



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal  
Clean Slate  
Sale AT-341-2020-W00738-01

District: Astoria

Date: February 18, 2020

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**Cost Summary**

|                         | Conifer        | Hardwood          | Total          |
|-------------------------|----------------|-------------------|----------------|
| Gross Timber Sale Value | \$4,123,718.88 | \$268,149.24      | \$4,391,868.12 |
|                         |                | Project Work:     | (\$159,127.00) |
|                         |                | Advertised Value: | \$4,232,741.12 |



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**District: Astoria**

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## Timber Description

**Location:** Sections 27, 28, 32, 33, 34, and 35, T7N, R6W, and Section 5, T6N, R6W, W.M., Clatsop County Oregon.

**Stand Stocking:** 80%

| Specie Name           | AvgDBH | Amortization (%) | Recovery (%) |
|-----------------------|--------|------------------|--------------|
| Douglas - Fir         | 24     | 0                | 98           |
| Western Hemlock / Fir | 17     | 0                | 97           |
| Alder (Red)           | 16     | 0                | 96           |
| Maple                 | 21     | 0                | 96           |

| Volume by Grade       | 2S    | 3S & 4S 6"-11" | 8" - 9" | 10" - 11" | 12"+ | 6" - 7" | Camprun | Total  |
|-----------------------|-------|----------------|---------|-----------|------|---------|---------|--------|
| Douglas - Fir         | 7,181 | 971            | 0       | 0         | 0    | 0       | 0       | 8,152  |
| Western Hemlock / Fir | 769   | 236            | 0       | 0         | 0    | 0       | 0       | 1,005  |
| Alder (Red)           | 0     | 0              | 251     | 383       | 114  | 260     | 0       | 1,008  |
| Maple                 | 0     | 0              | 0       | 0         | 0    | 0       | 39      | 39     |
| <b>Total</b>          | 7,950 | 1,207          | 251     | 383       | 114  | 260     | 39      | 10,204 |

**Comments:** Pond Values Used: Local Pond Values, December 2019.

Expected Log Markets: Mist, Willamina, Banks, North Plains, Clatskanie, Tillamook, Garibaldi, Forest Grove, Warrenton, Elma, WA, Longview, WA, Vancouver, WA and Chehalis, WA

Western Red Cedar and other Cedars stumpage = pond value - logging cost.  
 $\$799.49/\text{MBF} = \$1,000/\text{mbf} - \$200.51/\text{MBF}$

Other Costs (with Profit & Risk to be added):

Slash and Landing Piling (Includes move-in and pile materials) = \$26,753

Machine Washing for Invasive Weed Compliance = \$2,000

Ditch Filters:

20 bales of straw @ \$10.00/bale = \$200

8 hours of labor @ \$40/hr = \$320

TOTAL Other Costs (with Profit & Risk to be added): \$29,273

Other Costs (No Profit & Risk added):

None.

ROAD MAINTENANCE

(See attached Road Maintenance Cost Summary Sheet)

TOTAL Road Maintenance:  $\$38,376/10,204 \text{ MBF} = \$3.76/\text{MBF}$



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### Logging Conditions

**Combination#: 1**

|                       |        |
|-----------------------|--------|
| Douglas - Fir         | 36.00% |
| Western Hemlock / Fir | 36.00% |
| Alder (Red)           | 36.00% |
| Maple                 | 36.00% |

**Logging System:** Shovel **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:** 19 **bd. ft / load:** 4100

**cost / mbf:** \$68.60

**machines:** Forwarder  
Harvester

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**Combination#: 2**

|                       |        |
|-----------------------|--------|
| Douglas - Fir         | 64.00% |
| Western Hemlock / Fir | 64.00% |
| Alder (Red)           | 64.00% |
| Maple                 | 64.00% |

**Logging System:** Cable: Large Tower >=70 **Process:** Stroke Delimber

**yarding distance:** Medium (800 ft) **downhill yarding:** No

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

**loads / day:** 11 **bd. ft / load:** 4600

**cost / mbf:** \$122.53

**machines:** Log Loader (A)  
Stroke Delimber (A)  
Tower Yarder (Large)

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"STEWARDSHIP IN FORESTRY"

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## Logging Costs

|                                    |                                       |
|------------------------------------|---------------------------------------|
| <b>Operating Seasons:</b> 4.00     | <b>Profit Risk:</b> 11%               |
| <b>Project Costs:</b> \$159,127.00 | <b>Other Costs (P/R):</b> \$29,273.00 |
| <b>Slash Disposal:</b> \$0.00      | <b>Other Costs:</b> \$0.00            |

**Miles of Road**

**Road Maintenance:** \$3.76

| Dirt | Rock<br>(Contractor) | Rock<br>(State) | Paved |
|------|----------------------|-----------------|-------|
| 0.0  | 0.0                  | 0.0             | 0.0   |

**Hauling Costs**

| Species               | \$ / MBF | Trips/Day | MBF / Load |
|-----------------------|----------|-----------|------------|
| Douglas - Fir         | \$0.00   | 3.0       | 4.8        |
| Western Hemlock / Fir | \$0.00   | 2.0       | 4.2        |
| Alder (Red)           | \$0.00   | 2.0       | 3.3        |
| Maple                 | \$0.00   | 2.0       | 3.5        |



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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    |
|------------------------------|------------|--------------|----------|----------------|---------------|----------------|---------------|--------|----------|
| <b>Douglas - Fir</b>         |            |              |          |                |               |                |               |        |          |
| \$103.12                     | \$3.84     | \$1.72       | \$67.29  | \$2.87         | \$19.67       | \$0.00         | \$2.00        | \$0.00 | \$200.51 |
| <b>Western Hemlock / Fir</b> |            |              |          |                |               |                |               |        |          |
| \$103.12                     | \$3.87     | \$1.72       | \$116.49 | \$2.87         | \$25.09       | \$0.00         | \$2.00        | \$0.00 | \$255.16 |
| <b>Alder (Red)</b>           |            |              |          |                |               |                |               |        |          |
| \$103.12                     | \$3.91     | \$1.72       | \$149.70 | \$2.87         | \$28.75       | \$0.00         | \$2.00        | \$0.00 | \$292.07 |
| <b>Maple</b>                 |            |              |          |                |               |                |               |        |          |
| \$103.12                     | \$3.91     | \$1.72       | \$141.14 | \$2.87         | \$27.80       | \$0.00         | \$2.00        | \$0.00 | \$282.56 |

| Specie                | Amortization | Pond Value | Stumpage | Amortized |
|-----------------------|--------------|------------|----------|-----------|
| Douglas - Fir         | \$0.00       | \$671.45   | \$470.94 | \$0.00    |
| Western Hemlock / Fir | \$0.00       | \$538.36   | \$283.20 | \$0.00    |
| Alder (Red)           | \$0.00       | \$555.83   | \$263.76 | \$0.00    |
| Maple                 | \$0.00       | \$341.00   | \$58.44  | \$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 |
| Alder (Red)           | 0   | \$0.00 | \$0.00 |
| Maple                 | 0   | \$0.00 | \$0.00 |

**Unamortized**

| Specie                | MBF   | Value    | Total          |
|-----------------------|-------|----------|----------------|
| Douglas - Fir         | 8,152 | \$470.94 | \$3,839,102.88 |
| Western Hemlock / Fir | 1,005 | \$283.20 | \$284,616.00   |
| Alder (Red)           | 1,008 | \$263.76 | \$265,870.08   |
| Maple                 | 39    | \$58.44  | \$2,279.16     |

**Gross Timber Sale Value**

**Recovery:** \$4,391,868.12

**Prepared By:** John Choate

**Phone:** 503-325-5451

### Road Maintenance Cost Summary (Interim and Post Harvest)

**Sale:** Clean Slate  
**Date:** February 14, 2020  
**By:** Kevin Berry *FL*

**MBF:** 10,204.00  
**\$/MBF:** \$3.76

| Type                   | Equipment/Rationale        | Move-in Rate | Times | Hours | Rate  | Cost            |
|------------------------|----------------------------|--------------|-------|-------|-------|-----------------|
| Interim                | Grader 14G                 | \$875        | 1     | 10    | \$113 | \$2,005         |
|                        | Grader 14G                 | \$875        | 1     | 10    | \$113 | \$2,005         |
|                        | Dump Truck 12CY            | \$184        | 2     | 10    | \$89  | \$1,258         |
|                        | Vibratory Roller           | \$875        | 1     | 5     | \$87  | \$1,310         |
|                        | FE Loader C966             | \$875        | 1     | 5     | \$94  | \$1,345         |
| Final Road Maintenance | Grader 14G                 | \$875        | 1     | 80    | \$113 | \$9,915         |
|                        | Dump Truck 12CY            | \$184        | 3     | 20    | \$89  | \$2,332         |
|                        | FE Loader C966             | \$875        | 1     | 20    | \$94  | \$2,755         |
|                        | Vibratory Roller           | \$875        | 1     | 80    | \$87  | \$7,835         |
|                        | Water Truck 2,500 gallon   | \$214        | 1     | 40    | \$101 | \$4,254         |
|                        | Rubber Tired Backhoe-small | \$361        | 1     | 20    | \$87  | \$2,101         |
|                        | Labor                      |              |       | 20    | \$45  | \$1,261         |
| <b>Total</b>           |                            |              |       |       |       | <b>\$38,376</b> |

#### Interim Operations Road Maintenance

| Production Rates | Miles/day | Distance (miles) | Days | Hours |
|------------------|-----------|------------------|------|-------|
| Grader           | 2.5       | 5.0              | 2.0  | 20    |

#### Final Road Maintenance Mainline Roads

| Production Rates | Miles/day | Distance (miles) | Days | Hours |
|------------------|-----------|------------------|------|-------|
| Grader           | 1.25      | 6.7              | 5.4  | 54    |
| Vibratory Roller | 1.25      | 6.7              | 5.4  | 54    |

#### Final Road Maintenance Spur Roads

| Production Rates | Miles/day | Distance (miles) | Days | Hours |
|------------------|-----------|------------------|------|-------|
| Grader           | 1.5       | 3.6              | 2.4  | 24    |
| Vibratory Roller | 1.5       | 3.6              | 2.4  | 24    |

Process and compact: All crushed rock roads

Greasy Spoon Road 4.6 Miles

Fishhawk Loop Road 0.6 Miles

Bovine Mainline 2.1Miles

Unnamed Spurs 3 Miles

Grade & Process Total = 19.9 Miles



# Site Prep/Machine Piling Appraisal

Sale Number: AT-341-2020-W00738-01

Sale Name: Clean Slate

Date: 02/18/2020

| Vegetation Type/Zone | Vegetation Type/Zone Code | Production Rate (hr/ac) | Estimated Piles/Acre | Landing Production Rate (hrs/30 acres) |
|----------------------|---------------------------|-------------------------|----------------------|----------------------------------------|
| Doug-fir             | A                         | 0.5                     | 0.5                  | 6                                      |
| Hemlock/Fir          | B                         | 1.3                     | 4.5                  | 8                                      |
| Hemlock/Spruce       | C                         | 1.8                     | 6.0                  | 10                                     |
| Hemlock              | D                         | 1.8                     | 6.0                  | 8                                      |
| Conifer/Hardwood     | E                         | 1.0                     | 2.0                  | 8                                      |
| Whole Tree Yarding   | F                         | 0.5                     | 0.5                  | 12                                     |

| Sale Area      | Harvest Type | Veg Type/Zone | Ground Based Yarding Acres | Estimated Piling Hours/Area | Cost/Hour | Total Cost/Area      |
|----------------|--------------|---------------|----------------------------|-----------------------------|-----------|----------------------|
| 1              | MC           | E             | 54                         | 54                          | \$145     | \$7,830              |
| 2              | MC           | E             | 7                          | 7                           | \$145     | \$1,015              |
| 3              | MC           | E             | 26                         | 26                          | \$145     | \$3,770              |
| 4              | MC           | B             | 3                          | 4                           | \$145     | \$566                |
| In-unit Piling |              |               |                            |                             |           | Sub Total = \$13,181 |

| Sale Area                          | Number of Landings to be Piled | Harvested acres per area | Total Cost/Area | Number of In-Unit Piles | Material Cost/Pile | Total Cost/Area               |
|------------------------------------|--------------------------------|--------------------------|-----------------|-------------------------|--------------------|-------------------------------|
| 1                                  | 15                             | 97                       | \$3,751         | 123                     | \$5                | \$615                         |
| 2                                  | 8                              | 69                       | \$2,668         | 22                      | \$5                | \$110                         |
| 3                                  | 14                             | 59                       | \$2,281         | 66                      | \$5                | \$330                         |
| 4                                  | 2                              | 30                       | \$1,160         | 15.5                    | \$5                | \$78                          |
| *Cost includes separating firewood |                                |                          |                 |                         |                    | Materials Sub Total = \$1,133 |

| Move-In Allowance | Number of Move-In's | Total Move-In Allowance |
|-------------------|---------------------|-------------------------|
| \$1,290.00        | 2                   | \$2,580                 |

Additional Move-in allowance Landing Piling Sub Total = \$9,860

| Slash Endhaul | Dump Truck hrs | Cost/Hour | Total | Loader hrs | Cost/Hour | Total       |
|---------------|----------------|-----------|-------|------------|-----------|-------------|
|               |                | \$89.00   | \$0   |            | \$145     | \$0         |
| Sub Total =   |                |           |       |            |           | \$0         |
| Grand Total = |                |           |       |            |           | \$26,753.00 |

# SUMMARY OF ALL PROJECT COSTS

SALE NAME: Clean Slate

## Project No. 1: ROAD CONSTRUCTION:

| <u>Road segment</u> | <u>Length (Sta)</u> | <u>Length (Mile)</u> | <u>Cost</u> |
|---------------------|---------------------|----------------------|-------------|
| 3A to 3B, 3C to 3D, | 20.60               | 0.39                 | \$27,859.07 |
| 3E, 3F to 3G,       |                     |                      |             |
| 3H to 3I            |                     |                      |             |
| Road Maint.         |                     |                      | \$1,188.33  |
| Move-In             |                     |                      | \$1,480.08  |
| <b>TOTALS</b>       | 20.60               | 0.39                 | \$30,527    |

## Project No. 2: ROAD IMPROVEMENT:

| <u>Road segment</u>                 | <u>Length (Sta)</u> | <u>Length (Mile)</u> | <u>Cost</u>  |
|-------------------------------------|---------------------|----------------------|--------------|
| I1 to I2, I3 to I4, I5 to I6,       | 384.95              | 7.29                 | \$111,522.44 |
| I7 to I8, I9 to I10, I11 to I12,    |                     |                      |              |
| I13 to I14, I15 to I16,             |                     |                      |              |
| I17 to I18, I19 to I20, I21 to I22, |                     |                      |              |
| I23 to I24, I25 to I26,             |                     |                      |              |
| I27 to I28, I29 to I30              |                     |                      |              |
| Road Maint.                         |                     |                      | \$4,756.98   |
| Move-In                             |                     |                      | \$5,924.92   |
| <b>TOTALS</b>                       |                     |                      | \$122,204    |

## SPECIAL PROJECTS (Move-In and Road Maint. are included separately as needed, for each Special Project):

| <u>Description</u>    | <u>Length (Sta)</u> | <u>Cost</u> |
|-----------------------|---------------------|-------------|
| Proj. 3 Road Vacating | 8.9                 | \$6,395.08  |
| <b>TOTAL</b>          |                     | \$6,395     |

**GRAND TOTAL** **\$159,127**

Compiled By: Cole Hatcher 

Date: 02/18/2020

# Move In and Maintenance Calculator for Construction and Improvement

SALE NAME: Clean Slate

## Project No. 1: ROAD CONSTRUCTION:

| <u>Road segment</u> | <u>Length/Sta</u> | <u>Length/Mile</u> | <u>Cost</u> |
|---------------------|-------------------|--------------------|-------------|
| 3A to 3B, 3C to 3D, | 20.60             | 0.39               | \$27,859    |
| 3E, 3F to 3G,       |                   |                    |             |
| 3H to 3I            |                   |                    |             |
|                     |                   |                    |             |
| <b>TOTALS</b>       | 20.60             | 0.39               | \$27,859    |

## Project No. 2: ROAD IMPROVEMENT:

| <u>Road segment</u>                 | <u>Length/Sta</u> | <u>Length/Mile</u> | <u>Cost</u> |
|-------------------------------------|-------------------|--------------------|-------------|
| I1 to I2, I3 to I4, I5 to I6,       | 384.95            | 7.29               | \$111,522   |
| I7 to I8, I9 to I10, I11 to I12,    |                   |                    |             |
| I13 to I14, I15 to I16,             |                   |                    |             |
| I17 to I18, I19 to I20, I21 to I22, |                   |                    |             |
| I23 to I24, I25 to I26,             |                   |                    |             |
| I27 to I28, I29 to I30              |                   |                    |             |
| <b>TOTALS</b>                       |                   |                    | \$111,522   |

## MOVE IN (Construction & Improvement Only)

| <u>Equipment</u>             | <u>Length/Mile</u> | <u>Cost</u> |
|------------------------------|--------------------|-------------|
| Excavator (C315)             |                    | \$905.00    |
| Excavator (C330)             |                    | \$1,581.00  |
| Dozer (D8)                   |                    | \$1,581.00  |
| Dump Truck w/ Pup (20cy) x 3 |                    | \$645.00    |
| Dump Truck (12cy) x 2        |                    | \$368.00    |
| Backhoe (C 580)              |                    | \$361.00    |
| Grader (14G)                 |                    | \$875.00    |
| Vibratory Roller             |                    | \$875.00    |
| Water Truck 2,500 gallon     |                    | \$214.00    |
| <b>TOTAL</b>                 |                    | \$7,405.00  |

## ROAD MAINTENANCE (Construction & Improvement Only)

|                                         | <u>Length/Mile</u> | <u>Cost</u> |
|-----------------------------------------|--------------------|-------------|
| Nicolai (Viewpoint Pit to Greasy Spoon) | 4.53               | \$5,945.31  |
|                                         |                    |             |
| <b>TOTAL</b>                            |                    | \$5,945.31  |

# SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Clean Slate  
ROAD: 3A to 3B (12.0), 3C to 3D (2.1), 3F to 3G (5), & 3H to 3I (1.5)  
POINTS: 3E  
NEW CONSTRUCTION: 20.60 STATIONS  
IMPROVEMENT: STATIONS  
0.39 MILES  
0.00 MILES

| CLEARING & GRUBBING                                 |              |   |                       |
|-----------------------------------------------------|--------------|---|-----------------------|
| Method                                              | Acres/amount | x | Rate = Cost           |
| 3A to 3B,<br>3C to 3D, 3E,<br>3F to 3G,<br>3H to 3I | 2.33         | x | \$ 1,503 = \$3,506.74 |
| Scatter outside of right of way                     |              |   |                       |
| SUB TOTAL FOR CLEARING & GRUBBING                   |              |   | \$3,507               |

| EXCAVATION                                    |           |   |                       |
|-----------------------------------------------|-----------|---|-----------------------|
| Material                                      | Cy/amount | x | Rate = Cost           |
| Balanced construction (\$/sta)                | 2.10      | x | \$138.00 = \$289.80   |
| Landing construction (\$/ldg)                 | 1.00      | x | \$438.00 = \$438.00   |
| End haul excess material to onsite waste area |           |   |                       |
| (C330)/(\$/hr)                                | 1.00      | x | \$175.00 = \$175.00   |
| (Hwy.D.Truck)/(\$/hr)                         | 1.00      | x | \$89.00 = \$89.00     |
| Landing construction (\$/ldg)                 | 1.00      | x | \$438.00 = \$438.00   |
| Drift earth up to 200' (\$/sta)               | 5.00      | x | \$214.00 = \$1,070.00 |
| Landing construction (\$/ldg)                 | 1.00      | x | \$438.00 = \$438.00   |
| Balanced construction (\$/sta)                | 5.00      | x | \$138.00 = \$690.00   |
| Drift earth up to 200' (\$/sta)               | 1.50      | x | \$214.00 = \$321.00   |
| Landing construction (\$/ldg)                 | 1.00      | x | \$438.00 = \$438.00   |
| Balanced construction (\$/sta)                | 1.50      | x | \$138.00 = \$207.00   |
| SUB TOTAL FOR EXCAVATION                      |           |   | \$4,594               |

| CULVERT MATERIALS AND INSTALLATION             |          |            |         |          |
|------------------------------------------------|----------|------------|---------|----------|
| Location                                       | Dia/type | Lineal ft. | Rate    | Cost     |
| 3F to 3G                                       |          |            |         |          |
| 0+00                                           | 18" CPP  | 40         | \$21.95 | \$878.00 |
| Other/miscellaneous:                           |          |            |         |          |
| Culvert stakes & markers:                      |          |            |         |          |
|                                                |          | 1          | \$23.00 | \$23.00  |
| SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION |          |            |         | \$901    |
| Subtotal of Clearing, Exc., Culv.              |          |            |         | \$9,002  |

| SURFACING |  | Subgrade prep: |  | Description                                                               |  | Stations/<br>amount | x | Rate/<br>sta/amt | Cost     |
|-----------|--|----------------|--|---------------------------------------------------------------------------|--|---------------------|---|------------------|----------|
|           |  |                |  | Grade, Shape and Ditch 16' (3A to 3B, 3C to 3D, 3E, 3F to 3G, & 3H to 3I) |  | 20.60               | x | 27.91            | \$574.92 |
|           |  |                |  | Subgrade Compaction (3A to 3B, 3C to 3D, 3E, 3F to 3G, & 3H to 3I)        |  | 20.60               | x | 22.69            | \$467.49 |

| ROAD SEGMENT                 |                       | 3A to 3B       |                              | POINT TO POINT     |              | Sta. to Sta.  |      | TOTAL<br>VOLUME<br>(CY) | Rate/<br>Sta./<br>amt. | Cost    |
|------------------------------|-----------------------|----------------|------------------------------|--------------------|--------------|---------------|------|-------------------------|------------------------|---------|
| Application                  | Rock Size<br>and Type | Location       | Depth of<br>Rock<br>(inches) | Volume (CY)<br>per | Number<br>of | 0+00 to 12+00 |      |                         |                        |         |
| Base Rock                    | 4"-0" crushed         | 0+00 to 11+00  | 10"                          | station            | 11.00        | stations      | 1    | 693                     | \$7.34                 | \$5,090 |
| Turnarounds                  | 4"-0" crushed         | 10+55          | 10"                          | TA                 | 17           | TA's          | 1    | 17                      | \$7.34                 | \$125   |
| Base Rock                    | 6"-0" pit-run         | 11+00 to 12+00 | 12"                          | station            | 75           | stations      | 1.00 | 75                      | \$8.61                 | \$646   |
| Landings                     | 6"-0" pit-run         | 12+00          | N/A                          | landing            | 88           | landings      | 1    | 88                      | \$8.61                 | \$758   |
| Total Rock for Road Segment: |                       | 3A to 3B       |                              |                    |              |               |      | 873                     |                        | \$6,619 |

| ROAD SEGMENT                 |                       | 3C to 3D     |                              | POINT TO POINT     |              | Sta. to Sta. |      | TOTAL<br>VOLUME<br>(CY) | Rate/<br>Sta./<br>amt. | Cost    |
|------------------------------|-----------------------|--------------|------------------------------|--------------------|--------------|--------------|------|-------------------------|------------------------|---------|
| Application                  | Rock Size<br>and Type | Location     | Depth of<br>Rock<br>(inches) | Volume (CY)<br>per | Number<br>of | 0+00 to 2+10 |      |                         |                        |         |
| Base Rock                    | 4"-0" crushed         | 0+00 to 2+10 | 10"                          | station            | 63           | stations     | 2.10 | 132                     | \$7.34                 | \$972   |
| Landings                     | 6"-0" pit-run         | 2+10         | N/A                          | landing            | 88           | landings     | 1    | 88                      | \$8.61                 | \$758   |
| Total Rock for Road Segment: |                       | 3C to 3D     |                              |                    |              |              |      | 220                     |                        | \$1,730 |

| ROAD SEGMENT                 |                       | 3E       |                              | POINT TO POINT     |              | Sta. to Sta.  |   | TOTAL<br>VOLUME<br>(CY) | Rate/<br>Sta./<br>amt. | Cost  |
|------------------------------|-----------------------|----------|------------------------------|--------------------|--------------|---------------|---|-------------------------|------------------------|-------|
| Application                  | Rock Size<br>and Type | Location | Depth of<br>Rock<br>(inches) | Volume (CY)<br>per | Number<br>of | 0+00 to 12+00 |   |                         |                        |       |
| Landings                     | 6"-0" pit-run         | N/A      | N/A                          | landing            | 88           | landings      | 1 | 88                      | \$8.61                 | \$758 |
| Total Rock for Road Segment: |                       | 3E       |                              |                    |              |               |   | 88                      |                        | \$758 |



NEW CONSTRUCTION: STATIONS 0.00 MILES

|                   |                                                                                                                                                                                                                                                                                      |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SALE NAME:</b> | Clean Slate                                                                                                                                                                                                                                                                          |
| <b>ROAD:</b>      | 11 to 12 (181.75), 13 to 14 (3.1), 15 to 16 (36.7), 17 to 18 (36.3), 19 to 110 (6.0), 111 to 112 (37.35), 113 to 114 (7.05), 115 to 116 (1.1), 117 to 118 (2.1), 119 to 120 (8.8), 121 to 122 (1.1), 123 to 124 (28.5), 125 to 126 (5.25), 127 to 128, (14.25) and 129 to 130 (10.8) |
| <b>POINTS:</b>    |                                                                                                                                                                                                                                                                                      |

**IMPROVEMENT:** 384.95 STATIONS 7.29 MILES

**POINTS:**

| CLEARING & GRUBBING               |                                                                |              |   |          |   |          |  |  |  |
|-----------------------------------|----------------------------------------------------------------|--------------|---|----------|---|----------|--|--|--|
|                                   | Method                                                         | Acres/amount | X | Rate     | = | Cost     |  |  |  |
| I1 to I2                          |                                                                |              |   |          |   |          |  |  |  |
| 99+20 & 171+10                    | Clear roadside landings and scatter on site.<br>(C315)/(\$/hr) | 2            | X | \$114.00 | = | \$228.00 |  |  |  |
| I3 to I4                          |                                                                |              |   |          |   |          |  |  |  |
| 0+00 to 3+10                      | Clear road and haul clearing debris.<br>(C330)/(\$/hr)         | 4            | X | \$175.00 | = | \$700.00 |  |  |  |
|                                   | (Hwy.D.Truck)/(\$/hr)                                          | 2            | X | \$89.00  | = | \$178.00 |  |  |  |
| I5 to I6                          |                                                                |              |   |          |   |          |  |  |  |
| 36+70                             | Clear landing and haul debris.<br>(C330)/(\$/hr)               | 5            | X | \$175.00 | = | \$875.00 |  |  |  |
| I9 to I10                         |                                                                |              |   |          |   |          |  |  |  |
| 4+05 to 6+00                      | Clear road and landing and scatter on site.<br>(C315)/(\$/hr)  | 5            | X | \$114.00 | = | \$570.00 |  |  |  |
| I13 to I14                        |                                                                |              |   |          |   |          |  |  |  |
| 5+50                              | Clear roadside landing and scatter on site.<br>(C315)/(\$/hr)  | 2            | X | \$114.00 | = | \$228.00 |  |  |  |
| I15 to I16                        |                                                                |              |   |          |   |          |  |  |  |
| 1+10                              | Clear landing and scatter on site.<br>(C315)/(\$/hr)           | 1            | X | \$114.00 | = | \$114.00 |  |  |  |
| I17 to I18                        |                                                                |              |   |          |   |          |  |  |  |
| 2+10                              | Clear landing and scatter on site.<br>(C315)/(\$/hr)           | 1            | X | \$114.00 | = | \$114.00 |  |  |  |
| I19 to I20                        |                                                                |              |   |          |   |          |  |  |  |
| 7+30                              | Clear roadside landing and scatter on site.<br>(C315)/(\$/hr)  | 2            | X | \$114.00 | = | \$228.00 |  |  |  |
| I21 to I22                        |                                                                |              |   |          |   |          |  |  |  |
| 1+10                              | Clear landing and scatter on site.<br>(C315)/(\$/hr)           | 3            | X | \$114.00 | = | \$342.00 |  |  |  |
| I25 to I26                        |                                                                |              |   |          |   |          |  |  |  |
| 5+25                              | Clear landing and scatter on site.<br>(C315)/(\$/hr)           | 3            | X | \$114.00 | = | \$342.00 |  |  |  |
| I27 to I28                        |                                                                |              |   |          |   |          |  |  |  |
| 14+25                             | Clear landing and scatter on site.<br>(C315)/(\$/hr)           | 2            | X | \$114.00 | = | \$228.00 |  |  |  |
| I29 to I30                        |                                                                |              |   |          |   |          |  |  |  |
| 10+80                             | Clear landing and scatter on site.<br>(C315)/(\$/hr)           | 3            | X | \$114.00 | = | \$342.00 |  |  |  |
| SUB TOTAL FOR CLEARING & GRUBBING |                                                                |              |   |          |   | \$4,489  |  |  |  |

| EXCAVATION                         |                                     |           |   |          |   |          |
|------------------------------------|-------------------------------------|-----------|---|----------|---|----------|
|                                    | Material                            | Cy/amount | x | Rate     | = | Cost     |
| I1 to I2                           |                                     |           |   |          |   |          |
| 24+00                              | Rock ditch filters w/C315 (\$/hr)   | 1.0       | x | \$114.00 | = | \$114.00 |
| 58+65, 99+20,<br>& 171+10          | Landing sod removal w/ C315 (\$/hr) | 3.0       | x | \$114.00 | = | \$342.00 |
| I3 to I4                           |                                     |           |   |          |   |          |
| 0+00 to 3+10                       | Road subgrade reconstruction        |           |   |          |   |          |
|                                    | (C315)/(\$/hr)                      | 5.0       | x | \$114.00 | = | \$570.00 |
|                                    | (Hwy.D Truck)/(\$/hr)               | 3.0       | x | \$89.00  | = | \$267.00 |
| I7 to I8                           |                                     |           |   |          |   |          |
| 0+75, 3+30, 6+00,<br>6+90, 9+30, & | Rock ditch filters w/C315 (\$/hr)   | 6.0       | x | \$114.00 | = | \$684.00 |
| I19 to I20                         |                                     |           |   |          |   |          |
| 7+65                               | Clean culverts w/C315 (\$/hr)       | 0.5       | x | \$114.00 | = | \$57.00  |
| 8+80                               | Landing sod removal w/ C315 (\$/hr) | 1.0       | x | \$114.00 | = | \$114.00 |
| SUB TOTAL FOR EXCAVATION           |                                     |           |   |          |   | \$2,148  |

| CULVERT MATERIALS AND INSTALLATION             |          |            |         |                      |            |          |            |                                   |          |
|------------------------------------------------|----------|------------|---------|----------------------|------------|----------|------------|-----------------------------------|----------|
| Location                                       | Dia/type | Lineal ft. | Rate    | Cost                 | Location   | Dia/type | Lineal ft. | Rate                              | Cost     |
| I1 to I2                                       |          |            |         |                      | I23 to I24 |          |            |                                   |          |
| 152+45                                         | 18" CPP  | 30         | \$21.95 | \$658.50             | 8+45       | 18" CPP  | 40         | \$21.95                           | \$878.00 |
|                                                |          |            |         |                      |            |          |            |                                   |          |
| I11 to I12                                     |          |            |         |                      |            |          |            |                                   |          |
| 13+00                                          | 18" CPP  | 30         | \$21.95 | \$658.50             |            |          |            |                                   |          |
|                                                |          |            |         |                      |            |          |            |                                   |          |
|                                                |          |            |         |                      |            |          |            |                                   |          |
|                                                |          |            |         |                      |            |          |            |                                   |          |
|                                                |          |            |         |                      |            |          |            |                                   |          |
|                                                |          |            |         | Description          | Quantity   | Rate     | Cost       |                                   |          |
|                                                |          |            |         | Other/miscellaneous: |            |          |            |                                   |          |
|                                                |          |            |         |                      |            |          |            |                                   |          |
|                                                |          |            |         |                      |            |          |            |                                   |          |
|                                                |          |            |         |                      | 6          | \$23.00  |            |                                   |          |
|                                                |          |            |         |                      |            |          | \$138.00   |                                   |          |
| SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION |          |            |         |                      |            |          |            |                                   |          |
|                                                |          |            |         |                      |            |          |            | \$2,333                           |          |
|                                                |          |            |         |                      |            |          |            | Subtotal of Clearing, Exc., Culv. |          |
|                                                |          |            |         |                      |            |          |            | \$8,970                           |          |



| SURFACING                    |  | Subgrade prep:     |  | Description                                                                                                                                                                                                         |  | Stations/<br>amount      | x | Rate/<br>sta./amt | Cost       |
|------------------------------|--|--------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------|---|-------------------|------------|
|                              |  |                    |  | Grade, Shape and Ditch 20' (11 to 12 (Sta. 0+00 to 86+60) & 113 to 114)                                                                                                                                             |  | 96.15                    | x | \$31.12           | \$2,992.53 |
|                              |  |                    |  | Grade, Shape and Ditch 16' (11 to 12 (Sta. 86+85 to 181+75), 13 to 14, 15 to 16, 17 to 18, 19 to 110, 111 to 112, 115 to 116, 117 to 118, 119 to 120, 121 to 122, 123 to 124, 125 to 126, 127 to 128, & 129 to 130) |  | 288.80                   | x | \$27.91           | \$8,060.41 |
|                              |  |                    |  | Subgrade Compaction 20' (11 to 12 & 113 to 114)                                                                                                                                                                     |  | 96.15                    | x | \$28.67           | \$2,766.93 |
|                              |  |                    |  | Subgrade Compaction 16' (13 to 14, 15 to 16, 17 to 18, 19 to 110, 111 to 112, 115 to 116, 117 to 118, 119 to 120, 121 to 122, 123 to 124, 125 to 126, 127 to 128, & 129 to 130)                                     |  | 288.80                   | x | \$22.69           | \$6,552.87 |
|                              |  |                    |  | Sod Removal and end haul debris (15 to 16: Sta. 12+25 to 23+35)                                                                                                                                                     |  | 11.10                    | x | \$46.63           | \$517.59   |
|                              |  |                    |  | Sod Removal and scatter on site w/ backhoe (19 to 110, 111 to 112, 115 to 116, 117 to 118, 121 to 122, 123 to 124, 125 to 126, 127 to 128, 129 to 130)                                                              |  | 105.35                   | x | \$36.28           | \$3,822.10 |
| ROAD SEGMENT                 |  | 11 to 12           |  | POINT TO POINT                                                                                                                                                                                                      |  | Sta. to Sta.             |   | TOTAL VOLUME (CY) |            |
| Application                  |  | Rock Size and Type |  | Depth of Rock (inches)                                                                                                                                                                                              |  | Volume (CY) per          |   | Rate/ Sta./ amt.  |            |
| Transition Surfacing Rock    |  | 3/4"-0" crushed    |  | N/A                                                                                                                                                                                                                 |  | load 11                  |   | 22                |            |
| Surfacing                    |  | 3/4"-0" crushed    |  | 4"                                                                                                                                                                                                                  |  | station 25               |   | 113               |            |
| Turnouts                     |  | 3/4"-0" crushed    |  | 4"                                                                                                                                                                                                                  |  | turnout 25               |   | 25                |            |
| Subgrade Reinforcement       |  | 4'-0" crushed      |  | 5"                                                                                                                                                                                                                  |  | station 31               |   | 47                |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 1+75 to 3+25             |   | 2                 |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 5+00, 5+50,              |   |                   |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 29+60, 31+55,            |   |                   |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 38+00, 43+40,            |   |                   |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 45+80, 52+40,            |   |                   |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 71+00, 71+20,            |   |                   |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 81+30, 83+15,            |   |                   |            |
| Surface Leveling Rock        |  | 3/4"-0" crushed    |  | N/A                                                                                                                                                                                                                 |  | load 11                  |   | 143               |            |
| Rock Ditch Filters           |  | 6"-4" pit-run      |  | N/A                                                                                                                                                                                                                 |  | 3 filter series 2        |   | 22                |            |
| Junctions                    |  | 3/4"-0" crushed    |  | 4"                                                                                                                                                                                                                  |  | junction 22              |   | 22                |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | loads (see instructions) |   | 7.34              |            |
| Landings                     |  | 6"-0" pit-run      |  | N/A                                                                                                                                                                                                                 |  | load 11                  |   | 220               |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 171+10                   |   | 8.61              |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 115+50,                  |   |                   |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 143+85,                  |   |                   |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 149+30,                  |   |                   |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 155+70,                  |   |                   |            |
| Surface Leveling Rock        |  | 1 1/2"-0" crushed  |  | N/A                                                                                                                                                                                                                 |  | load 11                  |   | 55                |            |
| Culvert Bedding and Backfill |  | 3/4"-0" crushed    |  | N/A                                                                                                                                                                                                                 |  | culvert 33               |   | 33                |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  | 152+45                   |   | 7.34              |            |
| Total Rock for Road Segment: |  |                    |  | 11 to 12                                                                                                                                                                                                            |  |                          |   | 701               |            |
| ROAD SEGMENT                 |  | 13 to 14           |  | POINT TO POINT                                                                                                                                                                                                      |  | Sta. to Sta.             |   | TOTAL VOLUME (CY) |            |
| Application                  |  | Rock Size and Type |  | Depth of Rock (inches)                                                                                                                                                                                              |  | Volume (CY) per          |   | Rate/ Sta./ amt.  |            |
| Road Subgrade Reconstruction |  | 4'-0" crushed      |  | N/A                                                                                                                                                                                                                 |  | load 11                  |   | 99                |            |
| Base Rock                    |  | 4'-0" crushed      |  | 4"                                                                                                                                                                                                                  |  | station 25               |   | 78                |            |
| Traction Rock                |  | 3/4"-0" crushed    |  | 2"                                                                                                                                                                                                                  |  | station 13               |   | 40                |            |
| Total Rock for Road Segment: |  |                    |  | 13 to 14                                                                                                                                                                                                            |  |                          |   | 217               |            |
|                              |  |                    |  |                                                                                                                                                                                                                     |  |                          |   | \$1,592           |            |

| ROAD SEGMENT                 |                       | I5 to I6                                                                                                     |                              | POINT TO POINT     |            | Sta. to Sta.                |              | TOTAL<br>VOLUME<br>(CY) | Rate/<br>Sta./<br>amt. | Cost    |
|------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------|------------------------------|--------------------|------------|-----------------------------|--------------|-------------------------|------------------------|---------|
| Application                  | Rock Size<br>and Type | Location                                                                                                     | Depth of<br>Rock<br>(inches) | Volume (CY)<br>per | 15 to I6   | 0+00 to 36+70               | Number<br>of |                         |                        |         |
| Surfacing                    | 1 1/2"-0" crushed     | 0+00 to 36+70<br>0+90 to 1+85,<br>21+25 to<br>22+05,                                                         | 2"                           | station            | 13         | stations                    | 36.7         | 477                     | 7.34                   | \$3,504 |
| Curve Widening Surface       | 1 1/2"-0" crushed     | 7+50, 23+00,<br>27+50, 30+75,<br>31+15, 32+75,<br>33+90, 35+10                                               | 2"                           | load               | 11         | loads                       | 3            | 33                      | 7.34                   | \$242   |
| Surface Leveling Rock        | 1 1/2"-0" crushed     | 9+30, 14+65,<br>19+20, 23+00,<br>28+05, 31+55,<br>32+75, 35+10                                               | N/A                          | load               | 11         | loads                       | 8            | 88                      | 7.34                   | \$646   |
| Turnouts                     | 1 1/2"-0" crushed     |                                                                                                              | 2"                           | turnout            | 11         | turnouts                    | 8            | 88                      | 7.34                   | \$646   |
| Junctions                    | 1 1/2"-0" crushed     | 12+25, 35+10                                                                                                 | 2"                           | load               | 11         | loads (see<br>instructions) | 3            | 33                      | 7.34                   | \$242   |
| Landings                     | 6"-0" pit-run         | 36+70                                                                                                        | N/A                          | landing            | 88         | landings                    | 1            | 88                      | 8.61                   | \$758   |
| Total Rock for Road Segment: |                       |                                                                                                              | I5 to I6                     |                    |            |                             |              | 807                     |                        | \$6,040 |
| ROAD SEGMENT                 |                       | I7 to I8                                                                                                     |                              | POINT TO POINT     |            | Sta. to Sta.                |              | TOTAL<br>VOLUME<br>(CY) | Rate/<br>Sta./<br>amt. | Cost    |
| Application                  | Rock Size<br>and Type | Location                                                                                                     | Depth of<br>Rock<br>(inches) | Volume (CY)<br>per | 17 to I8   | 0+00 to 36+30               | Number<br>of |                         |                        |         |
| Rock Ditch Filters           | 6"-4" pit-run         | 0+75, 3+30,<br>6+00, 6+90,<br>9+30, 12+90,<br>9+45, 22+80,<br>25+20, 27+10,<br>28+30, 30+65,<br>31+15, 34+10 | N/A                          | 3 filter series    | 11         | 3 filter series             | 6            | 66                      | 8.61                   | \$569   |
| Surface Leveling Rock        | 1 1/2"-0" crushed     |                                                                                                              | N/A                          | load               | 11         | loads                       | 8            | 88                      | 7.34                   | \$646   |
| Surfacing Reinforcement      | 4"-0" crushed         | 13+45 to 19+90                                                                                               | N/A                          | station            | 11         | stations                    | 6.45         | 71                      | 7.34                   | \$521   |
| Total Rock for Road Segment: |                       |                                                                                                              | I7 to I8                     |                    |            |                             |              | 225                     |                        | \$1,736 |
| ROAD SEGMENT                 |                       | I9 to I10                                                                                                    |                              | POINT TO POINT     |            | Sta. to Sta.                |              | TOTAL<br>VOLUME<br>(CY) | Rate/<br>Sta./<br>amt. | Cost    |
| Application                  | Rock Size<br>and Type | Location                                                                                                     | Depth of<br>Rock<br>(inches) | Volume (CY)<br>per | 19 to I10  | 0+00 to 6+00                | Number<br>of |                         |                        |         |
| Subgrade Leveling Rock       | 4"-0" crushed         | 0+00                                                                                                         | N/A                          | load               | 11         | loads                       | 2            | 22                      | 7.34                   | \$162   |
| Surfacing                    | 4"-0" crushed         | 0+00 to 6+00                                                                                                 | 4"                           | station            | 25         | stations                    | 6            | 150                     | 7.34                   | \$1,102 |
| Turnouts                     | 4"-0" crushed         | 3+30                                                                                                         | 4"                           | turnout            | 11         | turnouts                    | 1            | 11                      | 7.34                   | \$81    |
| Junctions                    | 4"-0" crushed         | 4+05                                                                                                         | 4"                           | junction           | 11         | junctions                   | 1            | 11                      | 7.34                   | \$81    |
| Landings                     | 6"-0" pit-run         | 6+00                                                                                                         | N/A                          | landing            | 66         | landings                    | 1            | 66                      | 8.61                   | \$569   |
| Total Rock for Road Segment: |                       |                                                                                                              | I9 to I10                    |                    |            |                             |              | 260                     |                        | \$1,993 |
| ROAD SEGMENT                 |                       | I11 to I12                                                                                                   |                              | POINT TO POINT     |            | Sta. to Sta.                |              | TOTAL<br>VOLUME<br>(CY) | Rate/<br>Sta./<br>amt. | Cost    |
| Application                  | Rock Size<br>and Type | Location                                                                                                     | Depth of<br>Rock<br>(inches) | Volume (CY)<br>per | 111 to I12 | 0+00 to 37+35               | Number<br>of |                         |                        |         |
| Surfacing                    | 4"-0" crushed         | 0+00 to 37+35                                                                                                | 4"                           | station            | 25         | stations                    | 37.35        | 934                     | 7.34                   | \$6,858 |
| Junctions                    | 3/4"-0" crushed       | 0+00                                                                                                         | N/A                          | junction           | 11         | junctions                   | 3            | 33                      | 7.34                   | \$242   |
| Traction Rock                | 1 1/2"-0" crushed     | 0+00 to 2+65,<br>21+60 to 37+35                                                                              | 2"                           | station            | 13         | stations                    | 18.4         | 239                     | 7.34                   | \$1,757 |
| Turnouts                     | 4"-0" crushed         | 0+70, 8+25,<br>13+35, 15+50,<br>19+30, 33+40                                                                 | 4"                           | turnout            | 11         | turnouts                    | 6            | 66                      | 7.34                   | \$485   |
| Junctions                    | 4"-0" crushed         | 1+35, 8+25,<br>28+25                                                                                         | 4"                           | junction           | 11         | junctions                   | 3            | 33                      | 7.34                   | \$242   |
| Culvert Bedding/Backfill     | 3/4"-0" crushed       | 13+00                                                                                                        | N/A                          | load               | 11         | loads                       | 2            | 22                      | 7.34                   | \$162   |
| Total Rock for Road Segment: |                       |                                                                                                              | I11 to I12                   |                    |            |                             |              | 1,327                   |                        | \$9,746 |

| ROAD SEGMENT                 |                    |                            |                        |                |                 |               |           |                   |                  |         |
|------------------------------|--------------------|----------------------------|------------------------|----------------|-----------------|---------------|-----------|-------------------|------------------|---------|
| Application                  | Rock Size and Type | Location                   | Depth of Rock (inches) | POINT TO POINT |                 | Sta. to Sta.  |           | TOTAL VOLUME (CY) | Rate/ Sta./ amt. | Cost    |
|                              |                    |                            |                        | I13 to I14     | Volume (CY) per | 0+00 to 7+05  | Number of |                   |                  |         |
| Surface Leveling Rock        | 3/4"-0" crushed    | 0+00, 1+00, 3+45           | N/A                    | load           | 11              | loads         | 3         | 33                | 7.34             | \$242   |
| Landings                     | 6"-0" pit-run      | 5+50                       | N/A                    | landing        | 88              | landings      | 1         | 88                | 8.61             | \$758   |
| Junctions                    | 3/4"-0" crushed    | 6+70                       | N/A                    | junction       | 11              | junctions     | 1         | 11                | 7.34             | \$81    |
| Total Rock for Road Segment: |                    |                            |                        |                |                 |               |           | 132               |                  | \$1,081 |
| ROAD SEGMENT                 |                    |                            |                        |                |                 |               |           |                   |                  |         |
| Application                  | Rock Size and Type | Location                   | Depth of Rock (inches) | POINT TO POINT |                 | Sta. to Sta.  |           | TOTAL VOLUME (CY) | Rate/ Sta./ amt. | Cost    |
|                              |                    |                            |                        | I15 to I16     | Volume (CY) per | 0+00 to 1+10  | Number of |                   |                  |         |
| Surfacing                    | 4"-0" crushed      | 0+00 to 1+10               | 6"                     | station        | 38              | stations      | 1.1       | 42                | 7.34             | \$307   |
| Junctions                    | 1 1/2"-0" crushed  | 0+00                       | N/A                    | junction       | 11              | junctions     | 1         | 11                | 7.34             | \$81    |
| Junctions Reinforcement      | 4"-0" crushed      | 0+15                       | N/A                    | load           | 11              | loads         | 2         | 22                | 7.34             | \$162   |
| Landings                     | 6"-0" pit-run      | 1+10                       | N/A                    | landing        | 66              | landings      | 1         | 66                | 8.61             | \$569   |
| Total Rock for Road Segment: |                    |                            |                        |                |                 |               |           | 141               |                  | \$1,118 |
| ROAD SEGMENT                 |                    |                            |                        |                |                 |               |           |                   |                  |         |
| Application                  | Rock Size and Type | Location                   | Depth of Rock (inches) | POINT TO POINT |                 | Sta. to Sta.  |           | TOTAL VOLUME (CY) | Rate/ Sta./ amt. | Cost    |
|                              |                    |                            |                        | I17 to I18     | Volume (CY) per | 0+00 to 2+10  | Number of |                   |                  |         |
| Surfacing                    | 4"-0" crushed      | 0+00 to 2+10               | 6"                     | station        | 38              | stations      | 2.1       | 80                | 7.34             | \$586   |
| Junctions                    | 1 1/2"-0" crushed  | 0+00                       | N/A                    | junction       | 11              | junctions     | 1         | 11                | 7.34             | \$81    |
| Landings                     | 6"-0" pit-run      | 2+10                       | N/A                    | landing        | 66              | landings      | 1         | 66                | 8.61             | \$569   |
| Total Rock for Road Segment: |                    |                            |                        |                |                 |               |           | 157               |                  | \$1,235 |
| ROAD SEGMENT                 |                    |                            |                        |                |                 |               |           |                   |                  |         |
| Application                  | Rock Size and Type | Location                   | Depth of Rock (inches) | POINT TO POINT |                 | Sta. to Sta.  |           | TOTAL VOLUME (CY) | Rate/ Sta./ amt. | Cost    |
|                              |                    |                            |                        | I19 to I20     | Volume (CY) per | 0+00 to 8+80  | Number of |                   |                  |         |
| Surfacing                    | 4"-0" crushed      | 0+00 to 8+80               | 6"                     | station        | 38              | stations      | 8.8       | 334               | 7.34             | \$2,456 |
| Junctions                    | 1 1/2"-0" crushed  | 0+00                       | N/A                    | junction       | 11              | junctions     | 1         | 11                | 7.34             | \$81    |
| Junctions Reinforcement      | 4"-0" crushed      | 0+15, 1+10                 | N/A                    | load           | 11              | loads         | 2         | 22                | 7.34             | \$162   |
| Turnouts                     | 4"-0" crushed      | 4+10                       | 6"                     | turnout        | 22              | turnouts      | 1         | 22                | 7.34             | \$162   |
| Landings                     | 6"-0" pit-run      | 7+30, 8+80                 | N/A                    | landing        | 66              | landings      | 2         | 132               | 8.61             | \$1,137 |
| Total Rock for Road Segment: |                    |                            |                        |                |                 |               |           | 521               |                  | \$3,997 |
| ROAD SEGMENT                 |                    |                            |                        |                |                 |               |           |                   |                  |         |
| Application                  | Rock Size and Type | Location                   | Depth of Rock (inches) | POINT TO POINT |                 | Sta. to Sta.  |           | TOTAL VOLUME (CY) | Rate/ Sta./ amt. | Cost    |
|                              |                    |                            |                        | I21 to I22     | Volume (CY) per | 0+00 to 1+10  | Number of |                   |                  |         |
| Surfacing                    | 4"-0" crushed      | 0+00 to 1+10               | 6"                     | station        | 38              | stations      | 1.1       | 42                | 7.34             | \$307   |
| Landings                     | 6"-0" pit-run      | 1+10                       | N/A                    | landing        | 66              | landings      | 1         | 66                | 8.61             | \$569   |
| Total Rock for Road Segment: |                    |                            |                        |                |                 |               |           | 108               |                  | \$876   |
| ROAD SEGMENT                 |                    |                            |                        |                |                 |               |           |                   |                  |         |
| Application                  | Rock Size and Type | Location                   | Depth of Rock (inches) | POINT TO POINT |                 | Sta. to Sta.  |           | TOTAL VOLUME (CY) | Rate/ Sta./ amt. | Cost    |
|                              |                    |                            |                        | I23 to I24     | Volume (CY) per | 0+00 to 28+50 | Number of |                   |                  |         |
| Surfacing                    | 1 1/2"-0" crushed  | 0+00 to 28+50              | 3"                     | station        | 19              | stations      | 28.5      | 542               | 7.34             | \$3,977 |
| Junctions                    | 1 1/2"-0" crushed  | 2+50, 16+90                | 3"                     | load           | 11              | instructions  | 5         | 55                | 7.34             | \$404   |
| Culvert Bedding/Backfill     | 3/4"-0" crushed    | 8+45                       | N/A                    | load           | 11              | loads         | 3         | 33                | 7.34             | \$242   |
| Surface Leveling Rock        | 1 1/2"-0" crushed  | 10+00, 13+10, 16+55        | N/A                    | load           | 11              | loads         | 3         | 33                | 7.34             | \$242   |
| Turnaround                   | 1 1/2"-0" crushed  | 28+20                      | 3"                     | turnaround     | 11              | turnaround    | 1         | 11                | 7.34             | \$81    |
| Turnouts                     | 1 1/2"-0" crushed  | 12+60, 14+90, 19+40, 24+85 | 3"                     | turnout        | 11              | turnouts      | 4         | 44                |                  | \$0     |
| Total Rock for Road Segment: |                    |                            |                        |                |                 |               |           | 718               |                  | \$4,947 |

| ROAD SEGMENT                           |                       |               |                              | 125 to 126    |    | POINT TO POINT     |               | Sta. to Sta. |     | TOTAL<br>VOLUME<br>(CY) | Rate/<br>Sta./<br>amt. | Cost       |
|----------------------------------------|-----------------------|---------------|------------------------------|---------------|----|--------------------|---------------|--------------|-----|-------------------------|------------------------|------------|
| Application                            | Rock Size<br>and Type | Location      | Depth of<br>Rock<br>(inches) | 125 to 126    |    | Volume (CY)<br>per | 0+00 to 5+25  | Number<br>of |     |                         |                        |            |
| Surfacing                              | 4"-0" crushed         | 0+00 to 5+25  | 3"                           | station       | 38 | turnaround         | 1             | 5.25         | 200 | 7.34                    | \$1,465                |            |
| Turnaround                             | 4"-0" crushed         | 1+80          | 3"                           | turnaround    | 11 | landings           | 1             |              | 11  | 7.34                    | \$81                   |            |
| Landings                               | 6"-0" pit-run         | 5+25          | N/A                          | landings      | 88 |                    |               |              | 88  | 8.61                    | \$758                  |            |
| Total Rock for Road Segment:           |                       |               |                              |               |    |                    |               |              |     | 299                     |                        | \$2,304    |
| ROAD SEGMENT                           |                       |               |                              | 127 to 128    |    | POINT TO POINT     |               | Sta. to Sta. |     | TOTAL<br>VOLUME<br>(CY) | Rate/<br>Sta./<br>amt. | Cost       |
| Application                            | Rock Size<br>and Type | Location      | Depth of<br>Rock<br>(inches) | 127 to 128    |    | Volume (CY)<br>per | 0+00 to 14+25 | Number<br>of |     |                         |                        |            |
| Surfacing                              | 4"-0" crushed         | 0+00 to 14+25 | 2"                           | station       | 13 | loads              | 14.25         |              | 185 | 7.34                    | \$1,361                |            |
| Curve Widening Surface                 | 4"-0" crushed         | 3+10          | 2"                           | load          | 11 | turnouts           | 2             |              | 22  | 7.34                    | \$162                  |            |
| Traction Rock                          | 1 1/2"-0" crushed     | 3+10 to 13+00 | 2"                           | station       | 13 | landings           | 9.9           |              | 129 | 7.34                    | \$945                  |            |
| Turnouts                               | 4"-0" crushed         | 9+05          | 2"                           | turnout       | 11 |                    | 1             |              | 11  | 7.34                    | \$81                   |            |
| Landings                               | 6"-0" pit-run         | 14+25         | N/A                          | landings      | 88 |                    |               |              | 88  | 8.61                    | \$758                  |            |
| Total Rock for Road Segment:           |                       |               |                              |               |    |                    |               |              |     | 435                     |                        | \$3,306    |
| ROAD SEGMENT                           |                       |               |                              | 129 to 130    |    | POINT TO POINT     |               | Sta. to Sta. |     | TOTAL<br>VOLUME<br>(CY) | Rate/<br>Sta./<br>amt. | Cost       |
| Application                            | Rock Size<br>and Type | Location      | Depth of<br>Rock<br>(inches) | 129 to 130    |    | Volume (CY)<br>per | 0+00 to 10+80 | Number<br>of |     |                         |                        |            |
| Surfacing                              | 4"-0" crushed         | 0+00 to 10+80 | 4"                           | station       | 25 | turnouts           | 10.8          |              | 270 | 7.34                    | \$1,983                |            |
| Turnouts                               | 4"-0" crushed         | 2+10          | 4"                           | turnout       | 11 | junctions          | 1             |              | 11  | 7.34                    | \$81                   |            |
| Junctions                              | 4"-0" crushed         | 7+80          | 4"                           | junction      | 11 | landings           | 1             |              | 11  | 7.34                    | \$81                   |            |
| Landings                               | 6"-0" pit-run         | 10+80         | N/A                          | landings      | 66 |                    |               |              | 66  | 8.61                    | \$569                  |            |
| Total Rock for Road Segment:           |                       |               |                              |               |    |                    |               |              |     | 358                     |                        | \$2,713    |
| Processing:                            |                       |               |                              |               |    |                    |               |              |     |                         |                        |            |
| Description                            |                       |               |                              |               |    |                    |               |              |     | No.sta                  | Rate/sta               | Cost       |
| Water, Process & Compact:              |                       |               |                              |               |    |                    |               |              |     | 384.95                  | \$63.48                | \$24,438   |
| Traction Rock Water, Process & Compact |                       |               |                              |               |    |                    |               |              |     | 31.40                   | \$63.48                | \$1,993    |
| SUB TOTAL FOR SURFACING                |                       |               |                              |               |    |                    |               |              |     |                         |                        |            |
|                                        |                       |               |                              | 6"-4" pr      | 88 | 1,034              | 2,805         | 1,904        | 530 | 6,361                   |                        |            |
|                                        |                       |               |                              | 4"-0" crushed |    |                    |               | crushed      |     | Total                   |                        |            |
|                                        |                       |               |                              | 1 1/2"-0"     |    |                    |               | crushed      |     |                         |                        |            |
| \$99,274                               |                       |               |                              |               |    |                    |               |              |     |                         |                        |            |
| SPECIAL PROJECTS                       |                       |               |                              |               |    |                    |               |              |     |                         |                        |            |
| Description                            |                       |               |                              |               |    |                    |               |              |     | Cy/Amount               | Rate                   | Cost       |
| pit-run development                    |                       |               |                              |               |    |                    |               |              |     | 1,122                   | \$2.92                 | \$3,278.93 |
| SUB TOTAL FOR SPECIAL PROJECTS         |                       |               |                              |               |    |                    |               |              |     |                         |                        |            |
|                                        |                       |               |                              |               |    |                    |               |              |     |                         |                        | \$3,279    |
|                                        |                       |               |                              |               |    |                    |               |              |     |                         |                        | \$102,552  |
|                                        |                       |               |                              |               |    |                    |               |              |     |                         |                        | \$8,970    |
|                                        |                       |               |                              |               |    |                    |               |              |     |                         |                        | \$111,522  |
| GRAND TOTAL                            |                       |               |                              |               |    |                    |               |              |     |                         |                        |            |

Compiled By: Cole Hatcher

Date: 02/18/2020

CRUSHED ROCK COST

|            |               |
|------------|---------------|
| SALE NAME: | Clean Slate   |
| PROJECT:   | No. 1 & 2     |
| Stockpile: | Veiwpoint Pit |

MATERIAL:  $\frac{3}{4}"-0"$ ,  $1 \frac{1}{2}"-0"$ ,  
 $4"-0"$

DATE: 02/18/2020  
BY: C. Hatcher

[illegible]

ROCK HAUL:

|             |            |             |            |
|-------------|------------|-------------|------------|
| Truck type: | <u>D20</u> | No. trucks: | <u>3</u>   |
| Delay min.: | <u>8</u>   | Efficiency: | <u>85%</u> |

|           |        |     |
|-----------|--------|-----|
| Ave haul: | \$5.36 | /cy |
| Load:     | \$0.72 | /cy |
| Spread:   | \$1.26 | /cy |

|             |            |             |            |
|-------------|------------|-------------|------------|
| Truck type: | <u>D12</u> | No. trucks: | <u>2</u>   |
| Delay min.: | <u>6</u>   | Efficiency: | <u>85%</u> |

Truck type: D10 No. trucks:             
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 683

CRUSHED ROCK HAUL COSTS            6,441 cy @        \$7.34 /cy

6,441 cy @ \$7.34 /cy

### PIT RUN ROCK COST

|            |               |
|------------|---------------|
| SALE NAME: | Clean Slate   |
| PROJECT:   | No. 1 & 2     |
| QUARRY:    | Veiwpoint Pit |

DATE: 02/18/2020  
BY: C. Hatcher

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks: 0  
 Delay min.: 8 Efficiency: 85%

|           |        |     |
|-----------|--------|-----|
| Ave haul: | \$6.21 | /cy |
| Load:     | \$0.84 | /cy |
| Spread:   | \$1.56 | /cy |

|             |            |             |            |
|-------------|------------|-------------|------------|
| Truck type: | <u>D12</u> | No. trucks: | <u>5</u>   |
| Delay min.: | <u>6</u>   | Efficiency: | <u>85%</u> |

Truck type: D10      No. trucks:             
 Delay min.: 5      Efficiency: 85%

Production: cy/day = 509

### PIT RUN ROCK HAUL COSTS

1,825 cy @ \$8.61 /cy

**Timber Sale**  
**Vacating Costs V1, V2, V3 to V4**

| Work Description                           | Station | Pump    | C330     | C315     | D24 trk  | D10/12 trk | D-8      | Labor   | Straw-bales | Seed-lbs |
|--------------------------------------------|---------|---------|----------|----------|----------|------------|----------|---------|-------------|----------|
| V1                                         |         |         | 3.00     |          |          |            |          |         |             |          |
| V2                                         |         |         | 1.00     |          |          |            |          |         |             |          |
| V3: Walk equipment to beginning of project |         |         | 2.0      | 1.0      |          |            |          |         |             |          |
| Haul off old culverts                      |         |         |          | 1.0      |          | 4.0        |          |         |             |          |
| Remove fill and culvert                    | 0+00    |         | 4.0      |          |          |            |          | 2.0     | 8           | 2        |
| Construct water bar                        | 0+40    |         | 0.5      |          |          |            |          | 1.0     | 2           | 1        |
| Remove fill and culvert                    | 1+90    |         | 6.0      | 5.0      |          |            |          | 5.0     | 20          | 15       |
| Construct water bar                        | 2+50    |         | 0.5      |          |          |            |          | 1.0     | 2           | 1        |
| Remove fill and culvert                    | 5+20    |         | 4.0      |          |          |            |          | 2.0     | 10          | 7        |
| Construct water bar                        | 5+70    |         | 1.0      |          |          |            |          | 1.0     | 2           | 1        |
| V4: Block road, construct water bar        | 8+90    |         | 1.00     |          |          |            |          | 1.00    | 4           | 2        |
| <b>Total Quantity (Hours)</b>              |         | 0.00    | 23.00    | 7.00     | 0        | 4          | 0        | 13      | 48          | 29       |
| <b>Rates</b>                               |         | \$12.00 | \$175.00 | \$114.00 | \$143.00 | \$89.00    | \$178.00 | \$45.00 | \$12.06     | \$1.80   |
| <b>Total Dollars</b>                       |         | \$0     | \$4,025  | \$798    | \$0      | \$356      | \$0      | \$585   | \$579       | \$52     |

**Total Cost**

**\$6,395**

## Projects Road Maintenance Cost Summary

**Sale:** Clean Slate  
**Date:** 18-Feb-20  
**By:** Cole Hatcher

| Type         | Equipment/Rationale      |  |  | Hours | Rate  | Cost       |
|--------------|--------------------------|--|--|-------|-------|------------|
| Project Work | Grader 14G               |  |  | 16    | \$113 | \$1,783    |
| Final Haul   | Dump Truck 12CY          |  |  | 8     | \$89  | \$702      |
| Road         | FE Loader C966           |  |  | 5     | \$94  | \$494      |
| Maintenance  | Vibratory Roller         |  |  | 16    | \$87  | \$1,373    |
|              | Water Truck 2,500 gallon |  |  | 16    | \$101 | \$1,593    |
| <b>Total</b> |                          |  |  |       |       | \$5,945.31 |

Production Rates

Grader

Vibratory Roller

| Miles/day | Distance(miles) | Days |
|-----------|-----------------|------|
| 1.5       | 4.53            | 3.0  |
| 1.5       | 4.53            | 3.0  |

**NOTE:** Nicolai Mainline (Viewpoint Pit to Greasy Spoon) 4.53 Miles

(Final road maintenance from Viewpoint Pit to West Kerry is 2.88 Miles

anticipated to be shared with Wookie timber sale.)

TOTAL= 4.53 Miles



**Clean Slate Timber Sale  
FY 2020  
TIMBER CRUISE REPORT**

1. **Sale Unit Location:** Units 1, 2, 3 and 4 are located in portions of Sections 27, 28, 32, 33, 34, & 35 of T7N, R6W, and portions of Section 5 of T6N, R6W, W.M., Clatsop County, Oregon.

2. **Fund Distribution:** Fund: BOF 100% CSL 0%  
Tax Code: 8-01 1.1% 30-05 98.9%

3. **Sale Acreage by Unit:**

| Unit          | Harvest Type  | Gross Acres | Stream Buffer Acres | New R/W Acres | Existing R/W Acres | Net Acreage | Survey Method  |
|---------------|---------------|-------------|---------------------|---------------|--------------------|-------------|----------------|
| 1             | MC            | 118         | 14                  | 0             | 7                  | 97          | GIS            |
| 2             | MC            | 93          | 19                  | 0             | 5                  | 69          | GIS            |
| 3             | MC            | 80          | 12                  | 1             | 8                  | 59          | GIS            |
| 4             | MC            | 33          | 2                   | 0             | 1                  | 30          |                |
| 5             | R/W (In-unit) | 1           | -                   | -             | -                  | 1           | Length x Width |
| <b>TOTALS</b> |               | <b>325</b>  | <b>47</b>           | <b>1</b>      | <b>21</b>          | <b>256</b>  |                |

4. **Cruisers and Cruise Dates:** Units 1, 2, 3 and 4 were cruised on 2/11/2020 and 2/12/2020, by John Choate, Michele Huffman, Avery Petersen, and Justin Bush.

5. **Cruise Method and Computation:** Units 1, 2, 3 are modified clearcut units. A variable plot cruise with a 40.0 BAF was used in these Units. These plots were located on a 4 chain by 7.5 chain grid, with a count/cruise plot ratio of 2:1. A total of 83 plots were sampled, with 32 measured plots and 51 count plots. Minor species were found on several count plots, thus the increase in measure plots shown on the statistics page.

Unit 4 is a modified clearcut unit. A variable plot cruise with a 54.44 BAF was used in this Unit. These plots were located on a 2 chain by 5 chain grid, with a count/cruise plot ratio of 1:1. A total of 30 plots were sampled, with 16 measured plots and 14 count plots. Minor species were found on a count plot, thus the increase in measure plots shown on the statistics page.

Unit 5 R/W Right-of-way volume was calculated by multiplying the R/W acreage and the average volume per acre from the cruise in Unit 1, 2, and 3.

Cruisers used Allegro 2 data collectors, and were downloaded to the Atterbury Super A.C.E. program at the Astoria District for computing. See the attached Cruise Design for more details on the cruise method. The cruise calculations were processed in the Astoria District office.

| UNIT    | PROJECT | TRACT | CRUISE TYPE |
|---------|---------|-------|-------------|
| 1, 2, 3 | CSLATE  | A123  | OOMC        |
| 1, 2, 3 | CSLATE  | U123  | TAKE        |
| 4       | CSLATE  | A4    | OOMC        |
| 4       | CSLATE  | U4    | TAKE        |
| RW      | CSLATE  | U123  | RW          |

6. **Timber Description:** Units 1, 2, and 3 are approximately 76 year old stands of Douglas-fir, with some western hemlock, red alder and big leaf maple. The average take Douglas-fir tree size for harvest is approximately 24 inches DBH, with an average merchantable tree height of 91 feet. The average take western hemlock tree size is approximately 17 inches DBH, with an average merchantable tree height of 28 feet. The short merchantable height was due to a very small sample of understory western hemlock trees. The average take red alder tree size is approximately 15 inches DBH, with an average merchantable tree height of 45 feet. The average take big leaf maple tree is approximately 21 inches

DBH, with an average merchantable tree height of 36 feet. The average volume per acre to be harvested (net) is approximately 38 MBF. All trees were cruised to a merchantable top of 6 inch DIB or 40% fp.

**Unit 4** is approximately 83 year old stands of Douglas-fir and western hemlock with some red alder. The average take Douglas-fir tree size for harvest is approximately 24 inches DBH, with an average merchantable tree height of 91 feet. The average take western hemlock tree size is approximately 17 inches DBH, with an average merchantable tree height of 58 feet. The average take red alder tree size is approximately 17 inches DBH, with an average merchantable tree height of 62 feet. The average volume per acre to be harvested (net) is approximately 55 MBF. All trees were cruised to a merchantable top of 6 inch DIB or 40% fp.

**Unit 5 R/W** is similar to the timber description mentioned in Units 1, 2, and 3.

**7. Statistical Analysis: (See also "Statistics Reports," attached.)**

| Units   | Target CV | Target SE% | Actual CV | Actual SE% |
|---------|-----------|------------|-----------|------------|
| 1, 2, 3 | 60        | 8          | 49.8      | 5.5        |
| 4       | 55        | 8          | 50.8      | 9.4*       |

The statistics are for all Units and Take and Leave trees combined based on Net BF/Acre.

\*The result of a higher Actual SE% was due to a small acreage of a different stand type that was not large enough to cruise efficiently, and was combined.

**8. Take Volumes by Species and Log Grades for All Sale Units by MBF:** (See "Species, Sort Grade-Board Feet Volumes (Project)", "Statistics (Project)", and the "Stand Table Summary" attached). Volumes do not include "in-growth." The majority of defect and breakage was taken out during the cruise.

**Conifer**

| Species     | DBH | Net Vol. MBF | 2 Saw | 3Saw | 4 Saw | % D&B | % Sale |
|-------------|-----|--------------|-------|------|-------|-------|--------|
| Douglas-fir | 24  | 8,152        | 7,181 | 829  | 142   | 1.7   | 80     |
| W. Hemlock  | 17  | 1,005        | 769   | 144  | 92    | 4.2   | 10     |

**Hardwoods**

| Species        | DBH | Net Vol. MBF | 12"+ | 10-11" | 8-9" | 6-7" | Camprun | % D&B | % Sale |
|----------------|-----|--------------|------|--------|------|------|---------|-------|--------|
| Red Alder      | 16  | 1,008        | 114  | 383    | 251  | 260  |         | 5.8   | 9      |
| Big leaf maple | 21  | 39           |      |        |      |      | 39      | 0     | 1      |

|                         |               |
|-------------------------|---------------|
| <b>TOTAL NET VOLUME</b> | <b>10,204</b> |
|-------------------------|---------------|

**9. Prepared by:** John Choate

**Date:** 02/19/2020

**10. Approved by:** John W. Choate - Acting OF

**Date:** 2/28/2020

**11. Attachments:**  
 Cruise Plans & Maps (6)  
 Species, Sort, Grade Report (4)  
 Statistics Reports (7)  
 Stand Table Summary (2)  
 Log Stock Table Report MBF (3)

**CRUISE DESIGN  
ASTORIA DISTRICT**

**Sale Name:** Clean Slate **Units** 1, 2, and 3

**Harvest Type:** (MC) Modified Clear-cut

**Approx. Cruise Acres:** 226 **Estimated CV%** 60 Net BF/Acre **SE% Objective** 8 Net BF/Acre

**Planned Sale Volume:** 6,615 MBF **Estimated Sale Area Value/Acre:** \$12,750/Acre  
(30 MBF/Ac. @ \$425/MBF)

**A. Cruise Goals:** (a) Grade minimum 100 conifers  
(b) Sample 87 cruise plots ( 32 grade/ 55 count); (c) Other goals:        Determine "automark" thinning standards; X Determine log grades for sale value; X Determine snag and leave tree species and sizes.

**B. Cruise Design:**

**1. Plot Cruises:** BAF 40 (Full point)  
Cruise Line Directions: Unit1: 236°/56°; Unit2: 349°/169°; Unit3: 360°/180°  
Cruise Plot Spacing 4 (chains) 264 (Feet)  
Cruise Line Spacing 7.5 (chains) 495 (Feet)  
Grade/Count Ratio 1:2

Take plots as marked on cruise map. All cedar will be reserved. Record all snags as SN.

DO NOT RECORD 12', 22' and 32' (for Hardwoods).

DO NOT RECORD 22' LENGTHS.

**C. Tree Measurements:**

- 1. Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods.  
Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" dbh.
- 4. Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

**5. Tree Segments:** Record log segments in “standard” log lengths in general use, such as 32’ and 40’ lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12’; for hardwoods, it’s 8’. Maximum segment length is 40’. One foot of trim is assumed for each merch. segment. Do not use “double dash” (--) feature on the data recorder except for the top segment of the tree. Hardwoods shall be recorded in 8’ and 10’ multiples.

**6. Species, Sort, and Grade Codes:**

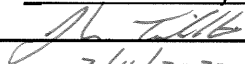
- A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For “leave trees” in partial cuts, or for marked “wildlife trees,” add an “L” to the species code (such as DL, HL, CL, etc.)
- B. Sort: Use code “1” (Domestic).
- C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull  
Hardwoods: Alder Grades: 12” + = 1 Sawmill; 10”-12” = 2 Sawmill; 10”-8” = 3 Sawmill; and 8”-6” 4 Sawmill, or R = Camp Run; 0 = Cull.  
All Maple Camp Run = R

**7. Deductions:** Estimate visible defect or damage as a “length deduction” (most often), or as a “diameter deduction,” as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a “per tree” basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

**8. Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at inter-visible points, not to exceed 100’ apart. On “measure/grade” plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.

**9. Cruising Equipment:** Relaskop, Rangefinder, Logger’s Tape (with dbh on back) Biltmore Stick, Compass, Cruise Cards in Tatum OR Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.

**10. Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Kevin Berry  
Approved by:   
Date: 2/11/2020

# TIMBER CRUISE

Modified Clearcut Cruise  
40 BAF  
Total Plots = 87  
Grade Plots = 29  
Count Plots = 58

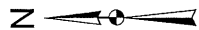
## CLEAN SLATE

Cruise Direction by Unit  
1 = 235.5/55.5  
2 = 348.8/168.8  
3 = 360/180

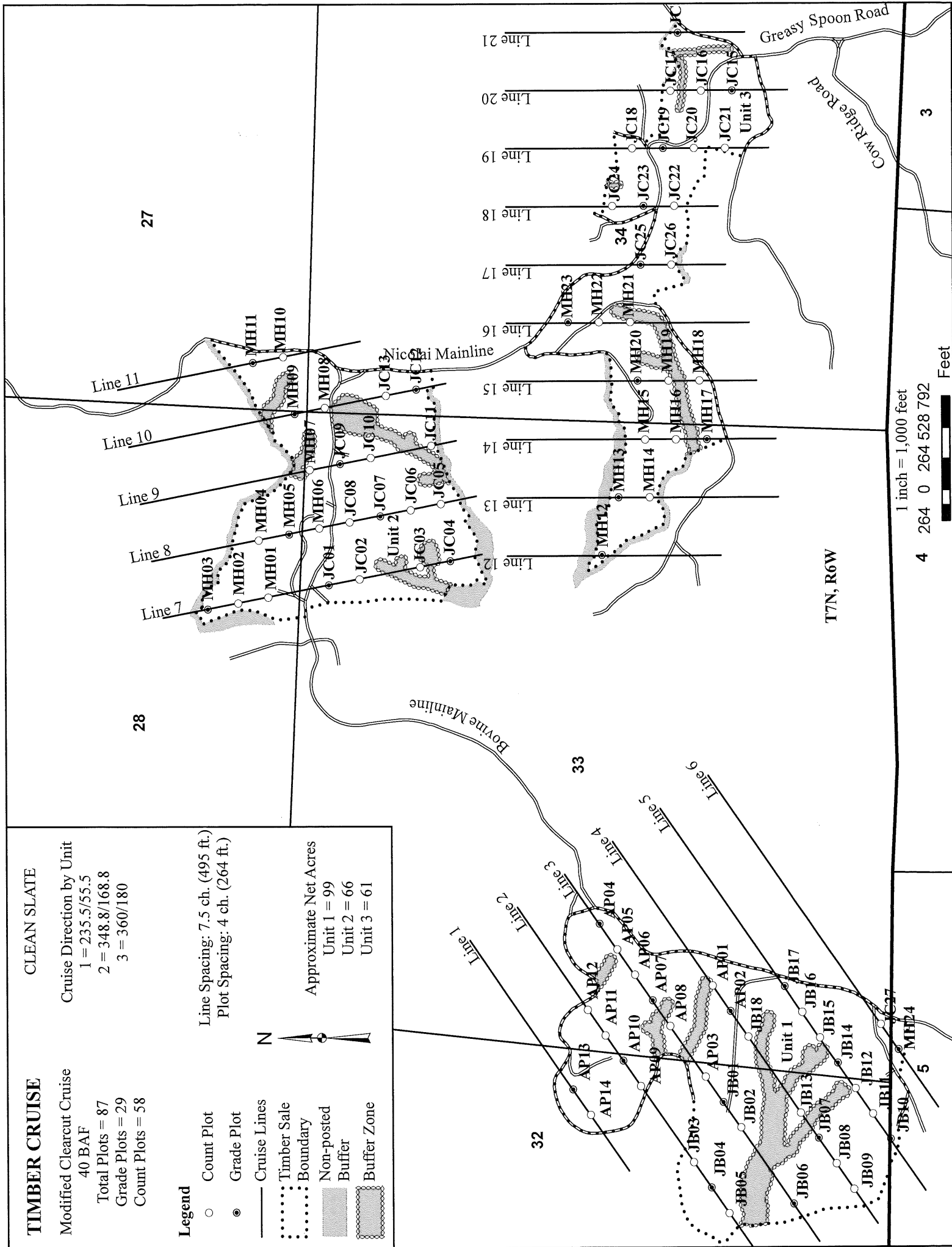
### Legend

- Count Plot
- Grade Plot
- Cruise Lines
- ⋯ Timber Sale
- ⋯ Boundary
- Non-posted Buffer
- Buffer Zone

Line Spacing: 7.5 ch. (495 ft.)  
Plot Spacing: 4 ch. (264 ft.)



Approximate Net Acres  
Unit 1 = 99  
Unit 2 = 66  
Unit 3 = 61



1 inch = 1,000 feet

4 264 0 264 528 792

Feet

**CRUISE DESIGN  
ASTORIA DISTRICT**

**Sale Name:** Clean Slate **Unit** 4

**Harvest Type:** (MC) Modified Clear-cut

**Approx. Cruise Acres:** 30 **Estimated CV%** 55 Net BF/Acre **SE% Objective** 8 Net BF/Acre

**Planned Sale Volume:** 1,500 MBF **Estimated Sale Area Value/Acre:** \$21,250/Acre  
(Unit 4 Only) (50MBF/Ac. @ \$425/MBF)

**A. Cruise Goals:** (a) Grade minimum 90 conifers  
(b) Sample 30 cruise plots ( 15 grade/ 15 count); (c) Other goals (        Determine "automark"  
thinning standards; X Determine log grades for sale value; X Determine snag and leave  
tree species and sizes.

**B. Cruise Design:**

**1. Plot Cruises:** BAF 54.44 (Full point)  
Cruise Line Directions: 45 °  
Cruise Plot Spacing 2 (chains) 132 (Feet)  
Cruise Line Spacing 5 (chains) 330 (Feet)  
Grade/Count Ratio 1:1

Take plots as marked on cruise map. All cedar will be reserved. Record all snags as SN.

DO NOT RECORD 12', 22' and 32' (for Hardwoods).

DO NOT RECORD 22' LENGTHS.

**C. Tree Measurements:**

- 1. Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods.  
Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16-24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.
- 2. Bole Length:** Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.
- 3. Top Cruise Diameter (TCD):** Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" dbh.
- 4. Form Factors:** (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area, and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in "standard" log lengths in general use, such as 32' and 40' lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12'; for hardwoods, it's 8'. Maximum segment length is 40'. One foot of trim is assumed for each merch. segment. Do not use "double dash" (--) feature on the data recorder except for the top segment of the tree. Hardwoods shall be recorded in 8' and 10' multiples.
6. **Species, Sort, and Grade Codes:**
- A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); SF (Silver fir); A (Red alder); M (Bigleaf maple). For "leave trees" in partial cuts, or for marked "wildlife trees," add an "L" to the species code (such as DL, HL, CL, etc.)
- B. Sort: Use code "1" (Domestic).
- C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull  
Hardwoods: Alder Grades: 12" + = 1 Sawmill; 10"-12" = 2 Sawmill; 10"-8" = 3 Sawmill; and 8"-6" 4 Sawmill, or R = Camp Run; 0 = Cull.  
All Maple Camp Run = R
7. **Deductions:** Estimate visible defect or damage as a "length deduction" (most often), or as a "diameter deduction," as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a "per tree" basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.
8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at inter-visible points, not to exceed 100' apart. On "measure/grade" plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.
9. **Cruising Equipment:** Relaskop, Rangefinder, Logger's Tape (with dbh on back) Biltmore Stick, Compass, Cruise Cards in Tatum OR Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint.
10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.

Cruise Design by: Kevin Berry  
Approved by: John W. Cherry  
Date: 2/28/2020 - Acting UF

## Legend

⋯ TSB Boundary

Stream Buffers

Posted

n

y

— Existing Surfaced Roads

● Cruise Plot

○ Count Plot

Azimuth 45'

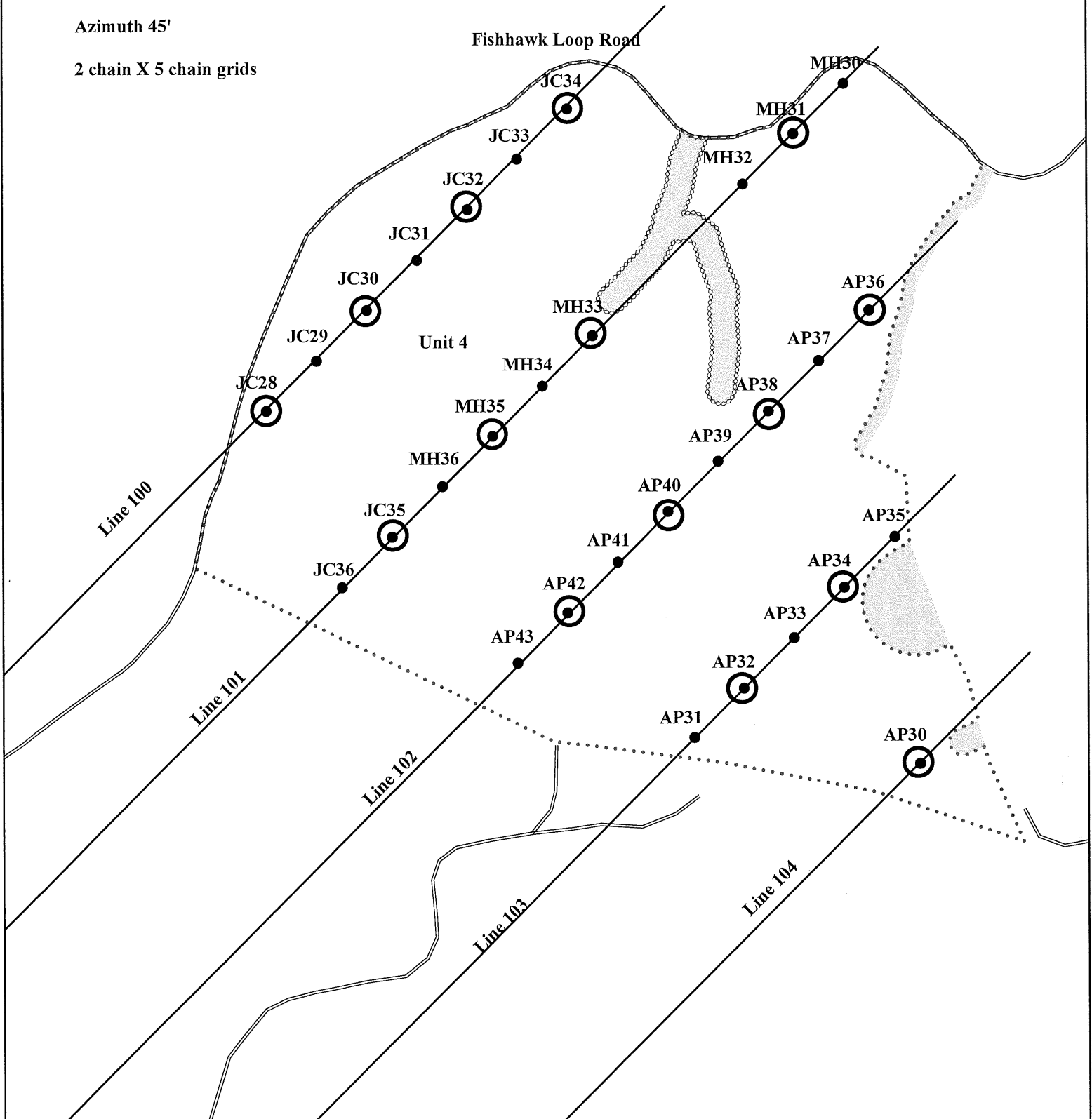
2 chain X 5 chain grids

## Timber Cruise Map Clean Slate Area 4

Portions of Sections 5, T6N, R6W,  
and portions of Sections 28, 32, 33, 34, and 35,  
T7N, R6W, W.M., Clatsop County, Oregon

0 66 132 264 396 528  
Feet

1"=500'





## Species, Sort Grade - Board Foot Volumes (Project)

|                      |        |
|----------------------|--------|
| T07N R06W S33 TyRW   | 1.00   |
| T07N R06W S33 TyTAKE | 225.00 |
| T07N R06W S35 TyTAKE | 30.00  |

**Project:** CSLATE  
**Acres** 256.00

**Page** 1  
**Date** 2/24/2020  
**Time** 9:02:30AM

| S<br>Spp | So<br>T | Gr<br>rt | ad | %<br>Net<br>BdFt | Bd. Ft. per Acre<br>Def%GrossNet |        |        | Total<br>Net MBF            | Percent of Net Board Foot Volume |      |       |     |            |       |       |       | Average Log |           |          |           | Logs<br>Per<br>/Acre |
|----------|---------|----------|----|------------------|----------------------------------|--------|--------|-----------------------------|----------------------------------|------|-------|-----|------------|-------|-------|-------|-------------|-----------|----------|-----------|----------------------|
|          |         |          |    |                  |                                  |        |        |                             | Log Scale Dia.                   |      |       |     | Log Length |       |       |       | Ln<br>Ft    | Dia<br>In | Bd<br>Ft | CF/<br>Lf |                      |
|          |         |          |    |                  |                                  |        |        |                             | 4-5                              | 6-11 | 12-16 | 17+ | 12-20      | 21-30 | 31-35 | 36-99 |             |           |          |           |                      |
| D        |         | DOCU     |    |                  | 100.0                            | 232    |        |                             |                                  |      |       |     |            |       |       |       | 12          | 26        |          | 0.00      | .6                   |
| D        |         | DO2S     |    | 88               | 1.0                              | 28,340 | 28,052 | 7,181                       |                                  | 3    | 29    | 68  | 0          | 1     | 2     | 96    | 39          | 16        | 461      | 2.44      | 60.8                 |
| D        |         | DO3S     |    | 10               | .2                               | 3,244  | 3,238  | 829                         | 1                                | 88   | 9     | 3   | 8          | 19    | 22    | 51    | 32          | 9         | 95       | 0.92      | 34.2                 |
| D        |         | DO4S     |    | 2                | 4.4                              | 580    | 554    | 142                         | 5                                | 94   | 1     |     | 63         | 17    | 14    | 6     | 21          | 7         | 31       | 0.54      | 18.1                 |
| D Totals |         |          |    | 80               | 1.7                              | 32,395 | 31,844 | 8,152                       | 0                                | 14   | 26    | 60  | 2          | 3     | 5     | 90    | 34          | 13        | 280      | 1.82      | 113.7                |
|          |         |          |    |                  |                                  |        |        |                             |                                  |      |       |     |            |       |       |       |             |           |          |           |                      |
| A        |         | DOCU     |    |                  | 100.0                            | 180    |        |                             |                                  |      |       |     |            |       |       |       | 6           | 18        |          | 0.00      | 2.1                  |
| A        |         | DO1S     |    | 11               |                                  | 446    | 446    | 114                         |                                  |      | 100   |     | 28         | 33    |       | 39    | 30          | 14        | 190      | 1.60      | 2.3                  |
| A        |         | DO2S     |    | 38               | 1.2                              | 1,512  | 1,495  | 383                         |                                  | 25   | 75    |     |            | 22    |       | 78    | 37          | 12        | 199      | 1.49      | 7.5                  |
| A        |         | DO3S     |    | 25               | 4.5                              | 1,025  | 979    | 251                         |                                  | 88   | 12    |     |            | 27    | 2     | 71    | 37          | 9         | 107      | 0.85      | 9.2                  |
| A        |         | DO4S     |    | 26               |                                  | 1,017  | 1,017  | 260                         | 1                                | 99   |       |     | 30         | 27    | 4     | 39    | 25          | 6         | 37       | 0.60      | 27.7                 |
| A Totals |         |          |    | 10               | 5.8                              | 4,180  | 3,937  | 1,008                       | 0                                | 57   | 43    |     | 11         | 26    | 2     | 62    | 29          | 8         | 81       | 0.88      | 48.9                 |
|          |         |          |    |                  |                                  |        |        |                             |                                  |      |       |     |            |       |       |       |             |           |          |           |                      |
| H        |         | DOCU     |    |                  | 100.0                            | 97     |        |                             |                                  |      |       |     |            |       |       |       | 10          | 9         |          | 0.00      | 2.6                  |
| H        |         | DO2S     |    | 76               | 1.8                              | 3,057  | 3,003  | 769                         |                                  | 6    | 40    | 54  | 3          | 2     | 7     | 88    | 36          | 15        | 359      | 2.21      | 8.4                  |
| H        |         | DO3S     |    | 14               | 3.6                              | 582    | 561    | 144                         |                                  | 71   | 15    | 14  | 15         | 8     | 40    | 37    | 29          | 9         | 85       | 0.91      | 6.6                  |
| H        |         | DO4S     |    | 10               |                                  | 361    | 361    | 92                          |                                  | 100  |       |     | 37         | 36    |       | 27    | 24          | 7         | 37       | 0.56      | 9.9                  |
| H Totals |         |          |    | 10               | 4.2                              | 4,097  | 3,925  | 1,005                       |                                  | 24   | 33    | 43  | 8          | 6     | 11    | 75    | 28          | 10        | 143      | 1.29      | 27.4                 |
|          |         |          |    |                  |                                  |        |        |                             |                                  |      |       |     |            |       |       |       |             |           |          |           |                      |
| M        |         | DOCR     |    | 100              |                                  | 150    | 150    | 39                          |                                  | 14   |       | 86  | 100        |       |       |       | 17          | 12        | 105      | 1.53      | 1.4                  |
| M Totals |         |          |    | 0                |                                  | 150    | 150    | 39                          |                                  | 14   |       | 86  | 100        |       |       |       | 17          | 12        | 105      | 1.53      | 1.4                  |
|          |         |          |    |                  |                                  |        |        |                             |                                  |      |       |     |            |       |       |       |             |           |          |           |                      |
| Totals   |         |          |    |                  | 2.4                              | 40,823 | 39,856 | 10,204<br><del>10,203</del> | 0                                | 19   | 28    | 53  | 4          | 6     | 5     | 86    | 32          | 11        | 208      | 1.53      | 191.4                |

| T TSPCSTGR          |        | Species, Sort Grade - Board Foot Volumes (Type) |                  |                  |        |                |                  |                               |      |                     |      |       |     |       |       | Page 1         |                 |                      |    |     |      |       |
|---------------------|--------|-------------------------------------------------|------------------|------------------|--------|----------------|------------------|-------------------------------|------|---------------------|------|-------|-----|-------|-------|----------------|-----------------|----------------------|----|-----|------|-------|
|                     |        | Project: CSLATE                                 |                  |                  |        |                |                  |                               |      |                     |      |       |     |       |       | Date 2/14/2020 | Time 12:39:53PM |                      |    |     |      |       |
| T07N R06W S33 TTAKE |        |                                                 |                  |                  |        |                |                  |                               |      | T07N R06W S33 TTAKE |      |       |     |       |       |                |                 |                      |    |     |      |       |
| Twp                 | Rge    | Sec                                             | Tract            | Type             | Acres  | Plots          | Sample Trees     | CuFt                          | BdFt |                     |      |       |     |       |       |                |                 |                      |    |     |      |       |
| 07N                 | 06W    | 33                                              | U123             | TAKE             | 225.00 | 82             | 160              | 1                             | W    |                     |      |       |     |       |       |                |                 |                      |    |     |      |       |
| S So Gr<br>T rt ad  |        |                                                 | %<br>Net<br>BdFt | Bd. Ft. per Acre |        |                | Total<br>Net MBF | Percent Net Board Foot Volume |      |                     |      |       |     |       |       | Average Log    |                 | Logs<br>Per<br>/Acre |    |     |      |       |
|                     |        |                                                 | Def%             | Gross            | Net    | Log Scale Dia. |                  |                               |      | Log Length          |      |       |     | Ln    | Dia   | Bd             | CF/<br>Lf       |                      |    |     |      |       |
|                     |        |                                                 |                  |                  |        |                |                  |                               |      | 4-5                 | 6-11 | 12-16 | 17+ | 12-20 | 21-30 | 31-35          | 36-99           | Ft                   | In | Ft  |      |       |
| D                   | DO     | CU                                              |                  | 00.0             | 195    |                |                  |                               |      |                     |      |       |     |       |       |                |                 | 11                   | 26 |     | 0.00 | .6    |
| D                   | DO     | 2S                                              | 88               | 1.0              | 28,396 | 28,103         | 6,323            |                               |      |                     | 3    | 30    | 67  | 0     | 1     | 2              | 96              | 39                   | 16 | 455 | 2.43 | 61.7  |
| D                   | DO     | 3S                                              | 10               | .2               | 3,295  | 3,288          | 740              |                               |      | 1                   | 89   | 8     | 3   | 8     | 21    | 23             | 48              | 32                   | 9  | 93  | 0.92 | 35.2  |
| D                   | DO     | 4S                                              | 2                | 5.2              | 565    | 536            | 121              |                               |      | 6                   | 94   |       |     | 62    | 16    | 16             | 6               | 21                   | 7  | 31  | 0.55 | 17.6  |
| D                   | Totals |                                                 | 84               | 1.6              | 32,450 | 31,927         | 7,183            |                               |      | 0                   | 13   | 27    | 59  | 2     | 3     | 5              | 90              | 34                   | 13 | 277 | 1.81 | 115.1 |
| A                   | DO     | CU                                              |                  | 00.0             | 204    |                |                  |                               |      |                     |      |       |     |       |       |                |                 | 6                    | 18 |     | 0.00 | 2.4   |
| A                   | DO     | 1S                                              | 12               |                  | 505    | 505            | 114              |                               |      |                     |      | 100   |     | 28    | 33    |                | 39              | 30                   | 14 | 190 | 1.60 | 2.7   |
| A                   | DO     | 2S                                              | 35               | 1.1              | 1,426  | 1,411          | 317              |                               |      |                     | 24   | 76    |     |       | 24    |                | 76              | 37                   | 12 | 202 | 1.53 | 7.0   |
| A                   | DO     | 3S                                              | 26               | 4.7              | 1,118  | 1,066          | 240              |                               |      |                     | 88   | 12    |     |       | 28    |                | 72              | 37                   | 9  | 109 | 0.86 | 9.8   |
| A                   | DO     | 4S                                              | 27               |                  | 1,090  | 1,090          | 245              |                               |      | 1                   | 99   |       |     | 30    | 28    | 4              | 37              | 25                   | 6  | 36  | 0.60 | 29.9  |
| A                   | Totals |                                                 | 11               | 6.2              | 4,343  | 4,072          | 916              |                               |      | 0                   | 58   | 42    |     | 12    | 27    | 1              | 60              | 28                   | 8  | 79  | 0.87 | 51.7  |
| H                   | DO     | CU                                              |                  | 00.0             | 110    |                |                  |                               |      |                     |      |       |     |       |       |                |                 | 10                   | 9  |     | 0.00 | 2.9   |
| H                   | DO     | 2S                                              | 87               | 2.8              | 1,507  | 1,465          | 330              |                               |      |                     |      | 30    | 70  | 8     |       | 11             | 81              | 32                   | 16 | 389 | 2.72 | 3.8   |
| H                   | DO     | 3S                                              | 6                | 19.1             | 124    | 100            | 23               |                               |      |                     | 65   | 35    |     | 65    |       |                | 35              | 15                   | 10 | 49  | 1.27 | 2.0   |
| H                   | DO     | 4S                                              | 7                |                  | 117    | 117            | 26               |                               |      |                     | 100  |       |     | 74    | 26    |                |                 | 20                   | 8  | 39  | 0.73 | 3.0   |
| H                   | Totals |                                                 | 4                | 9.5              | 1,858  | 1,682          | 378              |                               |      |                     | 11   | 28    | 61  | 16    | 2     | 10             | 73              | 20                   | 11 | 144 | 1.70 | 11.7  |
| M                   | DO     | CR                                              | 100              |                  | 170    | 170            | 38               |                               |      |                     | 14   |       | 86  | 100   |       |                |                 | 17                   | 12 | 105 | 1.53 | 1.6   |
| M                   | Totals |                                                 | 0                |                  | 170    | 170            | 38               |                               |      |                     | 14   |       | 86  | 100   |       |                |                 | 17                   | 12 | 105 | 1.53 | 1.6   |
| Type Totals         |        |                                                 |                  | 2.5              | 38,822 | 37,850         | 8,516            |                               |      | 0                   | 18   | 29    | 53  | 4     | 6     | 4              | 85              | 31                   | 11 | 210 | 1.56 | 180.2 |

| T                 |  | TSPCSTGR |  | Species, Sort Grade - Board Foot Volumes (Type) |  |            |  |                                 |  |                   |  |                               |  |              |  | Page       |  | 1          |  |                |  |                |  |                |  |
|-------------------|--|----------|--|-------------------------------------------------|--|------------|--|---------------------------------|--|-------------------|--|-------------------------------|--|--------------|--|------------|--|------------|--|----------------|--|----------------|--|----------------|--|
|                   |  |          |  | Project: CSLATE                                 |  |            |  |                                 |  |                   |  |                               |  |              |  | Date       |  | 2/14/2020  |  |                |  |                |  |                |  |
|                   |  |          |  |                                                 |  |            |  |                                 |  |                   |  |                               |  |              |  | Time       |  | 12:39:53PM |  |                |  |                |  |                |  |
| T07N R06W S33 TRW |  |          |  |                                                 |  |            |  |                                 |  | T07N R06W S33 TRW |  |                               |  |              |  |            |  |            |  |                |  |                |  |                |  |
| Twp               |  | Rge      |  | Sec                                             |  | Tract      |  | Type                            |  | Acres             |  | Plots                         |  | Sample Trees |  | CuFt       |  | BdFt       |  |                |  |                |  |                |  |
| 07N               |  | 06W      |  | 33                                              |  | U123       |  | RW                              |  | 1.00              |  | 82                            |  | 160          |  | 1          |  | W          |  |                |  |                |  |                |  |
| S Spp             |  | So rt    |  | Gr ad                                           |  | % Net BdFt |  | Bd. Ft. per Acre Def% Gross Net |  | Total Net MBF     |  | Percent Net Board Foot Volume |  |              |  |            |  |            |  | Average Log    |  |                |  | Logs Per /Acre |  |
|                   |  |          |  |                                                 |  |            |  |                                 |  |                   |  | Log Scale Dia.                |  |              |  | Log Length |  |            |  | Ln Dia Bd CF/  |  |                |  |                |  |
|                   |  |          |  |                                                 |  |            |  |                                 |  |                   |  | 4-5                           |  | 6-11         |  | 12-16      |  | 17+        |  | 12-20          |  | 21-30          |  |                |  |
| D                 |  | DO       |  | CU                                              |  |            |  | 00.0                            |  | 195               |  |                               |  |              |  |            |  | 11 26      |  | 0.00           |  | .6             |  |                |  |
| D                 |  | DO       |  | 2S                                              |  | 88         |  | 1.0                             |  | 28,396            |  | 28,103                        |  | 28           |  | 3 30 67    |  | 0 1 2 96   |  | 39 16 455 2.43 |  | 61.7           |  |                |  |
| D                 |  | DO       |  | 3S                                              |  | 10         |  | .2                              |  | 3,295             |  | 3,288                         |  | 3            |  | 1 89 8 3   |  | 8 21 23 48 |  | 32 9 93 0.92   |  | 35.2           |  |                |  |
| D                 |  | DO       |  | 4S                                              |  | 2          |  | 5.2                             |  | 565               |  | 536                           |  | 1            |  | 6 94       |  | 62 16 16 6 |  | 21 7 31 0.55   |  | 17.6           |  |                |  |
| D                 |  | Totals   |  |                                                 |  | 84         |  | 1.6                             |  | 32,450            |  | 31,927                        |  | 32           |  | 0 13 27 59 |  | 2 3 5 90   |  | 34 13 277 1.81 |  | 115.1          |  |                |  |
| A                 |  | DO       |  | CU                                              |  |            |  | 00.0                            |  | 204               |  |                               |  |              |  |            |  | 6 18       |  | 0.00           |  | 2.4            |  |                |  |
| A                 |  | DO       |  | 1S                                              |  | 12         |  |                                 |  | 505               |  | 505                           |  | 1            |  | 100        |  | 28 33      |  | 39             |  | 30 14 190 1.60 |  | 2.7            |  |
| A                 |  | DO       |  | 2S                                              |  | 35         |  | 1.1                             |  | 1,426             |  | 1,411                         |  | 1            |  | 24 76      |  | 24         |  | 76             |  | 37 12 202 1.53 |  | 7.0            |  |
| A                 |  | DO       |  | 3S                                              |  | 26         |  | 4.7                             |  | 1,118             |  | 1,066                         |  | 1            |  | 88 12      |  | 28         |  | 72             |  | 37 9 109 0.86  |  | 9.8            |  |
| A                 |  | DO       |  | 4S                                              |  | 27         |  |                                 |  | 1,090             |  | 1,090                         |  | 1            |  | 1 99       |  | 30 28 4 37 |  | 25 6 36 0.60   |  | 29.9           |  |                |  |
| A                 |  | Totals   |  |                                                 |  | 11         |  | 6.2                             |  | 4,343             |  | 4,072                         |  | 4            |  | 0 58 42    |  | 12 27 1 60 |  | 28 8 79 0.87   |  | 51.7           |  |                |  |
| H                 |  | DO       |  | CU                                              |  |            |  | 00.0                            |  | 110               |  |                               |  |              |  |            |  | 10 9       |  | 0.00           |  | 2.9            |  |                |  |
| H                 |  | DO       |  | 2S                                              |  | 87         |  | 2.8                             |  | 1,507             |  | 1,465                         |  | 1            |  | 30 70      |  | 8          |  | 11 81          |  | 32 16 389 2.72 |  | 3.8            |  |
| H                 |  | DO       |  | 3S                                              |  | 6          |  | 19.1                            |  | 124               |  | 100                           |  | 0            |  | 65 35      |  | 65         |  | 35             |  | 15 10 49 1.27  |  | 2.0            |  |
| H                 |  | DO       |  | 4S                                              |  | 7          |  |                                 |  | 117               |  | 117                           |  | 0            |  | 100        |  | 74 26      |  |                |  | 20 8 39 0.73   |  | 3.0            |  |
| H                 |  | Totals   |  |                                                 |  | 4          |  | 9.5                             |  | 1,858             |  | 1,682                         |  | 2            |  | 11 28 61   |  | 16 2 10 73 |  | 20 11 144 1.70 |  | 11.7           |  |                |  |
| M                 |  | DO       |  | CR                                              |  | 100        |  |                                 |  | 170               |  | 170                           |  | 0            |  | 14 86      |  | 100        |  |                |  | 17 12 105 1.53 |  | 1.6            |  |
| M                 |  | Totals   |  |                                                 |  | 0          |  |                                 |  | 170               |  | 170                           |  | 0            |  | 14 86      |  | 100        |  |                |  | 17 12 105 1.53 |  | 1.6            |  |
| Type Totals       |  |          |  |                                                 |  |            |  | 2.5                             |  | 38,822            |  | 37,850                        |  | 38           |  | 0 18 29 53 |  | 4 6 4 85   |  | 31 11 210 1.56 |  | 180.2          |  |                |  |

| T                                     |  | TSPCSTGR |                  | Species, Sort Grade - Board Foot Volumes (Type) |                                    |       |  |                   |  |                               |  |          |  | Page                    |  | 1          |  |                |  |                |  |                      |  |       |  |
|---------------------------------------|--|----------|------------------|-------------------------------------------------|------------------------------------|-------|--|-------------------|--|-------------------------------|--|----------|--|-------------------------|--|------------|--|----------------|--|----------------|--|----------------------|--|-------|--|
|                                       |  |          |                  | Project: CSLATE                                 |                                    |       |  |                   |  |                               |  |          |  | Date                    |  | 2/14/2020  |  |                |  |                |  |                      |  |       |  |
|                                       |  |          |                  |                                                 |                                    |       |  |                   |  |                               |  |          |  | Time                    |  | 12:39:53PM |  |                |  |                |  |                      |  |       |  |
| T07N R06W S35 TTAKE                   |  |          |                  |                                                 |                                    |       |  |                   |  | T07N R06W S35 TTAKE           |  |          |  |                         |  |            |  |                |  |                |  |                      |  |       |  |
| Twp                                   |  | Rge      |                  | Sec                                             |                                    | Tract |  | Type              |  | Acres                         |  | Plots    |  | Sample Trees            |  | CuFt       |  | BdFt           |  |                |  |                      |  |       |  |
| 07N                                   |  | 06W      |                  | 35                                              |                                    | U4    |  | TAKE              |  | 30.00                         |  | 30       |  | 85                      |  | 1          |  | W              |  |                |  |                      |  |       |  |
| S<br>So<br>Gr<br>T<br>rt<br>ad<br>Spp |  |          | %<br>Net<br>BdFt |                                                 | Bd. Ft. per Acre<br>Def% Gross Net |       |  | Total<br>Net MBF  |  | Percent Net Board Foot Volume |  |          |  |                         |  |            |  | Average Log    |  |                |  | Logs<br>Per<br>/Acre |  |       |  |
|                                       |  |          |                  |                                                 |                                    |       |  |                   |  | Log Scale Dia.                |  |          |  | Log Length              |  |            |  | Ln Dia Bd CF/  |  |                |  |                      |  |       |  |
|                                       |  |          |                  |                                                 |                                    |       |  |                   |  | 4-5 6-11 12-16 17+            |  |          |  | 12-20 21-30 31-35 36-99 |  |            |  | Ft In Ft Lf    |  |                |  |                      |  |       |  |
| H                                     |  |          | DO 2S            |                                                 | 70                                 |       |  | .9 14,727 14,589  |  | 438                           |  | 11 49 41 |  |                         |  | 3 3 94     |  |                |  | 39 14 339 1.94 |  |                      |  | 43.1  |  |
| H                                     |  |          | DO 3S            |                                                 | 19                                 |       |  | 4,032 4,032       |  | 121                           |  | 73 11 17 |  |                         |  | 6 9 47 38  |  |                |  | 34 8 98 0.85   |  |                      |  | 41.2  |  |
| H                                     |  |          | DO 4S            |                                                 | 11                                 |       |  | 2,201 2,201       |  | 66                            |  | 100      |  |                         |  | 23 40 38   |  |                |  | 25 6 36 0.51   |  |                      |  | 61.6  |  |
| H                                     |  |          | Totals           |                                                 | 38                                 |       |  | .7 20,960 20,822  |  | 625                           |  | 32 36 32 |  |                         |  | 4 8 12 77  |  |                |  | 32 9 143 1.13  |  |                      |  | 145.8 |  |
| D                                     |  |          | DO CU            |                                                 | 00.0 514                           |       |  |                   |  |                               |  |          |  |                         |  |            |  |                |  | 16 29 0.00     |  |                      |  | .8    |  |
| D                                     |  |          | DO 2S            |                                                 | 88                                 |       |  | .9 27,919 27,674  |  | 830                           |  | 6 18 77  |  |                         |  | 0 0 3 97   |  |                |  | 39 17 512 2.59 |  |                      |  | 54.0  |  |
| D                                     |  |          | DO 3S            |                                                 | 9                                  |       |  | 2,859 2,859       |  | 86                            |  | 83 17    |  |                         |  | 6 7 13 74  |  |                |  | 35 9 110 0.94  |  |                      |  | 26.1  |  |
| D                                     |  |          | DO 4S            |                                                 | 3                                  |       |  | 690 690           |  | 21                            |  | 90 10    |  |                         |  | 66 24 10   |  |                |  | 20 7 32 0.53   |  |                      |  | 21.8  |  |
| D                                     |  |          | Totals           |                                                 | 57                                 |       |  | 2.4 31,981 31,223 |  | 937                           |  | 15 17 68 |  |                         |  | 2 1 4 93   |  |                |  | 34 13 304 1.88 |  |                      |  | 102.8 |  |
| A                                     |  |          | DO 2S            |                                                 | 72                                 |       |  | 1.7 2,164 2,129   |  | 64                            |  | 32 68    |  |                         |  | 11 89      |  |                |  | 38 12 183 1.30 |  |                      |  | 11.7  |  |
| A                                     |  |          | DO 3S            |                                                 | 11                                 |       |  | 322 322           |  | 10                            |  | 100      |  |                         |  | 56 44      |  |                |  | 37 8 70 0.70   |  |                      |  | 4.6   |  |
| A                                     |  |          | DO 4S            |                                                 | 17                                 |       |  | 469 469           |  | 14                            |  | 100      |  |                         |  | 28 72      |  |                |  | 29 6 42 0.63   |  |                      |  | 11.3  |  |
| A                                     |  |          | Totals           |                                                 | 5                                  |       |  | 1.2 2,955 2,919   |  | 88                            |  | 51 49    |  |                         |  | 4 8 6 81   |  |                |  | 34 9 106 0.96  |  |                      |  | 27.5  |  |
| Type Totals                           |  |          |                  |                                                 | 1.7 55,897 54,964                  |       |  | 1,649             |  | 23 26 51                      |  |          |  | 3 4 7 86                |  |            |  | 33 10 199 1.40 |  |                |  | 276.1                |  |       |  |

| TC PSTATS                                                        |      |        |       | PROJECT STATISTICS |           |         |       |                 |        | PAGE      | 1         |
|------------------------------------------------------------------|------|--------|-------|--------------------|-----------|---------|-------|-----------------|--------|-----------|-----------|
|                                                                  |      |        |       | PROJECT            | CSLATE    |         |       |                 |        | DATE      | 2/19/2020 |
| TWP                                                              | RGE  | SC     | TRACT | TYPE               | ACRES     | PLOTS   | TREES | CuFt            | BdFt   |           |           |
| 07N                                                              | 06   | 33     | U123  | RW                 | 256.00    | 194     | 994   | 1               | W      |           |           |
| 07N                                                              | 06W  | 33     | U123  | TAKE               |           |         |       |                 |        |           |           |
| 07N                                                              | 06W  | 35     | U4    | TAKE               |           |         |       |                 |        |           |           |
|                                                                  |      |        |       | TREES              | ESTIMATED | PERCENT |       |                 |        |           |           |
|                                                                  |      |        |       | PER PLOT           | TOTAL     | SAMPLE  |       |                 |        |           |           |
|                                                                  |      |        |       | TREES              | TREES     | TREES   |       |                 |        |           |           |
| TOTAL                                                            |      |        | 194   | 994                | 5.1       |         |       |                 |        |           |           |
| CRUISE                                                           |      |        | 75    | 403                | 5.4       | 24,004  | 1.7   |                 |        |           |           |
| DBH COUNT                                                        |      |        |       |                    |           |         |       |                 |        |           |           |
| REFOREST                                                         |      |        |       |                    |           |         |       |                 |        |           |           |
| COUNT                                                            |      |        | 113   | 589                | 5.2       |         |       |                 |        |           |           |
| BLANKS                                                           |      |        | 6     |                    |           |         |       |                 |        |           |           |
| 100 %                                                            |      |        |       |                    |           |         |       |                 |        |           |           |
| STAND SUMMARY                                                    |      |        |       |                    |           |         |       |                 |        |           |           |
| SAMPLE                                                           |      |        | TREES | AVG                | BOLE      | REL     | BASAL | GROSS           | NET    | GROSS     | NET       |
| TREES                                                            |      |        | /ACRE | DBH                | LEN       | DEN     | AREA  | BF/AC           | BF/AC  | CF/AC     | CF/AC     |
| DOUG FIR                                                         |      |        | 289   | 44.1               | 24.3      | 91      | 28.8  | 142.1           | 32,395 | 31,844    | 7,052     |
| WHEMLOCK                                                         |      |        | 54    | 17.6               | 17.2      | 45      | 6.9   | 28.4            | 4,097  | 3,925     | 1,000     |
| R ALDER                                                          |      |        | 58    | 31.4               | 15.5      | 46      | 10.5  | 41.3            | 4,180  | 3,937     | 1,274     |
| BL MAPLE                                                         |      |        | 2     | .7                 | 21.0      | 36      | 0.4   | 1.7             | 150    | 150       | 37        |
| TOTAL                                                            |      |        | 403   | 93.8               | 20.4      | 67      | 47.3  | 213.6           | 40,823 | 39,856    | 9,363     |
| CONFIDENCE LIMITS OF THE SAMPLE                                  |      |        |       |                    |           |         |       |                 |        |           |           |
| 68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR |      |        |       |                    |           |         |       |                 |        |           |           |
| CL                                                               | 68.1 | COEFF  |       | SAMPLE TREES - BF  |           |         |       | # OF TREES REQ. |        | INF. POP. |           |
| SD:                                                              | 1.0  | VAR.%  | S.E.% | LOW                | AVG       | HIGH    | 5 10  |                 | 15     |           |           |
| DOUG FIR                                                         |      | 68.2   | 4.0   | 1,014              | 1,056     | 1,099   |       |                 |        |           |           |
| WHEMLOCK                                                         |      | 142.9  | 19.4  | 519                | 644       | 769     |       |                 |        |           |           |
| R ALDER                                                          |      | 63.7   | 8.4   | 156                | 170       | 185     |       |                 |        |           |           |
| BL MAPLE                                                         |      |        |       | 210                | 210       | 210     |       |                 |        |           |           |
| TOTAL                                                            |      | 88.4   | 4.4   | 831                | 869       | 908     | 312   | 78              | 35     |           |           |
| CL                                                               | 68.1 | COEFF  |       | TREES/ACRE         |           |         |       | # OF PLOTS REQ. |        | INF. POP. |           |
| SD:                                                              | 1.0  | VAR.%  | S.E.% | LOW                | AVG       | HIGH    | 5 10  |                 | 15     |           |           |
| DOUG FIR                                                         |      | 138.6  | 9.9   | 40                 | 44        | 48      |       |                 |        |           |           |
| WHEMLOCK                                                         |      | 243.8  | 17.5  | 14                 | 18        | 21      |       |                 |        |           |           |
| R ALDER                                                          |      | 250.9  | 18.0  | 26                 | 31        | 37      |       |                 |        |           |           |
| BL MAPLE                                                         |      | 1094.5 | 78.5  | 0                  | 1         | 1       |       |                 |        |           |           |
| TOTAL                                                            |      | 132.8  | 9.5   | 85                 | 94        | 103     | 704   | 176             | 78     |           |           |
| CL                                                               | 68.1 | COEFF  |       | BASAL AREA/ACRE    |           |         |       | # OF PLOTS REQ. |        | INF. POP. |           |
| SD:                                                              | 1.0  | VAR.%  | S.E.% | LOW                | AVG       | HIGH    | 5 10  |                 | 15     |           |           |
| DOUG FIR                                                         |      | 127.7  | 9.2   | 129                | 142       | 155     |       |                 |        |           |           |
| WHEMLOCK                                                         |      | 235.6  | 16.9  | 24                 | 28        | 33      |       |                 |        |           |           |
| R ALDER                                                          |      | 225.7  | 16.2  | 35                 | 41        | 48      |       |                 |        |           |           |
| BL MAPLE                                                         |      | 1094.5 | 78.5  | 0                  | 2         | 3       |       |                 |        |           |           |
| TOTAL                                                            |      | 113.3  | 8.1   | 196                | 214       | 231     | 512   | 128             | 57     |           |           |
| CL                                                               | 68.1 | COEFF  |       | NET BF/ACRE        |           |         |       | # OF PLOTS REQ. |        | INF. POP. |           |
| SD:                                                              | 1.0  | VAR.%  | S.E.% | LOW                | AVG       | HIGH    | 5 10  |                 | 15     |           |           |
| DOUG FIR                                                         |      | 127.6  | 9.2   | 28,930             | 31,844    | 34,758  |       |                 |        |           |           |
| WHEMLOCK                                                         |      | 249.0  | 17.9  | 3,224              | 3,925     | 4,626   |       |                 |        |           |           |
| R ALDER                                                          |      | 219.9  | 15.8  | 3,316              | 3,937     | 4,558   |       |                 |        |           |           |
| BL MAPLE                                                         |      | 1094.5 | 78.5  | 32                 | 150       | 268     |       |                 |        |           |           |
| TOTAL                                                            |      | 112.7  | 8.1   | 36,635             | 39,856    | 43,077  | 507   | 127             | 56     |           |           |

|                                                                  |     |       |       |                   |                 |                |          |         |                 |             |           |             |           |    |
|------------------------------------------------------------------|-----|-------|-------|-------------------|-----------------|----------------|----------|---------|-----------------|-------------|-----------|-------------|-----------|----|
| TC TSTATS                                                        |     |       |       | STATISTICS        |                 |                |          | PAGE 1  |                 |             |           |             |           |    |
|                                                                  |     |       |       | PROJECT           | CSLATE          | DATE 2/14/2020 |          |         |                 |             |           |             |           |    |
| TWP                                                              | RGE | SECT  | TRACT | TYPE              | ACRES           | PLOTS          | TREES    | CuFt    | BdFt            |             |           |             |           |    |
| 07N                                                              | 06W | 33    | A123  | 00MC              | 226.00          | 83             | 447      | 1       | W               |             |           |             |           |    |
|                                                                  |     |       |       | TREES             | ESTIMATED TOTAL | PERCENT SAMPLE |          |         |                 |             |           |             |           |    |
|                                                                  |     |       |       | PER PLOT          | TREES           | TREES          |          |         |                 |             |           |             |           |    |
|                                                                  |     |       |       | PLOTS             | TREES           |                |          |         |                 |             |           |             |           |    |
| TOTAL                                                            |     |       |       | 83                | 447             | 5.4            |          |         |                 |             |           |             |           |    |
| CRUISE                                                           |     |       |       | 33                | 176             | 5.3            | 21,048   | .8      |                 |             |           |             |           |    |
| DBH COUNT                                                        |     |       |       |                   |                 |                |          |         |                 |             |           |             |           |    |
| REFOREST                                                         |     |       |       |                   |                 |                |          |         |                 |             |           |             |           |    |
| COUNT                                                            |     |       |       | 48                | 261             | 5.4            |          |         |                 |             |           |             |           |    |
| BLANKS                                                           |     |       |       | 2                 |                 |                |          |         |                 |             |           |             |           |    |
| 100 %                                                            |     |       |       |                   |                 |                |          |         |                 |             |           |             |           |    |
| STAND SUMMARY                                                    |     |       |       |                   |                 |                |          |         |                 |             |           |             |           |    |
|                                                                  |     |       |       | SAMPLE TREES      | TREES /ACRE     | AVG DBH        | BOLE LEN | REL DEN | BASAL AREA      | GROSS BF/AC | NET BF/AC | GROSS CF/AC | NET CF/AC |    |
| DOUG FIR                                                         |     |       |       | 123               | 44.1            | 24.3           | 91       | 28.8    | 142.2           | 32,059      | 31,542    | 7,024       | 6,993     |    |
| R ALDER                                                          |     |       |       | 25                | 33.1            | 15.4           | 45       | 10.9    | 42.9            | 4,291       | 4,023     | 1,306       | 1,270     |    |
| WHEMLOCK                                                         |     |       |       | 10                | 8.9             | 17.3           | 28       | 3.5     | 14.5            | 1,836       | 1,661     | 431         | 404       |    |
| SNAG                                                             |     |       |       | 14                | 5.9             | 18.2           | 34       | 2.5     | 10.6            | 48          | 48        | 15          | 15        |    |
| WR CEDAR                                                         |     |       |       | 3                 | .4              | 41.1           | 79       | 0.5     | 3.4             | 622         | 616       | 136         | 133       |    |
| BL MAPLE                                                         |     |       |       | 1                 | .8              | 21.0           | 36       | 0.4     | 1.9             | 168         | 168       | 42          | 42        |    |
| TOTAL                                                            |     |       |       | 176               | 93.1            | 20.6           | 64       | 47.5    | 215.4           | 39,024      | 38,058    | 8,954       | 8,857     |    |
| CONFIDENCE LIMITS OF THE SAMPLE                                  |     |       |       |                   |                 |                |          |         |                 |             |           |             |           |    |
| 68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR |     |       |       |                   |                 |                |          |         |                 |             |           |             |           |    |
| CL: 68.1 %                                                       |     | COEFF |       | SAMPLE TREES - BF |                 |                |          |         | # OF TREES REQ. |             | INF. POP. |             |           |    |
| SD: 1.0                                                          |     | VAR.% |       | S.E.%             |                 | LOW            |          | AVG     |                 | HIGH        |           | 5           | 10        | 15 |
| DOUG FIR                                                         |     | 60.2  |       | 5.4               |                 | 939            |          | 992     |                 | 1,046       |           |             |           |    |
| R ALDER                                                          |     | 67.6  |       | 13.8              |                 | 145            |          | 168     |                 | 191         |           |             |           |    |
| WHEMLOCK                                                         |     | 96.8  |       | 32.2              |                 | 374            |          | 552     |                 | 730         |           |             |           |    |
| SNAG                                                             |     | 374.2 |       | 103.6             |                 |                |          | 4       |                 | 7           |           |             |           |    |
| WR CEDAR                                                         |     | 19.0  |       | 13.1              |                 | 1,503          |          | 1,730   |                 | 1,957       |           |             |           |    |
| BL MAPLE                                                         |     |       |       |                   |                 |                |          |         |                 |             |           |             |           |    |
| TOTAL                                                            |     | 83.1  |       | 6.3               |                 | 731            |          | 780     |                 | 829         |           | 276         | 69        | 31 |
| CL: 68.1 %                                                       |     | COEFF |       | TREES/ACRE        |                 |                |          |         | # OF PLOTS REQ. |             | INF. POP. |             |           |    |
| SD: 1.0                                                          |     | VAR.% |       | S.E.%             |                 | LOW            |          | AVG     |                 | HIGH        |           | 5           | 10        | 15 |
| DOUG FIR                                                         |     | 70.3  |       | 7.7               |                 | 41             |          | 44      |                 | 47          |           |             |           |    |
| R ALDER                                                          |     | 158.8 |       | 17.4              |                 | 27             |          | 33      |                 | 39          |           |             |           |    |
| WHEMLOCK                                                         |     | 234.3 |       | 25.7              |                 | 7              |          | 9       |                 | 11          |           |             |           |    |
| SNAG                                                             |     | 296.1 |       | 32.5              |                 | 4              |          | 6       |                 | 8           |           |             |           |    |
| WR CEDAR                                                         |     | 434.2 |       | 47.6              |                 | 0              |          | 0       |                 | 1           |           |             |           |    |
| BL MAPLE                                                         |     | 717.6 |       | 78.7              |                 | 0              |          | 1       |                 | 1           |           |             |           |    |
| TOTAL                                                            |     | 69.2  |       | 7.6               |                 | 86             |          | 93      |                 | 100         |           | 191         | 48        | 21 |
| CL: 68.1 %                                                       |     | COEFF |       | BASAL AREA/ACRE   |                 |                |          |         | # OF PLOTS REQ. |             | INF. POP. |             |           |    |
| SD: 1.0                                                          |     | VAR.% |       | S.E.%             |                 | LOW            |          | AVG     |                 | HIGH        |           | 5           | 10        | 15 |
| DOUG FIR                                                         |     | 59.2  |       | 6.5               |                 | 133            |          | 142     |                 | 151         |           |             |           |    |
| R ALDER                                                          |     | 141.0 |       | 15.5              |                 | 36             |          | 43      |                 | 50          |           |             |           |    |
| WHEMLOCK                                                         |     | 226.9 |       | 24.9              |                 | 11             |          | 14      |                 | 18          |           |             |           |    |
| SNAG                                                             |     | 243.5 |       | 26.7              |                 | 8              |          | 11      |                 | 13          |           |             |           |    |
| WR CEDAR                                                         |     | 422.5 |       | 46.3              |                 | 2              |          | 3       |                 | 5           |           |             |           |    |
| BL MAPLE                                                         |     | 717.6 |       | 78.7              |                 | 0              |          | 2       |                 | 3           |           |             |           |    |
| TOTAL                                                            |     | 46.2  |       | 5.1               |                 | 205            |          | 215     |                 | 226         |           | 85          | 21        | 9  |
| CL: 68.1 %                                                       |     | COEFF |       | NET BF/ACRE       |                 |                |          |         | # OF PLOTS REQ. |             | INF. POP. |             |           |    |
| SD: 1.0                                                          |     | VAR.% |       | S.E.%             |                 | LOW            |          | AVG     |                 | HIGH        |           | 5           | 10        | 15 |
| DOUG FIR                                                         |     | 59.5  |       | 6.5               |                 | 29,482         |          | 31,542  |                 | 33,601      |           |             |           |    |
| R ALDER                                                          |     | 138.9 |       | 15.2              |                 | 3,410          |          | 4,023   |                 | 4,636       |           |             |           |    |
| WHEMLOCK                                                         |     | 243.1 |       | 26.7              |                 | 1,218          |          | 1,661   |                 | 2,104       |           |             |           |    |
| SNAG                                                             |     | 589.4 |       | 64.6              |                 | 17             |          | 48      |                 | 79          |           |             |           |    |

|           |        |       |       |             |        |        |                 |           |      |
|-----------|--------|-------|-------|-------------|--------|--------|-----------------|-----------|------|
| TC TSTATS |        |       |       | STATISTICS  |        |        | PAGE            | 2         |      |
|           |        |       |       | PROJECT     | CSLATE |        | DATE            | 2/14/2020 |      |
| TWP       | RGE    | SECT  | TRACT | TYPE        | ACRES  | PLOTS  | TREES           | CuFt      | BdFt |
| 07N       | 06W    | 33    | A123  | 00MC        | 226.00 | 83     | 447             | 1         | W    |
| CL:       | 68.1 % | COEFF |       | NET BF/ACRE |        |        | # OF PLOTS REQ. | INF. POP. |      |
| SD:       | 1.0    | VAR.  | S.E.% | LOW         | AVG    | HIGH   | 5               | 10        | 15   |
| WR CEDAR  |        | 425.8 | 46.7  | 328         | 616    | 903    |                 |           |      |
| BL MAPLE  |        | 717.6 | 78.7  | 36          | 168    | 301    |                 |           |      |
| TOTAL     |        | 49.8  | 5.5   | 35,980      | 38,058 | 40,137 | 99              | 25        | 11   |

|                                                                  |       |                   |       |            |           |         |                 |        |           |        |
|------------------------------------------------------------------|-------|-------------------|-------|------------|-----------|---------|-----------------|--------|-----------|--------|
| TC TSTATS                                                        |       |                   |       | STATISTICS |           |         |                 | PAGE   | 1         |        |
|                                                                  |       |                   |       | PROJECT    | CSLATE    |         |                 | DATE   | 2/14/2020 |        |
| TWP                                                              | RGE   | SECT              | TRACT | TYPE       | ACRES     | PLOTS   | TREES           | CuFt   | BdFt      |        |
| 07N                                                              | 06W   | 35                | A4    | 00MC       | 30.00     | 30      | 169             | 1      | W         |        |
|                                                                  |       |                   |       |            |           |         |                 |        |           |        |
|                                                                  |       |                   |       | TREES      | ESTIMATED | PERCENT |                 |        |           |        |
|                                                                  |       |                   |       | PER PLOT   | TOTAL     | SAMPLE  |                 |        |           |        |
|                                                                  |       |                   |       |            | TREES     | TREES   |                 |        |           |        |
| TOTAL                                                            |       | 30                | 169   | 5.6        |           |         |                 |        |           |        |
| CRUISE                                                           |       | 16                | 89    | 5.6        | 4,196     |         | 2.1             |        |           |        |
| DBH COUNT                                                        |       |                   |       |            |           |         |                 |        |           |        |
| REFOREST                                                         |       |                   |       |            |           |         |                 |        |           |        |
| COUNT                                                            |       | 14                | 74    | 5.3        |           |         |                 |        |           |        |
| BLANKS                                                           |       |                   |       |            |           |         |                 |        |           |        |
| 100 %                                                            |       |                   |       |            |           |         |                 |        |           |        |
| STAND SUMMARY                                                    |       |                   |       |            |           |         |                 |        |           |        |
| SAMPLE                                                           |       | TREES             | AVG   | BOLE       | REL       | BASAL   | GROSS           | NET    | GROSS     | NET    |
| TREES                                                            |       | /ACRE             | DBH   | LEN        | DEN       | AREA    | BF/AC           | BF/AC  | CF/AC     | CF/AC  |
| WHEMLOCK                                                         |       | 34                | 82.0  | 17.2       | 58        | 31.9    | 132.5           | 20,960 | 20,822    | 5,247  |
| DOUG FIR                                                         |       | 43                | 39.7  | 24.4       | 91        | 26.1    | 128.8           | 31,981 | 31,223    | 6,615  |
| R ALDER                                                          |       | 8                 | 15.9  | 17.1       | 62        | 6.1     | 25.4            | 2,955  | 2,919     | 909    |
| WR CEDAR                                                         |       | 3                 | 1.6   | 40.4       | 78        | 2.3     | 14.5            | 2,291  | 2,291     | 575    |
| SNAG                                                             |       | 1                 | .6    | 40.0       | 52        | 0.9     | 5.4             |        |           |        |
| TOTAL                                                            |       | 89                | 139.9 | 20.1       | 68        | 68.5    | 306.7           | 58,188 | 57,255    | 13,345 |
|                                                                  |       |                   |       |            |           |         |                 |        |           | 13,262 |
| CONFIDENCE LIMITS OF THE SAMPLE                                  |       |                   |       |            |           |         |                 |        |           |        |
| 68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR |       |                   |       |            |           |         |                 |        |           |        |
| CL: 68.1 %                                                       | COEFF | SAMPLE TREES - BF |       |            |           |         | # OF TREES REQ. |        | INF. POP. |        |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW   | AVG        | HIGH      | 5 10    |                 | 15     |           |        |
| WHEMLOCK                                                         |       | 156.7             | 26.9  | 511        | 698       | 885     |                 |        |           |        |
| DOUG FIR                                                         |       | 81.0              | 12.3  | 1,246      | 1,421     | 1,597   |                 |        |           |        |
| R ALDER                                                          |       | 44.9              | 16.9  | 154        | 185       | 216     |                 |        |           |        |
| WR CEDAR                                                         |       | 62.6              | 43.3  | 879        | 1,550     | 2,221   |                 |        |           |        |
| SNAG                                                             |       |                   |       |            |           |         |                 |        |           |        |
| TOTAL                                                            |       | 111.8             | 11.8  | 901        | 1,022     | 1,143   | 500             | 125    | 56        |        |
| CL: 68.1 %                                                       | COEFF | TREES/ACRE        |       |            |           |         | # OF PLOTS REQ. |        | INF. POP. |        |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW   | AVG        | HIGH      | 5 10    |                 | 15     |           |        |
| WHEMLOCK                                                         |       | 101.5             | 18.8  | 67         | 82        | 97      |                 |        |           |        |
| DOUG FIR                                                         |       | 108.7             | 20.2  | 32         | 40        | 48      |                 |        |           |        |
| R ALDER                                                          |       | 194.1             | 36.0  | 10         | 16        | 22      |                 |        |           |        |
| WR CEDAR                                                         |       | 238.5             | 44.3  | 1          | 2         | 2       |                 |        |           |        |
| SNAG                                                             |       | 305.1             | 56.6  | 0          | 1         | 1       |                 |        |           |        |
| TOTAL                                                            |       | 60.8              | 11.3  | 124        | 140       | 156     | 153             | 38     | 17        |        |
| CL: 68.1 %                                                       | COEFF | BASAL AREA/ACRE   |       |            |           |         | # OF PLOTS REQ. |        | INF. POP. |        |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW   | AVG        | HIGH      | 5 10    |                 | 15     |           |        |
| WHEMLOCK                                                         |       | 95.1              | 17.7  | 109        | 132       | 156     |                 |        |           |        |
| DOUG FIR                                                         |       | 91.8              | 17.0  | 107        | 129       | 151     |                 |        |           |        |
| R ALDER                                                          |       | 192.8             | 35.8  | 16         | 25        | 34      |                 |        |           |        |
| WR CEDAR                                                         |       | 239.9             | 44.5  | 8          | 15        | 21      |                 |        |           |        |
| SNAG                                                             |       | 305.1             | 56.6  | 2          | 5         | 9       |                 |        |           |        |
| TOTAL                                                            |       | 38.3              | 7.1   | 285        | 307       | 328     | 61              | 15     | 7         |        |
| CL: 68.1 %                                                       | COEFF | NET BF/ACRE       |       |            |           |         | # OF PLOTS REQ. |        | INF. POP. |        |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW   | AVG        | HIGH      | 5 10    |                 | 15     |           |        |
| WHEMLOCK                                                         |       | 99.7              | 18.5  | 16,967     | 20,822    | 24,676  |                 |        |           |        |
| DOUG FIR                                                         |       | 100.2             | 18.6  | 25,417     | 31,223    | 37,029  |                 |        |           |        |
| R ALDER                                                          |       | 177.7             | 33.0  | 1,956      | 2,919     | 3,882   |                 |        |           |        |
| WR CEDAR                                                         |       | 245.7             | 45.6  | 1,246      | 2,291     | 3,336   |                 |        |           |        |
| SNAG                                                             |       |                   |       |            |           |         |                 |        |           |        |
| TOTAL                                                            |       | 49.6              | 9.2   | 51,986     | 57,255    | 62,523  | 102             | 25     | 11        |        |



|                                                                  |       |                   |            |             |                   |                             |                            |              |                |              |
|------------------------------------------------------------------|-------|-------------------|------------|-------------|-------------------|-----------------------------|----------------------------|--------------|----------------|--------------|
| TC TSTATS                                                        |       |                   |            | STATISTICS  |                   |                             |                            | PAGE         | 1              |              |
|                                                                  |       |                   |            | PROJECT     | CSLATE            |                             |                            | DATE         | 2/14/2020      |              |
| TWP                                                              | RGE   | SECT              | TRACT      | TYPE        | ACRES             | PLOTS                       | TREES                      | CuFt         | BdFt           |              |
| 07N                                                              | 06W   | 33                | U123       | TAKE        | 225.00            | 82                          | 418                        | 1            | W              |              |
|                                                                  |       |                   |            |             |                   |                             |                            |              |                |              |
|                                                                  |       |                   | PLOTS      | TREES       | TREES<br>PER PLOT | ESTIMATED<br>TOTAL<br>TREES | PERCENT<br>SAMPLE<br>TREES |              |                |              |
| TOTAL                                                            |       | 82                | 418        | 5.1         |                   |                             |                            |              |                |              |
| CRUISE                                                           |       | 30                | 159        | 5.3         |                   | 19,787                      |                            | .8           |                |              |
| DBH COUNT                                                        |       |                   |            |             |                   |                             |                            |              |                |              |
| REFOREST                                                         |       |                   |            |             |                   |                             |                            |              |                |              |
| COUNT                                                            |       | 49                | 258        | 5.3         |                   |                             |                            |              |                |              |
| BLANKS                                                           |       | 3                 |            |             |                   |                             |                            |              |                |              |
| 100 %                                                            |       |                   |            |             |                   |                             |                            |              |                |              |
| STAND SUMMARY                                                    |       |                   |            |             |                   |                             |                            |              |                |              |
| SAMPLE<br>TREES                                                  |       | TREES<br>/ACRE    | AVG<br>DBH | BOLE<br>LEN | REL<br>DEN        | BASAL<br>AREA               | GROSS<br>BF/AC             | NET<br>BF/AC | GROSS<br>CF/AC | NET<br>CF/AC |
| DOUG FIR                                                         |       | 123               | 44.6       | 24.3        | 91                | 29.2                        | 143.9                      | 32,450       | 31,927         | 7,110        |
| R ALDER                                                          |       | 25                | 33.5       | 15.4        | 45                | 11.1                        | 43.4                       | 4,343        | 4,072          | 1,322        |
| WHEMLOCK                                                         |       | 10                | 9.0        | 17.3        | 28                | 3.5                         | 14.6                       | 1,858        | 1,682          | 436          |
| BL MAPLE                                                         |       | 1                 | .8         | 21.0        | 36                | 0.4                         | 2.0                        | 170          | 170            | 42           |
| TOTAL                                                            |       | 159               | 87.9       | 20.6        | 66                | 44.9                        | 203.9                      | 38,822       | 37,850         | 8,910        |
| CONFIDENCE LIMITS OF THE SAMPLE                                  |       |                   |            |             |                   |                             |                            |              |                |              |
| 68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR |       |                   |            |             |                   |                             |                            |              |                |              |
| CL: 68.1 %                                                       | COEFF | SAMPLE TREES - BF |            |             |                   |                             | # OF TREES REQ.            |              | INF. POP.      |              |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW        | AVG         | HIGH              |                             | 5                          | 10           | 15             |              |
| DOUG FIR                                                         |       | 60.2              | 5.4        | 939         | 992               | 1,046                       |                            |              |                |              |
| R ALDER                                                          |       | 67.6              | 13.8       | 145         | 168               | 191                         |                            |              |                |              |
| WHEMLOCK                                                         |       | 96.8              | 32.2       | 374         | 552               | 730                         |                            |              |                |              |
| BL MAPLE                                                         |       |                   |            |             |                   |                             |                            |              |                |              |
| TOTAL                                                            |       | 75.3              | 6.0        | 781         | 830               | 880                         |                            | 227          | 57             | 25           |
| CL: 68.1 %                                                       | COEFF | TREES/ACRE        |            |             |                   |                             | # OF PLOTS REQ.            |              | INF. POP.      |              |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW        | AVG         | HIGH              |                             | 5                          | 10           | 15             |              |
| DOUG FIR                                                         |       | 69.0              | 7.6        | 41          | 45                | 48                          |                            |              |                |              |
| R ALDER                                                          |       | 157.4             | 17.4       | 28          | 34                | 39                          |                            |              |                |              |
| WHEMLOCK                                                         |       | 232.6             | 25.7       | 7           | 9                 | 11                          |                            |              |                |              |
| BL MAPLE                                                         |       | 713.2             | 78.7       | 0           | 1                 | 1                           |                            |              |                |              |
| TOTAL                                                            |       | 74.6              | 8.2        | 81          | 88                | 95                          |                            | 222          | 56             | 25           |
| CL: 68.1 %                                                       | COEFF | BASAL AREA/ACRE   |            |             |                   |                             | # OF PLOTS REQ.            |              | INF. POP.      |              |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW        | AVG         | HIGH              |                             | 5                          | 10           | 15             |              |
| DOUG FIR                                                         |       | 57.8              | 6.4        | 135         | 144               | 153                         |                            |              |                |              |
| R ALDER                                                          |       | 139.8             | 15.4       | 37          | 43                | 50                          |                            |              |                |              |
| WHEMLOCK                                                         |       | 225.3             | 24.9       | 11          | 15                | 18                          |                            |              |                |              |
| BL MAPLE                                                         |       | 713.2             | 78.7       | 0           | 2                 | 3                           |                            |              |                |              |
| TOTAL                                                            |       | 50.8              | 5.6        | 192         | 204               | 215                         |                            | 103          | 26             | 11           |
| CL: 68.1 %                                                       | COEFF | NET BF/ACRE       |            |             |                   |                             | # OF PLOTS REQ.            |              | INF. POP.      |              |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW        | AVG         | HIGH              |                             | 5                          | 10           | 15             |              |
| DOUG FIR                                                         |       | 58.1              | 6.4        | 29,878      | 31,927            | 33,975                      |                            |              |                |              |
| R ALDER                                                          |       | 137.6             | 15.2       | 3,454       | 4,072             | 4,690                       |                            |              |                |              |
| WHEMLOCK                                                         |       | 241.4             | 26.6       | 1,234       | 1,682             | 2,130                       |                            |              |                |              |
| BL MAPLE                                                         |       | 713.2             | 78.7       | 36          | 170               | 304                         |                            |              |                |              |
| TOTAL                                                            |       | 49.8              | 5.5        | 35,771      | 37,850            | 39,929                      |                            | 99           | 25             | 11           |

|                                                                  |       |                   |       |            |           |                |                 |        |           |       |       |
|------------------------------------------------------------------|-------|-------------------|-------|------------|-----------|----------------|-----------------|--------|-----------|-------|-------|
| TC TSTATS                                                        |       |                   |       | STATISTICS |           |                |                 | PAGE 1 |           |       |       |
|                                                                  |       |                   |       | PROJECT    | CSLATE    | DATE 2/14/2020 |                 |        |           |       |       |
| TWP                                                              | RGE   | SECT              | TRACT | TYPE       | ACRES     | PLOTS          | TREES           | CuFt   | BdFt      |       |       |
| 07N                                                              | 06W   | 33                | U123  | RW         | 1.00      | 82             | 418             | 1      | W         |       |       |
|                                                                  |       |                   |       |            |           |                |                 |        |           |       |       |
|                                                                  |       |                   |       | TREES      | ESTIMATED | PERCENT        |                 |        |           |       |       |
|                                                                  |       |                   |       | PER PLOT   | TOTAL     | SAMPLE         |                 |        |           |       |       |
|                                                                  |       |                   |       |            | TREES     | TREES          |                 |        |           |       |       |
| TOTAL                                                            |       | 82                | 418   | 5.1        |           |                |                 |        |           |       |       |
| CRUISE                                                           |       | 30                | 159   | 5.3        | 88        | 180.8          |                 |        |           |       |       |
| DBH COUNT                                                        |       |                   |       |            |           |                |                 |        |           |       |       |
| REFOREST                                                         |       |                   |       |            |           |                |                 |        |           |       |       |
| COUNT                                                            |       | 49                | 258   | 5.3        |           |                |                 |        |           |       |       |
| BLANKS                                                           |       | 3                 |       |            |           |                |                 |        |           |       |       |
| 100 %                                                            |       |                   |       |            |           |                |                 |        |           |       |       |
| STAND SUMMARY                                                    |       |                   |       |            |           |                |                 |        |           |       |       |
| SAMPLE                                                           |       | TREES             | AVG   | BOLE       | REL       | BASAL          | GROSS           | NET    | GROSS     | NET   |       |
| TREES                                                            |       | /ACRE             | DBH   | LEN        | DEN       | AREA           | BF/AC           | BF/AC  | CF/AC     | CF/AC |       |
| DOUG FIR                                                         |       | 123               | 44.6  | 24.3       | 91        | 29.2           | 143.9           | 32,450 | 31,927    | 7,110 | 7,079 |
| R ALDER                                                          |       | 25                | 33.5  | 15.4       | 45        | 11.1           | 43.4            | 4,343  | 4,072     | 1,322 | 1,285 |
| WHEMLOCK                                                         |       | 10                | 9.0   | 17.3       | 28        | 3.5            | 14.6            | 1,858  | 1,682     | 436   | 408   |
| BL MAPLE                                                         |       | 1                 | .8    | 21.0       | 36        | 0.4            | 2.0             | 170    | 170       | 42    | 42    |
| TOTAL                                                            |       | 159               | 87.9  | 20.6       | 66        | 44.9           | 203.9           | 38,822 | 37,850    | 8,910 | 8,815 |
| CONFIDENCE LIMITS OF THE SAMPLE                                  |       |                   |       |            |           |                |                 |        |           |       |       |
| 68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR |       |                   |       |            |           |                |                 |        |           |       |       |
| CL: 68.1 %                                                       | COEFF | SAMPLE TREES - BF |       |            |           |                | # OF TREES REQ. |        | INF. POP. |       |       |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW   | AVG        | HIGH      | 5 10 15        |                 |        |           |       |       |
| DOUG FIR                                                         |       | 60.2              | 5.4   | 939        | 992       | 1,046          |                 |        |           |       |       |
| R ALDER                                                          |       | 67.6              | 13.8  | 145        | 168       | 191            |                 |        |           |       |       |
| WHEMLOCK                                                         |       | 96.8              | 32.2  | 374        | 552       | 730            |                 |        |           |       |       |
| BL MAPLE                                                         |       |                   |       |            |           |                |                 |        |           |       |       |
| TOTAL                                                            |       | 75.3              | 6.0   | 781        | 830       | 880            | 227             | 57     | 25        |       |       |
| CL: 68.1 %                                                       | COEFF | TREES/ACRE        |       |            |           |                | # OF PLOTS REQ. |        | INF. POP. |       |       |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW   | AVG        | HIGH      | 5 10 15        |                 |        |           |       |       |
| DOUG FIR                                                         |       | 69.0              | 7.6   | 41         | 45        | 48             |                 |        |           |       |       |
| R ALDER                                                          |       | 157.4             | 17.4  | 28         | 34        | 39             |                 |        |           |       |       |
| WHEMLOCK                                                         |       | 232.6             | 25.7  | 7          | 9         | 11             |                 |        |           |       |       |
| BL MAPLE                                                         |       | 713.2             | 78.7  | 0          | 1         | 1              |                 |        |           |       |       |
| TOTAL                                                            |       | 74.6              | 8.2   | 81         | 88        | 95             | 222             | 56     | 25        |       |       |
| CL: 68.1 %                                                       | COEFF | BASAL AREA/ACRE   |       |            |           |                | # OF PLOTS REQ. |        | INF. POP. |       |       |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW   | AVG        | HIGH      | 5 10 15        |                 |        |           |       |       |
| DOUG FIR                                                         |       | 57.8              | 6.4   | 135        | 144       | 153            |                 |        |           |       |       |
| R ALDER                                                          |       | 139.8             | 15.4  | 37         | 43        | 50             |                 |        |           |       |       |
| WHEMLOCK                                                         |       | 225.3             | 24.9  | 11         | 15        | 18             |                 |        |           |       |       |
| BL MAPLE                                                         |       | 713.2             | 78.7  | 0          | 2         | 3              |                 |        |           |       |       |
| TOTAL                                                            |       | 50.8              | 5.6   | 192        | 204       | 215            | 103             | 26     | 11        |       |       |
| CL: 68.1 %                                                       | COEFF | NET BF/ACRE       |       |            |           |                | # OF PLOTS REQ. |        | INF. POP. |       |       |
| SD: 1.0                                                          | VAR.% | S.E.%             | LOW   | AVG        | HIGH      | 5 10 15        |                 |        |           |       |       |
| DOUG FIR                                                         |       | 58.1              | 6.4   | 29,878     | 31,927    | 33,975         |                 |        |           |       |       |
| R ALDER                                                          |       | 137.6             | 15.2  | 3,454      | 4,072     | 4,690          |                 |        |           |       |       |
| WHEMLOCK                                                         |       | 241.4             | 26.6  | 1,234      | 1,682     | 2,130          |                 |        |           |       |       |
| BL MAPLE                                                         |       | 713.2             | 78.7  | 36         | 170       | 304            |                 |        |           |       |       |
| TOTAL                                                            |       | 49.8              | 5.5   | 35,771     | 37,850    | 39,929         | 99              | 25     | 11        |       |       |

|           |     |      |       |            |           |         |       |      |           |  |
|-----------|-----|------|-------|------------|-----------|---------|-------|------|-----------|--|
| TC TSTATS |     |      |       | STATISTICS |           |         |       | PAGE | 1         |  |
|           |     |      |       | PROJECT    | CSLATE    |         |       | DATE | 2/14/2020 |  |
| TWP       | RGE | SECT | TRACT | TYPE       | ACRES     | PLOTS   | TREES | CuFt | BdFt      |  |
| 07N       | 06W | 35   | U4    | TAKE       | 30.00     | 30      | 158   | 1    | W         |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       | TREES      | ESTIMATED | PERCENT |       |      |           |  |
|           |     |      |       | PER PLOT   | TOTAL     | SAMPLE  |       |      |           |  |
|           |     |      |       |            | TREES     | TREES   |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
|           |     |      |       |            |           |         |       |      |           |  |
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| TC PSTNDSUM                 |        | Stand Table Summary |           |          |                |             |              |               |               |                  |                       | Page 1                |        |        |     |
|-----------------------------|--------|---------------------|-----------|----------|----------------|-------------|--------------|---------------|---------------|------------------|-----------------------|-----------------------|--------|--------|-----|
|                             |        |                     |           |          |                |             |              |               |               |                  |                       | Date: 2/14/2020       |        |        |     |
| T07N R06W S33 TyRW 1.00     |        |                     |           |          | Project CSLATE |             |              |               |               | Time: 12:42:24PM |                       |                       |        |        |     |
| T07N R06W S33 TyTAKE 225.00 |        |                     |           |          | Acres 256.00   |             |              |               |               | Grown Year:      |                       |                       |        |        |     |
| T07N R06W S35 TyTAKE 30.00  |        |                     |           |          |                |             |              |               |               |                  |                       |                       |        |        |     |
| S<br>Spc T                  | Sample |                     | Tot       |          | Trees/<br>Acre | BA/<br>Acre | Logs<br>Acre | Average Log   |               | Tons/<br>Acre    | Net<br>Cu.Ft.<br>Acre | Net<br>Bd.Ft.<br>Acre | Totals |        |     |
|                             | DBH    | Trees               | FF<br>16' | Av<br>Ht |                |             |              | Net<br>Cu.Ft. | Net<br>Bd.Ft. |                  |                       |                       | Tons   | Cunits | MBF |
| D                           | 11     | 4                   | 85        | 28       | 3.130          | 2.07        | 3.13         | 9.5           | 25.0          |                  | 30                    | 78                    | 76     | 20     |     |
| D                           | 14     | 1                   | 91        | 108      | .328           | .35         | .66          | 23.5          | 95.0          |                  | 15                    | 62                    | 40     | 16     |     |
| D                           | 15     | 3                   | 88        | 82       | 1.128          | 1.38        | 2.26         | 20.0          | 67.5          |                  | 45                    | 152                   | 115    | 39     |     |
| D                           | 16     | 5                   | 84        | 63       | 1.494          | 2.09        | 2.25         | 22.9          | 64.5          |                  | 51                    | 145                   | 132    | 37     |     |
| D                           | 17     | 9                   | 85        | 73       | 2.844          | 4.48        | 5.03         | 25.5          | 77.8          |                  | 128                   | 392                   | 328    | 100    |     |
| D                           | 18     | 11                  | 87        | 97       | 3.121          | 5.52        | 6.83         | 30.7          | 107.7         |                  | 210                   | 735                   | 537    | 188    |     |
| D                           | 19     | 10                  | 86        | 118      | 2.455          | 4.83        | 6.84         | 32.6          | 121.1         |                  | 223                   | 828                   | 571    | 212    |     |
| D                           | 20     | 11                  | 87        | 114      | 2.528          | 5.52        | 6.95         | 35.3          | 136.1         |                  | 245                   | 946                   | 628    | 242    |     |
| D                           | 21     | 12                  | 87        | 109      | 2.302          | 5.54        | 6.18         | 37.8          | 145.5         |                  | 234                   | 900                   | 598    | 230    |     |
| D                           | 22     | 8                   | 86        | 105      | 1.565          | 4.13        | 3.52         | 48.3          | 177.8         |                  | 170                   | 626                   | 436    | 160    |     |
| D                           | 23     | 10                  | 90        | 136      | 1.790          | 5.16        | 5.37         | 51.9          | 228.7         |                  | 279                   | 1,228                 | 713    | 314    |     |
| D                           | 24     | 14                  | 87        | 131      | 2.301          | 7.23        | 6.58         | 54.2          | 226.0         |                  | 356                   | 1,486                 | 912    | 380    |     |
| D                           | 25     | 13                  | 88        | 133      | 1.824          | 6.22        | 5.17         | 62.3          | 269.4         |                  | 322                   | 1,393                 | 824    | 357    |     |
| D                           | 26     | 16                  | 88        | 148      | 2.151          | 7.93        | 6.73         | 65.4          | 291.6         |                  | 441                   | 1,964                 | 1,128  | 503    |     |
| D                           | 27     | 15                  | 88        | 137      | 1.907          | 7.58        | 5.46         | 71.5          | 321.2         |                  | 390                   | 1,754                 | 999    | 449    |     |
| D                           | 28     | 14                  | 89        | 154      | 1.691          | 7.23        | 5.56         | 75.1          | 360.4         |                  | 417                   | 2,002                 | 1,068  | 513    |     |
| D                           | 29     | 18                  | 88        | 136      | 1.954          | 8.96        | 5.64         | 83.3          | 392.2         |                  | 470                   | 2,211                 | 1,202  | 566    |     |
| D                           | 30     | 30                  | 87        | 144      | 3.156          | 15.49       | 9.47         | 86.7          | 413.3         |                  | 821                   | 3,914                 | 2,102  | 1,002  |     |
| D                           | 31     | 13                  | 91        | 149      | 1.249          | 6.55        | 3.94         | 94.7          | 487.1         |                  | 374                   | 1,921                 | 956    | 492    |     |
| D                           | 32     | 13                  | 89        | 147      | 1.113          | 6.22        | 3.34         | 103.5         | 517.7         |                  | 346                   | 1,729                 | 885    | 443    |     |
| D                           | 33     | 13                  | 88        | 145      | 1.047          | 6.22        | 3.20         | 105.1         | 525.6         |                  | 336                   | 1,682                 | 861    | 431    |     |
| D                           | 34     | 12                  | 89        | 127      | .983           | 6.20        | 2.78         | 108.4         | 527.1         |                  | 302                   | 1,468                 | 773    | 376    |     |
| D                           | 35     | 14                  | 88        | 149      | .983           | 6.57        | 3.16         | 113.3         | 583.8         |                  | 358                   | 1,843                 | 915    | 472    |     |
| D                           | 36     | 3                   | 92        | 154      | .196           | 1.38        | .59          | 140.3         | 765.7         |                  | 82                    | 450                   | 211    | 115    |     |
| D                           | 37     | 2                   | 85        | 133      | .138           | 1.03        | .41          | 122.3         | 593.3         |                  | 51                    | 246                   | 130    | 63     |     |
| D                           | 38     | 4                   | 87        | 139      | .220           | 1.74        | .57          | 120.2         | 633.5         |                  | 69                    | 364                   | 177    | 93     |     |
| D                           | 39     | 1                   | 91        | 171      | .042           | .35         | .17          | 136.0         | 797.5         |                  | 23                    | 135                   | 59     | 35     |     |
| D                           | 40     | 3                   | 88        | 129      | .159           | 1.38        | .44          | 153.2         | 779.1         |                  | 67                    | 339                   | 171    | 87     |     |
| D                           | 41     | 1                   | 86        | 146      | .038           | .35         | .11          | 164.7         | 773.3         |                  | 19                    | 89                    | 48     | 23     |     |
| D                           | 43     | 3                   | 89        | 149      | .137           | 1.38        | .41          | 188.8         | 1008.2        |                  | 78                    | 415                   | 199    | 106    |     |
| D                           | 44     | 1                   | 86        | 169      | .033           | .35         | .13          | 157.0         | 860.0         |                  | 21                    | 114                   | 53     | 29     |     |
| D                           | 48     | 1                   | 88        | 142      | .028           | .35         | .08          | 229.0         | 1240.0        |                  | 19                    | 104                   | 49     | 27     |     |
| D                           | 50     | 1                   | 86        | 186      | .026           | .35         | .10          | 223.0         | 1247.5        |                  | 23                    | 128                   | 59     | 33     |     |
| D                           | Totals | 289                 | 87        | 115      | 44.062         | 142.14      | 113.07       | 62.0          | 281.6         |                  | 7,015                 | 31,844                | 17,957 | 8,152  |     |
| A                           | 8      | 2                   | 87        | 20       | 4.392          | 1.53        | 4.39         | 5.0           | 20.0          |                  | 22                    | 88                    | 56     | 22     |     |
| A                           | 10     | 2                   | 87        | 18       | 2.811          | 1.53        | 2.81         | 7.0           | 30.0          |                  | 20                    | 84                    | 50     | 22     |     |
| A                           | 11     | 2                   | 87        | 68       | 2.323          | 1.53        | 2.32         | 19.0          | 60.0          |                  | 44                    | 139                   | 113    | 36     |     |
| A                           | 12     | 2                   | 87        | 61       | 1.952          | 1.53        | 1.95         | 22.0          | 60.0          |                  | 43                    | 117                   | 110    | 30     |     |
| A                           | 15     | 5                   | 87        | 44       | 2.802          | 3.44        | 2.80         | 23.4          | 56.6          |                  | 66                    | 159                   | 168    | 41     |     |
| A                           | 16     | 10                  | 86        | 70       | 5.490          | 7.67        | 9.88         | 24.6          | 76.7          |                  | 243                   | 758                   | 621    | 194    |     |
| A                           | 17     | 4                   | 86        | 100      | .944           | 1.49        | 1.89         | 35.1          | 123.7         |                  | 66                    | 234                   | 170    | 60     |     |
| A                           | 18     | 12                  | 87        | 86       | 4.759          | 8.41        | 9.52         | 32.9          | 106.4         |                  | 314                   | 1,013                 | 803    | 259    |     |
| A                           | 19     | 5                   | 86        | 91       | 1.746          | 3.44        | 4.08         | 30.8          | 113.4         |                  | 126                   | 463                   | 322    | 119    |     |
| A                           | 20     | 6                   | 87        | 60       | 2.108          | 4.60        | 3.51         | 36.6          | 104.0         |                  | 129                   | 365                   | 329    | 94     |     |
| A                           | 21     | 2                   | 87        | 29       | .637           | 1.53        | .64          | 32.0          | 40.0          |                  | 20                    | 25                    | 52     | 7      |     |
| A                           | 23     | 2                   | 86        | 76       | .531           | 1.53        | 1.06         | 51.0          | 165.0         |                  | 54                    | 175                   | 139    | 45     |     |
| A                           | 24     | 2                   | 84        | 76       | .488           | 1.53        | .98          | 41.0          | 135.0         |                  | 40                    | 132                   | 102    | 34     |     |
| A                           | 25     | 2                   | 86        | 75       | .450           | 1.53        | .90          | 61.5          | 205.0         |                  | 55                    | 184                   | 142    | 47     |     |
| A                           | Totals | 58                  | 87        | 59       | 31.434         | 41.30       | 46.74        | 26.6          | 84.2          |                  | 1,241                 | 3,937                 | 3,177  | 1,008  |     |
| H                           | 10     | 3                   | 73        | 40       | 3.206          | 1.75        | 1.67         | 10.5          | 40.0          |                  | 18                    | 67                    | 45     | 17     |     |
| H                           | 11     | 2                   | 86        | 55       | 1.384          | .91         | 1.38         | 15.5          | 50.0          |                  | 21                    | 69                    | 55     | 18     |     |
| H                           | 12     | 2                   | 91        | 26       | 1.645          | 1.29        | 1.64         | 11.0          | 30.0          |                  | 18                    | 49                    | 46     | 13     |     |

| TC                                                                                                           |   | PSTNDSUM      |           | Stand Table Summary |                |             |              |               |               |               |                       | Page                  |             | 2          |        |
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| <div>T07N R06W S33 TyRW1.00</div> <div>T07N R06W S33 TyTAKE225.00</div> <div>T07N R06W S35 TyTAKE30.00</div> |   |               |           | Project             |                |             |              | CSLATE        |               |               |                       | Time:                 |             | 12:42:24PM |        |
|                                                                                                              |   |               |           | Acres               |                |             |              | 256.00        |               |               |                       | Grown Year:           |             |            |        |
| S<br>Sp                                                                                                      | T | Tot           |           |                     |                |             |              | Average Log   |               |               |                       |                       | T o t a l s |            |        |
|                                                                                                              |   | Sample<br>DBH | FF<br>16' | Av<br>Ht            | Trees/<br>Acre | BA/<br>Acre | Logs<br>Acre | Net<br>Cu.Ft. | Net<br>Bd.Ft. | Tons/<br>Acre | Net<br>Cu.Ft.<br>Acre | Net<br>Bd.Ft.<br>Acre | Tons        | Cunits     | MBF    |
| H                                                                                                            |   | 13            | 5         | 82 31               | 2.888          | 2.66        | 2.89         | 14.5          | 38.6          |               | 42                    | 111                   |             | 107        | 29     |
| H                                                                                                            |   | 14            | 1         | 86 52               | .427           | .46         | .43          | 23.0          | 60.0          |               | 10                    | 26                    |             | 25         | 7      |
| H                                                                                                            |   | 15            | 4         | 85 77               | 1.488          | 1.83        | 2.98         | 21.1          | 70.0          |               | 63                    | 208                   |             | 161        | 53     |
| H                                                                                                            |   | 16            | 4         | 87 70               | 1.579          | 2.21        | 2.56         | 24.7          | 95.1          |               | 63                    | 244                   |             | 162        | 62     |
| H                                                                                                            |   | 17            | 1         | 86 84               | .290           | .46         | .58          | 30.5          | 105.0         |               | 18                    | 61                    |             | 45         | 16     |
| H                                                                                                            |   | 18            | 3         | 90 98               | .775           | 1.37        | 1.55         | 38.5          | 141.7         |               | 60                    | 220                   |             | 153        | 56     |
| H                                                                                                            |   | 19            | 1         | 86 81               | .232           | .46         | .46          | 36.5          | 115.0         |               | 17                    | 53                    |             | 43         | 14     |
| H                                                                                                            |   | 20            | 3         | 90 98               | .628           | 1.37        | 1.46         | 40.3          | 164.3         |               | 59                    | 241                   |             | 151        | 62     |
| H                                                                                                            |   | 21            | 2         | 89 93               | .380           | .91         | .76          | 50.7          | 192.5         |               | 39                    | 146                   |             | 99         | 37     |
| H                                                                                                            |   | 22            | 1         | 89 94               | .173           | .46         | .35          | 56.0          | 210.0         |               | 19                    | 73                    |             | 50         | 19     |
| H                                                                                                            |   | 23            | 1         | 86 131              | .158           | .46         | .47          | 51.7          | 206.7         |               | 25                    | 98                    |             | 63         | 25     |
| H                                                                                                            |   | 24            | 1         | 86 111              | .145           | .46         | .44          | 51.3          | 216.7         |               | 22                    | 94                    |             | 57         | 24     |
| H                                                                                                            |   | 25            | 4         | 88 92               | .758           | 2.58        | 1.89         | 58.0          | 240.0         |               | 110                   | 455                   |             | 281        | 116    |
| H                                                                                                            |   | 27            | 2         | 84 84               | .230           | .91         | .46          | 73.0          | 260.0         |               | 34                    | 119                   |             | 86         | 31     |
| H                                                                                                            |   | 30            | 1         | 86 121              | .093           | .46         | .28          | 81.7          | 370.0         |               | 23                    | 103                   |             | 58         | 26     |
| H                                                                                                            |   | 31            | 2         | 83 87               | .246           | 1.29        | .49          | 98.5          | 355.0         |               | 49                    | 175                   |             | 124        | 45     |
| H                                                                                                            |   | 33            | 3         | 86 111              | .294           | 1.75        | .88          | 93.0          | 443.3         |               | 82                    | 392                   |             | 210        | 100    |
| H                                                                                                            |   | 34            | 2         | 83 89               | .205           | 1.29        | .41          | 81.5          | 350.0         |               | 33                    | 143                   |             | 86         | 37     |
| H                                                                                                            |   | 37            | 2         | 93 94               | .173           | 1.29        | .35          | 158.0         | 715.0         |               | 55                    | 247                   |             | 140        | 63     |
| H                                                                                                            |   | 44            | 1         | 89 115              | .043           | .46         | .13          | 175.0         | 910.0         |               | 23                    | 118                   |             | 58         | 30     |
| H                                                                                                            |   | 46            | 2         | 91 127              | .079           | .91         | .24          | 215.8         | 1160.0        |               | 51                    | 275                   |             | 131        | 70     |
| H                                                                                                            |   | 51            | 1         | 92 116              | .032           | .46         | .10          | 245.3         | 1410.0        |               | 24                    | 136                   |             | 61         | 35     |
| H                                                                                                            |   | Totals        | 54        | 84 60               | 17.551         | 28.44       | 24.86        | 39.2          | 157.9         |               | 975                   | 3,925                 |             | 2,497      | 1,005  |
| M                                                                                                            |   | 21            | 2         | 87 41               | .716           | 1.72        | 1.43         | 26.0          | 105.0         |               | 37                    | 150                   |             | 95         | 39     |
| M                                                                                                            |   | Totals        | 2         | 87 41               | .716           | 1.72        | 1.43         | 26.0          | 105.0         |               | 37                    | 150                   |             | 95         | 39     |
| Totals                                                                                                       |   |               | 403       | 86 85               | 93.764         | 213.61      | 186.10       | 49.8          | 214.2         |               | 9,268                 | 39,856                |             | 23,727     | 10,203 |





| TC PLOGSTVB                                                                                                  |             | Log Stock Table - MBF |            |              |          |                |          |                                          |     |     |     |                |       |       |       |       |       |       |     |
|--------------------------------------------------------------------------------------------------------------|-------------|-----------------------|------------|--------------|----------|----------------|----------|------------------------------------------|-----|-----|-----|----------------|-------|-------|-------|-------|-------|-------|-----|
| <div>T07N R06W S33 TyRW1.00</div> <div>T07N R06W S33 TyTAKE225.00</div> <div>T07N R06W S35 TyTAKE30.00</div> |             |                       |            |              |          | Project:CSLATE |          |                                          |     |     |     | Page3          |       |       |       |       |       |       |     |
|                                                                                                              |             |                       |            |              |          | Acres256.00    |          |                                          |     |     |     | Date2/14/2020  |       |       |       |       |       |       |     |
|                                                                                                              |             |                       |            |              |          |                |          |                                          |     |     |     | Time12:42:48PM |       |       |       |       |       |       |     |
| S<br>T<br><br>Spp                                                                                            | So<br>rt    | Gr<br>de              | Log<br>Len | Gross<br>MBF | Def<br>% | Net<br>MBF     | %<br>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+ |
| H                                                                                                            | DO          | 3S                    | 40         | 30           |          | 30             | 2.9      |                                          |     | 15  | 15  |                |       |       |       |       |       |       |     |
| H                                                                                                            | DO          | 4S                    | 16         | 13           |          | 13             | 1.3      |                                          |     | 8   | 4   | 1              |       |       |       |       |       |       |     |
| H                                                                                                            | DO          | 4S                    | 18         | 3            |          | 3              | .3       |                                          |     | 3   |     |                |       |       |       |       |       |       |     |
| H                                                                                                            | DO          | 4S                    | 20         | 18           |          | 18             | 1.8      |                                          |     | 15  | 4   |                |       |       |       |       |       |       |     |
| H                                                                                                            | DO          | 4S                    | 24         | 17           |          | 17             | 1.7      |                                          |     | 17  |     |                |       |       |       |       |       |       |     |
| H                                                                                                            | DO          | 4S                    | 26         | 2            |          | 2              | .2       |                                          |     | 2   |     |                |       |       |       |       |       |       |     |
| H                                                                                                            | DO          | 4S                    | 30         | 14           |          | 14             | 1.4      |                                          |     | 7   |     | 7              |       |       |       |       |       |       |     |
| H                                                                                                            | DO          | 4S                    | 36         | 11           |          | 11             | 1.1      |                                          |     | 11  |     |                |       |       |       |       |       |       |     |
| H                                                                                                            | DO          | 4S                    | 38         | 7            |          | 7              | .7       |                                          |     | 7   |     |                |       |       |       |       |       |       |     |
| H                                                                                                            | DO          | 4S                    | 40         | 8            |          | 8              | .8       |                                          |     | 8   |     |                |       |       |       |       |       |       |     |
| H                                                                                                            | Totals      |                       |            | 1,049        | 4.2      | 1,005          | 9.8      |                                          |     | 118 | 42  | 82             | 153   | 133   | 205   | 97    | 88    | 86    |     |
| M                                                                                                            | DO          | CR                    | 16         | 33           |          | 33             | 85.7     |                                          |     |     |     |                |       | 33    |       |       |       |       |     |
| M                                                                                                            | DO          | CR                    | 18         | 6            |          | 6              | 14.3     |                                          |     | 6   |     |                |       |       |       |       |       |       |     |
| M                                                                                                            | Totals      |                       |            | 39           |          | 39             | .4       |                                          |     | 6   |     |                |       | 33    |       |       |       |       |     |
| Total                                                                                                        | All Species |                       |            | 10,451       | 2.4      | 10,203         | 100.0    | 2                                        | 13  | 623 | 449 | 856            | 1058  | 1168  | 2441  | 2319  | 1052  | 223   |     |





## LOGGING PLAN MAP

Page 1 of 2

of Timber Sale Contract  
No. 341-2020-W00738-01

CLEAN SLATE

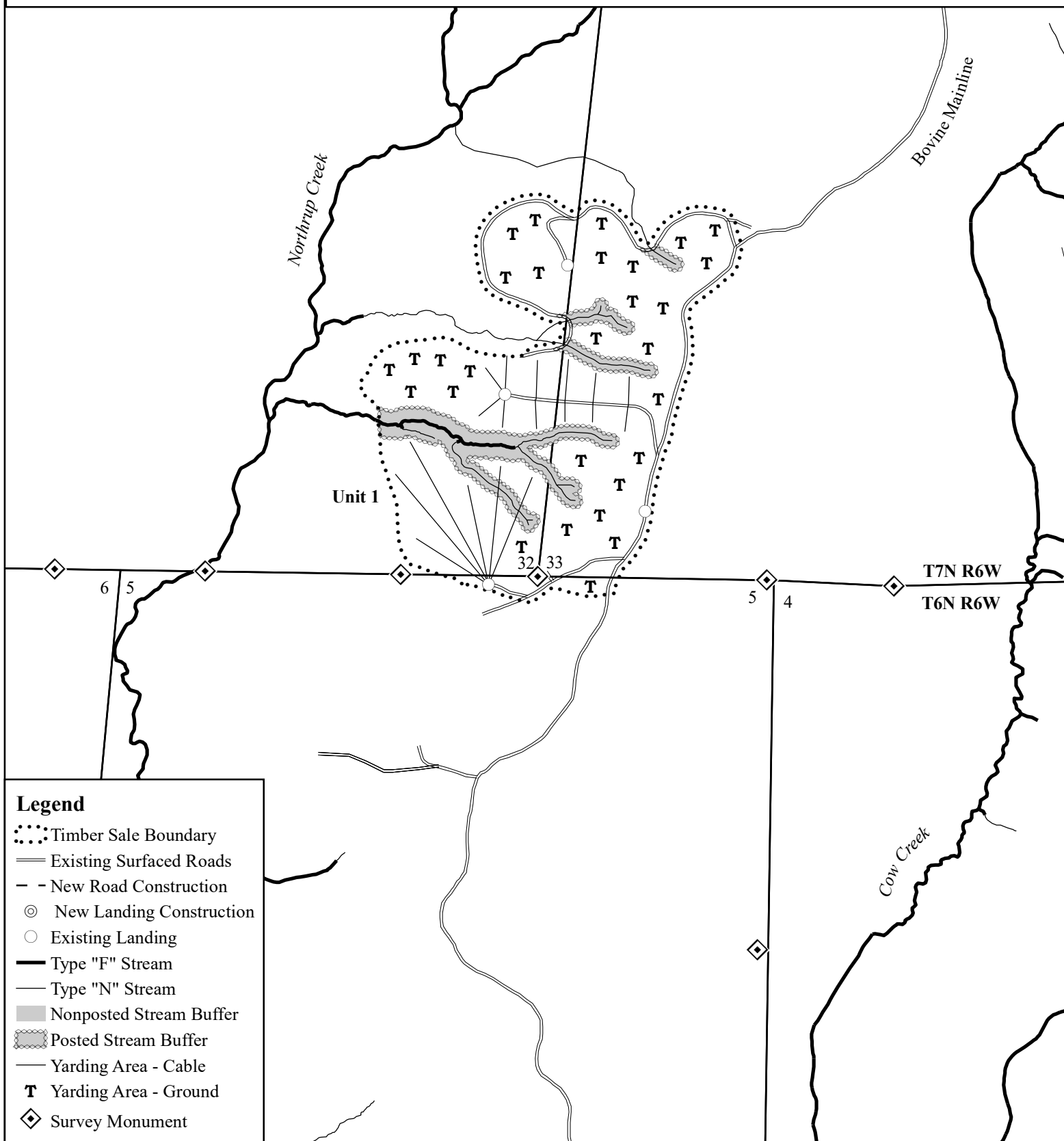
Portions of Section 27, 28, 32, 33, 34, &  
35 of T7N, R6W, and Portions of Section 5,  
T6N, R6W, W.M., Clatsop County, Oregon

Approximate Scale: 1 inch = 1,000 feet

0 500 1,000 2,000  
Feet

| Approximate Net Acres |     |
|-----------------------|-----|
| Unit 1(MC) =          | 97  |
| Unit 2(MC) =          | 69  |
| Unit 3(MC) =          | 59  |
| Unit 4(MC) =          | 30  |
| Unit 5(R/W) =         | 1   |
| Total =               | 256 |

|             | Logging Breakdown |       |
|-------------|-------------------|-------|
|             | Ground            | Cable |
| Unit 1      | 56%               | 44%   |
| Unit 2      | 10%               | 90%   |
| Unit 3      | 44%               | 56%   |
| Unit 4      | 10%               | 90%   |
| Unit 5(R/W) | 100%              | 0%    |
| Total       | 36%               | 64%   |



# LOGGING PLAN MAP

of Timber Sale Contract  
No. 341-2020-W00738-01

CLEAN SLATE

Portions of Section 27, 28, 32, 33, 34, &  
35 of T7N, R6W, and Portions of Section 5,  
T6N, R6W, W.M., Clatsop County, Oregon

Approximate Scale: 1 inch = 1,000 feet

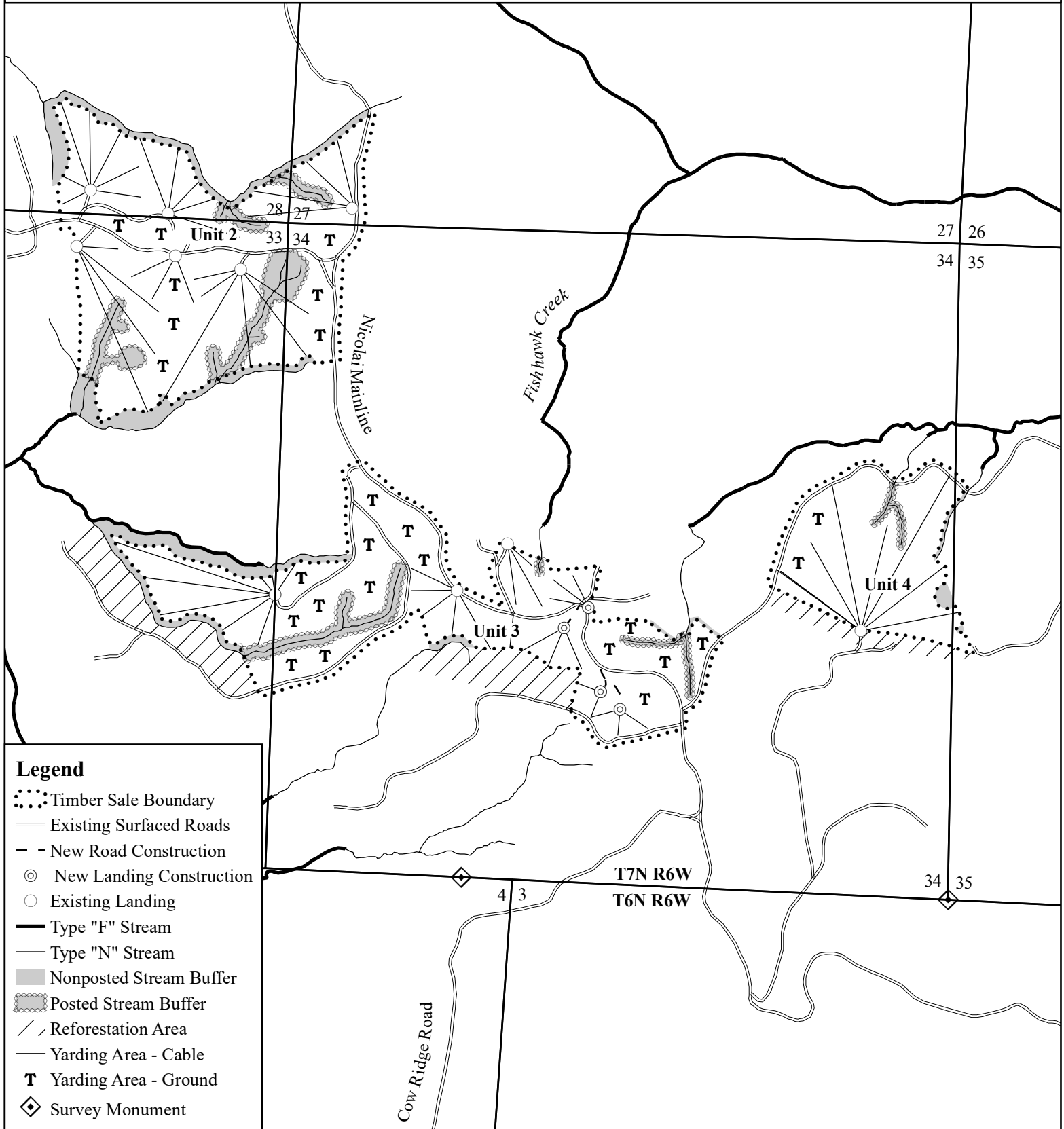
0 500 1,000 2,000  
Feet

## Approximate Net Acres

|               |     |
|---------------|-----|
| Unit 1(MC) =  | 97  |
| Unit 2(MC) =  | 69  |
| Unit 3(MC) =  | 59  |
| Unit 4(MC) =  | 30  |
| Unit 5(R/W) = | 1   |
| Total =       | 256 |

## Logging Breakdown

|             | Ground | Cable |
|-------------|--------|-------|
| Unit 1      | 56%    | 44%   |
| Unit 2      | 10%    | 90%   |
| Unit 3      | 44%    | 56%   |
| Unit 4      | 10%    | 90%   |
| Unit 5(R/W) | 100%   | 0%    |
| Total       | 36%    | 64%   |



## Legend

- ⋯ Timber Sale Boundary
- Existing Surfaced Roads
- - New Road Construction
- ⊙ New Landing Construction
- Existing Landing
- Type "F" Stream
- Type "N" Stream
- Nonposted Stream Buffer
- ▨ Posted Stream Buffer
- /// Reforestation Area
- Yarding Area - Cable
- T Yarding Area - Ground
- ◆ Survey Monument