WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

TIMBER NOTICE OF SALE

***SALE NAME**: TIP TOP* ***AGREEMENT NO**: 30-094094*

AUCTION: August 25, 2020 starting at 10:00 a.m., **COUNTY:** Mason
South Puget Sound Region Office, Enumclaw, WA

SALE LOCATION: Sale located approximately 16 miles west of Belfair.

PRODUCTS SOLD AND SALE AREA: All timber, except trees marked with blue paint or bounded out by yellow leave tree area tags, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, timber type changed marked with pink flagging, private property marked with pink flagging and white Carsonite posts, and the M-2000, M-2050, and M-2060 roads in Unit #1; white timber sale boundary tags in Unit #2; white timber sale boundary tags, and the M-2000 Road in Units #3 and #4; white timber sale boundary tags, timber type changed marked with pink flagging, and private property marked with pink flagging and white Carsonite posts in Unit #5;

All timber bounded by orange right of way tags, except that title to timber within the right of way tags is not conveyed to the Purchaser unless the road segment is actually constructed in Right of Way Unit #6;

All timber bounded by orange right of way tags in Right of Way Unit #7;

All forest products above located on part(s) of Sections 16, 17, 19, 20 and 21 all in Township 22 North, Range 3 West, W.M., containing 176 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: PwC-SFIFM-513) and FSC 100% raw materials under the Forest Stewardship Council® Standard (cert no: BV-FM/COC-080501).

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade 1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	15	6	3,592				12		1,640	1,369	571	
Red cedar	22.6		212							196	16	
Hemlock	11.7	7	193						65	62	66	
Red alder	15.7		97						26	40	31	
Maple	19.9		63						33	22	8	
White pine	12		28							20	8	
Sale Total			4,185									

MINIMUM BID: $1,097,000.00 **BID METHOD:** Sealed Bids

PERFORMANCE SECURITY: $100,000.00 **SALE TYPE:** Lump Sum

EXPIRATION DATE: October 31, 2022 **ALLOCATION:** Export Restricted

BID DEPOSIT: $109,700.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

TIMBER NOTICE OF SALE

HARVEST METHOD: Harvest activities are estimated to be 30 percent uphill cable and 70 percent ground based harvest. Cable or ground based equipment, with cable-tethered and self-leveling equipment limited to sustained slopes 75 percent or less and all other ground based equipment limited to sustained slopes 45 percent or less. Yarding may be restricted during wet weather if rutting becomes excessive, per clause H-017.

Falling and yarding will not be permitted on weekdays from 7:00 pm to 7:00 am, weekends or State recognized holidays, unless approved in writing by the Contract Administrator.

ROADS: 69.50 stations of required construction. 26.41 stations of required reconstruction. 128.06 stations of optional construction. 346.57 stations of required prehaul maintenance. 1.78 stations of abandonment. 108.07 stations of abandonment, if constructed. Purchaser maintenance on all roads used.

Rock for this proposal may be obtained from the State owned Sandhill Rock Pit at no cost to the Purchaser or any commercial rock source at the Purchaser's expense. If Purchaser elects to use the Sandhill Rock Pit, rock pit development work is required per Road Plan clause 6-11.

The operation of road construction equipment will not be permitted weekdays from 7:00 pm to 7:00 am, weekends or State recognized holidays, unless approved in writing by the Contract Administrator.

ACREAGE DETERMINATION

CRUISE METHOD: Acreage was determined by traversing boundaries by GPS. GPS data files are available at DNR's website for Timber Sale Auction Packets. See cruise narrative for cruise method.

FEES: $71,145.00 is due on day of sale. $9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: This sale contains high quality Douglas fir, see Cruise.

Tailhold locations are restricted in specific areas due to protection of potentially unstable slopes. Locations outside the sale boundary where trees shall not be used as tailholds due to potentially unstable slopes are identified on the Timber Sale Map.

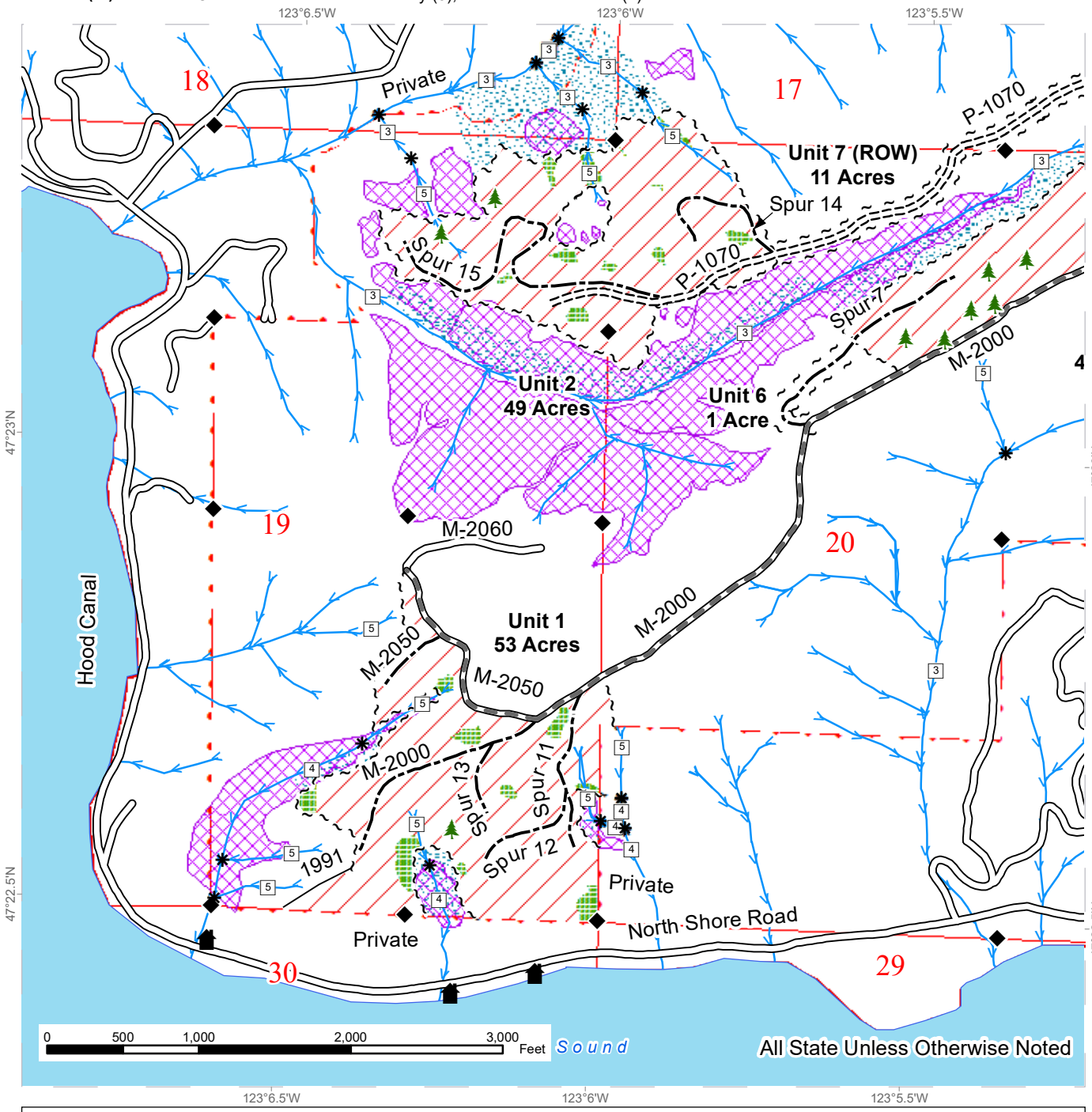
Please note there was poison oak observed in the southwest portion of Unit #1.

See map for gate locations. Gate keys may be obtained by contacting the South Puget Sound Region Office at 360-825-1631 or by contacting Nathan McReynolds at 253-381-2015.

TIMBER SALE MAP

SALE NAME: TIP TOP
AGREEMENT #: 30-094094
TOWNSHIP(S): T22R3W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Mason
ELEVATION RGE: 147-508



- Variable Retention Harvest
- Leave Tree Area
- Riparian Mgt Zone
- Tailhold Exclusion Zone
- Streams
- Sale Boundary Tags
- Leave Tree Tags
- Right of Way Tags
- Property Line
- Timber Type Change
- Leave Trees
- Structure
- Existing Roads
- Required Pre-Haul Maintenance
- Required Construction
- Optional Construction
- Stream Type
- Stream Type Break
- Survey Monument

N

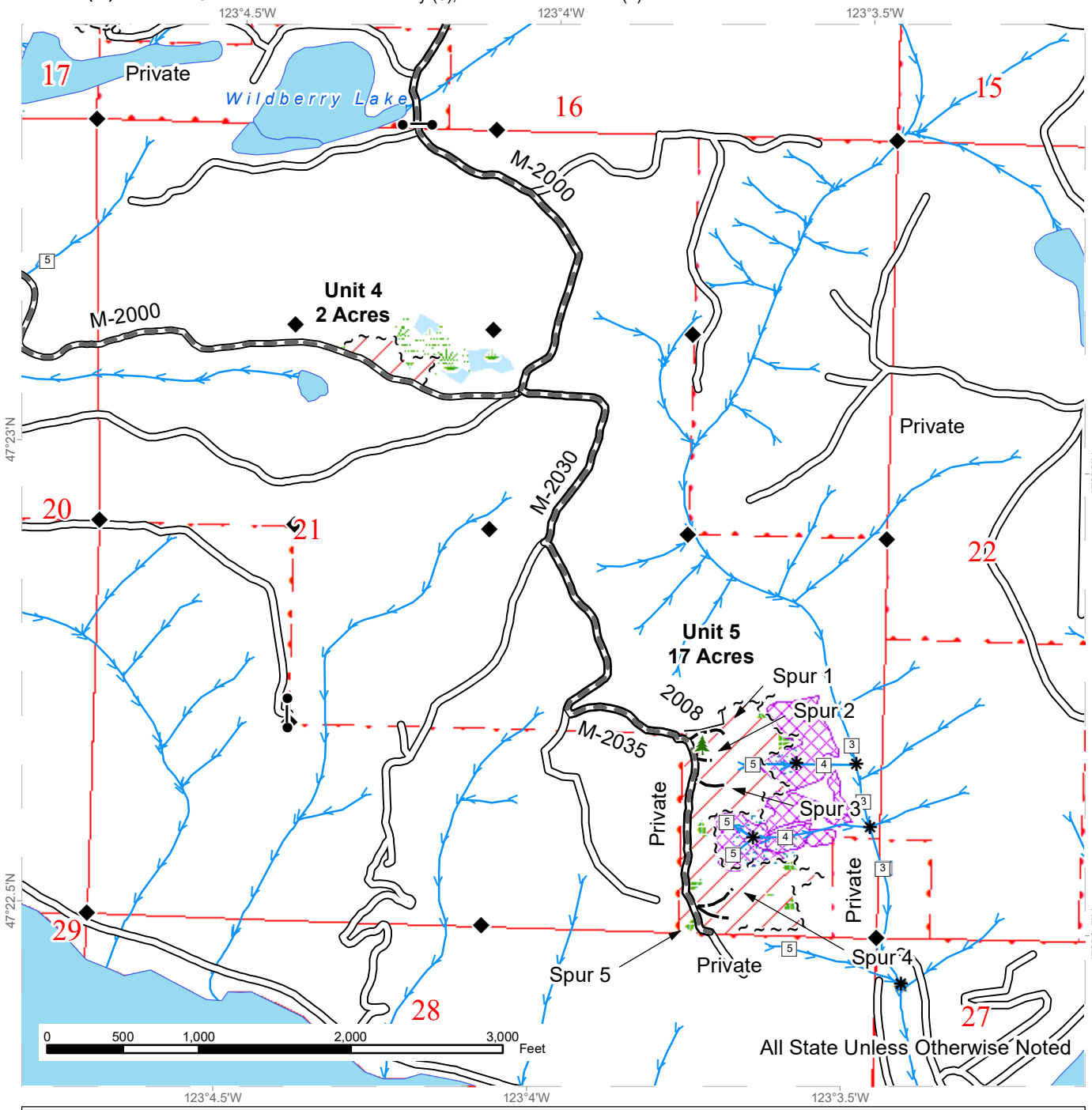
Prepared By: nmcr490

Modification Date: nchi490 7/2/2020

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Variable Retention Harvest
Leave Tree Area
Riparian Mgt Zone
Wetlands
Wetland Mgt Zone
Tailhold Exclusion Zone
Streams
Sale Boundary Tags
Leave Tree Tags
Right of Way Tags
Property Line
Timber Type Change
Leave Trees
Existing Roads
Required Pre-Haul Maintenance
Required Construction
Optional Construction
Stream Type
Stream Type Break
Survey Monument

N

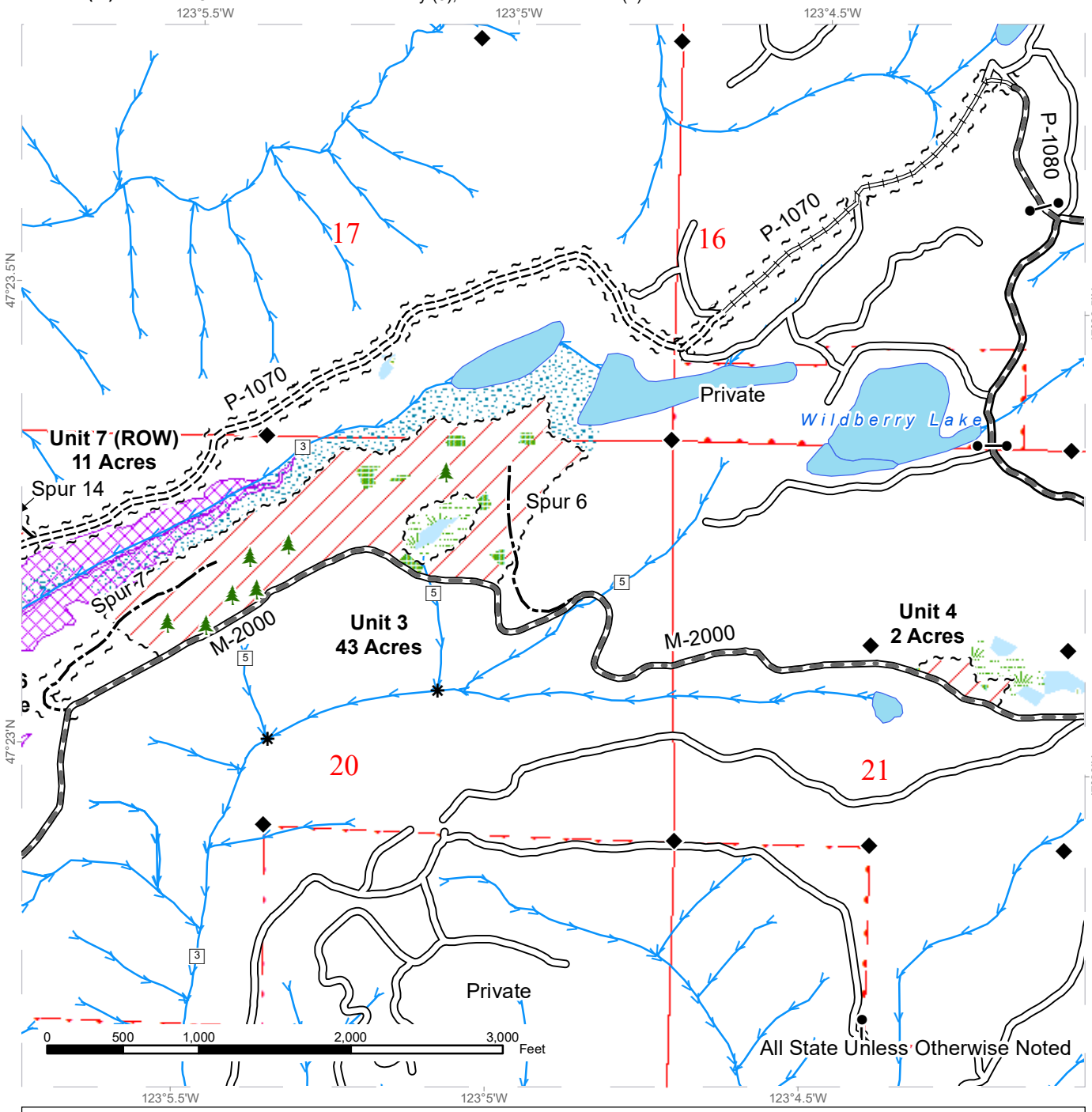
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- Variable Retention Harvest
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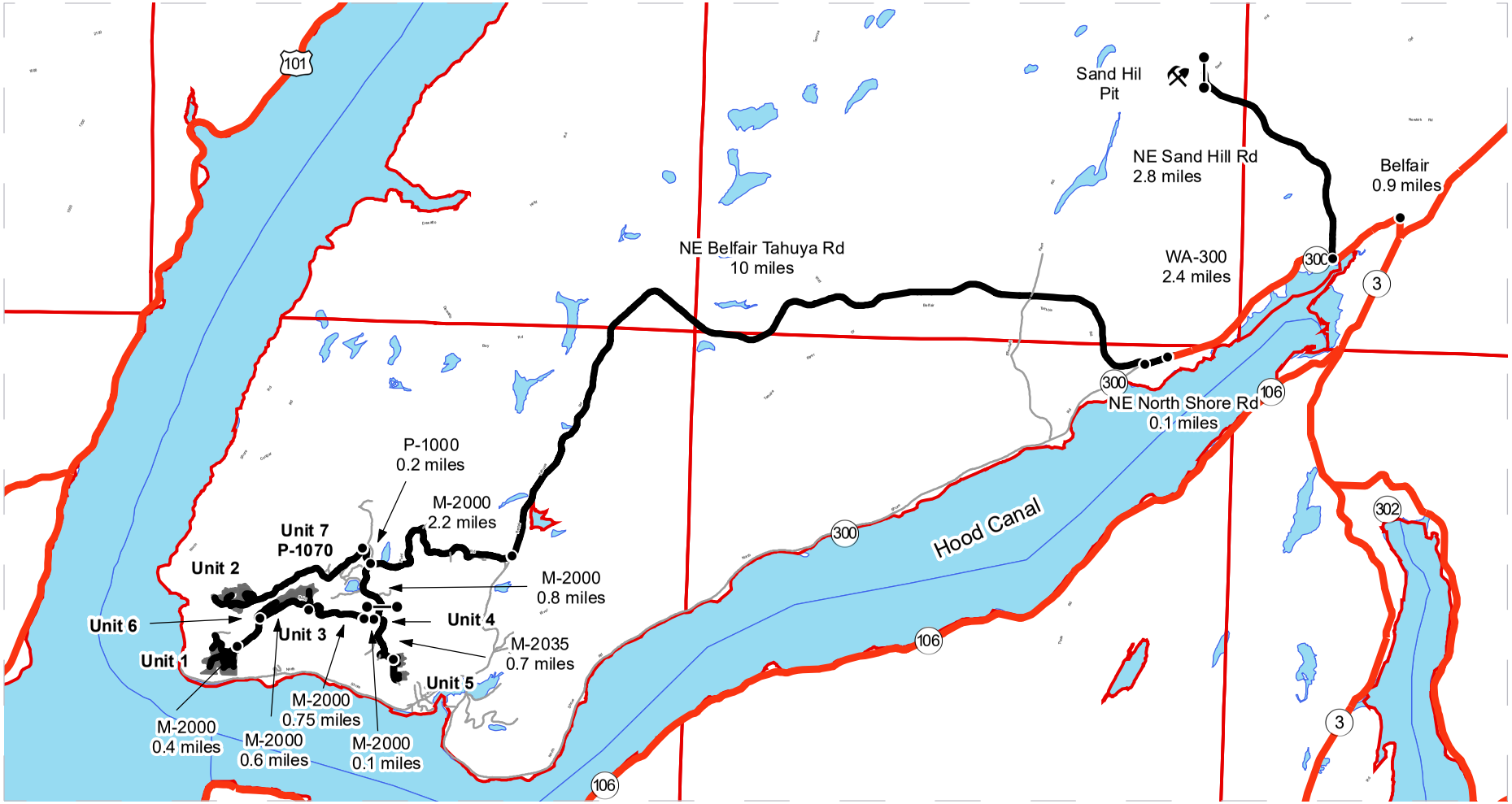
Prepared By: nmcr490

Modification Date: nchi490 7/2/2020

DRIVING MAP

SALE NAME: TIP TOP
AGREEMENT#: 30-094094
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REGION: South Puget Sound Region
COUNTY(S): Mason
ELEVATION RGE: 147-508



Timber Sale Unit
Haul Route
Other Road
Distance Indicator
Gate (383)
Rock Pit

Driving Directions:

Unit 7 (Right of Way Unit): From Belfair travel west on WA-300 W for 3.3 miles. Continue onto NE North Shore Rd. for 0.1 miles. Turn right onto NE Belfair Tahuya Rd. and follow for 10 miles. Turn right onto M-2000 road and follow for 2.2miles. Turn right onto P-1000 and follow for 0.2 mile. The unit will be on your left.
Unit 2: To reach Unit 2 you must walk via Unit 7.
Unit 4: From the junction of the M-2000 and P-1000 continue on the M-2000 for 0.9 miles to reach unit 4.
Unit 3: From Unit 4 continue to follow the M-2000 for 0.75 miles to reach Unit 2.
Unit 6(Right of Way Unit): From Unit 2 continue to follow the M-2000 for 0.6 miles to reach Unit 6.
Unit 1: From Unit 2 continue to follow the M-2000 for 0.7 miles to reach Unit 1.
Unit 5 From the junction of the M-2000 and the M-2035 follow the M-2035 for 0.7 miles to reach Unit 5.
Sand Hill Pit: From Belfair travel west on WA-300 W for 0.9 miles. Turn right onto NE Sand Hill Rd. and follow for 2.8 miles. Sand Hill Pit will be on your right.

N

Prepared By: nmcr490

Modification Date: jhom490 8/14/2019

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

BILL OF SALE AND CONTRACT FOR FOREST PRODUCTS

Export Restricted Lump Sum AGREEMENT NO. 30-094094

SALE NAME: TIP TOP

THE STATE OF WASHINGTON DEPARTMENT OF NATURAL RESOURCES, HEREINAFTER ACTING SOLELY, IN ITS PROPRIETARY CAPACITY, STATE, AND PURCHASER, AGREE AS FOLLOWS:

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

Bill of Sale and Contract for Forest Products: Contract between the Purchaser and the State, which sets forth the procedures and obligations of the Purchaser in exchange for the right to remove forest products from the sale area. The Bill of Sale and Contract for Forest Products may include a Road Plan for any road construction or reconstruction, where applicable.

Contract Administrator: Region Manager's designee responsible for assuring that the contractual obligations of the Purchaser are met.

Forest Product: Any material derived from the forest for commercial use.

Purchaser: The company or individual that has entered into a Bill of Sale and Contract for Forest Products with the State for the right to harvest and remove forest products from the timber sale area.

Road Construction: Includes building new and maintaining existing forest roads and associated work that may be optional or required as described in the Road Plan.

State: The Washington State Department of Natural Resources, landowner and seller of Forest Products from the timber sale area. The State is represented by the Region Manager as designated on the contract signature page. Contractual obligations to the State are enforced by the Region Manager or the designated Contract Administrator.

Subcontractor: Individual or company employed by the Purchaser to perform a portion or all of the services required by The Bill of Sale and Contract for Forest Products. The Purchaser is responsible for independently negotiating, procuring and paying for all subcontracted services rendered.

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on August 25, 2020 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except trees marked with blue paint or bounded out by yellow leave tree area tags, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, timber type changed marked with pink flagging, private property marked with pink flagging and white Carsonite posts, and the M-2000, M-2050, and M-2060 roads in Unit #1; white timber sale boundary tags in Unit #2; white timber sale boundary tags, and the M-2000 Road in Units #3 and #4; white timber sale boundary tags, timber type changed marked with pink flagging, and private property marked with pink flagging and white Carsonite posts in Unit #5;

All timber bounded by orange right of way tags, except that title to timber within the right of way tags is not conveyed to the Purchaser unless the road segment is actually constructed in Right of Way Unit #6;

All timber bounded by orange right of way tags in Right of Way Unit #7.

All forest products above located on approximately 176 acres on part(s) of Sections 16, 17, 19, 20, and 21 all in Township 22 North, Range 3 West W.M. in Mason County(s) as designated on the sale area and as shown on the attached timber sale map.

All forest products described above from the bole of the tree that meet or exceed 2 inches diameter inside bark on the small end are eligible for removal. Above ground components of a tree that remain as by-products after the manufacture of logs, including but not limited to tree tops, branches, limbs, needles, leaves, stumps, are not eligible for removal under the terms of this contract.

Forest products purchased under a contract that is designated as export restricted shall not be exported until processed. Forest products purchased under a contract that is designated as exportable may be exported prior to processing.

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to the State that they enter this contract based solely upon their own judgment of the value of the forest products, formed after their own examination and inspection of both the timber sale area and the forest products being sold. Purchaser also warrants to the State that they enter this contract without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representations by the State Department of Natural Resources.

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2022.

G-040 Contract Term Adjustment - No Payment

Purchaser may request an adjustment in the contract term. A claim must be submitted in writing and received by the State within 30 days after the start of interruption or delay. The claim must also indicate the actual or anticipated length of interruption or delay. The State may grant an adjustment without charge only if the cause for contract term adjustment is beyond Purchaser's control. The cause must be one of the following and the adjustment may be granted only if operations or planned operations under this contract are actually interrupted or delayed:

a. Road and bridge failures which deny access.

b. Access road closures imposed by road owner.

c. Excessive suspensions as provided in clause G-220.

d. Regulatory actions not arising from Purchaser's failure to comply with this contract which will prevent timber harvest for a period less than 6 months.

G-051 Contract Term Extension - Payment

Extensions of this contract term may be granted only if, in the judgment of the State, Purchaser is acting in good faith and is endeavoring to remove the forest products conveyed. The term of this contract may be extended for a reasonable time by the State if all of the following conditions are satisfied:

a. A written request for extension of the contract term must be received prior to the expiration date of the contract.

b. Completion of all required roads and compliance with all contract and regulatory requirements.

c. For the first extension, not to exceed 1 year, payment of at least 25 percent of the total contract price.

For the second extension, not to exceed 1 year, payment of at least 90 percent of the total contract price.

The payments shall not include the initial deposit which shall be held according to the provisions of RCW 79.15.100.

d. Payment of an amount based on 12 percent interest per annum on the unpaid portion of the total contract price.

All payments, except the initial deposit, will be deducted from the total contract price to determine the unpaid portion of the contract.

e. Payment of $727.00 per acre per annum for the acres on which an operating release has not been issued within the harvest area.

f. In no event will the extension charge be less than $200.00.

g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

Whenever the State determines that a survey for sensitive, threatened, or endangered species is prudent, or when Purchaser determines a survey is prudent and the State agrees, Purchaser shall perform such surveys at Purchaser's expense and to the standards required by the State. The survey information shall be supplied to the State.

G-060 Exclusion of Warranties

The PARTIES AGREE that the IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE and ALL OTHER WARRANTIES EXPRESSED OR IMPLIED ARE EXCLUDED from this transaction and shall not apply to the goods sold. For example, THE FOLLOWING SPECIFIC MATTERS ARE NOT WARRANTED, and are EXCLUDED from this transaction:

a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.

b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."

c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.

d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.

e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.

f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.

g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.

h. Items contained in any other documents prepared for or by the State.

G-062 Habitat Conservation Plan

The State has entered into a Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to address state trust land management issues relating to compliance with the Federal Endangered Species Act. The activities to be carried out under this contract are located within the State's HCP area and are subject to the terms and conditions of the HCP, and the Services' Incidental Take Permit Nos. TE812521-1 and 1168 (collectively referred to as ITP), or as amended hereafter by the Services. The ITP authorizes the incidental take of certain federally listed threatened and endangered species, as specified in the ITP conditions. All HCP materials, including the ITP, are available for review at the State's Regional Offices and the administrative headquarters in Olympia, Washington.

By signing this contract, Purchaser agrees to comply with the terms and conditions of the ITP, and the HCP, which shall become terms of this contract. The State agrees to authorize the lawful activities of the Purchaser carried out pursuant to this contract, PROVIDED the Purchaser remains in compliance with the terms and conditions of both the HCP and ITP. The requirements set forth in this contract are intended to comply with the terms and conditions of the HCP and ITP. Accordingly, non-compliance with the terms and conditions of the HCP and ITP will render the authorization provided in this paragraph void, be deemed a breach of the contract and may subject Purchaser to liability for violation of the Endangered Species Act.

Any modifications to the contract shall be proposed in writing by Purchaser, shall continue to meet the terms and conditions of the HCP and ITP, and shall require the prior written approval of the Region Manager before taking effect.

G-063 Incidental Take Permit Notification Requirements

a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.

b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.

c. Purchaser shall refer to a specific ITP number, ITP TE812521-1 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.

d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

Purchaser is responsible for obtaining any permits not already obtained by the State that relate to Purchaser's operation. Forest Practice Application / Hydraulic Project Approval permits obtained by the State shall be transferred to Purchaser. Purchaser is responsible for all permits, amendments and renewals.

G-065 Regulatory Disclaimer

The State disclaims any responsibility for, or liability relating to, regulatory actions by any government agency, including actions pursuant to the Forest Practices Act, Ch. 76.09 RCW that may affect the operability of the timber sale.

G-066 Governmental Regulatory Actions

a. Risk

Purchaser shall be responsible for any increased operational costs arising from any applicable foreign or domestic governmental regulation or order that does not cause contract performance to become commercially impracticable or that does not substantially frustrate the purpose of the contract. If impracticability or frustration results from Purchaser's failure to comply with this contract, Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

b. Sale Area

When portions of the sale area become subject to a foreign or domestic governmental regulation or order that will likely prevent timber harvest for a period that will exceed the expiration date of this contract, and Purchaser has complied with this contract, the following shall apply:

i. RCW 79.15.140 shall govern all adjustments to the contract area.

c. Adjustment of Price

The State shall adjust the total contract price by subtracting from the total contract price an amount determined in the following manner: The State shall cause the timber sale area subject to governmental regulation or order to be measured. The State shall calculate the percentage of the total sale area subject to the governmental regulation or order. The State shall reduce the total contract price by that calculated percentage. However, variations in species, value, costs, or other items pertaining to the affected sale area will be analyzed and included in the adjustment if deemed appropriate by the State. The State will further reduce the total contract price by the reasonable cost of unamortized roads Purchaser constructed but was unable to fully use for removing timber. A reduction in total contract price terminates all of the Purchaser's rights to purchase and remove the timber and all other interest in the affected sale area.

G-070 Limitation on Damage

In the event of a breach of any provision of this contract by the State, the exclusive remedy available to Purchaser will be limited to a return of the initial deposit, unapplied payments, and credit for unamortized improvements made by Purchaser.

The State shall not be liable for any damages, whether direct, incidental or consequential.

G-080 Scope of State Advice

No advice by any agent, employee, or representative of the State regarding the method or manner of performing shall constitute a representation or warranty that said method, manner or result thereof will conform to the contract or be suitable for Purchaser's purposes under the contract. Purchaser's reliance on any State advice regarding the method or manner of performance shall not relieve Purchaser of any risk or obligation under the contract. Purchaser retains the final responsibility for its operations under this contract and State shall not be liable for any injuries resulting from Purchaser's reliance on any State advice regarding the method or manner of performance.

G-091 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, the added forest products become a part of this contract. The State shall determine the volume added and shall calculate the increase to the total contract price using the rates set forth in clause G-101, G-102, or G-103. If the sale area is reduced, the State shall determine the volume to be reduced. The State shall calculate the reduction to the total contract price using the rates set forth in clause G-101, G-102, or G-103.

G-101 Forest Products Not Designated

Any forest products not designated for removal, which must be removed in the course of operations authorized by the State, shall be approved and designated by the Contract Administrator. Added forest products become a part of this contract and the Scribner log scale volume, as defined by the Northwest Log Rules Advisory Group, shall be determined by the Contract Administrator. Added forest products shall be paid for at the following contract payment rates per Mbf Scribner log scale.

The pricing schedule has not been set for the sale.

G-106 Adding Naturally Damaged Forest Products

Any forest products not designated for removal that are seriously damaged by disease, insects or wind, or that may contribute seriously to the spread of insect or disease damage may be added to this sale by the State's Contract Administrator. Additions must be in unlogged areas of the sale and added volume shall not exceed an amount equal to 10 percent of the original advertised volume. Added forest products become a part of this contract and shall be paid for at the rate set forth in clause G-101, G-102 or G-103.

G-111 Title and Risk of Loss

Title to the forest products under this contract passes to the Purchaser after they are removed from the sale area, if adequate advance payment or payment security has been provided to the State under this contract. Purchaser bears all risk of loss of, or damage to, and has an insurable interest in, the forest products described in this contract from

the time the sale is confirmed under RCW 79.15.120. Breach of this contract shall have no effect on this provision.

G-115 Forest Stewardship Council® (FSC®) Certification

Forest products purchased under this contract are FSC 100% certified as being in conformance with the Forest Stewardship Council Standard under certificate number: BV-FM/COC-080501.

G-116 Sustainable Forestry Initiative® (SFI) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: PwC-SFIFM-513.

Purchaser shall have at least one person regularly on-site during active operations that have completed training according to the requirements outlined within the SFI® program Standard. Purchaser shall designate in writing the name(s) of the individual(s) who will be on-site and provide proof of their successful completion of an approved training program prior to active operations.

G-120 Responsibility for Work

All work, equipment, and materials necessary to perform this contract shall be the responsibility of Purchaser. Any damage to improvements, except as provided in clause G-121 or unless the State issues an operating release pursuant to clause G-280, shall be repaired promptly to the satisfaction of the State and at Purchaser's expense.

G-121 Exceptions

Exceptions to Purchaser's responsibility in clause G-120 shall be limited exclusively to the following. These exceptions shall not apply where road damage occurs due to Purchaser's failure to take reasonable precautions or to exercise sound forest engineering and construction practices.

The State will bear the cost to repair damages caused by a third party. In all other cases, the Purchaser shall bear responsibility for the costs as described below.

Road is defined as the road bed, including but not limited to its component parts, such as cut and fill slopes, subgrade, ditches, culverts, bridges, and cattle guards.

For the purposes of this clause, damage will be identified by the State and is defined as:

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;

2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and

3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

The repair work identified by the State shall be promptly completed by Purchaser at an agreed price. The State may elect to accomplish repairs by means of State-provided resources.

For each event, Purchaser shall be solely responsible for the initial $5,000 in repairs. For repairs in excess of $5,000, the parties shall share equally the portion of costs between $5,000 and $15,000. The State shall be solely responsible for the portion of the cost of repairs that exceed $15,000.

Nothing contained in clauses G-120 and G-121 shall be construed as relieving Purchaser of responsibility for, or damage resulting from, Purchaser's operations or negligence, nor shall Purchaser be relieved from full responsibility for making good any defective work or materials. Authorization to haul does not warrant that Purchaser built roads are free from material defect and the State may require additional work, at Purchasers expense regardless of cost, to remedy deficiencies at any time.

G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims arising out of or resulting from the performance of the contract. "Claim" as used in this contract means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorneys' fees, attributable for bodily injury, sickness, disease or death, or injury to or destruction of tangible property including loss of use resulting therefrom. Purchasers' obligations to indemnify, defend, and hold harmless includes any claim by Purchasers' agents, employees, representatives, or any subcontractor or its employees. Purchaser expressly agrees to indemnify, defend, and hold harmless State for any claim arising out of or incident to Purchasers' or any subcontractors' performance or failure to perform the contract. Purchasers' obligation to indemnify, defend, and hold harmless State shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials. Purchaser waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

G-150 Insurance

Purchaser shall, at its cost and expense, buy and maintain insurance of the types and amounts listed below. Failure to buy and maintain the required insurance may result in a breach and/or termination of the contract at State's option. State may suspend Purchaser operations until required insurance has been secured.

All insurance and surety bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. If an insurer is not admitted, all insurance

policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

The State of Washington, Department of Natural Resources region office of sale origin shall be provided written notice before cancellation or non-renewal of any insurance referred to therein, in accord with the following specifications:

1. Insurers subject to Chapter 48.18 RCW (admitted and regulated by the Insurance Commissioner): The insurer shall give the State 45 days advance notice of cancellation or non-renewal. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.

2. Insurers subject to Chapter 48.15 RCW (surplus lines): The State shall be given 20 days advance notice of cancellation. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.

Before starting work, Purchaser shall furnish State of Washington, Department of Natural Resources with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements specified in the contract. Insurance coverage shall be obtained by the Purchaser prior to operations commencing and continually maintained in full force until all contract obligations have been satisfied or an operating release has been signed by the State.

Purchaser shall include all subcontractors as insured under all required insurance policies, or shall furnish separate certificates of insurance and endorsements for each subcontractor. Subcontractor(s) must comply fully with all insurance requirements stated herein. Failure of subcontractor(s) to comply with insurance requirements does not limit Purchaser's liability or responsibility.

The State of Washington, Department of Natural Resources, its elected and appointed officials, agents and employees shall be named as an additional insured via endorsement on all general liability, excess, umbrella, and property insurance policies.

All insurance provided in compliance with this contract shall be primary as to any other insurance or self-insurance programs afforded to or maintained by State. Purchaser waives all rights against State for recovery of damages to the extent these damages are covered by general liability or umbrella insurance maintained pursuant to this contract.

By requiring insurance herein, State does not represent that coverage and limits will be adequate to protect Purchaser and such coverage and limits shall not limit Purchaser's liability under the indemnities and reimbursements granted to State in this contract.

The limits of insurance, which may be increased as deemed necessary by State of Washington, Department of Natural Resources, shall not be less than as follows:

Commercial General Liability (CGL) Insurance. Purchaser shall maintain general liability (CGL) insurance, and, if necessary, commercial umbrella insurance with a limit of not less than $1,000,000.00 per each occurrence. If such CGL insurance contains aggregate limits, the General Aggregate limit shall be at least twice the "each occurrence" limit. CGL insurance shall have products-completed operations aggregate limit of at least two times the "each occurrence" limit. CGL coverage shall include a Logging and Lumbering Endorsement (i.e. Logger's Broad-Form) to cover the events that include, but are not limited to, fire suppression expenses, accidental timber trespasses, and wildfire property damage with limits of not less than $2,000,000.00 each occurrence.

CGL insurance shall be written on Insurance Services Office (ISO) occurrence form CG 00 01 (or a substitute form providing equivalent coverage). All insurance shall cover liability arising out of premises, operations, independent contractors, products completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another party assumed in a business contract), and contain separation of insured (cross liability) condition.

Employer's Liability "Stop Gap" Insurance. Purchaser shall buy employers liability insurance, and, if necessary, commercial umbrella liability insurance with limits not less than $1,000,000.00 each accident for bodily injury by accident or $1,000,000.00 each employee for bodily injury by disease.

Workers' Compensation Coverage. Purchaser shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Purchaser and employees of any subcontractor or sub-subcontractor. Coverage shall include bodily injury (including death) by accident or disease, which exists out of or in connection with the performance of this contract. Except as prohibited by law, Purchaser waives all rights of subrogation against State for recovery of damages to the extent they are covered by workers' compensation, employer's liability, commercial general liability, or commercial umbrella liability insurance.

If Purchaser, subcontractor or sub-subcontractor fails to comply with all State of Washington workers' compensation statutes and regulations and State incurs fines or is required by law to provide benefits to or obtain coverage for such employees, Purchaser shall indemnify State. Indemnity shall include all fines, payment of benefits to Purchaser or subcontractor employees, or their heirs or legal representatives, and the cost of effecting coverage on behalf of such employees.

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit not less than $1,000,000.00 per accident. Such insurance shall cover liability arising out of "Any Auto". Business auto coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or

expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Enumclaw, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive, modify, or amend the terms of this contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

Purchaser is required to have a person on site during all operations who is authorized to receive instructions and notices from the State. Purchaser shall inform the State in writing who is authorized to receive instructions and notices from the State, and any limits to this person's authority.

G-170 Assignment and Delegation

No rights or interest in this contract shall be assigned by Purchaser without prior written permission of the State. Any attempted assignment shall be void and ineffective for all purposes unless made in conformity with this paragraph. Purchaser may perform any duty through a delegate, but Purchaser is not thereby relieved of any duty to perform or any liability. Any assignee or delegate shall be bound by the terms of the contract in the same manner as Purchaser.

G-180 Modifications

Waivers, modifications, or amendments of the terms of this contract must be in writing signed by Purchaser and the State.

G-190 Contract Complete

This contract is the final expression of the Parties' agreement. There are no understandings, agreements, or representations, expressed or implied, which are not specified in this contract.

G-200 Notice

Notices required to be given under the following clauses shall be in writing and shall be delivered to Purchaser's authorized agent or sent by certified mail to Purchaser's address of record:

G-210 Violation of Contract
G-220 State Suspends Operations

All other notices required to be given under this contract shall be in writing and delivered to the authorized agent or mailed to the Party's post office address. Purchaser agrees to notify the State of any change of address.

G-210 Violation of Contract

a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.

b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.

c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.

d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

G-220 State Suspends Operation

The Contract Administrator may suspend any operation of Purchaser under this contract when the State is suffering, or there is a reasonable expectation the State will suffer environmental, monetary, or other damage if the operation is allowed to continue.

Purchaser shall be in breach of this contract if the operation continues after the suspension notice or if the operation resumes without prior approval and notice from the Contract Administrator.

Purchaser may request a modification of a suspension within 30 days of the start of suspension through the dispute resolution process in clause G-240. If this process results in a finding that the suspension exceeded the time reasonably necessary to stop or prevent damage to the State, Purchaser is entitled to request a contract term adjustment under clause G-040.

If it reasonably appears that the damage that the State is suffering, or can reasonably be expected to suffer if the operation is allowed to continue, will prevent harvest for a period that will exceed 6 months, and Purchaser has complied with this contract, the provisions of clause G-066 shall govern just as if the harvest was prevented by an applicable foreign or domestic governmental regulation or order.

G-230 Unauthorized Activity

Any cutting, removal, or damage of forest products by Purchaser, its employees, agents, or invitees, including independent contractors, in a manner inconsistent with the terms of this contract or State law, is unauthorized. Such activity may subject Purchaser to liability for triple the value of said forest products under RCW 79.02.320 or RCW 79.02.300 and may result in prosecution under RCW 79.02.330 or other applicable statutes.

G-240 Dispute Resolution

The following procedures apply in the event of a dispute regarding interpretation or administration of this contract and the parties agree that these procedures must be followed before a lawsuit can be initiated.

a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.

b. The Region Manager will issue a written decision on Purchaser's request within ten business days.

c. Within ten business days of receipt of the Region Manager's decision, Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.

d. Unless otherwise agreed, a conference will be held by the Deputy Supervisor - Uplands within 30 calendar days of the receipt of Purchaser's request for review of the Region Manager's written decision. Purchaser and the Region Manager will have an opportunity to present their positions. The Deputy Supervisor - Uplands will issue a decision within a reasonable time of being presented with both Parties' positions.

G-250 Compliance with All Laws

Purchaser shall comply with all applicable statutes, regulations and laws, including, but not limited to; chapter 27.53 RCW, chapter 68.50 RCW, WAC 240-15 and WAC 296-54. Failure to comply may result in forfeiture of this contract.

G-260 Venue

This contract shall be governed by the laws of the State of Washington. In the event of a lawsuit involving this contract, venue shall be proper only in Thurston County Superior Court.

G-270 Equipment Left on State Land

All equipment owned or in the possession of Purchaser, its employees, agents, or invitees, including independent contractors, shall be removed from the sale area and other State land by the termination date of this contract. Equipment remaining unclaimed on State land 60 days after the expiration of the contract period is subject to disposition as provided by law. Purchaser shall pay to the State all costs of moving, storing, and disposing of such equipment. The State shall not be responsible for any

damages to or loss of the equipment or damage caused by the moving, storing or disposal of the equipment.

G-280 Operating Release

An operating release is a written document, signed by the State and Purchaser, indicating that Purchaser has been relieved of certain rights or responsibilities with regard to the entire or a portion of the timber sales contract. Purchaser and State may agree to an operating release for this sale, or portion of this sale, prior to the contract expiration, when all contract requirements pertaining to the release area have been satisfactorily completed. Upon issuance of a release, Purchaser's right to cut and remove forest products on the released area will terminate.

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; on the M-2000, M-2030, M-2035, M-2050, M-2060, P-1000, and P-1070 roads and Spurs 1 - 7 and Spurs 11 - 15. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-330 Pre-work Conference

Purchaser shall arrange with the Contract Administrator to review this contract and to examine the sale area before beginning any operations. A plan of operations shall be developed and agreed upon by the Contract Administrator and Purchaser before beginning any operations. To the extent that the plan of operations is inconsistent with the contract, the terms of the contract shall prevail. State's acceptance and approval of Purchaser's plan of operations shall not be construed as any statement or warranty that the plan of operations is adequate for Purchaser's purposes or complies with applicable laws.

G-340 Preservation of Markers

Any legal land subdivision survey corners and witness objects are to be preserved. If such are destroyed or disturbed, the Purchaser shall, at the Purchaser’s own expense, re-establish them through a licensed land surveyor in accordance with U.S. General Land Office standards. Corners and/or witness objects that must be disturbed or destroyed in the process of road construction or logging shall be adequately referenced and/or replaced in accordance with RCW 58.24.040(8). Such references must be approved by the Contract Administrator prior to removal of said corners and/or witness objects.

G-360 Road Use Reservation

The State shall have the right to use, without charge, all existing roads and any road constructed or reconstructed on State lands by Purchaser under this contract. The State may extend such rights to others. If the State grants such rights to others, the State shall require performance or payment, as directed by the State, for their proportionate share of maintenance based on their use.

G-370 Blocking Roads

Purchaser shall not block the M-2000 Road, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

Purchaser agrees to comply with the terms and conditions of the attached:

Easement #55-000784 entered into between Washington State Department of Natural Resources and G.R. Kirk Company, dated May 1, 1972.

G-396 Public Hauling Permit

The hauling of forest products, rock or equipment may require a state, county, or city hauling permit. Purchaser is responsible for obtaining any necessary permit and any costs associated with extra maintenance or repair levied by the permitting agency. Purchaser must provide the Contract Administrator with a copy of the executed permit.

G-430 Open Fires

Purchaser shall not set, or allow to be set by Purchaser's employees, agents, invitees and independent contractors, any open fire at any time of the year without first obtaining permission, in writing, from the Contract Administrator.

G-450 Encumbrances

This contract and Purchaser's activities are subject to the following:

Lease, including the terms and provisions thereof,
For: Brush
In Favor of: Northwest Research & Harvesters Association
Disclosed by Application No.: 35-097407
Granted: 7/1/2018
Expires: 6/30/2021

Easement, including the terms and provisions thereof,
For: Road
In Favor of: Pope & Talbot, Inc.
Disclosed by Application No.: 50-037914
Granted: 4/1/1975
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: Robert S. Anderson
Disclosed by Application No.: 50-039932
Granted: 4/4/1977
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Pipeline
In Favor of: Folden Rendsland
Disclosed by Application No.: 50-085136
Granted: 10/31/1925
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road
In Favor of: Louis E. & Harry C. Curl
Disclosed by Application No.: 50-085139
Granted: 1/21/1955
Expires: Indefinite

Easement, including the terms and provisions thereof,
For: Road Use Permit
In Favor of: Jay Allen dba Allen's Tree Farm
Disclosed by Application No.: 50-092086
Granted: 1/5/2015
Expires: 12/31/2020

Lease, including the terms and provisions thereof,
For: Recreation
In Favor of: WA State Department of Natural Resources
Disclosed by Application No.: 59-059605
Granted: 8/1/1973
Expires: 7/31/2023

Lease, including the terms and provisions thereof,
For: Recreation
In Favor of: WA State Department of Natural Resources
Disclosed by Application No.: 59-091853
Granted: 3/29/2011
Expires: 3/28/2041

Lease, including the terms and provisions thereof,
For: Land Use License
In Favor of: Washington Department of Fish & Wildlife
Disclosed by Application No.: 60-095576
Granted: 5/2/2017
Expires: 6/30/2022

Special Notations

Located within the Point No Point Treaty area. Intergovernmental agreements for vehicle access with Lower Elwha Tribal Community (92-095264), Skokomish Indian

Tribe (92-095268), Jamestown S'Klallam Tribe (92-097129), and Port Gamble S'Klallam Tribe (92-097130).

Section P: Payments and Securities

P-011 Initial Deposit

Purchaser paid DATA MISSING initial deposit, which will be maintained pursuant to RCW 79.15.100(3). If the operating authority on this contract expires without Purchaser's payment of the full amount specified in Clause P-020, the initial deposit will be immediately forfeited to the State, and will be offset against Purchaser's remaining balance due. Any excess initial deposit funds not needed to ensure full payment of the contract price, or not needed to complete any remaining obligations of the Purchaser existing after contract expiration, will be refunded to the Purchaser.

P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of $108,810.00. The total contract price consists of a $0.00 contract bid price plus $108,810.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

THE PURCHASE PRICE SHALL NOT BE AFFECTED BY ANY FACTORS, INCLUDING: the amount of forest products actually present within the contract area, the actual acreage covered by the contract area, the amount or volume of forest products actually cut or removed by purchaser, whether it becomes physically impossible or uneconomic to remove the forest products, and whether the subject forest products have been lost or damaged by fire or any other cause. The only situations Purchaser may not be liable for the full purchase price are governed by clause G-066, concerning governmental regulatory actions taken during the term of the contract.

P-045 Guarantee of Payment

Purchaser will pay for forest products prior to cutting or will guarantee payment by posting an approved payment security. The amount of cash or payment security shall be determined by the State and shall equal or exceed the value of the cutting proposed by Purchaser.

P-050 Billing Procedure

The State will compute and forward to Purchaser statements of charges provided for in the contract. Purchaser shall deliver payment to the State on or before the date shown on the billing statement.

P-080 Payment Account Refund

Advance payments made under P-045 or P-045.2 remaining on account above the value for the charges shall be returned to Purchaser within 30 days following the final report of charges. Refunds not made within the 30 day period will accrue interest at the interest rate, as established by WAC 332-100-030, computed on a daily basis until paid.

P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of $100,000.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

The State may reduce the performance security after an operating release has been issued if the State determines that adequate security exists for any remaining obligations of Purchaser.

Section H: Harvesting Operations

H-013 Reserve Tree Damage Definition

Reserve trees are trees required and designated for retention within the sale boundary. Purchaser shall protect reserve trees from being cut, damaged, or removed during operations.

Reserve tree damage exists when one or more of the following criteria occur as a result of Purchaser's operation, as determined by the Contract Administrator:

a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 144 square inches.

b. A reserve tree top is broken or the live crown ratio is reduced below 30 percent.

c. A reserve tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and species within the sale unit containing the damaged leave tree, as approved by the Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

Removal of designated reserve trees from the sale area is unauthorized, and may invoke the use of the G-230 'Trespass and Unauthorized Activity' clause. Purchaser is required to leave all cut or damaged reserve trees on site.

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 12 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other mitigation measures. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

H-035 Fall Trees Into Sale Area

Trees shall be felled into the sale area unless otherwise approved by the Contract Administrator.

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for the entire sale area. The plan shall address the decking of right of way timber, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

H-051 Branding and Painting

Purchaser shall provide a State of Washington registered log brand, acceptable to the State, unless the State agrees to furnish the brand. All purchased timber shall be branded in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

For pulp loads purchased under a contract designated as export restricted, Purchaser shall brand at least 3 logs with legible brands at one end. Also, 10 logs shall be painted at one end with durable red paint.

H-080 Snags Not to be Felled

Snags not required to be felled for safety reasons may be left standing. Snags felled for safety reasons shall not be removed and must remain where felled.

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using cable or ground based equipment, with cable-tethered and self-leveling equipment limited to sustained slopes 75 percent or less and all other ground based equipment limited to sustained slopes 45 percent or less. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-126 Tailholds on State Land

If Purchaser tailholds on State land, methods to minimize damage to live trees outside the sale area shall be employed and must be approved in writing by the Contract Administrator.

H-127 Tailholds on Private Land

If Purchaser chooses to tailhold on private property, Purchaser shall obtain permit(s) and assumes responsibility for all costs and damages associated with the permit(s). Purchaser must provide the State with a copy of the executed permit(s) or a letter from the landowner indicating that a satisfactory tailhold permit(s) has been consummated between Purchaser and the landowner.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

a. Any existing downed trees or logs yarded to the landing shall be returned to their original locations.

b. Equipment limitation zones are required within 30 feet of Type 5 streams.

c. Crossings of Type 5 streams may be allowed at locations approved in writing by the Contract Administrator. Purchaser shall place a culvert or log puncheon at crossing locations, when water is present, to protect the stream bank and prevent sedimentation. All materials placed in and/or over the stream at these crossings shall be removed immediately upon completion of yarding on that skid trail.

d. Any and all operations associated with this sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the potential for delivery to typed water.

e. No equipment shall operate, or trees felled or damaged, outside the timber sale boundary.

f. Notify all employees and contractors working on this sale that any danger tree marked or unmarked may be felled. Any marked danger tree will be replaced with a suitable tree of similar size and species as approved by the Contract Administrator.

g. Within shovel logging areas, and when yarding and loading operations are occurring simultaneously, an additional shovel will be required for loading to avoid extra trips to the landing. No more than one round trip per shovel road is allowed.

h. To reduce impacts of compaction, the Contract Administrator may identify locations within skid trails used by rubber tired skidders to be ripped.

i. Take measures throughout operations to control soil erosion, water channelization, and prevent sediment delivery to streams or wetlands. Methods may include construction of water bars, "sweeping" with logs, silt traps, or other measures on skid trails, yarding corridors and haul roads.

j. Purchaser shall not have more than two skid trails open to active skidding at any one time.

k. Skid trail closure will occur immediately upon completion of yarding all tributary timber. Closure shall consist creating water bars or other methods as directed by the Contract Administrator to prevent water accumulation and sediment movement.

l. In the event operations become inactive for long periods of time, skid trails shall be water barred prior to completion of yarding tributary timber to prevent water accumulation and sediment movement, if required by the Contract Administrator.

m. Once a skid trail is closed, the Purchaser shall not reopen a skid trail unless approved in writing by the Contract Administrator.

n. To facilitate proper reforestation in areas of high slash concentrations, Purchaser shall, in concurrence with ground based yarding, clear plantable spots at a 11 foot by 11 foot spacing.

o. Falling and yarding will not be permitted on weekdays from 7:00 pm to 7:00 am, weekends or State recognized holidays, unless approved in writing by the Contract Administrator.

p. Fall all snags inside the sale area within 150 feet of the M-2000 and P-1070 roads or as directed by the Contract Administrator.

Permission to do otherwise must be granted in writing by the Contract Administrator.

H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

a. Leave 2 down logs per acre. A log is defined as having a minimum diameter of 12 inches on the small end of the log and a minimum length of 20 feet or at least 100 board feet.

b. Tailhold locations outside the timber sale boundary are restricted due to protection of potentially unstable slopes. Locations where trees shall not be used as tailholds due to potentially unstable slopes are identified on the timber sale map. Tailhold locations must be identified in a harvest plan by the Purchaser and approved by the Contract Administrator prior to operations.

Permission to do otherwise must be granted in writing by the State.

H-190 Completion of Settings

Operations begun on any setting of the sale area shall be completed before any operation begins on subsequent settings unless authorized in writing by the Contract Administrator.

H-220 Protection of Residual or Adjacent Trees

Unless otherwise specified by this contract, the Contract Administrator shall identify damaged adjacent or leave trees that shall be paid for according to clause G-230.

H-230 Tops and Limbs Outside the Sale Boundary

Tops and limbs outside the sale boundary as a result of Purchaser's operation shall be removed concurrently with the yarding operation unless otherwise directed by the Contract Administrator.

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 8/30/2018 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on all roads used. All work shall be completed to the specifications detailed in the Road Plan.

C-130 Dust Abatement

Purchaser shall abate dust on the M-2000 Road.

C-140 Water Bars

Purchaser shall, as directed by the Contract Administrator, construct water bars across haul roads, skid trails and fire trails as necessary to control soil erosion and water pollution.

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

An Emergency Response Plan (ERP) shall be provided to the Contract Administrator containing but not limited to, valid contact numbers and procedures for medical emergencies, fire, hazardous spills, forest practice violations and any unauthorized or unlawful activity on or in the vicinity of the sale area. The Contract Administrator and the State shall be promptly notified whenever an incident occurs requiring an emergency response.

The ERP must be presented for inspection at the prework meeting and kept readily available to all personnel, including subcontractors, on site during active operations.

S-010 Fire Hazardous Conditions

Purchaser acknowledges that operations under this Contract may increase the risk of fire. Purchaser shall conduct all operations under this agreement following the requirements of WAC 332-24-005 and WAC 332-24-405 and further agrees to use the highest degree of care to prevent uncontrolled fires from starting.

In the event of an uncontrolled fire, Purchaser agrees to provide equipment and personnel working at the site to safely and effectively engage in first response fire suppression activity.

Purchaser's failure to effectively engage in fire-safe operations is considered a breach and may result in suspension of operations.

S-030 Landing Debris Clean Up

Landing debris shall be disposed of in a manner approved in writing by the Contract Administrator.

S-050 Cessation of Operations for Low Humidity

When the humidity is 30 percent or lower on the sale area, all operations must cease unless authority to continue is granted by the State in writing.

S-060 Pump Truck or Pump Trailer

Purchaser shall provide a fully functional pump truck or pump trailer equipped to meet the specifications of WAC 332-24-005 and WAC 332-24-405 during the "closed season" or as extended by the State and shall provide trained personnel to operate this equipment on the sale area during all operating periods.

S-100 Stream Cleanout

Slash or debris which enters any stream as a result of operations under this contract and which is identified by the Contract Administrator shall be removed and deposited in a stable position. Removal of slash or debris shall be accomplished in a manner that avoids damage to the natural stream bed and bank vegetation.

S-110 Resource Protection

No equipment may operate within Riparian or Wetland Management Zones unless authority is granted in writing by the Contract Administrator.

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

Purchaser is responsible for understanding and complying with all applicable local, state, and federal hazardous material/waste laws and regulations for operations conducted under this contract. Such regulations pertain to, but may not be limited to, hazardous material storage, handling and transport, personnel protection, release notification and emergency response, cleanup, and waste disposal.

Purchaser shall be responsible for restoring the site in the event of a spill or other releases of hazardous material/waste during operations conducted under this contract.

b. Hazardous Materials Spill Prevention

All operations shall be conducted in a manner that avoids the release of hazardous materials, including petroleum products, into the environment (water, air or land).

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 10 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills from any piece of equipment at all times throughout active operations. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

Releases of oil or hazardous materials to the environment must be reported according to the State Department of Ecology (DOE). It is the responsibility of the Purchaser to have all emergency contact information readily available and a means of remote communication for purposes of quick notification. In the event of a spill covered in part a., the Purchaser is responsible for immediately notifying all the following:

-Department of Emergency Management (contact information below).
-National Response Center (contact information below).
-Appropriate Department of Ecology (DOE) regional office (contact information below).
-DNR Contract Administrator

DOE - Northwest Region: 1-425-649-7000
(Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom counties)

DOE - Southwest Region: 1-360-407-6300
(Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties)

DOE - Central Region: 1-509-575-2490

(Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties)

DOE - Eastern Region: 1-509-329-3400
(Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties)

Department of Emergency Management 24-hour Number: 1-800-258-5990

National Response Center: 1-800-424-8802

S-131 Refuse Disposal

As required by RCW 70.93, All Purchaser generated refuse shall be removed from state lands for proper disposal prior to termination of this contract. No refuse shall be burned, buried or abandoned on state forest lands. All refuse shall be transported in a manner such that it is in compliance with RCW 70.93 and all loads or loose materials shall be covered/secured such that these waste materials are properly contained during transport.

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

The following clauses provide for payments by Purchaser to the State for breaches of the terms of this contract other than failure to perform. These payments are agreed to as liquidated damages and not as penalties. They are reasonable estimates of anticipated harm to the State, which will be caused by Purchaser's breach. These liquidated damages provisions are agreed to by the State and Purchaser with the understanding of the difficulty of proving loss and the inconvenience or infeasibility of obtaining an adequate remedy. These liquidated damages provisions provide greater certainty for the Purchaser by allowing the Purchaser to better assess its responsibilities under the contract.

Clause P-020 governs Purchaser’s liability in the event Purchaser fails to perform any of the contract requirements other than the below liquidated damage clauses without written approval by the State. Purchaser’s failure to pay for all or part of the forest products sold in this contract prior to expiration of the contract term results in substantial injury to the State. Therefore, Purchaser agrees to pay the State the full lump sum contract price in P-020 in the event of failure to perform.

D-041 Reserve Tree Excessive Damage

When Purchaser’s operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of $1,000.00 per tree for all damaged reserve trees that are not replaced in all units.

SIGNATURES

This agreement may be executed in any number of counterparts (including by electronic mail in portable document format (.pdf), or by facsimile) each of which shall be deemed an original but all of which, when taken together, shall constitute one and the same Agreement binding on all parties.

IN WITNESS WHEREOF, the Parties hereto have entered into this contract.

	STATE OF WASHINGTON DEPARTMENT OF NATURAL RESOURCES
_____	_____
Purchaser	Scott Sargent South Puget Sound Region Manager
_____ Print Name	
Date: _____	Date: _____
Address:	

CORPORATE ACKNOWLEDGEMENT
(Required for both LLC and Inc. Entities)

STATE OF _____)
)
COUNTY OF _____)

On this _____ day of _____, 20___, before me personally appeared _____
_____ to me known to be the _____ of the corporation that executed the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on oath stated that (he/she was) (they were) authorized to execute said instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

_____
Notary Public in and for the State of

_____

My appointment expires _____

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region: South Puget Sound

Timber Sale Name: Tip Top

Application Number: 30-094094

EXCISE TAX APPLICABLE ACTIVITIES

Construction: 8,949 **linear feet**
Road to be constructed (optional and required) but not abandoned

Reconstruction: 2,641 **linear feet**
Road to be reconstructed (optional and required) but not abandoned

Abandonment: 178 **linear feet**
Abandonment of existing roads not reconstructed under the contract

Decommission: 0 **linear feet**
Road to be made undriveable but not officially abandoned.

Pre-Haul Maintenance: 34,657 **linear feet**
Existing road to receive maintenance work (optional and required) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Construction: 10,807 **linear feet**
Roads to be constructed (optional and required) and then abandoned

Temporary Reconstruction: 0 **linear feet**
Roads to be reconstructed (optional and required) and then abandoned

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contact. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.
(Revised 9/18)

PRE-CRUISE NARRATIVE

Sale Name: **Tip Top**	Region: **South Puget Sound**
Agreement #: **30-094094**	District: **Belfair**
Contact J. Homer Forester:	Phone/ Location: **(253)-381-2015** Ext: /
Alternate N. Chicano Contact:	Phone/ Location: **(360)509-1079** Ext: /

Type of Sale (lump sum, mbf scale, tonnage scale or contract harvest): Lump sum
Required or Optional removal of utility as pulp: Optional
Evaluated for RFRS Implementation?: Yes
Percentage cable (specify downhill vs uphill): 30% uphill
Percentage ground based: 70%
Species Onsite: ☒RC, ☒DF, ☒WH, ☒RA, ☐BC, ☒BLM, ☐NF, ☐SF, ☐SS, ☒ Other:(WP)

UNIT ACREAGES* AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description Sec/Twp/Rng	Grant	Gross Traversed Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method, dimensions and error of closure if applicable)
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	Sec 19, 20/ T 22N/ R 03 W	01,03	56.4	0	3.5	0	0	52.9	Garmin 64s
2	Sec 17,18,19,20/ T22 N/ R 03 W	01,03	51.4	0	2.3	0	0	49.1	Garmin 64s
3	Sec 17,20/ T 22N/ R 03 W	01	44.5	0	1.5	0	0	43	Garmin 64s
4	Sec 21/ T 22N/ R 03 W	01	2.4	0	0.2	0	0	2.2	Garmin 64s
5	Sec 21/ T 22N/ R 03 W	01	18.7	0	0.9	0.6 (1386'X20')	0	17.2	Garmin 64s
6	Sec 20/ T 22N/ R 03 W	01	1.3	0	0	0	0	1.3	Garmin 64s
7	Sec 16,17,20/ T 22N/ R 03 W	01	11.1	0	0	0	0	11.1	Garmin 64s
TOTAL ACRES			185.8	0	8.4	0.6		176.8	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Mark leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Leave trees dispersed and clumped. Marked with blue paint or yellow "Leave Tree Area" tags.	N/A	424 Leave Trees
2	Leave trees dispersed and clumped. Marked with blue paint or yellow "Leave Tree Area" tags.	N/A	430 Leave Trees
3	Leave trees dispersed and clumped. Marked with blue paint or yellow "Leave Tree Area" tags.	N/A	370 Leave Trees

4	Leave trees dispersed and clumped. Marked with blue paint or yellow "Leave Tree Area" tags.	N/A	16 Leave Trees
5	Leave trees dispersed and clumped. Marked with blue paint or yellow "Leave Tree Area" tags.	N/A	141 Leave Trees
6	Right away area to be cut and removed indicated with "Orange Right away tags".	N/A	
7	Right away area to be cut and removed indicated with "Orange Right away tags".	N/A	

OTHER PRE-CRUISE INFORMATION:

Unit #	Estimated Volume	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	see Cruise	Gate #157, Lock: SPB	Available at Belfair office
2		Gate #156, busted open	Available at Belfair office
3		Gate #157, Lock: SPB	Available at Belfair office
4		Gate #157, Lock: SPB	Available at Belfair office
5		Gate #157, Lock: SPB	Available at Belfair office
6		Gate #157, Lock: SPB	Available at Belfair office
7		Gate #156, busted open	Available at Belfair office

REMARKS:

There are a few root rot pockets scattered throughout all the units. Watch out for poison oak in the south west corner of unit 1. The best access to unit 2 is through Unit 3 on the old road grade.

Prepared By: Jeremy Marquardt **Date: 5/23/18**	**Title: NRS1**	**CC:**

Revised 2/23/2007 (PSLD)

Timber Sale Cruise Report
Tip Top

Sale Name: TIP TOP

Sale Type: LUMP SUM

Region: SO PUGET

District: HOOD CANAL

Lead Cruiser: Aaron Coleman

Other Cruisers:n/a

Cruise Narrative:
These units are a mixture of areas dominated by DF with areas of RC, WH, RA and BM. All units contain some DF that is larger than normal for this area. The RC is of fair quality with some butt defect, the north half of unit 2 contains the largest RC component. Most of the defect consists of sweep, forks, some spikes and minor amount of frost crack mostly in the WH. There is quite a lot of road building. The majority of the units are shovel ground, and about 35% are tower ground. A 786 key is needed to access gate 157, and unit 7 is a long walk to get to unit 2. Bring comfortable shoes!

Acreages revised for Unit 6 R/W and Unit 7 R/W. Cruise acres changed to 1.3 acres and 11.1 acres, respectively. (DR-7/1/20)

Timber Sale Notice Volume (MBF)

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	Spec Mill	2 Saw	3 Saw	4 Saw
DF	15.0	6.0		3,591.6	11.7	1,640.1	1,368.7	571.0
RC	22.6			212.5			196.4	16.2
WH	11.7	7.0		192.7		65.1	62.3	65.2
RA	15.7			96.9		25.9	39.7	31.2
MA	19.9			63.3		33.2	21.7	8.5
WP	12.0			28.2			19.9	8.3
ALL	14.9	6.5		4,185.3	11.7	1,764.3	1,708.7	700.4

Timber Sale Notice Weight (tons)

	Tons by Grade				
Sp	All	Spec Mill	2 Saw	3 Saw	4 Saw
DF	26,736.6	66.7	11,242.7	10,833.2	4,594.0
RC	1,752.0			1,613.5	138.5
WH	1,695.9		519.0	618.9	557.9
RA	824.1		162.9	330.6	330.5
MA	574.4		270.4	199.4	104.7
WP	189.2			123.2	66.0
ALL	31,772.2	66.7	12,195.1	13,718.7	5,791.6

Timber Sale Overall Cruise Statistics (Cut + Leave Trees)

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
175.1	3.8	134.5	2.0	23,672	4.3

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
TIP TOP U1	B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	52.9	56.5	29	15	0
TIP TOP U2	B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	49.1	51.4	22	11	0
TIP TOP U3	B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	43.0	44.5	24	13	0
TIP TOP U4	B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	2.2	2.4	3	3	0
TIP TOP U5	B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	17.2	18.7	13	7	0
Unit 6	B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	1.3		1	1	0
Unit 7	B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	11.1		7	3	0
All		176.8	173.5	99	53	0

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	16.1	36.0	5,880	5.3	6,859.3	1,039.6
DF	LIVE	2 SAW	HQ-A	13.1	36.0	56	6.0	66.5	10.0
DF	LIVE	2 SAW	HQ-B	13.7	37.0	3,340	2.5	4,316.9	590.5
DF	LIVE	3 SAW	Domestic	8.5	37.0	5,955	0.9	8,477.2	1,052.9
DF	LIVE	3 SAW	HQ-B	10.5	37.0	1,787	2.4	2,356.0	316.0
DF	LIVE	4 SAW	Domestic	5.4	28.0	3,230	0.2	4,594.0	571.0
DF	LIVE	CULL	Cull	14.9	4.0	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	16.0	36.0	66	0.0	66.7	11.7
MA	LIVE	2 SAW	Domestic	14.8	30.0	188	7.9	270.4	33.2
MA	LIVE	3 SAW	Domestic	11.0	29.0	123	7.2	199.3	21.7
MA	LIVE	4 SAW	Domestic	6.4	24.0	48	4.5	104.7	8.5
MA	LIVE	CULL	Cull	5.0	36.0	0	100.0	0.0	0.0
RA	LIVE	2 SAW	Domestic	15.1	30.0	146	6.4	162.9	25.9
RA	LIVE	3 SAW	Domestic	10.2	30.0	225	8.0	330.6	39.7

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	4 SAW	Domestic	6.9	28.0	176	4.8	330.5	31.2
RC	LIVE	3 SAW	Domestic	12.5	35.0	1,111	15.3	1,613.5	196.3
RC	LIVE	4 SAW	Domestic	5.8	26.0	92	2.9	138.5	16.2
WH	LIVE	2 SAW	Domestic	15.3	38.0	321	9.9	458.7	56.8
WH	LIVE	2 SAW	HQ-B	15.0	40.0	47	7.3	60.3	8.4
WH	LIVE	3 SAW	Domestic	8.2	36.0	353	3.9	618.9	62.4
WH	LIVE	4 SAW	Domestic	5.2	31.0	369	0.3	558.0	65.3
WP	LIVE	3 SAW	Domestic	9.0	37.0	112	0.9	123.2	19.8
WP	LIVE	4 SAW	Domestic	5.3	36.0	47	0.0	66.0	8.3

Timber Sale Log Grade x Diameter Bin Summary

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	4 SAW	5.3	29.0	3,230	0.2	4,594.0	571.0
DF	5 - 7	LIVE	3 SAW	6.8	39.0	1,768	0.6	2,719.9	312.5
DF	8 - 11	LIVE	3 SAW	9.8	36.0	5,974	1.4	8,113.3	1,056.3
DF	12 - 19	LIVE	2 SAW	14.5	37.0	8,037	3.6	9,885.7	1,421.0
DF	12 - 19	LIVE	CULL	14.9	4.0	0	100.0	0.0	0.0
DF	12 - 19	LIVE	SPECIAL MILL	16.0	36.0	66	0.0	66.7	11.7
DF	20+	LIVE	2 SAW	22.7	36.0	1,239	9.1	1,357.0	219.1
MA	5 - 7	LIVE	CULL	5.0	36.0	0	100.0	0.0	0.0
MA	5 - 7	LIVE	4 SAW	5.7	23.0	28	2.0	59.7	5.0
MA	8 - 11	LIVE	4 SAW	9.0	27.0	20	7.9	45.0	3.5
MA	8 - 11	LIVE	3 SAW	11.1	29.0	123	7.2	199.3	21.7
MA	12 - 19	LIVE	2 SAW	14.0	30.0	159	5.3	231.2	28.1
MA	20+	LIVE	2 SAW	26.7	30.0	28	20.0	39.2	5.0
RA	5 - 7	LIVE	4 SAW	6.7	27.0	145	5.0	259.1	25.6
RA	8 - 11	LIVE	4 SAW	8.6	30.0	32	3.6	71.5	5.6
RA	8 - 11	LIVE	3 SAW	10.2	30.0	225	8.0	330.6	39.7
RA	12 - 19	LIVE	2 SAW	15.1	30.0	146	6.4	162.9	25.9
RC	5 - 7	LIVE	4 SAW	5.7	25.0	92	2.9	138.5	16.2
RC	5 - 7	LIVE	3 SAW	7.6	36.0	52	0.0	89.5	9.3
RC	8 - 11	LIVE	3 SAW	10.1	34.0	283	11.3	464.9	50.0
RC	12 - 19	LIVE	3 SAW	15.3	35.0	411	13.0	557.5	72.7
RC	20+	LIVE	3 SAW	24.2	36.0	364	22.0	501.7	64.3
WH	5 - 7	LIVE	4 SAW	5.2	31.0	369	0.3	558.0	65.3
WH	5 - 7	LIVE	3 SAW	7.4	37.0	145	2.2	279.2	25.7
WH	8 - 11	LIVE	3 SAW	9.1	35.0	208	5.0	339.7	36.7

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	12 - 19	LIVE	2 SAW	13.9	39.0	250	6.7	358.9	44.1
WH	20+	LIVE	2 SAW	20.9	36.0	119	15.1	160.2	21.0
WP	5 - 7	LIVE	4 SAW	5.3	36.0	47	0.0	66.0	8.3
WP	5 - 7	LIVE	3 SAW	6.2	40.0	41	2.5	49.0	7.3
WP	8 - 11	LIVE	3 SAW	9.7	36.0	71	0.0	74.2	12.6

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Domestic	5.6	31.0	4,997	0.3	7,313.9	883.5
DF	8 - 11	LIVE	Domestic	9.7	36.0	4,187	1.0	5,757.3	740.3
DF	8 - 11	LIVE	HQ-B	10.4	37.0	1,787	2.4	2,356.0	316.0
DF	12 - 19	LIVE	HQ-B	13.7	37.0	3,340	2.5	4,316.9	590.5
DF	12 - 19	LIVE	HQ-A	14.3	36.0	123	2.8	133.2	21.7
DF	12 - 19	LIVE	Cull	14.9	4.0	0	100.0	0.0	0.0
DF	12 - 19	LIVE	Domestic	15.2	36.0	4,641	4.3	5,502.3	820.5
DF	20+	LIVE	Domestic	22.7	36.0	1,239	9.1	1,357.0	219.1
MA	5 - 7	LIVE	Cull	5.0	36.0	0	100.0	0.0	0.0
MA	5 - 7	LIVE	Domestic	5.7	23.0	28	2.0	59.7	5.0
MA	8 - 11	LIVE	Domestic	10.3	28.0	142	7.3	244.3	25.2
MA	12 - 19	LIVE	Domestic	14.0	30.0	159	5.3	231.2	28.1
MA	20+	LIVE	Domestic	26.7	30.0	28	20.0	39.2	5.0
RA	5 - 7	LIVE	Domestic	6.7	27.0	145	5.0	259.1	25.6
RA	8 - 11	LIVE	Domestic	9.8	30.0	257	7.5	402.1	45.4
RA	12 - 19	LIVE	Domestic	15.1	30.0	146	6.4	162.9	25.9
RC	5 - 7	LIVE	Domestic	6.2	27.0	144	1.8	228.0	25.5
RC	8 - 11	LIVE	Domestic	10.1	34.0	283	11.3	464.9	50.0
RC	12 - 19	LIVE	Domestic	15.3	35.0	411	13.0	557.5	72.7
RC	20+	LIVE	Domestic	24.2	36.0	364	22.0	501.7	64.3
WH	5 - 7	LIVE	Domestic	5.5	32.0	514	0.8	837.2	90.9
WH	8 - 11	LIVE	Domestic	9.1	35.0	208	5.0	339.7	36.7
WH	12 - 19	LIVE	Domestic	13.6	39.0	202	6.5	298.5	35.8
WH	12 - 19	LIVE	HQ-B	15.0	40.0	47	7.3	60.3	8.4
WH	20+	LIVE	Domestic	20.9	36.0	119	15.1	160.2	21.0
WP	5 - 7	LIVE	Domestic	5.7	38.0	88	1.2	115.0	15.5
WP	8 - 11	LIVE	Domestic	9.7	36.0	71	0.0	74.2	12.6

Cruise Unit Report
TIP TOP U1

Unit Sale Notice Volume (MBF): TIP TOP U1

				MBF Volume by Grade			
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw
DF	15.0			1,284.7	686.4	400.1	198.2
WH	12.5			27.8	19.4	2.9	5.4
MA	21.8			24.9	14.5	6.8	3.7
RC	13.7			13.9		10.7	3.2
RA	11.3			10.1			10.1
ALL	14.9			1,361.5	720.3	420.5	220.6

Unit Sale Notice Weight (tons): TIP TOP U1

	Tons by Grade			
Sp	All	2 Saw	3 Saw	4 Saw
DF	9,766.3	4,828.9	3,260.4	1,677.0
MA	244.4	128.3	64.4	51.8
WH	217.9	144.3	34.3	39.3
RC	118.1		83.2	34.9
RA	112.7			112.7
ALL	10,459.4	5,101.5	3,442.2	1,915.7

Unit Cruise Design: TIP TOP U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	52.9	56.5	29	15	0

Unit Cruise Summary: TIP TOP U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	70	148	5.1	0
WH	3	3	0.1	0
MA	6	6	0.2	0
RC	3	3	0.1	0
RA	3	3	0.1	0
ALL	85	163	5.6	0

Unit Cruise Statistics (Cut + Leave Trees): TIP TOP U1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	171.5	38.6	7.2	141.6	30.0	3.6	24,286	48.9	8.0
WH	3.5	395.6	73.5	151.2	36.2	20.9	526	397.3	76.4
MA	7.0	395.6	73.5	67.7	42.4	17.3	471	397.9	75.5
RC	3.5	395.6	73.5	75.7	61.9	35.7	263	400.4	81.7
RA	3.5	538.5	100.0	55.0	3.9	2.3	191	538.5	100.0
ALL	188.9	33.4	6.2	136.2	35.7	3.9	25,737	48.9	7.3

Unit Summary: TIP TOP U1

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	70	ALL	15.0	67	83	24,286	3.6	139.8	171.5	44.3	9,766.3	1,284.7
MA	LIVE	CUT	6	ALL	21.8	45	56	471	12.8	2.7	7.0	1.5	244.4	24.9
RA	LIVE	CUT	3	ALL	11.3	50	60	191	4.8	5.0	3.5	1.0	112.7	10.1
RC	LIVE	CUT	3	ALL	13.7	53	66	263	6.5	3.4	3.5	0.9	118.1	13.9
WH	LIVE	CUT	3	ALL	12.5	54	66	526	7.7	4.1	3.5	1.0	217.9	27.8
ALL	LIVE	CUT	85	ALL	15.0	65	81	25,737	3.9	155.0	189.0	48.7	10,459.4	1,361.4
ALL	ALL	ALL	85	ALL	15.0	65	81	25,737	3.9	155.0	189.0	48.7	10,459.4	1,361.4

Unit Stand Table: TIP TOP U1

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	3	7.6	40	48	577	0.0	23.2	7.4	2.7	182.3	30.5
DF	10	LIVE	CUT	8	9.7	54	64	1,534	1.2	38.0	19.6	6.3	707.5	81.1
DF	12	LIVE	CUT	5	11.8	60	75	1,239	1.5	16.2	12.3	3.6	527.9	65.5
DF	14	LIVE	CUT	3	13.3	77	88	871	1.1	7.6	7.4	2.0	369.4	46.1
DF	16	LIVE	CUT	4	15.5	75	94	1,293	0.9	7.5	9.8	2.5	526.1	68.4
DF	18	LIVE	CUT	9	17.5	82	103	2,845	3.7	13.1	22.1	5.3	1,269.9	150.5
DF	20	LIVE	CUT	14	19.4	88	112	4,779	2.6	16.7	34.3	7.8	2,109.3	252.8
DF	22	LIVE	CUT	7	21.4	93	118	2,867	2.4	6.9	17.2	3.7	1,103.7	151.6
DF	24	LIVE	CUT	4	23.2	97	125	1,867	2.3	3.3	9.8	2.0	657.5	98.8
DF	26	LIVE	CUT	4	25.2	103	131	1,804	4.9	2.8	9.8	2.0	686.0	95.4
DF	28	LIVE	CUT	3	27.7	107	137	1,432	5.9	1.8	7.4	1.4	526.2	75.7
DF	30	LIVE	CUT	1	29.0	110	141	487	11.2	0.5	2.5	0.5	177.3	25.8
DF	32	LIVE	CUT	1	32.0	115	148	525	8.2	0.4	2.5	0.4	184.6	27.8
DF	34	LIVE	CUT	2	34.0	118	152	1,090	8.0	0.8	4.9	0.8	368.5	57.7
DF	36	LIVE	CUT	1	35.0	120	154	554	9.9	0.4	2.5	0.4	193.0	29.3

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	38	LIVE	CUT	1	37.0	110	141	522	7.7	0.3	2.5	0.4	177.1	27.6
MA	18	LIVE	CUT	2	18.0	43	54	146	9.0	1.3	2.3	0.5	76.3	7.7
MA	22	LIVE	CUT	2	21.5	43	52	116	9.7	0.9	2.3	0.5	69.0	6.1
MA	26	LIVE	CUT	1	26.0	55	67	90	14.8	0.3	1.2	0.2	46.7	4.8
MA	42	LIVE	CUT	1	41.0	65	80	119	18.1	0.1	1.2	0.2	52.3	6.3
RA	12	LIVE	CUT	3	11.3	50	60	191	4.8	5.0	3.5	1.0	112.7	10.1
RC	12	LIVE	CUT	1	11.0	48	59	61	10.3	1.8	1.2	0.4	34.9	3.2
RC	14	LIVE	CUT	1	13.0	54	67	52	6.8	1.3	1.2	0.3	28.1	2.7
RC	24	LIVE	CUT	1	24.0	75	95	150	4.7	0.4	1.2	0.2	55.0	7.9
WH	8	LIVE	CUT	1	8.0	46	55	103	0.0	3.3	1.2	0.4	39.3	5.4
WH	22	LIVE	CUT	1	21.0	89	112	201	5.9	0.5	1.2	0.3	87.3	10.6
WH	28	LIVE	CUT	1	28.0	95	120	222	12.4	0.3	1.2	0.2	91.3	11.7

Unit Log Grade Summary: TIP TOP U1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	15.0	37.0	12,976	5.4	4,828.9	686.4
DF	LIVE	3 SAW	8.9	37.0	7,564	1.8	3,260.4	400.1
DF	LIVE	4 SAW	5.4	29.0	3,746	0.5	1,677.0	198.2
MA	LIVE	2 SAW	16.1	30.0	274	16.4	128.3	14.5
MA	LIVE	3 SAW	10.9	28.0	128	8.9	64.4	6.8
MA	LIVE	4 SAW	6.9	26.0	69	3.9	51.8	3.7
RA	LIVE	4 SAW	7.0	30.0	191	4.8	112.7	10.1
RC	LIVE	3 SAW	10.1	29.0	202	5.2	83.2	10.7
RC	LIVE	4 SAW	5.6	36.0	61	10.3	34.9	3.2
WH	LIVE	2 SAW	16.2	38.0	368	10.7	144.3	19.4
WH	LIVE	3 SAW	8.8	33.0	55	0.0	34.3	2.9
WH	LIVE	4 SAW	5.0	29.0	103	0.0	39.3	5.4

Unit Log Sort Summary: TIP TOP U1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	7.6	32.0	16,888	3.7	6,845.0	893.3
DF	LIVE	HQ-B	13.0	37.0	7,398	3.4	2,921.3	391.4
MA	LIVE	Domestic	10.4	27.0	471	12.8	244.4	24.9
RA	LIVE	Domestic	7.0	30.0	191	4.8	112.7	10.1
RC	LIVE	Domestic	8.0	32.0	263	6.5	118.1	13.9
WH	LIVE	Domestic	7.1	30.0	367	7.9	157.6	19.4
WH	LIVE	HQ-B	15.0	40.0	159	7.3	60.3	8.4

Unit Log Grade x Sort Summary: TIP TOP U1

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	16.2	37.0	7,427	7.0	2,646.6	392.9
DF	LIVE	2 SAW	HQ-B	13.9	37.0	5,549	3.1	2,182.3	293.5
DF	LIVE	3 SAW	Domestic	8.5	37.0	5,714	1.1	2,521.4	302.3
DF	LIVE	3 SAW	HQ-B	11.1	37.0	1,850	4.1	739.0	97.9
DF	LIVE	4 SAW	Domestic	5.4	29.0	3,746	0.5	1,677.0	198.2
MA	LIVE	2 SAW	Domestic	16.1	30.0	274	16.4	128.3	14.5
MA	LIVE	3 SAW	Domestic	10.9	28.0	128	8.9	64.4	6.8
MA	LIVE	4 SAW	Domestic	6.9	26.0	69	3.9	51.8	3.7
RA	LIVE	4 SAW	Domestic	7.0	30.0	191	4.8	112.7	10.1
RC	LIVE	3 SAW	Domestic	10.1	29.0	202	5.2	83.2	10.7
RC	LIVE	4 SAW	Domestic	5.6	36.0	61	10.3	34.9	3.2
WH	LIVE	2 SAW	Domestic	17.3	36.0	209	13.1	84.0	11.1
WH	LIVE	2 SAW	HQ-B	15.0	40.0	159	7.3	60.3	8.4
WH	LIVE	3 SAW	Domestic	8.8	33.0	55	0.0	34.3	2.9
WH	LIVE	4 SAW	Domestic	5.0	29.0	103	0.0	39.3	5.4

Unit Log Grade x Diameter Bin Summary: TIP TOP U1

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	4 SAW	5.4	29.0	3,746	0.5	1,677.0	198.2
DF	5 - 7	LIVE	3 SAW	7.0	38.0	1,861	1.1	908.2	98.4
DF	8 - 11	LIVE	3 SAW	10.2	36.0	5,703	2.1	2,352.2	301.7
DF	12 - 19	LIVE	2 SAW	14.5	37.0	11,180	4.3	4,204.5	591.4
DF	20+	LIVE	2 SAW	23.0	37.0	1,796	11.6	624.4	95.0
MA	5 - 7	LIVE	4 SAW	6.3	27.0	46	4.1	32.7	2.4
MA	8 - 11	LIVE	4 SAW	9.0	23.0	23	3.6	19.1	1.2
MA	8 - 11	LIVE	3 SAW	10.9	28.0	128	8.9	64.4	6.8
MA	12 - 19	LIVE	2 SAW	14.7	30.0	179	14.4	89.1	9.5
MA	20+	LIVE	2 SAW	26.7	30.0	95	20.0	39.2	5.0
RA	5 - 7	LIVE	4 SAW	7.0	30.0	191	4.8	112.7	10.1
RC	5 - 7	LIVE	4 SAW	5.6	36.0	61	10.3	34.9	3.2
RC	5 - 7	LIVE	3 SAW	7.8	37.0	25	0.0	15.1	1.3
RC	8 - 11	LIVE	3 SAW	8.9	24.0	52	6.8	28.1	2.7
RC	12 - 19	LIVE	3 SAW	16.4	36.0	125	5.6	39.9	6.6
WH	5 - 7	LIVE	4 SAW	5.0	29.0	103	0.0	39.3	5.4
WH	8 - 11	LIVE	3 SAW	8.8	33.0	55	0.0	34.3	2.9
WH	12 - 19	LIVE	2 SAW	14.7	39.0	223	7.6	88.3	11.8

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	20+	LIVE	2 SAW	20.3	36.0	145	15.1	56.0	7.7

Unit Log Sort x Diameter Bin Summary: TIP TOP U1

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Domestic	5.8	31.0	5,607	0.7	2,585.1	296.6
DF	8 - 11	LIVE	Domestic	9.8	36.0	3,853	1.1	1,613.3	203.8
DF	8 - 11	LIVE	HQ-B	11.1	37.0	1,850	4.1	739.0	97.9
DF	12 - 19	LIVE	HQ-B	13.9	37.0	5,549	3.1	2,182.3	293.5
DF	12 - 19	LIVE	Domestic	15.3	37.0	5,631	5.4	2,022.2	297.9
DF	20+	LIVE	Domestic	23.0	37.0	1,796	11.6	624.4	95.0
MA	5 - 7	LIVE	Domestic	6.3	27.0	46	4.1	32.7	2.4
MA	8 - 11	LIVE	Domestic	10.4	26.0	151	8.1	83.4	8.0
MA	12 - 19	LIVE	Domestic	14.7	30.0	179	14.4	89.1	9.5
MA	20+	LIVE	Domestic	26.7	30.0	95	20.0	39.2	5.0
RA	5 - 7	LIVE	Domestic	7.0	30.0	191	4.8	112.7	10.1
RC	5 - 7	LIVE	Domestic	6.0	36.0	86	7.5	50.1	4.6
RC	8 - 11	LIVE	Domestic	8.9	24.0	52	6.8	28.1	2.7
RC	12 - 19	LIVE	Domestic	16.4	36.0	125	5.6	39.9	6.6
WH	5 - 7	LIVE	Domestic	5.0	29.0	103	0.0	39.3	5.4
WH	8 - 11	LIVE	Domestic	8.8	33.0	55	0.0	34.3	2.9
WH	12 - 19	LIVE	Domestic	14.3	36.0	64	8.2	28.0	3.4
WH	12 - 19	LIVE	HQ-B	15.0	40.0	159	7.3	60.3	8.4
WH	20+	LIVE	Domestic	20.3	36.0	145	15.1	56.0	7.7

Cruise Unit Report
TIP TOP U2

Unit Sale Notice Volume (MBF): TIP TOP U2

				MBF Volume by Grade			
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw
DF	18.6	6.0		810.8	568.7	187.2	54.9
RC	23.8			185.8		175.7	10.2
WH	11.6	7.0		159.2	45.7	59.4	54.1
RA	16.4			83.3	25.9	39.7	17.6
MA	18.9			36.1	18.7	14.9	2.5
ALL	17.3	6.5		1,275.3	659.0	476.9	139.4

Unit Sale Notice Weight (tons): TIP TOP U2

	Tons by Grade			
Sp	All	2 Saw	3 Saw	4 Saw
DF	5,734.9	3,734.7	1,552.3	447.8
RC	1,528.6		1,442.4	86.2
WH	1,430.0	374.7	584.6	470.6
RA	677.1	162.9	330.6	183.5
MA	304.1	142.1	135.0	27.0
ALL	9,674.7	4,414.5	4,044.9	1,215.2

Unit Cruise Design: TIP TOP U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	49.1	51.4	22	11	0

Unit Cruise Summary: TIP TOP U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	31	64	2.9	1
RC	21	23	1.0	0
WH	12	18	0.8	1
RA	3	10	0.5	0
MA	2	6	0.3	0
ALL	69	121	5.5	2

Unit Cruise Statistics (Cut + Leave Trees): TIP TOP U2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	97.8	79.3	16.9	168.9	24.6	4.4	16,514	83.1	17.5
RC	35.1	196.9	42.0	107.7	23.7	5.2	3,785	198.3	42.3
WH	27.5	117.1	25.0	117.9	30.1	8.7	3,243	120.9	26.4
RA	15.3	162.5	34.6	111.0	13.4	7.8	1,696	163.0	35.5
MA	9.2	342.9	73.1	80.2	4.8	3.4	736	342.9	73.2
ALL	184.9	38.0	8.1	140.5	32.5	3.9	25,973	49.9	9.0

Unit Summary: TIP TOP U2

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	31	ALL	18.6	77	98	16,514	3.2	51.8	97.8	22.7	5,734.9	810.9
MA	LIVE	CUT	2	ALL	18.9	59	69	736	12.2	4.7	9.2	2.1	304.1	36.1
RA	LIVE	CUT	3	ALL	16.4	61	81	1,696	6.8	10.4	15.3	3.8	677.1	83.3
RC	LIVE	CUT	21	ALL	23.8	71	89	3,785	15.7	11.4	35.1	7.2	1,528.6	185.8
WH	LIVE	CUT	12	ALL	11.6	58	71	3,243	4.4	37.5	27.5	8.1	1,430.0	159.2
ALL	LIVE	CUT	69	ALL	17.1	68	86	25,974	5.9	115.8	184.9	43.9	9,674.7	1,275.3
ALL	ALL	ALL	69	ALL	17.1	68	86	25,974	5.9	115.8	184.9	43.9	9,674.7	1,275.3

Unit Stand Table: TIP TOP U2

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	1	8.0	42	51	262	0.0	9.0	3.2	1.1	75.9	12.9
DF	12	LIVE	CUT	1	12.0	61	76	333	0.0	4.0	3.2	0.9	129.2	16.4
DF	14	LIVE	CUT	2	13.5	68	84	740	1.8	6.4	6.3	1.7	287.5	36.4
DF	16	LIVE	CUT	2	15.5	75	94	822	2.9	4.8	6.3	1.6	315.9	40.3
DF	18	LIVE	CUT	3	17.6	82	104	1,309	1.3	5.6	9.5	2.3	512.1	64.3
DF	20	LIVE	CUT	4	19.2	87	110	1,829	2.2	6.3	12.6	2.9	724.4	89.8
DF	22	LIVE	CUT	4	21.5	93	118	2,107	2.4	5.0	12.6	2.7	759.1	103.5
DF	24	LIVE	CUT	2	23.0	97	124	1,196	1.8	2.2	6.3	1.3	397.8	58.7
DF	26	LIVE	CUT	4	25.5	103	131	2,480	3.4	3.6	12.6	2.5	828.3	121.8
DF	28	LIVE	CUT	4	27.2	106	136	2,647	3.3	3.1	12.6	2.4	846.1	130.0
DF	30	LIVE	CUT	2	29.5	108	138	1,356	3.7	1.3	6.3	1.2	423.6	66.6
DF	38	LIVE	CUT	1	38.0	124	160	755	8.8	0.4	3.2	0.5	225.4	37.1
DF	44	LIVE	CUT	1	44.0	110	141	677	10.6	0.3	3.2	0.5	209.6	33.2
MA	18	LIVE	CUT	1	18.0	51	60	355	5.5	2.6	4.6	1.1	162.0	17.5
MA	20	LIVE	CUT	1	20.0	68	80	381	17.7	2.1	4.6	1.0	142.1	18.7
RA	16	LIVE	CUT	2	15.0	59	81	1,054	7.3	8.3	10.2	2.6	442.7	51.8

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RA	22	LIVE	CUT	1	21.0	70	83	642	5.9	2.1	5.1	1.1	234.4	31.5
RC	16	LIVE	CUT	2	16.0	61	76	277	7.2	2.4	3.3	0.8	120.3	13.6
RC	18	LIVE	CUT	4	17.7	64	80	569	11.1	3.9	6.7	1.6	257.1	27.9
RC	20	LIVE	CUT	2	19.5	67	85	285	13.0	1.6	3.3	0.8	134.0	14.0
RC	24	LIVE	CUT	1	24.0	75	95	144	15.8	0.5	1.7	0.3	70.7	7.1
RC	28	LIVE	CUT	2	28.0	81	103	352	17.8	0.8	3.3	0.6	152.2	17.3
RC	32	LIVE	CUT	2	31.5	85	109	372	16.0	0.6	3.3	0.6	150.9	18.3
RC	34	LIVE	CUT	1	33.0	88	112	206	13.8	0.3	1.7	0.3	75.8	10.1
RC	36	LIVE	CUT	1	35.0	90	115	215	15.0	0.3	1.7	0.3	77.5	10.6
RC	38	LIVE	CUT	1	37.0	92	118	223	14.5	0.2	1.7	0.3	77.1	11.0
RC	40	LIVE	CUT	1	39.0	80	102	171	20.4	0.2	1.7	0.3	73.3	8.4
RC	44	LIVE	CUT	2	43.5	98	126	462	19.8	0.3	3.3	0.5	167.1	22.7
RC	46	LIVE	CUT	1	45.0	100	128	244	18.7	0.2	1.7	0.2	84.7	12.0
RC	54	LIVE	CUT	1	53.0	106	137	265	21.1	0.1	1.7	0.2	88.0	13.0
WH	8	LIVE	CUT	2	8.0	46	55	433	0.0	13.1	4.6	1.6	144.4	21.3
WH	10	LIVE	CUT	2	10.0	55	67	357	1.2	8.4	4.6	1.4	198.0	17.5
WH	12	LIVE	CUT	3	12.0	63	78	761	3.0	8.8	6.9	2.0	343.8	37.4
WH	14	LIVE	CUT	1	13.0	67	83	259	1.9	2.5	2.3	0.6	121.1	12.7
WH	16	LIVE	CUT	1	16.0	77	96	312	6.9	1.6	2.3	0.6	139.2	15.3
WH	18	LIVE	CUT	1	18.0	82	103	310	7.7	1.3	2.3	0.5	150.8	15.2
WH	20	LIVE	CUT	1	19.0	85	106	341	3.9	1.2	2.3	0.5	153.6	16.7
WH	30	LIVE	CUT	1	30.0	106	134	470	10.1	0.5	2.3	0.4	179.1	23.1

Unit Log Grade Summary: TIP TOP U2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	15.7	37.0	11,583	4.2	3,734.7	568.7
DF	LIVE	3 SAW	8.9	36.0	3,812	1.1	1,552.3	187.2
DF	LIVE	4 SAW	5.7	25.0	1,119	0.0	447.8	54.9
MA	LIVE	2 SAW	13.4	30.0	381	0.0	142.1	18.7
MA	LIVE	3 SAW	11.2	30.0	304	6.4	135.0	14.9
MA	LIVE	4 SAW	5.0	19.0	52	0.0	27.0	2.5
MA	LIVE	CULL	5.0	36.0	0	100.0	0.0	0.0
RA	LIVE	2 SAW	15.1	30.0	527	6.4	162.9	25.9
RA	LIVE	3 SAW	10.2	30.0	810	8.0	330.6	39.7
RA	LIVE	4 SAW	6.9	26.0	359	4.4	183.5	17.6
RC	LIVE	3 SAW	13.4	36.0	3,578	16.4	1,442.4	175.7
RC	LIVE	4 SAW	5.8	23.0	207	1.0	86.2	10.2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	LIVE	2 SAW	14.6	39.0	931	9.1	374.7	45.7
WH	LIVE	3 SAW	8.2	36.0	1,211	4.1	584.6	59.4
WH	LIVE	4 SAW	5.2	30.0	1,102	0.4	470.6	54.1

Unit Log Sort Summary: TIP TOP U2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	9.8	32.0	14,335	3.3	4,893.3	703.8
DF	LIVE	HQ-B	11.2	37.0	2,179	2.9	841.6	107.0
MA	LIVE	Cull	5.0	36.0	0	100.0	0.0	0.0
MA	LIVE	Domestic	9.6	26.0	736	2.7	304.1	36.1
RA	LIVE	Domestic	9.0	28.0	1,696	6.8	677.1	83.3
RC	LIVE	Domestic	10.8	31.0	3,785	15.7	1,528.6	185.8
WH	LIVE	Domestic	6.7	33.0	3,243	4.4	1,430.0	159.2

Unit Log Grade x Sort Summary: TIP TOP U2

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	16.4	36.0	9,968	4.4	3,114.8	489.4
DF	LIVE	2 SAW	HQ-B	13.0	38.0	1,616	3.0	620.0	79.3
DF	LIVE	3 SAW	Domestic	8.9	36.0	3,248	0.8	1,330.7	159.5
DF	LIVE	3 SAW	HQ-B	8.9	36.0	563	2.4	221.6	27.7
DF	LIVE	4 SAW	Domestic	5.7	25.0	1,119	0.0	447.8	54.9
MA	LIVE	2 SAW	Domestic	13.4	30.0	381	0.0	142.1	18.7
MA	LIVE	3 SAW	Domestic	11.2	30.0	304	6.4	135.0	14.9
MA	LIVE	4 SAW	Domestic	5.0	19.0	52	0.0	27.0	2.5
MA	LIVE	CULL	Cull	5.0	36.0	0	100.0	0.0	0.0
RA	LIVE	2 SAW	Domestic	15.1	30.0	527	6.4	162.9	25.9
RA	LIVE	3 SAW	Domestic	10.2	30.0	810	8.0	330.6	39.7
RA	LIVE	4 SAW	Domestic	6.9	26.0	359	4.4	183.5	17.6
RC	LIVE	3 SAW	Domestic	13.4	36.0	3,578	16.4	1,442.4	175.7
RC	LIVE	4 SAW	Domestic	5.8	23.0	207	1.0	86.2	10.2
WH	LIVE	2 SAW	Domestic	14.6	39.0	931	9.1	374.7	45.7
WH	LIVE	3 SAW	Domestic	8.2	36.0	1,211	4.1	584.6	59.4
WH	LIVE	4 SAW	Domestic	5.2	30.0	1,102	0.4	470.6	54.1

Unit Log Grade x Diameter Bin Summary: TIP TOP U2

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	4 SAW	5.7	25.0	1,119	0.0	447.8	54.9
DF	5 - 7	LIVE	3 SAW	7.0	39.0	803	0.0	368.6	39.4
DF	8 - 11	LIVE	3 SAW	9.8	35.0	3,009	1.3	1,183.8	147.7
DF	12 - 19	LIVE	2 SAW	14.9	37.0	9,056	3.4	3,002.1	444.6
DF	20+	LIVE	2 SAW	22.5	36.0	2,528	7.1	732.6	124.1
MA	5 - 7	LIVE	4 SAW	5.0	19.0	52	0.0	27.0	2.5
MA	5 - 7	LIVE	CULL	5.0	36.0	0	100.0	0.0	0.0
MA	8 - 11	LIVE	3 SAW	11.2	30.0	304	6.4	135.0	14.9
MA	12 - 19	LIVE	2 SAW	13.4	30.0	381	0.0	142.1	18.7
RA	5 - 7	LIVE	4 SAW	6.5	25.0	245	4.8	112.1	12.0
RA	8 - 11	LIVE	4 SAW	8.6	30.0	114	3.6	71.5	5.6
RA	8 - 11	LIVE	3 SAW	10.2	30.0	810	8.0	330.6	39.7
RA	12 - 19	LIVE	2 SAW	15.1	30.0	527	6.4	162.9	25.9
RC	5 - 7	LIVE	4 SAW	5.8	23.0	207	1.0	86.2	10.2
RC	5 - 7	LIVE	3 SAW	7.1	36.0	35	0.0	15.4	1.7
RC	8 - 11	LIVE	3 SAW	10.2	36.0	888	11.8	407.8	43.6
RC	12 - 19	LIVE	3 SAW	15.1	35.0	1,346	13.7	517.6	66.1
RC	20+	LIVE	3 SAW	24.2	36.0	1,309	22.0	501.7	64.3
WH	5 - 7	LIVE	4 SAW	5.2	30.0	1,102	0.4	470.6	54.1
WH	5 - 7	LIVE	3 SAW	7.4	37.0	523	2.2	279.2	25.7
WH	8 - 11	LIVE	3 SAW	9.1	36.0	688	5.4	305.4	33.8
WH	12 - 19	LIVE	2 SAW	13.4	39.0	659	6.3	270.5	32.4
WH	20+	LIVE	2 SAW	21.6	36.0	271	15.1	104.2	13.3

Unit Log Sort x Diameter Bin Summary: TIP TOP U2

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Domestic	6.0	29.0	1,922	0.0	816.4	94.4
DF	8 - 11	LIVE	HQ-B	8.9	36.0	563	2.4	221.6	27.7
DF	8 - 11	LIVE	Domestic	10.1	34.0	2,445	1.1	962.2	120.1
DF	12 - 19	LIVE	HQ-B	13.0	38.0	1,616	3.0	620.0	79.3
DF	12 - 19	LIVE	Domestic	15.5	36.0	7,440	3.5	2,382.2	365.3
DF	20+	LIVE	Domestic	22.5	36.0	2,528	7.1	732.6	124.1
MA	5 - 7	LIVE	Cull	5.0	36.0	0	100.0	0.0	0.0
MA	5 - 7	LIVE	Domestic	5.0	19.0	52	0.0	27.0	2.5
MA	8 - 11	LIVE	Domestic	11.2	30.0	304	6.4	135.0	14.9
MA	12 - 19	LIVE	Domestic	13.4	30.0	381	0.0	142.1	18.7

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 7	LIVE	Domestic	6.5	25.0	245	4.8	112.1	12.0
RA	8 - 11	LIVE	Domestic	9.8	30.0	924	7.5	402.1	45.4
RA	12 - 19	LIVE	Domestic	15.1	30.0	527	6.4	162.9	25.9
RC	5 - 7	LIVE	Domestic	5.9	24.0	242	0.9	101.6	11.9
RC	8 - 11	LIVE	Domestic	10.2	36.0	888	11.8	407.8	43.6
RC	12 - 19	LIVE	Domestic	15.1	35.0	1,346	13.7	517.6	66.1
RC	20+	LIVE	Domestic	24.2	36.0	1,309	22.0	501.7	64.3
WH	5 - 7	LIVE	Domestic	5.6	31.0	1,624	1.0	749.8	79.7
WH	8 - 11	LIVE	Domestic	9.1	36.0	688	5.4	305.4	33.8
WH	12 - 19	LIVE	Domestic	13.4	39.0	659	6.3	270.5	32.4
WH	20+	LIVE	Domestic	21.6	36.0	271	15.1	104.2	13.3

Cruise Unit Report
TIP TOP U3

Unit Sale Notice Volume (MBF): TIP TOP U3

				MBF Volume by Grade			
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw
DF	12.7			948.3	241.7	501.7	204.9
WP	12.4			20.9		12.6	8.3
WH	9.0			5.7			5.7
ALL	12.5			974.9	241.7	514.3	218.9

Unit Sale Notice Weight (tons): TIP TOP U3

	Tons by Grade			
Sp	All	2 Saw	3 Saw	4 Saw
DF	7,088.3	1,675.1	3,876.5	1,536.8
WP	140.2		74.2	66.0
WH	48.0			48.0
ALL	7,276.5	1,675.1	3,950.6	1,650.8

Unit Cruise Design: TIP TOP U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	43.0	44.5	24	13	0

Unit Cruise Summary: TIP TOP U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	59	120	5.0	0
WP	3	3	0.1	0
WH	1	1	0.0	0
ALL	63	124	5.2	0

Unit Cruise Statistics (Cut + Leave Trees): TIP TOP U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	168.1	40.0	8.2	131.2	29.3	3.8	22,053	49.6	9.0
WP	4.2	270.3	55.2	115.4	28.1	16.3	485	271.7	57.5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	1.4	489.9	100.0	95.1	0.0	0.0	133	489.9	100.0
ALL	173.7	37.7	7.7	130.6	29.2	3.7	22,671	47.7	8.5

Unit Summary: TIP TOP U3

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	59	ALL	12.7	65	76	22,053	0.9	191.0	168.1	47.2	7,088.3	948.3
WH	LIVE	CUT	1	ALL	9.0	50	61	133	0.0	3.2	1.4	0.5	48.0	5.7
WP	LIVE	CUT	3	ALL	12.4	73	82	485	0.0	5.0	4.2	1.2	140.2	20.8
ALL	LIVE	CUT	63	ALL	12.6	65	76	22,671	0.8	199.2	173.7	48.9	7,276.5	974.8
ALL	ALL	ALL	63	ALL	12.6	65	76	22,671	0.8	199.2	173.7	48.9	7,276.5	974.8

Unit Stand Table: TIP TOP U3

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	8	7.7	47	48	1,730	0.0	70.3	22.8	8.2	441.5	74.4
DF	10	LIVE	CUT	2	9.5	56	56	399	0.0	11.7	5.7	1.9	151.3	17.1
DF	12	LIVE	CUT	7	11.4	66	78	2,075	0.0	28.2	19.9	5.9	702.8	89.2
DF	14	LIVE	CUT	13	13.4	71	89	4,500	0.0	38.1	37.0	10.1	1,541.1	193.5
DF	16	LIVE	CUT	3	15.3	75	94	1,179	1.4	6.7	8.5	2.2	380.3	50.7
DF	18	LIVE	CUT	13	17.4	87	110	5,404	1.5	22.5	37.0	8.9	1,842.7	232.4
DF	20	LIVE	CUT	5	19.4	98	126	2,597	1.0	7.0	14.2	3.2	781.1	111.7
DF	22	LIVE	CUT	4	21.2	100	128	2,177	0.0	4.6	11.4	2.5	633.2	93.6
DF	24	LIVE	CUT	3	23.3	93	119	1,453	2.4	2.9	8.5	1.8	450.2	62.5
DF	28	LIVE	CUT	1	28.0	105	135	539	5.2	0.7	2.8	0.5	164.1	23.2
WH	10	LIVE	CUT	1	9.0	50	61	133	0.0	3.2	1.4	0.5	48.0	5.7
WP	10	LIVE	CUT	1	10.0	75	75	110	0.0	2.6	1.4	0.4	39.7	4.8
WP	14	LIVE	CUT	1	14.0	70	88	177	0.0	1.3	1.4	0.4	48.7	7.6
WP	16	LIVE	CUT	1	15.0	73	92	198	0.0	1.1	1.4	0.4	51.8	8.5

Unit Log Grade Summary: TIP TOP U3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	14.1	37.0	5,621	1.6	1,675.1	241.7
DF	LIVE	3 SAW	8.8	37.0	11,668	0.8	3,876.5	501.7
DF	LIVE	4 SAW	5.2	26.0	4,764	0.0	1,536.8	204.9
WH	LIVE	4 SAW	5.0	39.0	133	0.0	48.0	5.7
WP	LIVE	3 SAW	9.7	36.0	293	0.0	74.2	12.6

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WP	LIVE	4 SAW	5.3	36.0	192	0.0	66.0	8.3

Unit Log Sort Summary: TIP TOP U3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.6	30.0	15,136	0.6	4,962.5	650.8
DF	LIVE	HQ-B	11.6	37.0	6,917	1.3	2,125.8	297.4
WH	LIVE	Domestic	5.0	39.0	133	0.0	48.0	5.7
WP	LIVE	Domestic	6.7	36.0	485	0.0	140.2	20.9

Unit Log Grade x Sort Summary: TIP TOP U3

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.8	36.0	2,391	2.7	713.6	102.8
DF	LIVE	2 SAW	HQ-B	13.6	37.0	3,229	0.8	961.5	138.9
DF	LIVE	3 SAW	Domestic	8.3	37.0	7,980	0.4	2,712.1	343.1
DF	LIVE	3 SAW	HQ-B	10.5	38.0	3,688	1.8	1,164.3	158.6
DF	LIVE	4 SAW	Domestic	5.2	26.0	4,764	0.0	1,536.8	204.9
WH	LIVE	4 SAW	Domestic	5.0	39.0	133	0.0	48.0	5.7
WP	LIVE	3 SAW	Domestic	9.7	36.0	293	0.0	74.2	12.6
WP	LIVE	4 SAW	Domestic	5.3	36.0	192	0.0	66.0	8.3

Unit Log Grade x Diameter Bin Summary: TIP TOP U3

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	4 SAW	5.2	26.0	4,764	0.0	1,536.8	204.9
DF	5 - 7	LIVE	3 SAW	6.8	39.0	2,164	0.0	780.8	93.1
DF	8 - 11	LIVE	3 SAW	9.6	37.0	9,504	1.0	3,095.7	408.7
DF	12 - 19	LIVE	2 SAW	14.1	37.0	5,621	1.6	1,675.1	241.7
WH	5 - 7	LIVE	4 SAW	5.0	39.0	133	0.0	48.0	5.7
WP	5 - 7	LIVE	4 SAW	5.3	36.0	192	0.0	66.0	8.3
WP	8 - 11	LIVE	3 SAW	9.7	36.0	293	0.0	74.2	12.6

Unit Log Sort x Diameter Bin Summary: TIP TOP U3

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Domestic	5.5	28.0	6,929	0.0	2,317.5	297.9
DF	8 - 11	LIVE	Domestic	9.2	36.0	5,816	0.5	1,931.4	250.1
DF	8 - 11	LIVE	HQ-B	10.5	38.0	3,688	1.8	1,164.3	158.6

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	12 - 19	LIVE	HQ-B	13.6	37.0	3,229	0.8	961.5	138.9
DF	12 - 19	LIVE	Domestic	14.8	36.0	2,391	2.7	713.6	102.8
WH	5 - 7	LIVE	Domestic	5.0	39.0	133	0.0	48.0	5.7
WP	5 - 7	LIVE	Domestic	5.3	36.0	192	0.0	66.0	8.3
WP	8 - 11	LIVE	Domestic	9.7	36.0	293	0.0	74.2	12.6

Cruise Unit Report
TIP TOP U4

Unit Sale Notice Volume (MBF): TIP TOP U4

				MBF Volume by Grade			
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw
DF	14.4			25.8	4.8	15.8	5.2
WP	11.0			2.2		2.2	
ALL	14.0			28.0	4.8	18.0	5.2

Unit Sale Notice Weight (tons): TIP TOP U4

	Tons by Grade			
Sp	All	2 Saw	3 Saw	4 Saw
DF	221.0	38.2	131.4	51.4
WP	16.1		16.1	
ALL	237.1	38.2	147.5	51.4

Unit Cruise Design: TIP TOP U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	2.2	2.4	3	3	0

Unit Cruise Summary: TIP TOP U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	10	10	3.3	0
WP	1	1	0.3	0
ALL	11	11	3.7	0

Unit Cruise Statistics (Cut + Leave Trees): TIP TOP U4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	112.0	17.3	10.0	104.8	21.7	6.8	11,742	27.7	12.1
WP	11.2	173.2	100.0	87.9	0.0	0.0	985	173.2	100.0
ALL	123.2	15.7	9.1	103.3	21.4	6.5	12,727	26.6	11.2

Unit Summary: TIP TOP U4

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	10	ALL	14.4	68	76	11,742	1.7	99.1	112.0	29.5	221.0	25.8
WP	LIVE	CUT	1	ALL	11.0	59	74	985	7.9	17.0	11.2	3.4	16.1	2.2
ALL	LIVE	CUT	11	ALL	14.0	67	76	12,727	2.3	116.1	123.2	32.9	237.1	28.0
ALL	ALL	ALL	11	ALL	14.0	67	76	12,727	2.3	116.1	123.2	32.9	237.1	28.0

Unit Stand Table: TIP TOP U4

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	10	LIVE	CUT	1	10.0	52	64	883	0.0	20.5	11.2	3.5	16.7	1.9
DF	12	LIVE	CUT	1	12.0	65	65	870	3.2	14.3	11.2	3.2	17.9	1.9
DF	14	LIVE	CUT	2	13.0	63	71	2,018	0.0	24.3	22.4	6.2	38.9	4.4
DF	16	LIVE	CUT	2	16.0	78	78	2,552	0.9	16.0	22.4	5.6	43.3	5.6
DF	18	LIVE	CUT	2	17.5	76	96	2,705	4.3	13.4	22.4	5.4	51.4	6.0
DF	20	LIVE	CUT	1	19.0	94	94	1,246	0.0	5.7	11.2	2.6	25.7	2.7
DF	22	LIVE	CUT	1	22.0	80	101	1,468	2.3	4.2	11.2	2.4	27.1	3.2
WP	12	LIVE	CUT	1	11.0	59	74	985	7.9	17.0	11.2	3.4	16.1	2.2

Unit Log Grade Summary: TIP TOP U4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	13.5	38.0	2,181	1.5	38.2	4.8
DF	LIVE	3 SAW	8.4	38.0	7,188	2.4	131.4	15.8
DF	LIVE	4 SAW	5.2	33.0	2,373	0.0	51.4	5.2
WP	LIVE	3 SAW	6.1	40.0	985	7.9	16.1	2.2

Unit Log Sort Summary: TIP TOP U4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	7.3	35.0	11,742	1.7	221.0	25.8
WP	LIVE	Domestic	6.1	40.0	985	7.9	16.1	2.2

Unit Log Grade x Sort Summary: TIP TOP U4

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	13.5	38.0	2,181	1.5	38.2	4.8
DF	LIVE	3 SAW	Domestic	8.4	38.0	7,188	2.4	131.4	15.8
DF	LIVE	4 SAW	Domestic	5.2	33.0	2,373	0.0	51.4	5.2
WP	LIVE	3 SAW	Domestic	6.1	40.0	985	7.9	16.1	2.2

Unit Log Grade x Diameter Bin Summary: TIP TOP U4

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	4 SAW	5.2	33.0	2,373	0.0	51.4	5.2
DF	5 - 7	LIVE	3 SAW	6.3	40.0	1,924	1.5	41.8	4.2
DF	8 - 11	LIVE	3 SAW	10.0	36.0	5,264	2.7	89.6	11.6
DF	12 - 19	LIVE	2 SAW	13.5	38.0	2,181	1.5	38.2	4.8
WP	5 - 7	LIVE	3 SAW	6.1	40.0	985	7.9	16.1	2.2

Unit Log Sort x Diameter Bin Summary: TIP TOP U4

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Domestic	5.5	35.0	4,297	0.7	93.3	9.5
DF	8 - 11	LIVE	Domestic	10.0	36.0	5,264	2.7	89.6	11.6
DF	12 - 19	LIVE	Domestic	13.5	38.0	2,181	1.5	38.2	4.8
WP	5 - 7	LIVE	Domestic	6.1	40.0	985	7.9	16.1	2.2

Cruise Unit Report
TIP TOP U5

Unit Sale Notice Volume (MBF): TIP TOP U5

				MBF Volume by Grade				
Sp	QMD	Rings/In	Age	All	Spec Mill	2 Saw	3 Saw	4 Saw
DF	14.2			372.2	11.7	130.1	174.8	55.6
RC	14.2			12.8			10.0	2.8
RA	12.0			3.5				3.5
MA	15.0			2.3				2.3
ALL	14.1			390.7	11.7	130.1	184.8	64.1

Unit Sale Notice Weight (tons): TIP TOP U5

	Tons by Grade				
Sp	All	Spec Mill	2 Saw	3 Saw	4 Saw
DF	2,757.1	66.7	903.4	1,336.1	450.9
RC	105.3			87.9	17.4
RA	34.3				34.3
MA	25.9				25.9
ALL	2,922.6	66.7	903.4	1,424.1	528.4

Unit Cruise Design: TIP TOP U5

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	17.2	18.7	13	7	0

Unit Cruise Summary: TIP TOP U5

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	29	56	4.3	0
RC	3	3	0.2	0
RA	1	1	0.1	0
MA	1	1	0.1	0
ALL	34	61	4.7	0

Unit Cruise Statistics (Cut + Leave Trees): TIP TOP U5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	144.8	33.4	9.3	149.5	25.6	4.8	21,640	42.0	10.4
RC	7.8	259.6	72.0	95.7	8.2	4.7	742	259.8	72.2
RA	2.6	360.6	100.0	77.7	0.0	0.0	201	360.6	100.0
MA	2.6	360.6	100.0	51.3	0.0	0.0	133	360.6	100.0
ALL	157.7	28.0	7.8	144.0	29.9	5.1	22,716	41.0	9.3

Unit Summary: TIP TOP U5

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	29	ALL	14.2	87	96	21,640	2.4	131.7	144.8	38.4	2,757.1	372.2
MA	LIVE	CUT	1	ALL	15.0	30	57	133	10.0	2.1	2.6	0.7	25.9	2.3
RA	LIVE	CUT	1	ALL	12.0	54	66	201	6.2	3.3	2.6	0.7	34.3	3.5
RC	LIVE	CUT	3	ALL	14.2	85	85	742	2.7	7.1	7.8	2.1	105.3	12.8
ALL	LIVE	CUT	34	ALL	14.2	85	94	22,716	2.5	144.2	157.8	41.9	2,922.6	390.8
ALL	ALL	ALL	34	ALL	14.2	85	94	22,716	2.5	144.2	157.8	41.9	2,922.6	390.8

Unit Stand Table: TIP TOP U5

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	2	8.0	72	72	1,001	0.0	28.6	10.0	3.5	112.2	17.2
DF	10	LIVE	CUT	3	10.0	82	82	1,547	0.0	27.5	15.0	4.7	201.9	26.6
DF	12	LIVE	CUT	1	12.0	93	93	566	5.3	6.4	5.0	1.4	81.0	9.7
DF	14	LIVE	CUT	5	14.0	103	103	3,363	1.6	23.4	25.0	6.7	464.8	57.8
DF	16	LIVE	CUT	4	15.7	76	101	2,659	1.7	14.8	20.0	5.0	362.2	45.7
DF	18	LIVE	CUT	4	17.5	96	122	3,497	2.3	12.0	20.0	4.8	437.5	60.1
DF	20	LIVE	CUT	3	19.0	90	115	2,330	0.6	7.6	15.0	3.4	305.8	40.1
DF	22	LIVE	CUT	4	21.5	106	142	4,184	1.1	7.9	20.0	4.3	481.6	72.0
DF	26	LIVE	CUT	2	25.5	92	117	1,603	11.5	2.8	10.0	2.0	197.5	27.6
DF	28	LIVE	CUT	1	27.0	103	131	890	5.2	1.3	5.0	1.0	112.6	15.3
MA	16	LIVE	CUT	1	15.0	30	57	133	10.0	2.1	2.6	0.7	25.9	2.3
RA	12	LIVE	CUT	1	12.0	54	66	201	6.2	3.3	2.6	0.8	34.3	3.5
RC	14	LIVE	CUT	2	13.0	84	84	471	0.0	5.6	5.2	1.4	68.0	8.1
RC	18	LIVE	CUT	1	18.0	90	90	271	7.0	1.5	2.6	0.6	37.3	4.7

Unit Log Grade Summary: TIP TOP U5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	14.1	36.0	7,565	4.1	903.4	130.1
DF	LIVE	3 SAW	8.6	37.0	10,162	1.6	1,336.1	174.8
DF	LIVE	4 SAW	5.3	32.0	3,232	0.2	450.9	55.6
DF	LIVE	CULL	14.9	4.0	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	16.0	36.0	681	0.0	66.7	11.7
MA	LIVE	4 SAW	9.0	29.0	133	10.0	25.9	2.3
RA	LIVE	4 SAW	6.3	23.0	201	6.2	34.3	3.5
RC	LIVE	3 SAW	8.5	36.0	581	3.4	87.9	10.0
RC	LIVE	4 SAW	5.6	20.0	161	0.0	17.4	2.8

Unit Log Sort Summary: TIP TOP U5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Cull	14.9	4.0	0	100.0	0.0	0.0
DF	LIVE	Domestic	7.2	35.0	13,945	2.4	1,839.6	239.9
DF	LIVE	HQ-A	14.3	36.0	1,260	2.8	133.2	21.7
DF	LIVE	HQ-B	12.2	37.0	6,435	1.7	784.3	110.7
MA	LIVE	Domestic	9.0	29.0	133	10.0	25.9	2.3
RA	LIVE	Domestic	6.3	23.0	201	6.2	34.3	3.5
RC	LIVE	Domestic	7.0	28.0	742	2.7	105.3	12.8

Unit Log Grade x Sort Summary: TIP TOP U5

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.8	34.0	2,402	6.8	283.7	41.3
DF	LIVE	2 SAW	HQ-A	13.1	36.0	579	6.0	66.5	10.0
DF	LIVE	2 SAW	HQ-B	13.8	38.0	4,583	2.4	553.2	78.8
DF	LIVE	3 SAW	Domestic	8.4	38.0	8,310	1.9	1,105.0	142.9
DF	LIVE	3 SAW	HQ-B	10.2	36.0	1,852	0.0	231.1	31.8
DF	LIVE	4 SAW	Domestic	5.3	32.0	3,232	0.2	450.9	55.6
DF	LIVE	CULL	Cull	14.9	4.0	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	16.0	36.0	681	0.0	66.7	11.7
MA	LIVE	4 SAW	Domestic	9.0	29.0	133	10.0	25.9	2.3
RA	LIVE	4 SAW	Domestic	6.3	23.0	201	6.2	34.3	3.5
RC	LIVE	3 SAW	Domestic	8.5	36.0	581	3.4	87.9	10.0
RC	LIVE	4 SAW	Domestic	5.6	20.0	161	0.0	17.4	2.8

Unit Log Grade x Diameter Bin Summary: TIP TOP U5

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	4 SAW	5.3	32.0	3,232	0.2	450.9	55.6
DF	5 - 7	LIVE	3 SAW	6.7	39.0	2,590	1.5	357.3	44.5
DF	8 - 11	LIVE	3 SAW	9.8	36.0	7,572	1.6	978.8	130.2
DF	12 - 19	LIVE	2 SAW	14.1	36.0	7,565	4.1	903.4	130.1
DF	12 - 19	LIVE	CULL	14.9	4.0	0	100.0	0.0	0.0
DF	12 - 19	LIVE	SPECIAL MILL	16.0	36.0	681	0.0	66.7	11.7
MA	8 - 11	LIVE	4 SAW	9.0	29.0	133	10.0	25.9	2.3
RA	5 - 7	LIVE	4 SAW	6.3	23.0	201	6.2	34.3	3.5
RC	5 - 7	LIVE	4 SAW	5.6	20.0	161	0.0	17.4	2.8
RC	5 - 7	LIVE	3 SAW	7.7	36.0	365	0.0	59.0	6.3
RC	8 - 11	LIVE	3 SAW	11.4	36.0	217	8.6	29.0	3.7

Unit Log Sort x Diameter Bin Summary: TIP TOP U5

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Domestic	5.8	34.0	5,822	0.8	808.2	100.1
DF	8 - 11	LIVE	Domestic	9.7	36.0	5,720	2.1	747.7	98.4
DF	8 - 11	LIVE	HQ-B	10.2	36.0	1,852	0.0	231.1	31.8
DF	12 - 19	LIVE	HQ-B	13.8	38.0	4,583	2.4	553.2	78.8
DF	12 - 19	LIVE	HQ-A	14.3	36.0	1,260	2.8	133.2	21.7
DF	12 - 19	LIVE	Domestic	14.8	34.0	2,402	6.8	283.7	41.3
DF	12 - 19	LIVE	Cull	14.9	4.0	0	100.0	0.0	0.0
MA	8 - 11	LIVE	Domestic	9.0	29.0	133	10.0	25.9	2.3
RA	5 - 7	LIVE	Domestic	6.3	23.0	201	6.2	34.3	3.5
RC	5 - 7	LIVE	Domestic	6.5	27.0	525	0.0	76.3	9.0
RC	8 - 11	LIVE	Domestic	11.4	36.0	217	8.6	29.0	3.7

Cruise Unit Report
Unit 6

Unit Sale Notice Volume (MBF): Unit 6

				MBF Volume by Grade		
Sp	QMD	Rings/In	Age	All	3 Saw	4 Saw
DF	11.3			25.5	16.4	9.0
ALL	11.3			25.5	16.4	9.0

Unit Sale Notice Weight (tons): Unit 6

	Tons by Grade		
Sp	All	3 Saw	4 Saw
DF	207.4	127.5	79.9
ALL	207.4	127.5	79.9

Unit Cruise Design: Unit 6

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (33.61) Measure All, Sighting Ht = 4.5 ft	1.3		1	1	0

Unit Cruise Summary: Unit 6

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	6	6	6.0	0
ALL	6	6	6.0	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 6

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	201.7	0.0	0.0	97.2	19.6	8.0	19,597	19.6	8.0
ALL	201.7	0.0	0.0	97.2	19.6	8.0	19,597	19.6	8.0

Unit Summary: Unit 6

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	6	ALL	11.3	57	71	19,597	0.0	289.6	201.7	60.0	207.4	25.5
ALL	LIVE	CUT	6	ALL	11.3	57	71	19,597	0.0	289.6	201.7	60.0	207.4	25.5

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
ALL	ALL	ALL	6	ALL	11.3	57	71	19,597	0.0	289.6	201.7	60.0	207.4	25.5

Unit Stand Table: Unit 6

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	10	LIVE	CUT	2	10.0	52	64	5,300	0.0	123.3	67.2	21.3	59.4	6.9
DF	12	LIVE	CUT	3	11.3	59	72	9,927	0.0	144.7	100.9	30.0	100.6	12.9
DF	18	LIVE	CUT	1	17.0	80	101	4,371	0.0	21.3	33.6	8.2	47.4	5.7

Unit Log Grade Summary: Unit 6

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	7.1	38.0	12,653	0.0	127.5	16.4
DF	LIVE	4 SAW	5.1	35.0	6,944	0.0	79.9	9.0

Unit Log Sort Summary: Unit 6

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.1	36.0	19,597	0.0	207.4	25.5

Unit Log Grade x Sort Summary: Unit 6

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	7.1	38.0	12,653	0.0	127.5	16.4
DF	LIVE	4 SAW	Domestic	5.1	35.0	6,944	0.0	79.9	9.0

Unit Log Grade x Diameter Bin Summary: Unit 6

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	4 SAW	5.1	35.0	6,944	0.0	79.9	9.0
DF	5 - 7	LIVE	3 SAW	6.5	39.0	9,199	0.0	94.3	12.0
DF	8 - 11	LIVE	3 SAW	11.4	36.0	3,454	0.0	33.2	4.5

Unit Log Sort x Diameter Bin Summary: Unit 6

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Domestic	5.7	36.0	16,143	0.0	174.2	21.0
DF	8 - 11	LIVE	Domestic	11.4	36.0	3,454	0.0	33.2	4.5

Cruise Unit Report
Unit 7

Unit Sale Notice Volume (MBF): Unit 7

				MBF Volume by Grade			
Sp	QMD	Rings/In	Age	All	2 Saw	3 Saw	4 Saw
DF	11.8			124.3	8.4	72.7	43.2
WP	11.0			5.1		5.1	
ALL	11.8			129.4	8.4	77.8	43.2

Unit Sale Notice Weight (tons): Unit 7

	Tons by Grade			
Sp	All	2 Saw	3 Saw	4 Saw
DF	961.6	62.4	549.0	350.2
WP	32.9		32.9	
ALL	994.5	62.4	581.9	350.2

Unit Cruise Design: Unit 7

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (33.61) Measure/Count Plots, Sighting Ht = 4.5 ft	11.1		7	3	0

Unit Cruise Summary: Unit 7

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	14	21	3.0	0
WP	1	1	0.1	0
ALL	15	22	3.1	0

Unit Cruise Statistics (Cut + Leave Trees): Unit 7

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	100.8	63.8	24.1	111.0	25.2	6.7	11,197	68.6	25.0
WP	4.8	264.6	100.0	95.5	0.0	0.0	458	264.6	100.0
ALL	105.6	69.8	26.4	110.3	24.7	6.4	11,655	74.0	27.1

Unit Summary: Unit 7

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	14	ALL	11.8	58	72	11,197	0.4	132.8	100.8	29.4	961.6	124.3
WP	LIVE	CUT	1	ALL	11.0	60	74	458	0.0	7.3	4.8	1.4	32.9	5.1
ALL	LIVE	CUT	15	ALL	11.8	58	72	11,655	0.4	140.1	105.6	30.8	994.5	129.4
ALL	ALL	ALL	15	ALL	11.8	58	72	11,655	0.4	140.1	105.6	30.8	994.5	129.4

Unit Stand Table: Unit 7

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	1	8.0	42	51	557	0.0	20.6	7.2	2.5	39.2	6.2
DF	10	LIVE	CUT	3	9.6	50	62	1,723	0.0	42.7	21.6	7.0	155.0	19.1
DF	12	LIVE	CUT	3	11.6	60	74	2,191	0.0	29.2	21.6	6.3	192.1	24.3
DF	14	LIVE	CUT	3	13.6	68	85	2,610	0.0	21.3	21.6	5.8	225.2	29.0
DF	16	LIVE	CUT	2	15.5	75	94	1,933	0.0	11.0	14.4	3.7	163.1	21.5
DF	18	LIVE	CUT	1	17.0	80	101	937	0.0	4.6	7.2	1.7	86.7	10.4
DF	24	LIVE	CUT	1	23.0	97	124	1,246	3.5	2.5	7.2	1.5	100.3	13.8
WP	12	LIVE	CUT	1	11.0	60	74	458	0.0	7.3	4.8	1.4	32.9	5.1

Unit Log Grade Summary: Unit 7

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	15.9	36.0	754	5.6	62.4	8.4
DF	LIVE	3 SAW	8.5	37.0	6,554	0.0	549.0	72.7
DF	LIVE	4 SAW	5.1	30.0	3,889	0.0	350.2	43.2
WP	LIVE	3 SAW	6.3	40.0	458	0.0	32.9	5.1

Unit Log Sort Summary: Unit 7

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	6.5	32.0	11,197	0.4	961.6	124.3
WP	LIVE	Domestic	6.3	40.0	458	0.0	32.9	5.1

Unit Log Grade x Sort Summary: Unit 7

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	15.9	36.0	754	5.6	62.4	8.4
DF	LIVE	3 SAW	Domestic	8.5	37.0	6,554	0.0	549.0	72.7
DF	LIVE	4 SAW	Domestic	5.1	30.0	3,889	0.0	350.2	43.2
WP	LIVE	3 SAW	Domestic	6.3	40.0	458	0.0	32.9	5.1

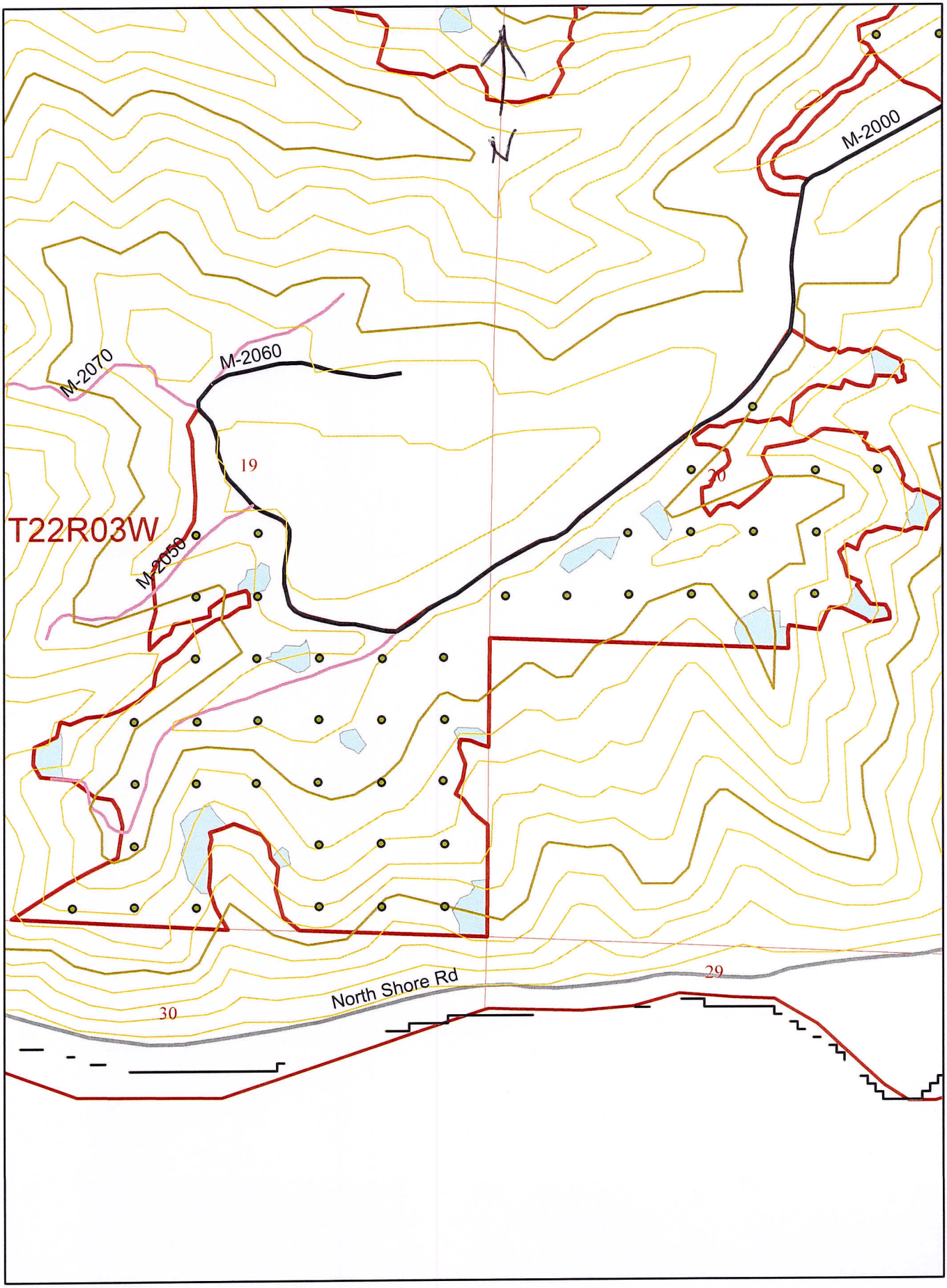
Unit Log Grade x Diameter Bin Summary: Unit 7

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	4 SAW	5.1	30.0	3,889	0.0	350.2	43.2
DF	5 - 7	LIVE	3 SAW	6.9	37.0	1,880	0.0	168.9	20.9
DF	8 - 11	LIVE	3 SAW	9.7	36.0	4,674	0.0	380.0	51.9
DF	12 - 19	LIVE	2 SAW	15.9	36.0	754	5.6	62.4	8.4
WP	5 - 7	LIVE	3 SAW	6.3	40.0	458	0.0	32.9	5.1

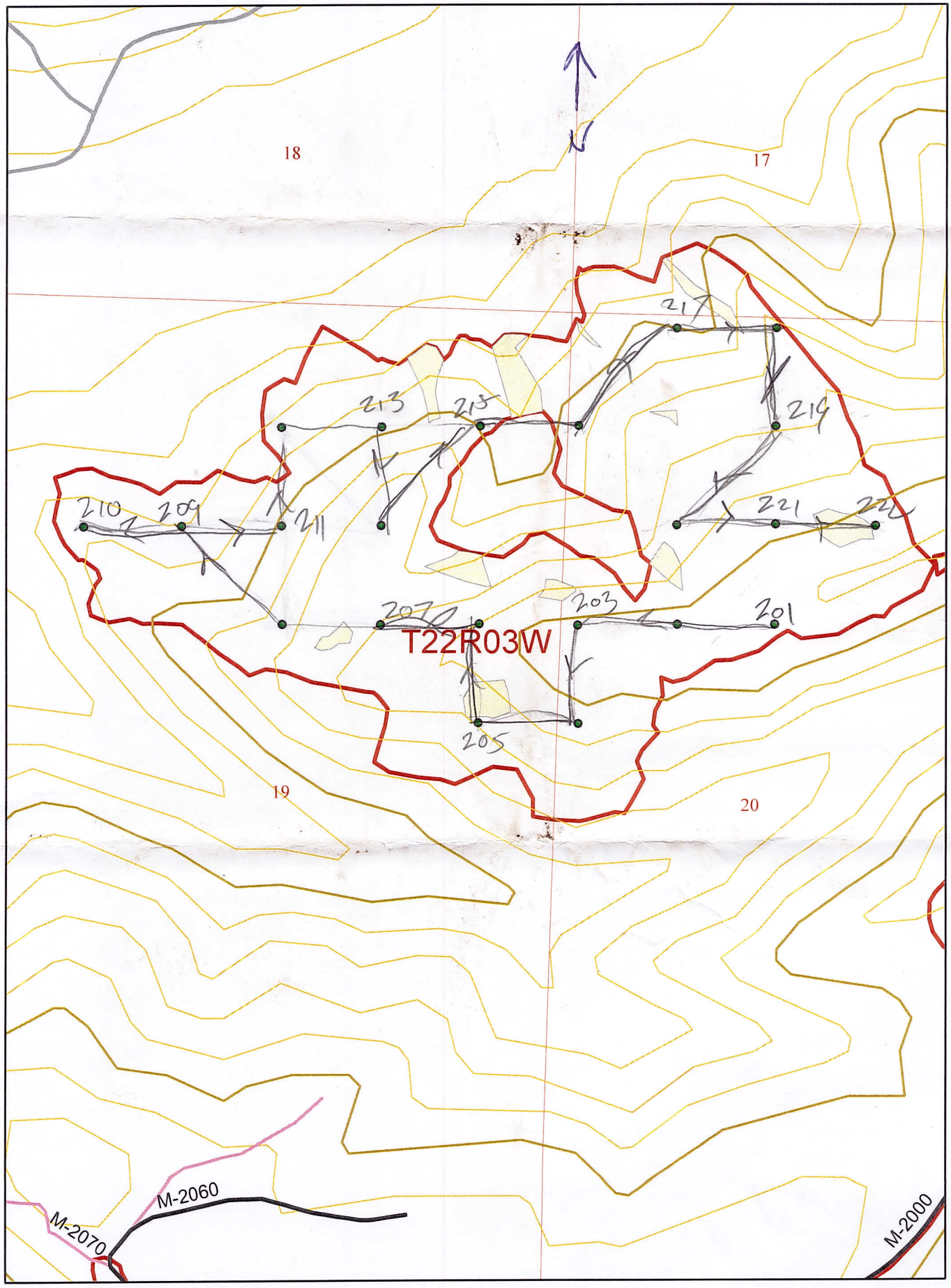
Unit Log Sort x Diameter Bin Summary: Unit 7

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Domestic	5.5	31.0	5,769	0.0	519.2	64.0
DF	8 - 11	LIVE	Domestic	9.7	36.0	4,674	0.0	380.0	51.9
DF	12 - 19	LIVE	Domestic	15.9	36.0	754	5.6	62.4	8.4
WP	5 - 7	LIVE	Domestic	6.3	40.0	458	0.0	32.9	5.1

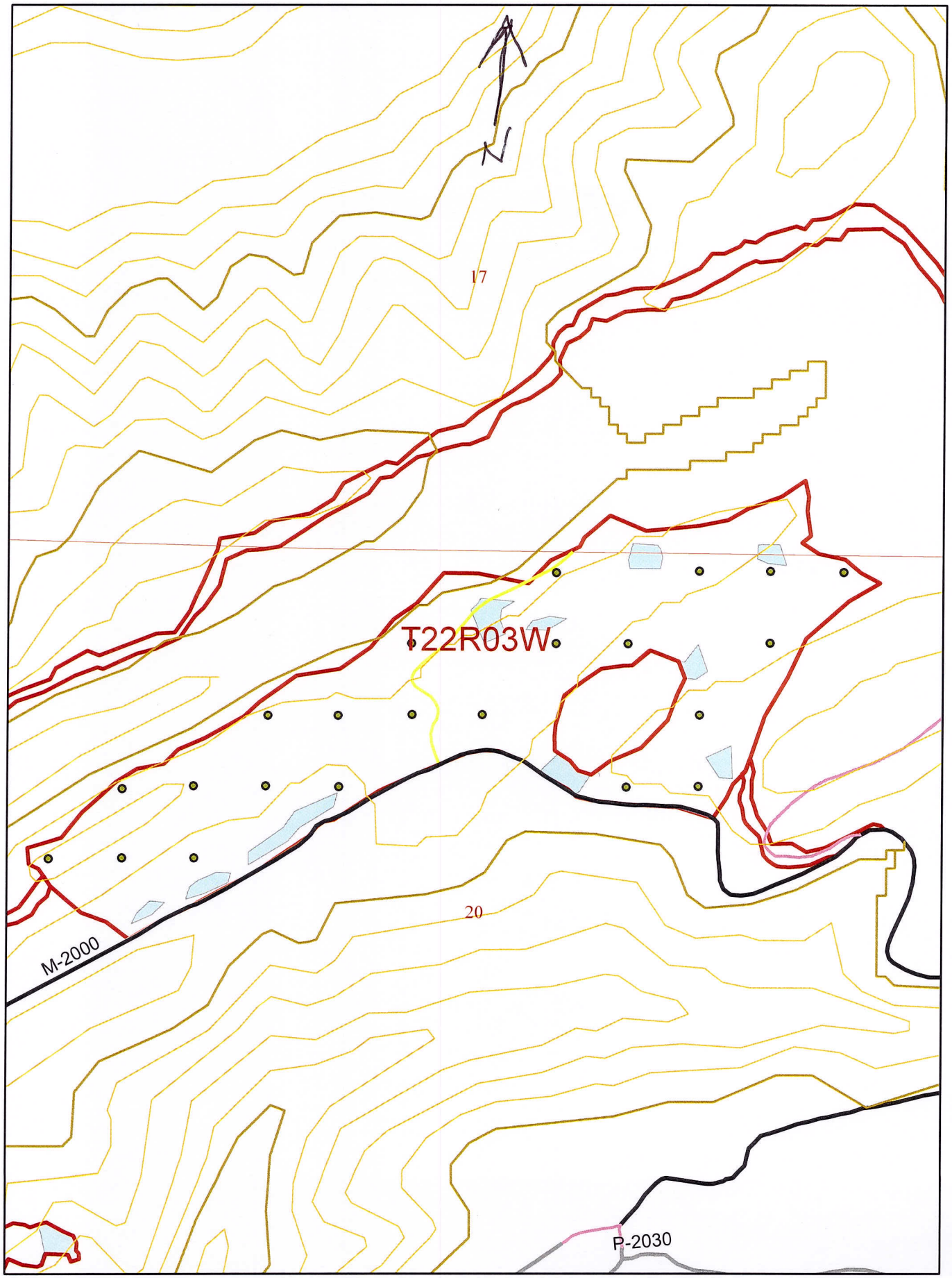
TIPTOP 195'x195' U1 NTS



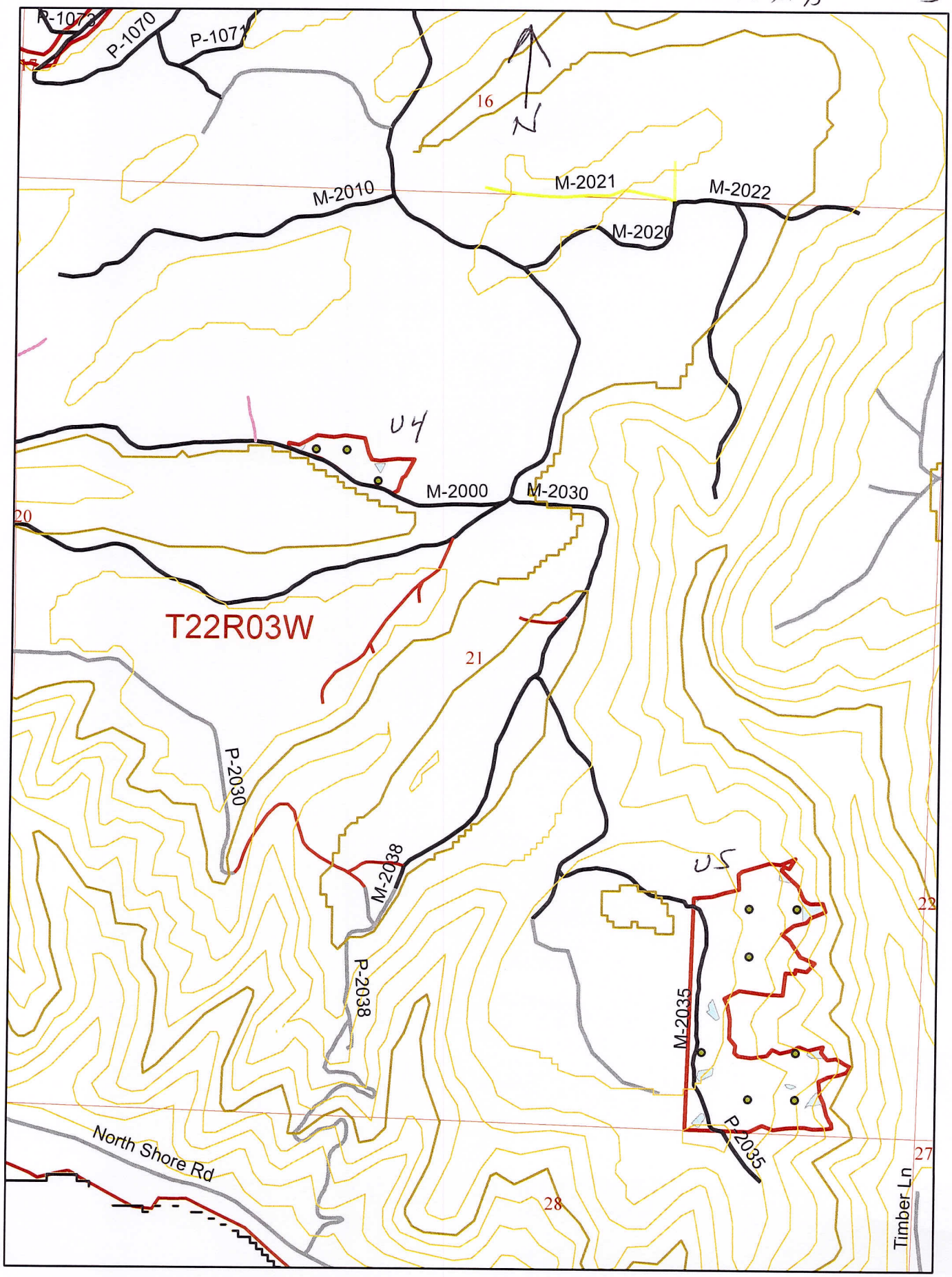
1"=400' TIPTOP U2 195' & 195'



TIPTOP 195'x195' U3 NTS



TIPTOP U4 & U5 175'x175' & 195'x195' NTS



FPA/N No: 2420714

Date of Service: 2/26/2020

Reference: Tip Top #30-094094

Request to Amend
Forest Practices Application/Notification

DNR's Decision

Decision

☒ **Approved** This Forest Practices Application is subject to the conditions listed below.

☐ **Disapproved** This Forest Practices Application is disapproved for the reasons listed below.

Conditions on Approval / Reasons for Disapproval

Appeal Information (RCW 76.09.090(3), WAC 222-46-030(4), and WAC 332-08-215(3)
The Landowner, Timber Owner, or Operator has 15 calendar days from the Date of Service to request a Brief Adjudicative Proceeding for this **amendment which is a Notice to Comply for an authorized deviation.** Appeal requests must:

- Be in writing
- Include signature(s)
- Include factual basis for the appeal and the issue to be adjudicated
- Sent to the Region Office at: Enumclaw
- With a copy sent to the Department of Natural Resources, Forest Practices Division, PO Box 47012, Olympia, WA 98504-7012

Issued By: Jason Sharp **Region:** South Puget Sound

Copies Sent to: *Landowner (via US Mail), Timber Owner (via US Mail), Operator (via US mail), WDFW, DOE, Affected Indian Tribes, LGE, other*

AEM 2-27-20

DNR affidavit of mailing: Hand Delivered MD MM

On this day 2/26/2020 (date mm/dd/yyyy), I placed in the United States mail at Olympia (post office location), WA, postage paid, a true and accurate copy of this document. Notice of Decision FPA #**2420714**

Meredith Dessens (Printed name) _____ (Signature)

WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

FPA/N No: 2420714
Date of Service: 12/27/2019
Reference: Tip Top #30-094094

Request to Amend
Forest Practices Application/Notification

DNR's Decision

Decision

☒ **Approved** This Forest Practices Application is subject to the conditions listed below.

☐ **Disapproved** This Forest Practices Application is disapproved for the reasons listed below.

Conditions on Approval / Reasons for Disapproval

Appeal Information (RCW 76.09.090(3), WAC 222-46-030(4), and WAC 332-08-215(3)
The Landowner, Timber Owner, or Operator has 15 calendar days from the Date of Service to request a Brief Adjudicative Proceeding for this **amendment which is a Notice to Comply for an authorized deviation.** Appeal requests must:

- Be in writing
- Include signature(s)
- Include factual basis for the appeal and the issue to be adjudicated
- Sent to the Region Office at: 950 Farman Ave North Enumclaw, WA 98022
- With a copy sent to the Department of Natural Resources, Forest Practices Division, PO Box 47012, Olympia, WA 98504-7012

Issued By: Carla Fosberg **Region:** South Puget Sound

Copies Sent to: *Landowner (via US Mail), Timber Owner (via US Mail), Operator (via US mail), WDFW, DOE, Affected Indian Tribes, LGE, other*

DNR affidavit of mailing: hand delivered

On this day 12/27/2019, I ~~placed in the United States mail~~ at Enumclaw, WA, postage paid, a true and accurate copy of this document. Notice of Decision FPA **#2420714**

Betty Burton

WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

FPA/N No: 2420714
Date of Service: 10/31/2019
Reference: Tip Top TS # 30-094094

Request to Amend
Forest Practices Application/Notification

DNR's Decision

Decision

☒ **Approved** This Forest Practices Application is subject to the conditions listed below.

☐ **Disapproved** This Forest Practices Application is disapproved for the reasons listed below.

Conditions on Approval / Reasons for Disapproval

Appeal Information (RCW 76.09.090(3), WAC 222-46-030(4), and WAC 332-08-215(3)
The Landowner, Timber Owner, or Operator has 15 calendar days from the Date of Service to request a Brief Adjudicative Proceeding for this **amendment which is a Notice to Comply for an authorized deviation.** Appeal requests must:

- Be in writing
- Include signature(s)
- Include factual basis for the appeal and the issue to be adjudicated
- Sent to the Region Office at: Enumclaw
- With a copy sent to the Department of Natural Resources, Forest Practices Division, PO Box 47012, Olympia, WA 98504-7012

Issued By: Jason Sharp **Region:** South Puget Sound

Copies Sent to: *Landowner (via US Mail), Timber Owner (via US Mail), Operator (via US mail), WDFW, DOE, Affected Indian Tribes, LGE, other*

AEM

DNR affidavit of mailing: hand delivered

On this day 10/31/2019, I ~~placed in the United States mail~~ at Enumclaw, WA, postage paid, a true and accurate copy of this document. Notice of Decision FPA # **2420714**

Betty Burton

Betty Burton

WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

FPA/N No: 2420714
Date of Service: 6/17/2019
Reference: Tip Top #30-094094

Request to Amend
Forest Practices Application/Notification
DNR's Decision

Decision

☒ **Approved** This Forest Practices Application is subject to the conditions listed below.

☐ **Disapproved** This Forest Practices Application is disapproved for the reasons listed below.

Conditions on Approval / Reasons for Disapproval

Due to the presence of highly erodible soils, steep slopes, and sidecast construction methods of spur 15, the following conditions are placed on FPA 2420714 (amended):

Spur 15, between STA 16+87 and 25+64 will be constructed with a full ditch or outsloped.

If left overwinter, the portions of spur 15 between STA 16+87 and 25+64 that slope toward the culvert upslope of stream 5i will have the entire road prism covered with straw and will be water barred at least every 100 feet, prior to the first heavy rain of the wet season.

The culvert upslope of stream 5i will be installed either with no outfall drop, or with energy dissipation measures installed at the outlet.

Contact the Forest Practices Forester prior to or during abandonment of spur 15.

Appeal Information (RCW 76.09.090(3), WAC 222-46-030(4), and WAC 332-08-215(3)
The Landowner, Timber Owner, or Operator has 15 calendar days from the Date of Service to request a Brief Adjudicative Proceeding for this **amendment which is a Notice to Comply for an authorized deviation.** Appeal requests must:

- Be in writing
- Include signature(s)
- Include factual basis for the appeal and the issue to be adjudicated
- Sent to the Region Office at: Enumclaw
- With a copy sent to the Department of Natural Resources, Forest Practices Division, PO Box 47012, Olympia, WA 98504-7012

Issued By: Matt Brady **Region:** South Puget Sound

Copies Sent to: *Landowner (via US Mail), Timber Owner (via US Mail), Operator (via US mail), WDFW, DOE, Affected Indian Tribes, LGE, other* Click here to enter text.

AEM, 1710

DNR affidavit of mailing: hand delivered

On this day 6/17/2019, I ~~placed in the United States mail~~ at Enumclaw, WA, postage paid, a true and accurate copy of this document. Notice of Decision FPA # **2420714**

Betty Burton

Forest Practices Application/Notification

Notice of Decision

FPA/N No: 2420714
Effective Date: 1/3/2019
Expiration Date: 1/3/2022
Shut Down Zone: 654
EARR Tax Credit: ☒ Eligible ☐ Non-eligible
Reference: Tip Top #30-094094

Decision

☒ **Notification**	Operations shall not begin before the effective date.
☒ **Approved**	This Forest Practices Application is subject to the conditions listed below.
☐ **Disapproved**	This Forest Practices Application is disapproved for the reasons listed below.
☐ **Closed**	Applicant has withdrawn approved FPA/N

FPA/N Classification

☐ Class II ☒ Class III ☐ Class IVG ☐ Class IVS

Number of Years Granted on Multi-Year Request

☐ 4 yrs ☐ 5 yrs

Conditions on Approval / Reasons for Disapproval

Issued By: Jason Sharp **Region:** South Puget Sound

Title: Resource Protection Forester **Date:** 1/3/2019

Copies to: ☒ Landowner, Timber Owner and Operator.

Issued in person: ☒ Landowner ☒ Timber Owner ☒ Operator **By:** ms essens

AEM 1-19

Appeal Information

You have thirty (30) days to appeal this Decision and any related State Environmental Policy Act determinations to the Pollution Control Hearings Board in writing at the following addresses:
Physical address: 1111 Israel Rd. SW, Ste 301, Tumwater, WA 98501
Mailing address: P.O. BOX 40903, OLYMPIA, WA 98504-0903
Information regarding the Pollution Control Hearings Board can be found at: http://www.eluho.wa.gov/
At the same time you file an appeal with the Pollution Control Hearings Board, also send a copy of the appeal to the Department of Natural Resources' region office and the Office of the Attorney General at the following addresses:

Office of the Attorney General
Natural Resources Division
1125 Washington Street SE
PO Box 40100
Olympia, WA 98504-0100

And

Department Of Natural Resources
South Puget Sound Region
950 Farman Ave N
Enumclaw, WA 98022

Other Applicable Laws

Operating as described in this application/notification does not ensure compliance with the Endangered Species Act, or other federal, state, or local laws.

Transfer of Forest Practices Application/Notification (WAC 222-20-010)

Use the "Notice of Transfer of Approved Forest Practices Application/Notification" form. This form is available at region offices and on the Forest Practices website: http://www.dnr.wa.gov/businesspermits/forestpractices.
Notify DNR of new Operators within 48 hours.

Continuing Forest Land Obligations (RCW 76.09.060, RCW 76.09.070, RCW 76.09.390, and WAC 222-20-055)

Obligations include reforestation, road maintenance and abandonment plans, conversions of forest land to non-forestry use and/or harvest strategies on perennial non-fish habitat (Type Np) waters in Eastern Washington.

Before the sale or transfer of land or perpetual timber rights subject to continuing forest land obligations, the seller must notify the buyer of such an obligation on a form titled "Notice of Continuing Forest Land Obligation". The seller and buyer must both sign the "Notice of Continuing Forest Land Obligation" form and send it to the DNR Region Office for retention. This form is available at DNR region offices.

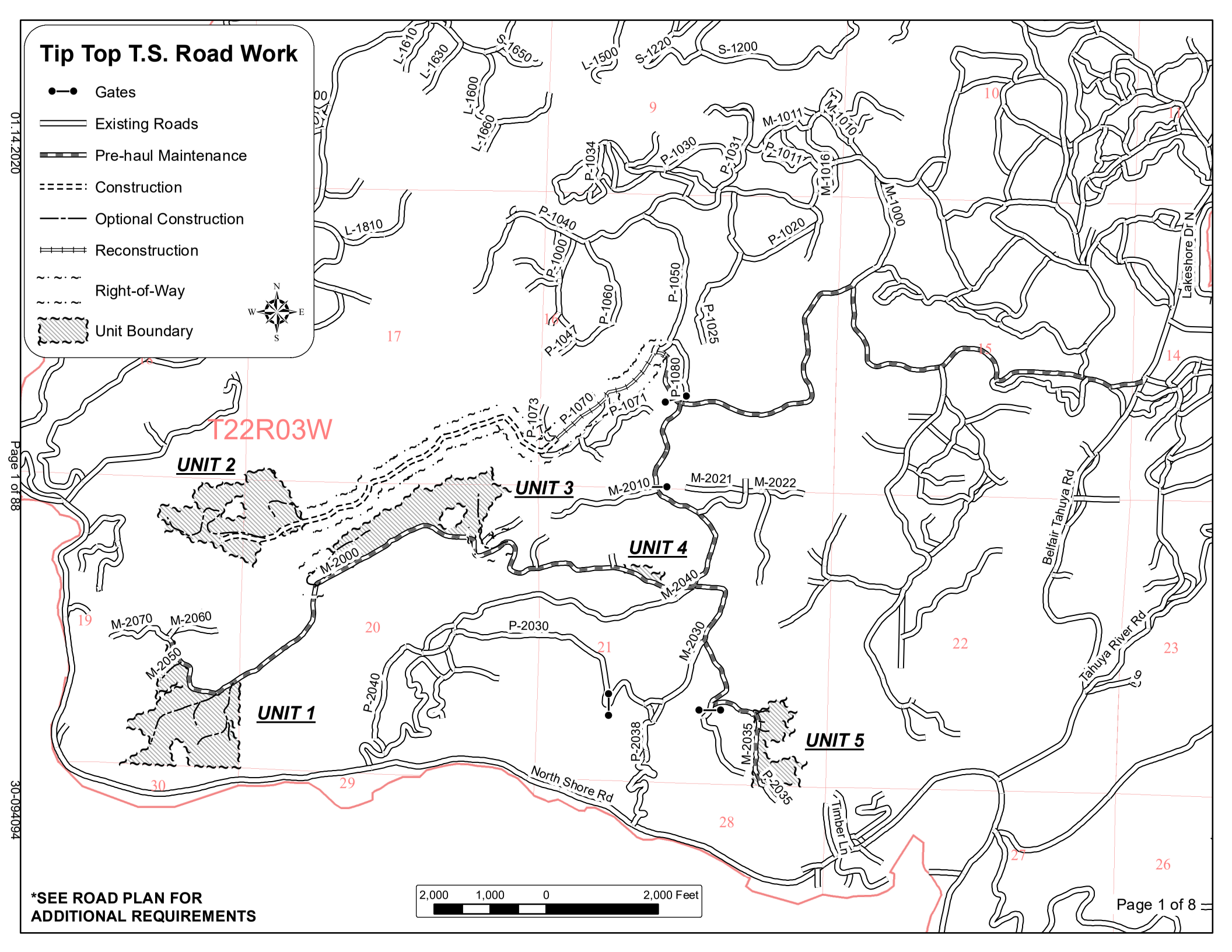
If the seller fails to notify the buyer about the continuing forest land obligation, the seller must pay the buyer's costs related to continuing forest land obligations, including all legal costs and reasonable attorneys' fees incurred by the buyer in enforcing the continuing forest land obligation against the seller.

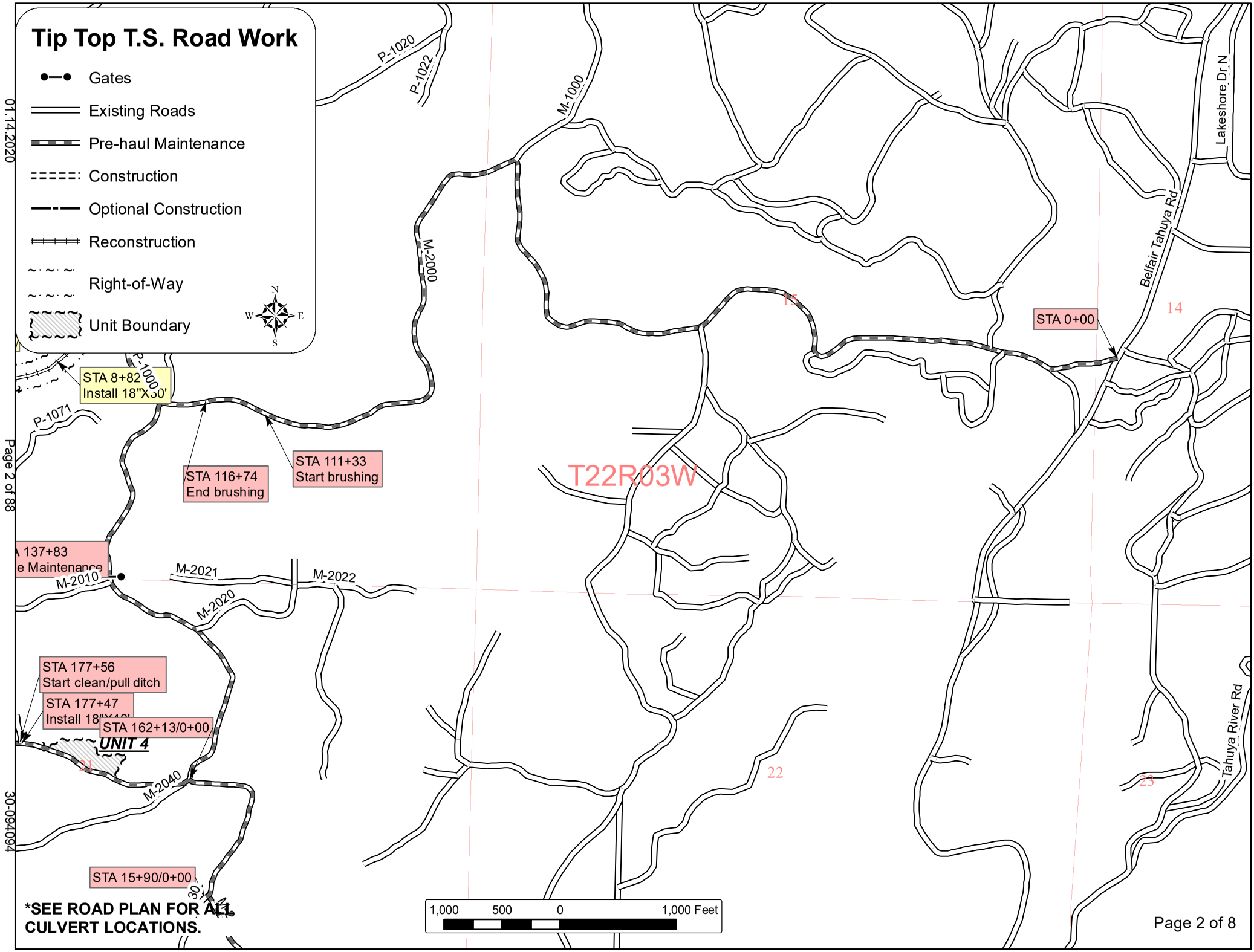
Failure by the seller to send the required notice to the DNR at the time of sale will be prima facie evidence in an action by the buyer against the seller for costs related to the continuing forest land obligation prior to sale.

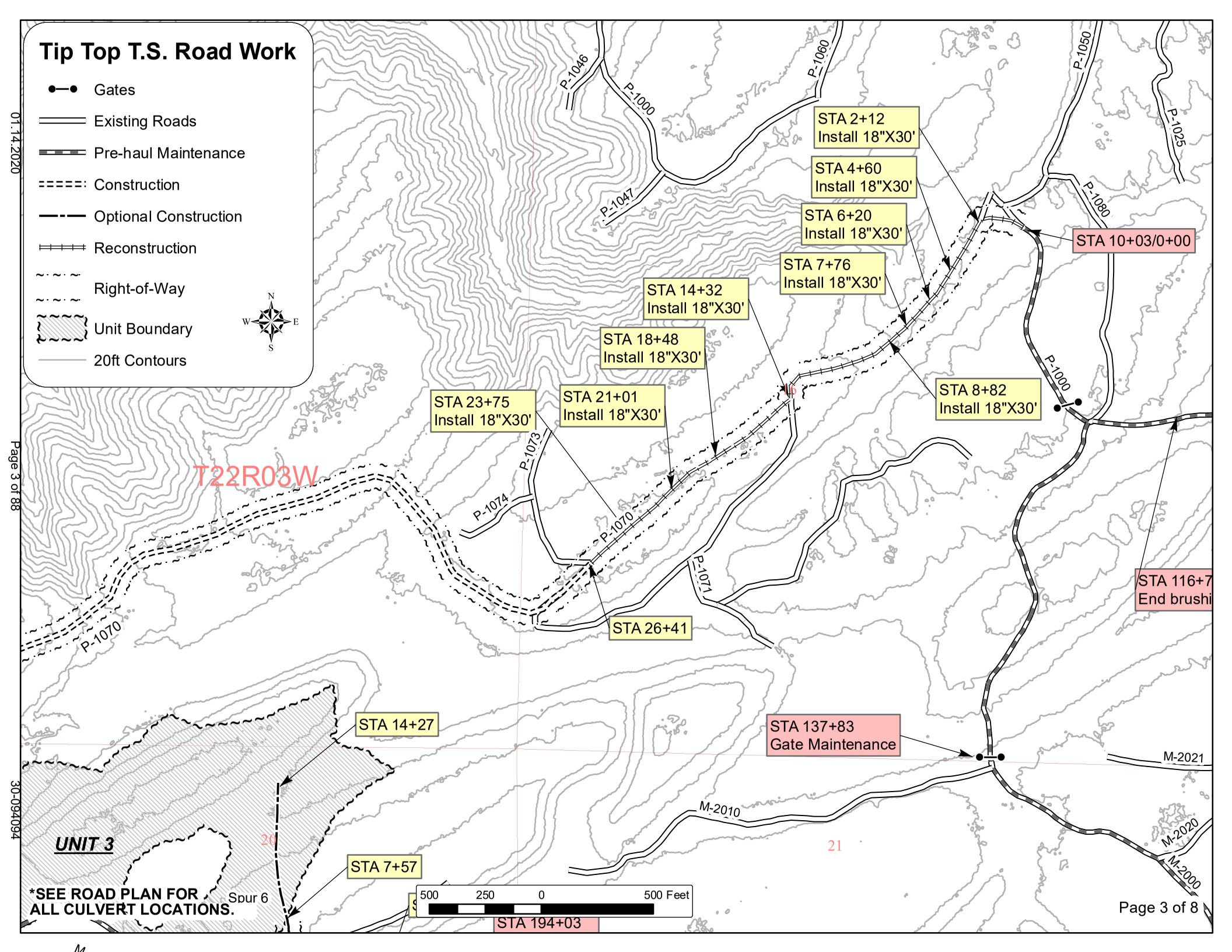
DNR affidavit of mailing:

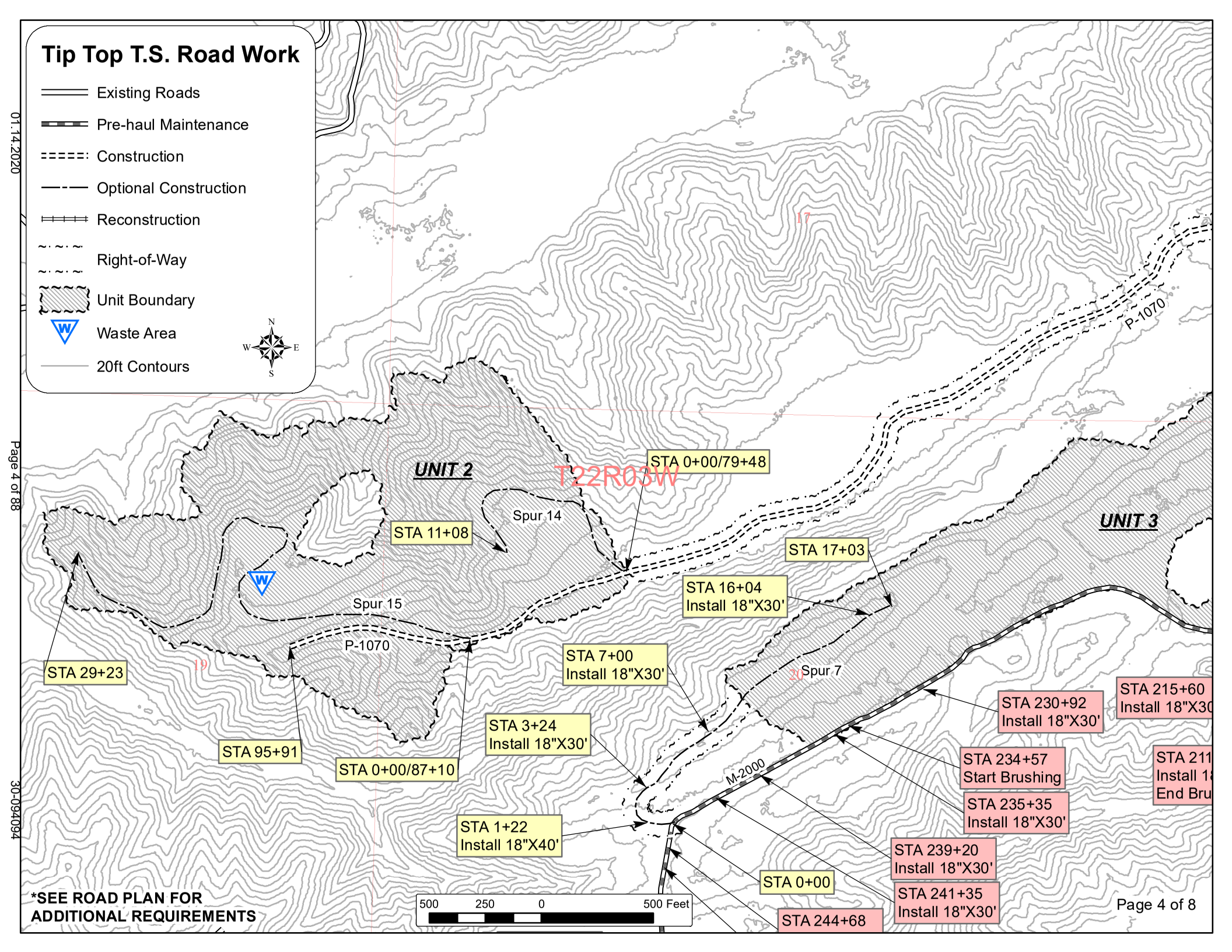
On this day 1/3/2019, I placed in the United States mail at Enumclaw, WA,
(date mm/dd/yyyy) (post office location)
postage paid, a true and accurate copy of this document. Notice of Decision FPA #2420714

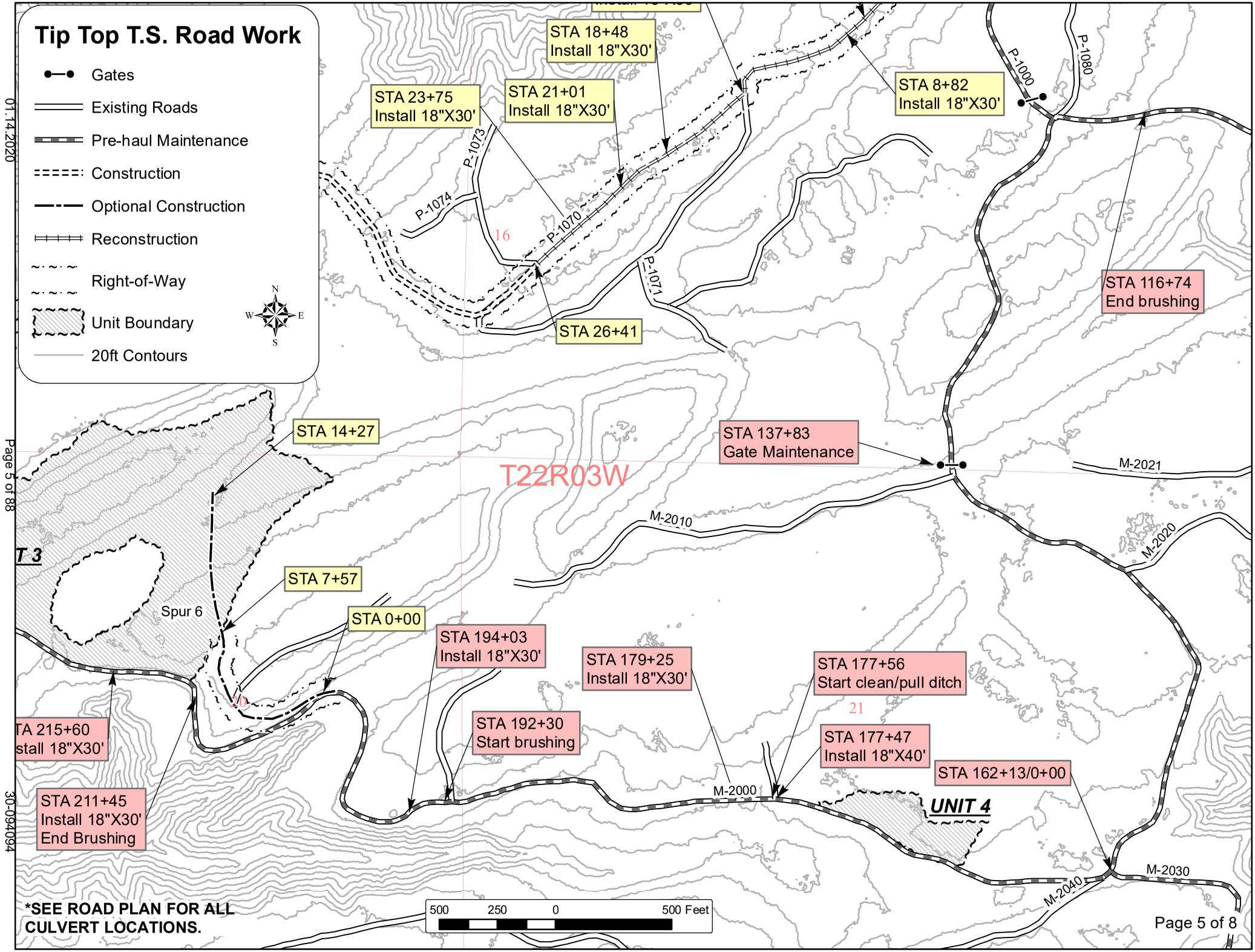
Meredith Dessens _____
(Printed name) (Signature)

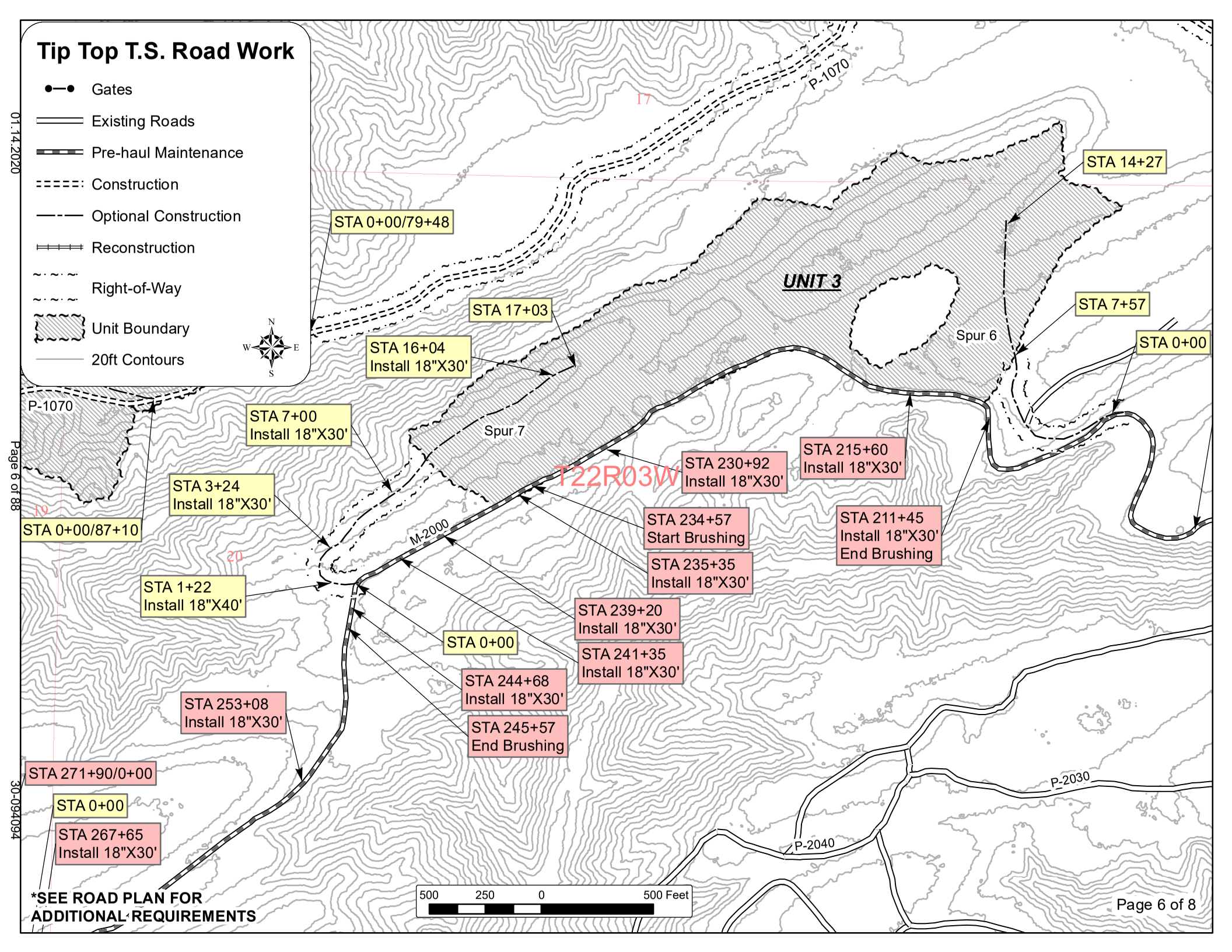

Tip Top T.S. Road Work
Gates
Existing Roads
Pre-haul Maintenance
Construction
Optional Construction
Reconstruction
Right-of-Way
Unit Boundary
N
W
E
S
01.14.2020
Page 1 of 88
30-094094
T22R03W
UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
L-1610
L-1630
S-1650
L-1600
L-1660
L-1500
S-1220
S-1200
L-1810
P-1034
P-1030
P-1031
M-1011
M-1010
P-1011
M-1016
M-1000
P-1020
P-1040
P-1000
P-1060
P-1050
P-1025
P-1047
P-1080
P-1073
P-1070
P-1071
M-2010
M-2021
M-2022
M-2000
M-2040
M-2070
M-2060
M-2050
P-2030
M-2030
P-2040
P-2038
M-2035
P-2035
North Shore Rd
Timber Ln
Belfair Tahuya Rd
Tahuya River Rd
Lakeshore Dr N
*SEE ROAD PLAN FOR ADDITIONAL REQUIREMENTS
2,000 1,000 0 2,000 Feet
Page 1 of 8

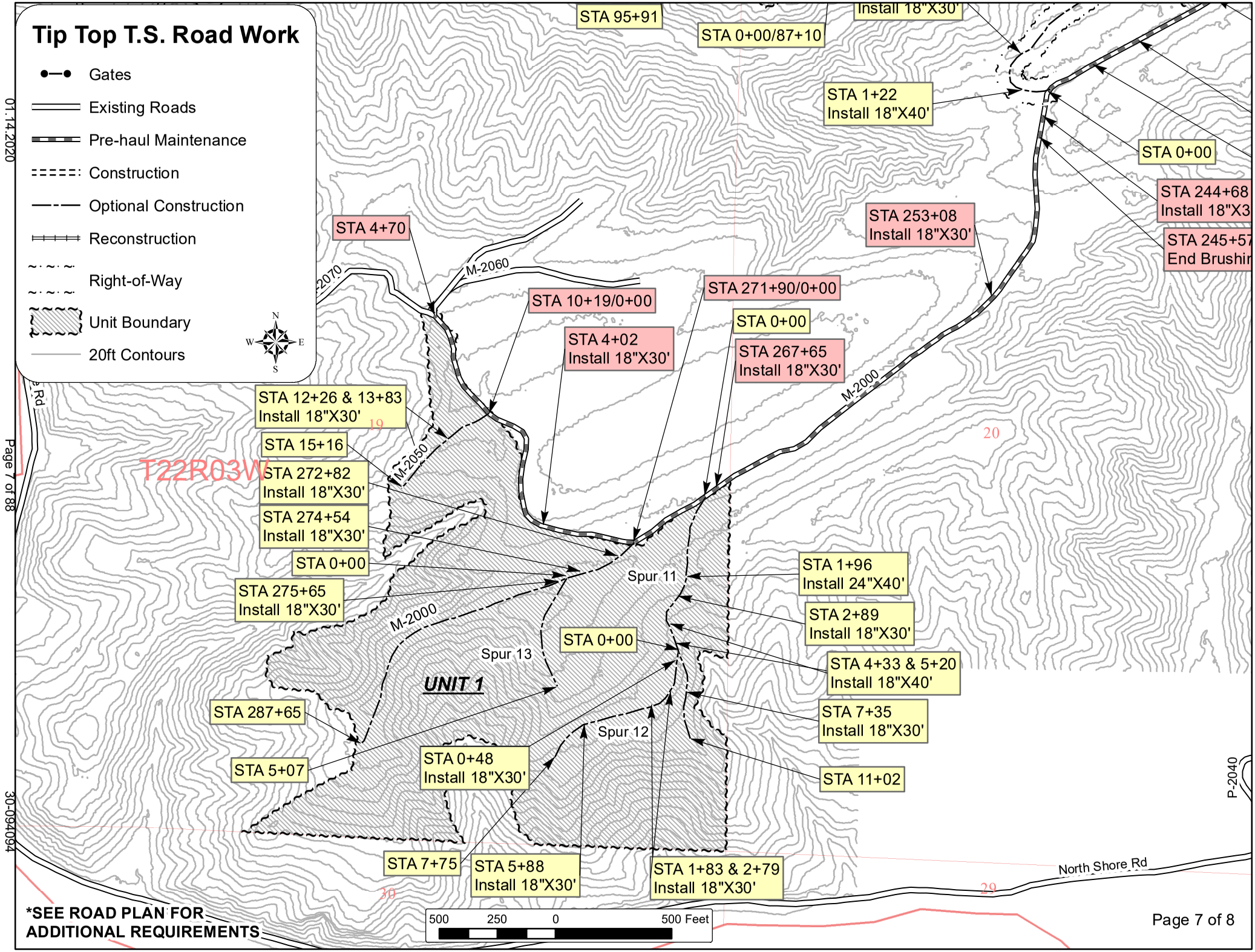

Tip Top T.S. Road Work
Gates
Existing Roads
Pre-haul Maintenance
Construction
Optional Construction
Reconstruction
Right-of-Way
Unit Boundary
N
W
E
S
P-1020
P-1022
M-1000
M-2000
Lakeshore Dr N
Belfair Tahuya Rd
STA 0+00
STA 8+82
Install 18"X30'
P-1000
P-1071
STA 116+74
End brushing
STA 111+33
Start brushing
T22R03W
137+83
e Maintenance
M-2010
M-2021
M-2022
M-2020
STA 177+56
Start clean/pull ditch
STA 177+47
Install 18"X
STA 162+13/0+00
UNIT 4
M-2040
STA 15+90/0+00
*SEE ROAD PLAN FOR ALL CULVERT LOCATIONS.
1,000 500 0 1,000 Feet
Tahuya River Rd
01.14.2020
Page 2 of 88
30-094094
Page 2 of 8

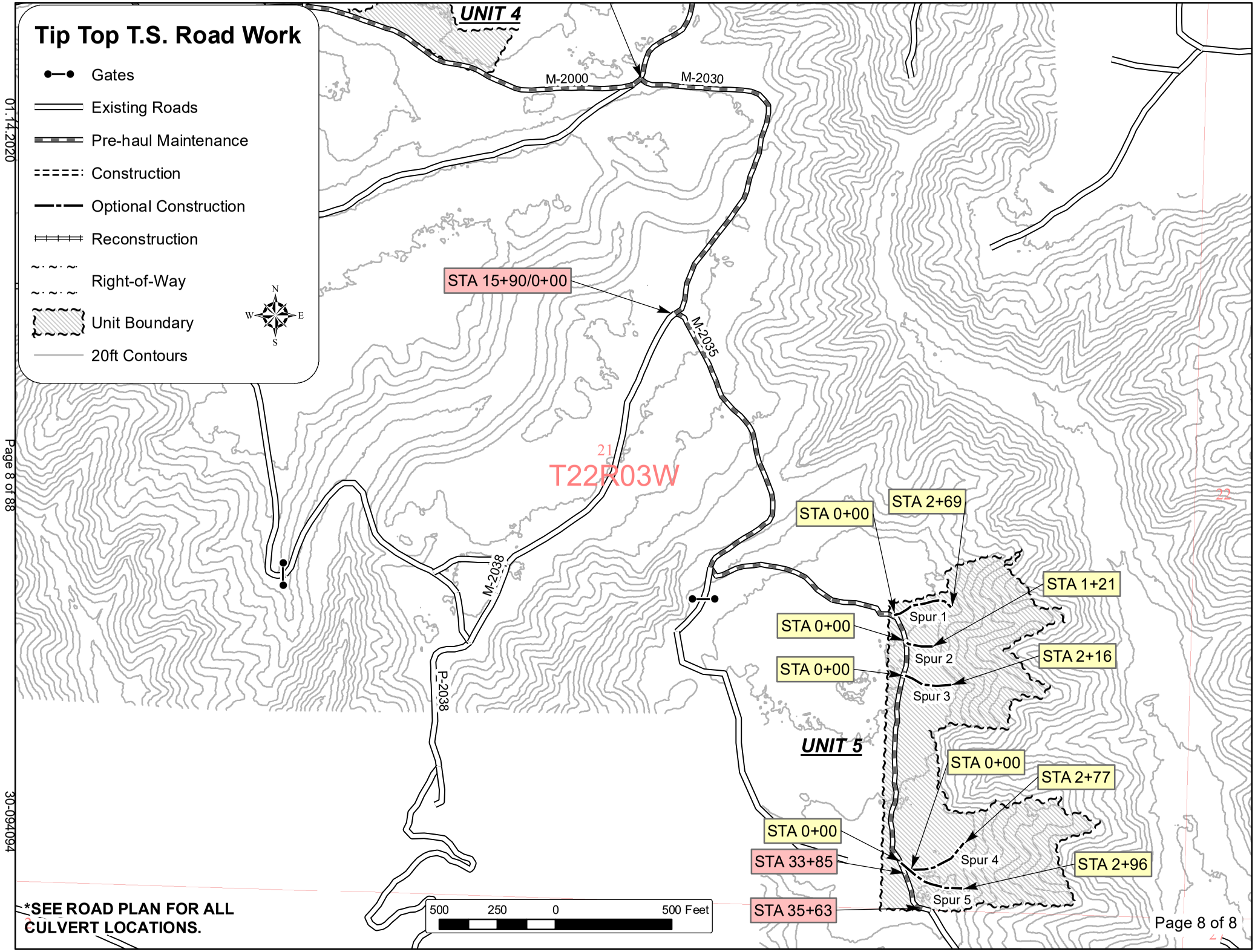

Tip Top T.S. Road Work
Gates
Existing Roads
Pre-haul Maintenance
Construction
Optional Construction
Reconstruction
Right-of-Way
Unit Boundary
20ft Contours
N
W
E
S
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P-1046
P-1000
P-1060
P-1050
P-1025
P-1047
P-1080
P-1073
P-1074
P-1070
P-1071
STA 2+12
Install 18"X30'
STA 4+60
Install 18"X30'
STA 6+20
Install 18"X30'
STA 7+76
Install 18"X30'
STA 8+82
Install 18"X30'
STA 10+03/0+00
STA 14+32
Install 18"X30'
STA 18+48
Install 18"X30'
STA 21+01
Install 18"X30'
STA 23+75
Install 18"X30'
STA 26+41
STA 116+7
End brushi
T22R03W
STA 14+27
STA 137+83
Gate Maintenance
M-2021
M-2010
M-2020
M-2000
UNIT 3
20
21
STA 7+57
Spur 6
*SEE ROAD PLAN FOR
ALL CULVERT LOCATIONS.
500 250 0 500 Feet
STA 194+03
Page 3 of 8


Tip Top T.S. Road Work
Existing Roads
Pre-haul Maintenance
Construction
Optional Construction
Reconstruction
Right-of-Way
Unit Boundary
Waste Area
20ft Contours
N
W
E
S
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UNIT 2
T22R03W
UNIT 3
STA 0+00/79+48
STA 11+08
Spur 14
STA 17+03
STA 16+04
Install 18"X30'
Spur 15
P-1070
STA 29+23
19
STA 7+00
Install 18"X30'
20
Spur 7
STA 230+92
Install 18"X30'
STA 215+60
Install 18"X30
STA 95+91
STA 0+00/87+10
STA 3+24
Install 18"X30'
M-2000
STA 234+57
Start Brushing
STA 235+35
Install 18"X30'
STA 211
Install 18
End Bru
STA 1+22
Install 18"X40'
STA 239+20
Install 18"X30'
STA 0+00
STA 241+35
Install 18"X30'
STA 244+68
*SEE ROAD PLAN FOR
ADDITIONAL REQUIREMENTS
500
250
0
500 Feet
Page 4 of 8


Tip Top T.S. Road Work
Gates
Existing Roads
Pre-haul Maintenance
Construction
Optional Construction
Reconstruction
Right-of-Way
Unit Boundary
20ft Contours
N
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E
S
01.14.2020
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STA 18+48
Install 18"X30'
STA 23+75
Install 18"X30'
STA 21+01
Install 18"X30'
STA 8+82
Install 18"X30'
P-1000
P-1080
P-1073
P-1074
P-1070
P-1071
16
STA 26+41
STA 116+74
End brushing
STA 14+27
STA 137+83
Gate Maintenance
T22R03W
M-2021
M-2010
M-2020
T 3
Spur 6
STA 7+57
STA 0+00
STA 194+03
Install 18"X30'
STA 179+25
Install 18"X30'
STA 177+56
Start clean/pull ditch
20
21
TA 215+60
stall 18"X30'
STA 192+30
Start brushing
STA 177+47
Install 18"X40'
STA 162+13/0+00
M-2000
UNIT 4
STA 211+45
Install 18"X30'
End Brushing
M-2030
M-2040
*SEE ROAD PLAN FOR ALL
CULVERT LOCATIONS.
500 250 0 500 Feet
Page 5 of 8


Tip Top T.S. Road Work
Gates
Existing Roads
Pre-haul Maintenance
Construction
Optional Construction
Reconstruction
Right-of-Way
Unit Boundary
20ft Contours
N
W
E
S
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P-1070
P-1070
17
19
20
T22R03W
UNIT 3
Spur 6
Spur 7
M-2000
P-2030
P-2040
STA 0+00/79+48
STA 14+27
STA 17+03
STA 16+04
Install 18"X30'
STA 7+57
STA 0+00
STA 7+00
Install 18"X30'
STA 3+24
Install 18"X30'
STA 0+00/87+10
STA 230+92
Install 18"X30'
STA 215+60
Install 18"X30'
STA 234+57
Start Brushing
STA 211+45
Install 18"X30'
End Brushing
STA 235+35
Install 18"X30'
STA 1+22
Install 18"X40'
STA 239+20
Install 18"X30'
STA 0+00
STA 241+35
Install 18"X30'
STA 244+68
Install 18"X30'
STA 253+08
Install 18"X30'
STA 245+57
End Brushing
STA 271+90/0+00
STA 0+00
STA 267+65
Install 18"X30'
*SEE ROAD PLAN FOR
ADDITIONAL REQUIREMENTS
500 250 0 500 Feet
Page 6 of 8


Tip Top T.S. Road Work
Gates
Existing Roads
Pre-haul Maintenance
Construction
Optional Construction
Reconstruction
Right-of-Way
Unit Boundary
20ft Contours
N
W
E
S
01.14.2020
30-094094
Page 7 of 88
STA 95+91
STA 0+00/87+10
Install 18"X30'
STA 1+22
Install 18"X40'
STA 0+00
STA 244+68
Install 18"X3
STA 245+57
End Brushir
STA 253+08
Install 18"X30'
STA 4+70
M-2070
M-2060
STA 10+19/0+00
STA 271+90/0+00
STA 0+00
STA 4+02
Install 18"X30'
STA 267+65
Install 18"X30'
M-2000
STA 12+26 & 13+83
Install 18"X30'
19
20
STA 15+16
M-2050
T22R03W
STA 272+82
Install 18"X30'
STA 274+54
Install 18"X30'
STA 0+00
STA 275+65
Install 18"X30'
Spur 11
STA 1+96
Install 24"X40'
STA 2+89
Install 18"X30'
M-2000
STA 0+00
Spur 13
STA 4+33 & 5+20
Install 18"X40'
UNIT 1
STA 287+65
STA 7+35
Install 18"X30'
Spur 12
STA 0+48
Install 18"X30'
STA 5+07
STA 11+02
P-2040
STA 7+75
STA 5+88
Install 18"X30'
STA 1+83 & 2+79
Install 18"X30'
North Shore Rd
30
29
500 250 0 500 Feet
*SEE ROAD PLAN FOR
ADDITIONAL REQUIREMENTS
Page 7 of 8


Tip Top T.S. Road Work
Gates
Existing Roads
Pre-haul Maintenance
Construction
Optional Construction
Reconstruction
Right-of-Way
Unit Boundary
20ft Contours
N
W
E
S
UNIT 4
M-2000
M-2030
STA 15+90/0+00
M-2035
21
T22R03W
22
M-2038
P-2038
STA 0+00
STA 2+69
STA 1+21
Spur 1
STA 0+00
Spur 2
STA 2+16
STA 0+00
Spur 3
UNIT 5
STA 0+00
STA 2+77
STA 0+00
STA 33+85
Spur 4
STA 2+96
Spur 5
STA 35+63
500 250 0 500 Feet
*SEE ROAD PLAN FOR ALL CULVERT LOCATIONS.
Page 8 of 8
01.14.2020
Page 8 of 88
30-094094
North Sho

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

TIP TOP TIMBER SALE ROAD PLAN
MASON COUNTY
HOOD CANAL DISTRICT
SOUTH PUGET SOUND REGION

AGREEMENT NO.: 30-094094 STAFF ENGINEER: Heymann
DATE: 8/30/18

SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

Clauses in this road plan apply to all road related work, including landings and rock source development, unless otherwise noted.

0-2 REQUIRED ROADS

The specified work on the following roads is required.

Road	Stations	Type
M-2000	0+00 to 271+90	Pre-haul Maintenance
M-2030	0+00 to 15+90	Pre-haul Maintenance
M-2035	0+00 to 33+85	Pre-haul Maintenance
M-2035	33+85 to 35+63	Abandonment
M-2050	0+00 to 10+19	Pre-haul Maintenance
M-2060	0+00 to 4+70	Pre-haul Maintenance
P-1000	0+00 to 10+03	Pre-haul Maintenance
P-1070	0+00 to 26+41	Reconstruction
P-1070	26+41 to 95+91	Construction

0-3 OPTIONAL ROADS

The specified work on the following roads is not required. Any optional roads built by the Purchaser must meet all the specifications in the road plan.

Road	Stations	Type
M-2000	271+90 to 287+65	Construction
M-2050	10+19 to 15+16	Construction
Spur 1	0+00 to 2+69	Construction
Spur 2	0+00 to 1+21	Construction
Spur 3	0+00 to 2+16	Construction
Spur 4	0+00 to 2+77	Construction
Spur 5	0+00 to 2+96	Construction
Spur 6	0+00 to 14+27	Construction
Spur 7	0+00 to 17+03	Construction
Spur 11	0+00 to 11+02	Construction

Spur 12	0+00 to 7+75	Construction
Spur 13	0+00 to 5+07	Construction
Spur 14	0+00 to 11+18	Construction
Spur 15	0+00 to 29+23	Construction

0-4 CONSTRUCTION

This project includes, but is not limited to the following construction requirements:

clearing;
grubbing;
right-of-way debris disposal;
excavation and/or embankment to subgrade;
landing construction;
acquisition and installation of drainage structures;
acquisition, manufacture, and application of rock;
road abandonment.

0-5 RECONSTRUCTION

This project includes, but is not limited to the following reconstruction requirements:

brushing right-of-way;
clearing existing excavation and embankment slopes;
grubbing existing excavation and embankment slopes;
right-of-way debris disposal;
landing construction;
pulling ditches;
cleaning ditches;
constructing ditches;
acquisition and installation of additional drainage structures;
realigning road segments;
widening road segments;
grading and shaping existing road surface and turnouts;
constructing additional turnouts;
compaction of road surface;
acquisition, manufacture, and application of rock; including existing turnouts.

0-6 PRE-HAUL MAINTENANCE

This project includes, but is not limited to the following pre-haul maintenance requirements:

brushing right-of-way;
removing fallen right-of-way debris;
pulling ditches;
cleaning ditches;
constructing catch basin and headwall;
cleaning culvert inlets and outlets;
acquisition and installation of additional drainage structures;
removing cutslope slumps;
grading and shaping existing road surface and turnouts;
removing berms from road shoulders;
gate maintenance (painting & lock open device).

0-7 POST-HAUL MAINTENANCE

This project includes post-haul road maintenance listed in Clause 9-5 POST-HAUL MAINTENANCE.

0-10 ABANDONMENT

This project includes abandonment listed in Clause 9-21 ROAD ABANDONMENT.

0-12 DEVELOP ROCK SOURCE

Purchaser may develop an existing rock source. Rock source development will involve clearind and grubbing. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

If the Purchaser desires a change from this road plan including, but not limited to, relocation, extension, change in design, or adding roads; a revised road plan must be submitted in writing to the Contract Administrator for consideration. Before work begins, Purchaser shall obtain approval from the State for any submitted plan that changes the scope of work or environmental condition from the original road plan.

1-2 UNFORESEEN CONDITIONS

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to unforeseen conditions, or Purchaser's choice of construction season or techniques will be at the Purchaser's expense. Unforeseen conditions include, but are not limited to, solid subsurface rock, subsurface springs, saturated ground, and unstable soils.

1-3 ROAD DIMENSIONS

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan, unless controlled by construction stakes or design data (plan, profile, and cross-sections).

1-4 ROAD TOLERANCES

Purchaser shall perform road work within the tolerances listed below. The tolerance class for each road is listed on the TYPICAL SECTION SHEET.

Tolerance Class	A	B	C
Road and Subgrade Width (feet)	+1.5	+1.5	+2.0
Subgrade Elevation (feet +/-)	0.5	1.0	2.0
Centerline alignment (feet lt./rt.)	1.0	1.5	3.0

1-6 ORDER OF PRECEDENCE

Any conflict or inconsistency in the road plan will be resolved by giving the documents precedence in the following order:

1. Addenda.
2. Designs or Plans. On designs and plans, figured dimensions shall take precedence over scaled dimensions.

3. Road Plan Clauses.
4. Typical Section Sheet.
5. Standard Lists.
6. Standard Details.
7. Road Work maps.

In case of any ambiguity or dispute over interpreting the road plan, the Contract Administrator's or designee's decision will be final.

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

Purchaser shall repair or replace all materials, roadway infrastructure, and road components damaged during road work or operation activities. The Contract Administrator will direct repairs and replacements. Repairs to structural materials must be made in accordance with the manufacturer's recommendation, and may not begin without written approval from the Contract Administrator.

1-15 ROAD MARKING

Purchaser shall perform road work in accordance with the state's marked location.

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work in accordance with the construction stakes and/or reference points set in the field for grade and alignment. Reconstruction of existing road grades must conform to the original location except where construction staked or designed.

1-18 REFERENCE POINT DAMAGE

Purchaser shall reset reference points (RPs) that were moved or damaged at any time during construction to their original locations. Excavation and embankment may not proceed on road segments controlled by said RPs until Purchaser resets all moved or damaged RPs.

1-19 OVERWINTER REQUIREMENTS

If left overwinter the portions of the following road(s) where the road grade slopes toward the culvert location listed below, Purchaser shall cover the entire road prism with straw and install drivable waterbars at a maximum spacing of 100 feet.

Road	Stations
Spur 15	21+94

1-21 HAUL APPROVAL

Purchaser shall not use roads under this road plan for timber hauling other than timber cut on the right-of-way, without written approval from the Contract Administrator.

1-23 ROAD WORK PHASE APPROVAL

Purchaser shall obtain written approval from the Contract Administrator upon completion of each of the following phases of road work:

- Drainage installation & Subgrade compaction
- Rock compaction

1-25 ACTIVITY TIMING RESTRICTION

The operation of road construction equipment is not allowed weekdays from 7 p.m. to 7 a.m, nor weekends or state recognized holidays, unless authorized in writing by the Contract Administrator. Restrictions for hauling forest products are specified in Contract Clause H-140 SPECIAL HARVEST REQUIREMENTS.

1-29 SEDIMENT RESTRICTION

Purchaser shall not allow silt-bearing runoff to enter any streams.

1-30 CLOSURE TO PREVENT DAMAGE

In accordance with Contract Clause G-220 STATE SUSPENDS OPERATION, the Contract Administrator will suspend road work or hauling right-of-way timber, forest products, or rock under the following conditions:

- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

Operations must stop unless authority to continue working or hauling is granted in writing by the Contract Administrator. In the event that surface or base stability problems persist, Purchaser shall cease operations, or perform corrective maintenance or repairs, subject to specifications within this road plan. Before and during any suspension, Purchaser shall protect the work from damage or deterioration.

1-33 SNOW PLOWING RESTRICTION

Snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the Contact Administrator upon request. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

Purchaser shall immediately remove any mud, dirt, rock, or other material tracked or spilled on to county roads and state highways.

If additional damage to the surface, signs, guardrails, etc. occurs then the damage will be repaired, at the Purchaser's expense, as directed by the Contract Administrator when authorized by the county or WSDOT.

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

Purchaser shall maintain all roads used under this contract in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS for the entire term of this contract. Maintenance is required even during periods of inactivity.

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

Purchaser shall perform maintenance on roads listed in Contract Clause C-050 PURCHASER ROAD MAINTENANCE AND REPAIR in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following road(s), Purchaser shall use a grader to shape the existing surface before rock application and/or timber haul. Purchaser shall accomplish all grading using a motor grader with a minimum of 175 horsepower.

Road	Stations
M-2000	0+00 to 271+90
P-1000	0+00 to 10+03
M-2030	0+00 to 15+90
M-2035	0+00 to 33+85
M-2050	0+00 to 10+19
M-2060	0+00 to 4+70

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following road(s), Purchaser shall clean ditches, headwalls, and catchbasins. Work must be completed before grading and/or timber haul.

Road	Stations
P-1000	0+00 to 10+03
M-2000	177+56 to 271+90
M-2050	0+00 to 4+02
M-2060	0+00 to 4+70

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 5 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by manual or mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

Road	Stations
M-2000	111+33 to 116+74
M-2000	192+30 to 211+45
M-2000	234+57 to 245+57

3-5 CLEARING

Purchaser shall fall all vegetative material larger than 2 inches DBH or over 5 feet high between the marked right-of-way boundaries or if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET. Clearing must be completed before starting excavation and embankment.

3-8 PROHIBITED DECKING AREAS

Purchaser shall not deck right-of-way timber in the following areas:

- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 50%.
- Against standing trees.

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Purchaser shall remove stumps using a hydraulic mounted excavator unless authorized in writing by the Contract Administrator. Grubbing must be completed before starting excavation and embankment.

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clause G-010 PRODUCTS SOLD AND SALE AREA or G-011 RIGHT TO REMOVE FOREST PRODUCTS AND CONTRACT AREA, that is larger than one cubic foot in volume within the grubbing limits as shown on the TYPICAL SECTION SHEET.

3-21 DISPOSAL COMPLETION

Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris, before rock application and/or timber haul.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 55%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

Purchaser shall not bury organic debris unless otherwise stated in this plan.

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris in natural openings. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

SECTION 4 – EXCAVATION

4-1 EXCAVATOR CONSTRUCTION

Purchaser shall use a track mounted hydraulic excavator for construction work involving pioneering, clearing and grubbing, unless authorized in writing by the Contract Administrator.

4-2 PIONEERING

Pioneering may not extend past construction that will be completed during the current construction season. In addition, the following actions must be taken as pioneering progresses:

- Drainage must be provided on all uncompleted construction.
- Road pioneering operations may not undercut the final cut slope or restrict drainage.
- Culverts at live stream crossings must be installed during pioneering operations prior to embankment.

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment except as designed:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.

4-5 CUT SLOPE RATIO

Purchaser shall construct excavation slopes no steeper than shown on the following table, unless construction staked or designed:

Material Type	Excavation Slope Ratio	Excavation Slope Percent
Common Earth (on side slopes up to 55%)	1:1	100
Common Earth (56% to 70% side slopes)	¾:1	133
Common Earth (on slopes over 70%)	½:1	200
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

4-6 EMBANKMENT SLOPE RATIO

Purchaser shall construct embankment slopes no steeper than shown on the following table, unless construction staked or designed:

Material Type	Embankment Slope Ratio	Embankment Slope Percent
Sandy Soils	2:1	50
Common Earth and Rounded Gravel	1½:1	67
Angular Rock	1¼:1	80

4-7 SHAPING CUT AND FILL SLOPE

Purchaser shall construct excavation and embankment slopes to a uniform line and left rough for easier revegetation.

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

- 6 feet for curves of 50 to 79 feet radius.
- 4 feet for curves of 80 to 100 feet radius.

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

- 2 feet for embankment heights at centerline of 2 to 6 feet.
- 4 feet for embankment heights at centerline of greater than 6 feet.

4-12 FULL BENCH CONSTRUCTION

Where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width except as construction staked or designed.

4-15 SIDECAST RETENTION

On the following road, sidecast material may be constructed to prevent loss of material down slope. Retention by log cribbing and/or end-haul construction are two approved methods. Waste areas identified in Clause 4-37 WASTE AREA LOCATION. Other proposed methods shall be submitted in writing to the Contract Administrator for approval prior to construction. Sidecast material shall be compacted by the bucket on the hydraulic excavator in two foot or shallower lifts. All sidecast material shall be removed as specified in Clause 9-23.

Roads	Stations
Spur 15	16+46 to 25+64

4-21 TURNOUTS

Purchaser shall construct turnouts intervisible with a maximum distance of 1,000 feet between turnouts unless otherwise shown on drawings. Locations may be adjusted to fit the final subgrade alignment and sight distances. Minimum dimensions are shown on the TYPICAL SECTION SHEET.

4-22 TURNAROUNDS

Optional Turnarounds must be no larger than 30 feet long and 30 feet wide.

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

Purchaser shall construct or reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Ditches must be constructed concurrently with construction of the subgrade.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as as needed and as directed by the Contract Administrator. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio.

4-35 WASTE MATERIAL DEFINITION

Waste material is defined as all dirt, rock, mud, or related material that is extraneous or unsuitable for construction material. Waste material, as used in Section 4 EXCAVATION, is not organic debris.

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in the listed designated areas. Additional waste areas may also be identified or approved by the Contract Administrator. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

Road	Waste Area Location	Comments
Spur 15	Station 12+00	If end-haul is used for Spur 15 stations 16+46 to 25+64

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- Within a wetland management zone.
- On side slopes steeper than 55%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

4-55 ROAD SHAPING

Purchaser shall shape the subgrade and surface as shown on the TYPICAL SECTION SHEET. The subgrade and surface shape must ensure runoff in an even, un-concentrated manner, and must be uniform, firm, and rut-free. Purchaser shall accomplish all shaping using a motor grader with a minimum of 175 horsepower.

4-60 FILL COMPACTION

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST by routing equipment over the entire width of each lift. Waste material may be placed by end-dumping or sidecasting until sufficiently wide enough to support the equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed and/or reconstructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width except ditch. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before rock application and/or timber haul.

SECTION 5 – DRAINAGE

5-1 REMOVAL OF SHOULDER BERMS

Purchaser shall remove berms from road. The construction of ditchouts is required where ponding could result from the effects of sidecast debris.

5-5 CULVERTS

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must be new material and meet the specifications in Clauses 10-15 through 10-24.

5-7 USED CULVERT MATERIAL

On the following road(s), Purchaser may install used culverts. All other culverts must have new culverts installed.

Road	Stations
M-2050	10+19 to 15+16
Spur 6	0+00 to 14+27
Spur 7	0+00 to 17+03
Spur 11	0+00 to 9+26
Spur 12	0+00 to 7+75
Spur 14	0+00 to 11+18
Spur 15	0+00 to 29+23

5-12 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the CULVERT AND DRAINAGE LIST that are not installed will become the property of the state. Purchaser shall stockpile materials as directed by the Contract Administrator.

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer's recommendations.

5-17 CROSS DRAIN SKEW AND SLOPE

Cross drains, on road grades in excess of 3%, must be skewed at least 30 degrees from perpendicular to the road centerline, except where the cross drain is at the low point in the road culverts will not be skewed. Cross drain culverts must be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 10%.

5-18 CULVERT DEPTH OF COVER

All culverts must be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point.

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts, except for temporary culverts. Energy dissipater installation is subject to approval by the Contract Administrator.

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT LIST. Placement must with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed.

5-25 CATCH BASINS

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 4 feet long.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts, except for temporary culverts. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed.

5-33 NATIVE SURFACE ROADS

If overwintered, native surface roads must be waterbarred by November 1. Purchaser shall construct waterbars according to the attached DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical distance of no more than 10 feet between waterbars or between natural drainage paths, and with a maximum spacing of 300 feet.

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following source(s) on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock source(s), a joint operating plan must be developed. All parties shall follow this plan.

Source	Location	Rock Type
Sandhill Pit	NW, NE & NE, NW Sec 24 T23N R02W	Pit Run

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the ROCK LIST may be obtained from any commercial source at the Purchaser's expense.

Rock Type
Quarry Spalls

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

Purchaser shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the state. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator.

Source	Rock Type
Sandhill Pit	Pit Run

6-12 ROCK SOURCE SPECIFICATIONS

Rock sources must be in accordance with the following specifications, unless otherwise specified in the ROCK SOURCE DEVELOPMENT PLAN:

- Pit walls may not be undermined or over steepened. The maximum slope of the walls must be consistent with recognized engineering standards for the type of material being excavated in accordance with the following table:

Material	Maximum Slope Ratio (Horiz. :Vert.)	Maximum Slope Percent
Sand	2:1	50
Gravel	1.5:1	67
Common Earth	1:1	100
Fractured Rock	0.5:1	200
Solid Rock	0:1	vertical

- Pit walls must be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches must be a minimum of 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
- All operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.

6-23 ROCK GRADATION TYPES

Purchaser shall provide and/or manufacture rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

6-41 PIT RUN ROCK

No more than 50 percent of the rock may be larger than 6 inches in any dimension and no rock may be larger than 8 inches in any dimension. Pit Run rock may not contain more than 5 percent by weight of organic debris, dirt, and trash. Rock may require processing to meet this specification.

6-43 QUARRY SPALLS

% Passing 8" square sieve	100%
% Passing 3" square sieve	40% maximum
% Passing 3/4" square sieve	10% maximum

Rock may not contain more than 5 percent vegetative debris or trash. All percentages are by weight.

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths, are defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are compacted yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for subgrade, drainage installation and ditch construction before rock application.

6-71 ROCK APPLICATION

Purchaser shall apply rock in accordance with the specifications and quantities shown on the ROCK LIST. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width.

SECTION 7 – STRUCTURES

7-70 GATE CLOSURE

Purchaser shall keep gates closed and locked except during periods of haul. All gates that remain open during haul must be locked or securely fastened in the open position. All gates must be closed at termination of use.

7-75 GATE MAINTENANCE

Purchaser shall conduct gate maintenance as listed.

1. Clean Gate and lock box
   Each gate and lock box to be thoroughly scraped, wire brushed and cleaned. Remove all rust and loose or peeling material from previous-painted surfaces. All surfaces must be clean, dry, free of mildew, grease, chalk, soap film, sanding dust or other contaminates.
2. Prevent Rust
   Use a suitable anti-corrosive primer for all bare surfaces.
3. Paint
   Paint color shall be Rodda Safety Yellow.
4. Installation of lock open device

The lock open device shall consist of a three inch diameter schedule 40 steel pipe painted Rodda Safety Yellow. The steel pipe shall be set in 0.5 cubic yards of concrete at a minimum depth of two feet below grade and a minimum height of four feet above grade. A 3/8 hot dip galvanized Grade 30 proof coil chain shall be welded to pipe. The chain shall be long enough to lock the gate open. The welded chain and pipe joint shall be covered in two coats of zinc rich paint. If the Purchaser wishes to install an alternate design, detailed plans for the construction of the lock open device shall be submitted to the Contract Administrator, or their designee, for approval, in writing, before installation.

Road	Station	Requirements
M-2000	137+83	Clean, prime and paint gate and lock box.

SECTION 9 – POST-HAUL ROAD WORK

9-1 BARRICADES

Purchaser shall construct barricades in accordance with the BARRICADE DETAIL.

Road	Stations
M-2050	0+25
Spur 1	0+25
Spur 2	0+25
Spur 3	0+25
Spur 5	0+25
Spur 6	4+24
Spur 7	0+25
Spur 13	0+25
Spur 14	0+25
Spur 15	0+25

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

Culverts removed from roads become the property of the Purchaser and must be removed from state land.

9-5 POST-HAUL MAINTENANCE

Purchaser shall perform post-haul maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS and as specified below.

Road	Stations	Additional Requirements
M-2000	0+00 to 287+65	Grade
P-1000	0+00 to 10+03	Grade
P-1070	0+00 to 95+91	Grade
M-2030	0+00 to 15+90	Grade
M-2035	0+00 to 33+85	Grade and reinstall drivable waterbars (sta 5+72,6+75, 7+52, 8+18, 11+16, 12+83, 15+23 & 16+52)
M-2050	0+00 to 10+19	Grade

M-2060	0+00 to 4+70	Grade

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

9-21 ROAD ABANDONMENT

Purchaser shall abandon the following roads before the termination of this contract.

Road	Stations	TYPE
M-2035	33+85 to 35+63	Light
M-2050	10+19 to 15+16	Light
Spur 1	0+00 to 2+69	Light
Spur 2	0+00 to 1+21	Light
Spur 3	0+00 to 2+16	Light
Spur 4	0+00 to 2+77	Light
Spur 5	0+00 to 2+96	Light
Spur 6	4+24 to 14+27	Light
Spur 7	0+00 to 17+03	Light
Spur 11	0+00 to 11+02	Light
Spur 12	0+00 to 7+75	Light
Spur 13	0+00 to 5+07	Light
Spur 14	0+00 to 11+18	Light
Spur 15	0+00 to 16+87	Light
Spur 15	16+87 to 29+23	Medium

9-22 LIGHT ABANDONMENT

- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Remove culverts.
- Slope all trench walls and approach embankments no steeper than 1.5:1.
- Block roads with barricades in accordance with the attached BARRICADE DETAIL.
- Scatter woody debris onto abandoned road surfaces.

9-23 MEDIUM ABANDONMENT

- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 100 feet, or as marked in the field.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars must be outsloped to provide positive drainage. Outlets must be on stable locations.

- Remove culverts.
- Slope all trench walls and approach embankments no steeper than 1.5:1.
- Removing embankments, sidecast fill and waste material, and placing material on the roadbed against cutbanks.
- Block roads with barricades in accordance with the attached BARRICADE DETAIL.
- Scatter woody debris onto abandoned road surfaces.

SECTION 10 MATERIALS

10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culverts must be Type S – double walled with a corrugated exterior and smooth interior.

10-22 PLASTIC BAND

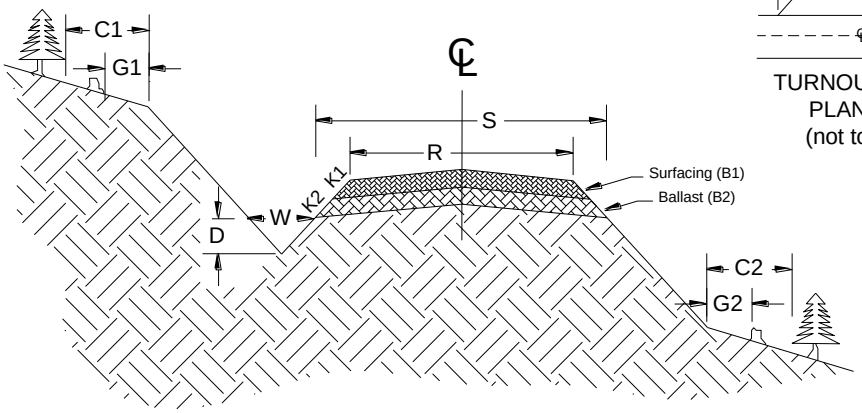
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used.

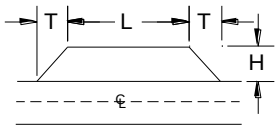
COMPACTION LIST

Road	From Station	To Station	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
P-1070 Spur 6 M-2000	0+00 0+00 271+90	95+91 4+24 287+65	Embankment Subgrade Rock Waste Culvert Install	12	Vibratory Smooth Drum	14,000	4	3

TYPICAL SECTION SHEET

ROAD CROSS-SECTION
(not to scale)





TURNOUT DETAIL
PLAN VIEW
(not to scale)

Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits (feet)		Cut Slope Ratio	Fill Slope Ratio
						Width (feet)	Depth (feet)							
				S	R	W	D		G1	G2	C1	C2	%	%
M-2000	0+00	162+13	C	24	20	2.5	1	4	0	0	0	0	100	67
M-2030	0+00	15+90	C	16	12	2.5	1	4	0	0	0	0	100	67
M-2035	0+00	33+85	C	16	12	2.5	1	4	0	0	0	0	100	67
M-2050	0+00	10+19	C	16	12	2.5	1	4	0	0	0	0	100	67
M-2050	10+19	15+16	C	16	12	2.5	1	4	5	5	7	7	100	67
M-2060	0+00	4+70	C	16	12	2.5	1	4	5	5	7	7	100	67
P-1000	0+00	10+03	C	16	12	2.5	1	4	5	5	7	7	100	67
P-1070	0+00	79+48	C	16	12	2.5	1	4	5	5	Tags	Tags	100	67
p-1070	79+48	95+91	C	16	12	2.5	1	4	5	5	7	7	100	67
Spur 1	0+00	2+69	C	16	12	2.5	1	4	0	0	0	0	100	67
Spur 2	0+00	1+21	C	16	12	2.5	1	4	0	0	0	0	100	67
Spur 3	0+00	2+16	C	16	12	2.5	1	4	0	0	0	0	100	67
Spur 4	0+00	2+77	C	16	12	2.5	1	4	0	0	0	0	100	67
Spur 5	0+00	2+96	C	16	12	2.5	1	4	0	0	0	0	100	67
Spur 6	0+00	7+57	C	16	12	2.5	1	4	5	5	7	7	100	67
Spur 6	7+57	14+27	C	16	12	2.5	1	4	0	0	0	0	100	67
Spur 7	0+00	9+19	C	16	12	2.5	1	4	0	0	Tags	Tags	100	67
Spur 11	0+00	9+26	C	16	12	2.5	1	4	0	0	0	0	100	67
Spur 12	0+00	7+75	C	16	12	2.5	1	4	0	0	0	0	100	67
Spur 13	0+00	5+07	C	16	12	2.5	1	4	0	0	0	0	100	67
Spur 14	0+00	11+18	C	16	12	2.5	1	4	0	0	0	0	100	67
Spur 15	0+00	29+23	C	16	12	2.5	1	4	0	0	0	0	100	67

ROCK LIST

BALLAST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y. Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K2	B2				Pit Run	L	H	T
*P-1070	0+00	95+91	2:1	8″	32	95.91	3069	Sandhill Pit*	50	12	25
*M-2050	10+19	15+16	2:1	8″	32	4.97	159	Sandhill Pit*			
*Spur 1	0+00	2+69	2:1	8″	32	2.69	86	Sandhill Pit*			
*Spur 2	0+00	1+21	2:1	8″	32	1.21	39	Sandhill Pit*			
*Spur 3	0+00	2+16	2:1	8″	32	2.16	69	Sandhill Pit*			
*Spur 4	0+00	2+77	2:1	8″	32	2.77	89	Sandhill Pit*			
*Spur 5	0+00	2+96	2:1	8″	32	2.96	95	Sandhill Pit*			
*Spur 6	0+00	14+27	2:1	8″	32	14.27	457	Sandhill Pit*			
*Spur 7	0+00	9+19	2:1	8″	32	9.19	294	Sandhill Pit*			
*Spur 11	0+00	9+26	2:1	8″	32	9.26	296	Sandhill Pit*			
*Spur 12	0+00	7+75	2:1	8″	32	7.75	248	Sandhill Pit*			
*Spur 13	0+00	5+07	2:1	8″	32	5.07	162	Sandhill Pit*			
*Spur 14	0+00	11+18	2:1	8″	32	11.18	358	Sandhill Pit*			
*Spur 15	0+00	29+23	2:1	8″	32	29.23	623	Sandhill Pit*			
			Quarry Spalls for culvert headwalls/energy dissipaters				34	Commercial			

OPTIONAL ROCK 7,236 Cubic Yards
REQUIRED ROCK 34 Cubic Yards
TOTAL ROCK 7,270 Cubic Yards

*Optional Rock: If Purchaser elects to haul on optional rock roads in wet weather, the depth listed above is recommended but not required.

NOTE: Yardages are estimated on a compacted (In-Place) basis. Compliance of required rock will be based on compacted depth measurement.

CULVERT LIST

(Page 1 of 2)

Road Number	Location	Culvert Dia.	Culvert Type	Length (ft) Culvert	Length (ft) Downspt	Length (ft) Flume	Riprap (C.Y.) Inlet	Riprap (C.Y.) Outlet	Riprap (C.Y.) Type	Backfill Material	Placement Method	Const. Staked	Remarks
M-2000	177+47	18	PD	40			0.5	0.5	QS				
	179+25	18	PD	30			0.5	0.5	QS				
	194+03	18	PD	30			0.5	0.5	QS				
	211+45	18	PD	30			0.5	0.5	QS				
	215+60	18	PD	30			0.5	0.5	QS				
	230+92	18	PD	30			0.5	0.5	QS				
	235+35	18	PD	30			0.5	0.5	QS				
	239+20	18	PD	30			0.5	0.5	QS				
	241+35	18	PD	30			0.5	0.5	QS				
	244+68	18	PD	30			0.5	0.5	QS				
	253+08	18	PD	30			0.5	0.5	QS				
	267+65	18	PD	30			0.5	0.5	QS				
	272+82	18	PD	30			0.5	0.5	QS				
	274+54	18	PD	30			0.5	0.5	QS				
	275+65	18	PD	30			0.5	0.5	QS				
M-2050	4+02	18	PD	30			0.5	0.5	QS				
	12+26	18	TEMP	30									
	13+83	18	TEMP	30									
P-1070	2+12	18	PD	30			0.5	0.5	QS				
	4+60	18	PD	30			0.5	0.5	QS				
	6+20	18	PD	30			0.5	0.5	QS				
	7+76	18	PD	30			0.5	0.5	QS				
	14+32	18	PD	30			0.5	0.5	QS				
	18+48	18	PD	30			0.5	0.5	QS				
	21+01	18	PD	30			0.5	0.5	QS				
	23+75	18	PD	30			0.5	0.5	QS				
	31+25	18	PD	30			0.5	0.5	QS				
	36+74	24	PD	50			1	1	QS				
	46+39	18	PD	34			0.5	0.5	QS				
	53+53	24	PD	52			1	1	QS				
	56+62	18	PD	36			0.5	0.5	QS				
	64+78	18	PD	34			0.5	0.5	QS				
	70+53	18	PD	30			0.5	0.5	QS				
	82+73	18	PD	30			0.5	0.5	QS				
Spur 6	4+25	18	TEMP	44									
	7+79	18	TEMP	30									
	03+33	18	TEMP	30									
Spur 7	1+22	18	TEMP	40									
	3+24	18	TEMP	30									
	7+00	18	TEMP	30									
	16+04	18	TEMP	30									
Spur 11	1+96	24	TEMP	40									
	2+89	18	TEMP	30									

CULVERT LIST

(Page 2 of 2)

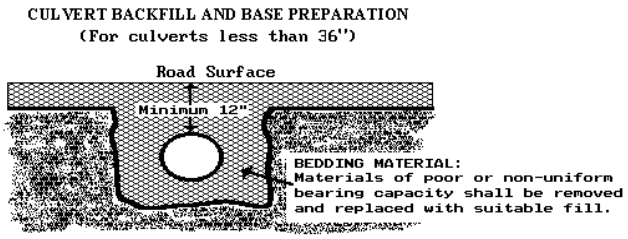
Road Number	Location	Culvert Dia.	Culvert Type	Length (ft) Culvert	Length (ft) Downspt	Length (ft) Flume	Riprap (C.Y.) Inlet	Riprap (C.Y.) Outlet	Riprap (C.Y.) Type	Backfill Material	Placement Method	Const. Staked	Remarks
	4+33	18	TEMP	40									
	5+20	18	TEMP	40									
	7+35	18	TEMP	30									
Spur 12	0+48	18	TEMP	30									
	1+83	18	TEMP	30									
	2+79	18	TEMP	30									
	5+88	18	TEMP	30									
Spur 14	4+18	18	TEMP	38									
	8+43	18	TEMP	30									
Spur 15	3+88	18	TEMP	44									
	7+75	18	TEMP	34									
	14+22	18	TEMP	32									
	19+80	18	TEMP	32									
	21+94	18	TEMP	60									
	25+64	18	TEMP	40									

PD = Polyethylene Pipe Dual Wall AASHTO No. M294 Type S or ASTM F2648

GS16 = Galvanized Steel AASHTO No. M36, 16 Gauge

AS12 = Aluminized Steel AASHTO No. M274, 12 Gauge

TEMP = Temporary Culvert



Key:

QS - Quarry Spalls

SR - Shot Rock

NT - Native (bank run)

SL - Select Fill

HL - Heavy Loose Riprap

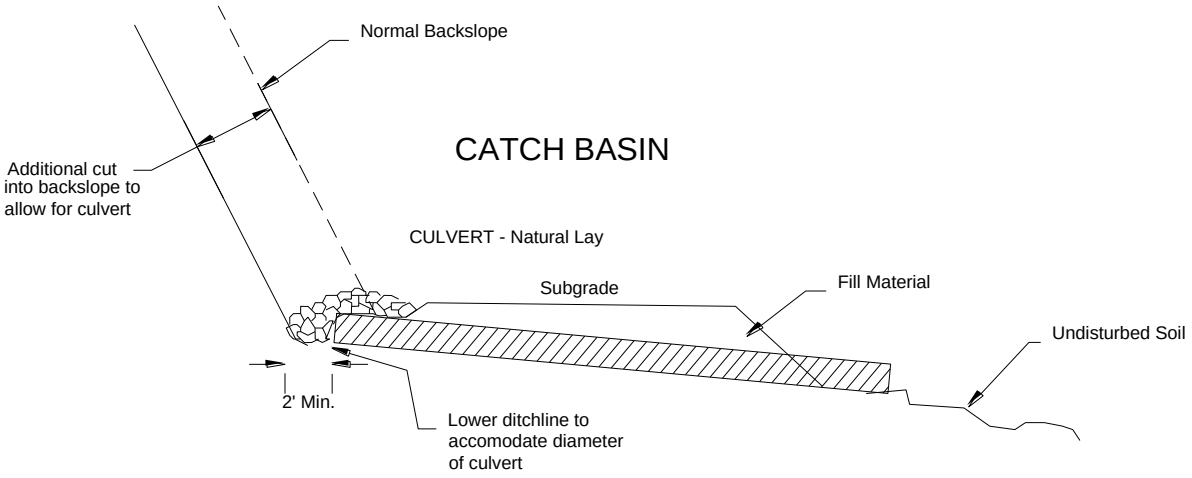
LL - Light Loose Riprap

Flume - Half round pipe

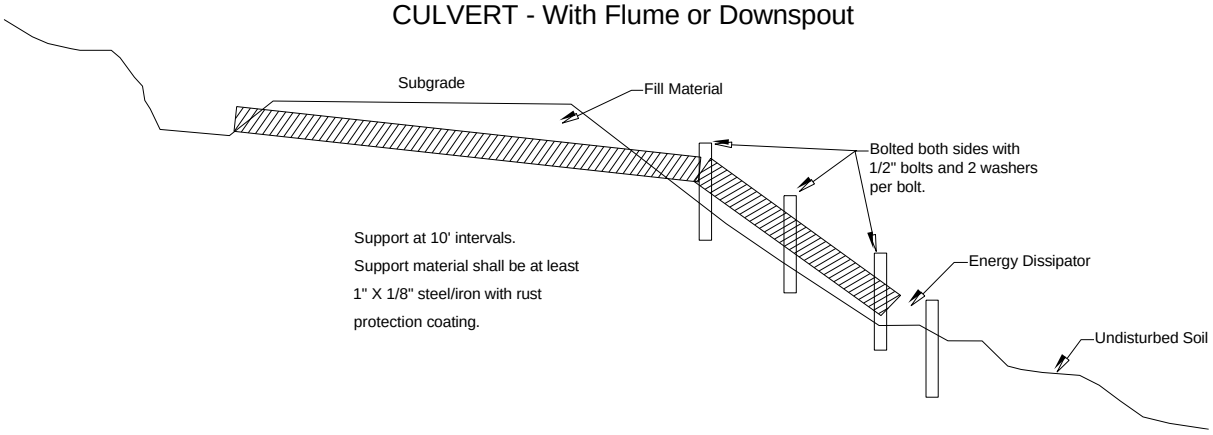
Downspout - Full round pipe

CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 1 of 3)



CULVERT - With Flume or Downspout

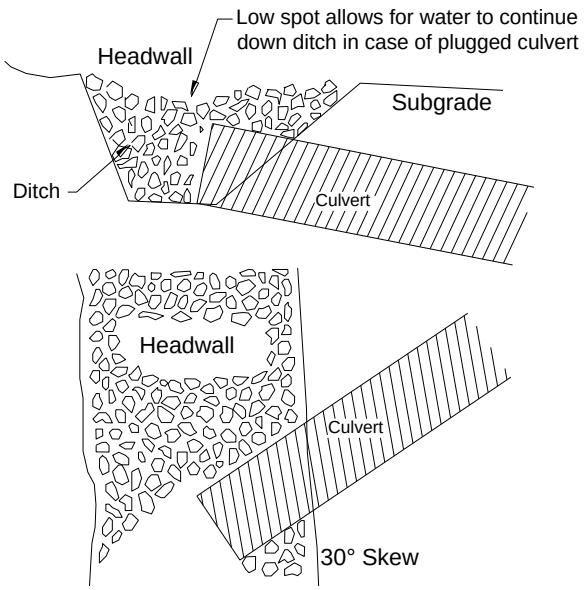


CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 2 of 3)

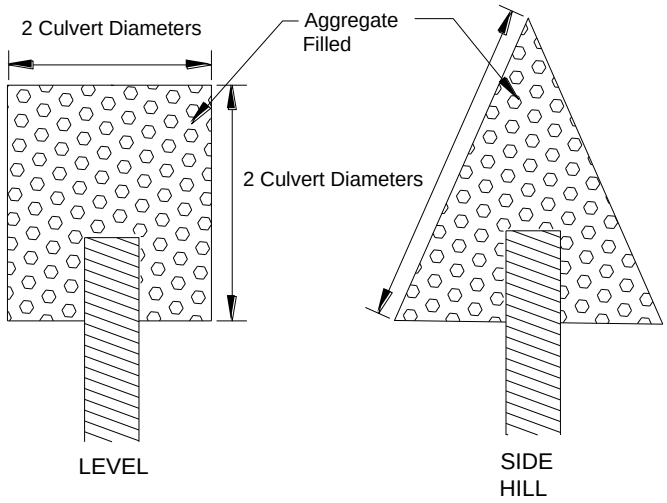
Proper preparation of foundation and placement of bedding material shall precede the installation of all culvert pipe. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform dense unyielding base. The backfill material shall be placed so that the pipe is uniformly supported along the barrel.

HEADWALLS



Headwalls to be constructed of material that will resist erosion.

ENERGY DISSIPATORS



Dissipator Specifications:
Depth: 1 culvert diameter
Aggregate: as specified in the CULVERT LIST.

CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 3 of 3)

POLYETHYLENE PIPE INSTALLATION

INSTALLATION REQUIREMENTS:

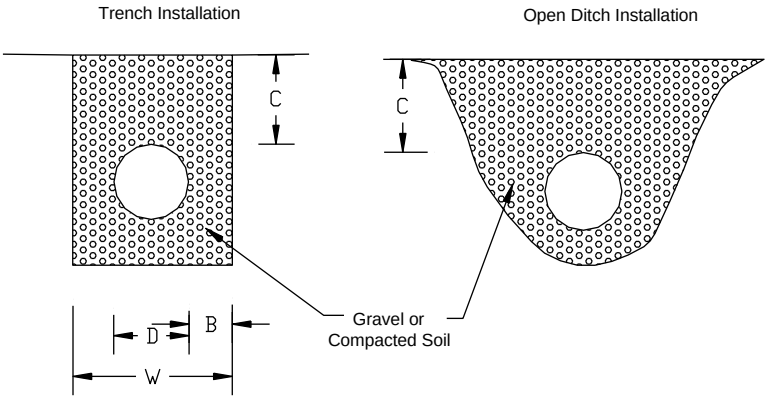
1. Crushed stone, gravel, or compacted soil backfill material shall be used as the bedding and envelope material around the culvert. The aggregate size shall not exceed 1/6 pipe diameter or 4" diameter, whichever is smaller.

2. The corrugated pipe shall be laid on grade, on a layer of bedding material as shown for the two types of installations. If native soil is used as the bedding and backfill material, it shall be well compacted in six inch layers under the haunches, around the sides and above the pipe to the recommended minimum height of cover.

3. Either crushed aggregate or flexible (asphalt) pavement may be laid as part of the minimum cover requirements.

4. Site conditions and availability of bedding materials often dictate the type of installation method used.

5. The load bearing capability of flexible conduits is dependent on the type of backfill material used and the degree of compaction achieved. Crushed stone and gravel backfill materials typically reach a compaction level of 90-95% AASHTO standard density without compaction. When native soils are used as backfill material, a compaction level of 85% is required. This minimum compaction can be achieved by either hand or mechanical tamping.



MINIMUM DIMENSIONS

Nominal Diameter	Minimum Thickness	Minimum Cover	Min. Trench Width
D	B	C	W
18"	6"	12"	36"
24"	6"	12"	42"
30"	6"	12"	48"
36"	6"	12"	54"

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the construction materials. Remove slides from ditches and the roadway. Repair fill-failures, in accordance with Clause 4-6 EMBANKMENT SLOPE RATIO, with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Shape the road surface, turnouts, and shoulders to the original shape on the TYPICAL SECTION SHEET, to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- Blading shall not undercut the backslope or cut into geotextile fabric on the road.
- If required by the Contract Administrator, water shall be applied as necessary to control dust and retain fine surface rock.
- Surface material shall not be bladed off the roadway. Replace surface material when lost or worn away, or as directed by the Contract Administrator.
- Remove shoulder berms, created by grading, to facilitate drainage, except as marked or directed by the Contract Administrator.
- For roads with geotextile fabric: spread surface aggregate to fill in soft spots and wheel ruts (barrel spread) to prevent damage to the geotextile fabric.

Drainage

- Prevent silt bearing road surface and ditch runoff from delivering sediment to any streams or wetlands.
- Maintain rolling dips and drivable waterbars as needed to keep them functioning as intended.
- Maintain headwalls to the road shoulder level with material that will resist erosion.
- Maintain energy dissipaters at culvert outlets with non-erodible material or rock.
- Keep ditches, culverts, and other drainage structures clear of obstructions and functioning as intended.
- Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This shall be done even during periods of inactivity.

Preventative Maintenance

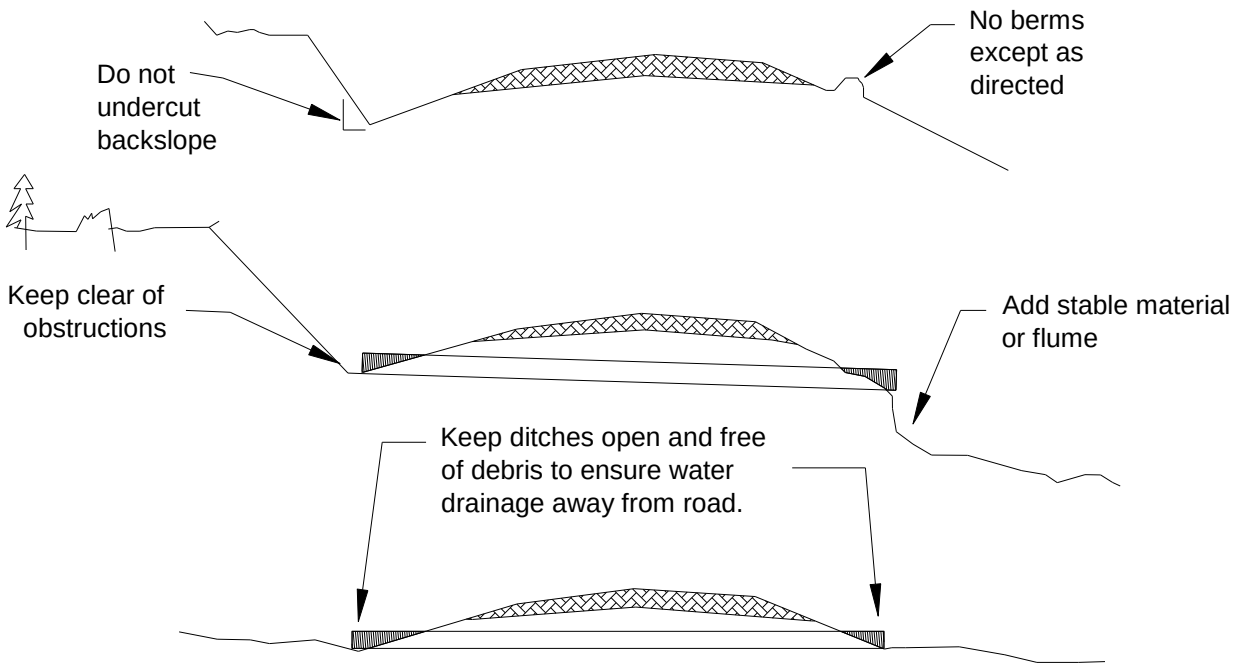
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

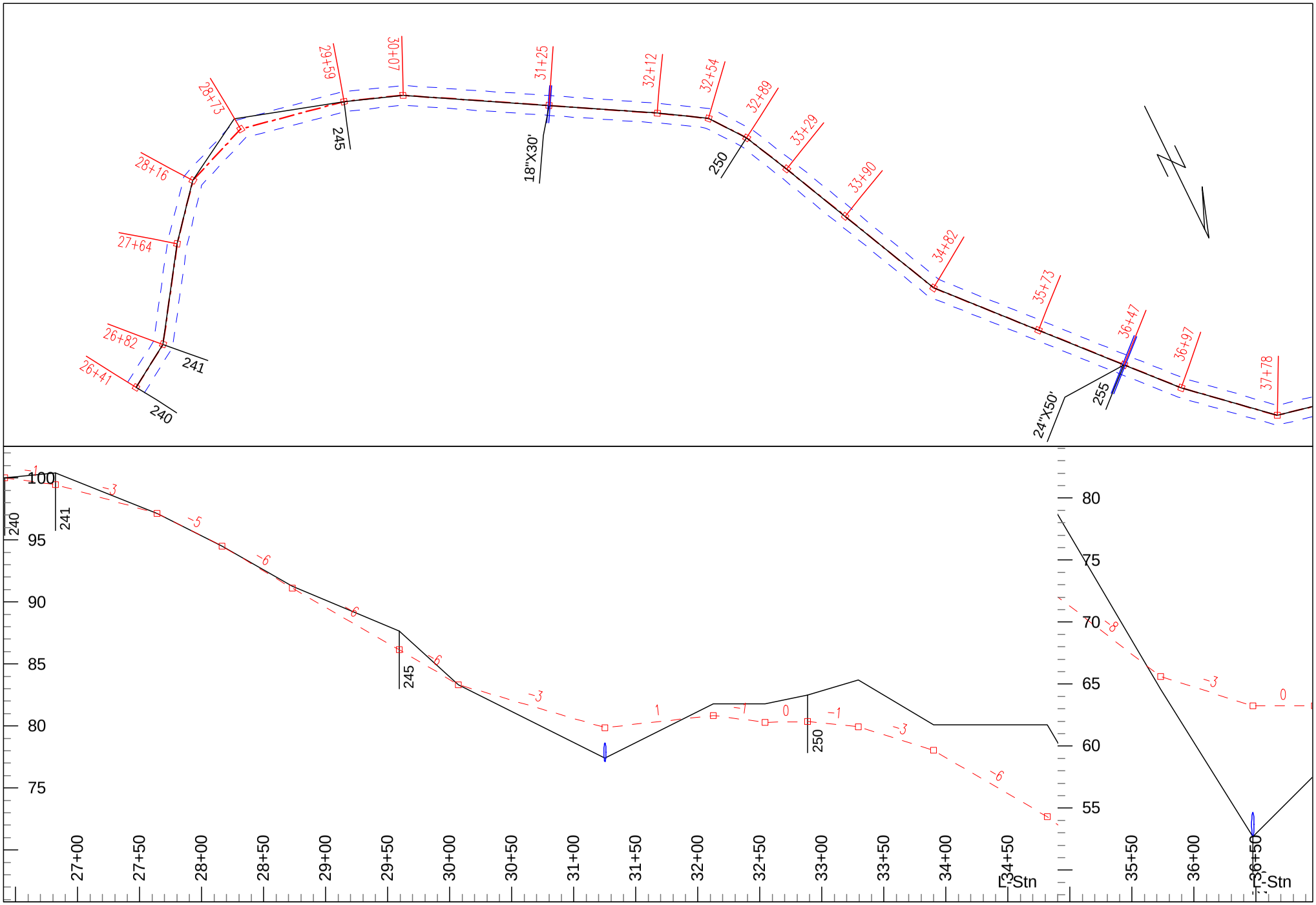
Termination of Use or End of Season

- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

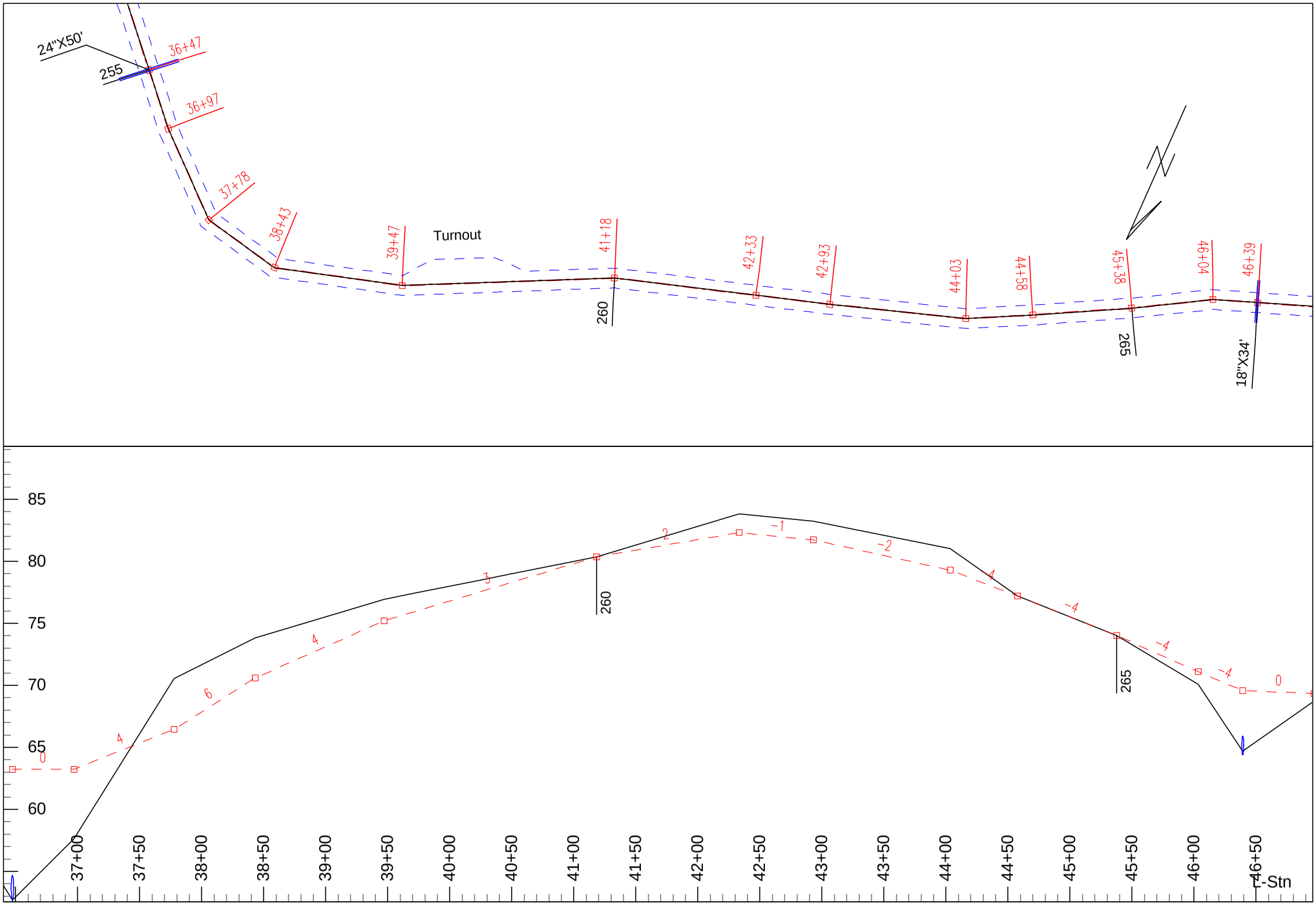
Debris

- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.


No berms
except as
directed
Do not
undercut
backslope
Keep clear of
obstructions
Add stable material
or flume
Keep ditches open and free
of debris to ensure water
drainage away from road.



Tip Top Timber Sale P-1070 Contract #: 30-094094	WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES	Plan Scale 1:1200 Profile Vert Scale 1:120 Profile Horz Scale 1:1200	Engineer: Heymann 18/08/16 Page 1 of 8



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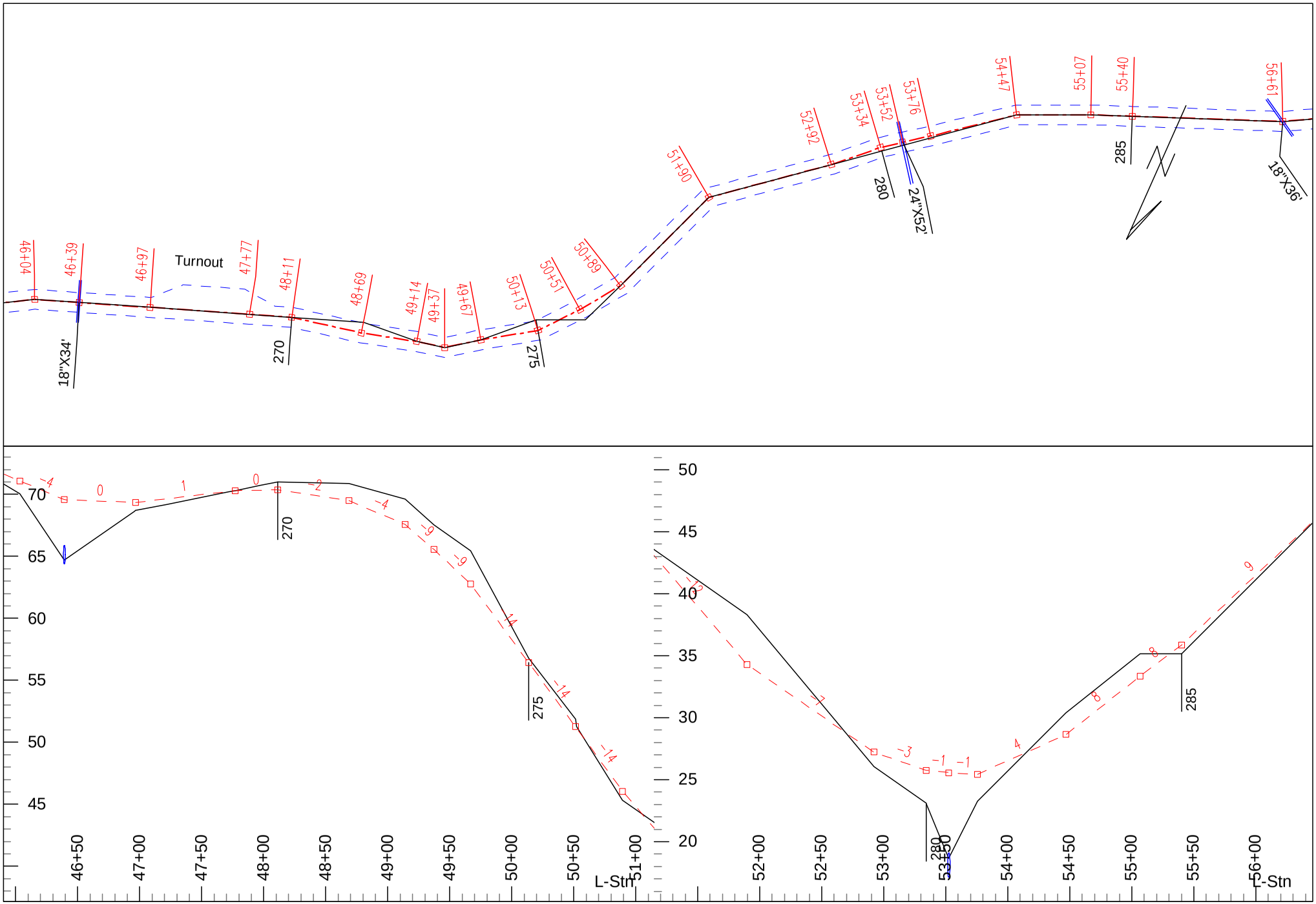
30-094094

Tip Top Timber Sale
P-1070
Contract #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

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Profile Horz Scale 1:1200

Engineer: Heymann
18/08/16



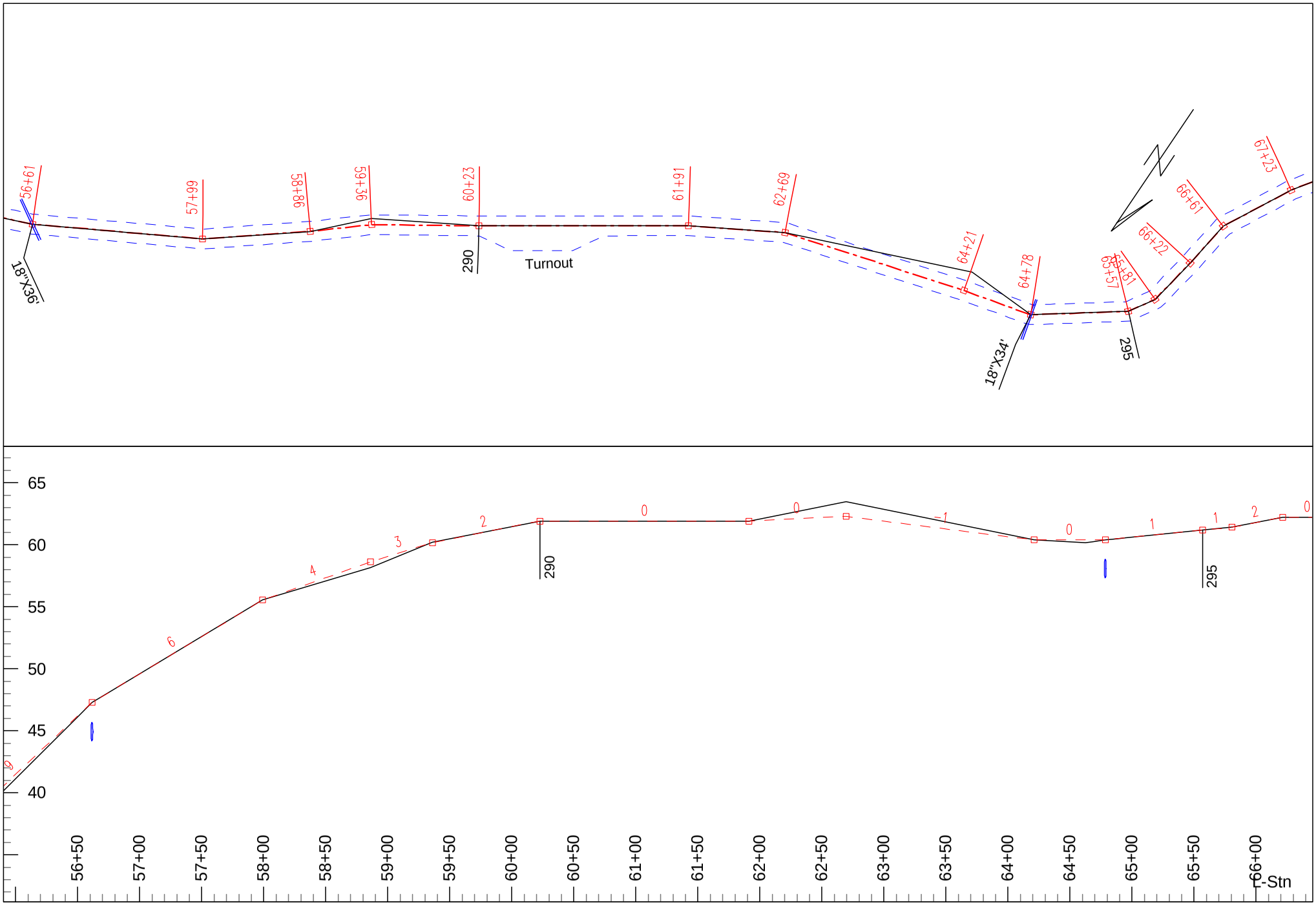
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Tip Top Timber Sale
P-1070
Contract #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

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Engineer: Heymann
18/08/16
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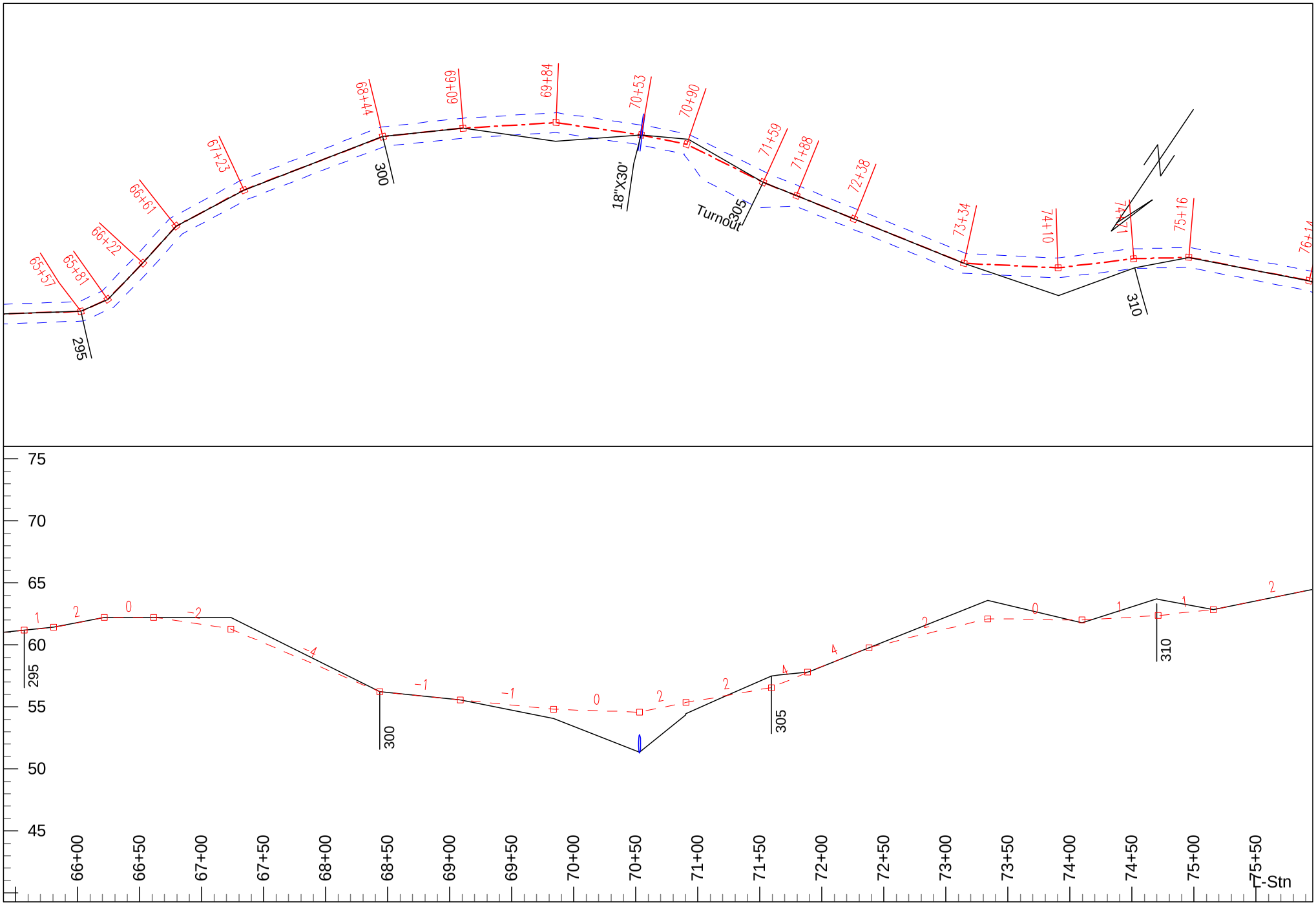


Tip Top Timber Sale
P-1070
Contract #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

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Engineer: Heymann
18/08/16

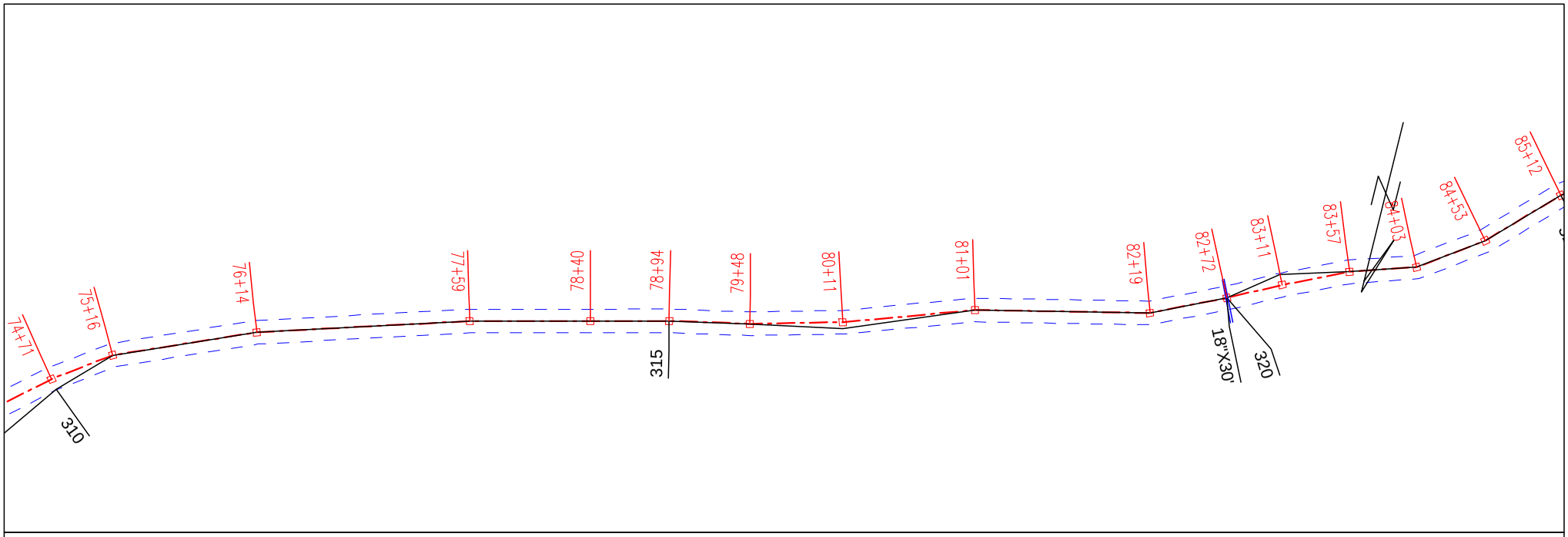


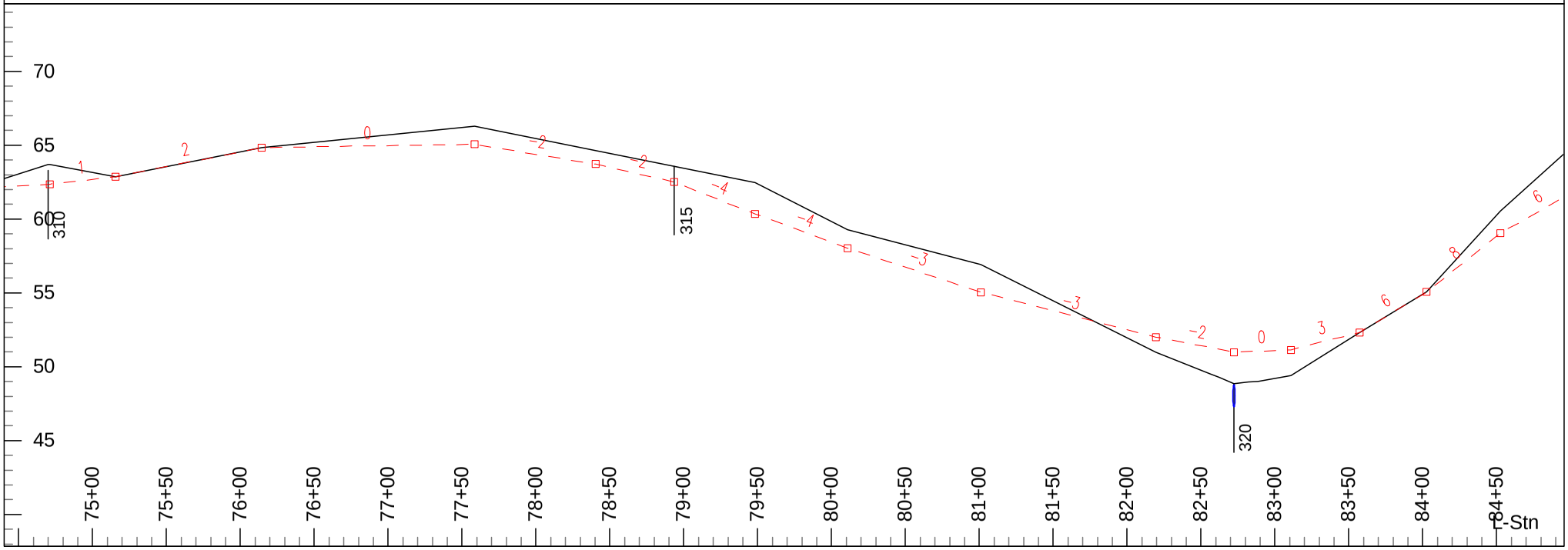
Tip Top Timber Sale
P-1070
Contract #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Plan Scale 1:1200
Profile Vert Scale 1:120
Profile Horz Scale 1:1200

Engineer: Heymann
18/08/16
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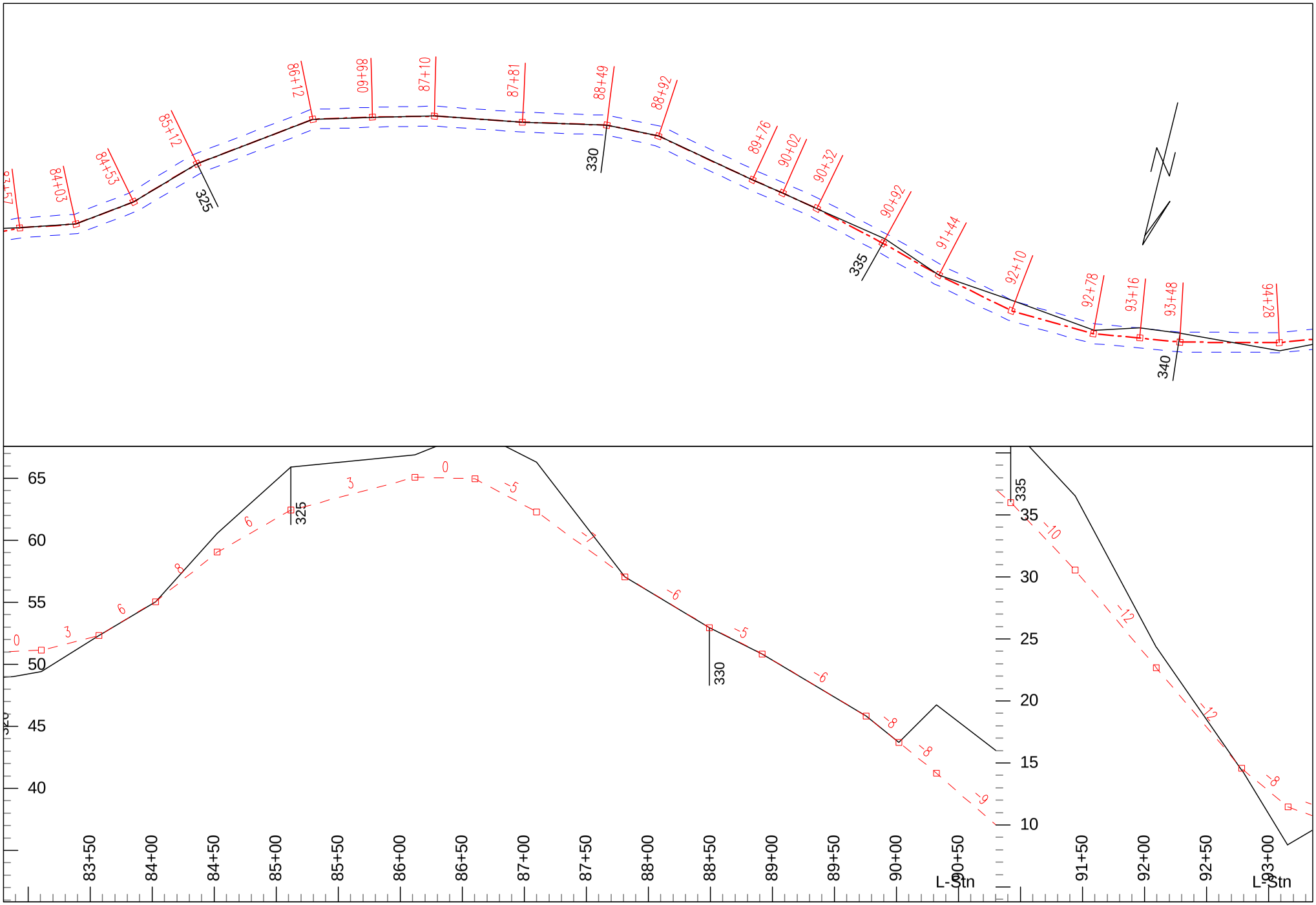


Tip Top Timber Sale
P-1070
Contract #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

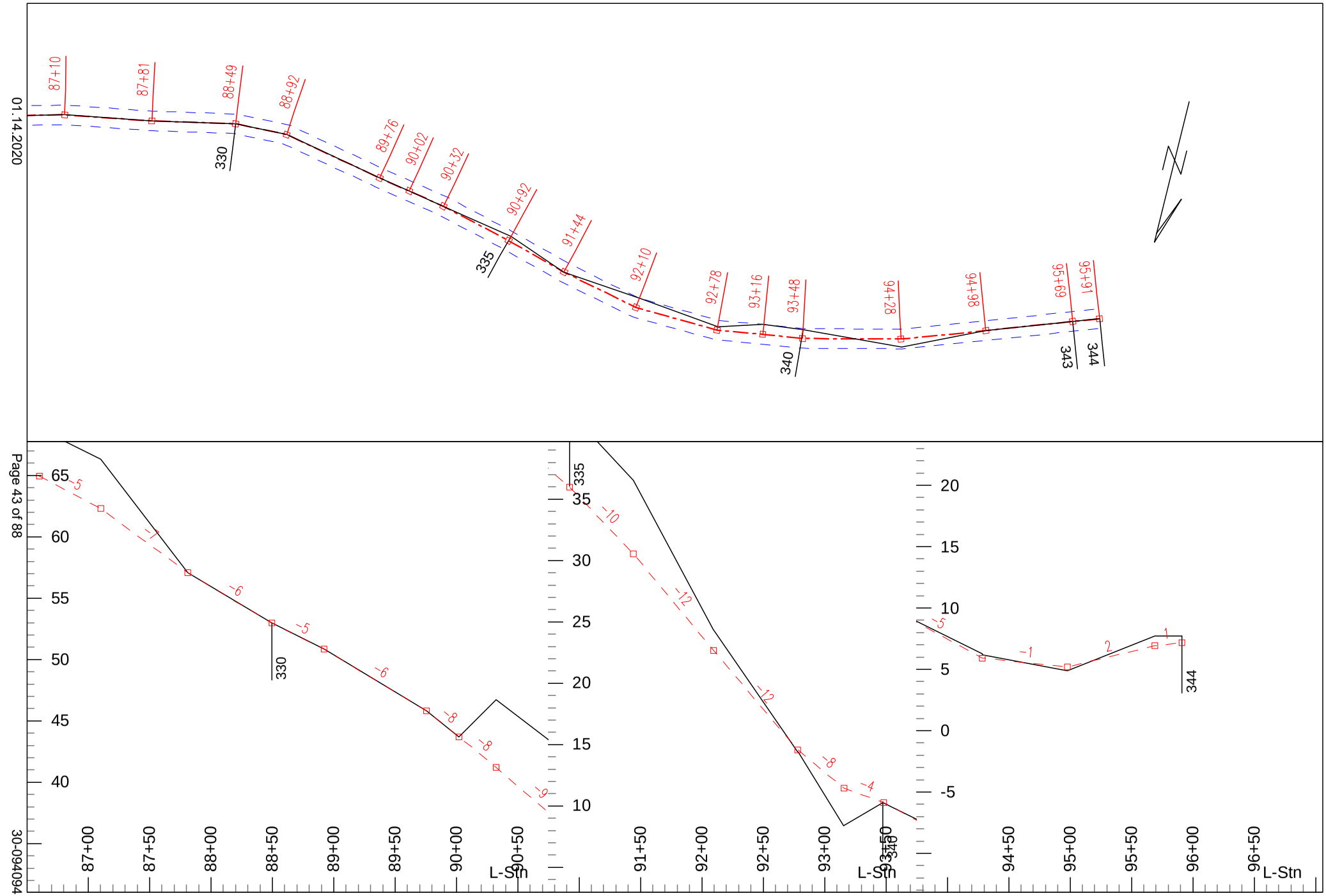
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Engineer: Heymann
18/08/16



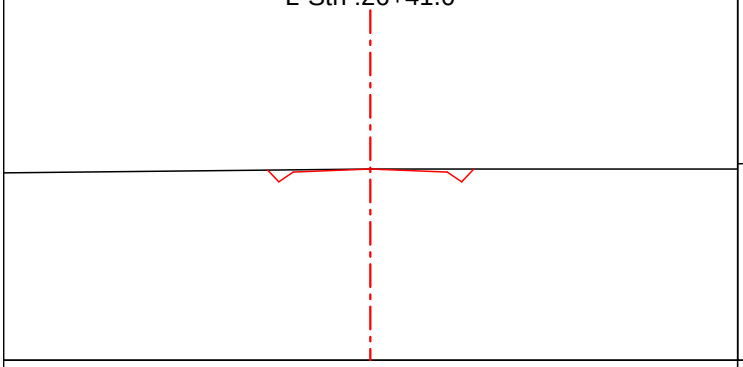
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Tip Top Timber Sale P-1070 Contract #: 30-094094	WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES
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Engineer: Heymann 18/08/16	Page 7 of 8



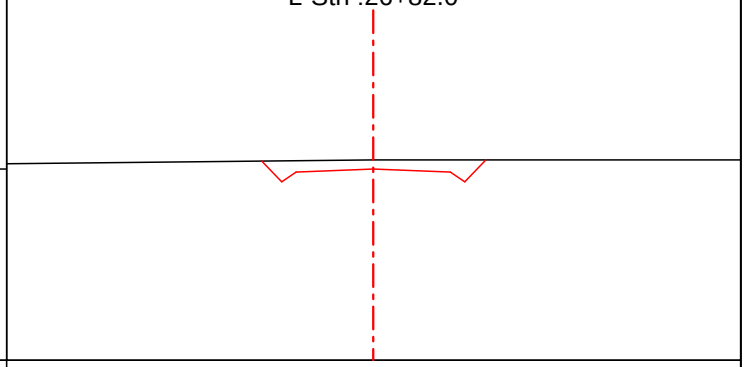
Tip Top Timber Sale P-1070 Contract #: 30-094094	WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES	Plan Scale 1:1200 Profile Vert Scale 1:120 Profile Horz Scale 1:1200
Engineer: Heymann 18/08/16		Page 8 of 8

L-Stn :26+41.0



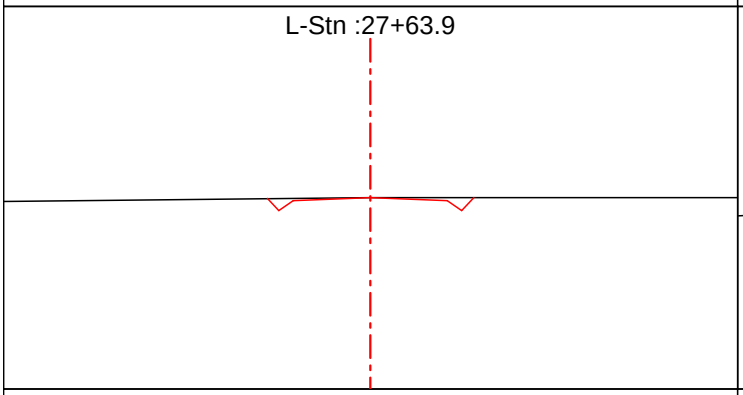
P-Stn : 0+00.0 Cut Dp: 0.0 CL Elev: 100.0
V.Offset: 0.0 H. Offset: 0.0 Index: 240

L-Stn :26+82.0



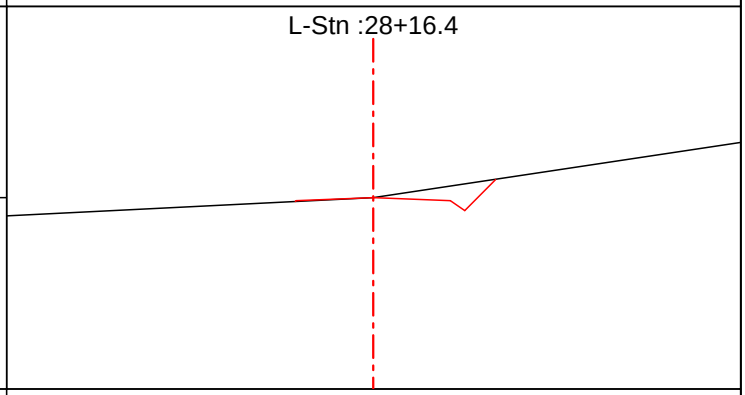
P-Stn : 0+41.0 Cut Dp: 0.9 CL Elev: 99.5
V.Offset: -0.9 H. Offset: 0.0 Index: 241

L-Stn :27+63.9



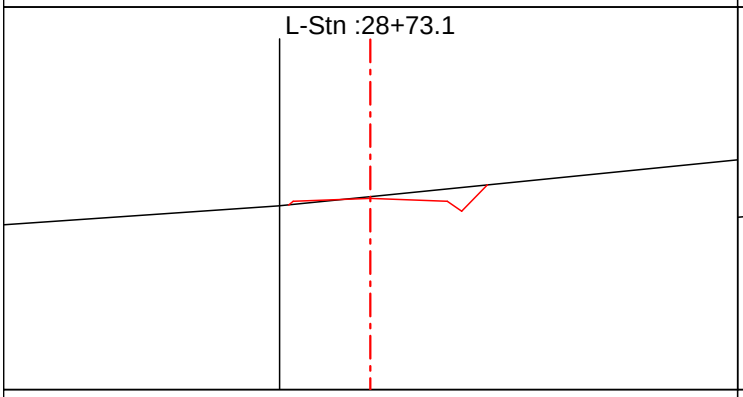
P-Stn : 1+22.9 Cut Dp: 0.0 CL Elev: 97.1
V.Offset: 0.0 H. Offset: 0.0 Index: 242

L-Stn :28+16.4



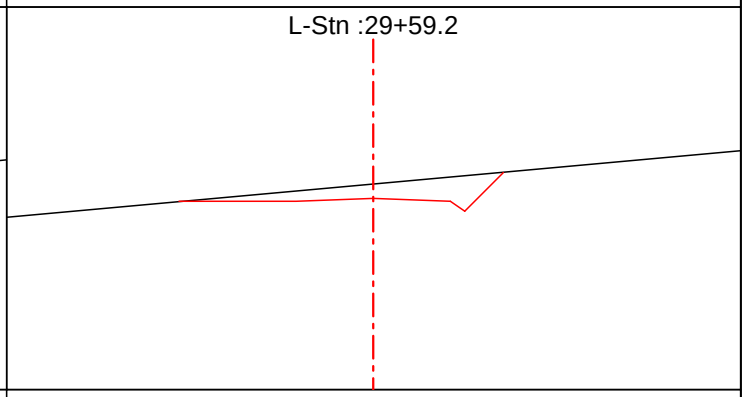
P-Stn : 1+75.4 Cut Dp: 0.0 CL Elev: 94.5
V.Offset: 0.0 H. Offset: 0.0 Index: 243

L-Stn :28+73.1



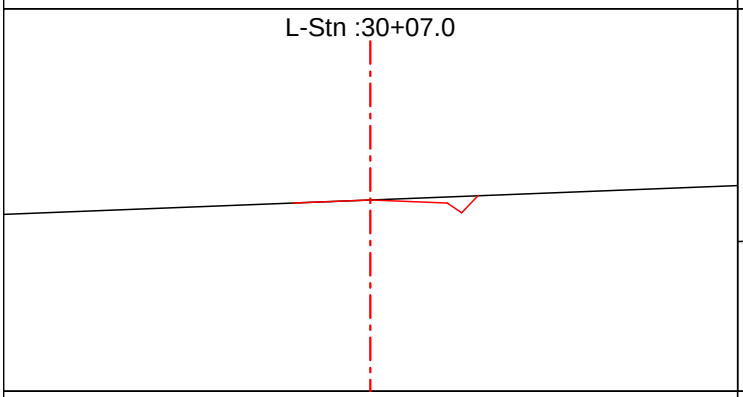
P-Stn : 2+35.2 Cut Dp: 0.2 CL Elev: 91.1
V.Offset: 0.8 H. Offset: 9.6 Index: 244

L-Stn :29+59.2



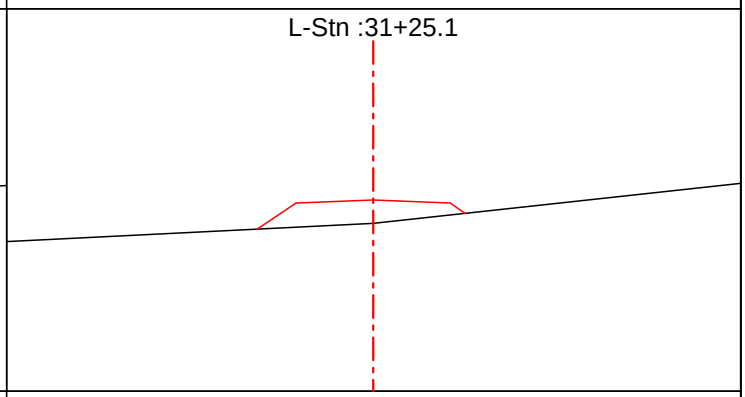
P-Stn : 3+24.7 Cut Dp: 1.5 CL Elev: 86.1
V.Offset: -1.5 H. Offset: 0.0 Index: 245

L-Stn :30+07.0



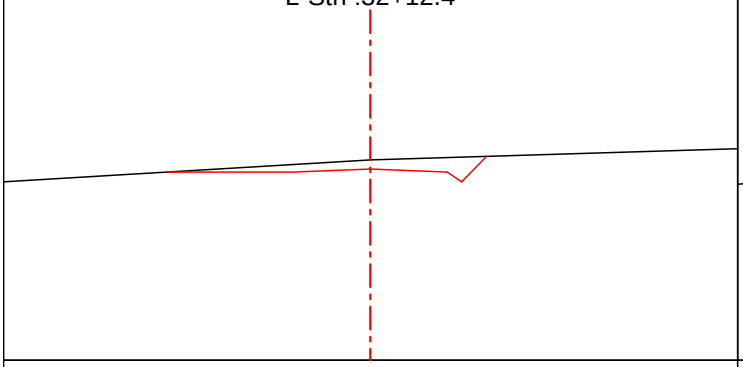
P-Stn : 3+72.5 Cut Dp: 0.0 CL Elev: 83.3
V.Offset: 0.0 H. Offset: 0.0 Index: 246

L-Stn :31+25.1



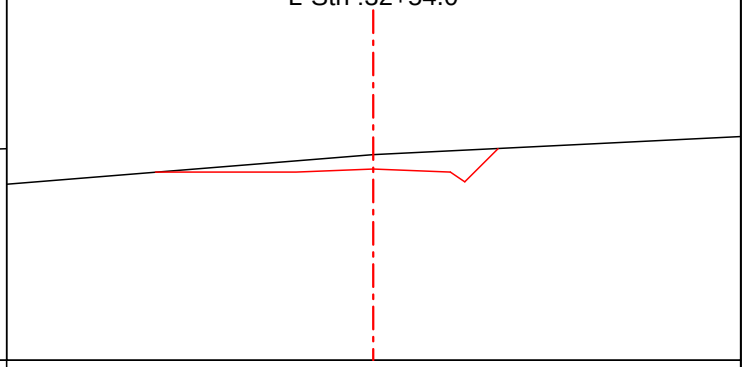
P-Stn : 4+90.6 Cut Dp: -2.4 CL Elev: 79.9
V.Offset: 2.4 H. Offset: 0.0 Index: 247

L-Stn :32+12.4



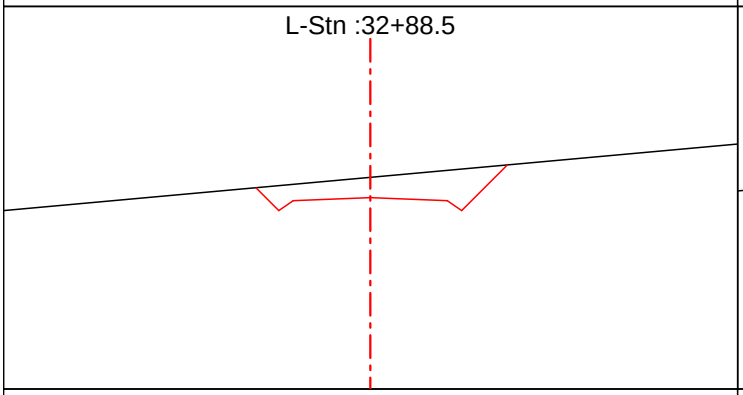
P-Stn : 5+77.9 Cut Dp: 0.9 CL Elev: 80.8
V.Offset: -0.9 H. Offset: 0.0 Index: 248

L-Stn :32+54.0



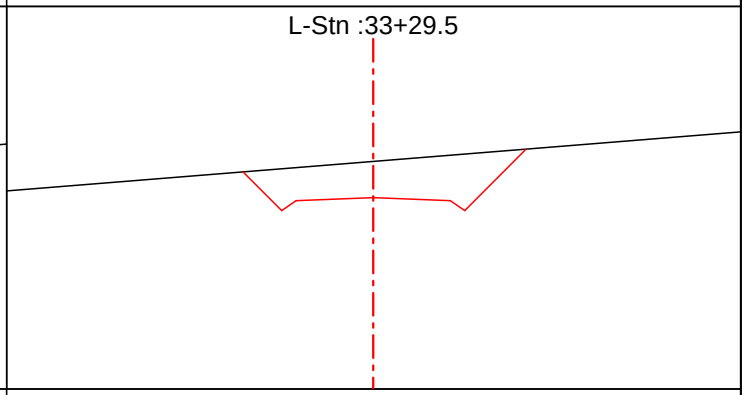
P-Stn : 6+19.5 Cut Dp: 1.5 CL Elev: 80.3
V.Offset: -1.5 H. Offset: 0.0 Index: 249

L-Stn :32+88.5



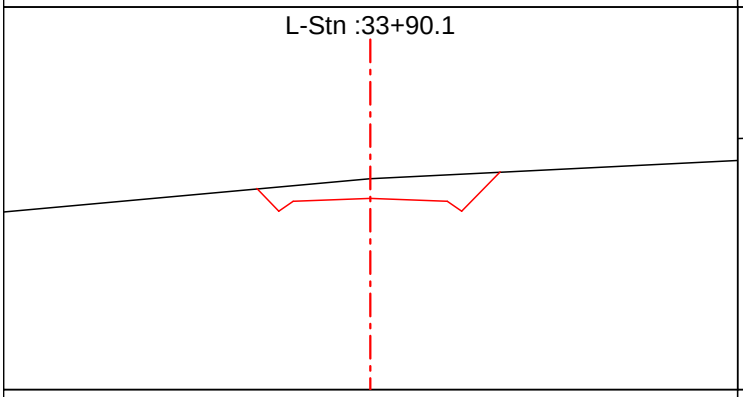
P-Stn : 6+54.0 Cut Dp: 2.1 CL Elev: 80.4
V.Offset: -2.1 H. Offset: 0.0 Index: 250

L-Stn :33+29.5



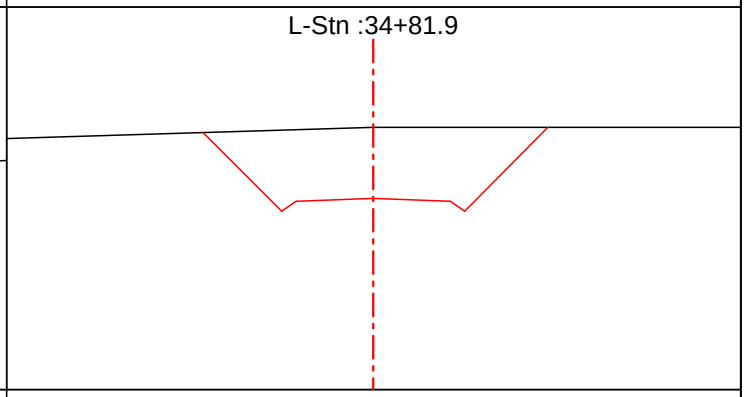
P-Stn : 6+95.0 Cut Dp: 3.8 CL Elev: 79.9
V.Offset: -3.8 H. Offset: 0.0 Index: 251

L-Stn :33+90.1



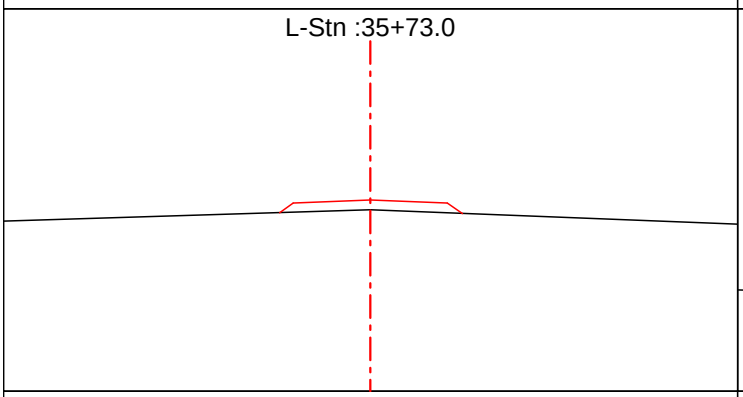
P-Stn : 7+55.6 Cut Dp: 2.0 CL Elev: 78.0
V.Offset: -2.0 H. Offset: 0.0 Index: 252

L-Stn :34+81.9



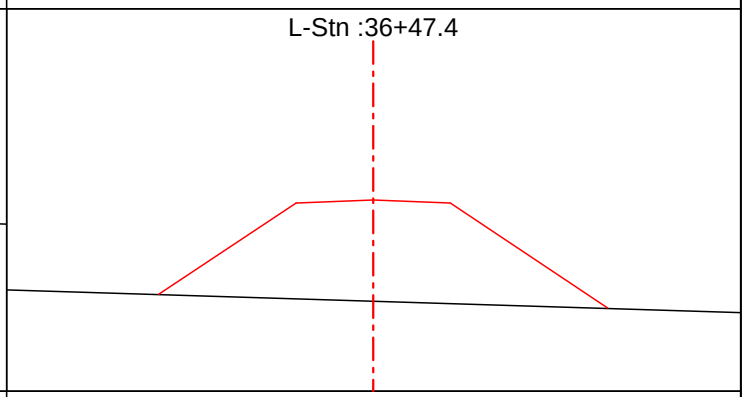
P-Stn : 8+47.4 Cut Dp: 7.4 CL Elev: 72.7
V.Offset: -7.4 H. Offset: 0.0 Index: 253

L-Stn :35+73.0



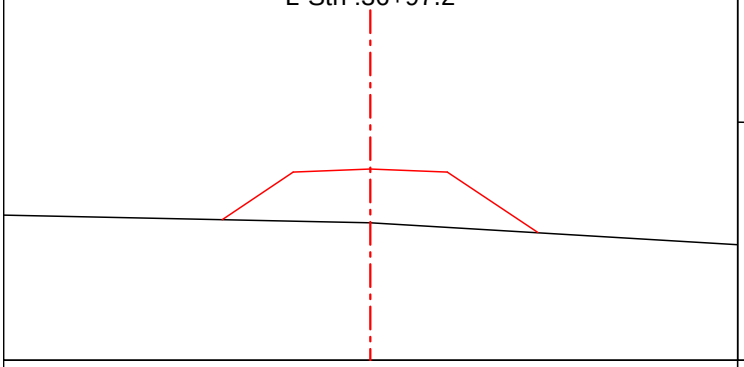
P-Stn : 9+38.5 Cut Dp: -1.0 CL Elev: 65.6
V.Offset: 1.0 H. Offset: 0.0 Index: 254

L-Stn :36+47.4



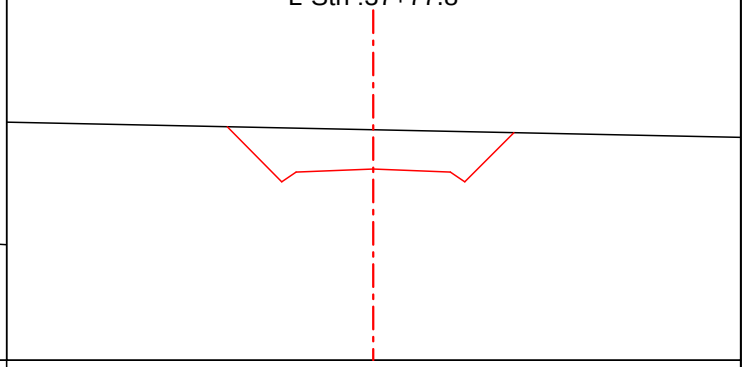
P-Stn : 10+12.9 Cut Dp: -10.6 CL Elev: 63.2
V.Offset: 10.6 H. Offset: 0.0 Index: 255

L-Stn :36+97.2



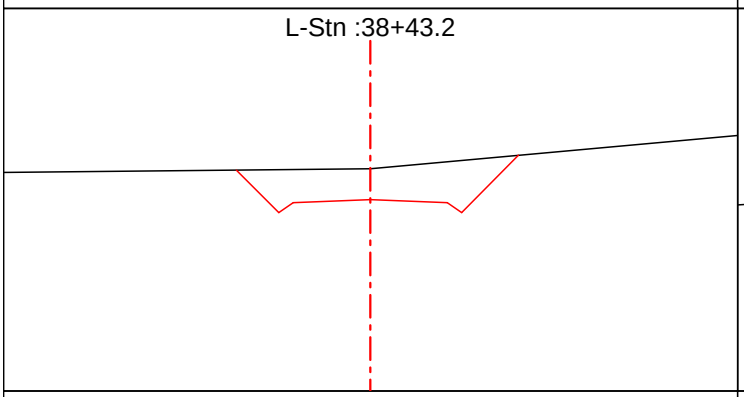
P-Stn :	10+62.7	Cut Dp:	-5.6	CL Elev:	63.2
V.Offset:	5.6	H. Offset:	0.0	Index:	256

L-Stn :37+77.8



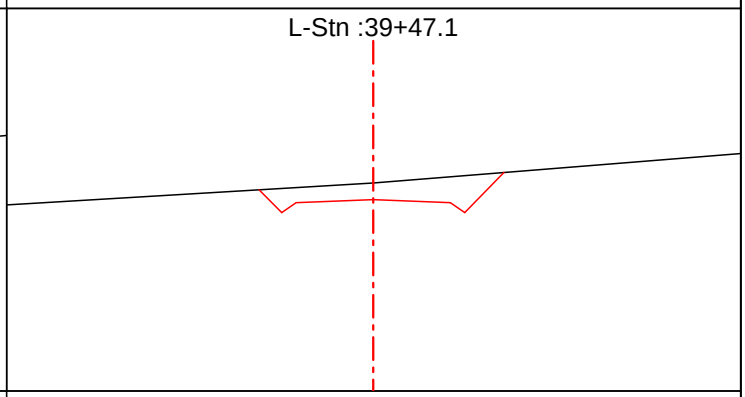
P-Stn :	11+43.3	Cut Dp:	4.1	CL Elev:	66.4
V.Offset:	-4.1	H. Offset:	0.0	Index:	257

L-Stn :38+43.2



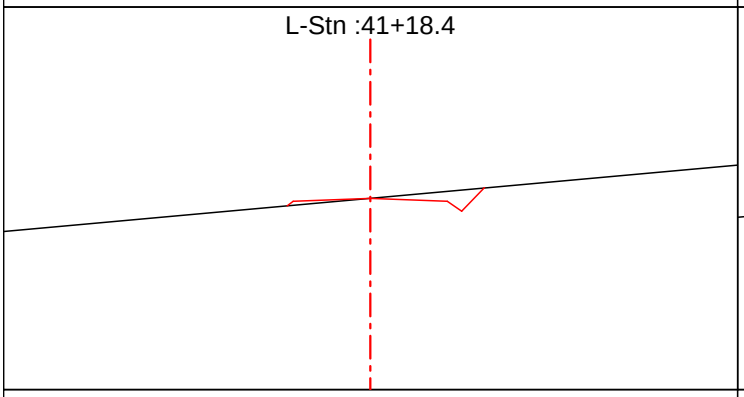
P-Stn :	12+08.7	Cut Dp:	3.2	CL Elev:	70.6
V.Offset:	-3.2	H. Offset:	0.0	Index:	258

L-Stn :39+47.1



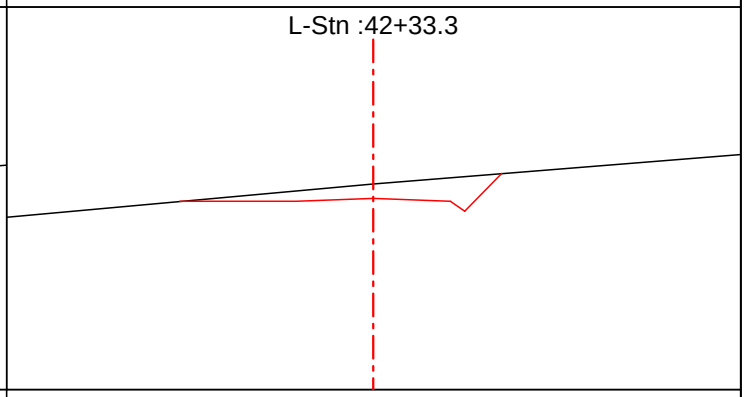
P-Stn :	13+12.6	Cut Dp:	1.7	CL Elev:	75.2
V.Offset:	-1.7	H. Offset:	0.0	Index:	259

L-Stn :41+18.4



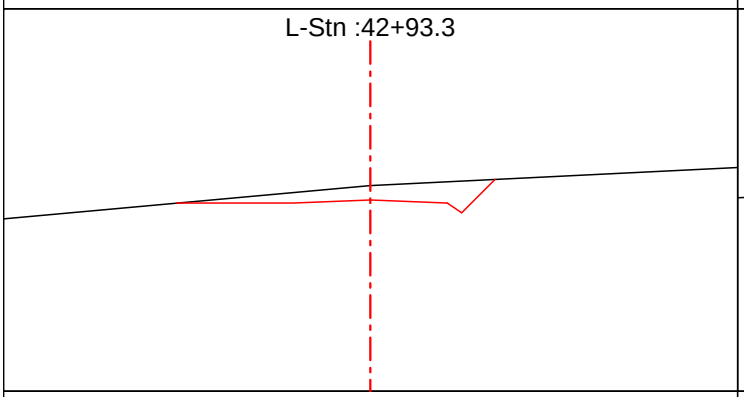
P-Stn :	14+83.9	Cut Dp:	0.0	CL Elev:	80.4
V.Offset:	0.0	H. Offset:	0.0	Index:	260

L-Stn :42+33.3



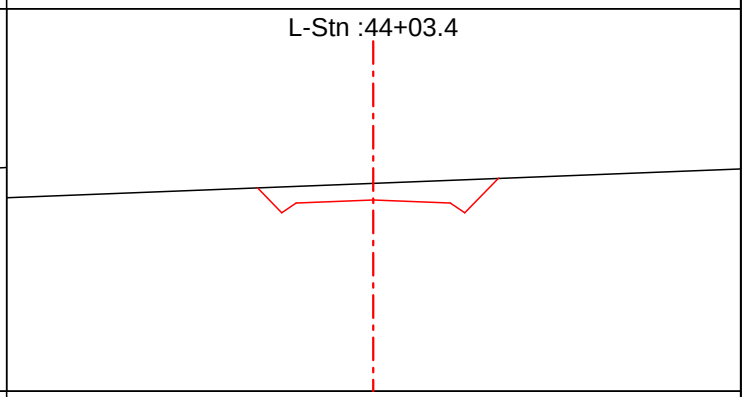
P-Stn :	15+98.9	Cut Dp:	1.5	CL Elev:	82.3
V.Offset:	-1.5	H. Offset:	0.0	Index:	261

L-Stn :42+93.3



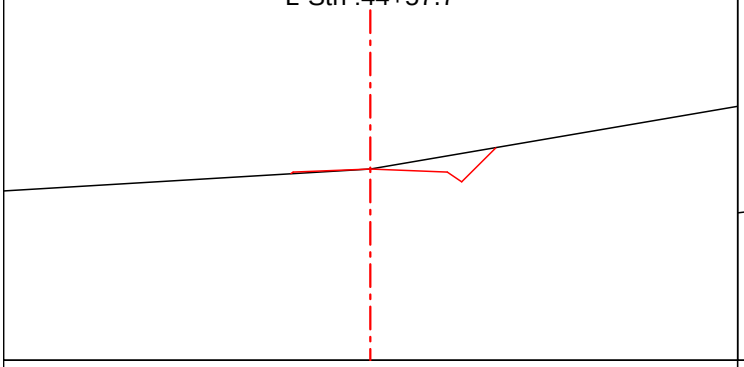
P-Stn :	16+58.9	Cut Dp:	1.5	CL Elev:	81.7
V.Offset:	-1.5	H. Offset:	0.0	Index:	262

L-Stn :44+03.4



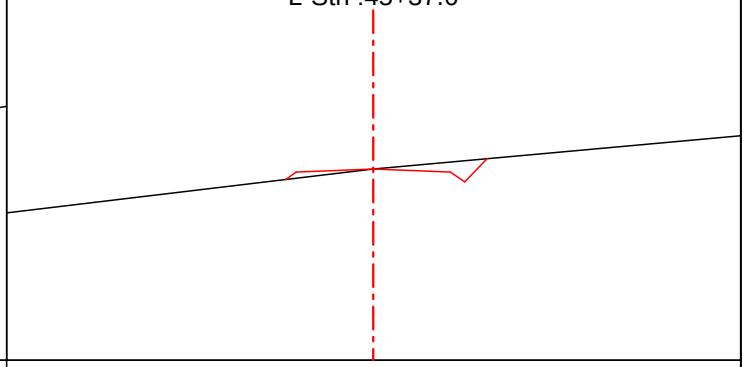
P-Stn :	17+68.9	Cut Dp:	1.7	CL Elev:	79.3
V.Offset:	-1.7	H. Offset:	0.0	Index:	263

L-Stn :44+57.7



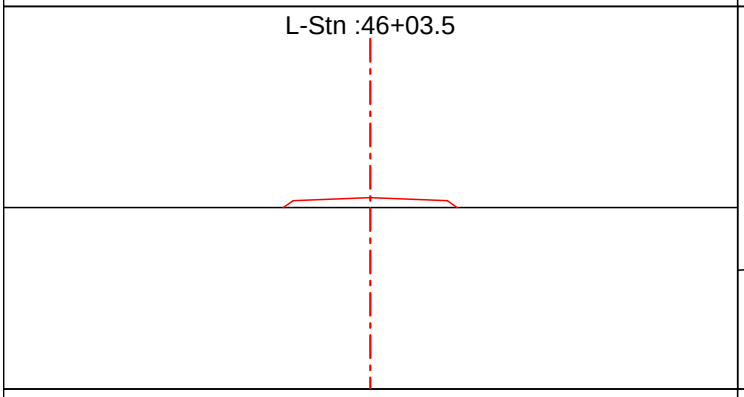
P-Stn :	18+23.2	Cut Dp:	0.0	CL Elev:	77.2
V.Offset:	0.0	H. Offset:	0.0	Index:	264

L-Stn :45+37.6



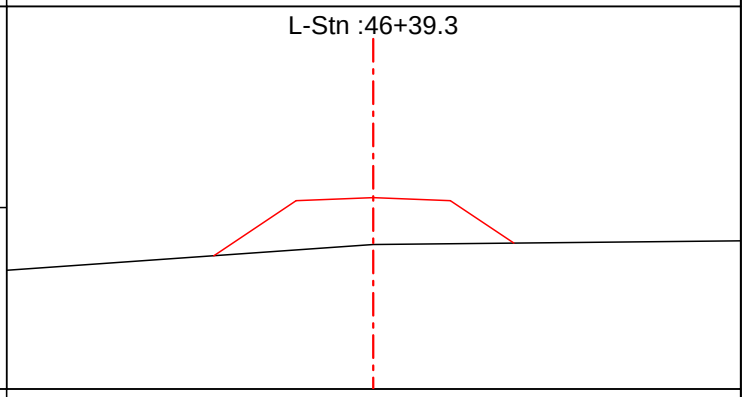
P-Stn :	19+03.1	Cut Dp:	0.0	CL Elev:	74.0
V.Offset:	0.0	H. Offset:	0.0	Index:	265

L-Stn :46+03.5



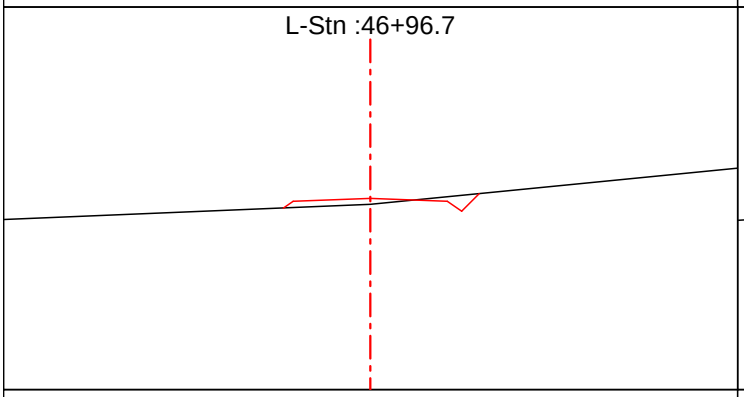
P-Stn :	19+69.0	Cut Dp:	-1.0	CL Elev:	71.1
V.Offset:	1.0	H. Offset:	0.0	Index:	266

L-Stn :46+39.3



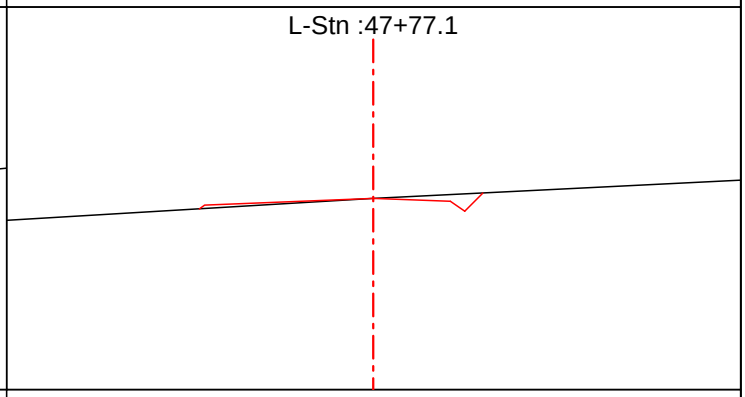
P-Stn :	20+04.8	Cut Dp:	-4.9	CL Elev:	69.6
V.Offset:	4.9	H. Offset:	0.0	Index:	267

L-Stn :46+96.7



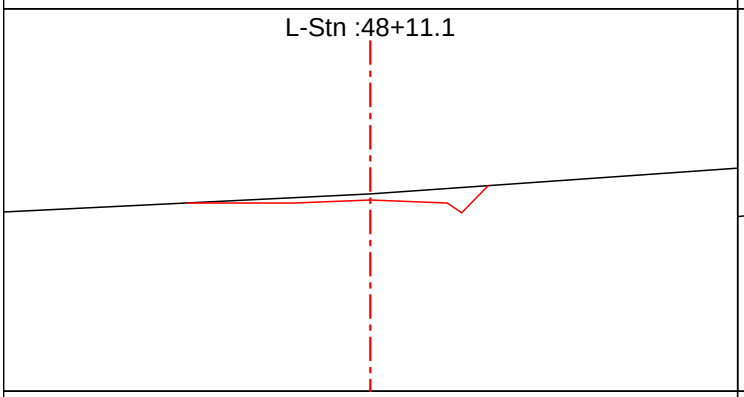
P-Stn :	20+62.2	Cut Dp:	-0.6	CL Elev:	69.3
V.Offset:	0.6	H. Offset:	0.0	Index:	268

L-Stn :47+77.1



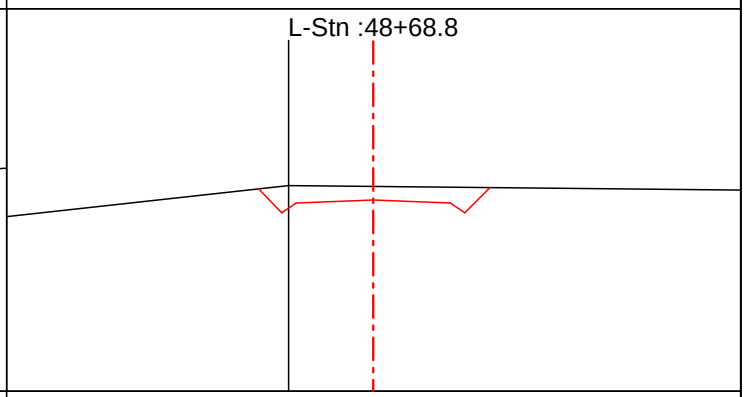
P-Stn :	21+42.7	Cut Dp:	0.0	CL Elev:	70.3
V.Offset:	0.0	H. Offset:	0.0	Index:	269

L-Stn :48+11.1



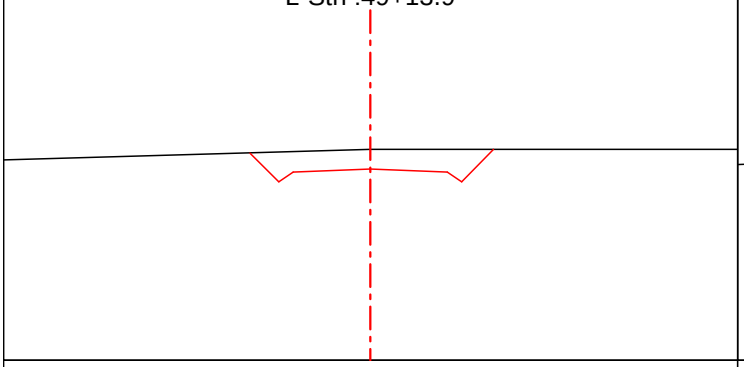
P-Stn :	21+76.7	Cut Dp:	0.6	CL Elev:	70.4
V.Offset:	-0.6	H. Offset:	0.0	Index:	270

L-Stn :48+68.8



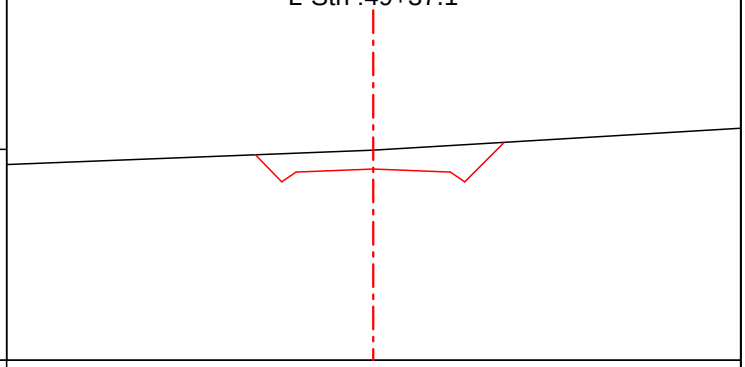
P-Stn :	22+34.9	Cut Dp:	1.4	CL Elev:	69.5
V.Offset:	-1.5	H. Offset:	8.8	Index:	271

L-Stn :49+13.9



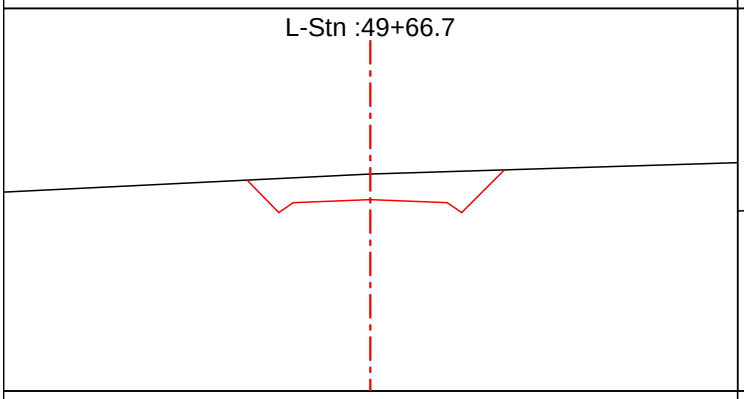
P-Stn :	22+80.3	Cut Dp:	2.0	CL Elev:	67.6
V.Offset:	-2.0	H. Offset:	0.0	Index:	272

L-Stn :49+37.1



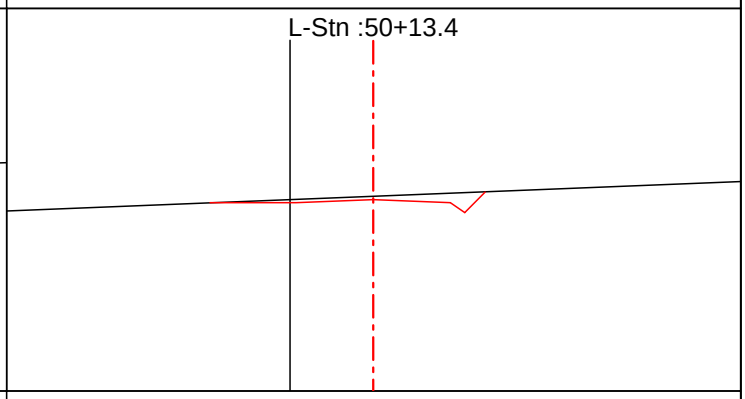
P-Stn :	23+03.5	Cut Dp:	2.0	CL Elev:	65.6
V.Offset:	-2.0	H. Offset:	0.0	Index:	273

L-Stn :49+66.7



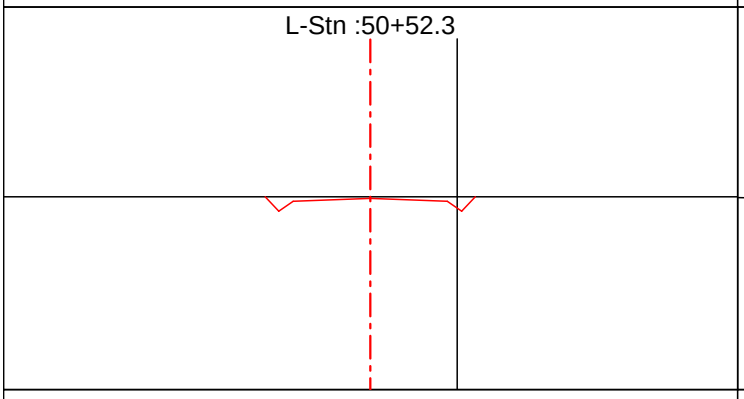
P-Stn :	23+33.2	Cut Dp:	2.7	CL Elev:	62.8
V.Offset:	-2.7	H. Offset:	0.0	Index:	274

L-Stn :50+13.4



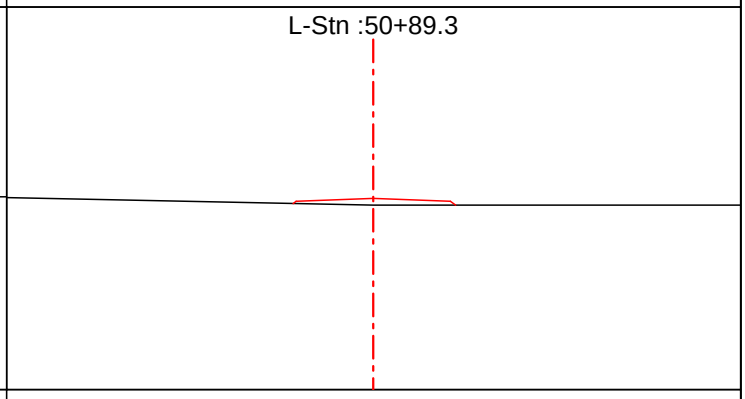
P-Stn :	23+80.6	Cut Dp:	0.4	CL Elev:	56.4
V.Offset:	0.0	H. Offset:	8.8	Index:	275

L-Stn :50+52.3



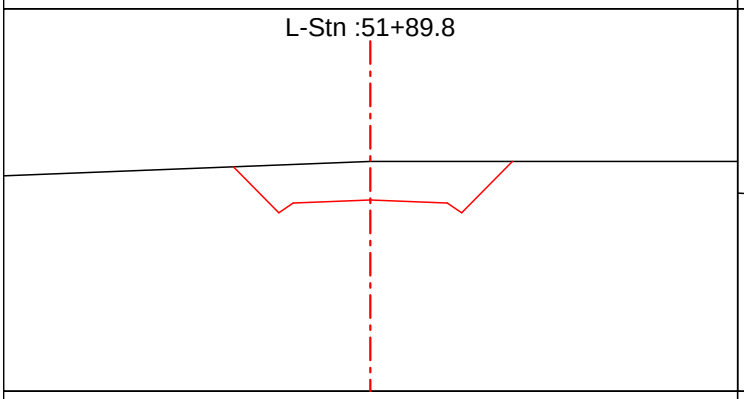
P-Stn :	24+20.4	Cut Dp:	0.1	CL Elev:	51.1
V.Offset:	-0.1	H. Offset:	-9.5	Index:	276

L-Stn :50+89.3



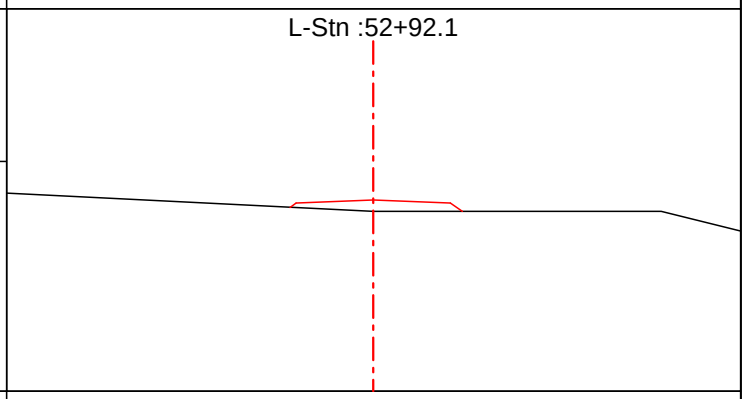
P-Stn :	24+59.9	Cut Dp:	-0.7	CL Elev:	46.1
V.Offset:	0.7	H. Offset:	0.0	Index:	277

L-Stn :51+89.8



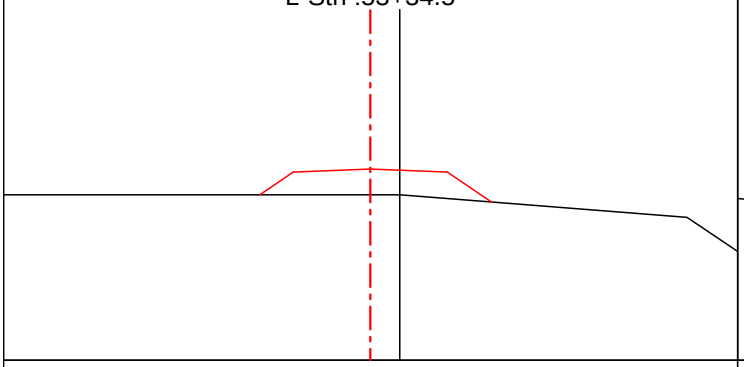
P-Stn :	25+60.4	Cut Dp:	4.0	CL Elev:	34.3
V.Offset:	-4.0	H. Offset:	0.0	Index:	278

L-Stn :52+92.1



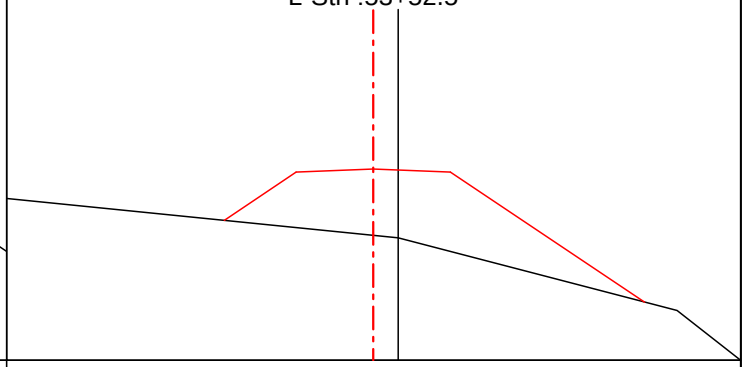
P-Stn :	26+62.7	Cut Dp:	-1.2	CL Elev:	27.2
V.Offset:	1.2	H. Offset:	0.0	Index:	279

L-Stn :53+34.5



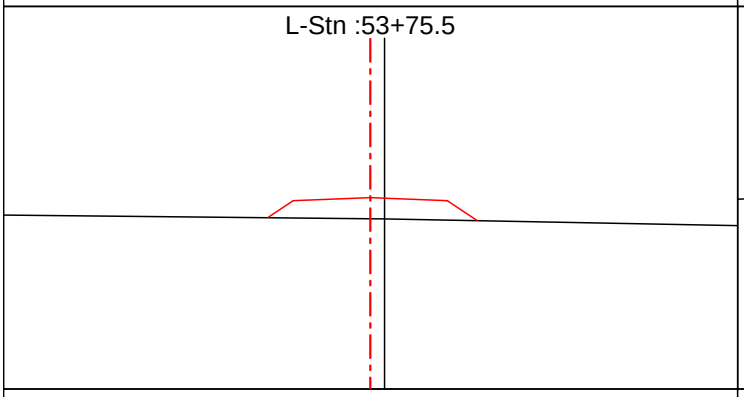
P-Stn :	27+05.0	Cut Dp:	-2.7	CL Elev:	25.8
V.Offset:	2.7	H. Offset:	-3.1	Index:	280

L-Stn :53+52.5



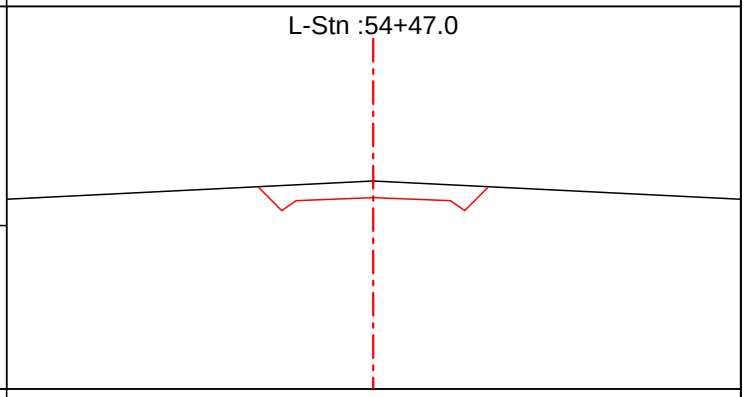
P-Stn :	27+23.0	Cut Dp:	-6.9	CL Elev:	25.6
V.Offset:	7.2	H. Offset:	-2.6	Index:	281

L-Stn :53+75.5



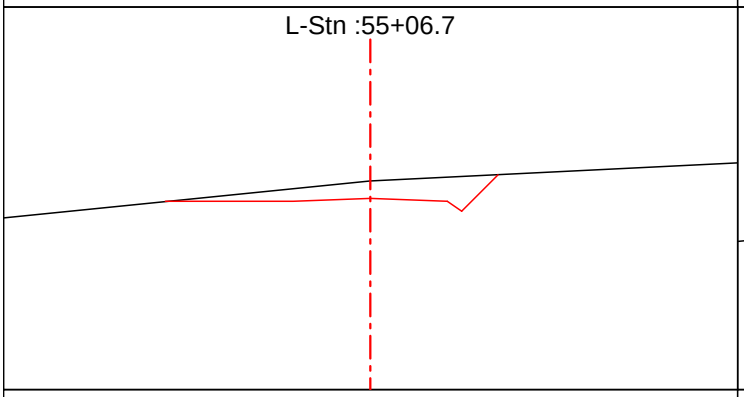
P-Stn :	27+46.0	Cut Dp:	-2.2	CL Elev:	25.4
V.Offset:	2.2	H. Offset:	-1.5	Index:	282

L-Stn :54+47.0



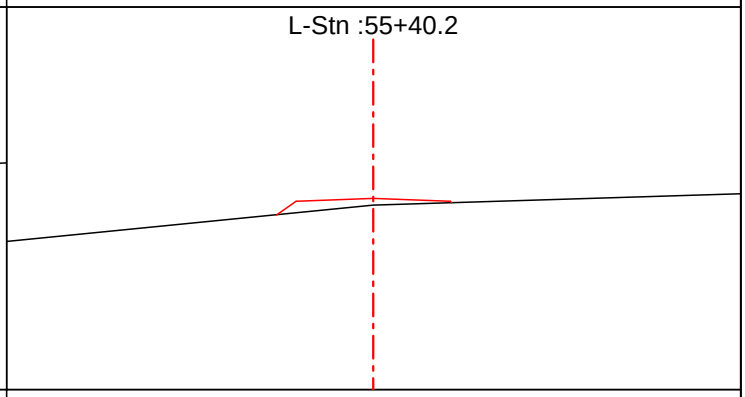
P-Stn :	28+17.4	Cut Dp:	1.7	CL Elev:	28.6
V.Offset:	-1.7	H. Offset:	0.0	Index:	283

L-Stn :55+06.7



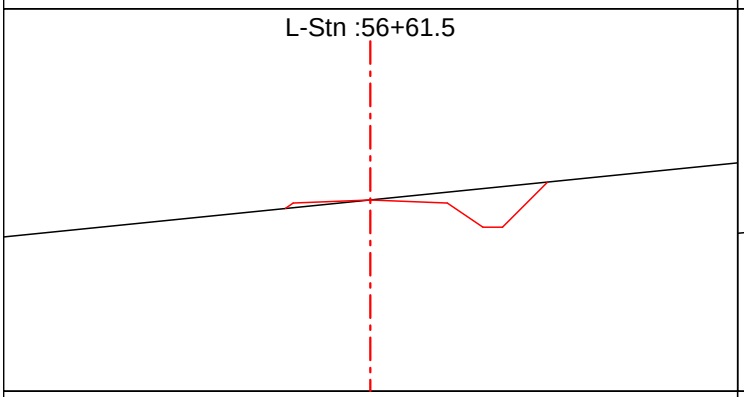
P-Stn :	28+77.1	Cut Dp:	1.8	CL Elev:	33.3
V.Offset:	-1.8	H. Offset:	0.0	Index:	284

L-Stn :55+40.2



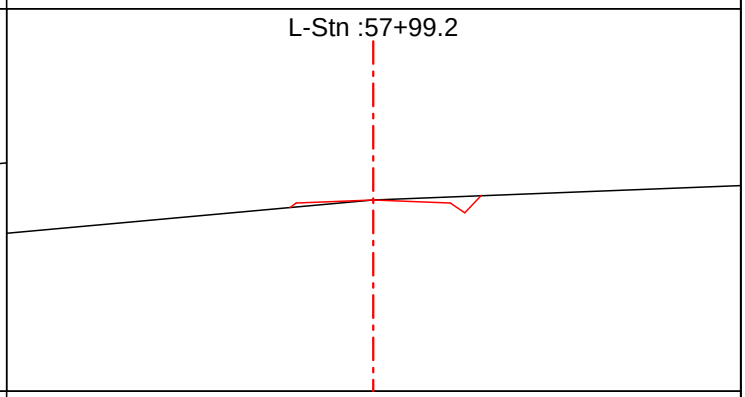
P-Stn :	29+10.6	Cut Dp:	-0.7	CL Elev:	35.9
V.Offset:	0.7	H. Offset:	0.0	Index:	285

L-Stn :56+61.5



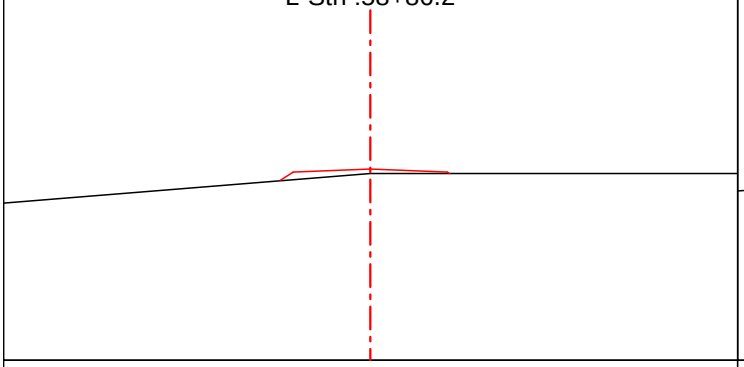
P-Stn :	30+31.9	Cut Dp:	0.0	CL Elev:	47.3
V.Offset:	0.0	H. Offset:	0.0	Index:	286

L-Stn :57+99.2



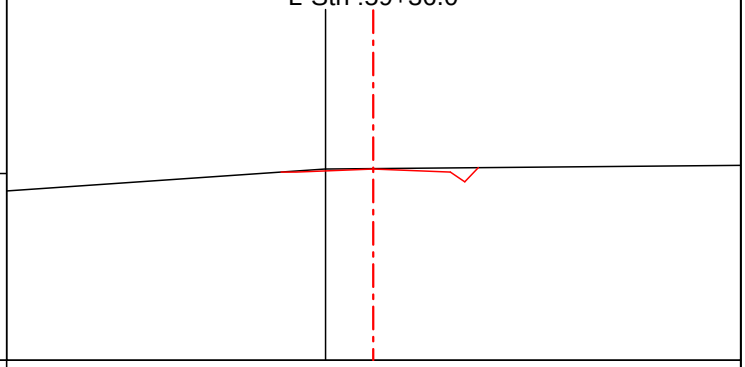
P-Stn :	31+69.7	Cut Dp:	0.0	CL Elev:	55.5
V.Offset:	0.0	H. Offset:	0.0	Index:	287

L-Stn :58+86.2



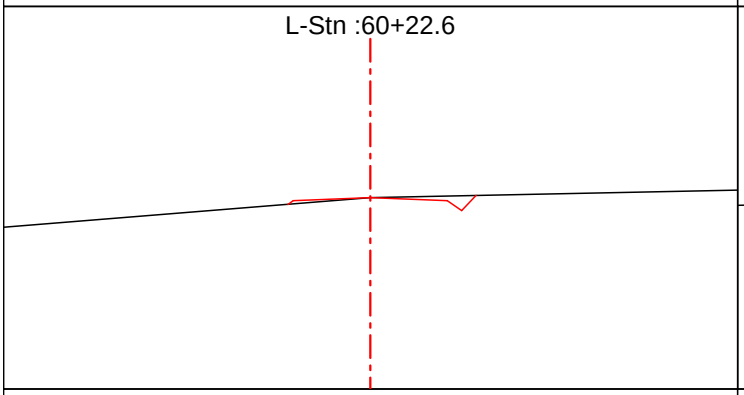
P-Stn :	32+56.6	Cut Dp:	-0.5	CL Elev:	58.6
V.Offset:	0.5	H. Offset:	0.0	Index:	288

L-Stn :59+36.0



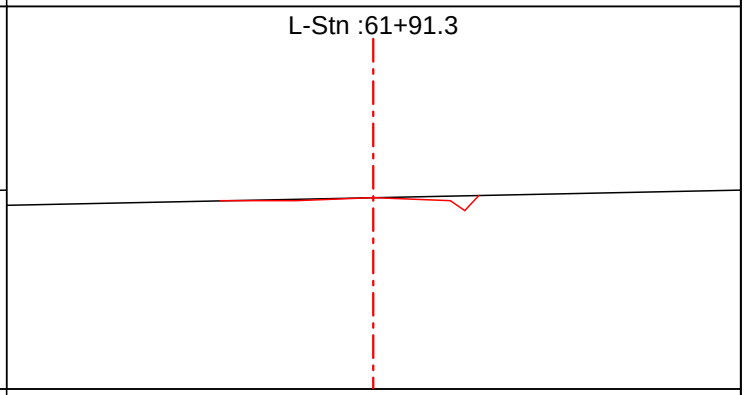
P-Stn :	33+06.9	Cut Dp:	0.1	CL Elev:	60.2
V.Offset:	0.0	H. Offset:	5.0	Index:	289

L-Stn :60+22.6



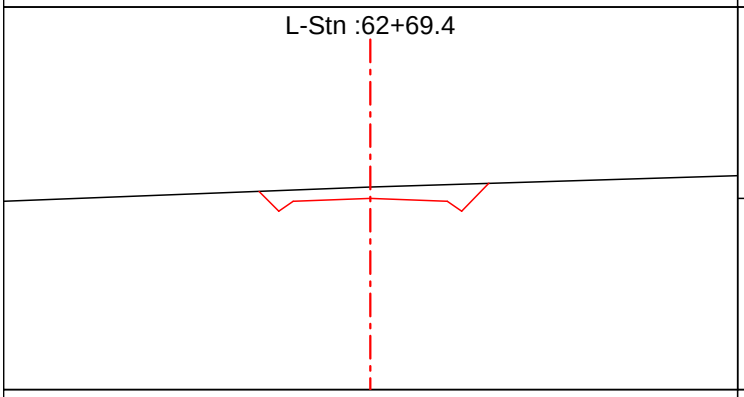
P-Stn :	33+94.1	Cut Dp:	0.0	CL Elev:	61.9
V.Offset:	0.0	H. Offset:	0.0	Index:	290

L-Stn :61+91.3



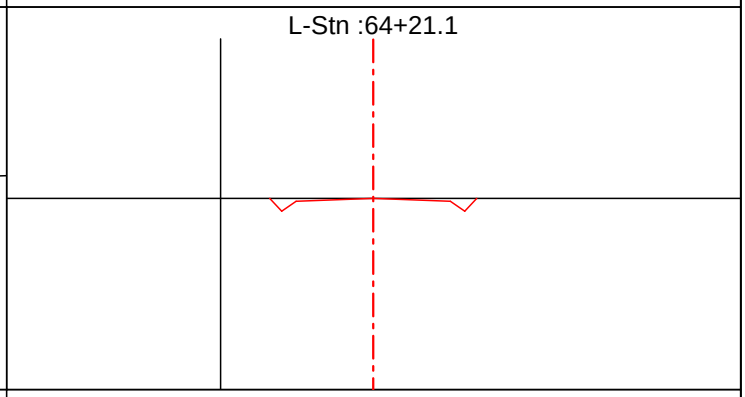
P-Stn :	35+62.8	Cut Dp:	0.0	CL Elev:	61.9
V.Offset:	0.0	H. Offset:	0.0	Index:	291

L-Stn :62+69.4



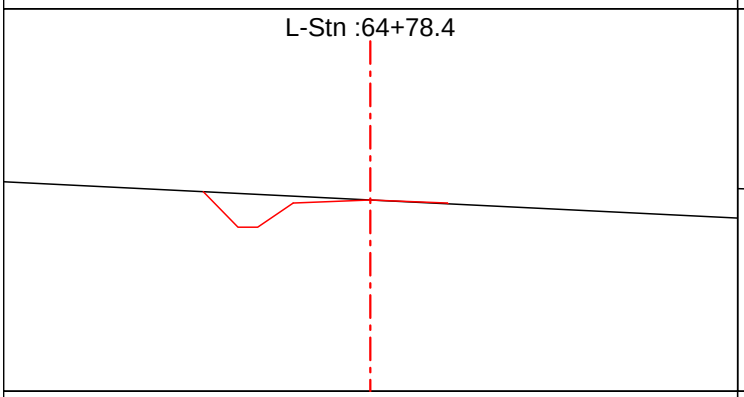
P-Stn :	36+40.8	Cut Dp:	1.2	CL Elev:	62.3
V.Offset:	-1.2	H. Offset:	0.0	Index:	292

L-Stn :64+21.1



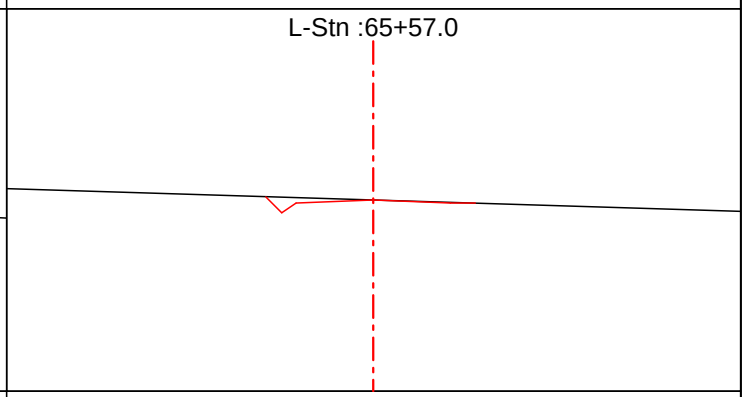
P-Stn :	37+95.1	Cut Dp:	0.0	CL Elev:	60.4
V.Offset:	0.0	H. Offset:	16.2	Index:	293

L-Stn :64+78.4



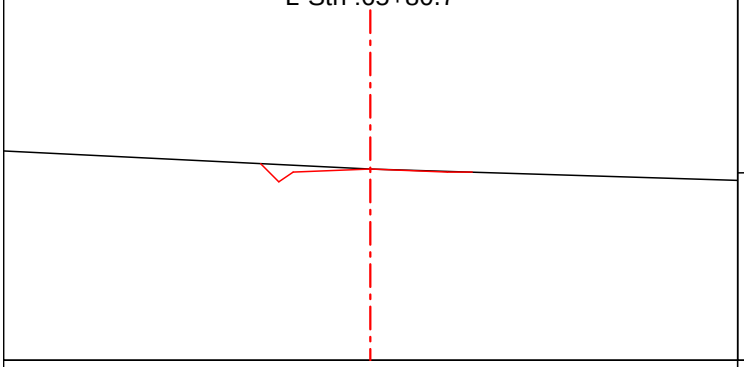
P-Stn :	38+53.5	Cut Dp:	0.0	CL Elev:	60.4
V.Offset:	0.0	H. Offset:	0.0	Index:	294

L-Stn :65+57.0



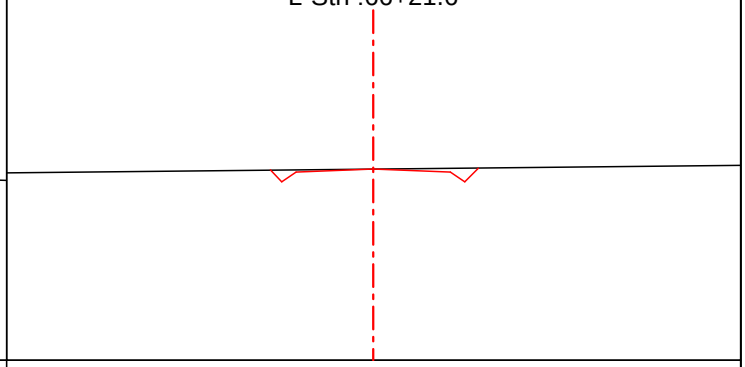
P-Stn :	39+32.1	Cut Dp:	0.0	CL Elev:	61.2
V.Offset:	0.0	H. Offset:	0.0	Index:	295

L-Stn :65+80.7



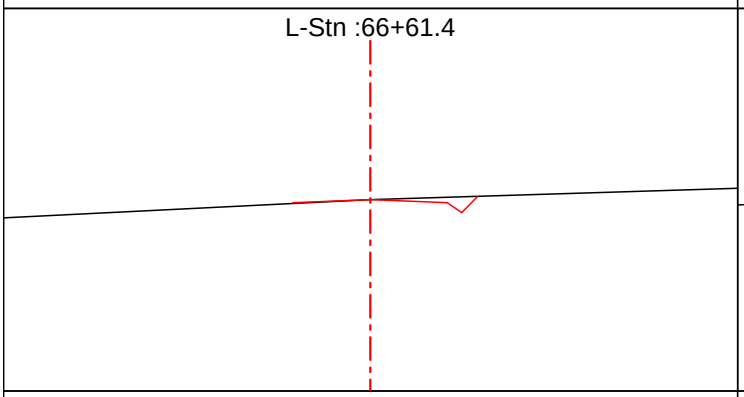
P-Stn :	39+55.8	Cut Dp:	0.0	CL Elev:	61.4
V.Offset:	0.0	H. Offset:	0.0	Index:	296

L-Stn :66+21.6



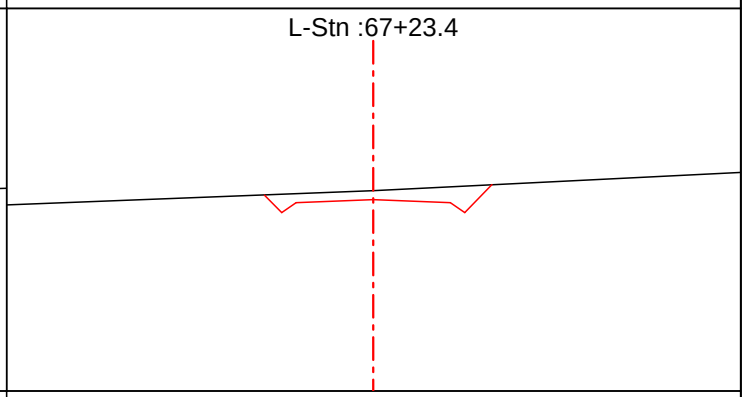
P-Stn :	39+96.7	Cut Dp:	0.0	CL Elev:	62.2
V.Offset:	0.0	H. Offset:	0.0	Index:	297

L-Stn :66+61.4



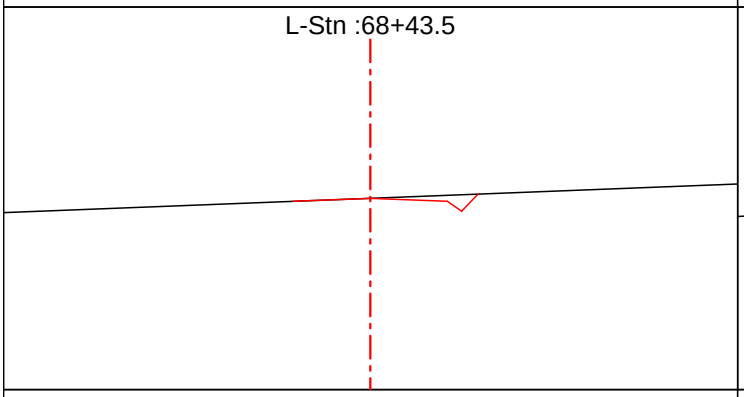
P-Stn :	40+36.5	Cut Dp:	0.0	CL Elev:	62.2
V.Offset:	0.0	H. Offset:	0.0	Index:	298

L-Stn :67+23.4



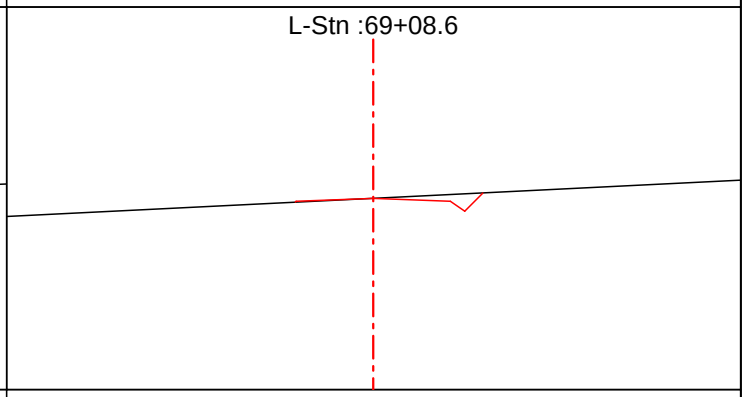
P-Stn :	40+98.5	Cut Dp:	0.9	CL Elev:	61.3
V.Offset:	-0.9	H. Offset:	0.0	Index:	299

L-Stn :68+43.5



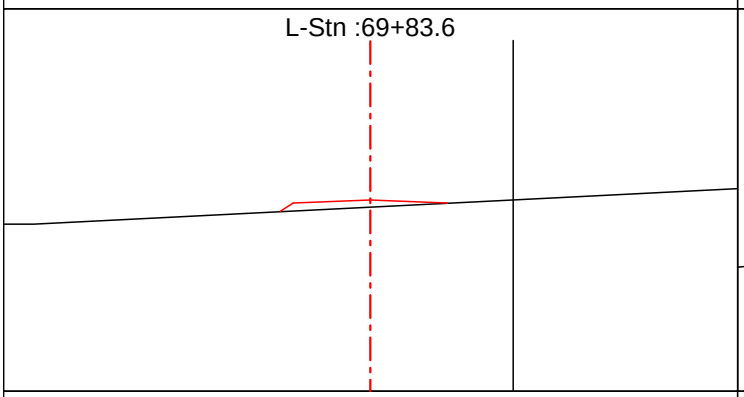
P-Stn :	42+18.6	Cut Dp:	0.0	CL Elev:	56.2
V.Offset:	0.0	H. Offset:	0.0	Index:	300

L-Stn :69+08.6



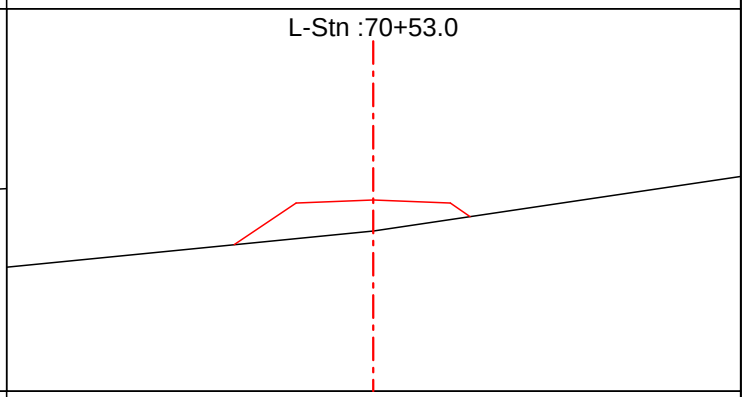
P-Stn :	42+83.7	Cut Dp:	0.0	CL Elev:	55.6
V.Offset:	0.0	H. Offset:	0.0	Index:	301

L-Stn :69+83.6



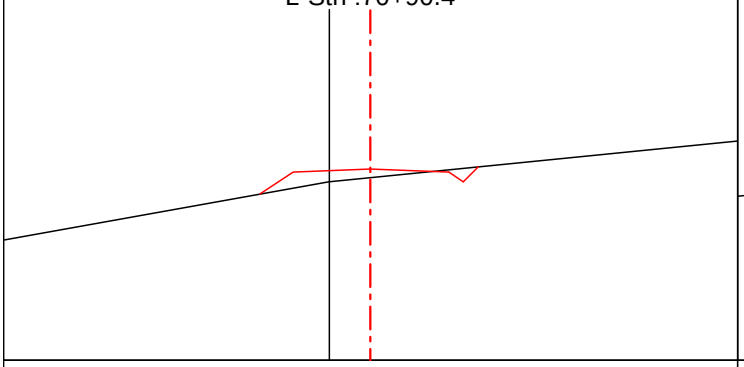
P-Stn :	43+58.7	Cut Dp:	-0.7	CL Elev:	54.8
V.Offset:	0.0	H. Offset:	-14.9	Index:	302

L-Stn :70+53.0



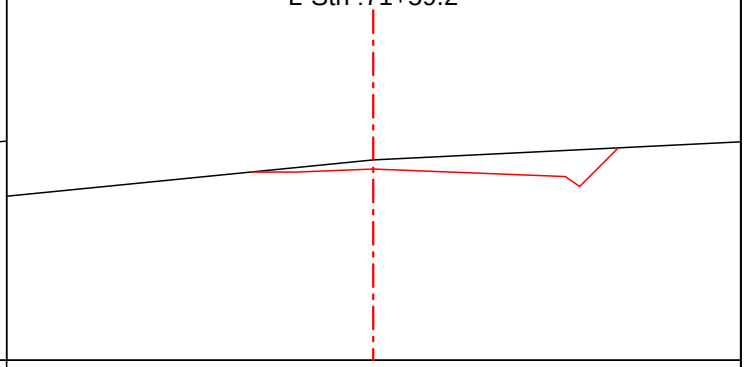
P-Stn :	44+28.2	Cut Dp:	-3.2	CL Elev:	54.6
V.Offset:	3.2	H. Offset:	0.0	Index:	303

L-Stn :70+90.4



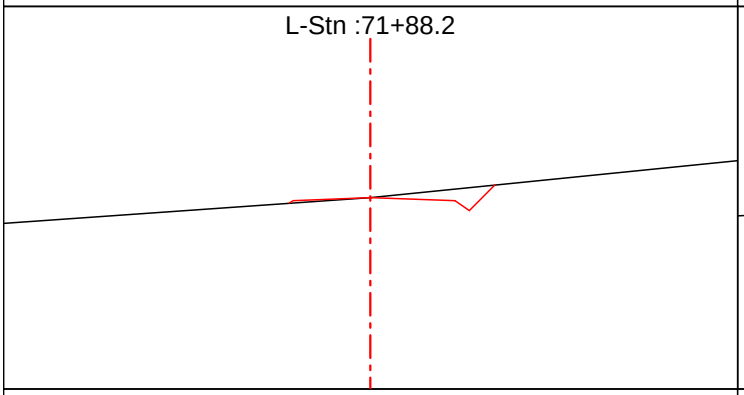
P-Stn :	44+66.3	Cut Dp:	-0.9	CL Elev:	55.4
V.Offset:	1.3	H. Offset:	4.3	Index:	304

L-Stn :71+59.2



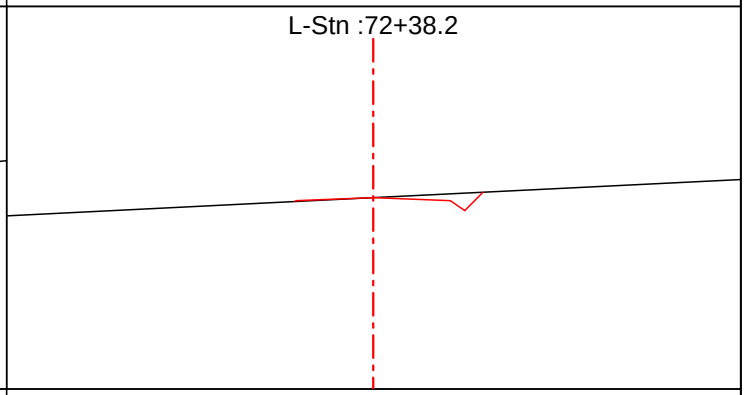
P-Stn :	45+35.9	Cut Dp:	0.9	CL Elev:	56.6
V.Offset:	-0.9	H. Offset:	0.0	Index:	305

L-Stn :71+88.2



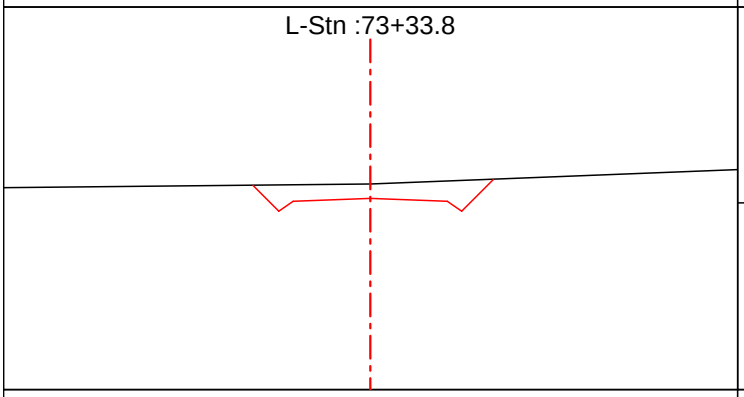
P-Stn :	45+64.9	Cut Dp:	0.0	CL Elev:	57.8
V.Offset:	0.0	H. Offset:	0.0	Index:	306

L-Stn :72+38.2



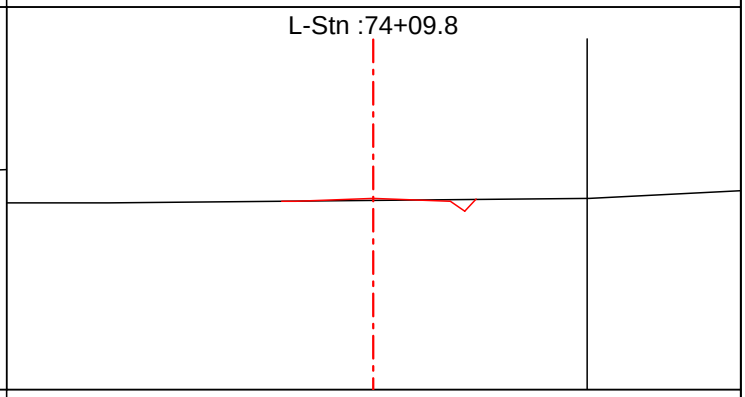
P-Stn :	46+14.8	Cut Dp:	0.0	CL Elev:	59.8
V.Offset:	0.0	H. Offset:	0.0	Index:	307

L-Stn :73+33.8



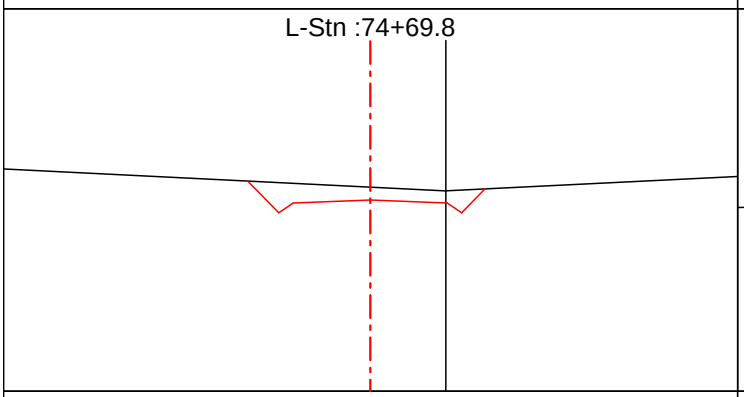
P-Stn :	47+10.5	Cut Dp:	1.5	CL Elev:	62.1
V.Offset:	-1.5	H. Offset:	0.0	Index:	308

L-Stn :74+09.8



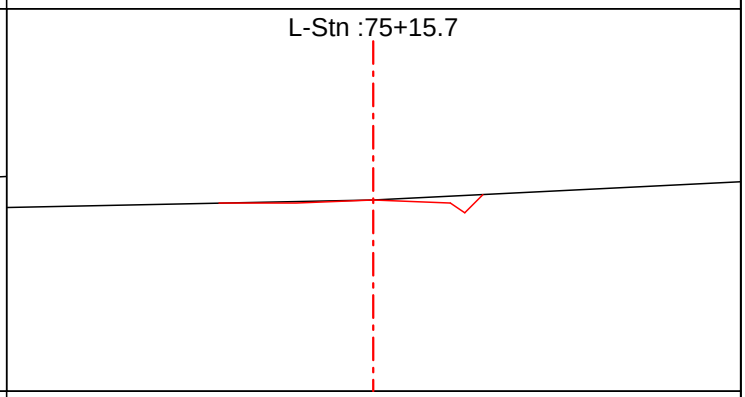
P-Stn :	47+90.9	Cut Dp:	-0.2	CL Elev:	62.0
V.Offset:	0.0	H. Offset:	-22.5	Index:	309

L-Stn :74+69.8



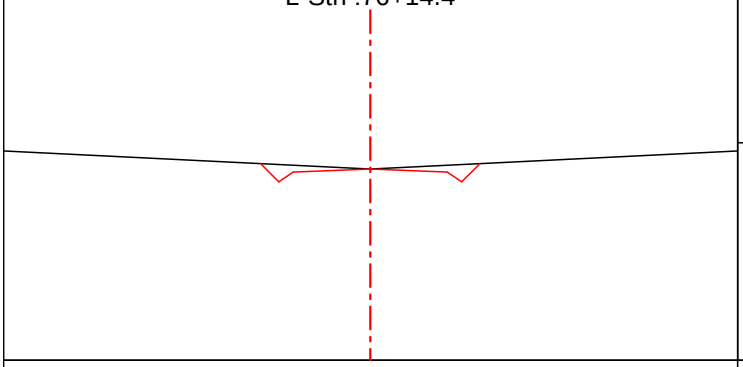
P-Stn :	48+56.3	Cut Dp:	1.3	CL Elev:	62.4
V.Offset:	-1.0	H. Offset:	-7.7	Index:	310

L-Stn :75+15.7



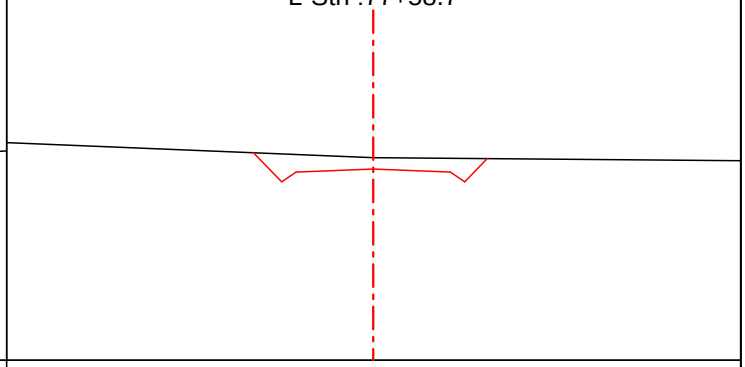
P-Stn :	49+00.9	Cut Dp:	0.0	CL Elev:	62.9
V.Offset:	0.0	H. Offset:	0.0	Index:	311

L-Stn :76+14.4



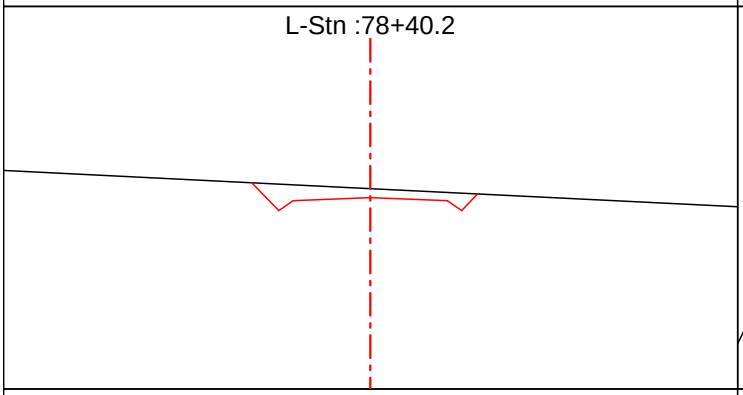
P-Stn :	49+99.6	Cut Dp:	0.0	CL Elev:	64.8
V.Offset:	0.0	H. Offset:	0.0	Index:	312

L-Stn :77+58.7



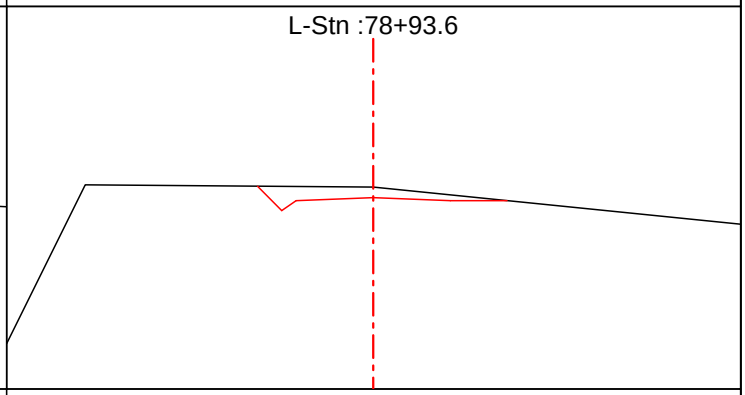
P-Stn :	51+43.9	Cut Dp:	1.2	CL Elev:	65.1
V.Offset:	-1.2	H. Offset:	0.0	Index:	313

L-Stn :78+40.2



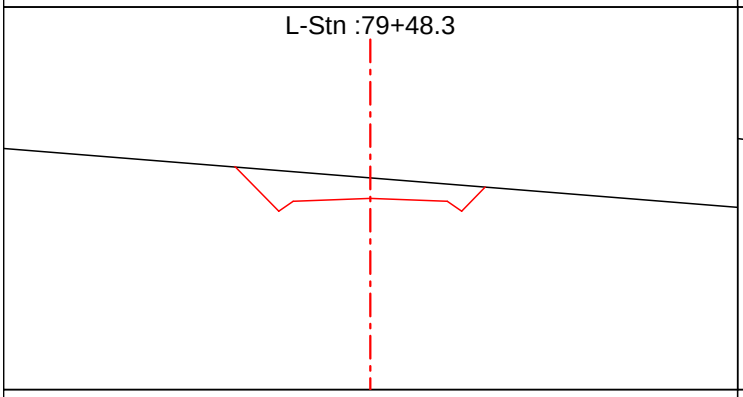
P-Stn :	52+25.5	Cut Dp:	0.9	CL Elev:	63.7
V.Offset:	-0.9	H. Offset:	0.0	Index:	314

L-Stn :78+93.6



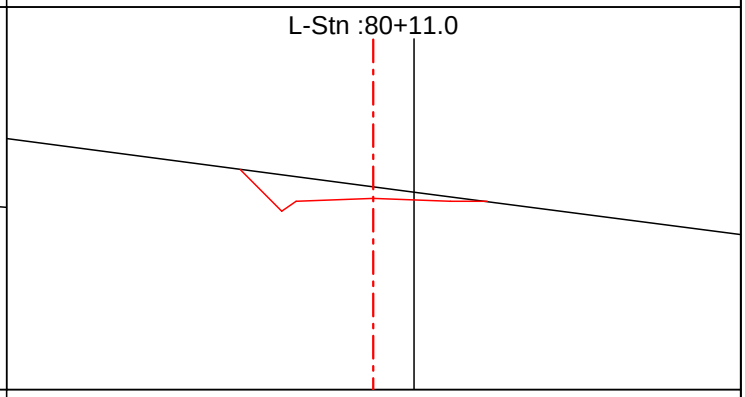
P-Stn :	52+78.9	Cut Dp:	1.1	CL Elev:	62.5
V.Offset:	-1.1	H. Offset:	0.0	Index:	315

L-Stn :79+48.3



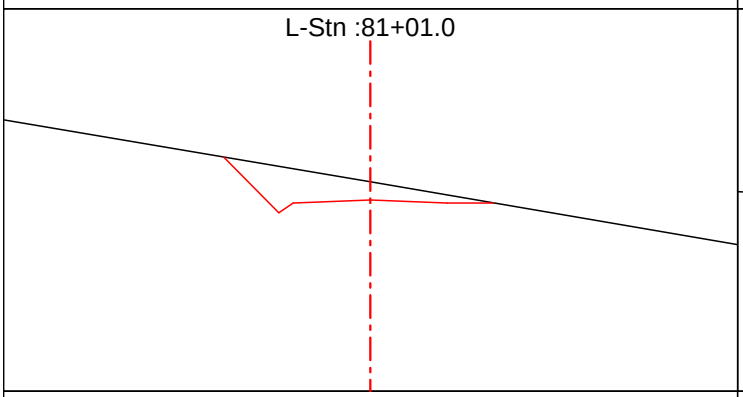
P-Stn :	53+33.6	Cut Dp:	2.1	CL Elev:	60.3
V.Offset:	-2.1	H. Offset:	0.0	Index:	316

L-Stn :80+11.0



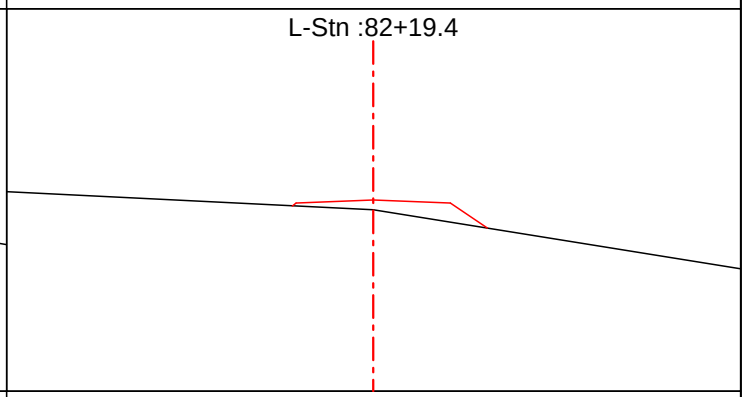
P-Stn :	53+96.5	Cut Dp:	1.2	CL Elev:	58.0
V.Offset:	-0.7	H. Offset:	-4.3	Index:	317

L-Stn :81+01.0



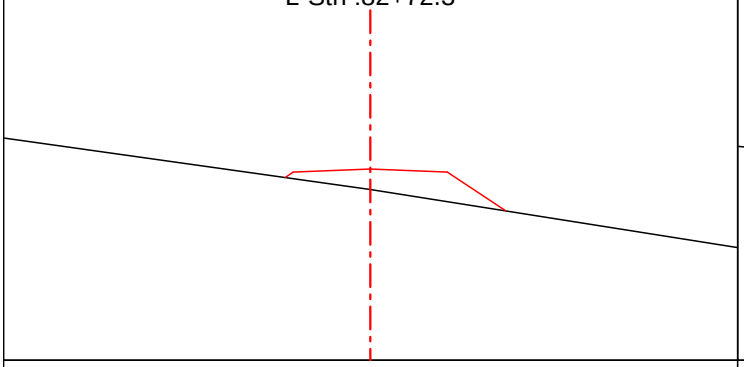
P-Stn :	54+86.8	Cut Dp:	1.9	CL Elev:	55.0
V.Offset:	-1.9	H. Offset:	0.0	Index:	318

L-Stn :82+19.4



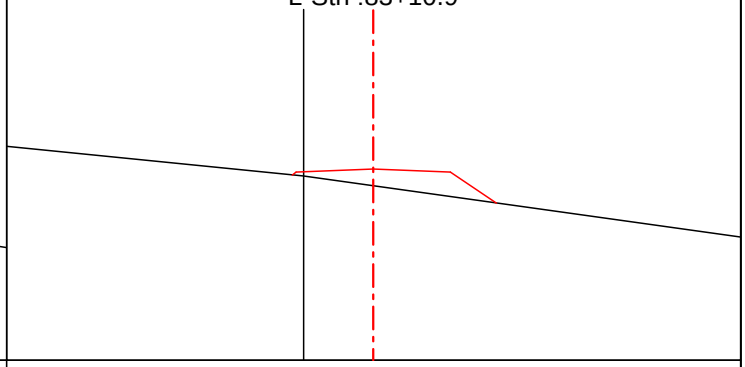
P-Stn :	56+05.2	Cut Dp:	-1.0	CL Elev:	52.0
V.Offset:	1.0	H. Offset:	0.0	Index:	319

L-Stn :82+72.3



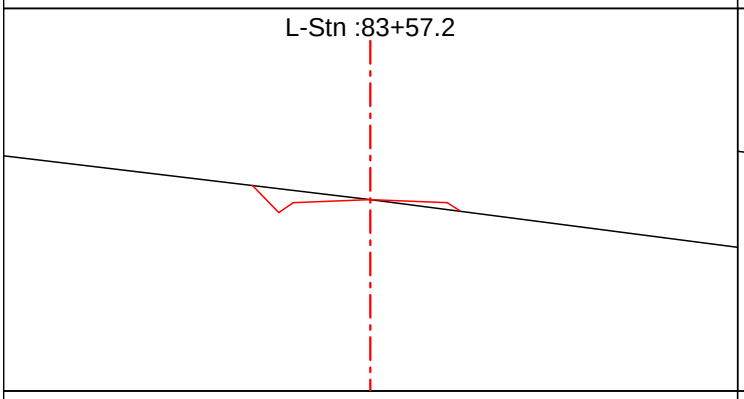
P-Stn :	56+58.1	Cut Dp:	-2.1	CL Elev:	51.0
V.Offset:	2.1	H. Offset:	0.0	Index:	320

L-Stn :83+10.9



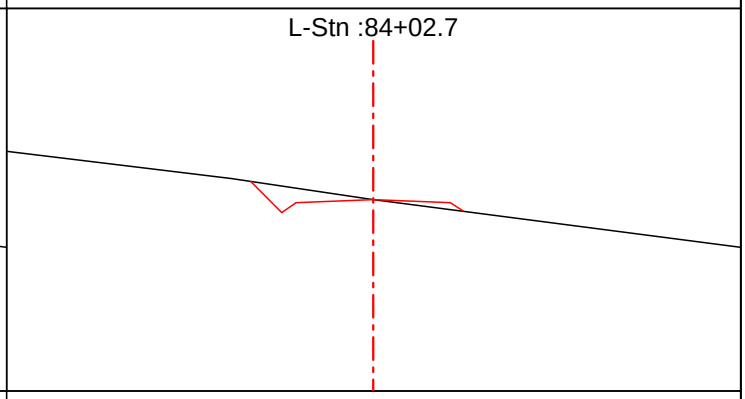
P-Stn :	56+97.4	Cut Dp:	-1.7	CL Elev:	51.1
V.Offset:	0.7	H. Offset:	7.3	Index:	321

L-Stn :83+57.2



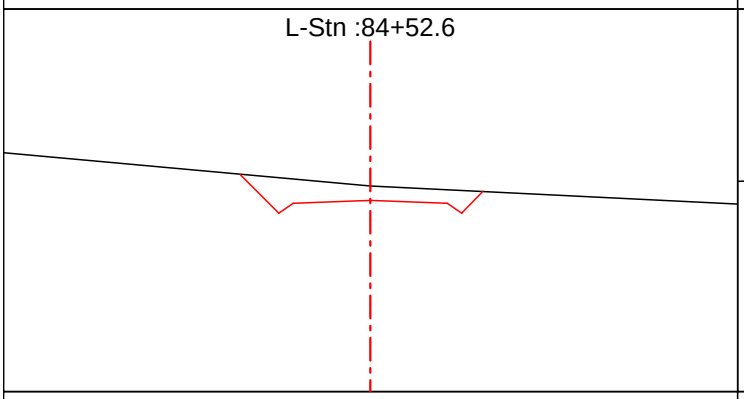
P-Stn :	57+44.6	Cut Dp:	0.0	CL Elev:	52.3
V.Offset:	0.0	H. Offset:	0.0	Index:	322

L-Stn :84+02.7



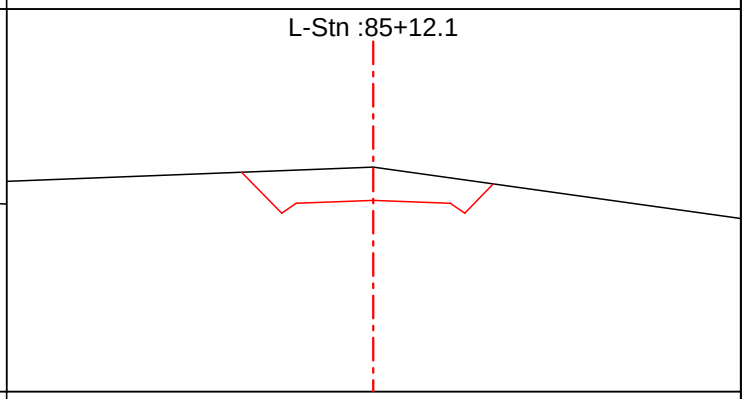
P-Stn :	57+90.1	Cut Dp:	0.0	CL Elev:	55.1
V.Offset:	0.0	H. Offset:	0.0	Index:	323

L-Stn :84+52.6



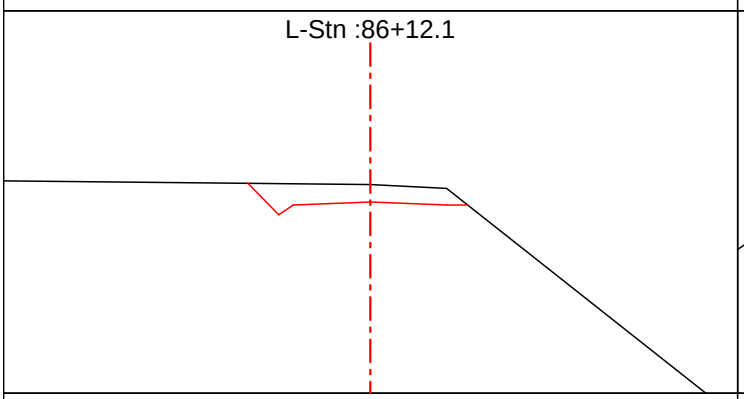
P-Stn :	58+40.0	Cut Dp:	1.5	CL Elev:	59.0
V.Offset:	-1.5	H. Offset:	0.0	Index:	324

L-Stn :85+12.1



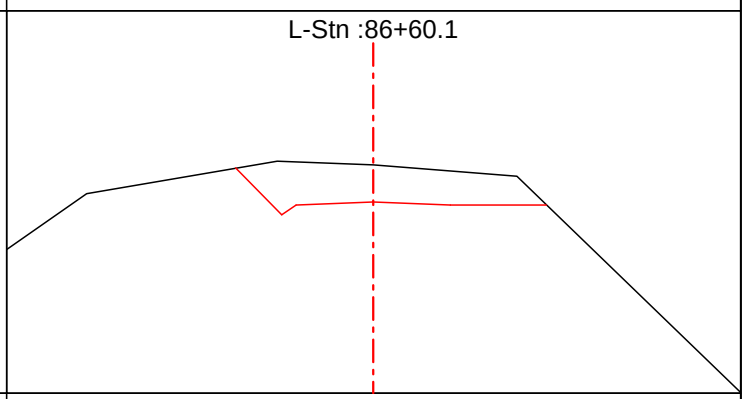
P-Stn :	58+99.4	Cut Dp:	3.5	CL Elev:	62.4
V.Offset:	-3.5	H. Offset:	0.0	Index:	325

L-Stn :86+12.1



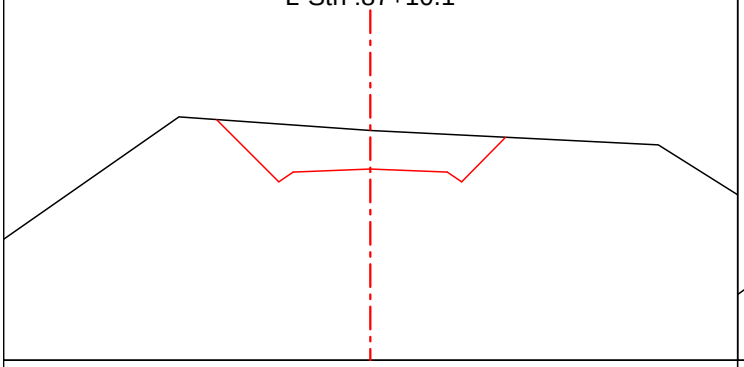
P-Stn :	59+99.4	Cut Dp:	1.8	CL Elev:	65.1
V.Offset:	-1.8	H. Offset:	0.0	Index:	326

L-Stn :86+60.1



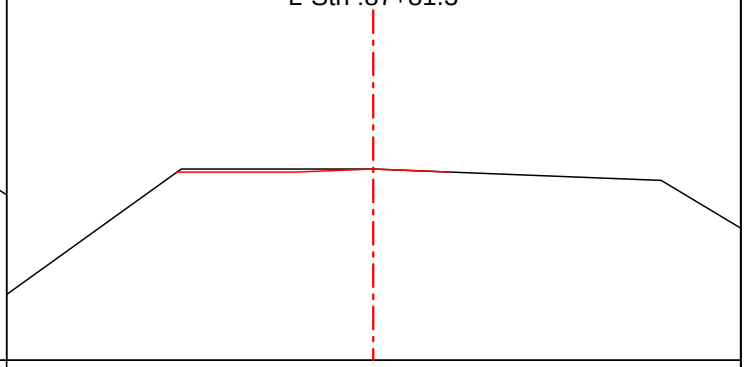
P-Stn :	60+47.5	Cut Dp:	3.9	CL Elev:	65.0
V.Offset:	-3.9	H. Offset:	0.0	Index:	327

L-Stn :87+10.1



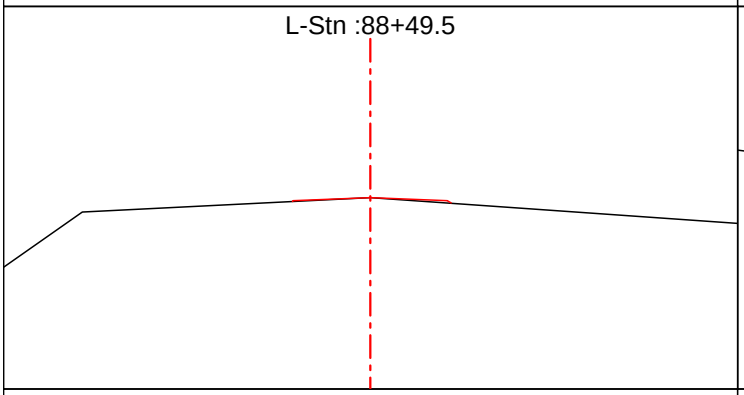
P-Stn :	60+97.4	Cut Dp:	4.0	CL Elev:	62.3
V.Offset:	-4.0	H. Offset:	0.0	Index:	328

L-Stn :87+81.3



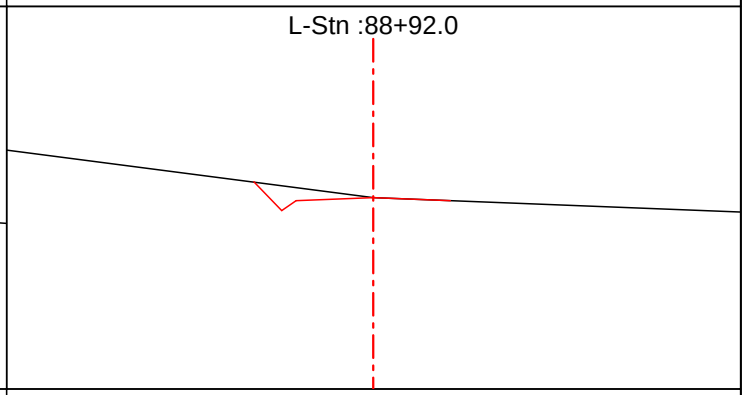
P-Stn :	61+68.6	Cut Dp:	0.0	CL Elev:	57.1
V.Offset:	0.0	H. Offset:	0.0	Index:	329

L-Stn :88+49.5



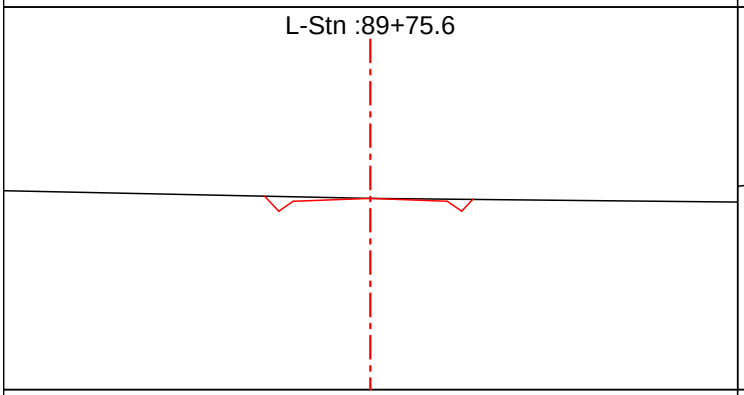
P-Stn :	62+36.8	Cut Dp:	0.0	CL Elev:	53.0
V.Offset:	0.0	H. Offset:	0.0	Index:	330

L-Stn :88+92.0



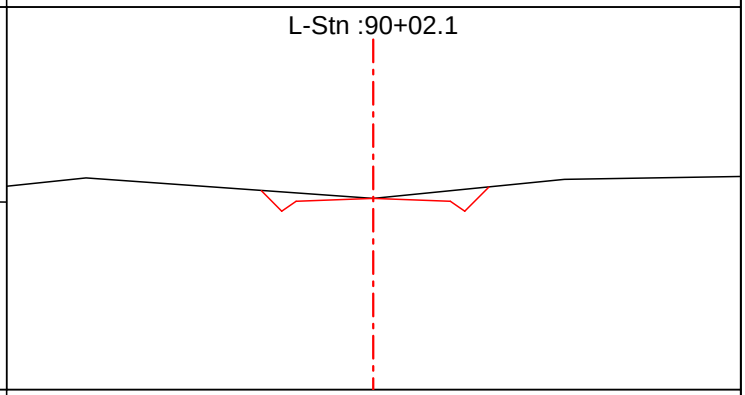
P-Stn :	62+79.4	Cut Dp:	0.0	CL Elev:	50.8
V.Offset:	0.0	H. Offset:	0.0	Index:	331

L-Stn :89+75.6



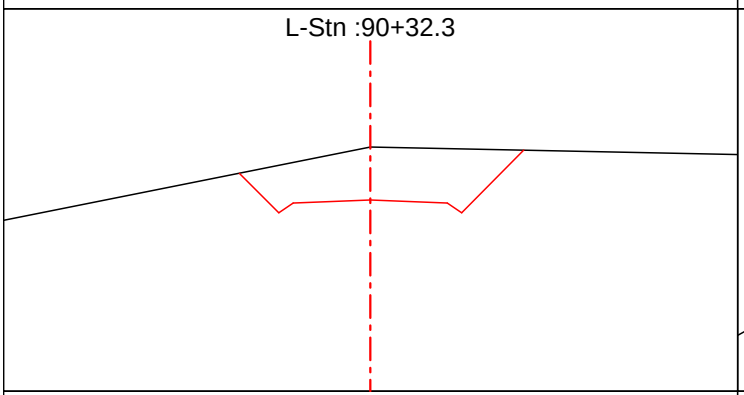
P-Stn :	63+63.0	Cut Dp:	0.0	CL Elev:	45.8
V.Offset:	0.0	H. Offset:	0.0	Index:	332

L-Stn :90+02.1



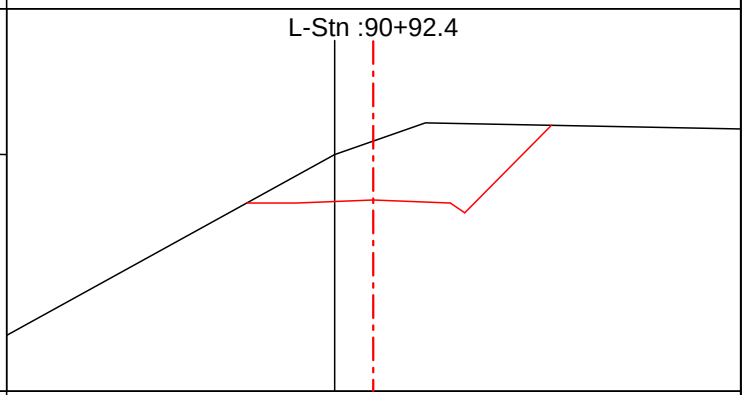
P-Stn :	63+89.4	Cut Dp:	0.0	CL Elev:	43.7
V.Offset:	0.0	H. Offset:	0.0	Index:	333

L-Stn :90+32.3



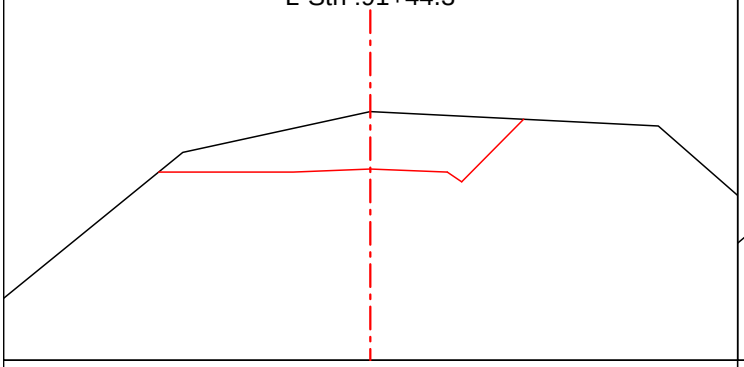
P-Stn :	64+19.7	Cut Dp:	5.5	CL Elev:	41.2
V.Offset:	-5.5	H. Offset:	0.0	Index:	334

L-Stn :90+92.4



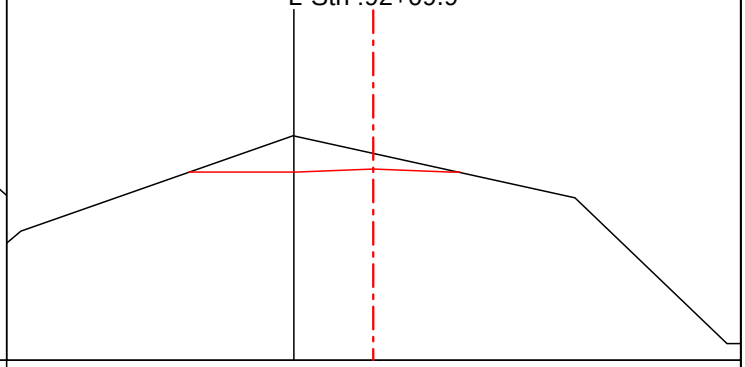
P-Stn :	64+80.0	Cut Dp:	6.1	CL Elev:	36.0
V.Offset:	-4.7	H. Offset:	4.0	Index:	335

L-Stn :91+44.3



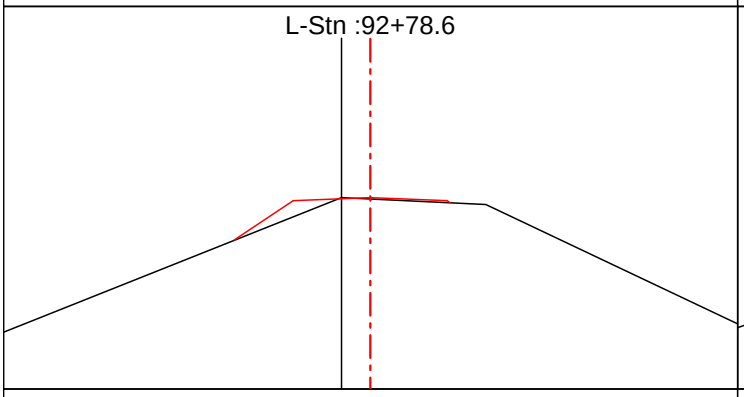
P-Stn :	65+32.1	Cut Dp:	6.0	CL Elev:	30.5
V.Offset:	-6.0	H. Offset:	0.0	Index:	336

L-Stn :92+09.9



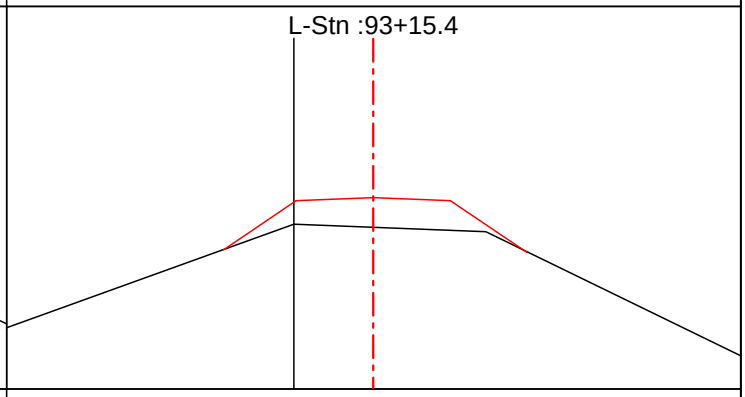
P-Stn :	65+97.2	Cut Dp:	1.7	CL Elev:	22.6
V.Offset:	-3.5	H. Offset:	8.3	Index:	337

L-Stn :92+78.6



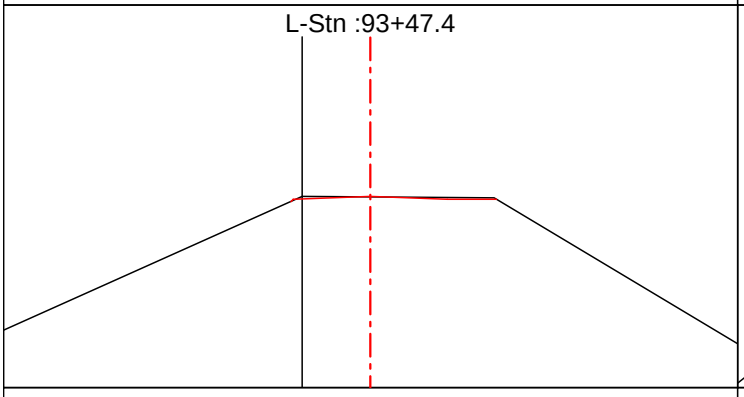
P-Stn :	66+65.2	Cut Dp:	-0.1	CL Elev:	14.5
V.Offset:	0.0	H. Offset:	3.0	Index:	338

L-Stn :93+15.4



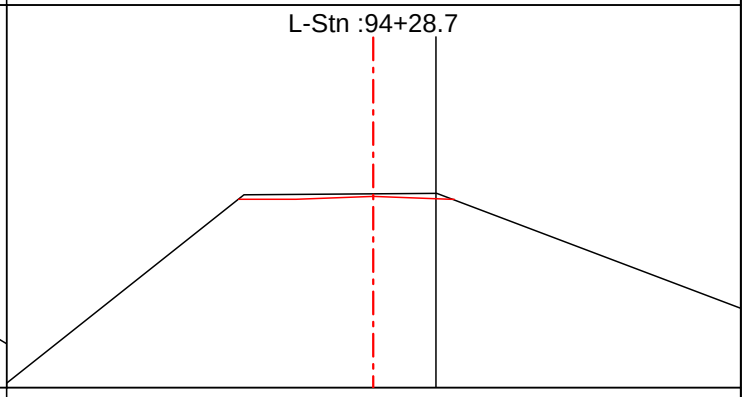
P-Stn :	67+01.8	Cut Dp:	-3.1	CL Elev:	11.5
V.Offset:	2.8	H. Offset:	8.3	Index:	339

L-Stn :93+47.4



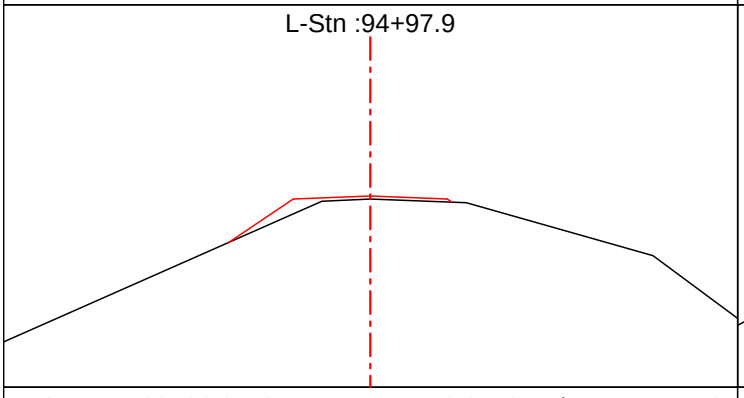
P-Stn :	67+34.7	Cut Dp:	0.0	CL Elev:	10.3
V.Offset:	0.0	H. Offset:	7.1	Index:	340

L-Stn :94+28.7



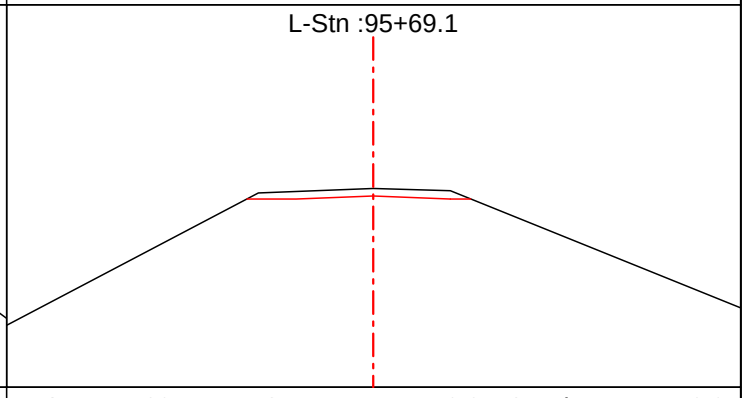
P-Stn :	68+16.2	Cut Dp:	0.3	CL Elev:	5.9
V.Offset:	-0.3	H. Offset:	-6.6	Index:	341

L-Stn :94+97.9

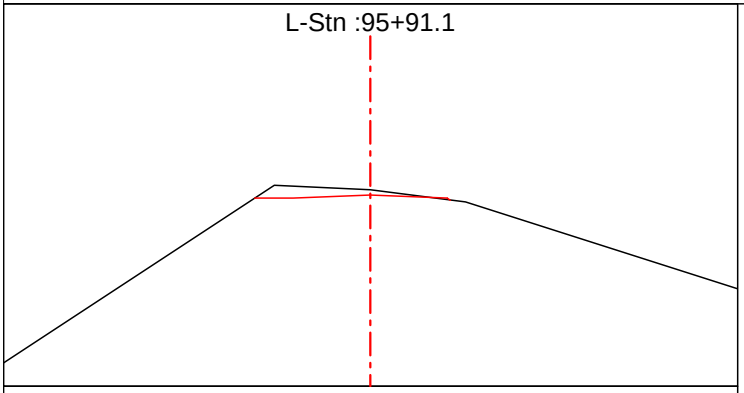


P-Stn :	68+86.3	Cut Dp:	-0.3	CL Elev:	5.2
V.Offset:	0.3	H. Offset:	0.0	Index:	342

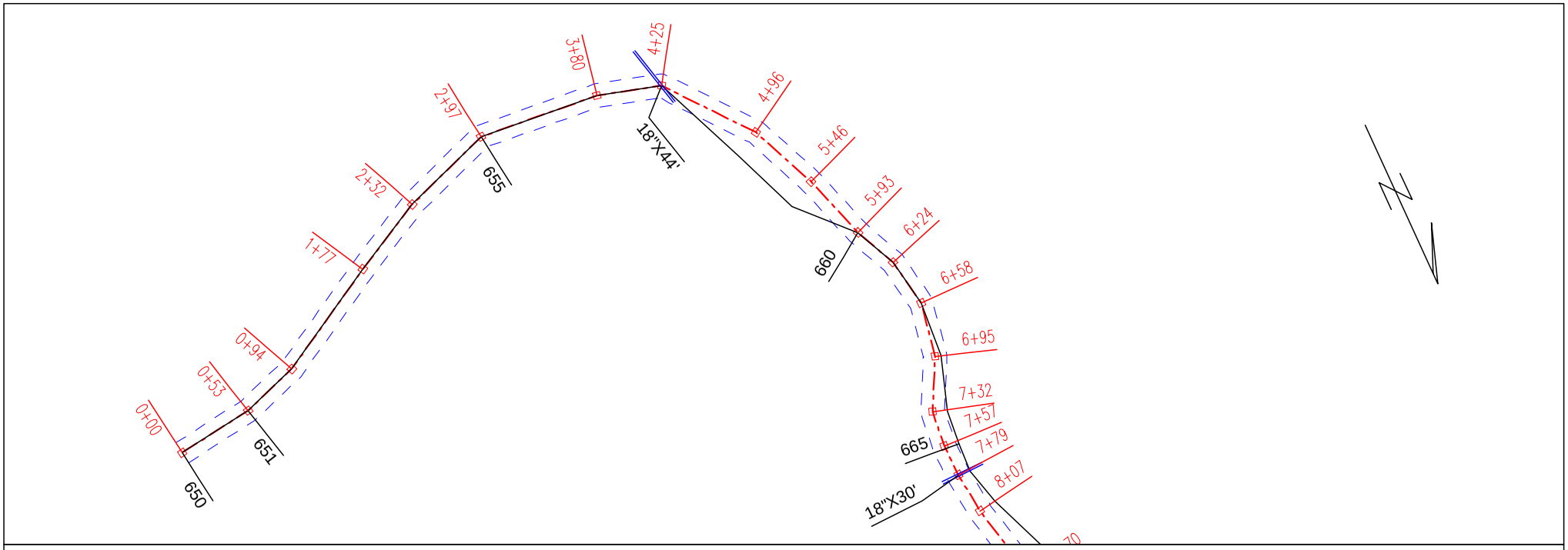
L-Stn :95+69.1

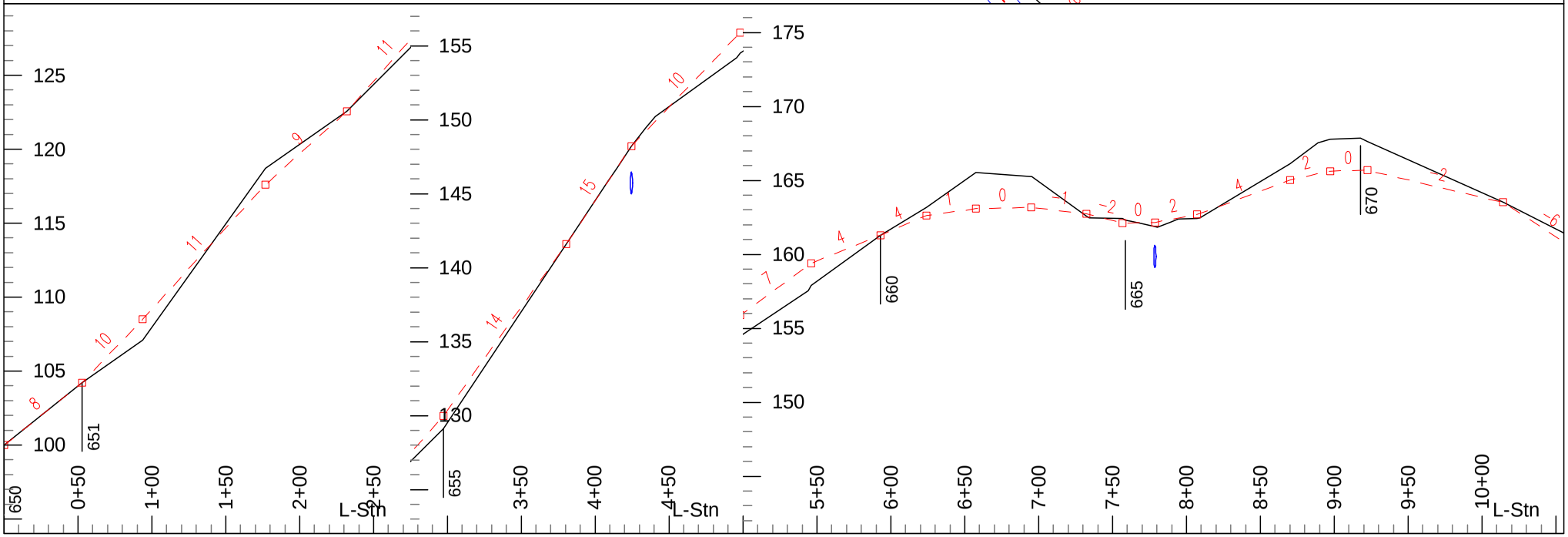


P-Stn :	69+57.4	Cut Dp:	0.8	CL Elev:	6.9
V.Offset:	-0.8	H. Offset:	0.0	Index:	343



P-Stn :	69+79.4	Cut Dp:	0.5	CL Elev:	7.2
V.Offset:	-0.5	H. Offset:	0.0	Index:	344



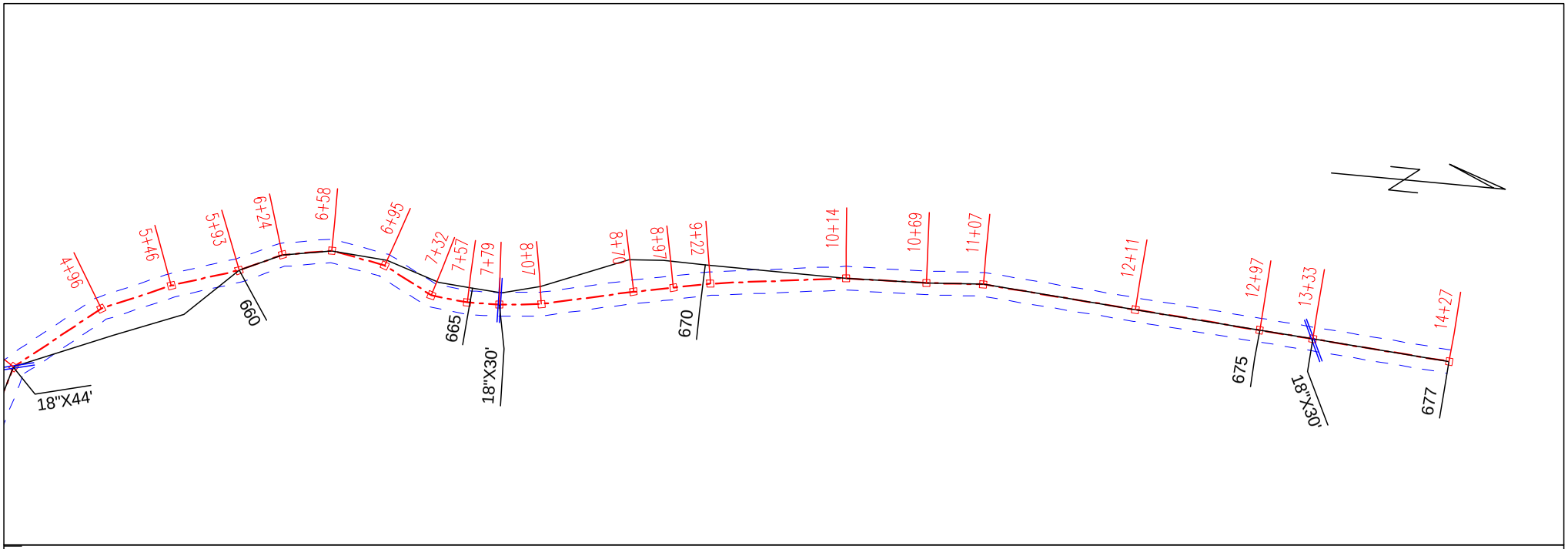


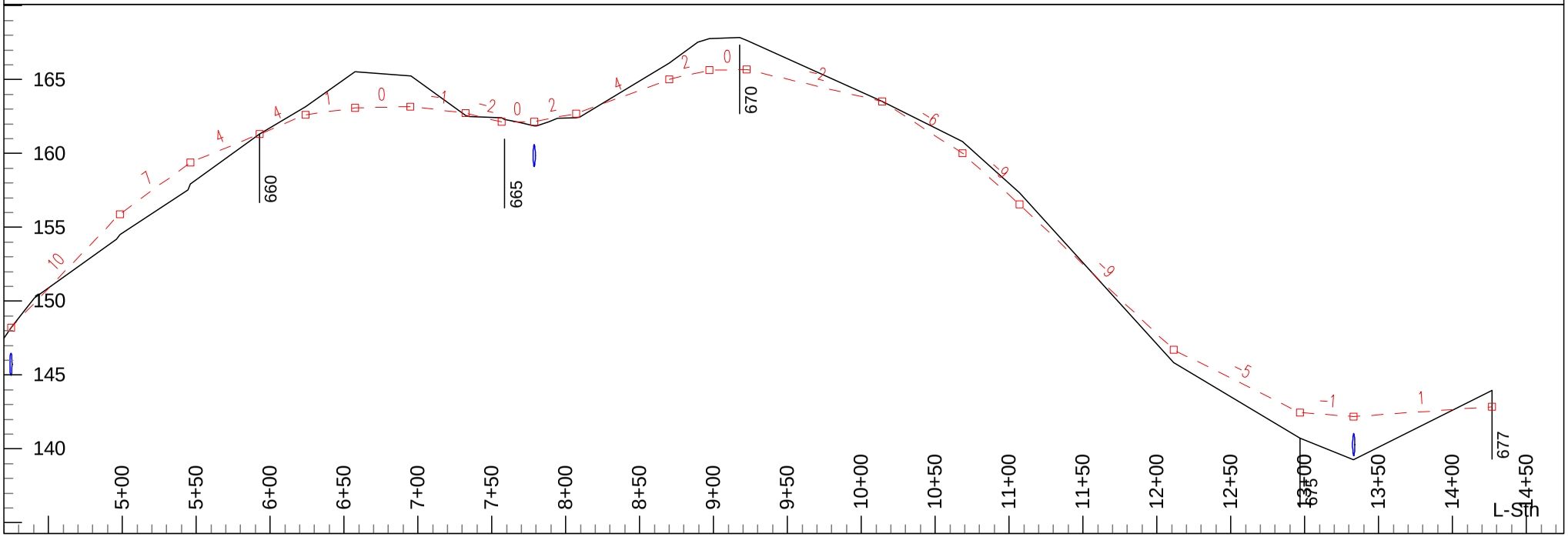
Tip Top Timber Sale
Spur 6
Contract #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Plan Scale 1:1200
Profile Vert Scale 1:120
Profile Horz Scale 1:1200

Engineer: Heymann
18/08/16





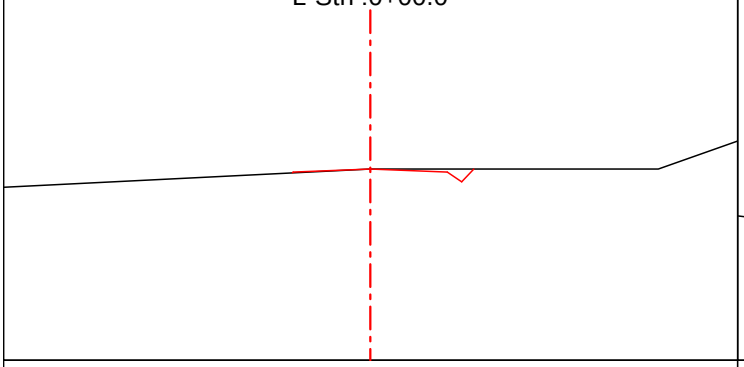
Tip Top Timber Sale
Spur 6
Contract #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Plan Scale 1:1200
Profile Vert Scale 1:120
Profile Horz Scale 1:1200

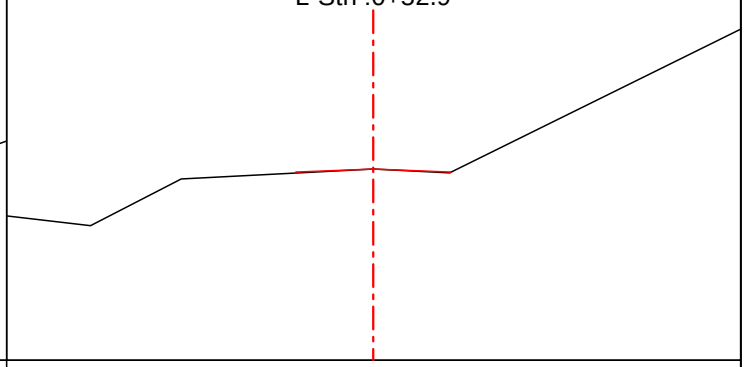
Engineer: Heymann
18/08/16
Page 2 of 2

L-Stn :0+00.0



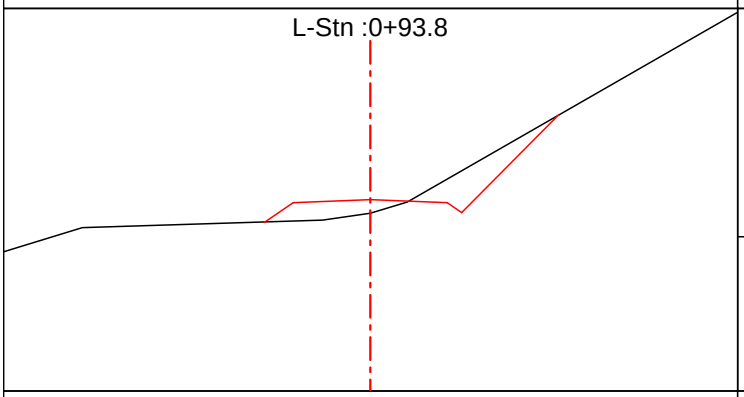
P-Stn :	0+00.0	Cut Dp:	0.0	CL Elev:	100.0
V.Offset:	0.0	H. Offset:	0.0	Index:	650

L-Stn :0+52.9



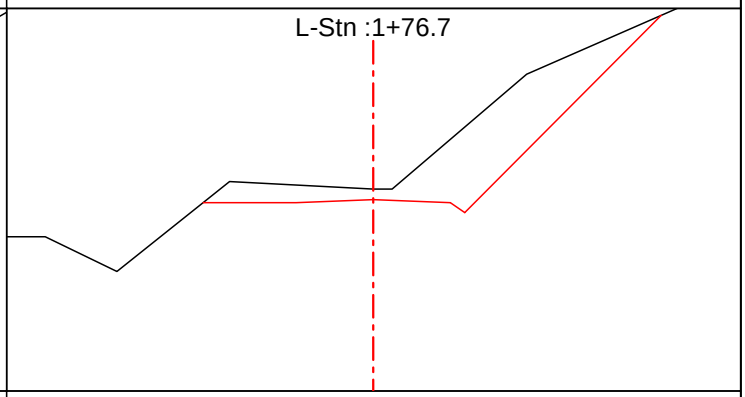
P-Stn :	0+52.9	Cut Dp:	0.0	CL Elev:	104.2
V.Offset:	0.0	H. Offset:	0.0	Index:	651

L-Stn :0+93.8



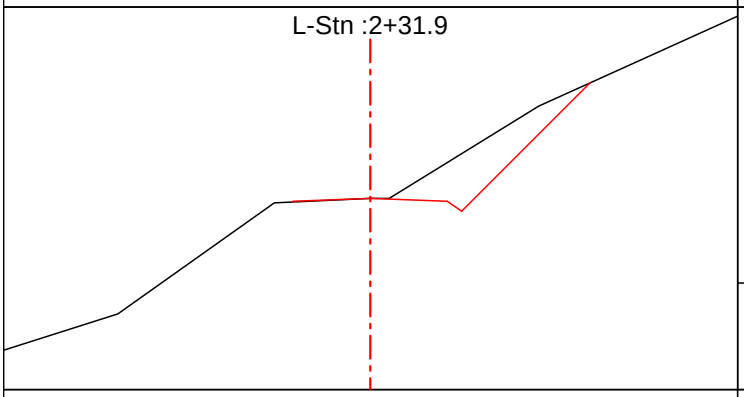
P-Stn :	0+93.8	Cut Dp:	-1.4	CL Elev:	108.5
V.Offset:	1.4	H. Offset:	0.0	Index:	652

L-Stn :1+76.7



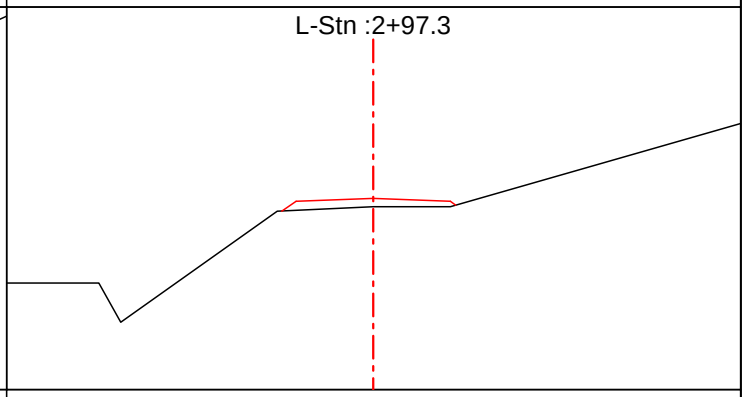
P-Stn :	1+76.7	Cut Dp:	1.1	CL Elev:	117.6
V.Offset:	-1.1	H. Offset:	0.0	Index:	653

L-Stn :2+31.9



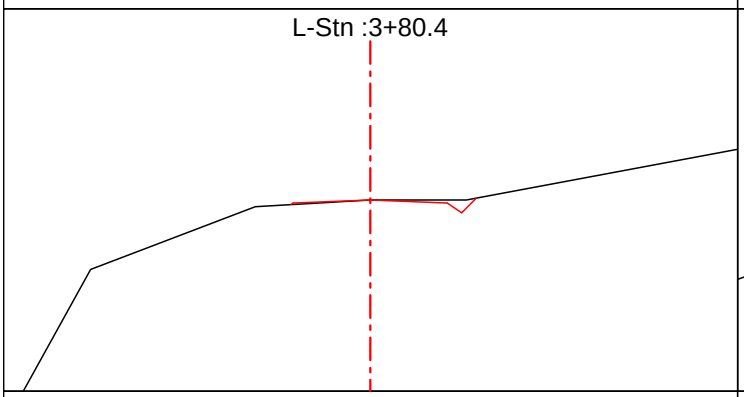
P-Stn :	2+31.9	Cut Dp:	0.0	CL Elev:	122.6
V.Offset:	0.0	H. Offset:	0.0	Index:	654

L-Stn :2+97.3



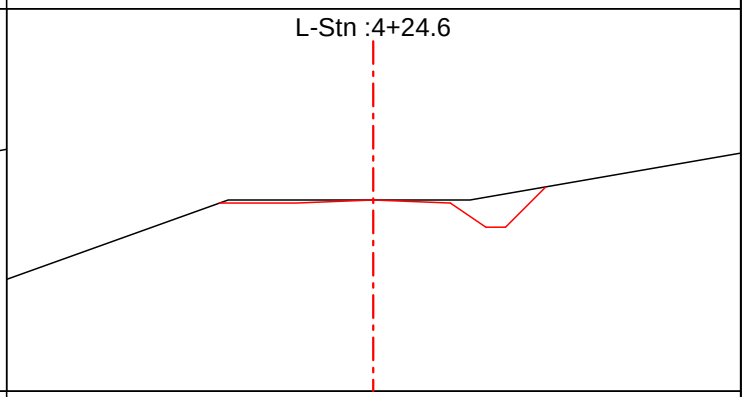
P-Stn :	2+97.3	Cut Dp:	-0.9	CL Elev:	130.0
V.Offset:	0.9	H. Offset:	0.0	Index:	655

L-Stn :3+80.4



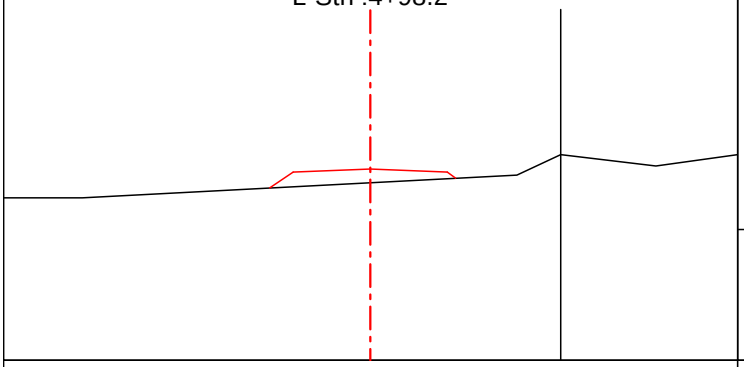
P-Stn :	3+80.4	Cut Dp:	0.0	CL Elev:	141.6
V.Offset:	0.0	H. Offset:	0.0	Index:	656

L-Stn :4+24.6



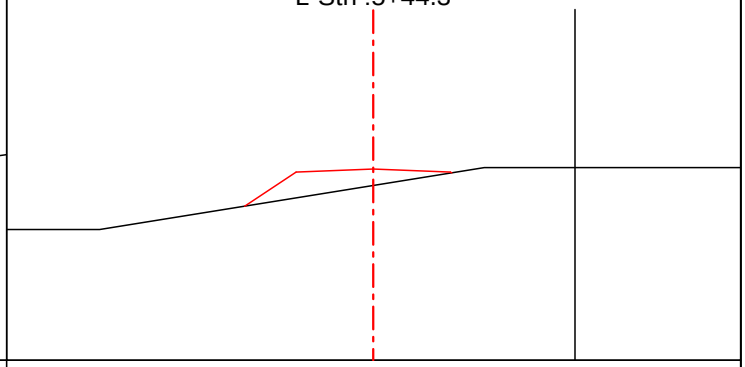
P-Stn :	4+24.6	Cut Dp:	0.0	CL Elev:	148.2
V.Offset:	0.0	H. Offset:	0.0	Index:	657

L-Stn :4+98.2



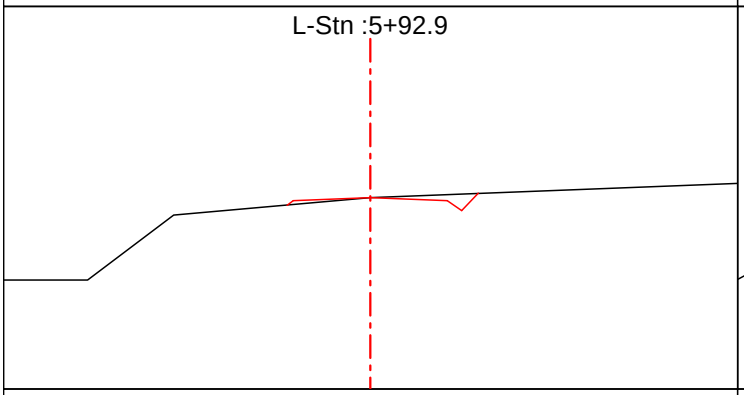
P-Stn :	4+95.2	Cut Dp:	-1.4	CL Elev:	155.9
V.Offset:	-1.5	H. Offset:	-19.8	Index:	658

L-Stn :5+44.3



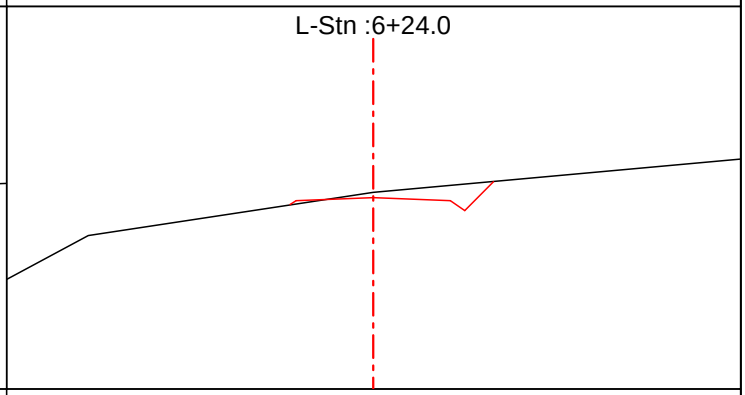
P-Stn :	5+45.2	Cut Dp:	-1.7	CL Elev:	159.3
V.Offset:	-0.1	H. Offset:	-21.4	Index:	659

L-Stn :5+92.9



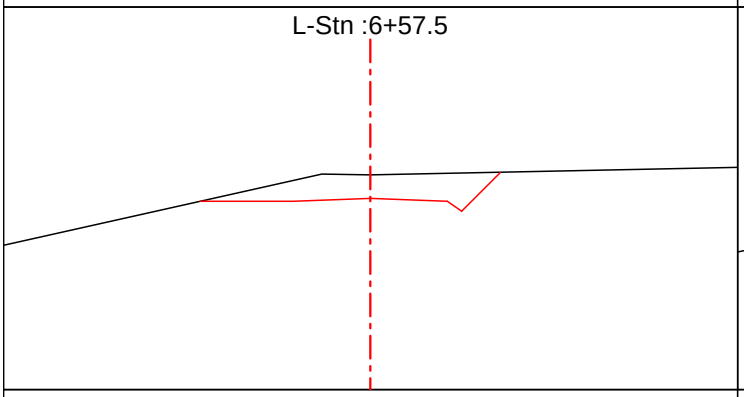
P-Stn :	5+93.1	Cut Dp:	0.0	CL Elev:	161.3
V.Offset:	0.0	H. Offset:	0.0	Index:	660

L-Stn :6+24.0



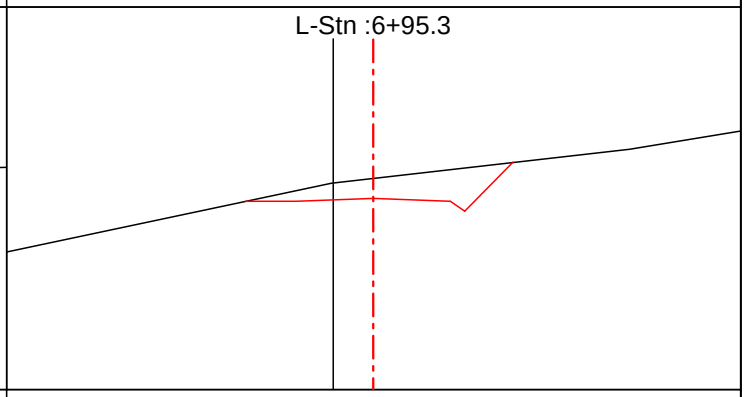
P-Stn :	6+24.2	Cut Dp:	0.6	CL Elev:	162.6
V.Offset:	-0.6	H. Offset:	0.0	Index:	661

L-Stn :6+57.5



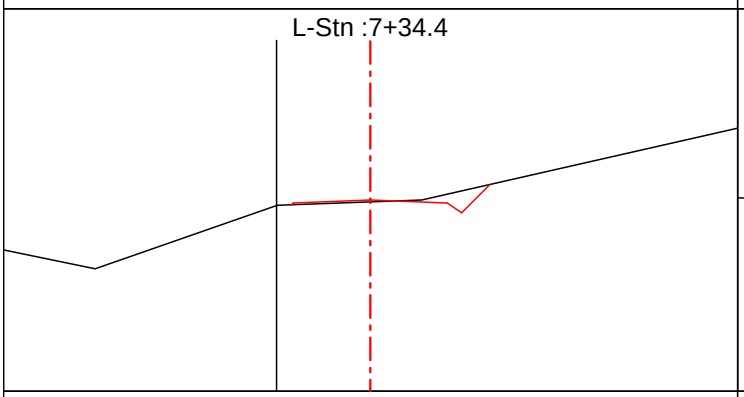
P-Stn :	6+57.7	Cut Dp:	2.4	CL Elev:	163.1
V.Offset:	-2.4	H. Offset:	0.0	Index:	662

L-Stn :6+95.3



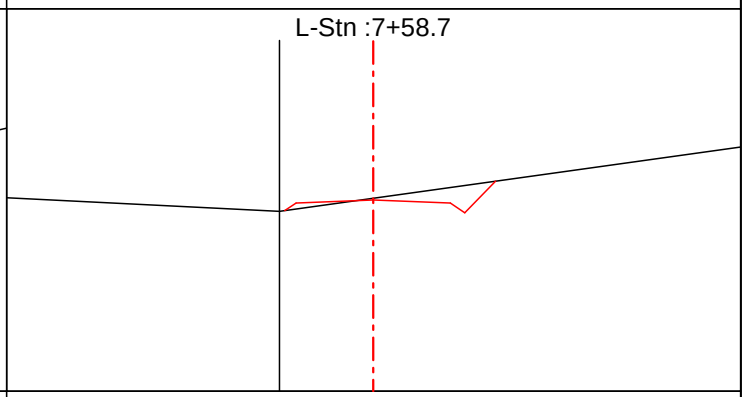
P-Stn :	6+95.7	Cut Dp:	2.1	CL Elev:	163.2
V.Offset:	-1.6	H. Offset:	4.1	Index:	663

L-Stn :7+34.4



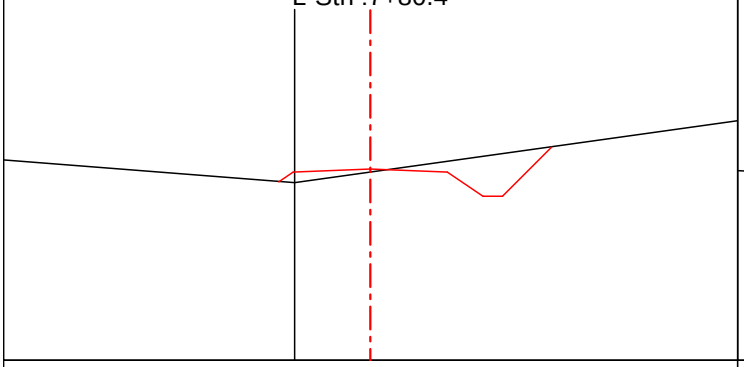
P-Stn :	7+33.7	Cut Dp:	-0.2	CL Elev:	162.7
V.Offset:	0.6	H. Offset:	9.6	Index:	664

L-Stn :7+58.7



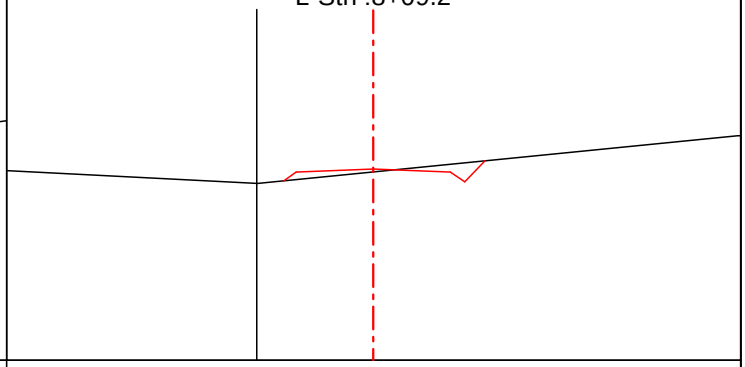
P-Stn :	7+56.8	Cut Dp:	0.2	CL Elev:	162.1
V.Offset:	1.2	H. Offset:	9.7	Index:	665

L-Stn :7+80.4



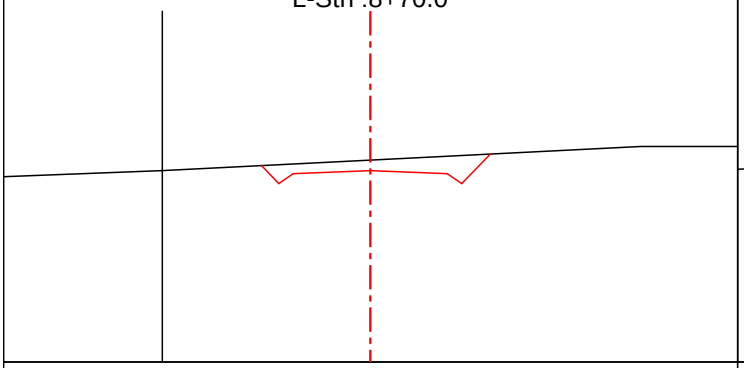
P-Stn :	7+77.0	Cut Dp:	-0.3	CL Elev:	162.2
V.Offset:	1.5	H. Offset:	7.9	Index:	666

L-Stn :8+09.2



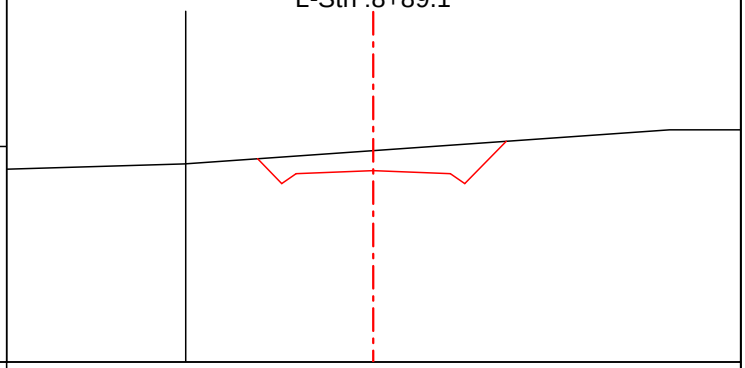
P-Stn :	8+03.5	Cut Dp:	-0.3	CL Elev:	162.8
V.Offset:	1.5	H. Offset:	12.0	Index:	667

L-Stn :8+70.0



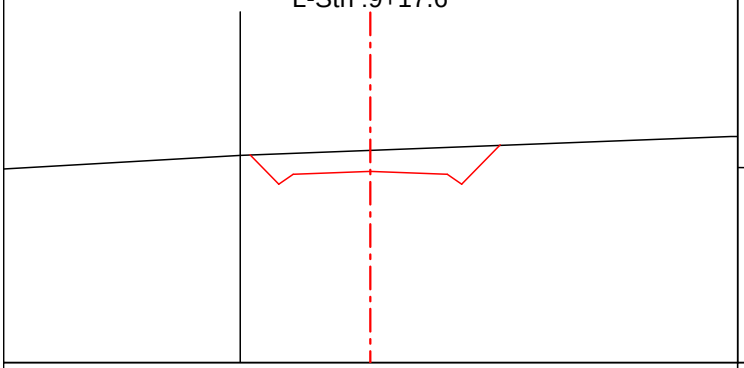
P-Stn :	8+66.1	Cut Dp:	1.1	CL Elev:	165.0
V.Offset:	0.0	H. Offset:	21.7	Index:	668

L-Stn :8+89.1



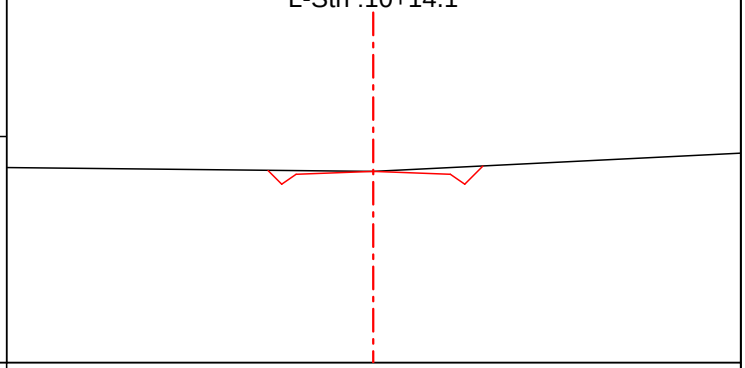
P-Stn :	8+89.2	Cut Dp:	2.1	CL Elev:	165.5
V.Offset:	-0.7	H. Offset:	19.4	Index:	669

L-Stn :9+17.6



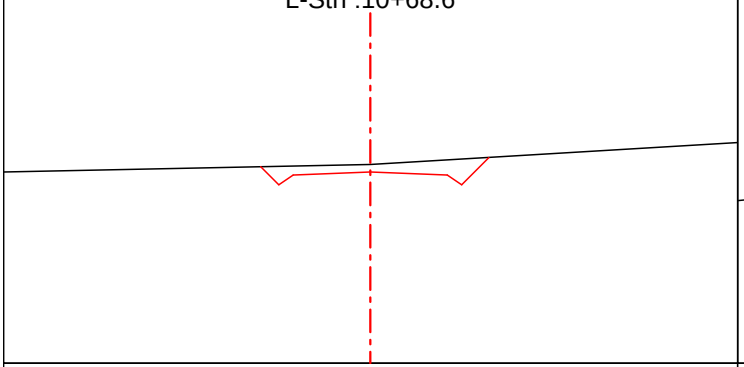
P-Stn :	9+17.9	Cut Dp:	2.2	CL Elev:	165.7
V.Offset:	-1.7	H. Offset:	13.2	Index:	670

L-Stn :10+14.1



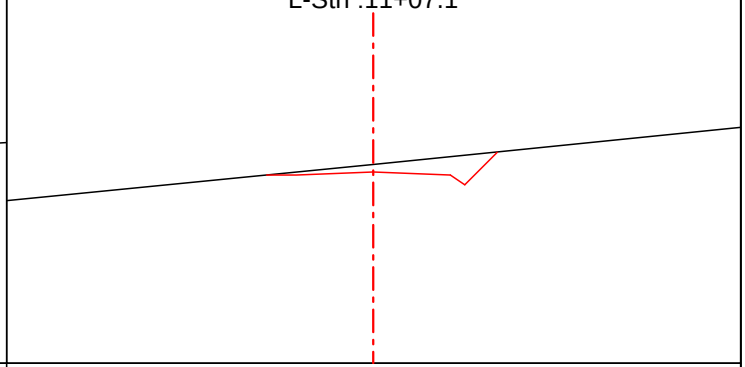
P-Stn :	10+13.4	Cut Dp:	0.0	CL Elev:	163.5
V.Offset:	0.0	H. Offset:	0.0	Index:	671

L-Stn :10+68.6



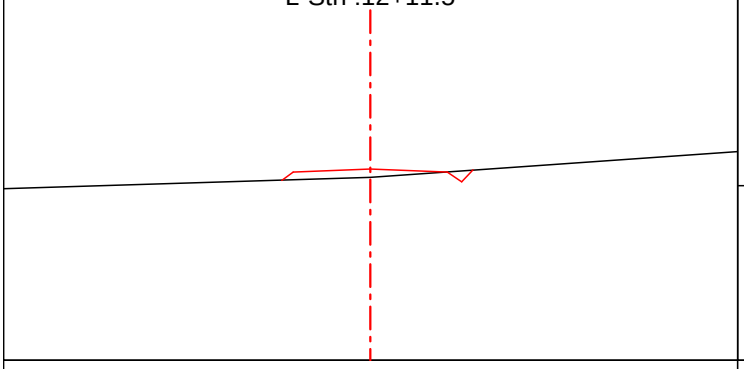
P-Stn :	10+67.9	Cut Dp:	0.8	CL Elev:	160.0
V.Offset:	-0.8	H. Offset:	0.0	Index:	672

L-Stn :11+07.1



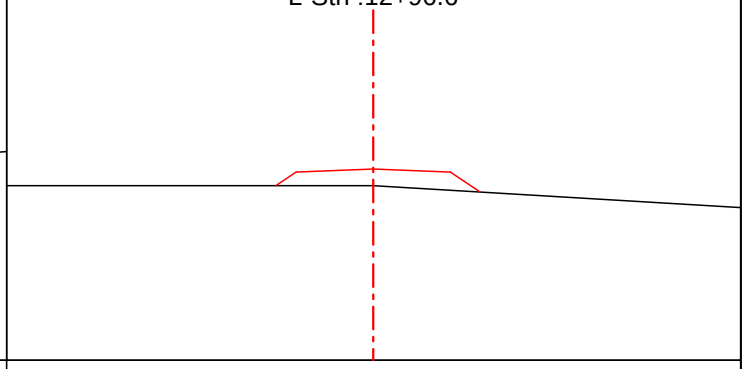
P-Stn :	11+06.4	Cut Dp:	0.8	CL Elev:	156.5
V.Offset:	-0.8	H. Offset:	0.0	Index:	673

L-Stn :12+11.5



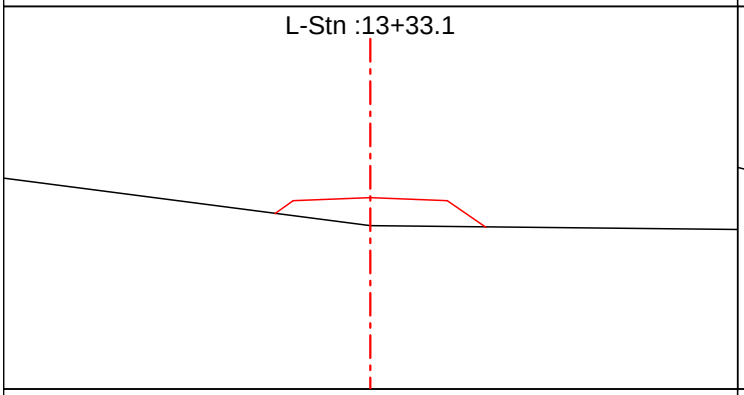
P-Stn :	12+10.8	Cut Dp:	-0.9	CL Elev:	146.7
V.Offset:	0.9	H. Offset:	0.0	Index:	674

L-Stn :12+96.6



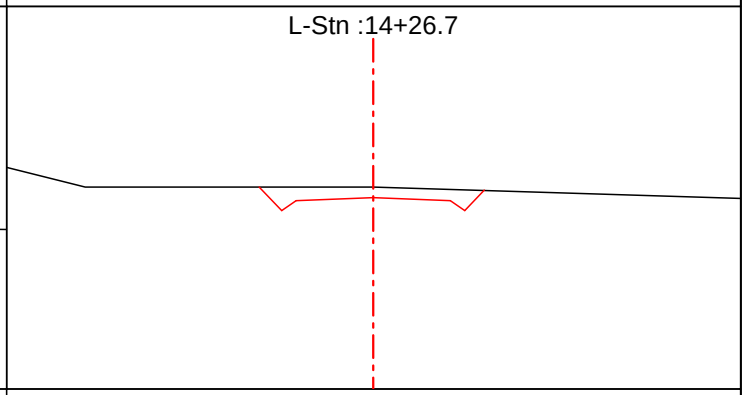
P-Stn :	12+95.9	Cut Dp:	-1.7	CL Elev:	142.5
V.Offset:	1.7	H. Offset:	0.0	Index:	675

L-Stn :13+33.1

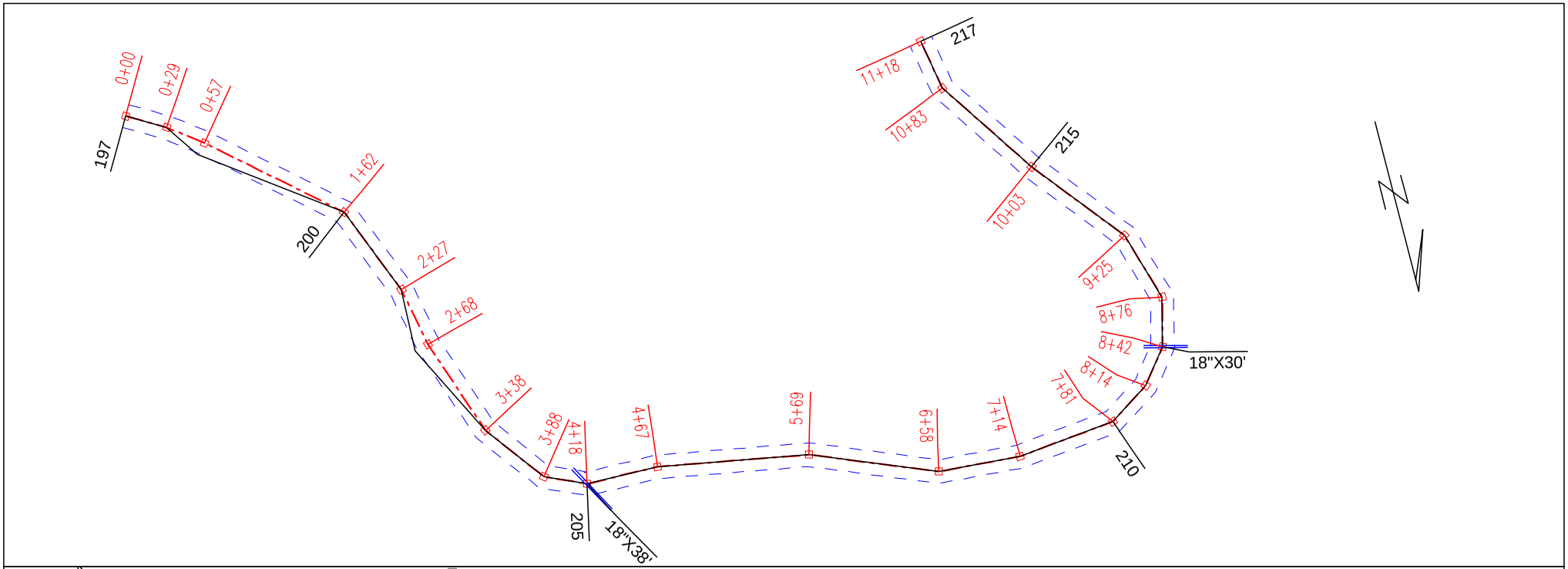


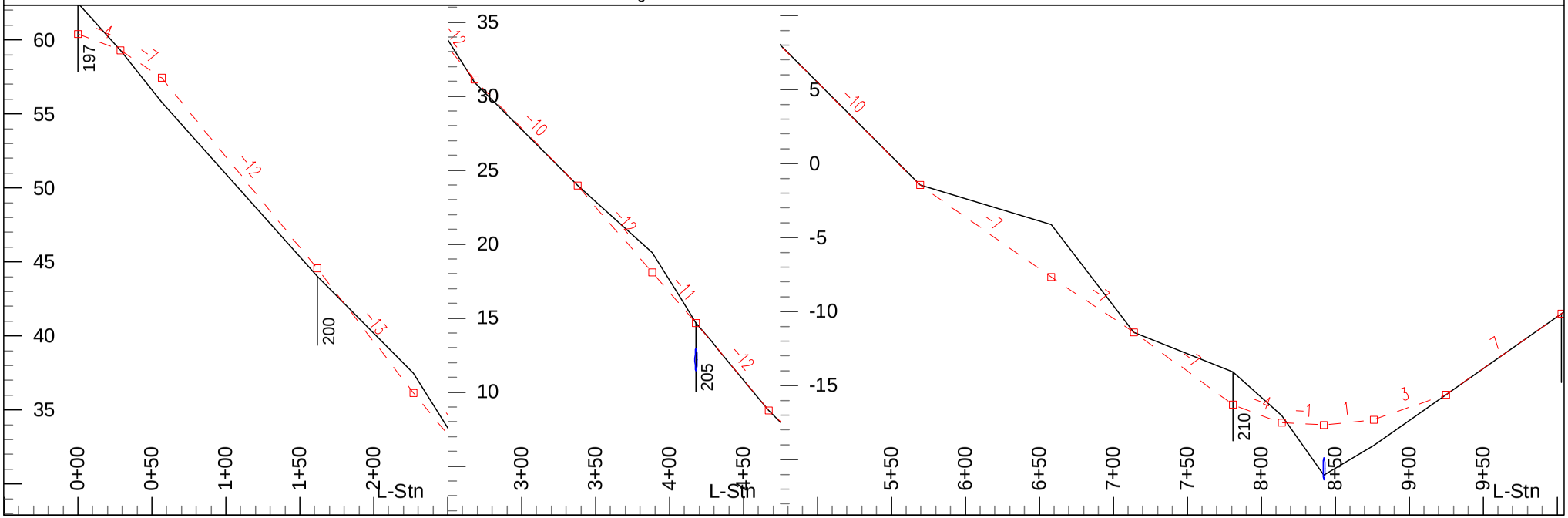
P-Stn :	13+32.4	Cut Dp:	-2.9	CL Elev:	142.2
V.Offset:	2.9	H. Offset:	0.0	Index:	676

L-Stn :14+26.7



P-Stn :	14+26.0	Cut Dp:	1.1	CL Elev:	142.8
V.Offset:	-1.1	H. Offset:	0.0	Index:	677



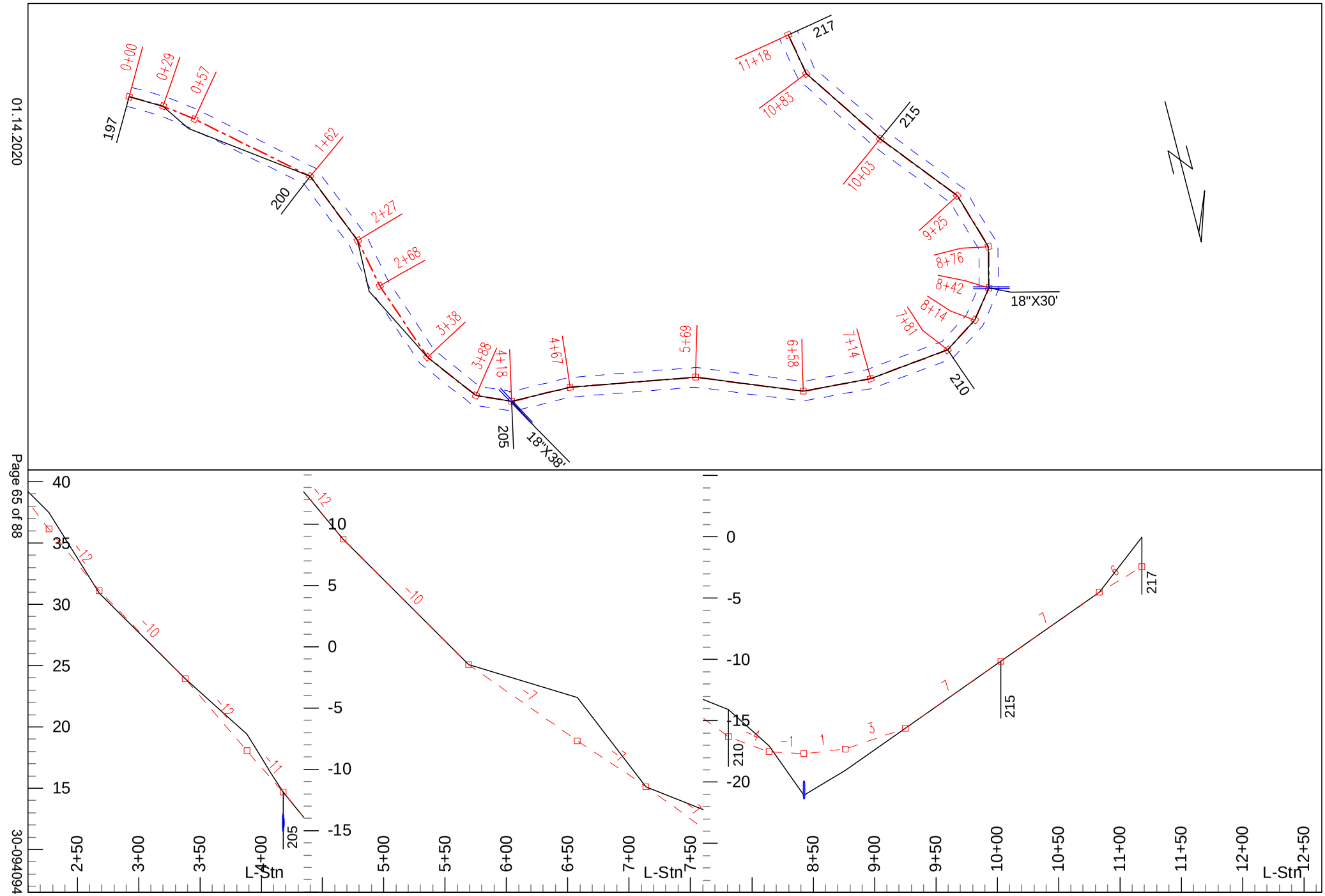


Tip Top Timber Sale
Spur 14
Contract #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Plan Scale 1:1200
Profile Vert Scale 1:120
Profile Horz Scale 1:1200

Engineer: Heymann
18/08/16
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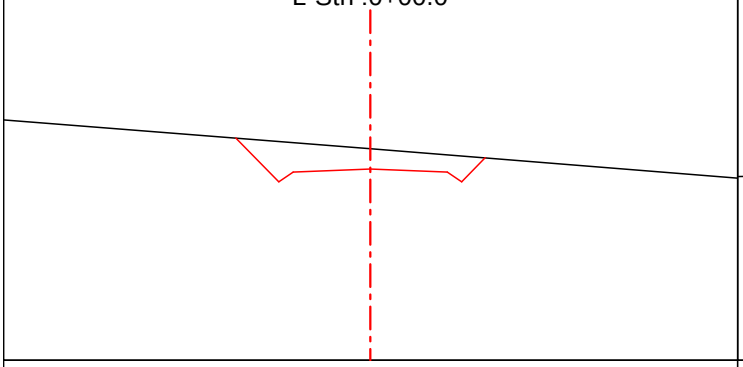
Tip Top Timber Sale
Spur 14
Contract #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Plan Scale 1:1200
Profile Vert Scale 1:120
Profile Horz Scale 1:1200

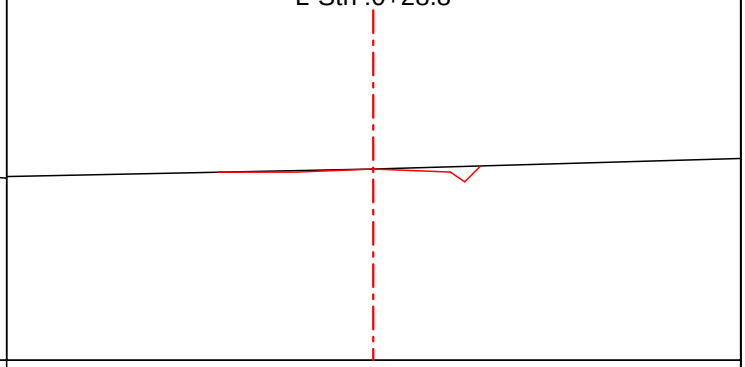
Engineer: Heymann
18/08/16
Page 2 of 2

L-Stn :0+00.0



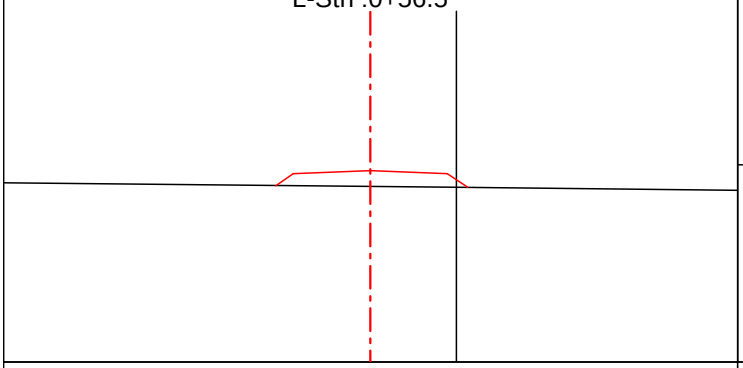
P-Stn : 0+00.0 Cut Dp: 2.1 CL Elev: 60.4
V.Offset: -2.1 H. Offset: 0.0 Index: 197

L-Stn :0+28.8



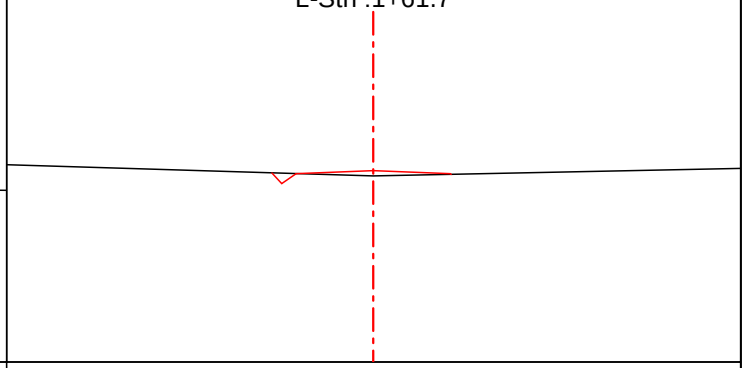
P-Stn : 0+28.8 Cut Dp: 0.0 CL Elev: 59.3
V.Offset: 0.0 H. Offset: 0.0 Index: 198

L-Stn :0+56.5



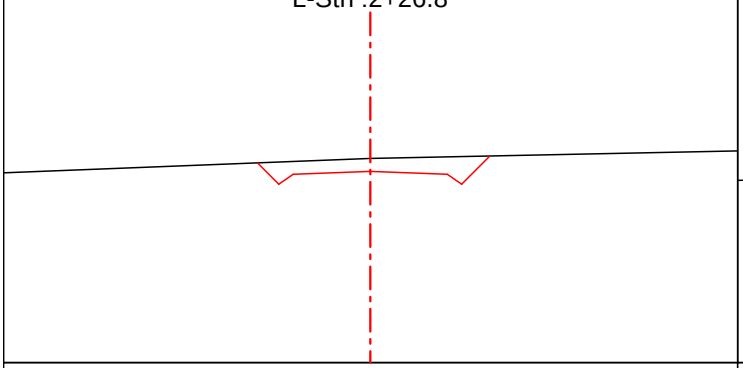
P-Stn : 0+56.6 Cut Dp: -1.6 CL Elev: 57.4
V.Offset: 1.7 H. Offset: -9.1 Index: 199

L-Stn :1+61.7



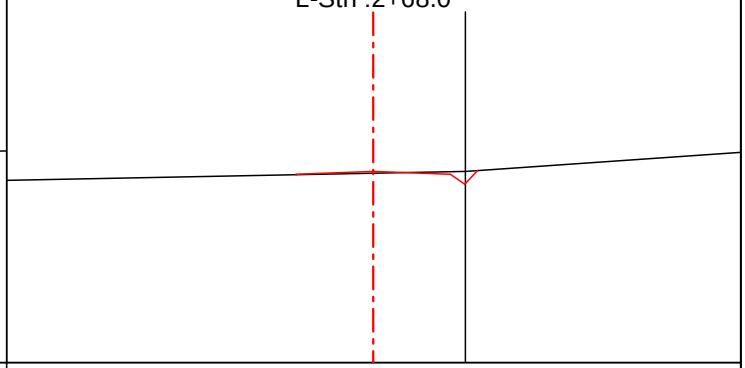
P-Stn : 1+63.0 Cut Dp: -0.6 CL Elev: 44.6
V.Offset: 0.6 H. Offset: 0.0 Index: 200

L-Stn :2+26.8



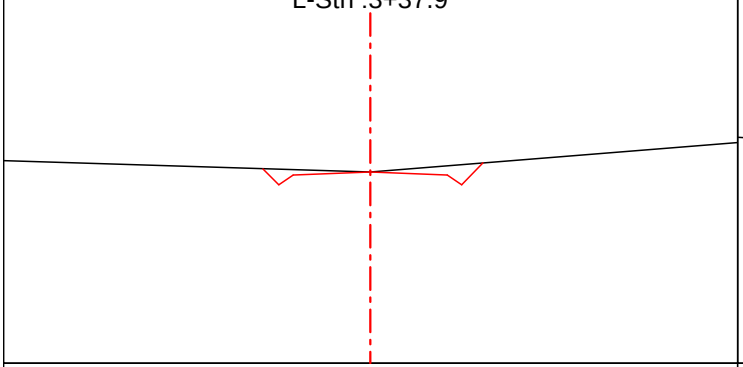
P-Stn : 2+28.1 Cut Dp: 1.3 CL Elev: 36.1
V.Offset: -1.3 H. Offset: 0.0 Index: 201

L-Stn :2+68.0



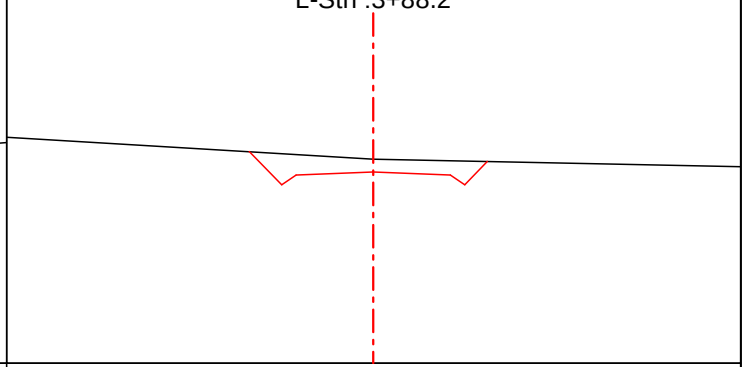
P-Stn : 2+70.7 Cut Dp: -0.2 CL Elev: 31.1
V.Offset: 0.0 H. Offset: -9.7 Index: 202

L-Stn :3+37.9



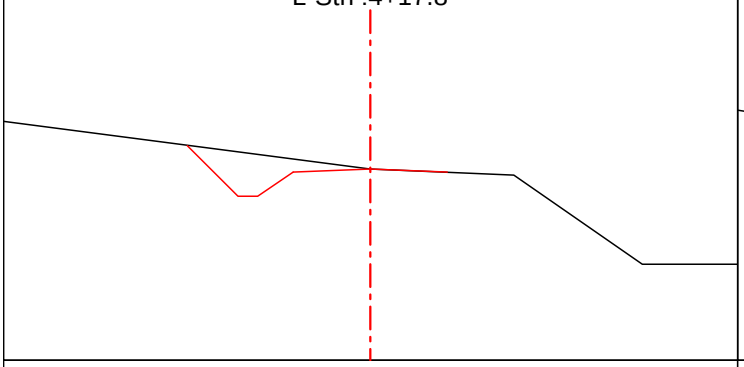
P-Stn : 3+42.3 Cut Dp: 0.0 CL Elev: 23.9
V.Offset: 0.0 H. Offset: 0.0 Index: 203

L-Stn :3+88.2



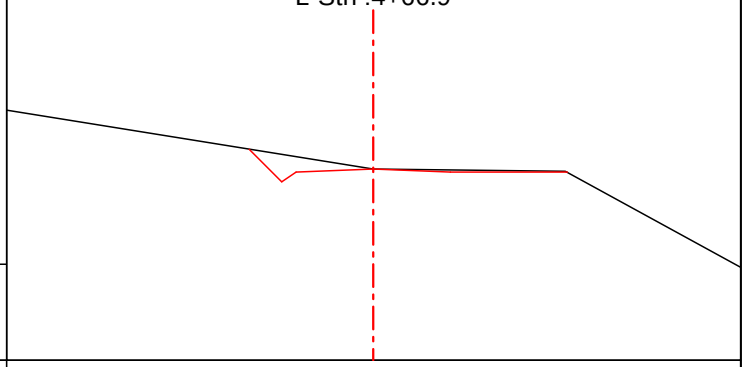
P-Stn : 3+92.6 Cut Dp: 1.3 CL Elev: 18.1
V.Offset: -1.3 H. Offset: 0.0 Index: 204

L-Stn :4+17.8



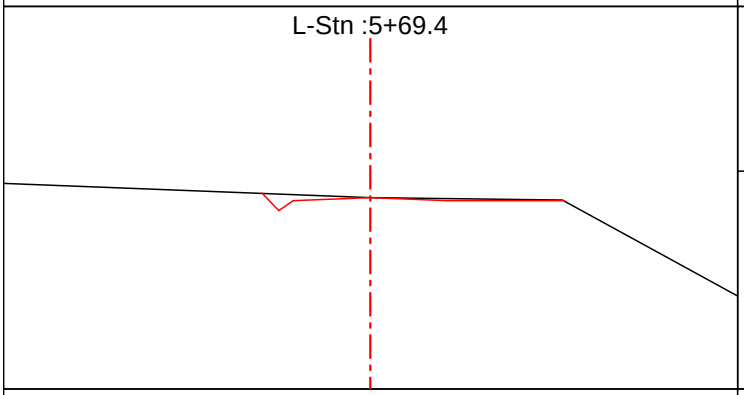
P-Stn : 4+22.2 Cut Dp: 0.0 CL Elev: 14.7
V.Offset: 0.0 H. Offset: 0.0 Index: 205

L-Stn :4+66.9



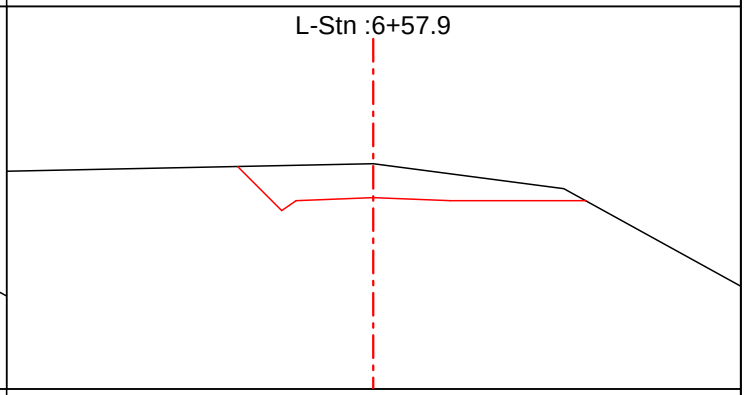
P-Stn : 4+71.4 Cut Dp: 0.0 CL Elev: 8.8
V.Offset: 0.0 H. Offset: 0.0 Index: 206

L-Stn :5+69.4



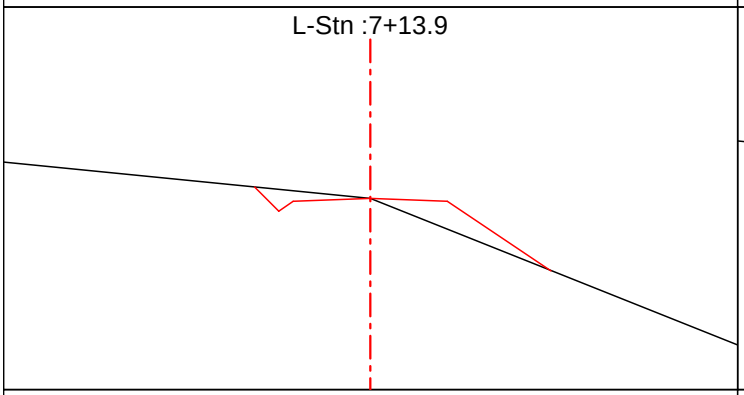
P-Stn : 5+73.8 Cut Dp: 0.0 CL Elev: -1.5
V.Offset: 0.0 H. Offset: 0.0 Index: 207

L-Stn :6+57.9



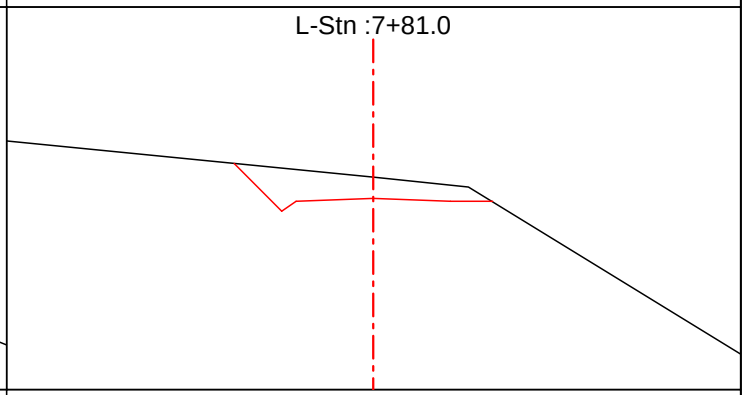
P-Stn : 6+62.3 Cut Dp: 3.5 CL Elev: -7.7
V.Offset: -3.5 H. Offset: 0.0 Index: 208

L-Stn :7+13.9



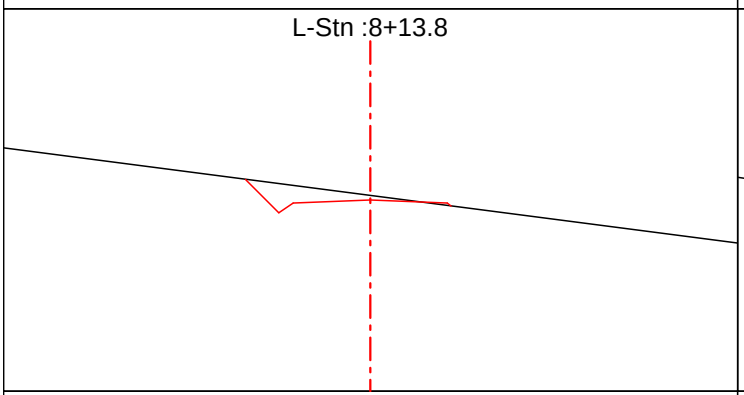
P-Stn : 7+18.3 Cut Dp: 0.0 CL Elev: -11.4
V.Offset: 0.0 H. Offset: 0.0 Index: 209

L-Stn :7+81.0



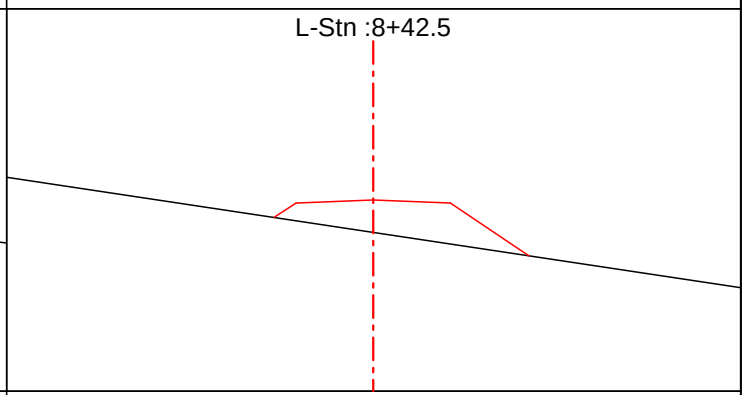
P-Stn : 7+85.4 Cut Dp: 2.2 CL Elev: -16.3
V.Offset: -2.2 H. Offset: 0.0 Index: 210

L-Stn :8+13.8



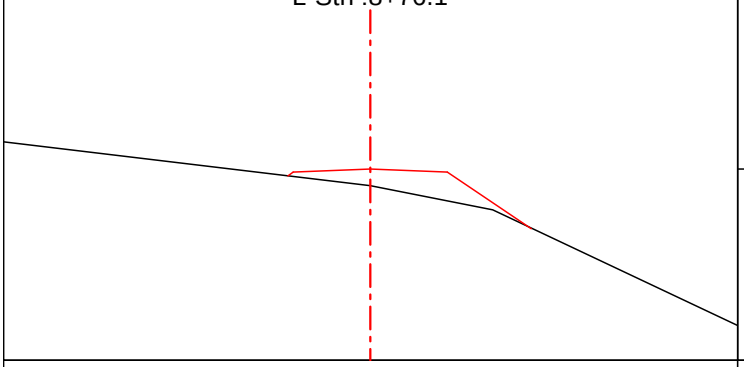
P-Stn : 8+18.3 Cut Dp: 0.5 CL Elev: -17.5
V.Offset: -0.5 H. Offset: 0.0 Index: 211

L-Stn :8+42.5



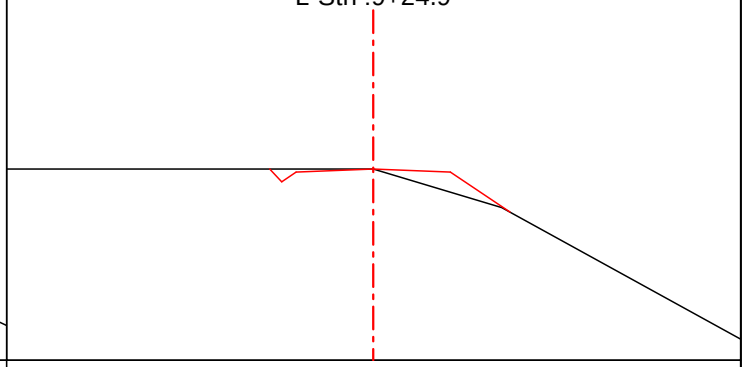
P-Stn : 8+46.9 Cut Dp: -3.4 CL Elev: -17.7
V.Offset: 3.4 H. Offset: 0.0 Index: 212

L-Stn :8+76.1



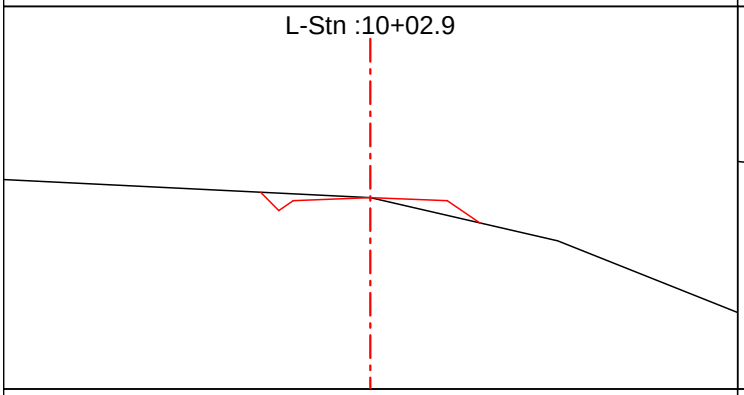
P-Stn : 8+80.5 Cut Dp: -1.7 CL Elev: -17.3
V.Offset: 1.7 H. Offset: 0.0 Index: 213

L-Stn :9+24.9



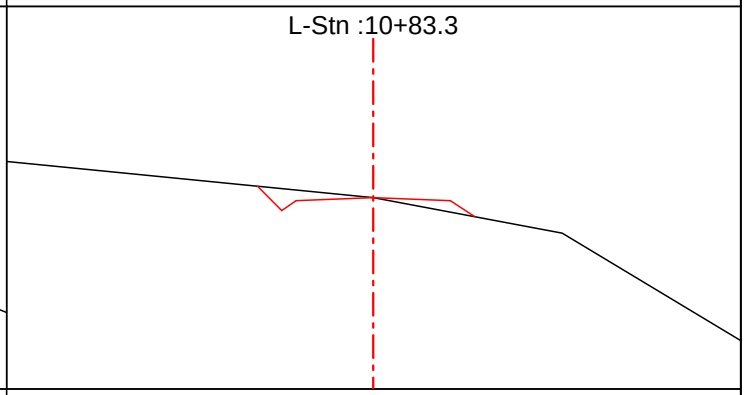
P-Stn : 9+29.3 Cut Dp: 0.0 CL Elev: -15.6
V.Offset: 0.0 H. Offset: 0.0 Index: 214

L-Stn :10+02.9



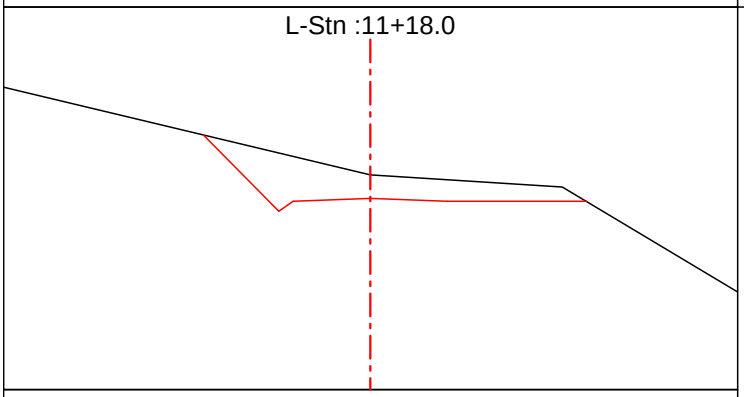
P-Stn : 10+07.3 Cut Dp: 0.0 CL Elev: -10.2
V.Offset: 0.0 H. Offset: 0.0 Index: 215

L-Stn :10+83.3

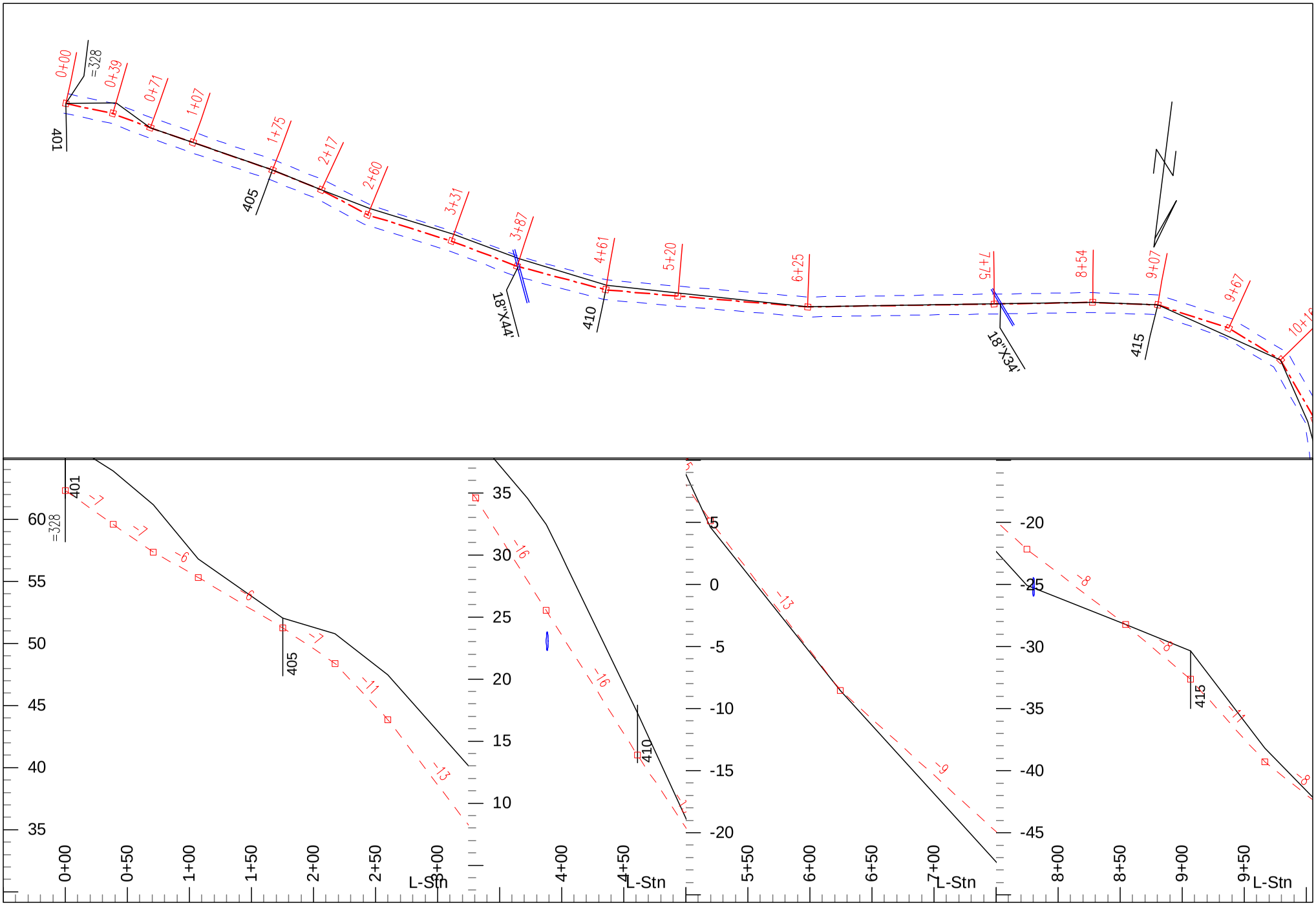


P-Stn : 10+87.7 Cut Dp: 0.0 CL Elev: -4.5
V.Offset: 0.0 H. Offset: 0.0 Index: 216

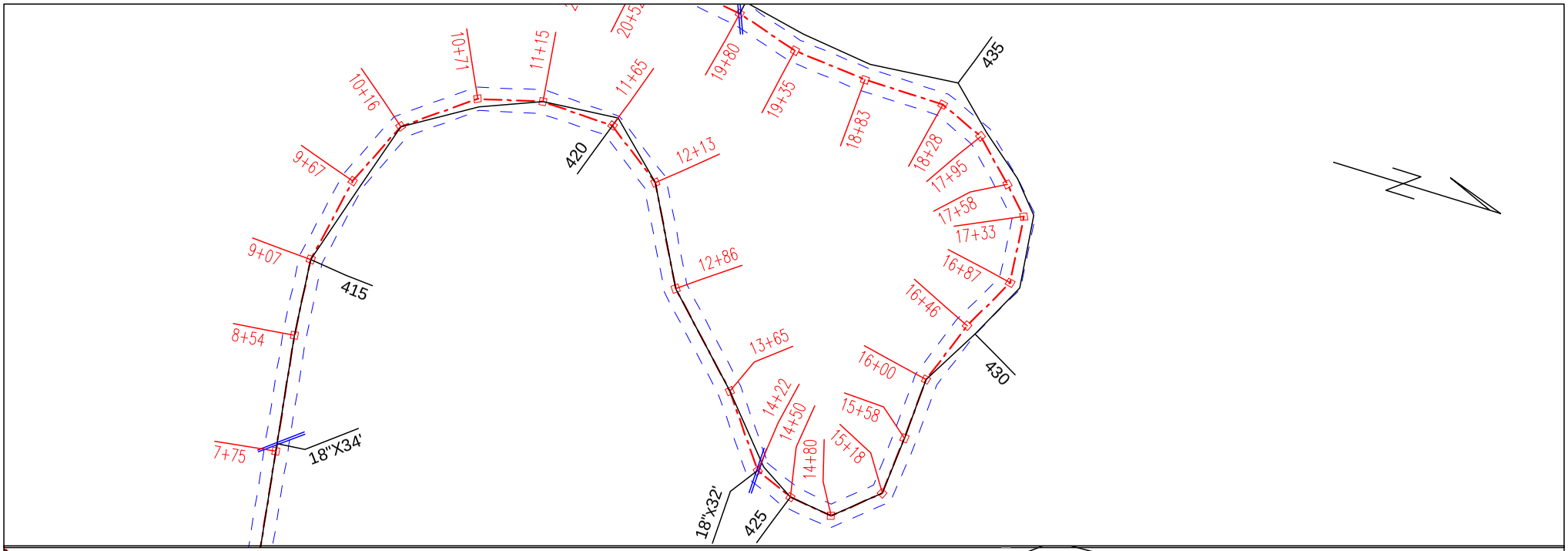
L-Stn :11+18.0

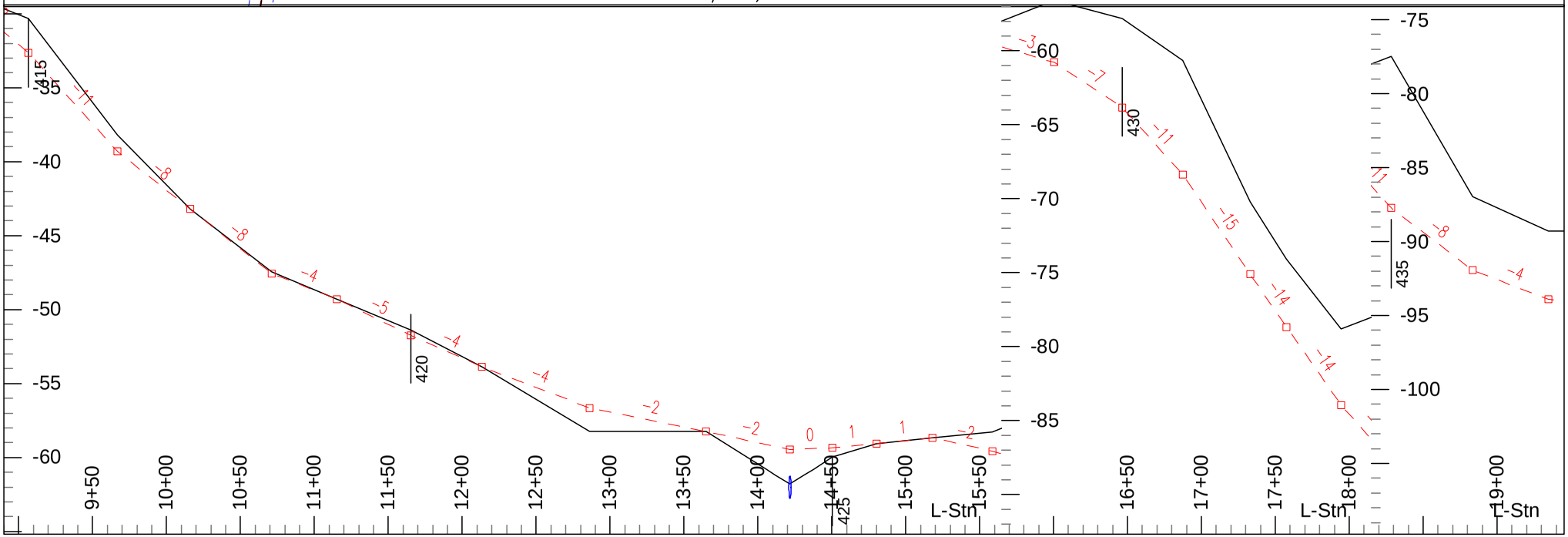


P-Stn : 11+22.4 Cut Dp: 2.4 CL Elev: -2.4
V.Offset: -2.4 H. Offset: 0.0 Index: 217



Tip Top Timber Sale Spur 15 Contracr #: 30-094094	WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES	Plan Scale 1:1200 Profile Vert Scale 1:120 Profile Horz Scale 1:1200
Engineer: Heymann 19/04/30	Page 1 of 4	



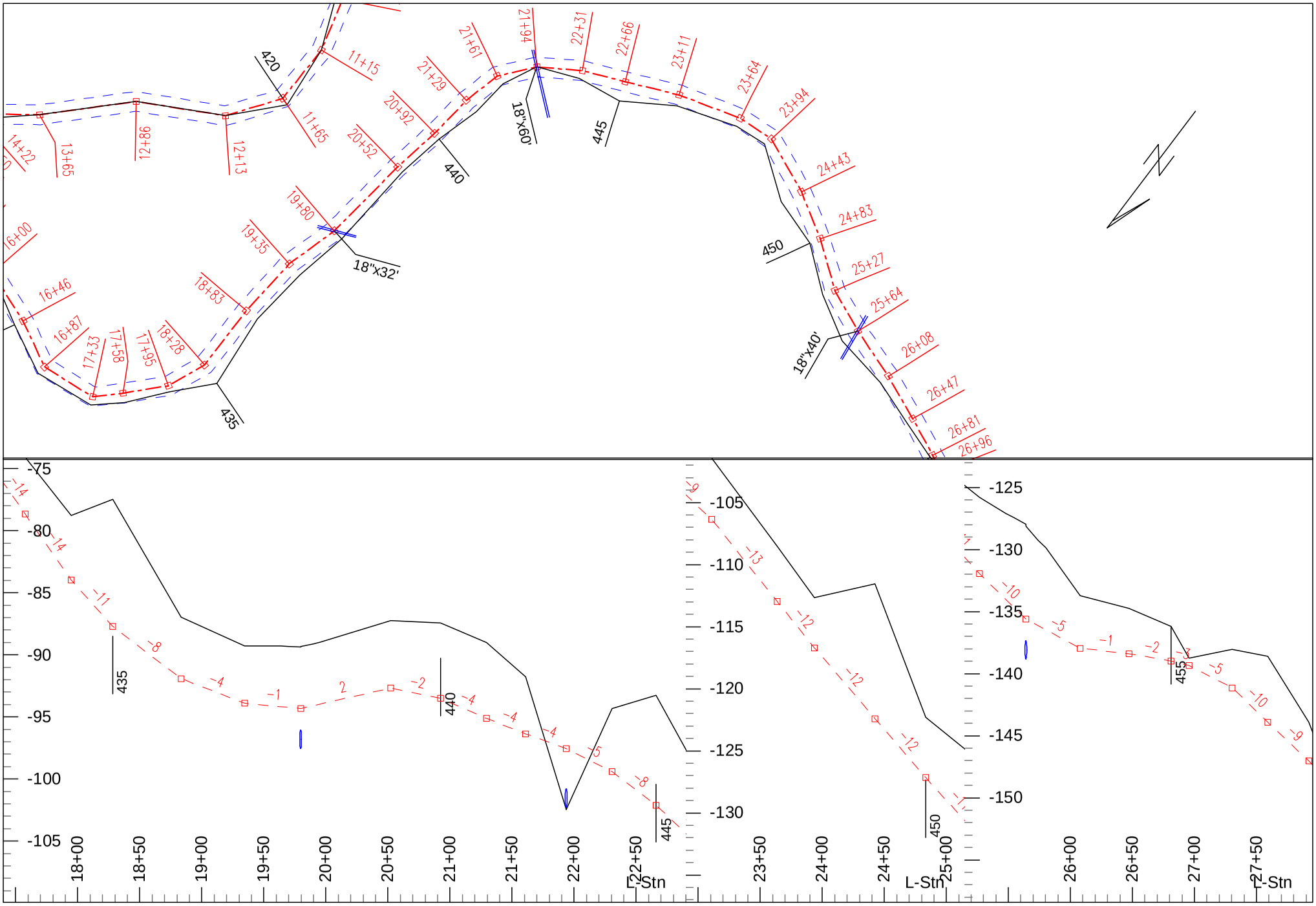


Tip Top Timber Sale
Spur 15
Contracr #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Plan Scale 1:1200
Profile Vert Scale 1:120
Profile Horz Scale 1:1200

Engineer: Heymann
19/04/30
Page 2 of 4

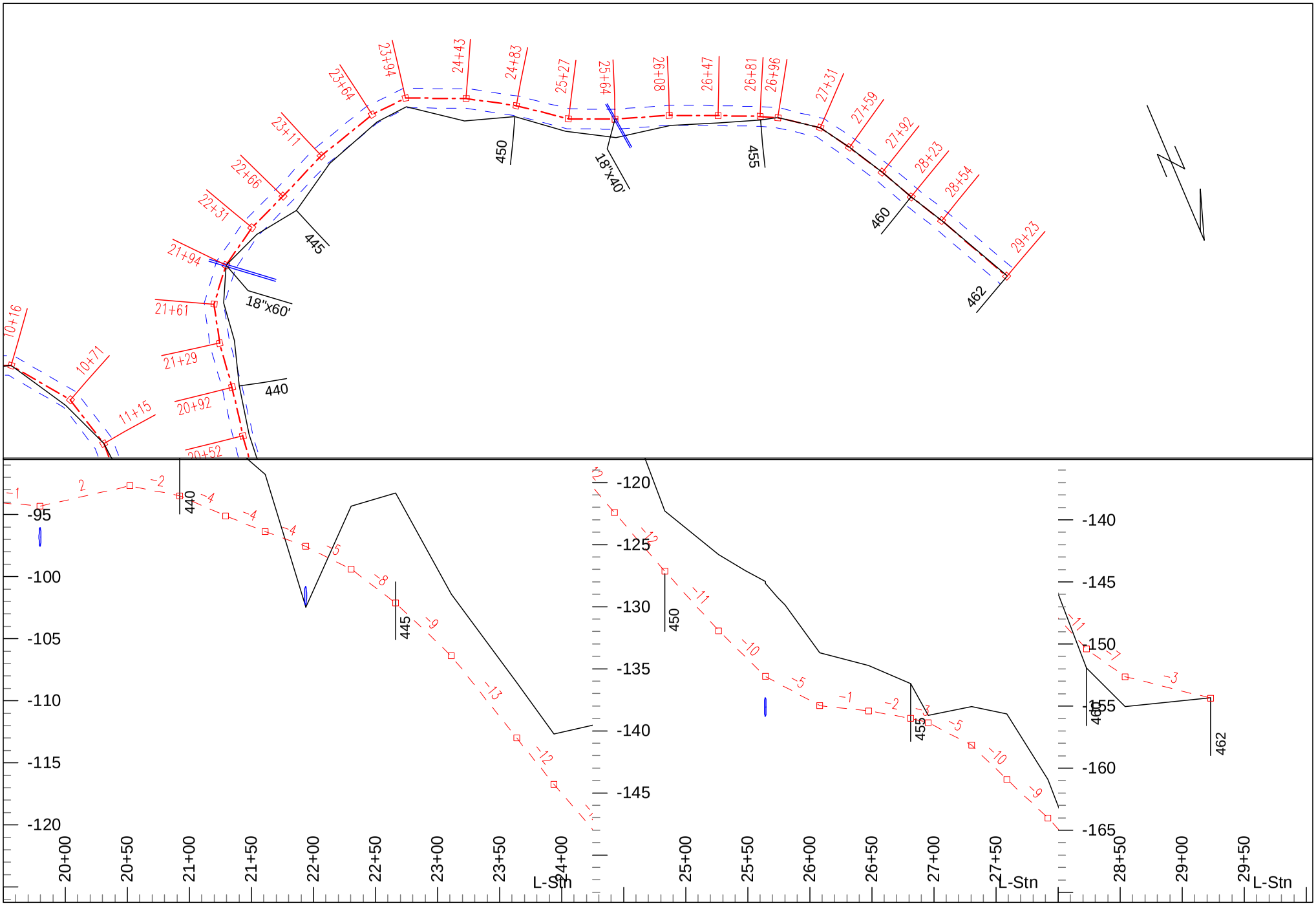


Tip Top Timber Sale
Spur 15
Contracr #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Plan Scale 1:1200
Profile Vert Scale 1:120
Profile Horz Scale 1:1200

Engineer: Heymann
19/04/30



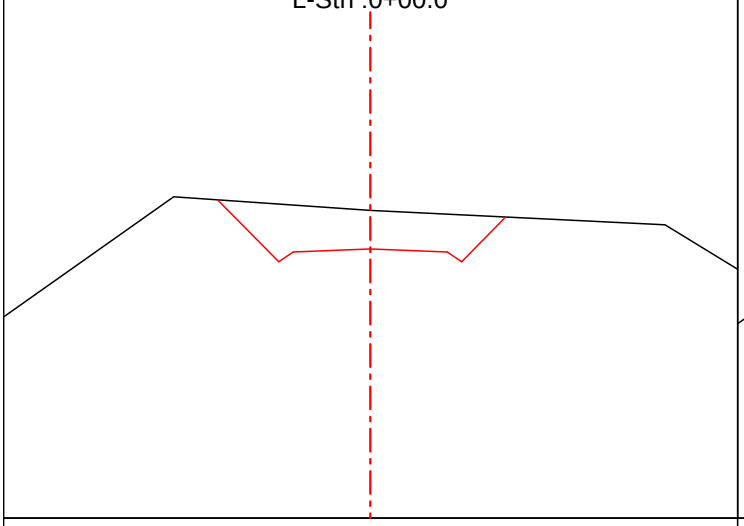
Tip Top Timber Sale
Spur 15
Contracr #: 30-094094

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

Plan Scale 1:1200
Profile Vert Scale 1:120
Profile Horz Scale 1:1200

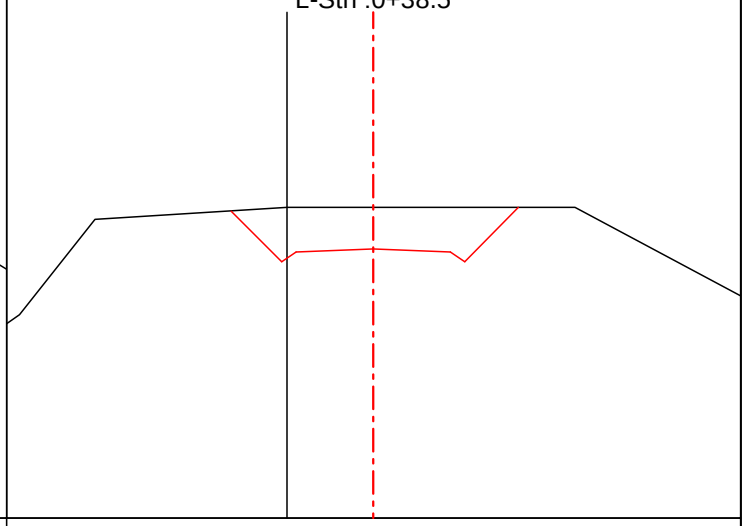
Engineer: Heymann
19/04/30

L-Stn :0+00.0



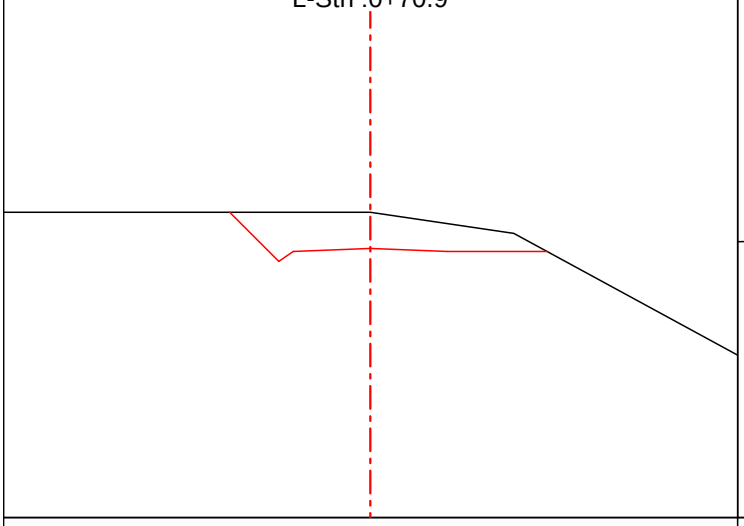
P-Stn : 0+00.0 Cut Dp: 4.0 CL Elev: 62.3
V.Offset: -4.0 H. Offset: 0.0 Index: 401

L-Stn :0+38.5



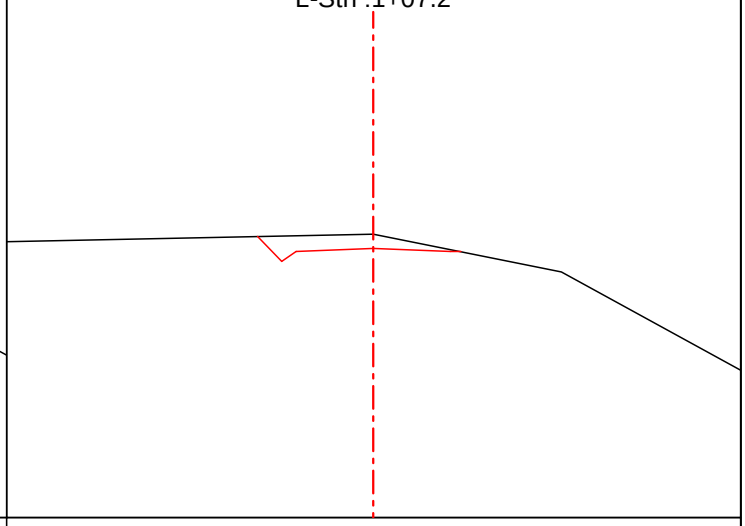
P-Stn : 0+40.4 Cut Dp: 4.3 CL Elev: 59.6
V.Offset: -4.3 H. Offset: 9.0 Index: 402

L-Stn :0+70.9



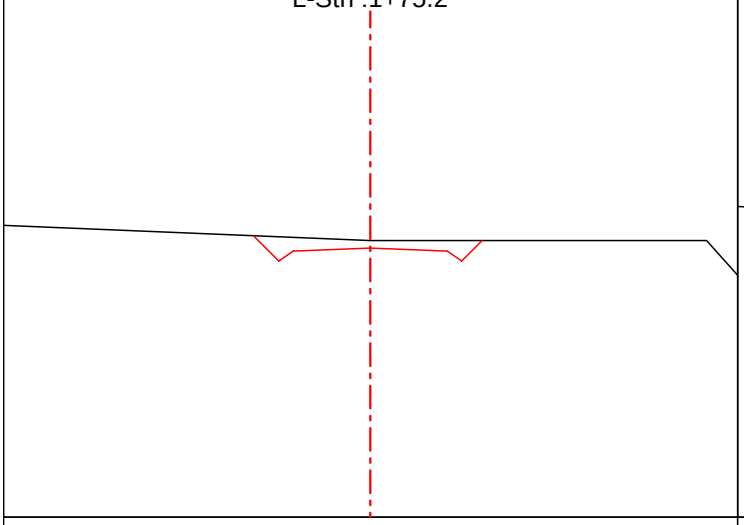
P-Stn : 0+74.5 Cut Dp: 3.8 CL Elev: 57.4
V.Offset: -3.8 H. Offset: 0.0 Index: 403

L-Stn :1+07.2



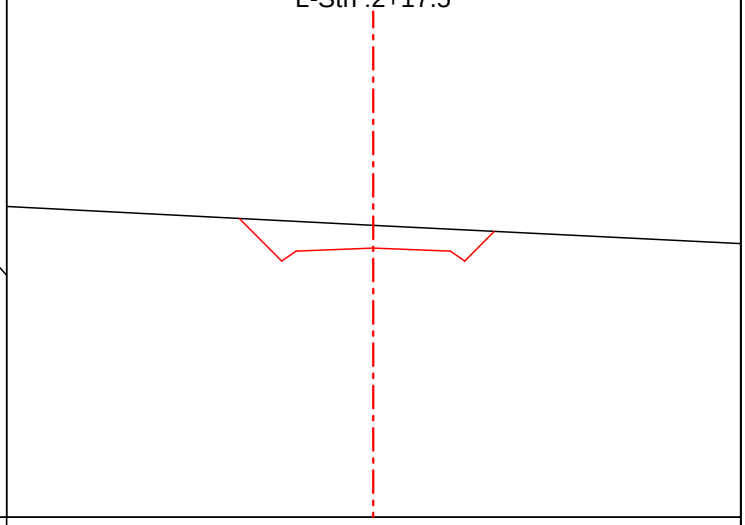
P-Stn : 1+10.9 Cut Dp: 1.5 CL Elev: 55.3
V.Offset: -1.5 H. Offset: 0.0 Index: 404

L-Stn :1+75.2



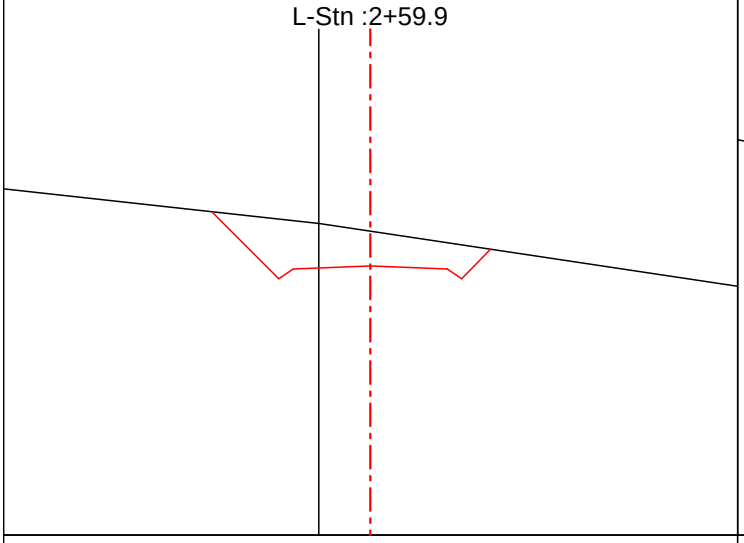
P-Stn : 1+78.8 Cut Dp: 0.8 CL Elev: 51.2
V.Offset: -0.8 H. Offset: 0.0 Index: 405

L-Stn :2+17.5



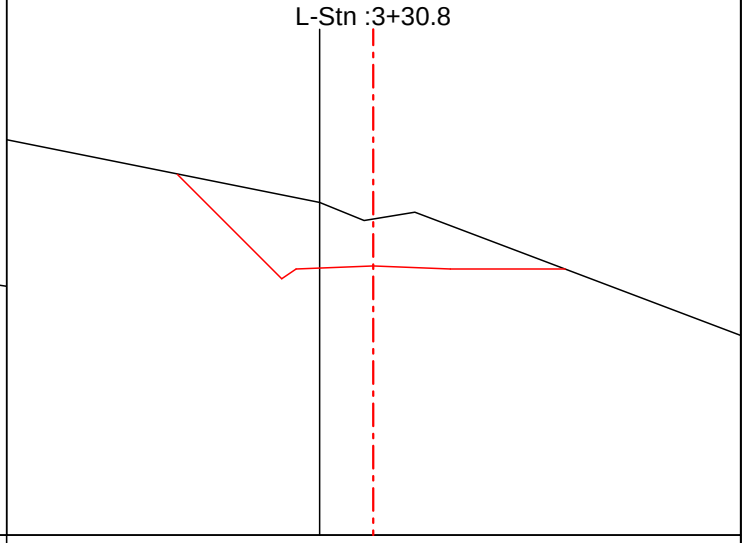
P-Stn : 2+21.1 Cut Dp: 2.4 CL Elev: 48.4
V.Offset: -2.4 H. Offset: 0.0 Index: 406

L-Stn :2+59.9



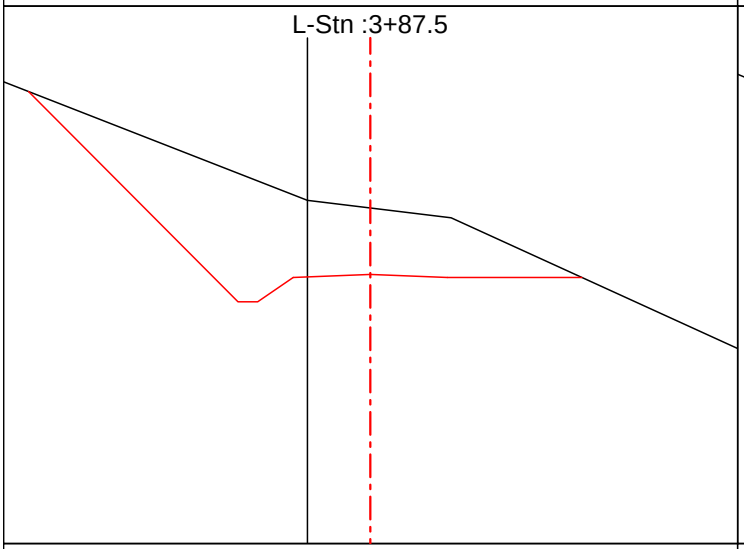
P-Stn : 2+63.0 Cut Dp: 3.6 CL Elev: 43.9
V.Offset: -4.4 H. Offset: 5.3 Index: 407

L-Stn :3+30.8



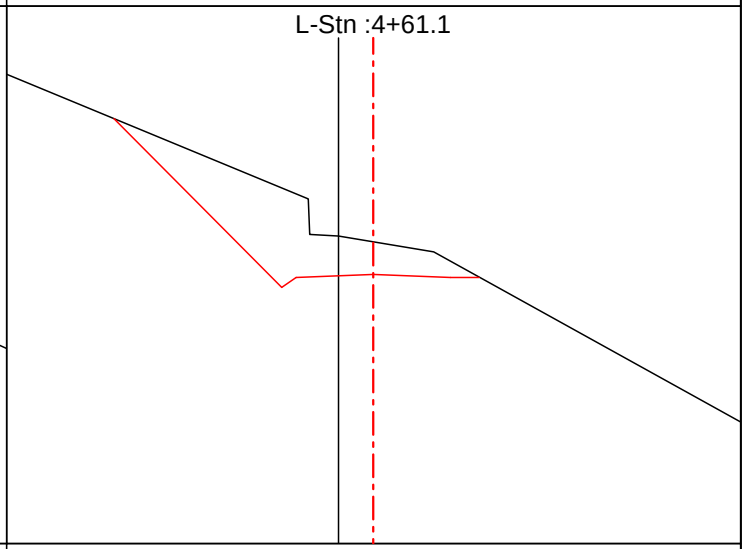
P-Stn : 3+33.8 Cut Dp: 4.9 CL Elev: 34.6
V.Offset: -6.6 H. Offset: 5.6 Index: 408

L-Stn :3+87.5



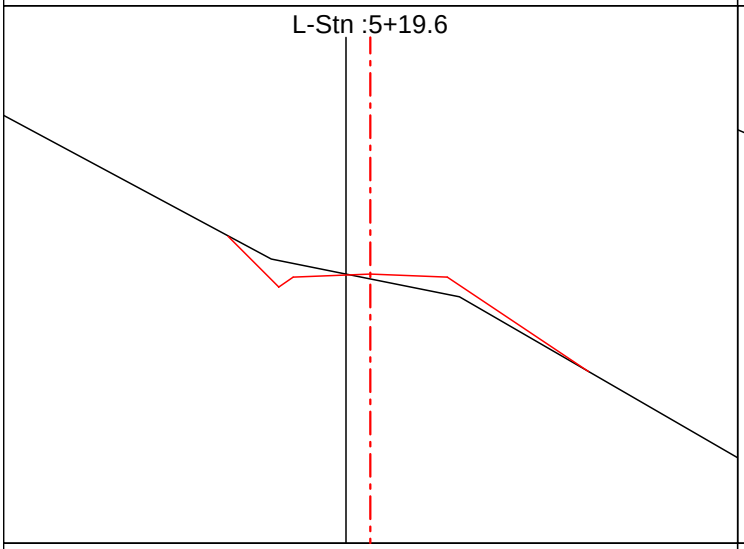
P-Stn : 3+90.5 Cut Dp: 6.9 CL Elev: 25.5
V.Offset: -7.7 H. Offset: 6.5 Index: 409

L-Stn :4+61.1



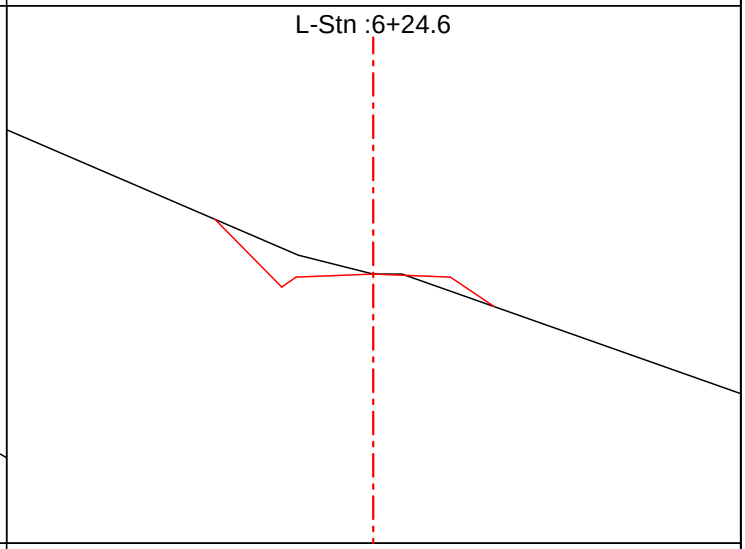
P-Stn : 4+63.6 Cut Dp: 3.4 CL Elev: 13.9
V.Offset: -4.0 H. Offset: 3.6 Index: 410

L-Stn :5+19.6



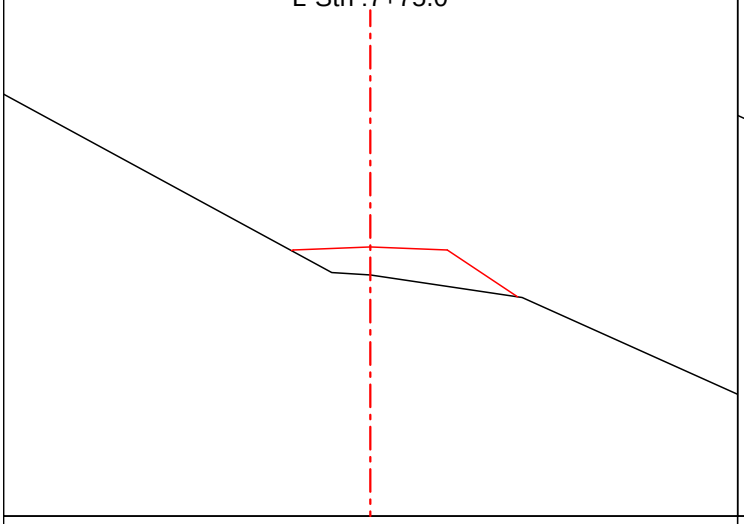
P-Stn : 5+21.7 Cut Dp: -0.5 CL Elev: 5.1
V.Offset: 0.0 H. Offset: 2.5 Index: 411

L-Stn :6+24.6



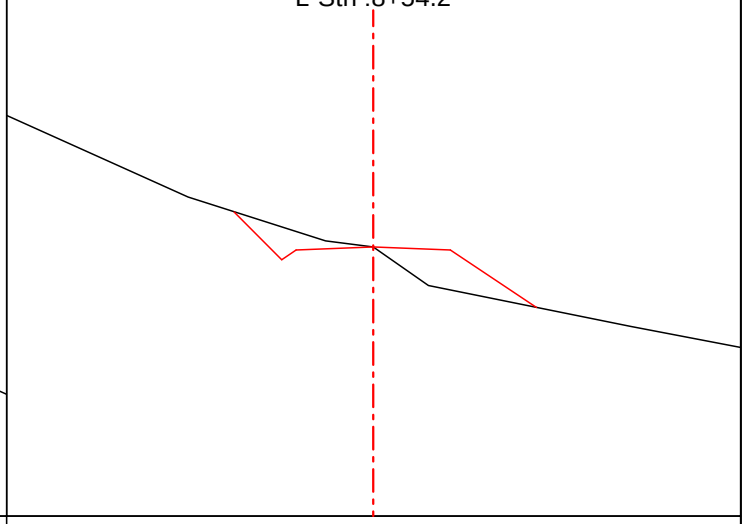
P-Stn : 6+26.6 Cut Dp: 0.0 CL Elev: -8.5
V.Offset: 0.0 H. Offset: 0.0 Index: 412

L-Stn :7+75.0



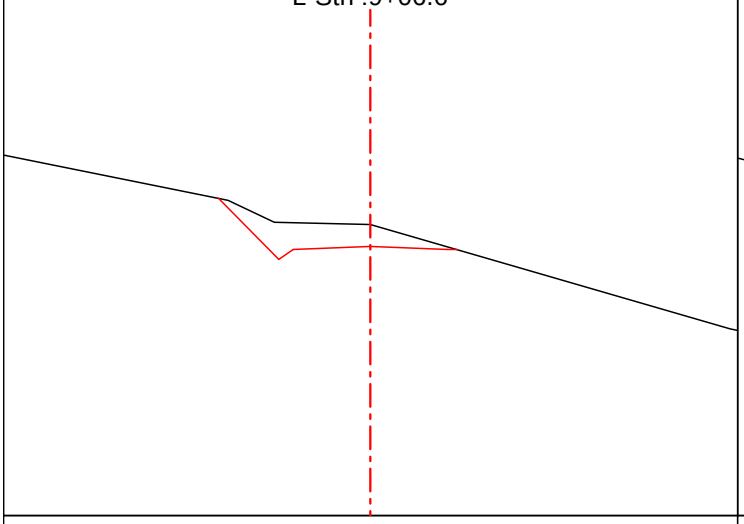
P-Stn : 7+77.0 Cut Dp: -2.9 CL Elev: -22.2
V.Offset: 2.9 H. Offset: 0.0 Index: 413

L-Stn :8+54.2



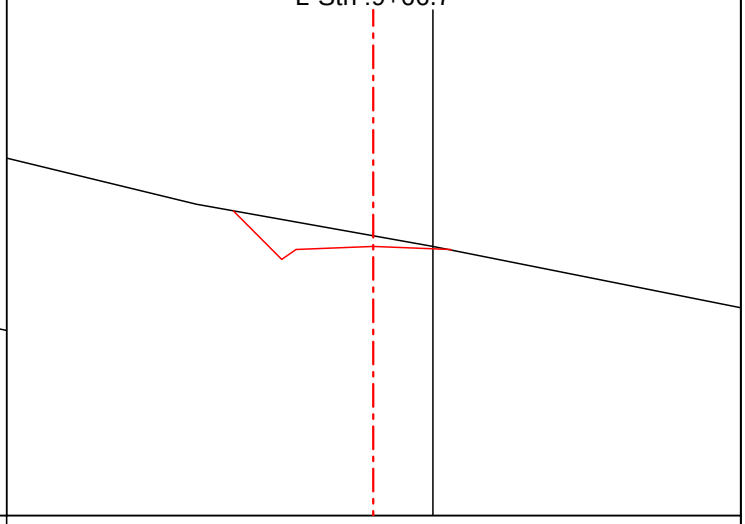
P-Stn : 8+56.3 Cut Dp: 0.0 CL Elev: -28.2
V.Offset: 0.0 H. Offset: 0.0 Index: 414

L-Stn :9+06.6



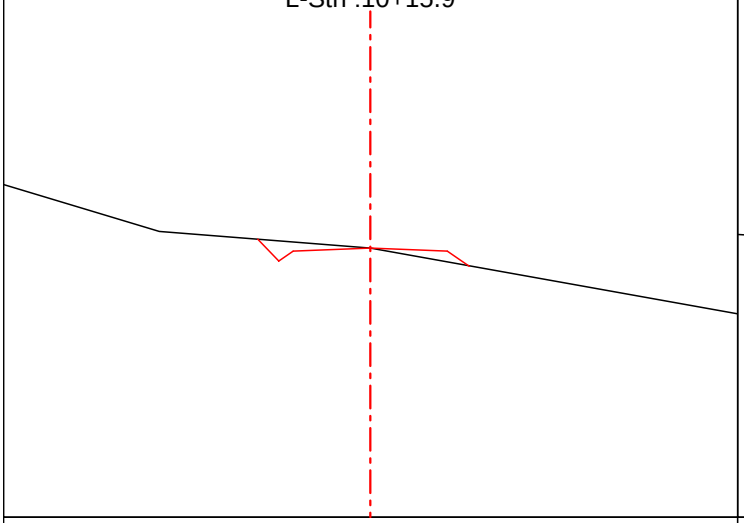
P-Stn : 9+08.7 Cut Dp: 2.3 CL Elev: -32.6
V.Offset: -2.3 H. Offset: 0.0 Index: 415

L-Stn :9+66.7



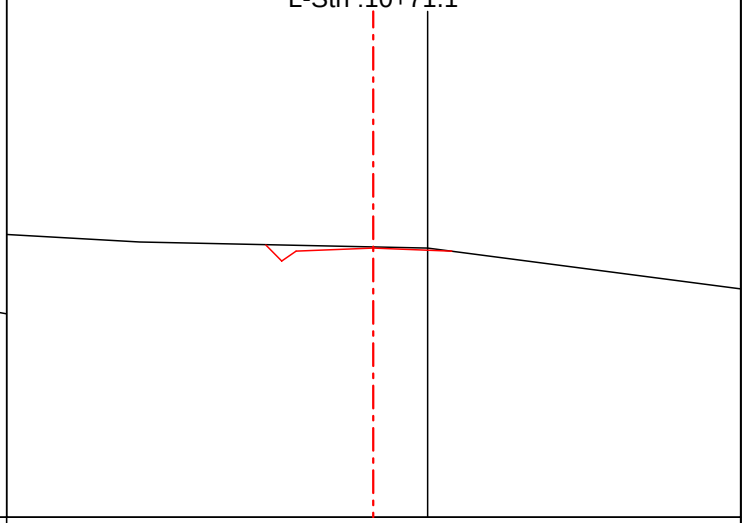
P-Stn : 9+68.4 Cut Dp: 1.1 CL Elev: -39.3
V.Offset: 0.0 H. Offset: -6.2 Index: 416

L-Stn :10+15.9



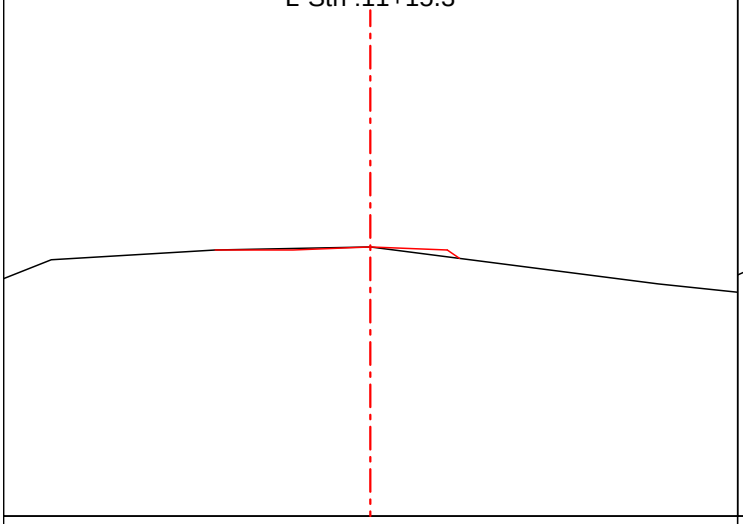
P-Stn : 10+17.3 Cut Dp: 0.0 CL Elev: -43.2
V.Offset: 0.0 H. Offset: 0.0 Index: 417

L-Stn :10+71.1



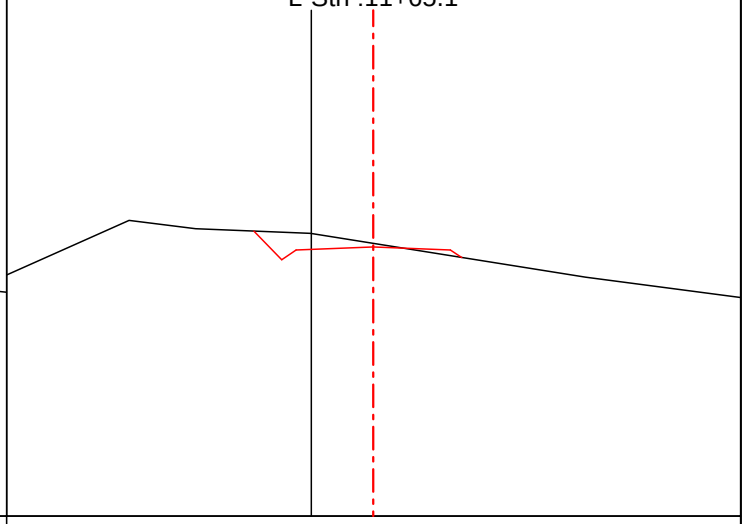
P-Stn : 10+71.7 Cut Dp: 0.1 CL Elev: -47.6
V.Offset: 0.0 H. Offset: -5.7 Index: 418

L-Stn :11+15.3



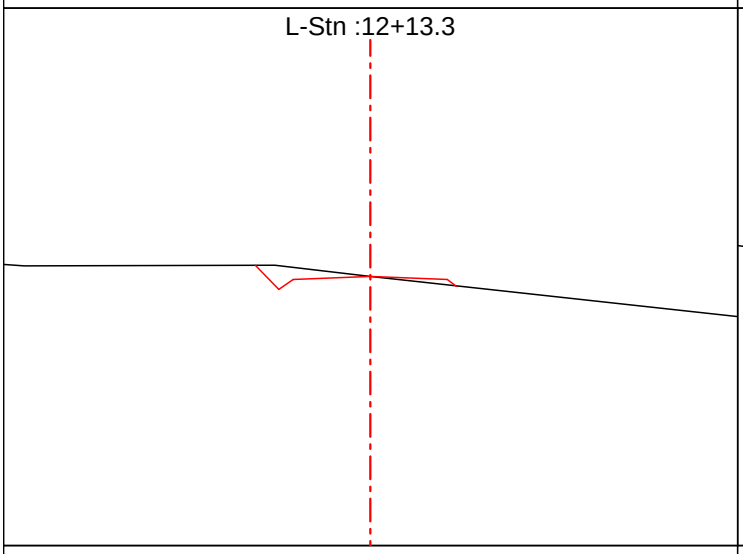
P-Stn :	11+15.1	Cut Dp:	0.0	CL Elev:	-49.3
V.Offset:	0.0	H. Offset:	0.0	Index:	419

L-Stn :11+65.1



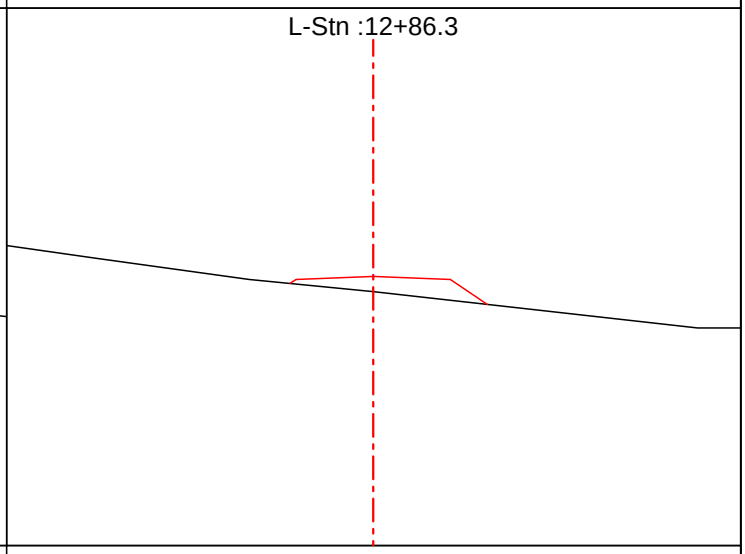
P-Stn :	11+67.2	Cut Dp:	0.4	CL Elev:	-51.7
V.Offset:	-1.4	H. Offset:	6.5	Index:	420

L-Stn :12+13.3



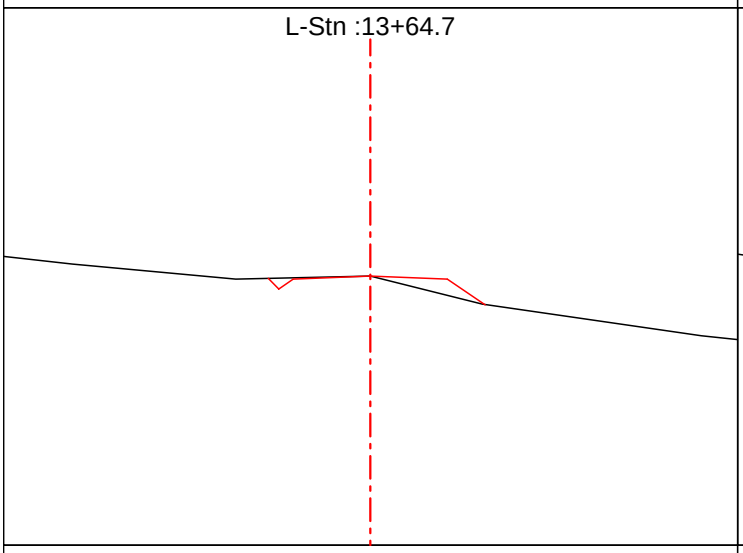
P-Stn :	12+17.6	Cut Dp:	0.0	CL Elev:	-53.9
V.Offset:	0.0	H. Offset:	0.0	Index:	421

L-Stn :12+86.3



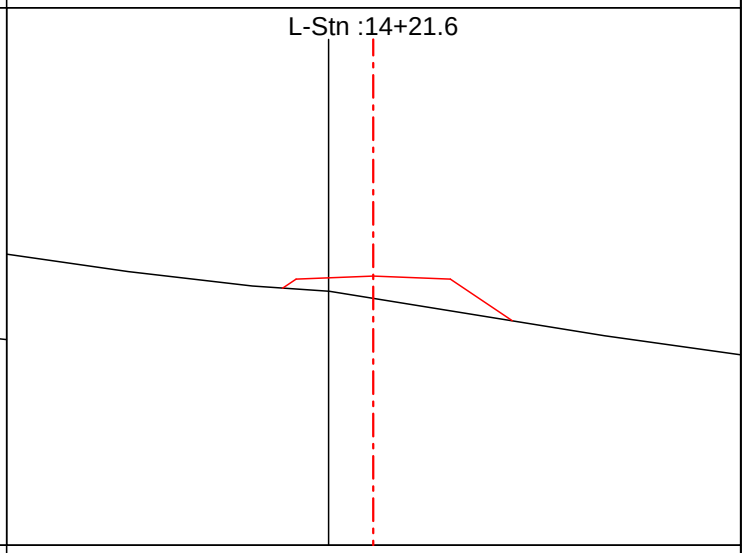
P-Stn :	12+90.6	Cut Dp:	-1.6	CL Elev:	-56.6
V.Offset:	1.6	H. Offset:	0.0	Index:	422

L-Stn :13+64.7



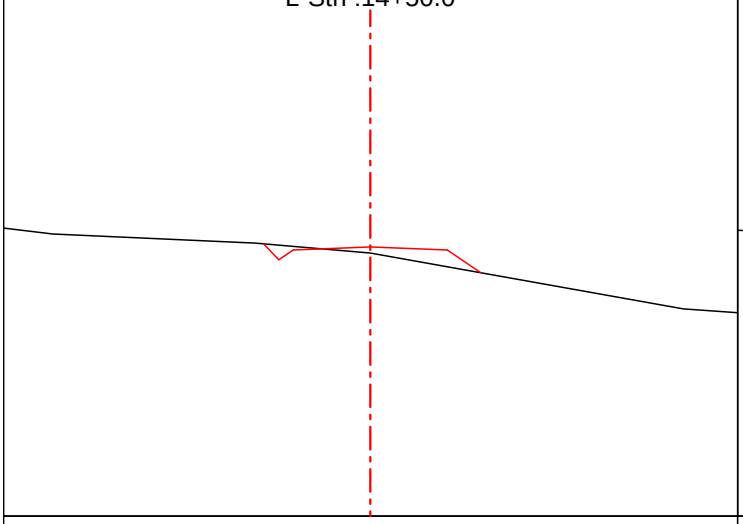
P-Stn :	13+69.0	Cut Dp:	0.0	CL Elev:	-58.2
V.Offset:	0.0	H. Offset:	0.0	Index:	423

L-Stn :14+21.6



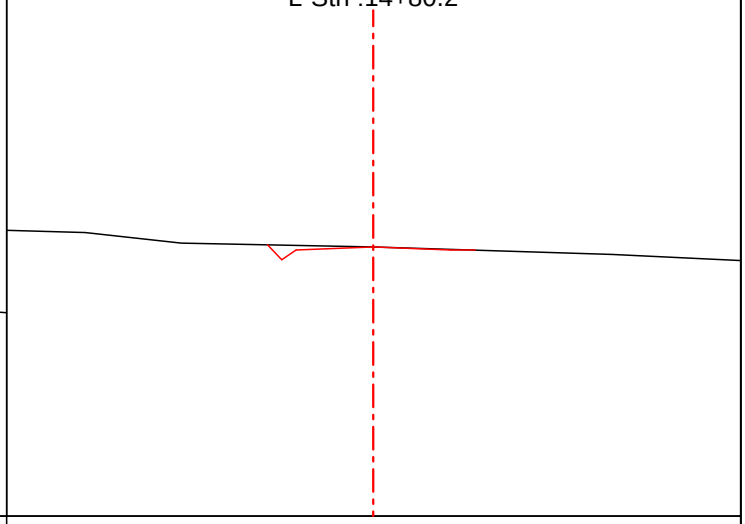
P-Stn :	14+25.0	Cut Dp:	-2.3	CL Elev:	-59.4
V.Offset:	1.6	H. Offset:	4.6	Index:	424

L-Stn :14+50.0

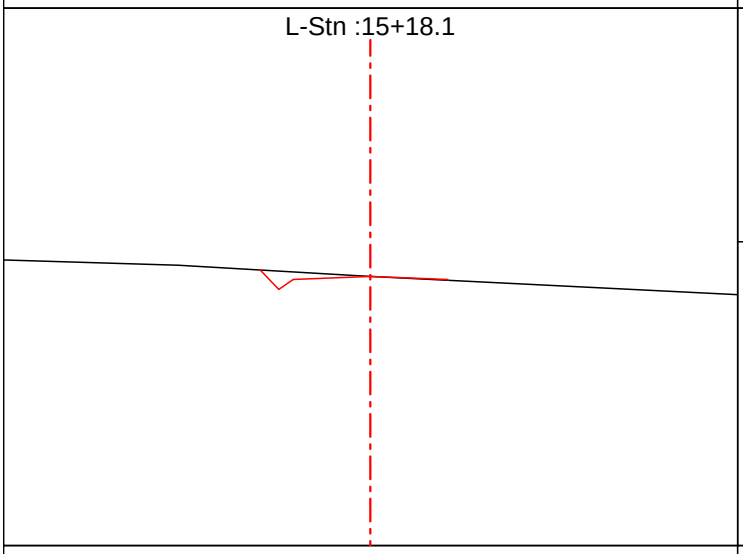


P-Stn :	14+52.4	Cut Dp:	-0.6	CL Elev:	-59.4	P-Stn :	14+82.6	Cut Dp:	0.0	CL Elev:	-59.0
V.Offset:	0.6	H. Offset:	0.0	Index:	425	V.Offset:	0.0	H. Offset:	0.0	Index:	426

L-Stn :14+80.2

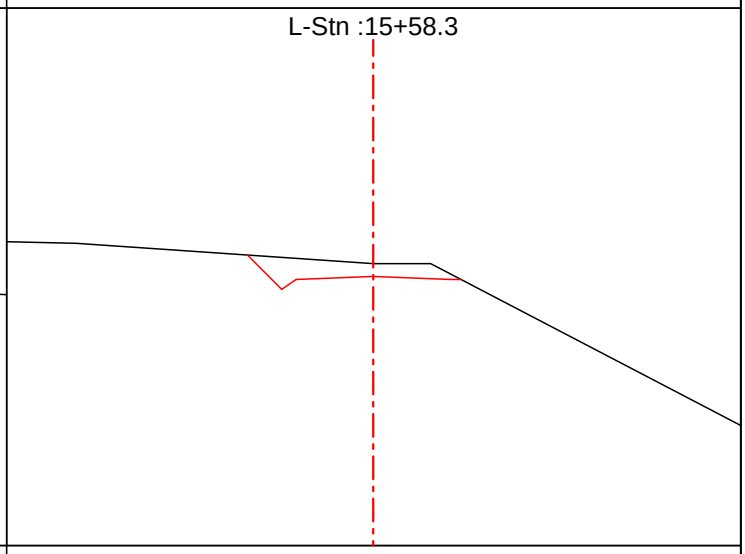


L-Stn :15+18.1

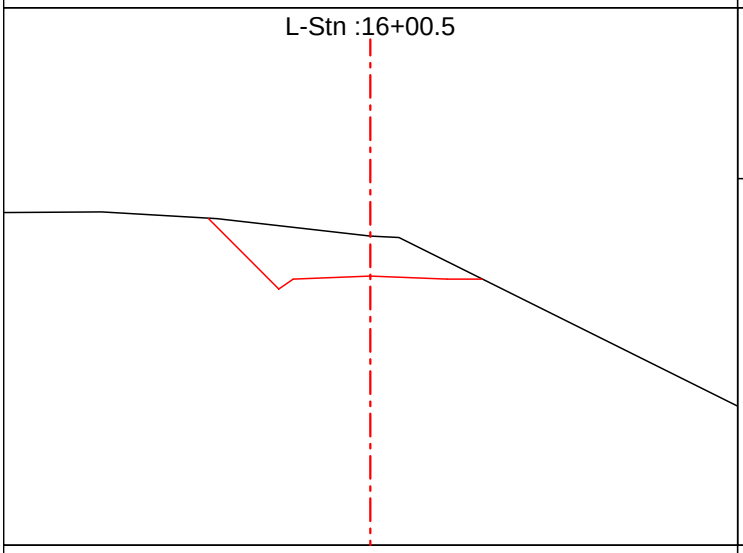


P-Stn :	15+20.5	Cut Dp:	0.0	CL Elev:	-58.7	P-Stn :	15+60.7	Cut Dp:	1.3	CL Elev:	-59.6
V.Offset:	0.0	H. Offset:	0.0	Index:	427	V.Offset:	-1.3	H. Offset:	0.0	Index:	428

L-Stn :15+58.3

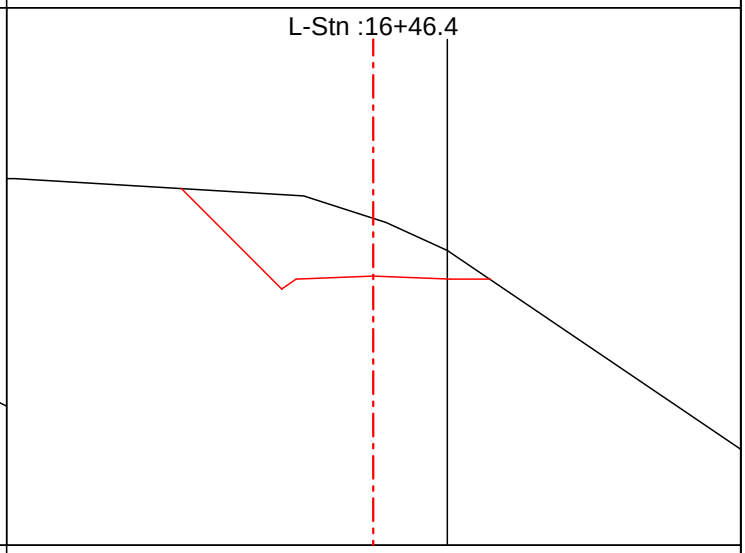


L-Stn :16+00.5

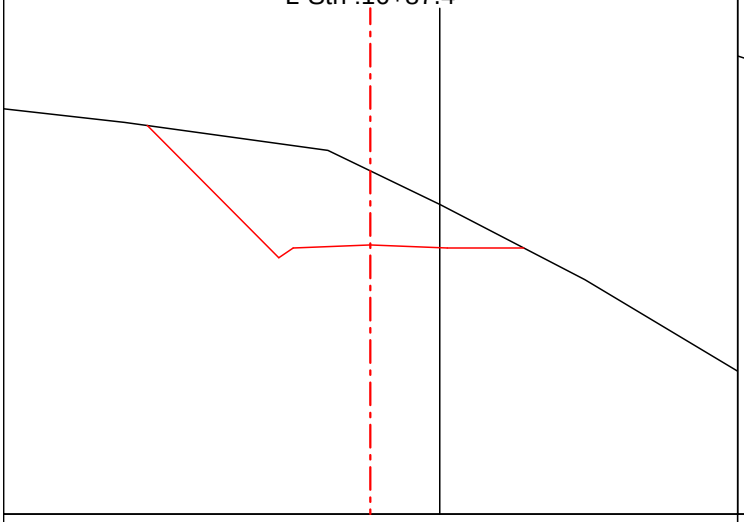


P-Stn :	16+02.9	Cut Dp:	4.2	CL Elev:	-60.8	P-Stn :	16+48.3	Cut Dp:	6.0	CL Elev:	-63.8
V.Offset:	-4.2	H. Offset:	0.0	Index:	429	V.Offset:	-2.7	H. Offset:	-7.7	Index:	430

L-Stn :16+46.4

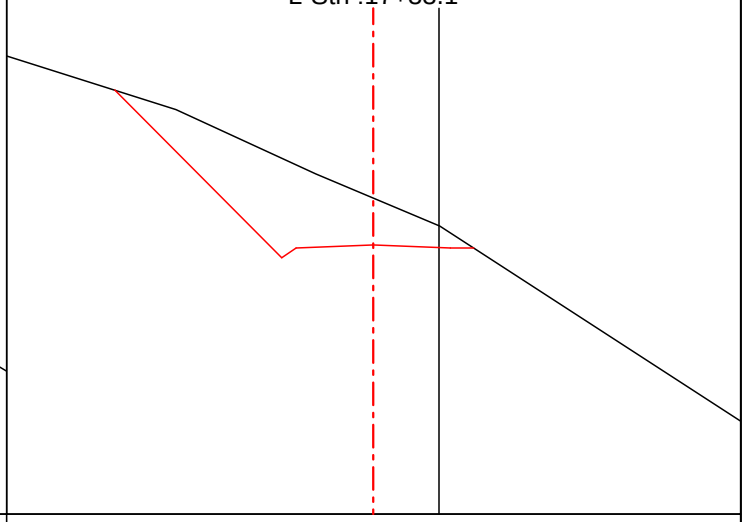


L-Stn :16+87.4



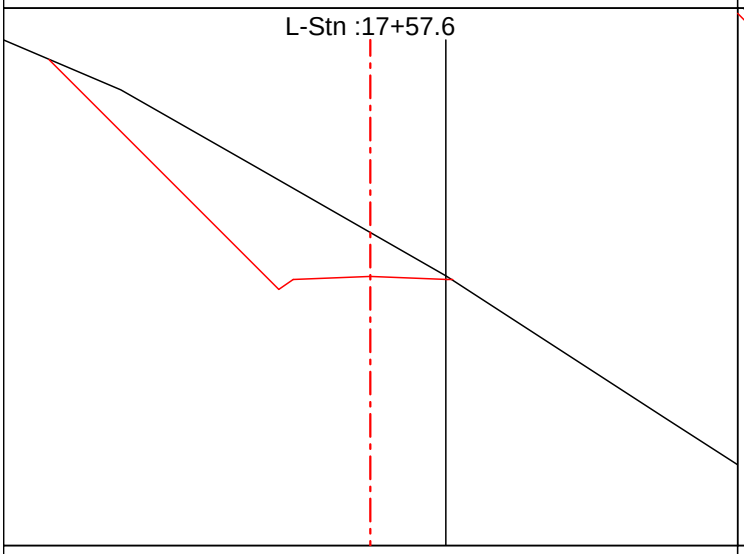
P-Stn :	16+91.6	Cut Dp:	7.7	CL Elev:	-68.4
V.Offset:	-4.2	H. Offset:	-7.3	Index:	431

L-Stn :17+33.1



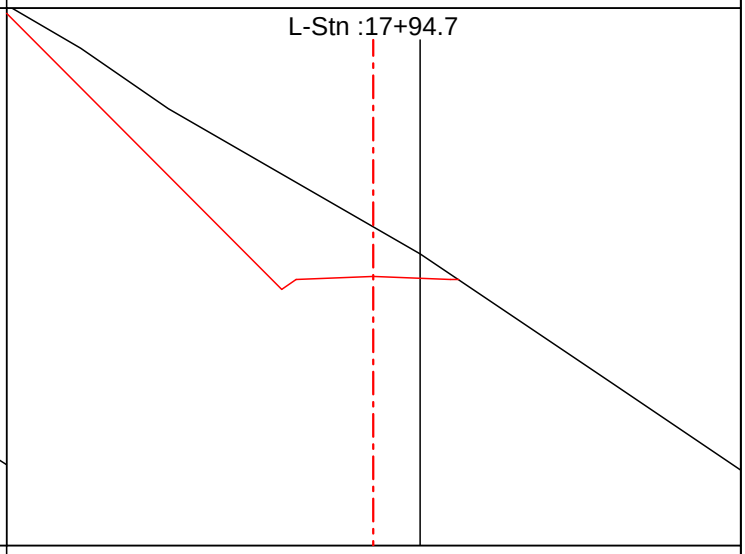
P-Stn :	17+41.4	Cut Dp:	4.9	CL Elev:	-75.1
V.Offset:	-2.0	H. Offset:	-6.9	Index:	432

L-Stn :17+57.6



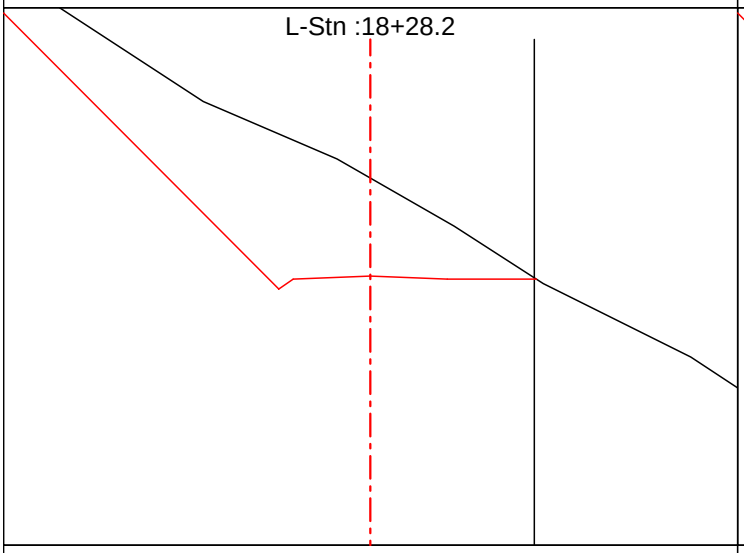
P-Stn :	17+68.7	Cut Dp:	4.6	CL Elev:	-78.7
V.Offset:	-0.1	H. Offset:	-7.9	Index:	433

L-Stn :17+94.7



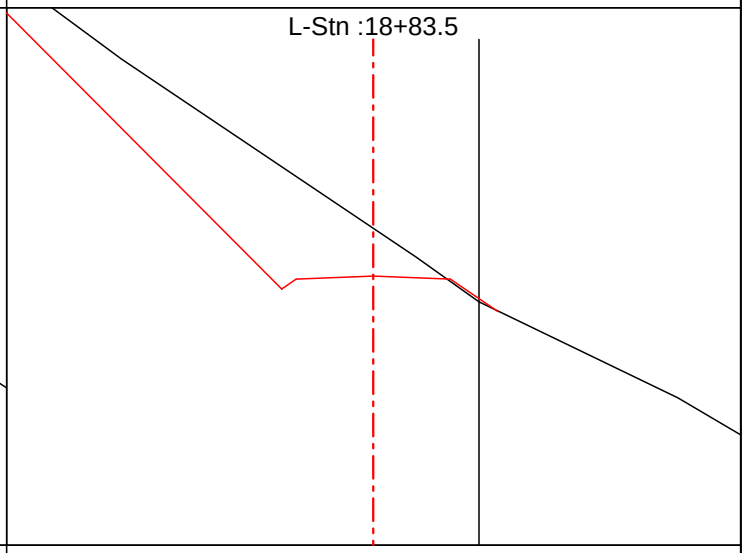
P-Stn :	18+06.2	Cut Dp:	5.2	CL Elev:	-84.0
V.Offset:	-2.4	H. Offset:	-4.8	Index:	434

L-Stn :18+28.2



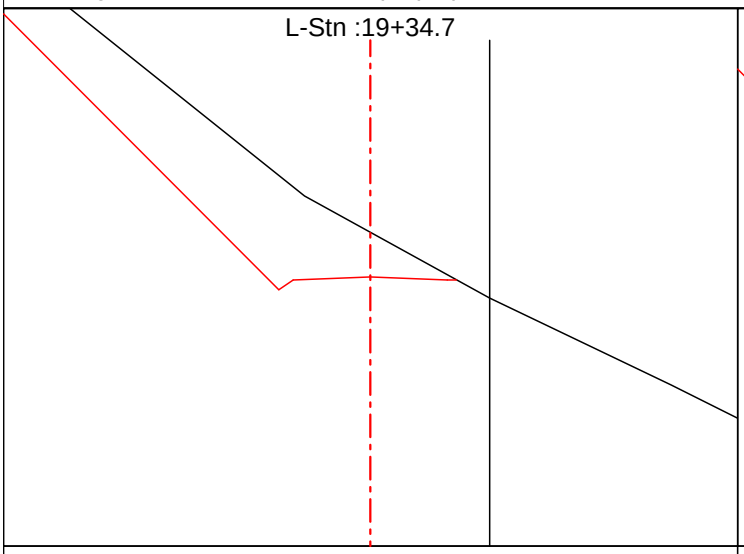
P-Stn :	18+44.8	Cut Dp:	10.2	CL Elev:	-87.7
V.Offset:	0.8	H. Offset:	-17.9	Index:	435

L-Stn :18+83.5



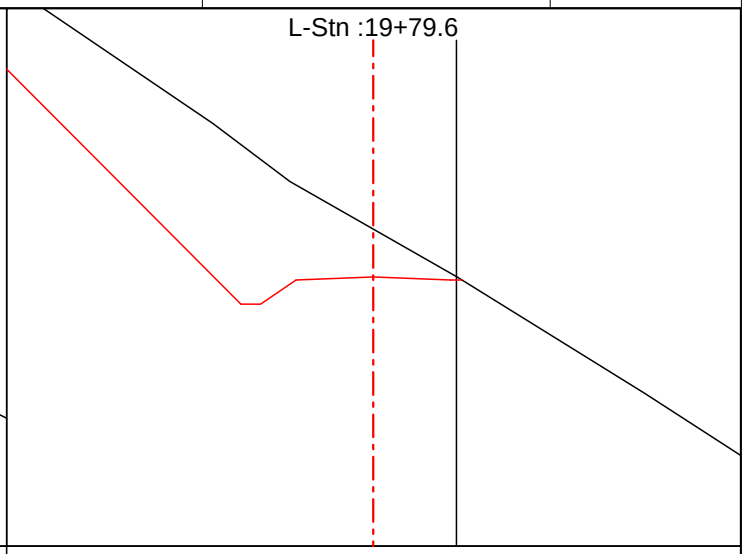
P-Stn :	19+05.9	Cut Dp:	4.9	CL Elev:	-91.9
V.Offset:	2.7	H. Offset:	-11.0	Index:	436

L-Stn :19+34.7



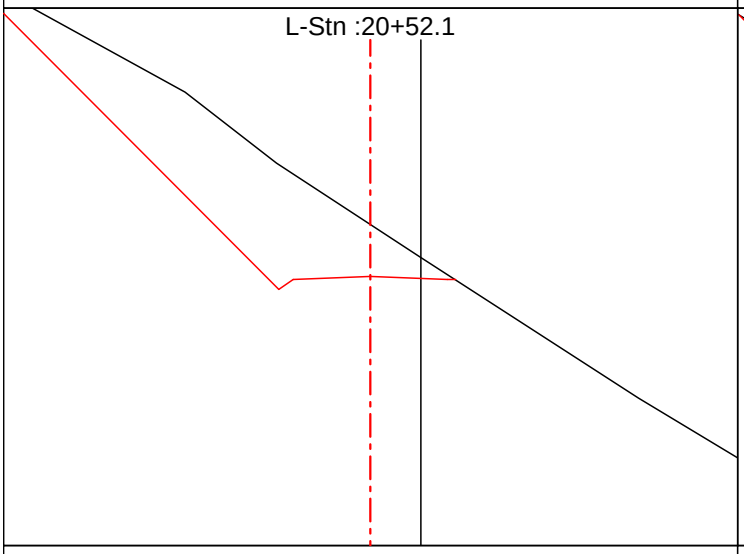
P-Stn :	19+55.3	Cut Dp:	4.6	CL Elev:	-93.9			
V.Offset:	2.2	H. Offset:	-12.4	Index:	437			

L-Stn :19+79.6



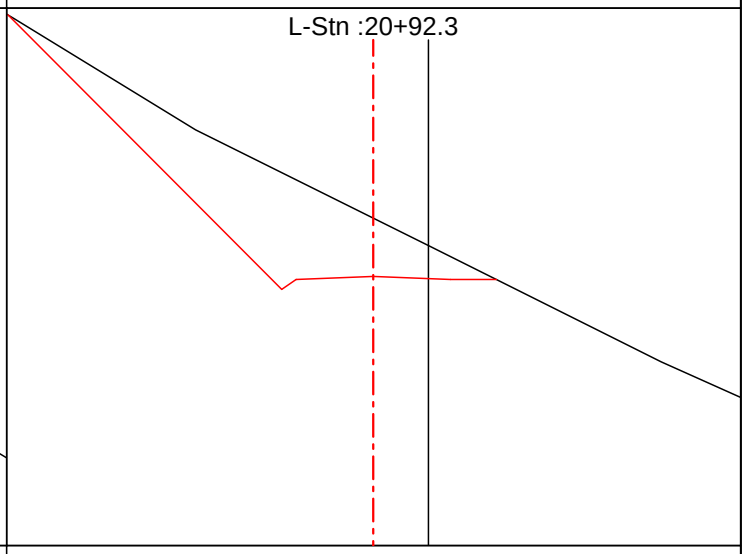
P-Stn :	20+00.1	Cut Dp:	5.0	CL Elev:	-94.3			
V.Offset:	0.0	H. Offset:	-8.7	Index:	438			

L-Stn :20+52.1



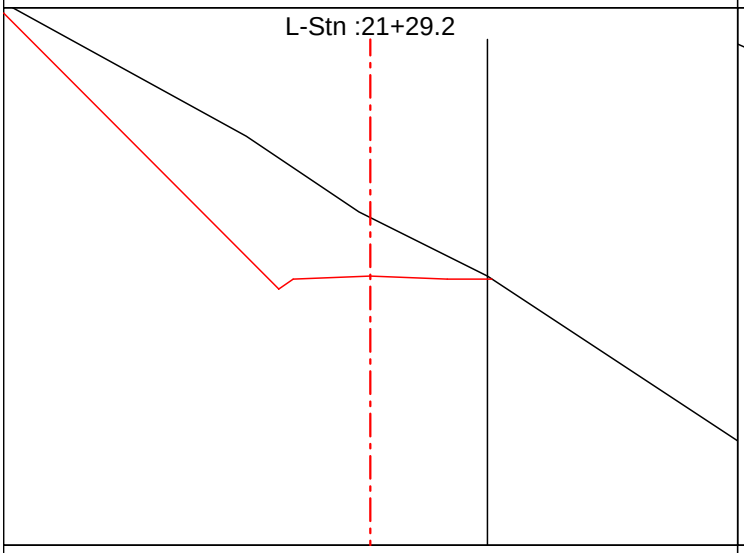
P-Stn :	20+72.8	Cut Dp:	5.4	CL Elev:	-92.7			
V.Offset:	-2.0	H. Offset:	-5.3	Index:	439			

L-Stn :20+92.3



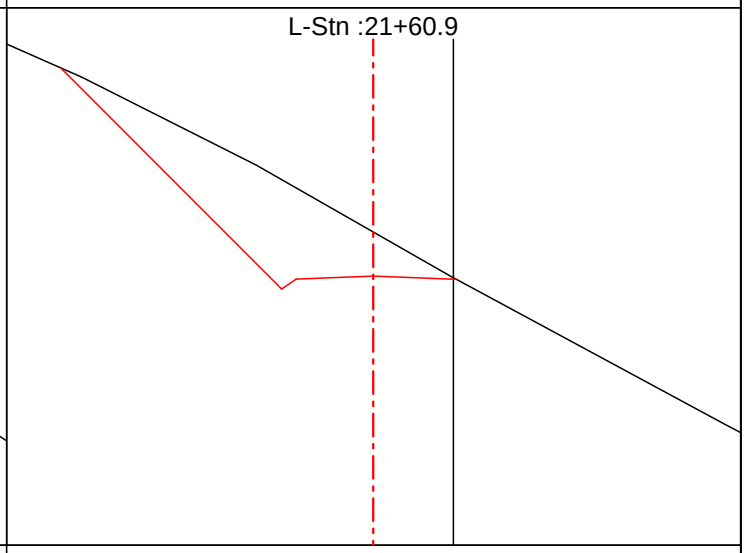
P-Stn :	21+12.4	Cut Dp:	6.0	CL Elev:	-93.5			
V.Offset:	-3.2	H. Offset:	-5.7	Index:	440			

L-Stn :21+29.2



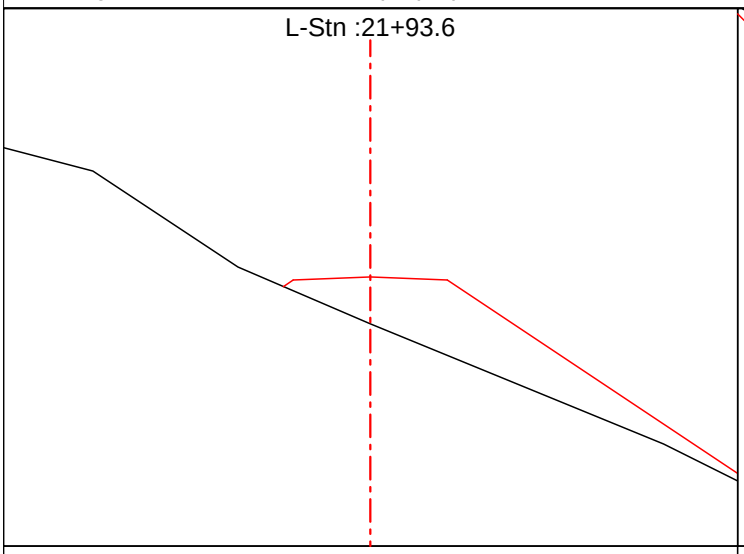
P-Stn :	21+49.5	Cut Dp:	6.1	CL Elev:	-95.1			
V.Offset:	0.0	H. Offset:	-12.2	Index:	441			

L-Stn :21+60.9



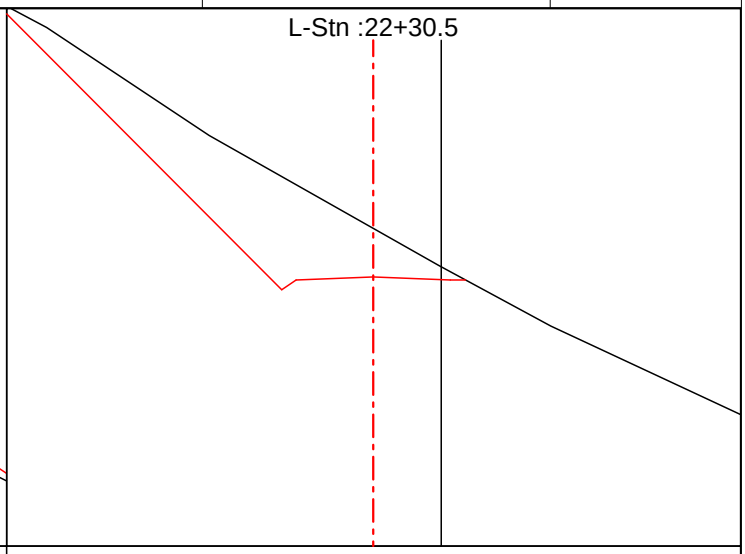
P-Stn :	21+80.7	Cut Dp:	4.6	CL Elev:	-96.4			
V.Offset:	0.0	H. Offset:	-7.9	Index:	442			

L-Stn :21+93.6



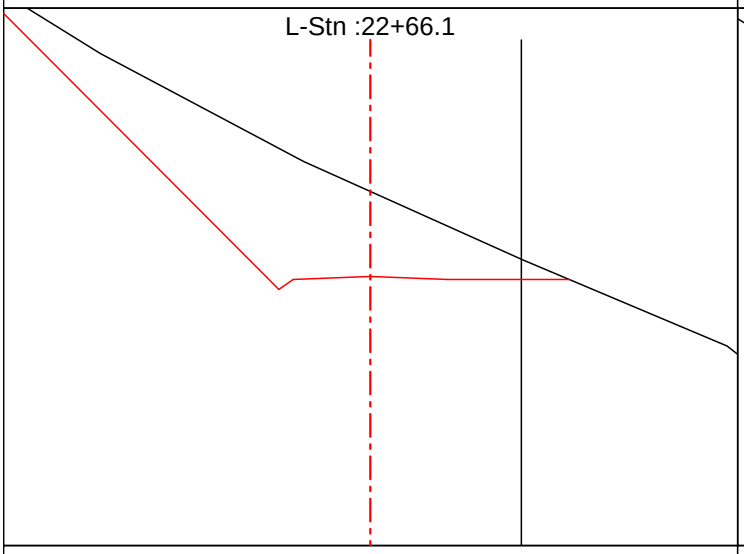
P-Stn :	22+11.2	Cut Dp:	-4.9	CL Elev:	-97.6	V.Offset:	4.9	H. Offset:	0.0	Index:	443

L-Stn :22+30.5



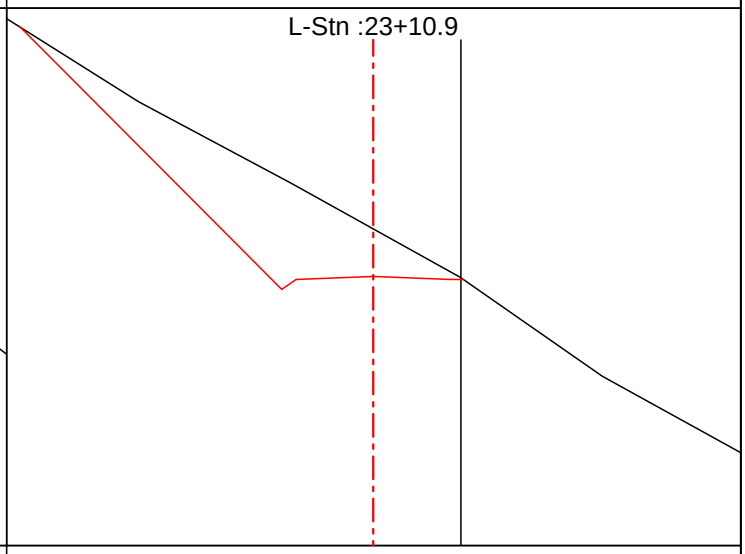
P-Stn :	22+46.6	Cut Dp:	5.1	CL Elev:	-99.4	V.Offset:	-1.2	H. Offset:	-6.7	Index:	444

L-Stn :22+66.1



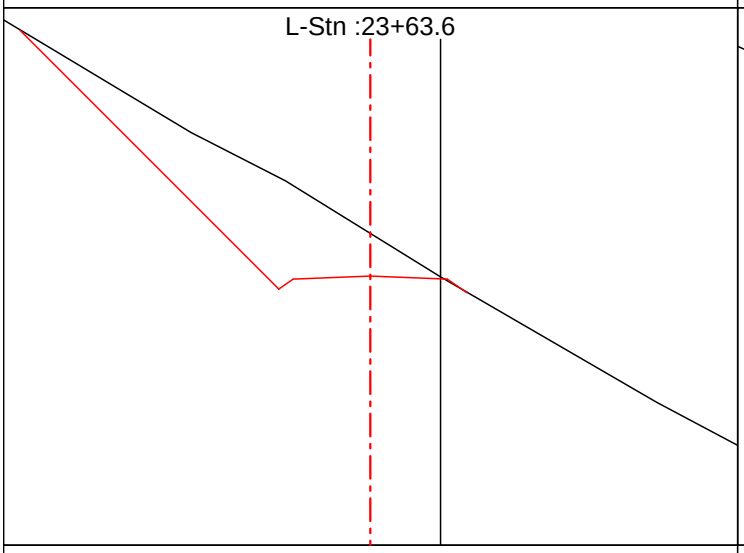
P-Stn :	22+83.5	Cut Dp:	8.9	CL Elev:	-102.1	V.Offset:	-1.7	H. Offset:	-15.9	Index:	445

L-Stn :23+10.9



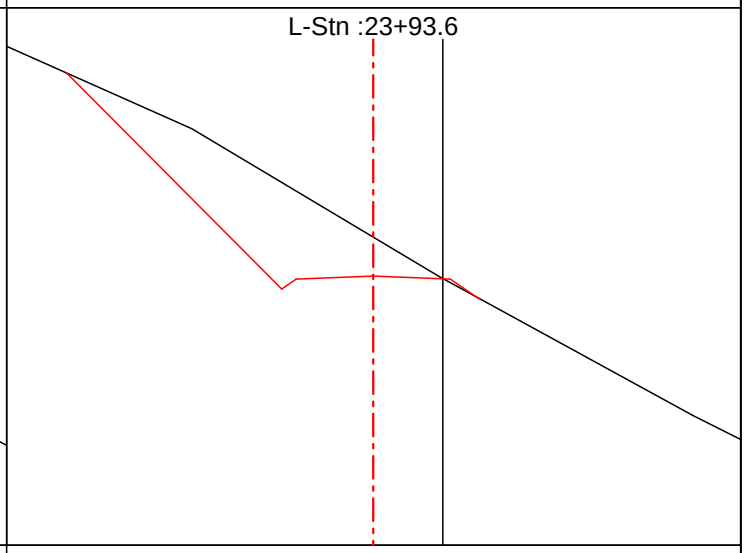
P-Stn :	23+30.0	Cut Dp:	4.9	CL Elev:	-106.4	V.Offset:	0.1	H. Offset:	-9.0	Index:	446

L-Stn :23+63.6



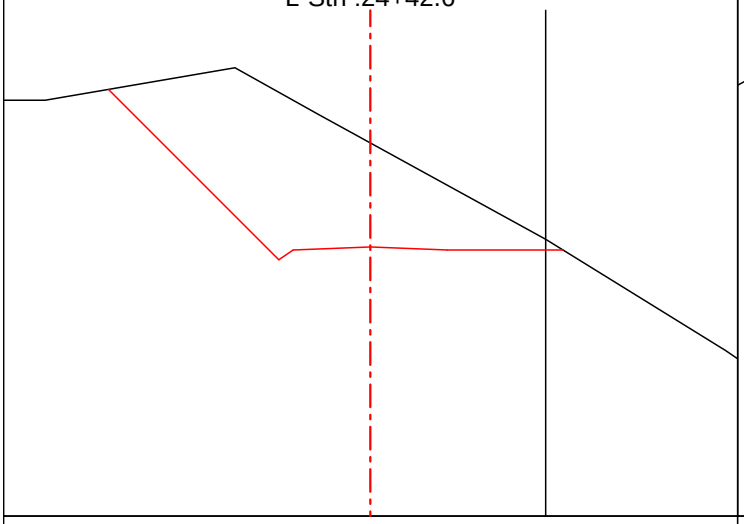
P-Stn :	23+80.8	Cut Dp:	4.4	CL Elev:	-113.0	V.Offset:	0.1	H. Offset:	-7.3	Index:	447

L-Stn :23+93.6



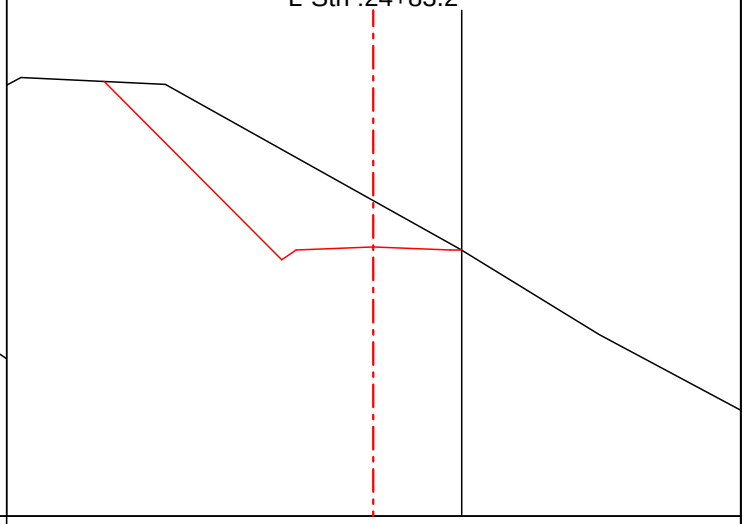
P-Stn :	24+07.6	Cut Dp:	4.0	CL Elev:	-116.7	V.Offset:	0.1	H. Offset:	-6.9	Index:	448

L-Stn :24+42.6



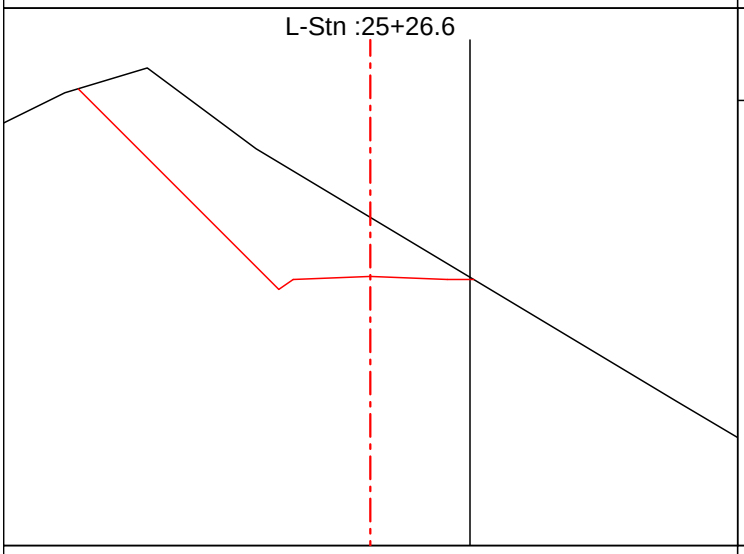
P-Stn :	24+55.6	Cut Dp:	10.9	CL Elev:	-122.4
V.Offset:	-0.8	H. Offset:	-18.3	Index:	449

L-Stn :24+83.2



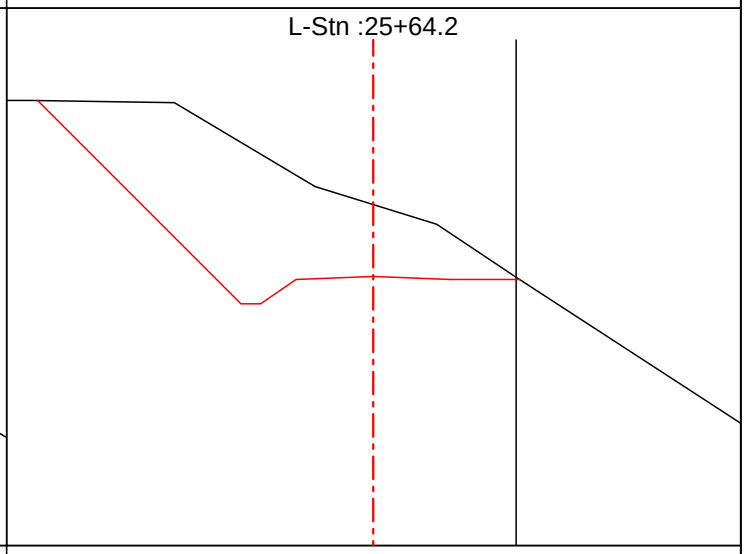
P-Stn :	24+96.6	Cut Dp:	4.8	CL Elev:	-127.2
V.Offset:	0.2	H. Offset:	-9.0	Index:	450

L-Stn :25+26.6



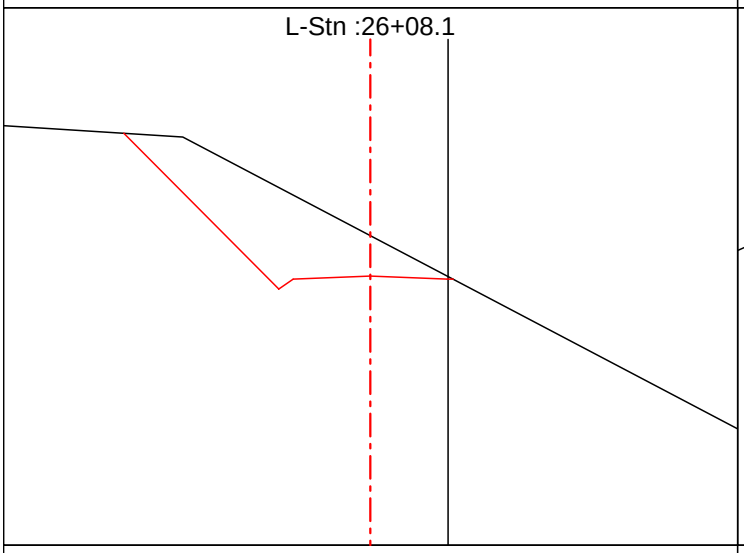
P-Stn :	25+39.2	Cut Dp:	6.1	CL Elev:	-131.9
V.Offset:	0.1	H. Offset:	-10.4	Index:	451

L-Stn :25+64.2



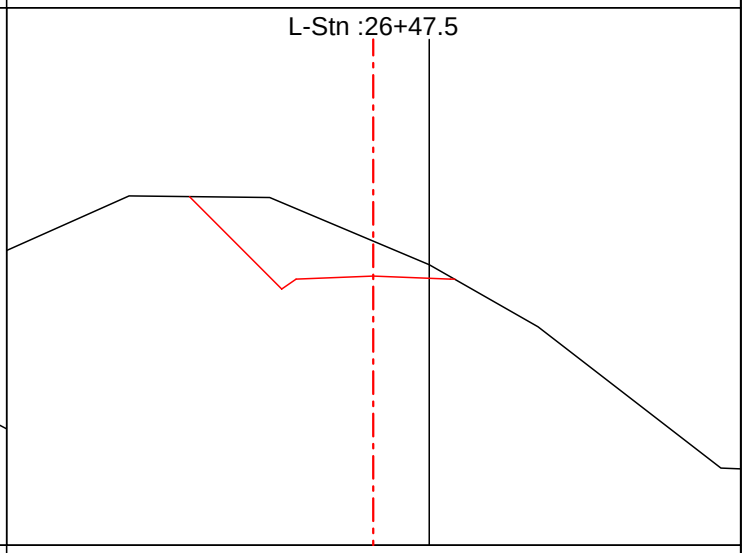
P-Stn :	25+79.9	Cut Dp:	7.5	CL Elev:	-135.6
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L-Stn :26+08.1



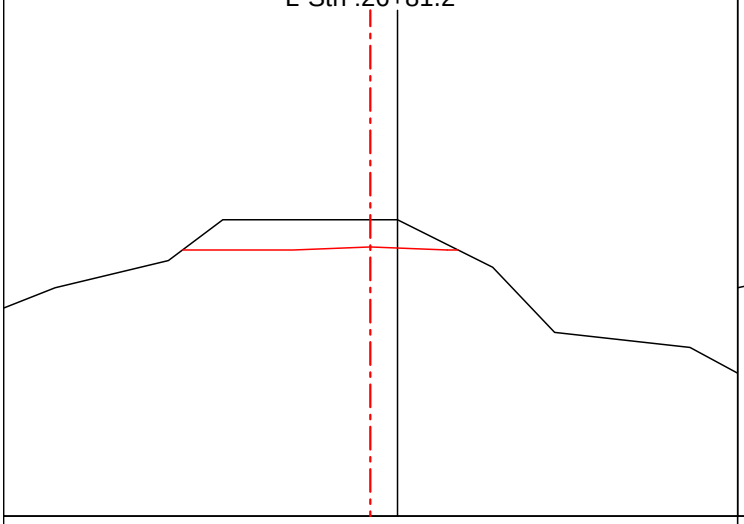
P-Stn :	26+25.1	Cut Dp:	4.2	CL Elev:	-138.0
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L-Stn :26+47.5



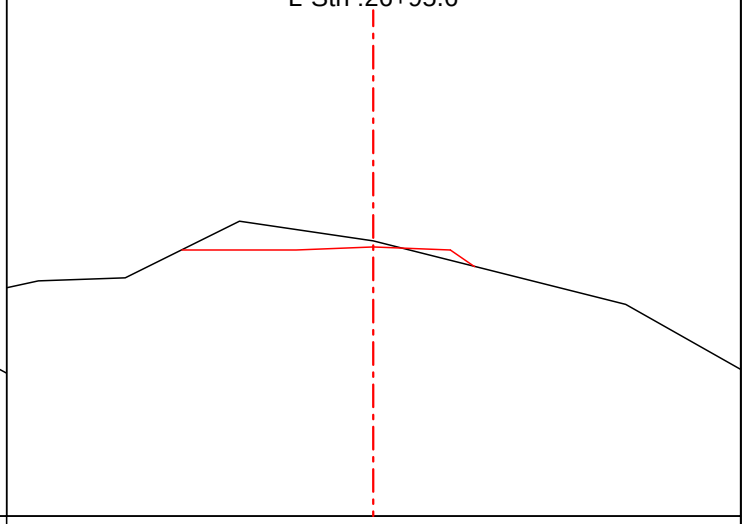
P-Stn :	26+63.8	Cut Dp:	3.6	CL Elev:	-138.4
V.Offset:	-1.2	H. Offset:	-5.8	Index:	454

L-Stn :26+81.2



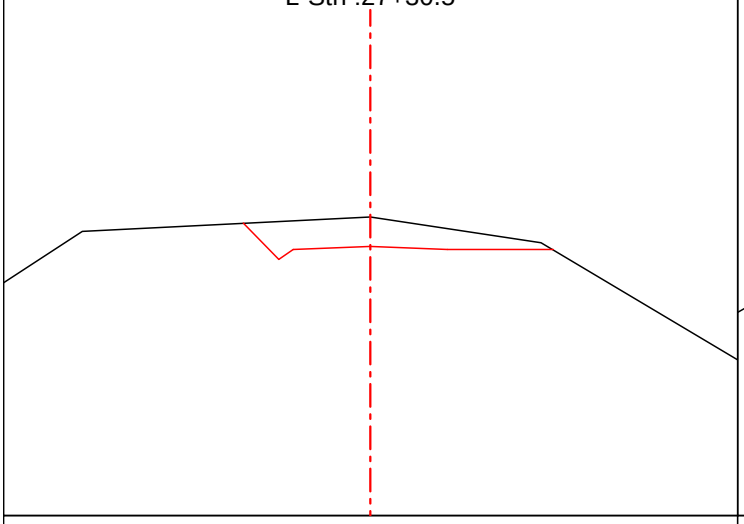
P-Stn :	26+97.5	Cut Dp:	2.8	CL Elev:	-139.0
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L-Stn :26+95.6



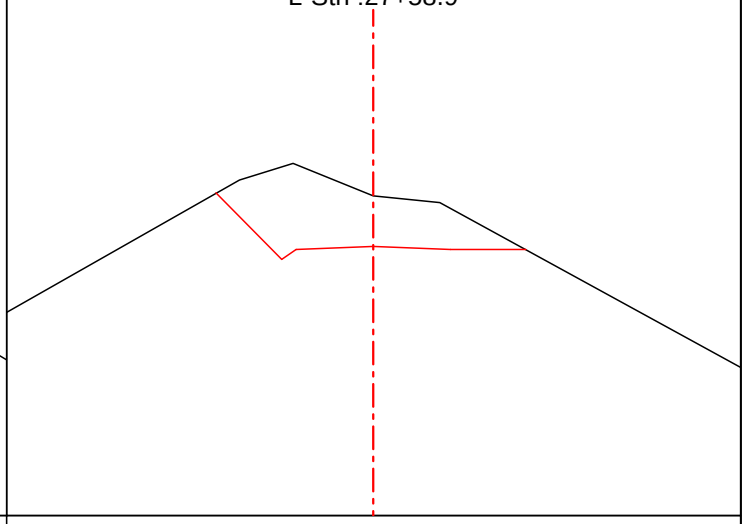
P-Stn :	27+11.8	Cut Dp:	0.6	CL Elev:	-139.3
V.Offset:	-0.6	H. Offset:	0.0	Index:	456

L-Stn :27+30.5



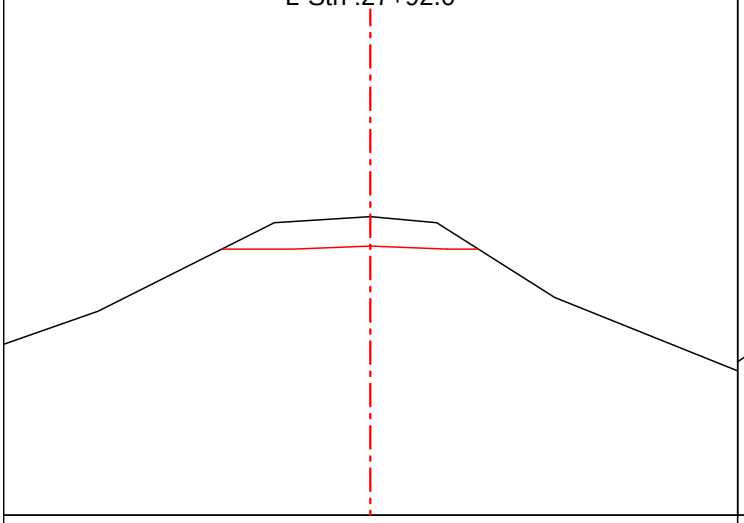
P-Stn :	27+46.7	Cut Dp:	3.1	CL Elev:	-141.1
V.Offset:	-3.1	H. Offset:	0.0	Index:	457

L-Stn :27+58.9



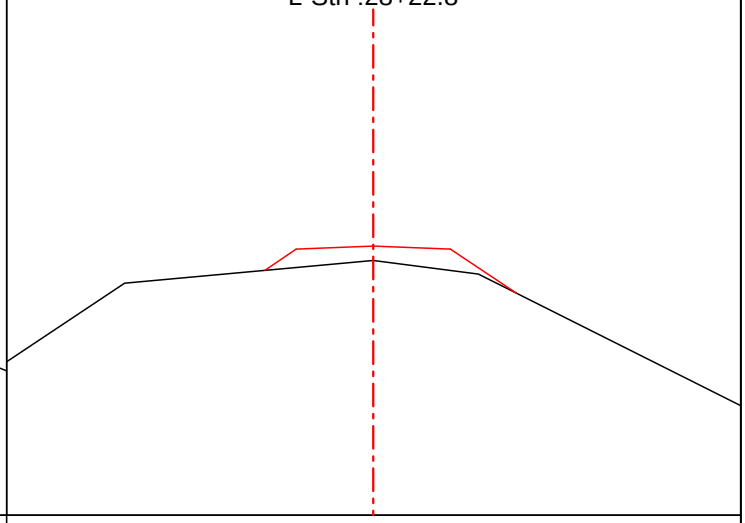
P-Stn :	27+75.1	Cut Dp:	5.3	CL Elev:	-143.9
V.Offset:	-5.3	H. Offset:	0.0	Index:	458

L-Stn :27+92.0

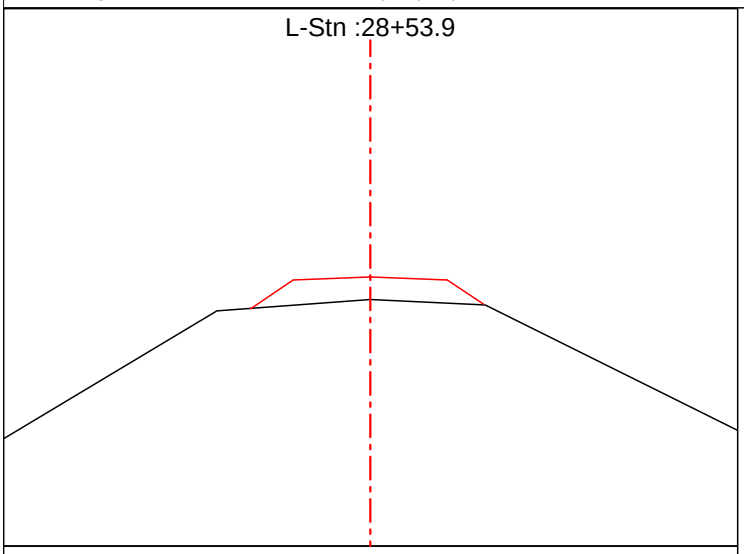


P-Stn :	28+08.2	Cut Dp:	3.1	CL Elev:	-147.0
V.Offset:	-3.1	H. Offset:	0.0	Index:	459

L-Stn :28+22.8

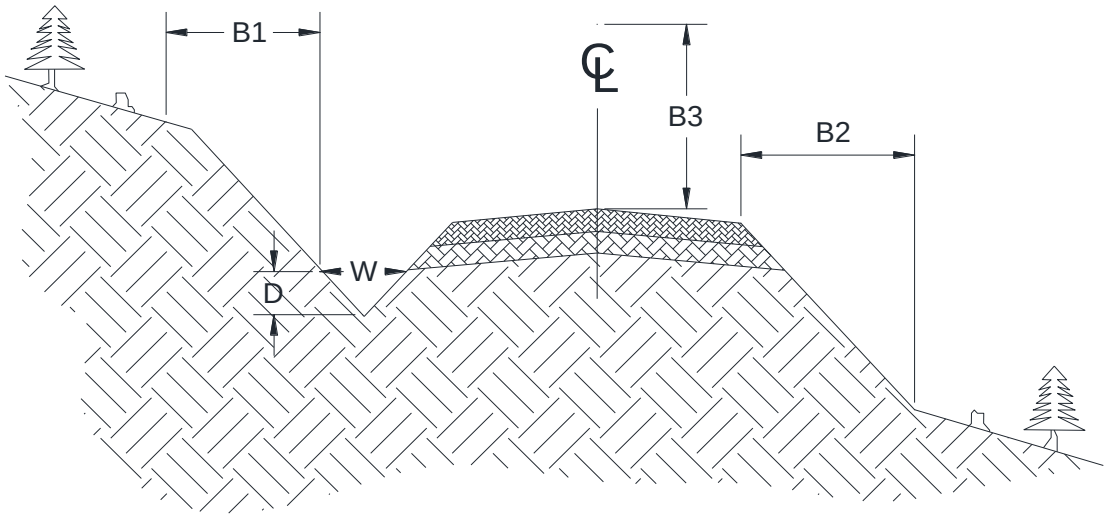


P-Stn :	28+38.9	Cut Dp:	-1.5	CL Elev:	-150.4
V.Offset:	1.5	H. Offset:	0.0	Index:	460



P-Stn :	28+70.1	Cut Dp:	-2.4	CL Elev:	-152.6
V.Offset:	2.4	H. Offset:	0.0	Index:	461

BRUSHING DETAIL
(not to scale)



BRUSHING LIST

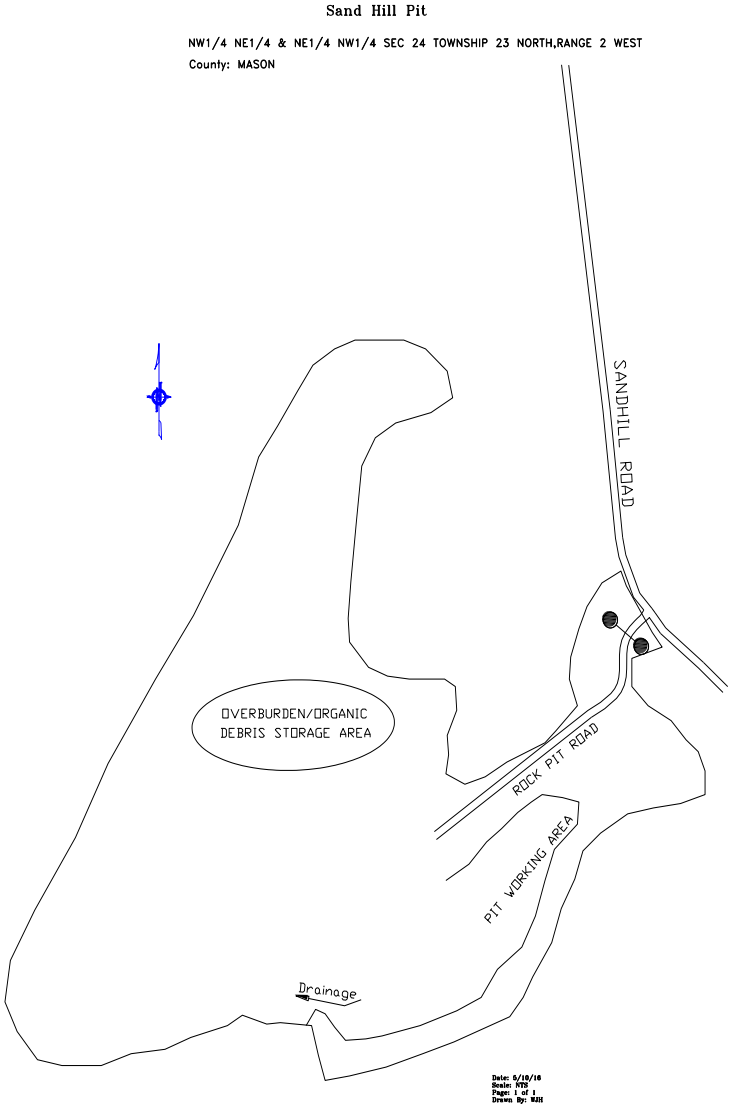
Road Number	From station	To station	Road Width (feet)	Ditch Width (feet)	Ditch Depth (feet)	Brushing Limits (feet)			Remarks In addition to brushing…
				W	D	B1	B2	B3	
M-2000	111+33	116+74	12	2	1	10	10	14	
M-2000	192+30	211+45	12	2	1	10	10	14	
M-2000	234+57	245+57	12	2	1	10	10	14	

B1 extends horizontally the specified distance in feet from the back of the ditch. B2 extends horizontally the specified distance in feet from the outside edge of the running surface. Brush is defined as all non-merchantable vegetative material found within the specified limits. Brush that is cut shall be removed to the downhill side of the road and placed such that it will not block ditches, ditch-outs, or drainage structures. Signs, culvert location markers, culverts or any other identification features damaged by brushing shall be replaced at the Purchasers expense.

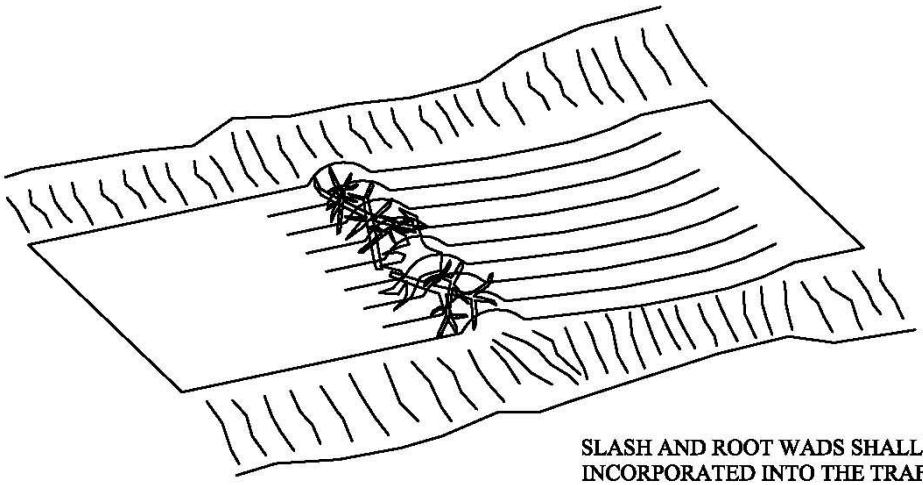
Legal Description: NW, NE & NE, NW Sec 24 T23N R02W
Rock Pit Name: Sandhill Pit

PIT DEVELOPMENT PLAN

1. Scatter root wads and organic debris larger than one cubic foot in volume as directed by the Contract Administrator.
2. A minimum stripping width of 20 feet must be maintained from all pit faces and at the termination of operations pit shall be left in said condition.
3. Pile all reject rock and overburden away from pit working area as shown.
4. Pit floor shall be sloped to allow drainage as shown. No ponding will be allowed.
5. Maximum face height shall not exceed 30 feet in height.
6. Pit face shall have a maximum backslope of 1/4:1.
7. Working bench width shall be a minimum of 25 feet.
8. At the completion of operations, Contractor shall request written approval from the Contract Administrator for final rock source condition and compliance with the terms of this plan
9. Quantity and Quality of ballast pit is not guaranteed by the State.

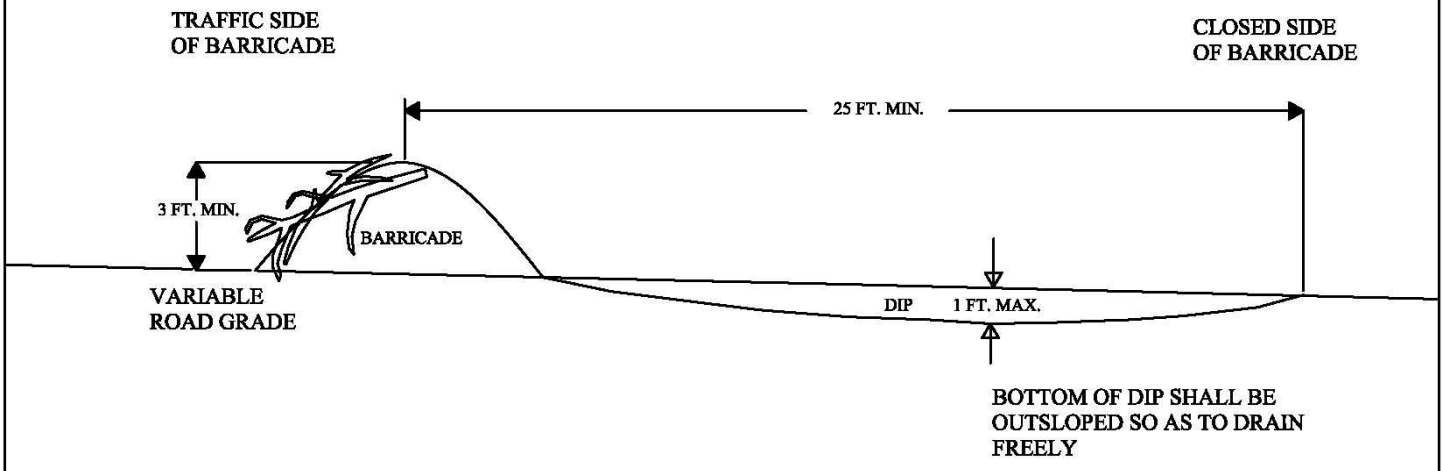


BARRICADE DETAIL



SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.

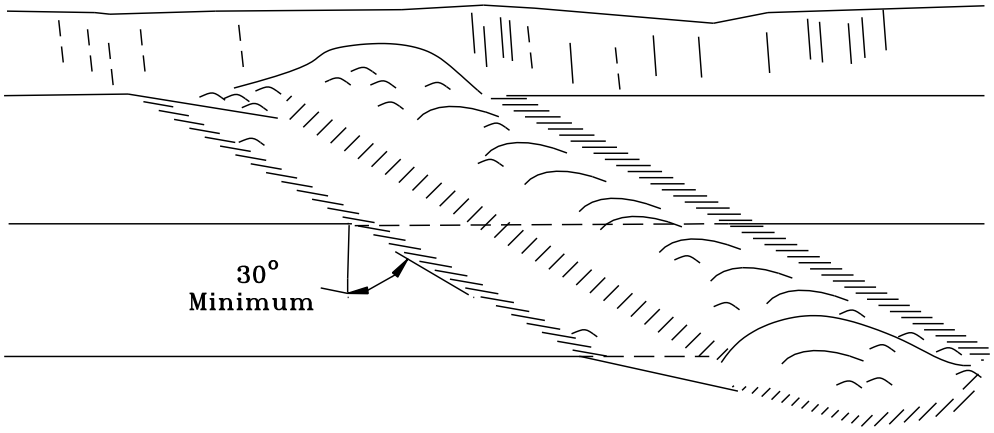
PLAN VIEW



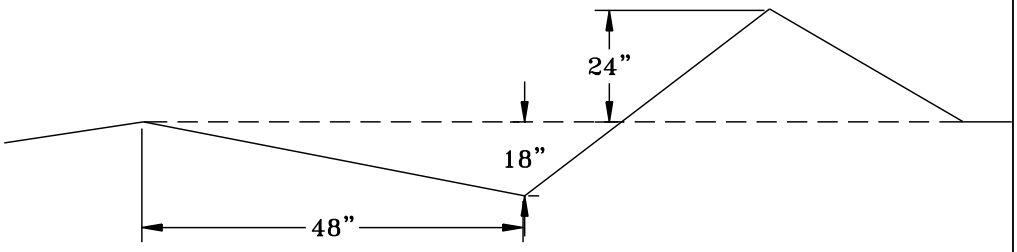
PROFILE VIEW

Non-Drivable Water Bar Detail

Cross Ditch



Cross Section at Centerline



Date:
Scale : None
App#
Drawn by: M.A.D.

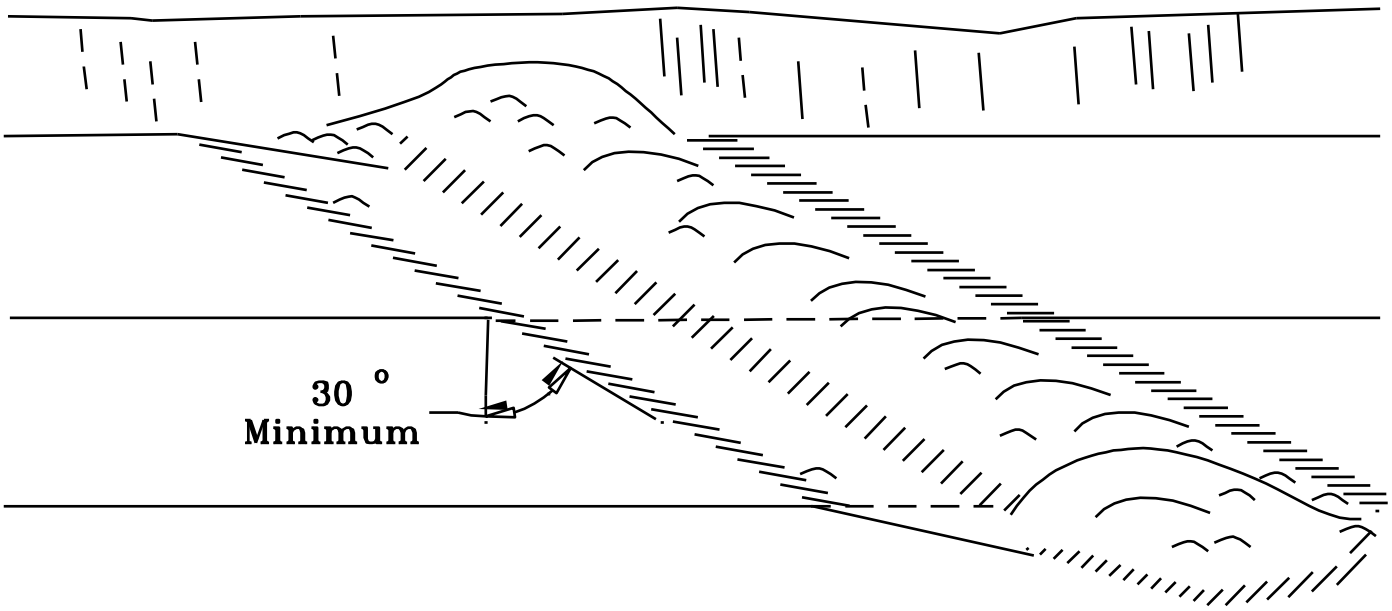
Water Bar Detail

WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

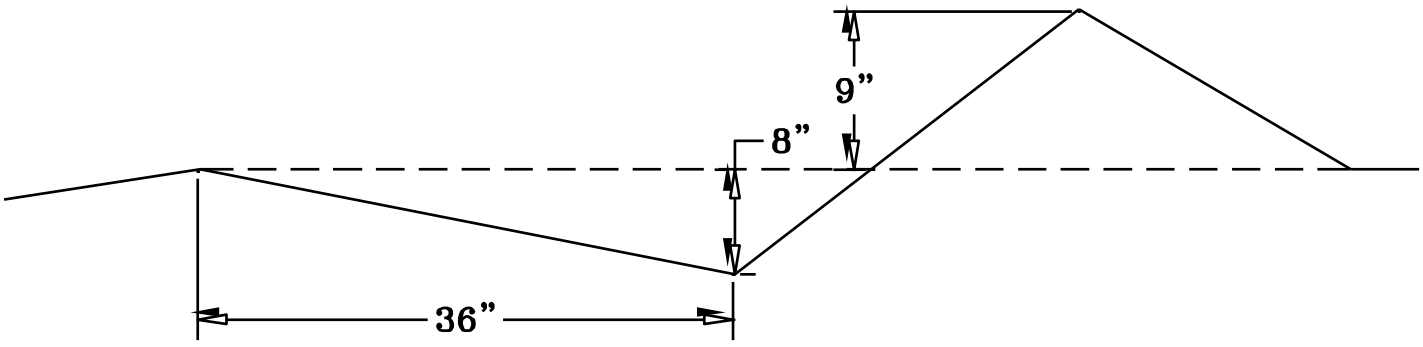
SPS REGION

Drivable Water Bar Detail

Cross Ditch



Cross Section at Centerline



DEPARTMENT OF NATURAL RESOURCES - SOUTH PUGET SOUND REGION

FORM 9-87(Rev. 01-09)

Road Development Cost Estimate

(For internal DNR use only. Costs are estimates only & are not guaranteed by the State or part of the Road Plan.)

REGION: South Puget Sound
DISTRICT: Hood Canal

SALE/PROJECT NAME: Tip Top T.S. CONTRACT NUMBER: 30-094094
LEGAL DESCRIPTION: Sec 16, 17, 19, 20 &21 T22N R03W

ROAD NUMBER:	P-1070 M-2000 M-2050 Spurs 1-15	P-1070	M-2000 M-2030 M-2035 M-2050 M-2060 P-1000 P-1070
ROAD STANDARD:	Construction	Reconstruction	Pre/Post-haul maintenance
NUMBER OF STATIONS:	197.56	26.41	804.80
SIDESLOPE:	10-25%	5-15%	5-15%
CLEARING AND GRUBBING:	$16,523	$1,849	
EXCAVATION AND FILL:	$22,438	$2,905	
MISC. MAINTENANCE:			$9,498
ROCK TOTALS (Cu. Yds.):			
Ballast: 9407	$102,474	$0	$0
Surface: 0	$0	$0	$0
Riprap: 34	$423	$261	$423
CULVERTS AND FLUMES:	$24,570	$4,790	$7,984
STRUCTURES:	$0	$0	$0
GENERAL EXPENSES:	$13,314	$1,079	$1,791
MOBILIZATION:	$2,333	$2,333	$2,333
TOTAL COSTS:	$182,077	$13,217	$22,029
COST PER STATION:	$922	$500	$27

ROAD DEACTIVATION AND ABANDONMENT COSTS: $14,730

NOTE[1]: This appraisal has no allowance for profit and risk.
NOTE[2]: This appraisal does not account for optional rock.

TOTAL (All Roads) = $232,053

SALE VOLUME MBF = 4,185

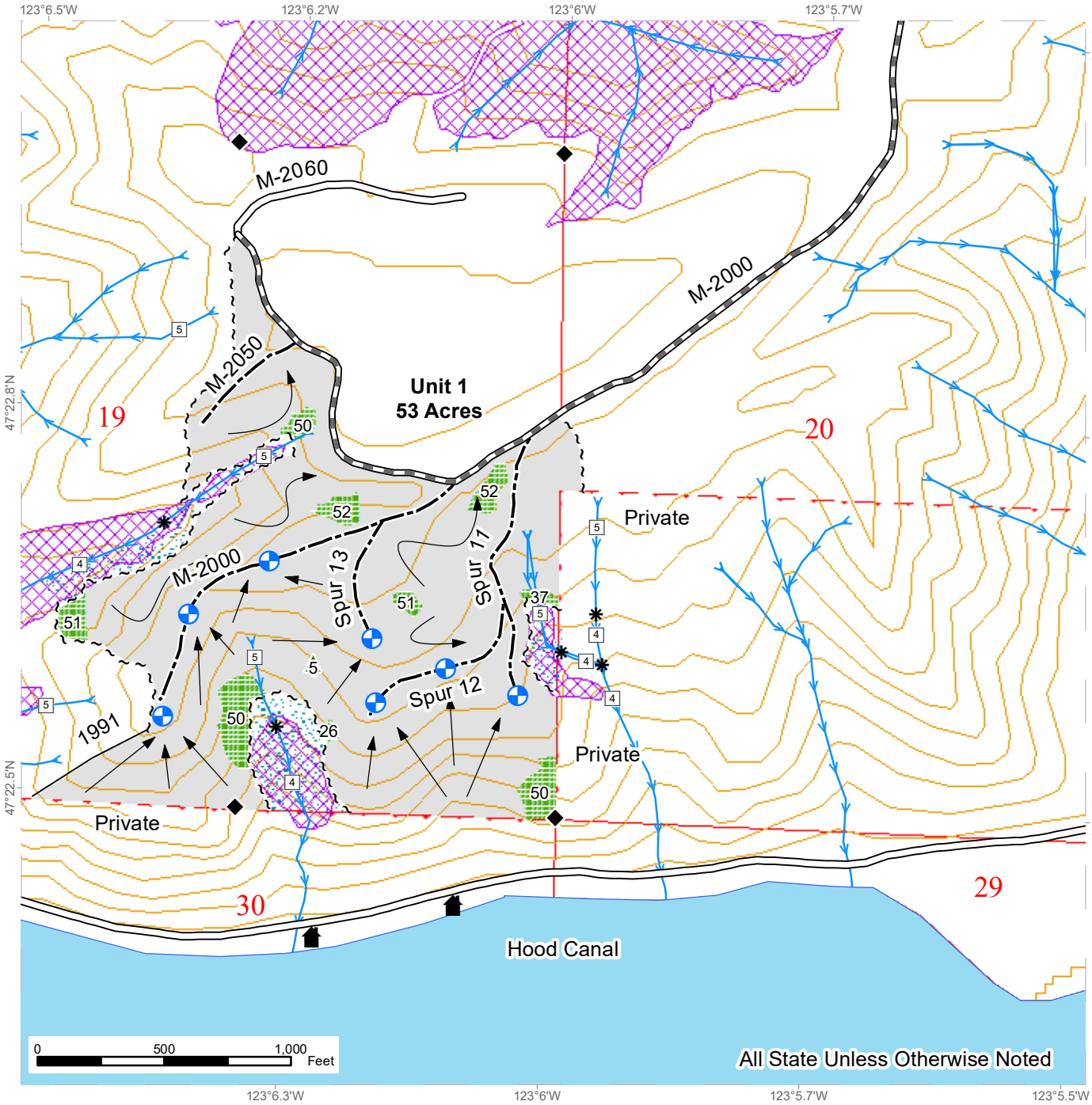
TOTAL COST PER MBF = $55.45

Date: 08/30/18

LOGGING PLAN MAP

SALE NAME: TIP TOP
AGREEMENT#: 30-094094
TOWNSHIP(S): T22R3W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Mason
ELEVATION RGE: 147-508



Leave Tree Area
Riparian Mgt Zone
Tailhold Exclusion Zone
Stream Type
Stream Type Break
Survey Monument
Sale Boundary Tags
Timber Type Change
Leave Tree Tags
Right of Way Tags
Property Line
Landing - Proposed
Blue Painted Trees
Structure
Existing Roads
Required Pre-Haul Maintenance
Optional Construction
Streams
Cable Harvest
Ground Harvest
N

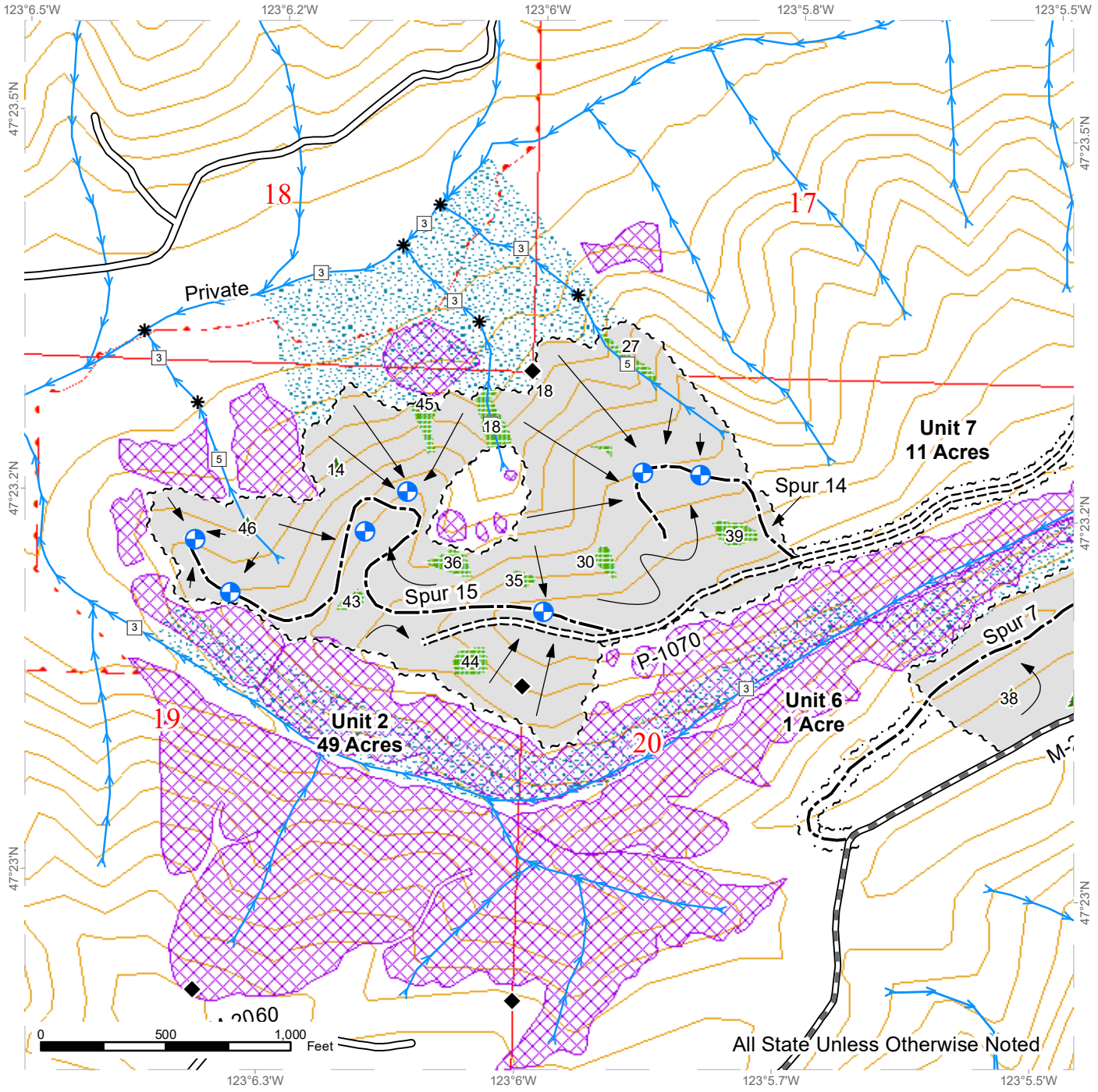
Prepared By: nmcr490

Modification Date: nchi490 9/4/2019

LOGGING PLAN MAP

SALE NAME: TIP TOP
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TOWNSHIP(S): T22R3W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region
COUNTY(S): Mason
ELEVATION RGE: 147-508



- Leave Tree Area
- Riparian Mgt Zone
- Tailhold Exclusion Zone
- Stream Type
- Stream Type Break
- Survey Monument
- Sale Boundary Tags
- Timber Type Change
- Leave Tree Tags
- Right of Way Tags
- Property Line
- Landing - Proposed
- Blue Painted Trees
- Existing Roads
- Required Pre-Haul Maintenance
- Required Construction
- Optional Construction
- Streams
- Cable Harvest
- Ground Harvest

N

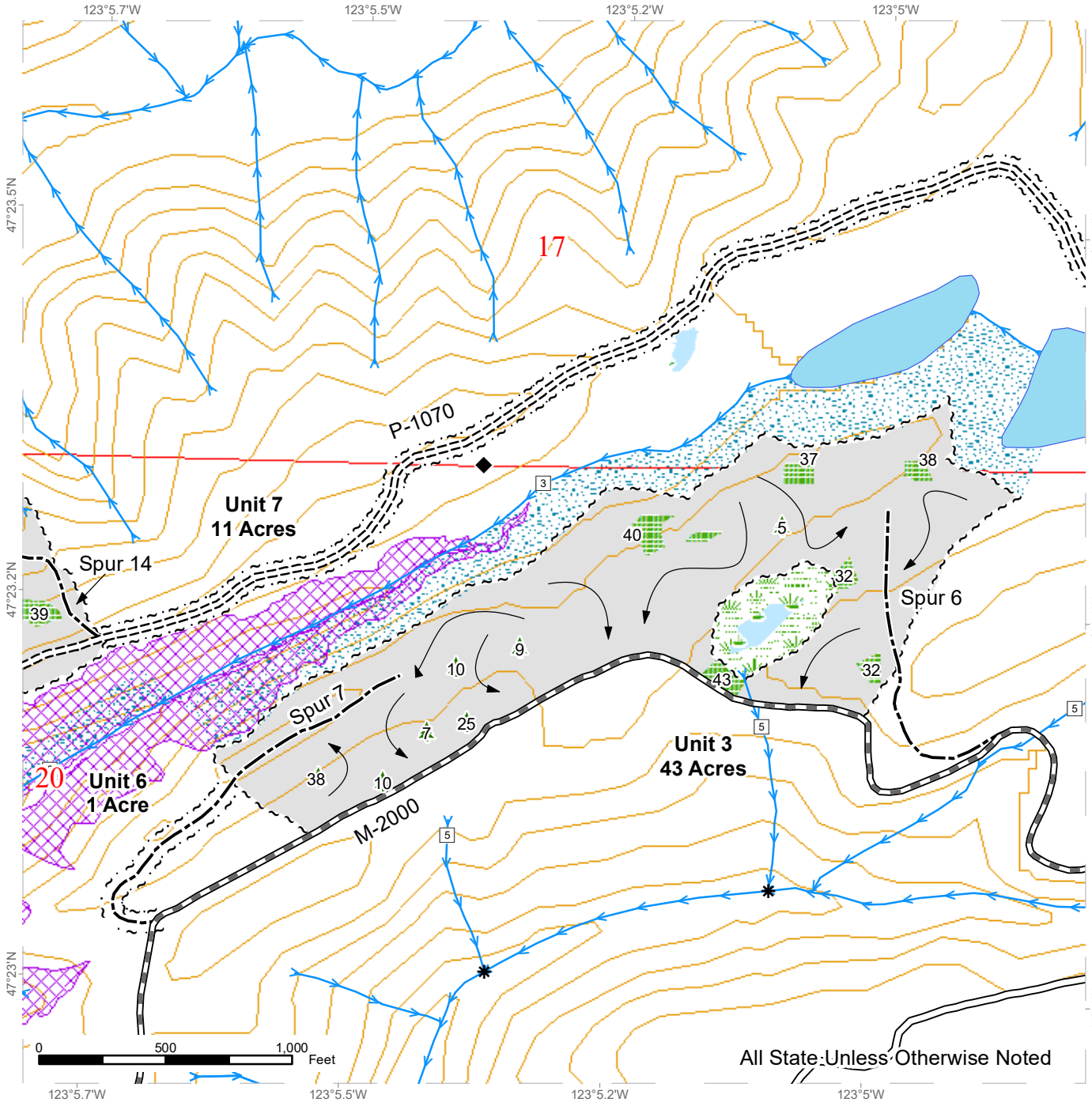
Prepared By: nmcr490

Modification Date: nchi490 9/4/2019

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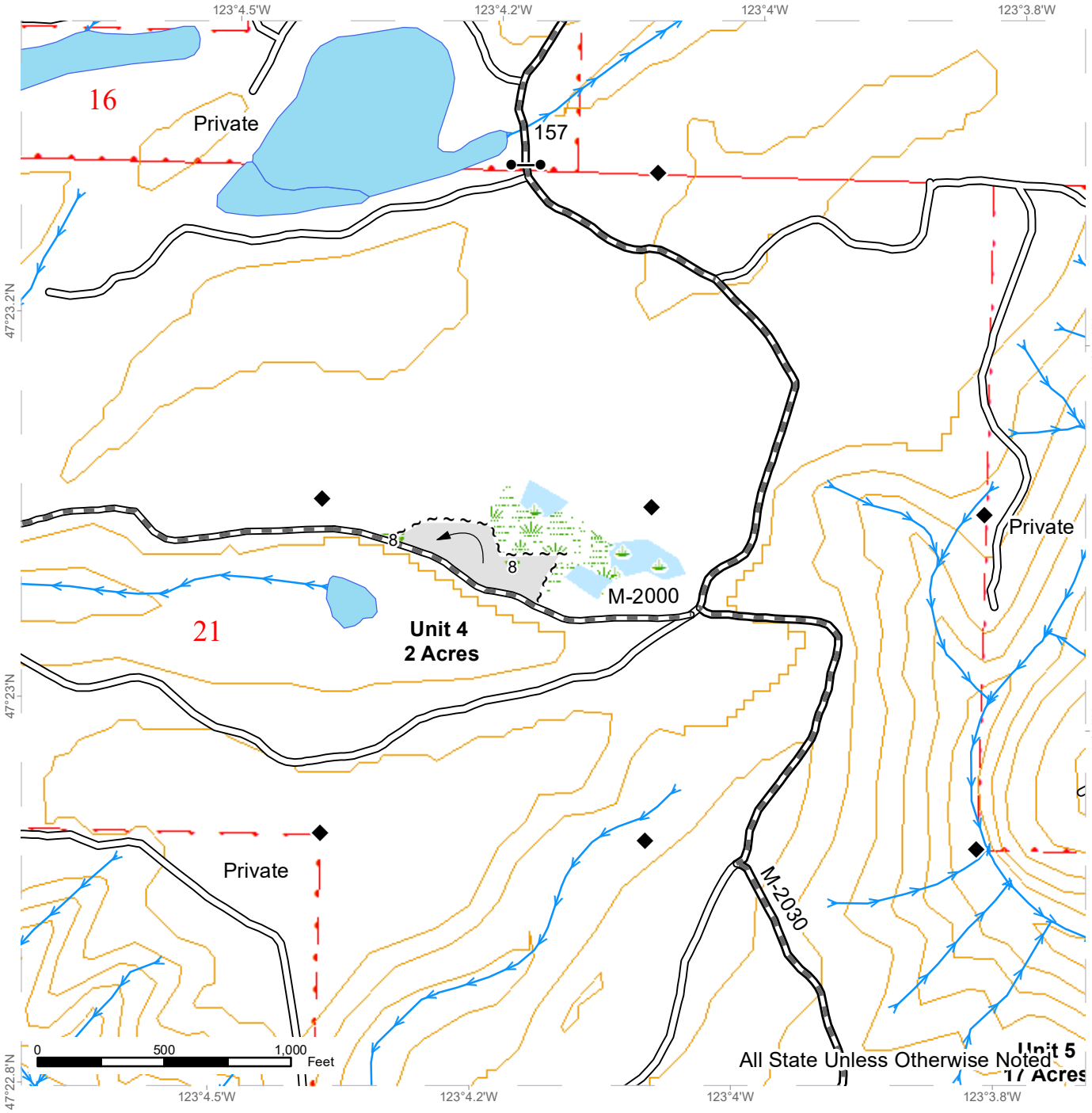
- Leave Tree Area
- Riparian Mgt Zone
- Wetlands - Non-forested
- Wetland Mgt Zone
- Tailhold Exclusion Zone
- Stream Type
- Stream Type Break
- Survey Monument
- Sale Boundary Tags
- Timber Type Change
- Leave Tree Tags
- Right of Way Tags
- Property Line
- Blue Painted Trees
- Existing Roads
- Required Pre-Haul Maintenance
- Required Construction
- Optional Construction
- Streams
- Cable Harvest
- Ground Harvest

N

LOGGING PLAN MAP

SALE NAME: TIP TOP
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COUNTY(S): Mason
ELEVATION RGE: 147-508



Leave Tree Area
Wetlands - Non-forested
Wetland Mgt Zone
Stream Type
Stream Type Break
Survey Monument
Sale Boundary Tags
Timber Type Change
Leave Tree Tags
Right of Way Tags
Property Line
Existing Roads
Required Pre-Haul Maintenance
Streams
Gates
Cable Harvest
Ground Harvest

N

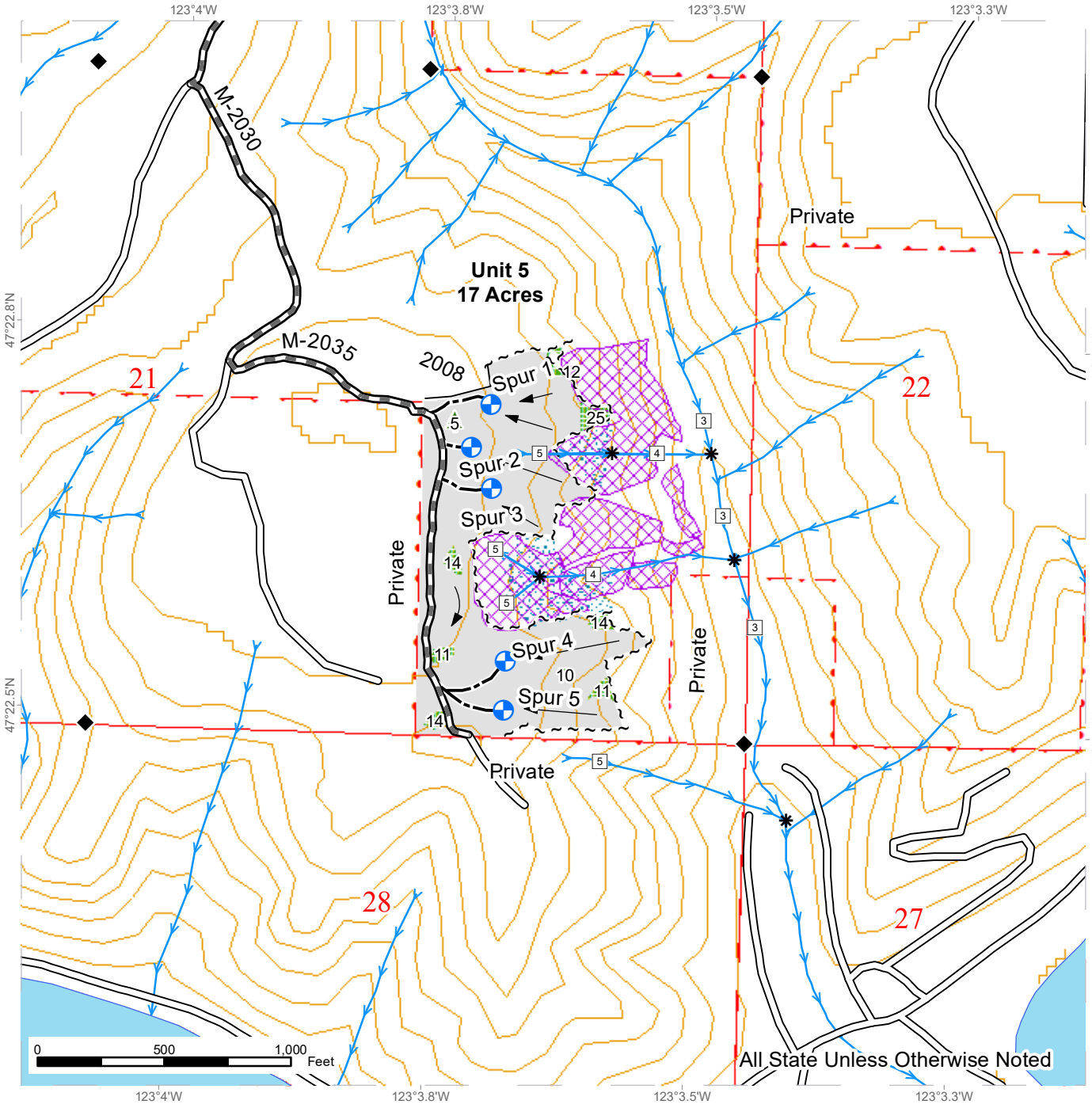
Prepared By: nmcr490

Modification Date: nchi490 9/4/2019

LOGGING PLAN MAP

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Leave Tree Area
Riparian Mgt Zone
Tailhold Exclusion Zone
Stream Type
Stream Type Break
Survey Monument
Sale Boundary Tags
Timber Type Change
Leave Tree Tags
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Property Line
Landing - Proposed
Blue Painted Trees
Existing Roads
Required Pre-Haul Maintenance
Optional Construction
Streams
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Ground Harvest
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Prepared By: nmcr490

Modification Date: nchi490 9/4/2019