

Request for Proposals

Timberline Wupatki Trails Stewardship

Coconino National Forest, Arizona

Background and Statement of Work: The Timberline Wupatki Trails Stewardship Integrated Resource Service Contract (IRSC) Project is comprised of ten (10) cutting units, totaling approximately 317 acres of ponderosa pine forest. The objective of this project is to remove dead and dying trees on forest land immediately adjacent to the communities of Timberline and Wupatki Trails, in areas impacted by the Tunnel and Pipeline Fires in 2022. All necessary logging activities such as cutting, skidding, decking, processing and sorting of logs, temporary and skid road work, and landing slash management are required to be completed as mandatory work items. ***Please note, removal of sawlogs is not included within the Project.*** Timber stand improvement, hauling slash off FS lands, hand thinning & manually removing material from Heritage Sites (20 acres), processing sawlogs to firewood and delivering to tribal communities across Northern Arizona, and construction of three bolstered crossings will be optional work items that may be issued at the discretion of the National Forest Foundation (NFF), in coordination with the Forest Service, pending contractor interest and funding availability. The cutting units are all leave tree marked. The implementation of this project will expedite forest rehabilitation, reduce hazardous fuels loading, and create a fuel break that will help protect the Wildland Urban Interface and these local communities.

Information Requested

If interested in submitting a bid for this project, please provide a proposal for the above statement of work by providing:

- technical approach
- work experience
- cost
- capacity for this project
- experience in similar projects

Specific requirements are detailed below.

I. PROJECT OVERVIEW AND REQUIREMENTS

General Specifications

- (a) Description of Work – This Request for Proposals is for restoration services related to mechanical fuels reduction treatments, including the following:
1. **Mandatory:** Cut, Skid, Process, and Deck un-marked trees 6 inches DBH and greater across 297 acres. Trees will be whole tree skidded to designated staging areas within the project area.
 2. **Mandatory:** Sort Logs into two decks: sawtimber (9.0 inches DBH and greater) and non-sawtimber (8.9 inches DBH and less). Decked volume is anticipated to be later processed into firewood for both local and tribal communities across Northern Arizona, under NFF's Wood for Life Program.
 3. **Mandatory:** Construct and maintain temporary road systems to facilitate restoration services.
 4. **Optional:** Remove ALL slash from Forest Service Lands
 5. **Optional:** Hand thin and manually remove material from Heritage Sites across 20 acres. Mechanical felling and skidding within sites may be allowed upon written agreement with Forest Service Archaeologist.
 6. **Optional:** Timber Stand Improvement (TSI) thinning treatments across 317 acres.
 7. **Optional:** Process sawlogs into an estimated 3,750 cords of firewood and haul to agreed upon locations. Delivery locations across Northern Arizona range in distance (one way) from 14 miles to the closest location, and 145 miles to the furthest location, with an estimated average of 70 miles.
 8. **Optional:** Construct Three (3) bolstered crossings within incised channels, as denoted in Appendix A. Project Map. Crossings will include crushed culvert and rock armoring. Final specifications, culvert size, and materials for this line item will be determined and approved by the Contractor, NFF, and US Forest Service.
 9. Contractor is required to coordinate with Coconino County Flood Control operators as needed throughout the duration of implementation.
 10. All work will be conducted in adherence to all project appendices.

The Contractor shall identify what they can supply in terms of materials, labor, equipment, supplies, supervision, quality control, and incidentals required to complete the work described. The Contractor shall perform all work in a safe and conscientious manner.

- (b) Project Location – The Project is located roughly 12 miles north of Flagstaff, AZ, adjacent to Highway 89 North, in Coconino County. The Project is immediately adjacent to the communities of Timberline and Wupatki Trails, in areas impacted by the 2022 Tunnell and Pipeline Fires.
- (c) Work Schedule – Work may begin immediately upon contract finalization and attending a pre-operations meeting, but no later than July 1, 2024, and must be completed no later than February 1, 2025. Preference will be given to proposals that outline an immediate operational start due to the high priority nature of the project.

Other Project Requirements and Specifications

- I. Utilities – In many locations there will be no or limited sanitation, water, electrical or housing services available. The Contractor shall make its own arrangements for temporary facilities if needed.
- (b) Specifications – Project work shall be accomplished in accordance with the following:
 - Appendix A. Project Area Map
 - Appendix B. Timber Removal Specifications
 - Appendix C. Technical Specifications
 - Appendix D. Guidelines for Operations

Insurance Requirements

Upon selection of the winning bid, the Contractor agrees that it has and shall maintain the following insurance coverage indicated below. The effective date of all coverage shall precede the start of any work.

- a. State minimum workers' compensation insurance coverage for its employees, if any.
- b. Broad form general liability, property damage, and automotive liability insurance in the minimum amount of \$1,000,000 for bodily injury, death, or damage to property of any person and \$2,000,000 for bodily injury, death, or damage to property of more than one person. The Contractor shall name NFF an Additional Named Insured and provide NFF with a certificate of insurance evidencing such coverages, prior to the initiation of the Scope of Services.
- c. Contractor shall provide professional errors and omissions liability insurance if its Scope of Services includes professional services. Professional services for purposes of this section include, but are not limited to performing: architecture, engineering, landscape architecture, land surveying or planning, geological investigation, interior design/space planning, preparation and signing or stamping of drawings, maps, surveys or construction specifications, consulting, or design and development of computer software, programs or websites by the Contractor or by subcontractors on behalf of the Contractor. The minimum coverage limits required are \$1,000,000 for each claim and \$1,000,000 annual aggregate.

Prohibited Telecommunications Services and Equipment

The Contractor is responsible for compliance with the prohibition on certain telecommunications and video surveillance services or equipment identified in 2 CFR 200.216.

Payment/Performance Security

Contractor shall post cash, a letter of credit, bond, or other financial security that is easily convertible into cash in a form acceptable to the NFF, in its sole determination, to assure completion of the work required under any subsequent agreement and payment of all amounts

lawfully due to all persons supplying or furnishing to the Contractor or Contractor's subcontractors with labor, laborers, materials, rental machinery, tools or equipment used or to perform the work. Contractor may incorporate required associated costs into mobilization costs or other approved expenses.

- a. Work that is classified as construction in accordance with the Miller Act or Little Miller Act or if required per conditions of the funding source, payment and performance bonding will be required in the full amount of any Agreement. For the purposes of this Request for Proposal, construction is defined as "any contract greater than \$100,000 for the construction, alteration, or repair of any public building or public work where the federal government is the owner", or
- b. If Contractor is not self-performing at least 85% of the total contract value or if the cost of materials is in excess of the larger of \$100,000 or 50% of the contract total, payment and performance bonding will be required in the full amount of the agreement, or
- c. If the value of the agreement is in excess of \$250,000, Contractor will be required to post financial security in a form acceptable to the NFF in the amount of 5% of the total agreement value up to \$250,000 in total financial security.

American Made Products. The work associated with this RFP is subject to Build America, Buy America Act. P.L. 117-58, Secs 70911-70917, and as such, domestic content procurement preference requires all iron and steel, manufactured products and construction materials used within the scope of this Agreement, be produced in the United States.

Federal Exclusion Verification

The selected Contractor will be required to affirm that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

Federal Flowdown Provisions

Flowdown Requirements: Any Agreement associated with this RFP may be subject to flowdown requirements under associated federal or state funding agreements, which are included and made part of by this reference.

Competitive Range

The expected competitive range for bids to this solicitation is \$1,500,000.00 to \$2,500,000.00.

II. REQUIRED COMPONENTS

Technical Proposal

Please provide a detailed technical approach to the work.

Contractor Qualifications

- I. Past Experience – Please provide a brief explanation of previous work experience with land management agencies.
- II. References – Please provide three professional references that can speak to past performance.

Pricing Schedule

Contractor shall price work according to the schedule below. Prevailing wages are required per conditions of funding sources.

	Task/Item	Units	Unit Cost	Extended Cost
1.	Mandatory: Cut, Skid, Process, Deck, and Sort	297 Acres		
2.	Optional: Remove All Slash from FS Lands	317 Acres		
3.	Optional: Hand Thin and Manually Remove Material from Heritage Sites	20 Acres		
4.	Optional: Timber Stand Improvement	317 Acres		
5.	Optional: Process and deliver Firewood	3,750 cords		
6.	Optional: Construct crossings with crushed culvert or other approved approach	3 Crossings		
7.				
			Total Bid	

III. SUBMISSION, EVALUATION, AND CONTACTS

Contractor Selection Process

This is a request for proposals only and bids furnished are not offers from the National Forest Foundation. This request does not commit the National Forest Foundation to pay any costs incurred in the preparation or submission of the proposal or to contract for supplies or services.

The NFF will use the Evaluation Factors below to review each submitted bid. Based on the outcomes of that selection process, the NFF will notify successful and unsuccessful bidders by April 19, 2024, and will prepare a separate contract document.

Evaluation Factors and Relative Importance

The following criteria will be used in the evaluation of submitted proposals, ordered from highest weighting (level 3) to lowest weighting (level 1).

Level 3 Criteria

- Price / cost
- Equipment and contractor capability
- Timing of when contractor can begin and/or finish the project
- Past performance, references, and USFS feedback

Level 2 Criteria

- Technical proposal / proposed approach to project
- Overall strategic benefits to meeting NFF goals and grant needs, requirements, and timelines

Level 1 Criteria

- Benefits to the local community
- Relationship to local community

Point of Contact

Please submit any questions about the project in writing to the Point of Contact.

Trevor Seck
National Forest Foundation, Arizona Program Forestry Supervisor
tseck@nationalforests.org
530.760.7419

Responses will be shared with known interested parties by email or otherwise posted at <https://www.nationalforests.org/rfp>.

Pre-Bid Tour

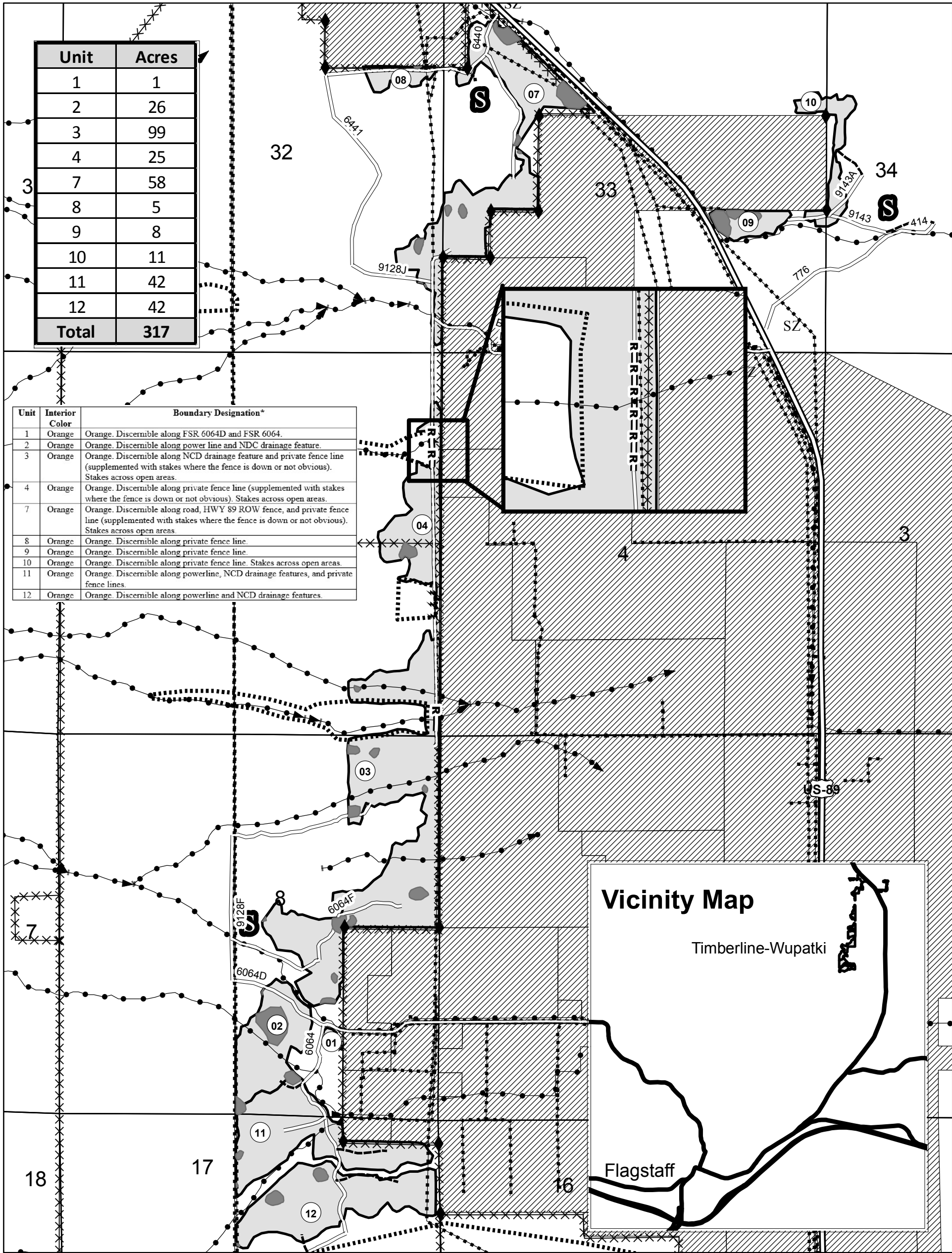
A pre-bid tour will be held on Wednesday, March 27, 2024. While not required, Contractors are encouraged to attend to fully understand the scope of work and complexities associated with this project. If interested in attending, please RSVP to Trevor Seck (tseck@nationalforests.org) no later than Friday March 22, 2024.

Bid Submission















Submit bids via email to tseck@nationalforests.org by Friday, April 12, 2024.

Equal Opportunity Provider

In accordance with Federal law and U.S. Department of Agriculture policy, the National Forest Foundation is prohibited from discriminating on the basis of race, color, national origin, sex, age, religion, political beliefs, or disability.

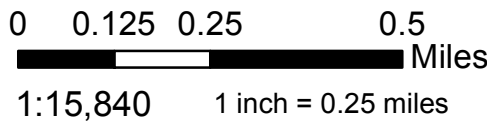


Legend

- | | | | |
|--|--|---|--|
|  | Cut, Skid, and Deck (LTM) - App. A Sec. I Item 1, B2.35 |  | Protect Streamcourse - C6.65# |
|  | Hand Thin & Manual Removal - App. A Sec. I Item 4 |  | Utility Corridor - C6.4# |
|  | Protect Improvement - NCD Fans - C6.4# |  | Protect Known Survey Monuments - C6.4# |
|  | Staging Areas (Proposed) - App. A Sec. I Item 1, 2, B6.422 |  | Protect Improvement - Fence - B6.22, C6.4# |
|  | Existing Road (Improvement Needed) - B5.12 |  | Safety Zones - C6.43 |
|  | Temporary Road (Proposed) - B5.1, B6.63 |  | Other Ownership |
|  | Deep Channelization And Flood Debris - B5.12 | | |
|  | Existing Road (Use Prohibited) - B5.12 | | |

***Remove Slash from NFS Lands**
(App. A, Sec. I, Item 2): All Units

***Timber Stand Improvement**
(App. A, Sec. I, Item 4): All Units



APPENDIX B - SCALED

STEWARDSHIP CONTRACT - TIMBER REMOVAL SPECIFICATIONS

GENERAL INSTRUCTIONS: The following is a complete list of standard clauses that may be used for the IRSC. Do Not Delete any of these standard clauses. The clause marked with ‘**’ is mandatory for Forests west of the 100th meridian and may be deleted if not applicable.

B1.0 CONTRACT AREA

B1.1 Contract Area Map

B1.2 Claims

B2.0 TIMBER SPECIFICATIONS

B2.1 Included Timber

B2.11 Standard Timber

B2.12 Substandard Timber

B2.13 Damaged Timber

B2.131 Damaged by Contractor

B2.132 Negligent or Willful Damage

B2.134 Minor Damage by Natural Causes

B2.14 Unintentionally Cut Timber

B2.15 Construction Timber

B2.16 Other Material

B2.2 Utilization and Removal of Included Timber

B2.3 Timber Designations

B2.31 Clearcutting Units

B2.32 Construction Clearing

B2.33 Overstory Removal Units

B2.34 Understory Removal Units

B2.35 Individual Trees

B2.37 Minor Changes

B2.4 Volume Estimate

B3.0 RATES OF PAYMENT

B3.1 Current Contract Rates

B3.4 Other Payment Rates

B.341 Material Not in Division A2

B3.42 Timber Cut Through Mistake

B3.43 Designated Timber Cut But Not Removed

B3.44 Undesignated Timber Damaged Without Negligence

B3.45 Undesignated Timber Unnecessarily Damaged or Negligently or Willfully Cut

B3.46 Liquidated Damages

B3.47 Defect Caused by Abnormal Delay

B4.0 PAYMENTS

B4.1 Amount Payable for Timber

B4.2 Integrated Resource Account

B4.21 Cash Deposits

B4.215 Deposits When Payment Guarantee

B4.218 Cooperative Deposits

B4.24 Refund after Scaling Completed

B4.4 Payments Not Received

B5.0 TRANSPORTATION FACILITIES

B5.1 Authorization

B5.12 Use of Roads by Contractor

B6.0 OPERATIONS

B6.3 Control of Operations

B6.33 Safety

B6.341 Prevention of Oil Spills

B6.342 Hazardous Substances

B6.36 Acceptance of Work

B6.4 Conduct of Logging

B6.41 Felling and Bucking

B6.411 Felling in Clearings

B6.412 Stump Heights

B6.413 Bucking Lengths

B6.414 Limbing

B6.42 Skidding and Yarding

B6.421 Rigging

B6.422 Landings and Skid Trails

B6.423 Skidding on Roads

B6.424 Arches and Dozer Blades

B6.63 Temporary Roads

B6.64 Landings

B6.65 Skid Trails and Fire Lines

B6.66 Current Operating Areas

B6.67 Erosion Control Structure Maintenance

B6.7 Slash Disposal

B6.8 Scaling

B6.81 Scaling Services

B6.811 Scaling Location

B6.812 Scaling Adjustments

B6.813 Delayed or Interrupted Scaling Services

B6.814 Weighing Services

B6.82 Presentation for Scaling

B6.83 Scaling Other Products

B6.84 Accountability

B6.841 Route of Haul

** B6.842 Product Identification

B6.85 Scaling Lost Products

B6.851 Scaling Lost Sample Loads

B6.86 Scale Reports

B8.0 OTHER CONDITIONS

B8.1 Title and Liability

B8.11 Title Passage

B8.12 Liability for Loss

B8.32 Modification for Catastrophe

B8.5 Sale of Other Materials

B9.0 PERFORMANCE AND SETTLEMENT

B9.5 Settlement

B9.6 Contract Closure

WO-C2.357# Individual Trees (Leave Tree Marking) (9/15)

WO-C5.12# Use of Roads by Contractor (9/04)

WO-C5.46 Snow Removal (5/08)

WO-C6.313# Timing of Sale Operations (7/09)

WO-C6.4# Conduct of Logging (7/09)

WO-C6.43 Protection of Public in Recreation Areas (5/08)

WO-C6.6 Erosion Prevention and Control (5/08)

WO-6.601# Erosion Control Seeding (5/08)

WO-C6.602 Temporary Road and Landing Scarification (5/08)

WO-C6.65# Aquatic Management Zones (2/21)

WO-C6.7 Slash Disposal

WO-C6.8 Scaling (4/20)

WO-C6.821# Scaling as Presented (Sales by Load Count)

(3/22)

WO-C6.84 Accountability (5/08)

WO-C8.66# Use of Timber (Option 1)

DIVISION A- Specific Conditions. The following conditions apply to the indicated portions.

A.1 Location and Area:

This Contract Area of 317 acres is more or less located in T23N, R8E Sections 32 - 34 and T22N, R8E Sections 5, 8 and 17 of Coconino County, Gila and Salt River Baseline and Meridian, Arizona.

A.2 Volume Estimate and Utilization Standards

Species Group	Product	Estimated Quantity	Unit of Measure	Minimum Specifications				
				Merchantable Tree		Piece Required to be Removed		
				Diameter Breast High (DBH) (inches)	Number of Minimum Pieces per Tree	Length (feet)	Diameter Inside Bark at Small End (inches)	Net Scale in % Gross Scale 1/
Timber Subject to Agreement								
Ponderosa Pine		9,133	Ton	N/A	1	N/A	N/A	N/A
Total Quantity		9,133						

1/ Enter Merchantability Factor (Merch. Factor) or Net Scale in % of Gross Scale, whichever is appropriate.

A.3 Timber Designations, acres are approximate:

	Number	Acres
Clearcutting Units (B2.31)		
Overstory Removal Units (B2.33)		
Understory Removal Units (B2.34)		
Individual Trees (B2.35)	ALL	317
Designation by Description or Prescription (C2.351-C2.355)		

A.4 RESERVED

A.5 RESERVED

A.6 High Stumps

Species	Product	Maximum Stump Height (inches)
ALL	ALL	6 Inches

A.7 Roads

Name and Date of Governing Road Specifications: N/A

Project		Design Class	Approx. Length (mi./km.)	Sheet Numbers and Approval Date	Performance Responsibility		
					Survey	Design	Const. Staking ^{1/}
N/A							

^{1/} Indicate timing, i.e., before clearing (BC) or after clearing (AC).
Specification sheets with itemized construction codes also attached

A.8 RESERVED

A.9 Scaling Instructions and Specifications

Name and Date of Governing Instructions: N/A

Scaling Specifications

Species	Product	Maximum Scaling Length (feet)	Trim Allowance		
			Diameter Range (inches)	Length Range (feet)	Trim Allowance (inches)
N/A	N/A	N/A	N/A	N/A	N/A

A.10 Scaling Services

Unit of Measure	Site and Geographic Location	Method	Standard Estimated Cost per Unit \$
TON	Site is to be at an agreed upon location(s) meeting requirements in B6.814 and with valid weighing services agreement.	Load Count	N/A

APPLICABLE REGIONAL CLAUSES MAY BE ADDED

UNITED STATES DEPARTMENT OF AGRICULTURE
Forest Service
TIMBER REMOVAL SPECIFICATIONS
CLAUSES FOR SCALED TIMBER REMOVAL CONTRACTS
(Applicable to Contracts to be Measured After Felling)

This Division is organized into Parts, Sections, Subsections, and Items. These are numbered in accordance with the following scheme: Part B1.0, Section B1.1, Subsection B1.11, and Item B1.111. References to a Part include all Sections, Subsections, and Items within that Part; references to a Section include all Subsections and Items within that Section; and references to a Subsection include all Items within that Subsection. Cross-references within this contract cite the reference number of the applicable Division, Part, Section, Subsection, and Item. Descriptive headings used are not to be considered in determining the rights and obligations of the parties hereunder.

The Standard Clauses in this Division are subject to Specific Conditions of the contract stated in Division A. Wherever appropriate, Specific Conditions established in Division A are herein cited by reference number. References to Standard Clauses also apply to Special C Clauses with the same numbers. These clauses are applicable only to the timber removal portion of the Timberline Wupatki Trails Stewardship Contract except where otherwise specifically referenced. "Timber" when used in this appendix includes timber and other products.

B1.0—CONTRACT AREA

B1.1 Contract Area Map.

The boundaries of "Contract Area" and any subdivision thereof, are as shown on the attached "Contract Area Map" that is made a part hereof, and were, before contract solicitation, designated on the ground by Forest Service to meet the anticipated needs of the parties. The location of Contract Area and its approximate acreage are stated in Division A. Subdivisions may be revised and additional ones may be established only by written agreement.

Where applicable, the following are also identified on Contract Area Map:

- (a) Identified claims limiting Contractor's rights under B1.2
- (b) Subdivisions defined in B2.3 where timber is to be Marked after date of contract solicitation
- (c) Boundaries of Clearcutting Units, Overstory Removal Units, and Understory Removal Units under B2.3
- (d) Diameter limits for Overstory Removal Units and Understory Removal Units under B2.33 and B2.34
- (e) Areas where leave trees are Marked to be left uncut under B2.35
- (f) Roads
- (g) Sources of base course, surface rock, and rock riprap listed in the Schedule of Items
- (h) Roads where log hauling or use is prohibited or restricted
- (i) Roads and trails to be kept open
- (j) Improvements to be protected
- (k) Locations of known wildlife or plant habitat and cave resources to be protected
- (l) Locations of areas known to be infested with specific invasive species of concern
- (m) Maximum stump heights when more than one height is listed by areas in Division A6 under B6.412
- (n) Skidding or yarding methods specified under B6.42
- (o) Streamcourses to be protected
- (p) Locations of meadows requiring protection
- (q) Locations of wetlands requiring protection
- (r) Locations of temporary roads to be kept open; and
- (s) Other features required by Division B or C.

B1.2 Claims. Valid claims are excluded from Contract Area, except those on which timber cutting is authorized in writing by the claimant and except mining claims on which cutting is authorized by the Act of July 23, 1955 (30 USC 614). Claims that limit Contractor's rights to operate under this contract and that Forest Service has been able to identify are shown on Contract Area Map. Contractor is not obligated to operate contrary to existing claim limitations. Forest Service shall designate boundaries of claims on the ground to the extent necessary to identify Included Timber.

B2.0—TIMBER SPECIFICATIONS

B2.1 Included Timber. “Included Timber” consists of:

B2.11 Standard Timber Live and dead trees and portions thereof that meet Utilization Standards under B2.2 and are designated for cutting under B2.3.

B2.12 Substandard Timber. Live and dead trees that:

- (a) Do not meet Utilization Standards and
- (b) Are located in Clearcutting Units or construction clearings or are otherwise designated for cutting.

B2.13 Damaged Timber.

B2.131 Damaged by Contractor. Undesignated live trees meeting Utilization Standards:

- (a) Within 200 feet slope distance from centerline of roads constructed hereunder that are damaged by Contractor’s construction to the extent that considerable deterioration or mortality is imminent and are designated by Forest Service for felling before the nearest road segment is Substantially Completed or
- (b) That are damaged by Contractor in logging or stewardship project operations and are subsequently Marked before Contractor has completed work in the immediate area.

By agreement, such trees may be left without charge if their removal would cause undue damage or be grossly uneconomic.

B2.132 Negligent or Willful Damage. Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by Contractor, if included by Contracting Officer.

B2.134 Minor Damage by Natural Causes. Undesignated trees within Contract Area and meeting Utilization Standards, that become insect infested, wind-thrown, suffer serious damage, or die, as designated by agreement.

B2.14 Unintentionally Cut Timber. Trees, within or immediately adjacent to Contract Area or other authorized clearing outside Contract Area, not designated for cutting under B2.3 but that are cut through mistake by Contractor, when included by Contracting Officer.

B2.15 Construction Timber. Trees to be used for construction under this contract.

B2.16 Other Material. Species or products not listed in the contract, upon written approval of Forest Service.

B2.2 Utilization and Removal of Included Timber. “Utilization Standards” for trees and minimum pieces are stated in Division A2. To meet minimum tree specifications, trees must equal or exceed tree diameters listed in Division A2 and contain at least one minimum piece. Except for timber required or authorized to be left Contractor shall fell and buck such trees and shall remove from Contract Area and present for Scaling all pieces that:

- (a) Meet minimum piece standards in Division A2 or
- (b) Do not meet such standards but would have qualified as part of minimum pieces if bucking lengths were varied to include such material.

B2.3 Timber Designations. Timber designated for cutting shall be confined to Contract Area, except as otherwise provided. Contract Area Map indicates subdivisions, if any, where Marking is to be done after contract solicitation, except for construction clearing, minor changes, and damaged timber. The boundaries of Clearcutting Units, Overstory Removal Units and Understory Removal Units were plainly Marked on ground before contract advertisement and are shown on Contract Area Map. Boundary trees shall not be cut. The number of units and approximate acreage of timber designations are stated in Division A3.

B2.31 Clearcutting Units. All trees that meet Utilization Standards within “Clearcutting Units” are designated for cutting.

B2.32 Construction Clearing. All timber is designated for cutting that is within the clearing limits of roads constructed hereunder or is in other authorized clearings. All dead or unstable live trees are designated for cutting that are sufficiently tall to reach Contractor's landings, work areas, or the roadbed of Temporary Roads when Marked in advance of work in the immediate area. Pieces meeting Utilization Standards from such dead or unstable live trees shall be removed unless there is agreement that to do so could damage the road. Such designation may be revised as part of agreed changes in road locations.

B2.33 Overstory Removal Units. All trees within "Overstory Removal Units" are designated for cutting when they meet Utilization Standards and equal or exceed the diameter limits shown on Contract Area Map.

B2.34 Understory Removal Units. All trees within "Understory Removal Units" are designated for cutting when they meet Utilization Standards and are smaller than the diameter limits shown on Contract Area Map.

B2.35 Individual Trees. All trees to be cut, other than in the units described in B2.31, B2.32, B2.33, and B2.34, are Marked or designated by description. Trees are "Marked" when individually designated by Forest Service with paint marks above and below stump height. Contract Area Map indicates areas plainly identified on the ground where leave trees are Marked to be left uncut.

B2.37 Minor Changes. Within Contract Area, minor adjustments may be made in boundaries of cutting units or in the timber individually Marked for cutting when acceptable to Contractor and Forest Service.

B2.4 Volume Estimate. The estimated volumes of timber by species designated for cutting under B2.3 and expected to be cut under Utilization Standards are listed in Division A2. If Contract Area Map indicates that there are incompletely Marked subdivisions, the objective of Forest Service shall be to designate for cutting in such subdivisions sufficient timber so that Contract Area shall yield the approximate estimated volume by species or species groups stated in Division A2. However, the estimated volumes stated in Division A2 are not to be construed as guarantees or limitations of the timber volumes to be designated for cutting under the terms of this contract.

B3.0—RATES OF PAYMENT

B3.1 Current Contract Rates. Included Timber that is removed by Contractor and presented for Scaling in the product form stated in Division A2 shall be paid for at Current Contract Rates determined under this Section. "Current Contract Rates" shall be Flat Rates. Flat Rates shall be those listed in the Schedule of Items – Timber/Product Removal Price Schedule. In the event contract time is adjusted, Current Contract Rates shall be continued in the same manner as immediately prior to the adjustment period. In addition, Required Deposits, if applicable, shall be made as listed in A4, C5.32# and C6.816#.

B3.4 Other Payment Rates.

B3.41 Material Not in Division A2. Incidental amounts of products or portions of trees of species that do not meet Utilization Standards may be removed without charge. Such material may be purposely removed in more than incidental amounts without charge upon written approval of Contracting Officer, and subject to agreement on deposits if needed for road maintenance and use. Other species or products not listed may be cut and removed upon written approval of Contracting Officer and subject to agreement on rates of payment. Timber for which the quantity is not included in the estimate, shall be paid for at Current Contract Rates and Required Deposits.

B3.42 Timber Cut Through Mistake. Undesignated timber meeting Utilization Standards, cut by Contractor through mistake and included by Contracting Officer under B2.14, shall be removed and paid for at Current Contract Rates and Required Deposits, unless such material is not listed in Division A2. In such event, Contracting Officer, in accord with standard Forest Service methods, shall establish rates to be paid.

B3.43 Designated Timber Cut But Not Removed. Standard timber shall be removed, as provided in B2.2, prior to acceptance of a subdivision. There shall be no charge when:

- (a) The leaving of incidental material is justified under existing conditions, or
- (b) Cut timber is left by option or requirement.

B3.44 Undesignated Timber Damaged Without Negligence. Undesignated timber meeting Utilization Standards, damaged without negligence by Contractor and designated by Forest Service under B2.131, shall be cut, removed, and paid for at Current Contract Rates and Required Deposits.

B3.45 Undesignated Timber Unnecessarily Damaged or Negligently or Willfully Cut. Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by Contractor, if included by Forest Service, shall be cut, removed, and paid for at Current Contract Rates and Required Deposits that are in addition to liquidated damages under B3.46.

If such timber is of a species or size not listed in Division A2 or is of a quality different from designated timber, Contracting Officer shall establish payment rates in accord with standard Forest Service methods.

B3.46 Liquidated Damages. Unnecessary damage to or negligent or willful cutting of undesignated timber, as described in B3.45, on portions of Contract Area cut over under this contract is likely to cause substantial silvicultural or other damage to the National Forest. It will be difficult, if not impossible, to determine the amount of such damage. Therefore, Contractor shall pay as fixed, agreed, and liquidated damages an amount equivalent to the amount payable at Current Contract Rates. If designated by Contracting Officer, Contractor shall remove such damaged or cut timber and pay for it at Current Contract Rates.

B3.47 Defect Caused by Abnormal Delay. Scaling deductions made for rot, check, or other defect resulting from abnormal delay in Scaling caused by Contractor shall be recorded separately and charged to Integrated Resource Account at Current Contract Rates and applicable deposits.

B4.0—PAYMENTS

B4.1 Amount Payable for Timber. Current Contract Rates and Required Deposits in effect when the timber is Scaled shall be applied to the Scaled volume to determine the amount Contractor shall pay.

B4.2 Integrated Resource Account. "Integrated Resource Account" is an account maintained by Forest Service of all Contractor's deposits, credits, payment guarantees, and the charges for:

- (a) Timber at Current Contract Rates
- (b) Slash disposal, road maintenance at Required Deposit rates
- (c) Stewardship Credits established
- (d) Contract Scaling Deposits, and
- (e) Other charges provided in this contract.

Cash deposits and Stewardship Credits earned shall be recorded currently in such account.

Charges for timber cut shall be made when Forest Service prepares and furnishes to Contractor periodic statements of volume and value of such timber cut and Scaled. Charges against Stewardship Credits shall be limited to timber value in excess of Required Deposits. Required Deposits, and Other Charges shall be paid in cash.

B4.21 Cash Deposits. Within the limitations of this Subsection, Contractor shall make cash deposits to meet Contractor's obligations within 15 days of billing by Forest Service. Deposits shall be made to Forest Service, U.S.D.A., by mail or delivery to the address to be furnished by Forest Service. Forest Service shall explain the bill at the time it requests each deposit.

B4.215 Deposits When Payment Guaranteed. To the extent payment guarantee is provided under Clause entitled, "PRODUCT PAYMENT GUARANTEE" requirements for advance cash deposits shall be waived for the value of Product on contract area that is cut, but not removed, and for the value of Products removed from contract area, up to limit of remaining stewardship credits to be earned and exchanged for value of included product except for Required Deposits and Associated Charges. Associated charges shall be waived for not more than one monthly billing period.

B4.218 Cooperative Deposits. On a basis of cooperation or assistance (16 USC 572) and by a written agreement, Forest Service shall perform all or portions of the work that Contractor is obligated to perform under this contract, as well as furnish other Services in connection with activities under this contract. When Forest Service is to perform such work,

Contractor shall make one or more deposits to cover the estimated cost of the work. On request of Contractor, Forest Service shall render monthly accounts, as may be specified in such agreement.

B4.24 Refund after Scaling Completed. Any cash deposit, in excess of that required to meet charges under B4.2, shall be refunded or transferred within 15 days of Contractor's request after Scaling is completed, except for amounts estimated to be required under B9.5.

B4.4 Payments Not Received. (a) Payments are due and payable on the date of issue indicated on the bill for collection. When a payment for timber cut and other charges is not received at the location designated by Forest Service by the date specified in the bill for collection for receipt of payment, Contracting Officer will suspend all or any part of Contractor's Operations until payment or acceptable payment guarantee is received. Other charges include, but are not limited to:

- (i) Slash disposal, road maintenance, and contract Scaling deposits;
- (ii) Cooperative work at rates established by specific agreement under B4.218; and
- (iii) Other mandatory deposits.

(b) Failure to pay amounts due by the date specified in the bill for collection for receipt of payment shall be considered non-compliance. The non-compliance shall be remedied within 30-days which begins to run as of the end of business on the date specified for receipt of payments. If the performance or payment is guaranteed by surety bond, the surety will receive a copy of the written notification of non-compliance. Demand will be made on the surety or other institution providing the guarantee or bond instrument for immediate payment 10 days after issuance of written notification of the breach.

(c) Pursuant to the Debt Collection Improvement Act of 1996, as amended, if payment is not received by Forest Service within 15 days after the date of issue indicated on the bill for collection:

(i) Simple interest shall be assessed at the Current Value of Funds Rate as established by the Secretary of the Treasury. Interest will begin to accrue as of the date of issue indicated on the initial bill for collection.

(ii) Debtors will be assessed administrative charges, in addition to the delinquent amount due. Administrative charges are those additional costs incurred by the Government in processing, handling, and collecting delinquent debts.

(iii) A penalty charge of six (6) percent per annum will be assessed on any portion of a debt delinquent more than 90 days. This penalty charge is in addition to interest and administrative charges under paragraphs (c)(i) and (c)(ii). The penalty charge shall accrue from the date of issue indicated on the bill for collection and shall be assessed on all outstanding amounts, including interest and administrative costs assessed under paragraphs (c)(i) and (c)(ii).

(iv) Payments will be credited on the date received by the Federal Depository or Collection Officer designated on the bill for collection.

(d) Forest Service remedies for Contractor's failure to make payment for timber cut and other charges when due, except for accrual of interest, suspension of all or any part of Contractor's Operations, and administrative offset, shall be stayed for so long as:

- (i) A bona fide dispute exists as to Contractor's obligation to make such payment and
- (ii) Contractor files and prosecutes a timely Claim.

B5.0—TRANSPORTATION FACILITIES

B5.1 Authorization. Contractor is authorized to construct and maintain roads, bridges, and other transportation facilities, as needed for harvesting Included Timber and completing stewardship service items on National Forest and other lands where Forest Service has such authority. Maintenance shall be governed by Appendix C. Road reconstruction shall be governed by Appendix D. The location and clearing widths of all Temporary Roads or facilities shall be agreed to in writing before construction is started. "Temporary Roads" are roads other than roads listed in Appendix D that are constructed by Contractor for the purpose of harvesting Included Timber or completing stewardship service items. Contractor is authorized to cut and use for construction, without charge, construction timber designated by agreement.

B5.12 Use of Roads by Contractor. Except as provided herein, Contractor is authorized to use existing National Forest system roads when Forest Service determines that such use will not cause damage to the roads or National Forest resources. C5.12# lists existing roads shown on Contract Area Map that for such reasons as limitations in structural capacity, safety, and protection of soil, water, and roads:

- (a) Cannot be used for log hauling or
- (b) May be used only under the restrictive limitations stated therein.

B6.0—OPERATIONS

B6.3 Control of Operations. Under this contract, “Contractor’s Operations” shall include activities of or use of equipment of Contractor, Contractor’s employees, agents, Subcontractors, or their employees or agents, acting in the course of their employment in operations hereunder on National Forest lands or within Forest Service protection boundary (unless acting under the immediate supervision of Forest Service).

Contractor’s Operations shall be conducted in a workmanlike and orderly manner. The timing of re- quired Forest Service designation of work on the ground and the performance of other Forest Service work shall not be such as to cause unnecessary delay to Contractor.

B6.33 Safety. Contractor’s Operations shall facilitate Forest Service’s safe and practical inspection of Contractor’s Operations and conduct of other official duties on Contract Area. Contractor has all responsibility for compliance with safety requirements for Contractor’s employees.

In the event that Contracting Officer identifies a conflict between the requirements of this contract or agreed upon methods of proceeding hereunder and State or Federal safety requirements, the contract shall be modified and Contractor may request an adjustment in Current Contract Rates to compensate for the changed conditions.

Unless otherwise agreed in writing, when Contractor’s Operations are in progress adjacent to or on Forest Service controlled roads and trails open to public travel, Contractor shall furnish, install, and maintain all temporary traffic controls that provide the user with adequate warning of hazardous or potentially hazardous conditions associated with Contractor’s Operations. Contractor and Forest Service shall agree to a specific Traffic Control Plan for each individual project prior to commencing operations. Devices shall be appropriate to current conditions and shall be covered or removed when not needed. Except as otherwise agreed, flagmen and devices shall be as specified in the “Manual on Uniform Traffic Control Devices for Streets and Highways” (MUTCD) and as shown on Plans, Contract Area Map, Traffic Control Plan, or in specifications attached hereto.

B6.341 Prevention Of Oil Discharges. If Contractor maintains storage facilities for oil or oil products on Contract Area, Contractor shall take appropriate preventative measures to ensure that any harmful discharge of such oil or oil products does not enter into or upon any navigable waters, adjoining shorelines, or other waters of the United States, as prescribed in 40 CFR 110. As soon as Contractor has knowledge that measures, as described in the Sanitation and Servicing clause fail to prevent a discharge into or upon navigable waters or adjoining shorelines of the United States, Contractor shall notify the Contract Officer or Contract Officer Representative, the National Response Center and any other appropriate State agencies. In accordance with 40 CFR 110.6, all harmful discharges that occur as a direct or indirect result of Contractor’s operations, regardless of whether such discharges are caused by Contractor’s employees, agents, Subcontractors, or their employees or agents, directly or indirectly, as a result of Contractor’s Operations must be reported.

Harmful discharges of oil are those that violate applicable State water quality standards, cause a film or sheen on the water’s surface, or leave sludge or emulsion beneath the surface of the water or adjoining shorelines regardless of the amount of material discharged (40 CFR 110.3). As such reporting is not triggered by the amount of the discharge but by the presence of the criteria prescribed in 40 CFR 110.3. Harmful discharges meeting the criteria in 40 CFR 110 must be reported by Contractor. Contractor shall take whatever initial action may be safely accomplished to control all reportable discharges. Appropriate actions include but are not limited to containment, sorbents or dispersants as needed or as prescribed by the Spill Prevention Control and Countermeasures Plan pursuant to 40 CFR 112. Contractor shall prepare a Spill Prevention Control and Countermeasures (SPCC) Plan pursuant to EPA requirements as stated in 40 CFR 112 when the following conditions are met:

- (a) Contractor maintains above ground storage facilities, including mobile storage, for oil or oil products on the Contract Area and the total storage capacity for these products exceeds 1,320 gallons in either a single container of greater than 1,320 gallons, or in multiple containers of 55 gallons or greater, and
- (b) there is a reasonable expectation that a harmful discharge could reach navigable waters of the United States, adjoining shorelines or other waters as prescribed in 40 CFR 112.

Reasonable expectation for a discharge reaching navigable waters is based on the location of the storage facility to streams, ditches, gullies, or permanent water bodies that could be impacted as well as drainage patterns, soil conditions,

precipitation runoff and the volume of material potentially spilled. The SPCC Plan shall outline measures which will prevent discharges from reaching navigable waters, adjoining shorelines, or other waters of the United States. According to §112.1(d)(1)(i), the determination of reasonable expectation for a harmful discharge must be based solely upon consideration of the geographical and locational aspects of the facility. If a Contractor makes a determination that, due to the location, the facility cannot reasonably be expected to discharge oil as described in §112.1(b), Contractor should be prepared to provide the rationale and any supporting documentation, if requested by the Contracting Officer, that explains why the facility does not have an SPCC Plan.

B6.342 Hazardous Substances. Contractor shall notify the National Response Center and Contracting Officer of all releases of reportable quantities of hazardous substances on or in the vicinity of Contract Area that are caused by Contractor's employees, agents, Subcontractors or their employees or agents, directly or indirectly, as a result of Contractor's Operations, in accordance with 40 CFR 302.

B6.36 Acceptance of Work. Upon Contractor's written request and assurance that work has been completed, Forest Service shall perform an inspection within 5 days, excluding weekends and Federal holidays, so as not to delay unnecessarily the progress of Contractor's Operations. Such a request may be for acceptance of:

(a) Specific requirements on a subdivision of Contract Area (such as logging, slash disposal, erosion control, or snag felling); or

(b) All contract requirements on a subdivision of Contract Area.

Forest Service may perform such inspections without request from Contractor.

Within 2 days of inspection, excluding weekends and Federal holidays, Forest Service shall furnish Contractor with written notice either of acceptance or of work remaining to be done.

In the event that Forest Service is unable to make such inspection within 5 days of Contractor's request, Contractor shall be notified in writing of necessity for postponement and time when inspection can be made.

B6.4 Conduct of Logging. Unless otherwise specifically provided herein, Contractor shall fell trees designated for cutting and shall remove the portions which meet Utilization Standards, except for occasional trees inadvertently not cut or trees or pieces not removed for good reason, including possible damage to forest resources or gross economic impracticability at the time of removal of other timber. Logging shall be conducted in accordance with the following, unless other clauses set forth requirements to meet special or unusual logging conditions:

B6.41 Felling and Bucking. Felling shall be done to minimize breakage of Included Timber and damage to residual timber. Unless agreed otherwise, felling shall be done by saws or shears. Bucking shall be done to permit removal of all minimum pieces set forth in Division A2. Contractor may buck out cull material when necessary to produce pieces meeting Utilization Standards. Such bucked out material shall contain a minimum amount of sound wood, not in excess of the net scale in percentage of gross scale, or based on the merchantability factor, whichever is stated in Division A2. If necessary to assess the extent of defect, Contractor shall make sample saw cuts or wedges.

B6.411 Felling in Clearings. Insofar as ground conditions, tree lean, and shape of clearings permit, trees shall be felled so that their tops do not extend outside Clearcutting Units, construction clearings, and areas of regeneration cutting.

B6.412 Stump Heights. Stumps shall not exceed, on the side adjacent to the highest ground, the maximum heights set forth in Division A6, except that occasional stumps of greater heights are acceptable when Contractor determines that they are necessary for safe and efficient conduct of logging. Unless otherwise agreed, Contractor shall re-cut high stumps so they will not exceed heights specified in Division A6 and shall dispose of severed portions in the same manner as other logging debris. The stump heights shown in Division A6 were selected with the objective of maximum reasonable utilization of the timber, unless Contract Area Map shows special areas where stump heights are lower for aesthetic, land treatment, or silvicultural reasons.

B6.413 Bucking Lengths. Trees shall be bucked in various lengths to obtain the greatest utilization of material meeting Utilization Standards.

B6.414 Limbing. When Forest Service determines it is necessary to minimize damage to the residual stand during skidding, Contractor shall cut exposed limbs from products prior to skidding. Contractor may leave uncut those limbs that cannot be cut with reasonable safety.

B6.42 Skidding and Yarding. Methods of skidding or yarding specified for particular areas, if any, are indicated on Contract Area Map. Outside Clearcutting Units and construction clearings, insofar as ground conditions permit, products shall not be skidded against reserve trees or groups of reproduction and tractors shall be equipped with a winch to facilitate skidding.

B6.421 Rigging. Insofar as practicable, needed rigging shall be slung on stumps or trees designated for cutting.

B6.422 Landings and Skid Trails. Location of all landings, tractor roads, and skid trails shall be agreed upon prior to their construction. The cleared or excavated size of landings shall not exceed that needed for efficient skidding and loading operations.

B6.423 Skidding on Roads. Products may be skidded on permanent roads authorized for hauling only by prior written agreement.

B6.424 Arches and Dozer Blades. Skidding tractors equipped with pull-type arches or dozer blades wider than tractor width or C-frame width, whichever is greater, shall not be used in residual timber outside Clearcutting Units and other authorized clearings, except on constructed tractor roads or landings, unless there is written agreement that residual timber will not be damaged materially by such use.

B6.63 Temporary Roads. As necessary to attain stabilization of roadbed and fill slopes of Temporary Roads, Contractor shall employ such measures as out-sloping, drainage dips, and water-spreading ditches.

After a Temporary Road has served Contractor's purpose, Contractor shall give notice to Forest Service and shall remove bridges and culverts, eliminate ditches, outslope roadbed, remove ruts and berms, effectively block the road to normal vehicular traffic where feasible under existing terrain conditions, and build cross ditches and water bars, as staked or otherwise marked on the ground by Forest Service. When bridges and culverts are removed, associated fills shall also be removed to the extent necessary to permit normal maximum flow of water.

B6.64 Landings. After landings have served Contractor's purpose, Contractor shall ditch and slope them to permit water to drain or spread. Unless agreed otherwise, cut and fill banks around landings shall be sloped to remove overhangs and otherwise minimize erosion.

B6.65 Skid Trails and Fire Lines. Contractor shall construct cross ditches and water-spreading ditches on tractor roads and skid trails, where staked or otherwise marked on the ground by Forest Service. Forest Service shall designate cross ditching on Contractor-built fire lines prior to or during construction. By agreement, Contractor may use other comparable erosion control measures, such as backblading skid trails, in lieu of cross ditching.

B6.66 Current Operating Areas. Where logging, road construction, or other stewardship project work is in progress but not completed, unless agreed otherwise, Contractor shall, before operations cease annually, remove all temporary log culverts and construct temporary cross drains, drainage ditches, dips, berms, culverts, or other facilities needed to control erosion.

Such protection shall be provided, prior to end of November 30th, for all disturbed, unprotected ground that is not to be disturbed further prior to end of operations each year, including roads and associated fills, tractor roads, skid trails, and fire lines. When weather permits, operations during December 1 – April 14th Contractor shall keep such work on any additional disturbed areas as up to date as practicable.

B6.67 Erosion Control Structure Maintenance. During the period of this contract, Contractor shall provide maintenance of soil erosion control structures constructed by Contractor until they become stabilized, but not for more than 1 year after their construction. Contractor shall not be responsible for repair of such structures damaged by other National Forest users whose activities are not a part of Contractor's Operations.

B6.7 Slash Disposal. Contractor's timing of product removal and preparatory work shall not unnecessarily delay slash disposal. Specific slash disposal measures to be employed by Contractor are stated in elsewhere herein and are in addition to Required Deposits for slash disposal.

B6.8 Scaling. "Scaling," as used herein, involves:

- (a) Various volume determination methods, such as log rule, sampling, measuring, linear measuring,
- (b) Various sites, such as truck Scaling stations, rollways, weighing stations, woods landings, water Scaling stations, or other sites; and
- (c) Various geographic locations.

B6.81 Scaling Services. Scaling services shall be performed by Forest Service personnel or parties under contract to Forest Service, except that weighing services may be performed by personnel or parties approved by Forest Service. Scaling shall be provided in accordance with the instructions and specifications in Division A9. Scalers shall be currently certified to perform accurate Scaling services. The Scaling services provided shall be selected exclusively by Forest Service.

Scaling services may be Continuous, Intermittent, or Extended. "Continuous Scaling Services" is Scaling at one site five (5) 8-hour shifts a week, exclusive of Sundays and Federal holidays. "Intermittent Scaling Services" are non-continuous Scaling services. "Extended Scaling Services" are Scaling services exceeding Continuous Scaling Services and may include Sundays and designated Federal holidays.

Upon written request of Contractor and approval of Contracting Officer, Forest Service may provide other services, such as but not limited to grading, tagging, or marking of Scaled logs.

B6.811 Scaling Location. Forest Service shall provide Scaling services at the Scaling site(s) shown in Division A10. The Scaling site(s) shown in Division A10 normally will be a non-exclusive site where more than one National Forest contractor may be served.

Contractor may request, in writing, an alternate Scaling site, such as at a private mill yard, private truck ramp, or a privately operated log transfer facility. Contracting Officer may approve an alternate Scaling site, when Contracting Officer determines that Scaling conditions at an alternate site are acceptable. Such conditions shall include at a minimum:

- (a) Scaler safety and comfort,
- (b) Product accountability and security,
- (c) Facilities and practices conducive to accurate and independent Scaling, and
- (d) The ability to provide for remote check Scaling. Upon approval of an alternate Scaling site, Forest Service and Contractor shall enter into a written memorandum of agreement governing Scaling at that alternate location. Contractor agrees that Forest Service personnel or persons under contract with Forest Service shall perform Scaling services at an alternative Scaling site. In no instance shall Contractor or employees of Contractor perform Scaling services.

B6.812 Scaling Adjustments. Forest Service shall check the accuracy of the Scaling performed on National Forest logs. Scaling will be satisfactory if performed within the accuracy standards stated in governing instructions identified in Division A9. In the event Forest Service check Scale(s) shows a variance in net Scale in excess of the allowable variance, an adjustment to volume reported Scaled may be made by Forest Service.

Such adjustment will be based on the difference between Forest Service check Scale(s) and original Scale for contract volume Scaled within the adjustment period. The volume to which this difference will be applied will be:

- (a) One-half of the volume Scaled between the last satisfactory check Scale and the first unsatisfactory check Scale or, if a period of 120 days or more occurs without Scaling National Forest timber for stumpage, the adjustment will be applied to 100 percent of the volume Scaled after this period and
- (b) 100 percent of the volume Scaled between unsatisfactory check Scales and
- (c) One-half of the volume Scaled between the last unsatisfactory check Scale and the next satisfactory check Scale, or if no satisfactory check Scale is completed and a period of 120 days or more occurs without Scaling of National Forest timber for stumpage, the adjustment will be applied to 100 percent of the volume Scaled since the last unsatisfactory check Scale.

Adjustments may increase or decrease the original Scaled volume. Adjustments will be applied to Integrated Resource Account to correct charges for Included Timber, plus deposits, Scaled during the adjustment period.

B6.813 Delayed or Interrupted Scaling Services. In the event Scaling services are delayed or interrupted, Contractor shall discontinue hauling. Contractor further agrees that no logs will be presented for Scaling outside agreed upon Scaling services schedule.

B6.814 Weighing Services. Weighing services for stumpage payment purposes may be provided by either public or privately owned and operated weighing facilities. A "Weighing Services Agreement," approved by the Forest Supervisor, must be executed at each weighing facility providing weighing services.

Scales used to weigh National Forest products for payment purposes must be a currently certified scale in accordance with State law and be capable of weighing the entire load of logs in a single operation. The weighing of less than the entire load or weighing two loads at once is prohibited. Unless otherwise agreed, the minimum sized weighing facility shall be a 60-ton capacity scale with a 10-foot by 70-foot platform or larger. The weighmaster must work in a position where it is possible to verify that the truck wheels are on or off the scales.

Weighing facilities shall meet the following minimum requirements:

- (a) Be an electronic design,
- (b) Use electronic load cells or have a fully enclosed and sealed weigh-beam,
- (c) Have digital weight meters sealed with a seal approved by the State,
- (d) Have a zero-interlocking device on the printer,
- (e) Have an automatic zero-setting mechanism,
- (f) Have an automatic motion-detecting device,
- (g) Be shielded against radio or electromagnetic interference, and
- (h) Have a date and time stamp and gross and tare weights that print electronically with each weighing.

Contracting Officer may waive electronic printing for public or third-party weighing facilities.

Contractor shall bear all charges or fees for weighing services.

B6.82 Presentation for Scaling. Contractor shall present products so that they may be Scaled in an economical and safe manner. If prior to Scaling, Included Timber is to be mixed with other timber, Contractor shall, prior to mixing, provide for distinguishing, by means approved by Forest Service, each product included in this contract.

Trees or pieces presented for Scaling that have not been bucked to separate material meeting minimum piece standards from material not meeting minimum piece standards due to diameter, shall be Scaled as though such bucking had been done.

Deductions made for rot, check, or other defects resulting from abnormal delay in Scaling caused by Contractor shall be recorded separately and charged to Integrated Resource Account under B3.47.

Any timber that has been removed from Contract Area during the period of this contract, but remains unscaled after the Period of Performance Date, shall be Scaled at the earliest reasonable date.

B6.83 Scaling Other Products. The Scaled volume of material presented for Scaling in forms other than those stated in Division A2, when appropriate, shall be converted to the Division A2 unit of measure by the application of standard converting factors and procedures in effect at the time the contract was sold. Other converting factors may be used by written agreement.

B6.84 Accountability. When Scaling is performed away from Contract Area, products shall be accounted for in accordance with Forest Service written instructions or an Accountability Agreement between Forest Service and Contractor and as follows:

- (a) Contractor shall plainly mark or otherwise identify products prior to hauling in accordance with B6.842.
- (b) Forest Service shall issue removal receipts to Contractor.
- (c) Contractor shall assign a competent individual at the landing to complete removal receipts and attach them to each load of products removed from Contract Area.
- (d) Removal receipts shall be returned to Forest Service at periodic intervals.
- (e) When products are in transit, the truck driver shall possess or display removal receipt and show it upon request as evidence of authority to move products.
- (f) The scaler's portion of removal receipt shall be surrendered at point of Scaling, the unloading point, or as requested by Forest Service; and
- (g) Contractor shall notify Forest Service of lost or off-loaded logs and their location within 12 hours of such loss.

Contractor shall not place products in storage for deferred Scaling until an accountability system has been agreed to in writing for a stated period.

B6.841 Route of Haul. As part of the annual Operating Schedule, Contractor shall furnish a map showing and designating the route of haul over which unscaled products will be transported from Contract Area to the approved Scaling location. A written description of the haul route will not be accepted as a substitute for a map. Such designated route of haul shall be the most economical haul route available between the points. The estimated average haul time from the Contract Area to the approved scaling location shall be documented on the map showing the route of haul.

Upon advance written agreement, other routes may be approved. All unscaled products removed from Contract Area shall be transported over the designated routes of haul.

Contractor shall notify Forest Service when a load of products, after leaving Contract Area, will be delayed in reaching Scaling location by more than 12 hours past the estimated average haul time documented on the map showing the route of haul.

Contractor shall require truck drivers to stop, if requested by Forest Service, for accountability checks when products are in transit from Contract Area to the designated Scaling location.

Contractor and Forest Service shall agree to locations for accountability checks in advance of haul. Such locations shall be established only in areas where it is safe to stop trucks. Forest Service shall notify Contractor of the methods to be used to alert truck drivers of an impending stop.

B6.842 Product Identification. Before removal from Contract Area, unless Contracting Officer determines that circumstances warrant a written waiver or adjustment, Contractor shall:

- (a) Hammer brand all products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter.
- (b) West of the 100th meridian, paint with a spot of highway-yellow paint all domestic processing products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter. Each paint spot must be no less than three (3) square inches in size.
- (c) Contracting Officer shall assign brands and, if Contract Area is within a State that maintains a log brand register, brands shall be registered with the State. Contractor shall use assigned brand exclusively on logs from this contract until Contracting Officer releases brand. Contractor will furnish and apply highway-yellow paint of a lasting quality (oil-base or equivalent).

All hammer brands and/or highway-yellow paint must remain on logs until they are domestically processed. Contractor shall replace identifying marks if they are lost, removed, or become unreadable. Contractor may remanufacture products into different log lengths. Except for logs remanufactured as part of the mill in-feed process immediately before processing, remanufactured products must be rebranded with the assigned contract brand and repainted with highway-yellow paint, unless otherwise agreed to in writing by Contracting Officer. For such remanufactured products, Contracting Officer may approve use of a brand to be used exclusively as a catch brand, in lieu of the assigned contract brand.

B6.85 Scaling Lost Products. The volume of lost products shall be determined by the best methods currently available, using data from the records for the period in which the loss occurred or the most applicable period if loss should occur substantially after cutting. In the absence of specific information indicating size or species of lost products, species distribution and volume for entire truckloads shall be assumed to be the same as the average volume Scaled per truck during the report period, and for individual products it shall be assumed that the volume and species were the average volume of the highest priced species Scaled during the report period.

B6.851 Scaling Lost Sample Loads. If Scaling is being done by sampling loads of logs, Contractor shall present such sample loads for Scaling by Forest Service. If loads of logs selected to be sample Scaled are placed in the decks before they are Scaled, they will be considered as lost sample loads. It will be difficult, if not impossible, to determine the volume and species contained in such loads for payment purposes. Therefore, lost sample loads will be deemed to have a Scale volume and species composition equal to that of the highest value load Scaled during the sampling period, as established by Forest Service. If no sample loads were Scaled during the period, the Scale data for the high valued load will be taken

from the most current preceding sampling period with Scale. Sample loads lost as a result of Forest Service actions shall be treated as non-Scaled loads.

B6.86 Scale Reports. Forest Service shall provide Contractor a copy of Forest Service scaler's record, if requested in writing.

B8.0—OTHER CONDITIONS

B8.1 Title and Liability.

B8.11 Title Passage. All right, title, and interest in and to any Included Timber shall remain in Forest Service until it has been cut, Scaled, removed from Contract Area or other authorized cutting area, and paid for, at which time title shall vest in Contractor. Timber cut under the terms of clause titled Product Payment Guarantee, shall be considered to be paid for. Title to any Included Timber that has been cut, scaled and paid for, but not removed from Contract Area or other authorized cutting area by Contractor on or prior to contract termination, shall remain in Forest Service.

B8.12 Liability for Loss. If Included Timber is destroyed or damaged by an unexpected event that significantly changes the nature of Included Timber, such as fire, wind, flood, insects, disease, or similar cause, the party holding title shall bear the timber value loss resulting from such destruction or damage; except that such losses after removal of timber from Contract Area, but before Scaling, shall be borne by Contractor at Current Contract Rates and Required Deposits. Deterioration or loss of value of salvage timber is not an unexpected event.

In the event Included Timber to which Forest Service holds title is destroyed, Contractor will not be obligated to remove and pay for such timber. In the event Included Timber to which Forest Service holds title is damaged, Contracting Officer shall make an appraisal to determine for each species the difference between the appraised unit value of Included Timber immediately prior to the value loss and the appraised unit value of timber after the loss. Current Contract Rates in effect at the time of the value loss shall be adjusted by differences to become the redetermined rates.

There shall be no obligation for Forest Service to supply, or for Contractor to accept and pay for, other timber in lieu of that destroyed or damaged. This Subsection shall not be construed to relieve either party of liability for negligence.

B8.32 Modification for Catastrophe. In event of Catastrophic Damage, Forest Service, in consultation with Contractor, shall outline on Contract Area Map:

- (a) Any areas of catastrophe-affected live and dead timber meeting Utilization Standards and having undesignated timber so situated that it should be logged with the designated timber;
 - (b) If needed, any such areas where the damaged undesignated timber can reasonably be logged separately; and
 - (c) Areas of affected or unaffected timber that are to be eliminated from Contract Area.
- Forest Service shall locate and post the boundaries of all such areas, as needed.

After Contract Area Map has been outlined under this Subsection, Forest Service may propose contract modification to permit the harvest of catastrophe-affected timber. If Contractor accepts Forest Service proposed modifications, this contract shall be modified per FAR 52.212-4 and other related revisions as necessary, such as revision of Operating Schedule to ensure prompt removal of affected timber when necessary to avoid further loss and provision for additional contract time, if needed.

B8.5 Sale of Other Materials. Forest Service reserves the right to sell from Contract Area during the period of this contract any materials or products not subject to its terms, but shall not permit removal, possession, or use thereof that will materially interfere with Contractor's Operations. Contractor shall not be obligated to do any work made necessary by the action of others.

B9.0—PERFORMANCE AND SETTLEMENT

B9.5 Settlement. If obligations of Contractor have not been fully discharged by Period of Performance, any money advanced or deposited hereunder shall be retained and applied toward unfulfilled obligations of Contractor without prejudice to any other rights or remedies of Forest Service. Such funds may be treated as cooperative deposits under B4.218 for uncompleted work 30 days after receipt of written notice from Contracting Officer to Contractor of work to be done and Contractor's failure to deny the obligation or to do the work.

B9.6 Contract Closure. Contracting Officer shall give appropriate written notice to Contractor when Contractor has complied with the terms of this contract. Contractor shall be paid refunds due from Integrated Resource Account under B4.24 and excess cooperative deposits under B4.218.

C2.357# - INDIVIDUAL TREES (LEAVE TREE MARKING) (9/15)

In unit(s) **ALL** shown on the Contract Area Map all live trees meeting minimum tree diameter specifications of A.2 are designated for cutting except trees reserved from cutting. Trees reserved from cutting have been Marked with **orange** paint. The boundaries of areas where leave trees are marked are identified by **two horizontal bands of orange paint, 12 inches apart, around the bole of the tree, above 6 feet, facing into the cut unit and two vertical stump marks two feet in height facing the adjacent boundary trees or pointing down the discernible boundary.**

Unit numbers on every fifth boundary tree face into the unit. Corners follow the same specifications but are designated with three horizontal bands and the stump mark runs from ground-level to the bottom horizontal band. The unit numbers are between the vertical stump marks. Some unit boundaries are also designated by green t-posts installed in the ground about 4-5 feet in height. A yellow sign stating "Sale Area Boundary" will be attached to the post facing into the cut unit. Trees used for boundary designation are not to be cut.

C5.12# – USE OF ROADS BY CONTRACTOR. (9/04) Contractor's use of existing roads identified on Contract Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed otherwise:

<u>Code</u>	<u>Use Limitations</u>
X	Hauling prohibited
R	Hauling restricted
U	Unsuitable for hauling prior to completion of agreed reconstruction
P	Use prohibited
A	Public use restriction
W	Regulation waiver

Roads coded A will be signed by Forest Service to inform the public of use restrictions. Contractor's use of roads coded R, A, or W shall be in accordance with the following restrictions:

Restricted Road List

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
All	Various and Temp	Beginning	End	R	Unless otherwise agreed, operations only with dry or frozen conditions.
All	Various and Temp	Beginning	End	See CAM	No hauling allowed on holiday weekends or weekday (calendar year dependent) for the following holidays: *Memorial Day (5 PM Friday – 4 PM Monday) *Fourth of July (12 PM Thursday – 6 AM Tuesday) If the legal holiday falls on Tuesday, Wednesday, or Thursday no hauling will be permitted during the week. *Labor Day (5 PM Friday – 4 PM Monday)

C5.46 - SNOW REMOVAL (5/08)

Snow removal shall be done in a manner to preserve and protect the roads, to the extent necessary, to insure safe and efficient transportation of timber and to prevent erosion damage to roads, streams, and adjacent lands.

1. Description. Snow removal work by Contractor shall include:

- A Removal of snow from entire road surface width including turnouts.
- B Removal of snow slides, earth slides, fallen timber, and boulders that obstruct normal road surface width.
- C Removal of snow, ice, and debris from ditches and culverts so that the drainage system will function efficiently at all times.

2. Performance. All items of snow removal shall be done currently as necessary to ensure safe, efficient transportation. Work shall be done in accordance with the following minimum standards of performance. Waivers of standards will not be given where circumstances will cause unacceptable and unavoidable damage to the road or other resource.

- A Removal of material. All debris, except snow and ice, that is removed from the road surface and ditches shall be deposited away from stream channels at agreed locations.
- B During snow removal operations, banks shall not be undercut nor shall gravel or other selected surfacing material be bladed off the roadway surface.
- C Ditches and culverts shall be kept functional during and following roadway use.
- D Snow berms shall not be left on the road surface unless written waivers are made for specific locations for traffic safety. Berms left on the shoulder of the road shall be removed following hauling completion and/or drainage holes shall be opened and maintained. Drainage holes shall be spaced as required to obtain satisfactory surface drainage without discharge onto erodible fills.
- E Dozers shall not be used to plow snow on system roads without written approval of Forest Service.
- F Snow shall not be removed to the road surface. A minimum two-inch depth must be left to prevent loss of surfacing and protect the road bed during snow removal operations. Written waivers may be made by Forest Service for specific locations where snow may be completely removed during plowing for traffic safety. Locations receiving a waiver will have a written agreement prepared prior to plowing that prescribes the timing and method of damage repair or surface replacement.

C6.313# - TIMING OF SALE OPERATIONS. (7/09)

Unless otherwise agreed to in writing Contractor's Operations shall be performed in accordance with the following table.

Subdivision Unit(s)	Operation Condition	Purpose
ALL	No operations allowed on holiday weekends or weekday (calendar year dependent) for the following holidays: *Memorial Day (5 PM Friday- 4 PM Monday) *Fourth of July (12 PM Thursday- 6 AM Tuesday) If the legal holiday falls on Tuesday, Wednesday or Thursday, no hauling will be permitted during the week. *Labor Day (5 PM Friday- 4 PM Monday)	Protect high use recreation areas.
ALL	No operations are allowed between 7:00pm to 7:00am. Unless waived by written agreement with USFS.	¼ mile noise protection for private residents. Area will be designated on the ground by flagging prior to operation in affected units.
Units 1, 2, 3, 4, 7, 8, 9 and 11	The contractor will be required to work in close coordination with Forest Service District Archaeologist. The contractor is required to notify FS staff five (5) business days in advance of working within a designated site.	Directional hand felling is required within sites to protect areas of concentrated materials.

C6.4# - CONDUCT OF LOGGING. (7/09)

Unless otherwise agreed in writing, silvicultural prescriptions and land management objectives shall be conducted and accomplished by the requirements, methods and procedures in accordance with the following table.

C6.4# - CONDUCT OF ACTIVITY	
Cutting Units	Conduct of Activity
ALL	1. The skid trail pattern shall be designated by the contractor and approved by Forest Service in advance of felling and major trails, including go-back trails, shall be flagged on the ground in advance of felling.
ALL	2. Contractor and Forest Service will agree on felling lead at the time of approval of skid trails/skyline corridors.
ALL	3. Trees shall be felled, insofar as safety permits, to angle in the direction of skidding.
ALL	4. Between September 30 and January 1, Contractor shall remove from National Forest administered lands products meeting utilization standards within 60 calendar days after felling of trees unless written authorization to delay such removal is obtained from the Forest Service. Should the Forest Service determine that other justification, such as environmental concerns require reducing this time period, contractor shall be notified in writing.
ALL	5. Skid roads will be located, approved and constructed in advance of falling.
ALL	6. Logs shall be skidded with the leading end free of the ground.
ALL	7. Trees designated for cutting and/or logs will be left as rub trees along skid trails as needed to protect young growth and leave trees.
ALL	8. Log landings and transfer points shall be limited to existing roads and turnouts unless otherwise agreed to in writing.
ALL	9. Botanical Protection Measures include: Piling of slash needs to be 10-20 feet away from known populations of sensitive plants, no operation of track vehicles, road building or construction of landings in areas identified as protection for sensitive plant species in accordance with standard provision H.16. Area will be designated on the ground by flagging prior to operation in affected units. In general, minimize skid trails, temp roads and overall disturbance in the areas identified as sensitive on the CAM.
ALL	11. Known Cultural Resources are marked on the ground by white bands and/or pink flagging around trees on the perimeter of the site and shall be protected in accordance with Standard Provision H.16.
ALL	12. <u>Protect Improvements</u> : So far as practicable, Contractor shall protect Specified Roads and other improvements (such as trails, trailheads, transect markers, utility lines, telephone lines, ditches, culverts and fences): (a) Existing in the operating area. (b) Determined to have a continuing need or use, and/or (c) Designated on the CAM. Contractor shall keep all roads and trails needed for fire protection or other purposes reasonably free of equipment and products, slash, and debris resulting from Contractor's Operations. Contractor shall make timely restoration to any such improvements damaged by Contractor's Operations.

C6.43 - PROTECTION OF PUBLIC IN RECREATION AREAS (5/08)

For protection of National Forest interests and safety of general public, Contractor's Operations shall be subject to the following restrictions:

- a. When Contractor's Operations are in progress within safety zones, shown on Contract Area Map, and designated on the ground, Contractor may be required to post warning signs in the area or maintain a watchman whose sole duty shall be to warn and advise public of any hazards present in area as a result of this contract.

b. During periods of general recreation activity within Contract Area or vicinity, Forest Service may restrict hauling to days other than Saturdays, Sundays, and National holidays.

C6.6 - EROSION PREVENTION AND CONTROL (5/08)

Unless waived in writing, erosion prevention and control work, required by C6.6 shall be completed within 15 calendar days after skidding operations related to each landing are completed or after Forest Service designation on the ground of work where such designation is required hereunder. Said time limit shall be exclusive of full days lost in Contractor's Operations due to causes beyond Contractor's control. Damage resulting from Contractor's operations, due to failure to perform required work, shall be repaired by Contractor.

When not adequately protected from erosion by treatments such as out sloping and cross draining or grass seeding, place lopped slash and logging debris in temporary roads, landings, and skid trails.

C6.601# - EROSION CONTROL SEEDING (5/08)

Following completion of skidding and yarding operations in an area, Contractor shall seed areas of exposed soil on skid trails, landings, firebreaks, and Temporary Roads where other erosion control measures described in G.6 will not result in satisfactory control of soil movement. Seed bed preparation shall consist of surface scarification on roads and landings sufficient for retention of seed.

Seed shall be broadcast evenly at the rate of 5 pounds of seed per acre. Application shall be during the period April 15 to November 30 unless otherwise approved. No application work shall be done during extremely windy or rainy weather, or when the ground is frozen or otherwise unsuitable.

The kinds and amounts of seed to be sown in terms of live pure seed shall be:

See Table A

TABLE-A	
C6.601# - EROSION CONTROL SEEDING	
Species of Seed	Lbs per Acre
Arizona Fescue (<i>Festuca arizonica</i>)	2.0
Western Wheat Grass (<i>Elymus smithii</i>)	2.0
Blue Grama (<i>Bouteloua gracilis</i>)	1.0
Total	5.0

C6.602 - TEMPORARY ROAD AND LANDING SCARIFICATION (5/08)

Unless waived in writing by Forest Service on specific roads or landings, all landings and Temporary Roads constructed or used by Contractor shall be scarified by Contractor following use. Scarification shall be done to a depth of not less than four inches and must effectively prepare the ground for seeding.

C6.65#- AQUATIC MANAGEMENT ZONES. (2/21)

An Aquatic Management Zone (AMZ) is a zone that contains riparian vegetation or other special characteristics. Areas identified as Aquatic Management Zones are areas marked on the ground or are within the distances identified on the Contract Area Map measured from the centerline of stream courses. Centerlines will be designated with blue flagging in the field, by the Forest Service prior to release of payment unit.

Timber designation, conduct of logging, and/or slash treatment may differ in the AMZ from the rest of the unit. Unless otherwise agreed to in writing and notwithstanding the contract requirements otherwise applicable to each subdivision or cutting unit, the following special requirements apply to the AMZ of the subdivisions or cutting units specified below:

C6.7# - SLASH TREATMENT (07/1999)

All vegetative debris associated with construction of Specified Roads such as unutilized timber, brush and grubbed stumps is Construction Slash. Measures to be taken by Purchaser for treatment of Construction Slash are set forth in the attached road construction specifications and in item (1) below.

Vegetative debris larger than 1 inch in diameter and 3 feet long resulting from Purchaser's Operations, other than Construction Slash, is Logging Slash. In Required Disposal Strip along permanent roads, in areas of Temporary Road construction outside of Clearcutting Units, and in fuelbreaks (C6.75), both hardwood trees and coniferous trees smaller than the minimum d.b.h. in A2, over 3 feet in height and damaged beyond recovery by Purchaser's Operations shall be cut and treated as Logging Slash. Measures to be taken by Purchaser for treatment of Logging Slash are set forth below and in following Subsections unless otherwise agreed in writing.

Forest Service and Purchaser shall jointly develop a schedule for completion of slash treatment on the various portions of Sale Area prior to Purchaser's Operations. Slash treatment plan may be made a part of the annual operating plan required in B6.31.

Specified slash treatment methods for each cutting unit shall be shown on Sale Area Map and listed in the attached tables by the following symbols:

Slash Treatment Methods:

Method: BURYING Map Symbol: "Bury"

Definition and Specifications:

Logging Slash shall be buried where agreed in borrow areas, pits, trenches, or other locations reasonably near the area of origin. Logging Slash shall be matted down in layers and shall be covered with at least 2 feet of rock and soil so that the final surface is sloped to drain and relatively smooth.

Method: CHIPPING Map Symbol: "Chip"

Definition and Specifications:

Chippable Logging Slash up to 4 inches in diameter shall be processed through a chipping machine. Chips shall be scattered to a depth not exceeding 6 inches.

Method: REMOVING Map Symbol: "Remove"

Definition and Specifications:

Logging Slash shall be moved or hauled to locations shown on Sale Area Map and designated on the ground where it shall be piled.

Method: FELLING DAMAGED TREES Map Symbol: "Fell"

Definition and Specifications:

Damaged or destroyed trees are trees substandard because of size, which are over 3 feet in height, and/or species not included in A2 over 3 feet in height, knocked down or damaged to the extent that mortality or serious deterioration will occur, and such trees partially pushed over so as to result in permanent lean and visible damage to the root system, all as a result of the Purchaser's operation. Such damaged or destroyed trees shall be felled and further treated by the slash treatment method specified for the area. Materials meeting the minimum piece specifications of A2 will be utilized by the Purchaser according to B2.2. Maximum stump height shall be that specified in A6 or on the Sale Area Map.

Method: BUCKING & PILING (Small Material) Map Symbol: "Buck"

Definition and Specifications:

Logging Slash smaller than **N/A inches** inches and larger than 4 inches in large end diameter shall be bucked into lengths not to exceed **N/A feet** feet and left in place. Logging Slash 4 inches and smaller in large end diameter shall be hand Piled within Required Disposal Strip.

Method: DECKING LARGE MATERIAL Map Symbol: "Deck"

Definition and Specifications:

Logging Slash **N/A inches or larger in diameter and N/A** feet or more in length shall be Decked free of other slash by piling pieces parallel to each other.

Method: HAND PILING Map Symbol: "Hpile"

Definition and Specifications:

Logging slash smaller than **N/A inches in diameter and N/A** feet long shall be hand piled in accordance with the following specifications:

HAND PILING SPECIFICATIONS

LOCATION OF PILES: Piles shall be located within cleared areas of landings and Temporary Roads or within natural openings. The minimum spacing between edge of each pile and crown edge of adjacent live trees shall not be less than the average diameter of the pile.

Purchaser shall not be required to move slash more than 75 feet to meet the above pile location requirement.

Piles shall not be made below highwater mark of perennial or intermittent stream courses designated to be protected in accordance with B6.5. Slash shall not be piled on or allowed to remain in drainage ditches of permanent roads.

CONSTRUCTION OF PILES. Piles shall be compact and dirt-free, with most small slash on the bottom to facilitate consumption during burning. Piles shall not exceed 10 feet in average diameter and pile height shall not be less than one-third the average pile diameter. All slash which protrudes 4-feet or more from outer edge of the pile shall be bucked off and placed on pile.

Method: MACHINE PILING Map Symbol: "Mpile"

Definition and Specifications:

Concentrations of logging slash, excluding scattered individual pieces, shall be machine piled by tractor equipped with brush rake as per Machine Piling Specifications.

Method: MACHINE PILING & LOPPING Map Symbol: "Mpile/lop"

Definition and Specifications:

Concentrations of slash marked on the ground by the Forest Service shall be machine piled by a tractor equipped with a brush rake as per Machine Piling Specifications. The remaining slash, not in concentrations, shall be lopped and scattered as per specification for "Lopping."

Machine Piling Specifications

Acceptable Equipment. Piling will be accomplished with a crawler tractor not to exceed overall width of **N/A feet** feet. Tractor will be equipped with a brush blade having teeth extending a minimum of 11 inches below the frame. The teeth shall number at least **4 and no more than 10**. The teeth shall be of sufficient size and strength so that they shall not bend or break through normal slash piling.

Location of Piles. Piles shall be so located that burning will not damage standing live trees or physical improvements such as fences, poles, buildings, signs, tables, grills, and cattleguards. The minimum spacing between piles shall be equivalent to one and one-half the diameter of the adjacent pile.

If conditions make it impractical to locate piles where damage to live trees and physical improvements can be avoided, a space shall be cleared in a location designated by Forest Service.

Slash within partial cut areas and road construction clearings shall be moved to take advantage of previously constructed or natural clearings in order to minimize the construction of new clearings. Slash shall not be moved more than 120 feet to achieve the location requirement. Piles shall not be made on

permanent roads, in drainage ditches, below high water marks of live streams, and in intermittent streamcourses.

Piles shall not be constructed within a **N/A foot strip along the top edge of the cutting unit or within a N/A foot strip along the remaining edges of the unit.**

Construction of Piles. Machine piles shall be compacted by pushing slash from all sides towards the center of the pile. A machine pile will not exceed an average diameter of 25 feet and pile height shall not be less than one-third the average diameter of the the pile. All slash which protrudes 4-feet or more from outer edge of the pile shall be bucked off and placed on pile.

Unmerchantable material may be left between piles to protect regeneration seedlings and for site protection purposes as specified in writing by Forest Service.

Piling shall be accomplished in a manner that will prevent the accumulation of dirt in the piles. Logs and tops from felled trees within leave groups of trees inside or outside the cutting unit shall be yarded out of such leave groups to approved locations and piled. Where there is danger of damaging leave trees, long material shall be endlined out of leave groups.

Method: COVERING PILES Map Symbol: "Cover"

Definition and Specifications:

All slash piles shall be covered with a durable waterproof covering furnished by Purchaser as approved by the Forest Service. The material shall be at least 6 feet in width. Piles shall not be less than onethird covered, with the covering extending not less than halfway down all sides. Pieces of burnable material shall be placed on top of the waterproof covering to keep it from blowing off the pile.

Method: SITE PREPARATION Map Symbol: "Mach"

Definition and Specifications:

In conjunction with machine slash piling, a minimum of **N/A percent and maximum of N/A** percent of the workable ground surface uniformly distributed over the unit area, shall be scarified down to bare mineral soil. Scarified ground is here defined as bare mineral soil in patches exceeding **N/A feet by N/A**

Method: SCATTERING Map Symbol: "Scat"

Definition and Specifications:

Purchaser shall remove all slash greater than **N/A inches in diameter and/or N/A** feet long, a minimum of **N/A feet away from each leave tree N/A** inches d.b.h. and larger. Slash shall be placed upslope from, or along the upslope from, or along the contour from, leave trees. Slash shall not be placed downslope from leave trees.

Method: LOPPING Map Symbol: "Lop"

Definition and Specifications:

Slash shall be treated by limbing or severing, or both, and scattered as necessary to place slash within (two or three) feet of the ground over entire area of cutting unit. Occasional slash which exceeds the maximum height, not to exceed 5 percent of slash to be lopped and scattered, is acceptable. When agreed in writing between Purchaser and Forest Service, crushing or chopping with mechanized equipment is permissible, where residual trees will not be excessively damaged and ground conditions are suitable.

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By agreement in writing, certain slash may be left for fuelwood. When the specified treatment is by a combination of methods, Logging Slash not treated by one of the methods shall be treated by the other(s).

(1) Treatment Along Permanent Roads. Permanent roads that require roadside slash treatment are listed in the attached table and shown on the Sale Area Map. All Logging and Construction Slash within Required Disposal Strips shall be treated by Purchaser. "Required Disposal Strips" are those areas adjacent to permanent roads where slash treatment is required for resource objectives. The width of Required Disposal Strips is shown in the attached table and is measured in slope distance from Roadbed edges of permanent roads. By agreement, in Clearcutting Units, slash from Required Disposal Strips may be treated with other Logging Slash. By agreement, the location of Required Disposal Strips may be adjusted from side to side without materially changing the total work required.

Slash treatment in Required Disposal Strips shall be accomplished without affecting the proper functioning of channels leading to and from drainage structures.

(a) Slash shall be treated by Scattering, Removing, Burying, Chipping, Piling, Bucking and Piling, Machine Piling or a combination of these methods as shown in the attached table. Logging Slash larger than treatment size requirements of the specified method shall either be Scattered outside Required Disposal Strip, within Required Disposal Strip or Decked at agreed locations as shown in the attached table.

(b) Hardwood and coniferous trees within or extending over Required Disposal Strips and which have been partially knocked down by Purchaser's Operations shall be felled and treated as Logging Slash. Damaged trees which cannot be felled with reasonable safety may be pushed or pulled down.

(2) Treatment Along Temporary Roads. Outside of Clearcutting Units, all hardwood and coniferous trees felled or pushed over and trees damaged beyond recovery by Temporary Road construction shall be felled, limbed to a stem diameter of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and stem shall be bucked into lengths not exceeding 3/ feet. Such slash shall be Scattered free of soil to reduce concentrations unless treatment is required by another specified method.

(3) Landings and Disposal Sites. Unutilized logs accumulated at landings and disposal sites shall be Decked by Purchaser. Other slash accumulated at landings and disposal sites shall be kept separate from unutilized logs and treated by the method shown in the attached table.

(4) View and Special Management Units. Areas identified as "VIEW" on the Sale Area Map are Travel and Water Influence Zones and Special Management Units which include roads, recreation trails, streamsides, lakeshores, and other view areas. The "VIEW" boundaries are identified on the ground or a distance limitation is specified on the Sale Area Map. Primary treatment shall be by Removing, Burying, Chipping, Hand Piling, Machine Piling, or a combination of these means unless a method is specified or prohibited on Sale Area Map. Logging Slash not readily treated by the selected or specified method shall be removed to designated areas or treated as agreed.

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The following tables, where applicable and filled in, summarize slash requirements:

TABLE-A			
TREATMENT ALONG PERMANENT ROADS			
Subdivision No. Or Road Junctions Road No. (From To)	Width Of Required Disposal Strip	Specified Method	Slash Larger Than Treatment Size, Requirements Of Specified Method

N/A			

TABLE-B		
LANDING, DISPOSAL SITES AND OTHER SLASH		
Site	Cutting Unit No.	Specified Method
Landings	ALL	Machine Pile (Mpile)

TABLE-C			
CONTRACTOR UNIT SLASH RESPONSIBILITY			
Description of Cutting Unit	Type of Treatment	Acres	Remarks
ALL	Fell	2023	Fell Damaged Stems
ALL	Mpile/Lop	2023	Lop and scatter to 2' mat where Mpile is not feasible by written agreement between purchaser and C.O.

C6.8 – Scaling (4/20)

Volume estimators used for quantity estimates in A2 are listed below. Volume for trees added pursuant to B2.1 and B2.3, or other authorization hereunder, will be derived from the same volume estimators or from volume tables based on these estimators.

Common Species Name	Species Code	Model/Equation
Ponderosa pine	VPP,BPP,NPP,PP	Flewelling Profile Model ^{(4) (5)}
Southwestern White Pine	VWP,BWP,NWP,WP	Flewelling Profile Model ^{(4) (5)}
Douglas fir	VDF,BDF,NDF,DF	Flewelling Profile Model ^{(4) (5)}
White fir	VWF,BWF,NWF,WF	Flewelling Profile Model ^{(4) (5)}
Corkbark fir	VCF,BCF,NCF,CF	Flewelling Profile Model ^{(4) (5)}
Spruce,	VES,BES,NES,ES,	Hann and Bare Equation ⁽³⁾
Aspen	VAS,BAS,NAS,AS	Hann and Bare Equation ⁽³⁾
Juniper, Pinyon Pine, Oaks	JA,JO,JX,PN,PE,PX,OK	Hann and Bare Equation ⁽²⁾

(1) The Eager Mill Study is not available as a published document.

(2) Hann, David W, and B. Bruce Bare. 1978, Comprehensive tree volume equations for major species of New Mexico and Arizona: I Results and Methodology.USDA Forest Service Research Paper INT-209.

(3) As a result of the FY87 DF validation project, reduce Douglas-fir Scibner volume for the APS, COC, COR, GIL, LIN, PRE, and TON Forests by multiplying the gross merchantable volume by 0.932.

(4) Flewelling, James W. and Lawrence M. Raynes. 1993. Variable-shape stem profile predictions for western hemlock. Part I: Predictions from DBH and total height. & Part II: Predictions from DBH, total height, and upper stem measurements. Can. J. For. Res.

Vol. 23. 1993. Attachment 1. R3 Ponderosa Pine Flewelling Profile Model volume Equation Validation and Biomass Study

(5) Flewelling, James W. and Lawrence M. Raynes. 1993. Variable-shape stem profile predictions for western hemlock. Part I: Predictions from DBH and total height. & Part II: Predictions from DBH, total height, and upper stem measurements. Can. J. For. Res. Vol. 23. 1993. Attachment 2. R3 Santa Fe National Forest Biomass Study and Volume Validation.

Weight / Biomass Equations

(For All Forest)				
Species	Equation	Weight Factor	Moisture Content	Percent Removed ⁽¹⁾
PP	01	66.5	126.82	95 - Defect
WP	01	53.5	107.1	95- Defect
DF	01	60.5	84.35	95- Defect
WF	01	64.8	137.35	95- Defect
CF	01	64.8	137.35	95- Defect
ES	01	64.8	137.35	95- Defect
AS	01	64.8	137.35	95- Defect
JA/JO/JX	01	55.0	37	95- Defect
PN,PE,PX	01	55.0	37	95- Defect
OK	01	77.20	75	95- Defect

(1) The use of 95% minus the defect associated with the species
In the cruise (R301 or VSM1 Report to get the Avg. Defect).

C6.821# - SCALING AS PRESENTED (SALES BY LOAD COUNT). (3/22)

Notwithstanding criteria in B6.82, volume for all material will be paid for at rates listed in A4 Timber Payment Rates on a predetermined conversion factor of **24.84** tons per load for single trailer, 5 axle log truck configuration. Log trucks are restricted to a maximum gross vehicle weight of 80,000 pounds unless otherwise agreed, as well as State limits for width and height. The weight in tons shall be multiplied times the total loads counted for sale total scaled weight by load count.

Lost loads will be charged 125% of the predetermined conversion factor.

C6.84 - ACCOUNTABILITY (5/08)

Unless otherwise agreed in writing and prior to hauling from Contract Area, products shall be accounted for as follows:

The truck driver shall obtain a removal receipt furnished by Forest Service. Contractor shall assign a competent individual at the landing to issue removal receipts for products removed from Contract Area. A duplicate copy or stub of such receipt shall be retained by Contractor and delivered to Forest Service at periodic intervals. When products are in transit, the truck driver shall keep the original copy of the receipt in his possession and show it upon request or display it as evidence of his authority to remove products. The original removal receipt shall be surrendered at the unloading point or as requested by Forest Service.

C8.66# - USE OF TIMBER (Option 1). (9/04) (a) This contract is subject to the Forest Resources Conservation and Shortage Relief Act of 1990, as amended (16 USC 620, *et seq.*).

(b) Except for 1/ NONE determined pursuant to public hearing to be surplus, unprocessed Included Timber shall not be exported from the United States nor used in direct or indirect substitution for unprocessed timber exported from private lands by Contractor or any person as defined in the Act (16 USC 620e).

(c) Timber in the following form will be considered unprocessed:

(i) Trees or portions of trees or other roundwood not processed to standards and specifications suitable for end product use.

(ii) Lumber, construction timbers, or cants intended for remanufacturing not meeting standards defined in the Act (16 USC 620e); and

(iii) Aspen or other pulpwood bolts exceeding 100 inches in length.

(d) Unless otherwise agreed in writing, unprocessed Included Timber shall be delivered to a domestic processing facility and shall not be mixed with logs intended for export.

(e) Prior to award, during the life of this contract, and for a period of 3 years from Termination Date, Contractor shall furnish to Forest Service, upon request, records showing the volume and geographic origin of unprocessed timber from private lands exported or sold for export by Contractor or affiliates.

(f) Prior to delivering unprocessed Included Timber to another party, Contractor shall require each buyer, exchangee, or recipient to execute an acceptable agreement that will:

(i) Identify the Federal origin of the timber.

(ii) Specify domestic processing for the timber involved.

(iii) Require the execution of such agreements between the parties to any subsequent transactions involving the timber.

(iv) Require that all hammer brands and/or yellow paint must remain on logs until they are either legally exported or domestically processed, whichever is applicable; and

(v) Otherwise comply with the requirements of the Act (16 USC 620d).

(g) No later than 10 days following the execution of any such agreement between Contractor and another party, Contractor shall furnish to Forest Service a copy of each such agreement. Contractor shall retain, for 3 years from Termination Date, the records of all sales, exchanges, or dispositions of all Included Timber.

(h) Upon request, all records dealing with origin and disposition of Included Timber shall be made available to Contracting Officer.

(i) For breach of this Subsection, Forest Service may terminate this contract and take such other action as may be provided by statute or regulation, including the imposition of penalties. When terminated by Forest Service under this Subsection, Forest Service will not be liable for any Claim submitted by Contractor relating to the termination.

APPENDIX C

TECHNICAL SPECIFICATIONS FOR SERVICE WORK ITEMS

SECTION I – DESCRIPTION OF WORK:

The Timberline Wupatki Trails Stewardship IRSC is comprised of ten (10) cutting units, totaling approximately 317 acres of ponderosa pine forest. Units 1-4 and 7-10 are covered under Timberline Wupatki Estate Post Fire Hazard Tree Removal CE signed on 5/20/2023 and units 11 and 12 are covered under East Side Hazardous Fuels Reduction and Forest Health EIS (signed 1/08/2007). The objective of this project is to remove dead and dying trees on forest land immediately adjacent to the communities of Timberline and Wupatki Trails in areas impacted by the Tunnel and Pipeline Fires in 2022. All necessary logging activities such as cutting, skidding, decking, processing and sorting of logs, temporary and skid road work and landing slash management are required to be completed as mandatory work items. Hauling slash off FS lands plus Hand Thin & Manually Remove Material from Heritage Sites will be optional work items that may be issued at the discretion of the FS. The cutting units are all leave tree marked. The implementation of this project will expedite forest rehabilitation, reduce hazardous fuels loading and creating a fuel break that will help protect the Wildland Urban Interface and these local communities by accomplishing the following:

1. Cut all dead and trees expected to die withing 3 years, regardless of species or diameter.
2. Cut all pinyon pine, juniper, and Gambel oak with less than 50% live crown ratio.
3. Cut all ponderosa pine less than 6 inches DBH with less than 50% live crown ratio.
4. Remove all slash generated during cutting activities off Forest Service System lands.

SECTION II – WORK ITEMS

Mandatory Item 1: Cut, Skid, Deck, and Sort

Units 1, 2, 3, 4, 7, 8, 9, 10, 11 and 12 (297 acres)

The following Appendix B provisions apply: B1.1, B2.3, B2.35, B3.43, B5.12, B6.3, B6.4, B6.412, B6.422 B6.8, B6.81, C2.357#, C5.12#, C6.313#, C6.4#, C6.43, C6.6, C6.01#, C6.602, C6.7#

1. Cut, skid, and deck all un-marked trees 6 inches DBH and greater. Trees will be whole tree skidded to designated staging areas within the project area (see CAM for suggested locations). All trees shall be processed down to a 2-inch Diameter Inside Bark (DIB) regardless of size or smallest feasible DIB.
2. Sort logs into two decks: sawtimber (9.0 inches DBH and greater) and non-sawtimber (8.9 inches DBH and less). Sorted logs will be of various sizes and lengths. Each separate log deck must be accessible and constructed in a safe and efficient manner.
3. Units 4, 7 and 8 will utilize a staging unit to the north. Units 1, 2, 11 and 12 will utilize a southern staging unit and units 9 and 10 will utilize an eastern staging unit. There is a mostly-impassable stream crossing that roughly bisects unit 3. Harvested material in the northern portion of unit 3 will require transportation to the northern staging area and material harvested in the southern portion will need to be hauled south.
4. All Temporary roads will be maintained to facilitate the transportation and ingress/egress of chip vans and any other low clearance equipment. Any erosion control features that are modified to facilitate these activities must be put back in place upon completion of activities. Construction and obliteration of all newly created temporary roads shall be in accordance with the requirements of provisions in Appendix B.

Optional Item 2: Remove All Slash from Forest Service Lands

Units 1, 2, 3, 4, 7, 8, 9, 10, 11 and 12 (317 acres)

1. Remove all material generated from processing logs at staging areas. Slash is considered all tops, limbs, and needles that are produced from processing logs at staging areas. These products will be removed from the National Forest System lands.
2. This will require the haul routes in and out of the staging areas to be maintained to facilitate the transportation of slash/grindings via chip vans or a variety of other truck and trailer configurations.
3. Refer to C6.7# Slash Treatment in Appendix B for slash treatment requirements.

Optional Item 3: Hand Thin & Manually Remove Material from Heritage Sites

Units 1, 2, 3, 4, 7, 8, 9 and 11 (20 acres)

1. All un-marked trees within designated heritage sites will be hand-felled. All cut material will be moved outside of heritage site boundaries manually. Once outside of heritage site boundaries, material can be mechanically skidded to designated staging areas. Mechanical removal may be agreed upon in select sites.
2. Directional hand felling will be required within sites to protect areas of concentrated materials. The contractor will be required to work in close coordination with Forest Service District Archaeologist. The contractor is required to notify FS staff five (5) business days in advance of working within a designated site.
3. Trees initially marked with white paint but subsequently marked over with blue paint will be required to be removed.
4. See Contract Area Map for georeferenced heritage site locations.

Optional Item 4: Timber Stand Improvement:

Units 1, 2, 3, 4, 7, 8, 9, 10, 11 and 12 (317 acres)

1. Cut all dead trees, regardless of species or diameter.
2. Cut all pinyon pine, juniper, and Gambel oak with <50% live crown ratio.
3. Cut all ponderosa pine <6-inch DBH with <50% live crown ratio.
4. Slash generated from this activity will be piled at designated staging areas.

Optional Item 5: Process Sawlogs into Firewood:

Units 1, 2, 3, 4, 7, 8, 9, 10, 11 and 12 (317 acres)

1. Processed firewood must be between lengths of 10-20 inches. Wood smaller than 6 inches diameter on the small end is not required to be split.
2. Processed firewood must be piled in an organized manner that does not prohibit the work of any other activities. Firewood piles may be spread throughout the area at approved locations to allow for ensuing activities.
3. Processed firewood shall be left onsite at an agreed upon staging location.
4. All slash/duff/bark produced by firewood production shall be spread out to a depth of no greater than 4 inches.

Optional Item 5: Construct 3 crossings with crushed culvert:

Units 1, 2, 3, 4, 7, 8, 9, 10, 11 and 12 (317 acres)

1. Three (3) crossings shall be constructed within incised channels to facilitate Coconino County Flood Control efforts.

2. Crossing shall include, but is not limited to, crushed culverts and rock armoring for bank stabilization. Final design and culvert size shall be determined by the Forest Service and agreed upon by all Parties. Alternative approaches will be accepted, with final cost for this Optional item to be negotiated prior to contract finalization.

SECTION III – CONTROL OF WORK

The Contractor agrees to conduct its operations under this contract and other related business activities in compliance with Federal, State, and local statutes, standards, orders, permits and other regulations.

The Contractor shall meet all State and local environmental quality laws applicable to National Forest system lands.

Work may be done any time during the term of the contract, except under the following conditions:

- (1) Logging activities will begin within 30 days of the Notice to Proceed,
- (2) Once work commences, work will continue until all work items are complete unless agreed upon or because of uncontrollable conditions.
- (3) When conditions are such that operations shall be restricted or ceased due to increased fire risk.
- (4) If new nests or TES are discovered,
- (5) When soil moisture conditions create excessive risk of damage to the soil,
- (6) When snow depth creates a situation where requirements cannot be met and/or work cannot be inspected, as determined by the COR.
- (7) The government reserves the right to prioritize the order in which Units are treated.
- (8) If any cultural or archeological sites are discovered during operations of this contract, work will be suspended in the immediate vicinity of the site until a reconnaissance survey is completed by the Forest Archeologist. Areas excluded from treatment shall be deleted from the contract.

SECTION IV – INSPECTION AND ACCEPTANCE

For All Work Items:

At any point during the project, the Contractor and/or Project Manager may request (documented through email, text, or hand-written request) an in the field consultation with the Forest Service to inspect work progress, review contract specifications, or clarify issues. The Forest Service shall respond to Contractor's request within 5 working days, excluding weekends and federal holidays.

GOVERNMENT QUALITY ASSURANCE SURVEILLANCE PLAN

Government Inspection Procedures - The COR, or a designated inspector (GTM), will make periodic inspections while work is in progress, usually daily at first, as needed to assure work is proceeding satisfactorily. The Contractor shall notify the COR when units are started, when problems are encountered and when contract work needs government oversight.

1. Each unit will be inspected as a separate unit. Unit will not be averaged with other units for acceptance or payment.

2. When units are completed and ready for government inspection, Contractor's designated Project manager shall request unit inspection in writing, prior to moving out of the general area.
3. The COR, or designated inspector, will determine compliance with contract specifications through informal visual inspections. In the event visual inspection indicates work to be in non-compliance with specifications, prompt corrective action and/or rework shall be required.

Government Inspection Procedures – Formal (Plots)

1. In the event visual inspection indicates work and / or rework to be in non-compliance with contract specifications, a series of verification plots shall be installed by the Government to determine compliance with specifications and percent of satisfactory work for treatment of each unit not meeting specification as observed with visual inspection.
2. Government verification plots will consist of a series of fixed area plots and variable radius plots along transects to record whether density, basal area, best tree selection, and other requirements are being met and to what extent.
3. Plots and grid will be distributed so that a representative sample is obtained.
4. The COR or designated inspector will mark the center of each plot on the ground using flagging, stakes, or pin flags. Additional flagging will be hung near the plot center so that it may be seen from a distance. The inspector will include the plot number, their initials and date on the flagging.
5. Plots will be numbered to correlate with the inspection form and transects on a unit map.
6. The minimum number of verification plots, per treatment unit, shall be as follows:

Unit Acreage	Minimum No. of Plots
1 – 9	1 plot per 2 acres
10 – 29	10 plots
30 – 59	1 plot per 4 acres
60 – 99	20 plots
100	1 plot per 5 acres

7. Determination of acceptability of the work performed will be based on Government verification inspections and will be considered conclusive.
8. At each plot, the Government will examine the plot area and record findings on the items listed below:
 - a. Plot number
 - b. Number of trees to be left on plot.
 - c. Number of trees left on plot.
 - d. Number of satisfactory trees.
 - e. Number of deficient trees.
 - f. Number of excess trees.
 - Stumps containing live limbs which are not in accordance with specifications herein will be counted as excess trees.
 - Cut trees which are still attached at the stump will be counted as excess trees
 - Trees meeting cut specifications will be counted as excess trees
 - Trees in excess of trees to be left will be counted as excess

9. Work quality will be calculated on the form as follows:

$$\frac{\text{No. Trees Deficient} + \text{No. Excess Trees}}{\text{No. Trees to be left}} = \% \text{ Unsatisfactory work}$$

$$100\% - \% \text{ Unsatisfactory work} = \% \text{ Work Quality}$$

Unsatisfactory Performance

1. If the work quality falls below 85 percent, the COR will immediately notify the Contractor, in writing, and order him to improve the quality of subsequent tree cutting. If the quality of subsequent tree cutting is not raised above the 85 percent minimum acceptable standard within 24 business hours after receipt of such written notice, the Contractor's right to proceed may be terminated and the contract considered in default.
2. When the work quality falls below 90 percent as a result of excess trees, the Government may elect to do one of the following:
 - (a) Order rework to be performed and withhold payment until excess trees are cut and the results of a post-rework Government inspection show work quality to be at least 85 percent or more. No rework shall be performed unless ordered or authorized by the COR.
 - (b) Order that no rework be performed and payment will either be made at a reduced rate, or not at all, as determined from the Thinning Inspection Report.
3. Repeated failure to produce work quality at or above the 85 percent minimum acceptable standard will be considered reason for contract termination and default action.

Reinspection Upon Contractor Request

1. If Government inspection results are unacceptable to the Contractor, a reinspection may be requested, in writing, within 5 business days after receipt of notice of said inspection results. The same inspection procedure will be used; however, the inspection pattern will be shifted so that new inspection plots will not overlap previously inspected plots.
2. If reinspection results – rounded up to the nearest whole percent – indicate a variance of more than 5 percent from the first inspection, the results of the second inspection will be used to calculate work quality and payment, and the Government will bear the cost of reinspection.
3. If reinspection results – rounded up to the nearest whole percent – are within 5 percent of the first inspection, plots from the initial inspection and the reinspection will be combined and used to calculate work quality and payment, and the Contractor shall bear the cost of reinspection.

Government Inspection Procedures – Items XX

Table 1 – Minimum Acceptable Quality Levels (AQL) of Work

ITEM	DESCRIPTION	SCHEDULE	UNIT	Min AQL
1	Cut, Skid, Deck, and Sort	MANDATORY	ACRE	90%
2	Remove All Slash from FS Lands	OPTIONAL	ACRE	90%
3	Hand Thin & Manually Remove Material from Heritage Sites	OPTIONAL	ACRE	90%
4	Timber Stand Improvement	OPTIONAL	ACRE	90%

SECTION V – PAYMENT METHODS

Method of Measurement for Acreages

Acreages were determined by using Global Positioning Systems (GPS). The acreage for each work item will be rounded to the nearest acre and is final unless:

- a. The contract is modified or,
- b. The Government makes a determination to remeasure or,
- c. The Contractor exercises his/her option under the following Remeasurement provisions:

Remeasurement

1. The Contractor may request, in writing, remeasurement of any units under this contract if he/she feels that acreage stated on the project maps is incorrect. The remeasurement must be within the existing perimeter of the respective unit. No variance of the unit perimeters as laid out on the ground for this contract will be allowed. All requests for remeasurement must be made prior to payment for each completed unit. Remeasurement will be performed by the Government.
2. If remeasurement indicates that a variance of ten percent or less exists on units of 1 to 5 acres, five percent or less exists on units of more than five but less than 20 acres, or if three percent or less exists on units of 20 acres or larger, the Contractor shall pay for the actual costs of the remeasurement. Under this condition, payment will be made on the acreage stated on the project maps. If the remeasurement indicates the actual acreage varies by more than the above factors from that stated on the project maps, the payment will be made on the remeasured acreage and the Forest Service will pay for the cost of the remeasurement.

Acceptance and Payment – All Items

1. If informal visual inspection indicates acceptable work quality, the Contractor will be paid 100 percent of their bid rate.
2. For work quality measured to be 90% or higher with formal plots, Contractor will be paid 100% of their bid rate.
3. Contractor shall rework any areas or entire units at no additional cost to the Government, when work is deemed to be unacceptable by visual or formal inspection.
4. If after rework, the work quality is measured with formal inspection to be between 90% and 100%, payment will be made by the actual percentage. If the percentage is less than 90%, the work is unacceptable, and no payment will be made.

Acceptance and Payment

1. Percentages as calculated herein shall be rounded to the nearest whole percent.
2. No allowance for variation or portion of a variation will be added which will create a percentage greater than 100 percent.
3. Payment rate for work quality at or above 85% will be calculated as follows:

$$\% \text{ Work Quality} + 5 \% \text{ Statistical Variation (SV)} = \% \text{ Payment rate}$$

4. **Examples:**

$$\begin{array}{rcl} \text{(a) } 2 \text{ Trees Deficient} + 4 \text{ Trees Excess} & 6 & \\ \hline 115 \text{ Trees to be left} & 115 & \\ & = 5.22\% = 5\% \text{ Unsatisfactory work} & \end{array}$$

$$100\% - 5\% = 95\% \text{ Work Quality}$$

$$95\% + 5\% (\text{SV}) = 100\% \text{ Payment rate}$$

$$\begin{array}{r} \text{(b) } 2 \text{ Trees Deficient} + 9 \text{ Trees Excess} \quad 11 \\ \hline 92 \text{ Trees to be left} \quad 92 \end{array} = \frac{11}{92} = 11.96\% = 12\% \text{ Unsatisfactory work}$$

$$100\% - 12\% = 88\% \text{ Work Quality}$$
$$88\% + 5\% (\text{SV}) = 93\% \text{ Payment rate}$$

$$\begin{array}{r} 2 \text{ Trees Deficient} + 14 \text{ Trees Excess} \quad 16 \\ \hline 95 \text{ Trees to be left} \quad 95 \end{array} = \frac{16}{95} = 16.84\% = 17\% \text{ Unsatisfactory work}$$

$$100\% - 17\% = 83\% \text{ Work Quality} - - \text{No payment made}$$

*** Stewardship Credits will be earned first, whenever practical. Forest Service Funds will be used if the availability of Stewardship Credits is exhausted or if appropriated dollars are obligated to a specific item.**

SECTION VI – DEFINITIONS

ACCEPTABLE QUALITY LEVEL (AQL): Acceptance of work will be based on compliance with all specifications corresponding to the appropriate task(s). A minimum AQL is required for all service work – hand or mechanical. The minimum AQL will receive a satisfactory performance rating.

BIOMASS TREES: Any conifer material 2 feet in height to 4.9 inches DBH.

BOLE SPACING: The horizontal distance in feet from the edge of one leave tree bole to another leave tree bole, measured from the outside bark of each tree.

CIRCULAR PLOT: A sample plot within a thinning unit that is used to determine the number of desirable trees and other contract specifications.

COARSE WOODY DEBRIS: Woody material left on the ground to meet wildlife habitat requirements.

CLEARCUT: A cutting prescription in which all trees within a boundary are designated to be cut.

CROWN RATIO: The ratio of live crown length (tip of leader to base of the crown) to total tree length/height.

CROWN SPACING: The horizontal distance in feet between the dripline of a live crown to another live crown.

CUT TREES: Trees that do not possess the characteristics of desirable leave trees and are required to be cut. As described by the contract or otherwise marked to be cut.

CUTTING UNIT: See Treatment Unit definition.

DAMAGED TREES: Trees damaged beyond recovery. A tree that is larger than 2 feet in height, and has the top knocked out, is leaning more than 10 degrees, has less than one half of its original limbs, or has approximately 50% of bark removed from the circumference of the bowl.

DBH: Diameter at breast height, measured at a point of 4.5 feet above the ground level on the uphill side of the tree.

DECKING: Stockpiling of trees in a designated area.

DEAD/DYING TREES: Trees with the crown foliage changing from green to red, yellow, or needleless. Any tree that has pitch tubes indicating Mountain Pine Beetle infestation.

DESIGNATION BY SPECIES AND DIAMETER (DXSD): A cutting prescription in which species and diameter are used to determine which trees will be left and which will be cut.

DIB: Diameter inside bark.

HANG-UP TREE: Any cut tree suspended above ground level.

HEALTHY REGENERATION: Young, healthy, dwarf mistletoe free conifers, less than 4.9 inches in diameter, free of defect or characteristics listed in Section II, 2.2.2.

LEAVE TREE: Trees that possess desirable characteristics and that serve to create the basis for designated spacing requirements or are otherwise designated to be left.

NON-SAWTIMBER TREE: For all conifer species, minimum diameter of 5 inches DBH to minimum diameter by species identified in Appendix B, Division A.

OVERSTORY REMOVAL: A cutting prescription where all trees greater than a specified size are cut. Trees less than the specified size are protected.

PAYMENT UNIT: See Treatment Unit.

PERFORMANCE REQUIREMENTS SUMMARY (PRS): Identifies the key service outputs of the contract that will be evaluated by the Government to assure contract performance standards are met by the Contractor.

PILING: Material moved to an agreed upon location shall be piled for future treatment by Forest Service.

PROGRESSION OF WORK: Work conducted in a progressive, workmanlike and orderly manner by the Contractor.

RESERVE CLUMPS: Groups of trees within a treatment area that are protected from cutting, may also include Individual Reserve trees.

SAWTIMBER TREE: Included timber meeting sawlog size specifications as defined in Appendix B, Division A.2.

SLASH: Woody material existing or created that has accumulated on the forest floor. Woody material includes logs, pieces of logs, tops, and branches.

UNIT: See Treatment Unit.

TEMPORARY ROADS: Non-permanent roads that are constructed by Contractor for the purpose of treatment unit access.

TREATMENT UNIT: An individual area on the ground in which activities will be performed and which may appear as a separate pay item in the Schedule of Items.

UNSATISFACTORY WORK: If work quality falls below the AQL, the COR will issue a work order or notice of noncompliance to the Contractor in writing. Untreated or unsatisfactory treated areas shall be reworked to obtain satisfactory work quality.

WHOLE TREE YARDING: Whole tree logging includes cutting tree and removing the entire tree, including tops and branches, to the landing.

WILDLIFE TREE: Standing tree marked to be reserved as a wildlife tree. Used by birds and small mammals for shelter, nesting, perching, etc.

APPENDIX D

GUIDELINES FOR OPERATIONS

The following Guidelines for Operations apply to activities under this SPA, when relevant to the project. These guidelines are intended to clarify the expectations of the parties related to these specific areas of operations.

D.1. STEWARDSHIP PROJECT AREA MAP (PAM)

This is the boundary of the Stewardship Project Area as shown in Appendix 1 and designated on the ground by NFF and/or the Forest Service to meet the anticipated needs of the parties. The following are identified on the Map:

- a) Boundaries of all harvest and stewardship treatment units.
- b) Areas where leave trees are marked to be left uncut.
- c) Specified roads.
- d) Sources of base course, surface rock, and rock riprap listed in the Schedule of Items: **N/A**
- e) Roads where log hauling or use is prohibited or restricted.
- f) Roads and trails to be kept open.
- g) Improvements to be protected.
- h) Locations of known wildlife or plant habitat and cave resources to be protected.
- i) Locations of areas known to be infested with specific invasive species of concern.
- j) Skidding methods.
- k) Streamcourses to be protected.
- l) Locations of meadows requiring protection.
- m) Locations of wetlands requiring protection.
- n) Locations of temporary roads to be kept open.
- o) Payment units, if required

D.2. USE OF ROADS BY THE CONTRACTOR

Contractor is authorized to use existing National Forest system roads and specified roads. The Parties will determine that such use will not cause damage to the roads or National Forest resources.

D.3. PLAN OF OPERATIONS FOR ROADS

Annually, prior to start of operations, Contractor will prepare a supplement to the Technical Proposal that shall include a schedule of proposed maintenance and construction progress and a description of planned measures to be taken to provide erosion control for work in progress, including special measures to be taken on any segments of construction not substantially completed prior to periods of seasonal precipitation or runoff. Contractor shall submit a revised schedule when they propose a significant deviation from the progress schedule. Prior to beginning construction on any portion of specified roads identified as sensitive on plans, the parties shall agree on the proposed method of construction and maintenance.

D.4. PROTECTION OF RESIDUAL TREES

Contractor's operations shall not unnecessarily damage young growth or other trees to be reserved.

D.5. SAFETY

Contractor's operations shall facilitate NFF and/or the Forest Service's safe and practical inspection of Contractor's operations and conduct of other official duties on the Stewardship Project Area. Contractor has all responsibility for compliance with safety requirements for Contractor's employees.

When operations are in progress adjacent or on Forest Service controlled roads and trails open to public travel, Contractor shall furnish, install, and maintain all temporary traffic controls that provide the user with adequate warning of hazardous or potentially hazardous conditions associated with operations occurring in the area. The parties shall agree to a specific traffic control plan prior to commencement of work. Devices shall be appropriate to current conditions and shall be covered or removed when not needed.

During periods of general recreation activity within Stewardship Project Area or vicinity, NFF and/or the Forest Service may restrict road construction, timber cutting, yarding, and other harvesting operations to days other than Saturdays, Sundays, and holidays.

D. 5.1. LOGGING AND MAINTENANCE OPERATIONS SIGNING STANDARDS

All signs must be manufactured & installed as specified in the FHWA "**Manual on Uniform Traffic Control Devices**" (MUTCD) & FS publication "**Standards for Forest Service Signs & Posters**"(EM 7100-15).

D.5.2. SIGN STANDARDS

SHAPE & COLOR: Generally, signs for logging and maintenance operations are either diamond-shaped or rectangular. All signs are *reflective orange background with black legend and border* unless shown otherwise. Handpainted, homemade signs are not legal. Fluorescent paint is not reflectorized.

SUBSTRATE: Sign substrate material may be High Density Overlay (HDO) Plywood, Aluminum, Fiberglass Reinforced Plastic, Corrugated Plastic or Roll-up Fabrics.

SIGN SIZE: Sign size is a factor of speed and MUTCD & FS standards. Where conditions of speed, volume, or special hazard require greater visibility or emphasis, larger signs should be used. Minimum sizes for the most common signs can be found in MUTCD. Refer to the EM-7100-15 for additional sign sizes.

LEGEND: All lettering shall be Series "C" alphabet, conforming to Standard Alphabets for Highway Signs. Letter size is also a function of speed - use letter size and word messages as specified in MUTCD and EM-7100-15.

SIGN PLACEMENT

Signs are to be installed in locations as agreed to in the traffic control plan. All signs are to be removed, covered, or folded when operations are not in progress or the sign message is not applicable. Signs should generally be located on the right-hand side of the roadway. When special emphasis is needed, signs may be placed on both the left and right sides of the road. Sign message shall be clearly visible to road users,

mounted on posts or portable sign stands.

LATERAL CLEARANCE

From the edge of the road - 2 foot minimum, where slope limits to less than 6 feet. 6-12 foot preferred.

HEIGHT

Minimum of 7 feet, measured from the bottom of the sign to the near edge of the travelway. The height to the bottom of a supplemental sign mounted below the primary sign will be 6 feet.

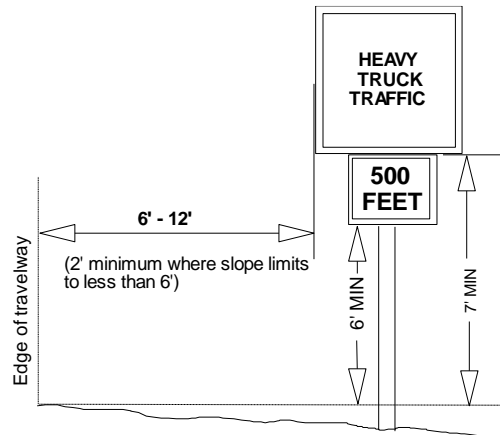


Figure 1: Sign Placement Dimensions

PLACEMENT DISTANCE

Signs must be located 100-500 feet prior to the activity, (both ends if a through road) and maintained at that distance. This distance is based on speed. Refer to Figure 2 , Table II-1, MUTCD, a portion of which is reproduced here, to determine correct placement distance.

Posted or 85 percentile speed MPH	Deceleration to listed advisory speed MPH				
	10	20	30	40	50
20	NA				
25	100				
30	150	100			
35	200	175			
40	275	250	175		
45	350	300	250		
50	425	400	325	225	
55	500	475	400	300	
60	575	550	500	400	300
65	650	625	575	500	375

Figure 2: A Portion of MUTCD TABLE II-1

D.5.3. SIGN SUPPORTS

POSTS: Signs are to be mounted on separate posts. Supplemental signs such as Speed Advisory plates are to be mounted on the same post as the primary sign. *Do not mount signs on trees or other signs.* Posts may be wood, metal, carsonite or similar material. Where sign supports cannot be sufficiently offset from the road edge, supports will meet breakaway standards. Single wood posts with less than 24 square inches do not require breakaway design.

D.5.4. TEMPORARY/PORTABLE SUPPORTS

Portable supports may be used for short-term, short-duration, and mobile conditions. MUTCD defines this time period as one work shift, 12 hours or less. All portable supports must meet MUTCD standards, including breakaway. These must be a minimum of 1 foot above the road surface or more if visibility requires it.

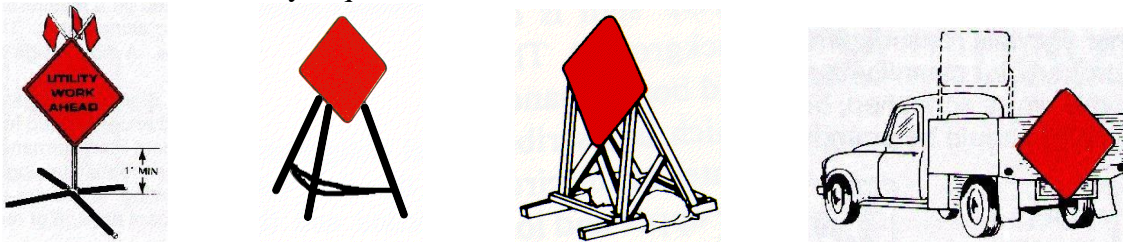


Figure 9: Examples of Temporary/Portable Supports

D.5.5. SIGNS

The following signs meet the intent of the Safety standard. *This is not a complete listing of signs that may be needed.*

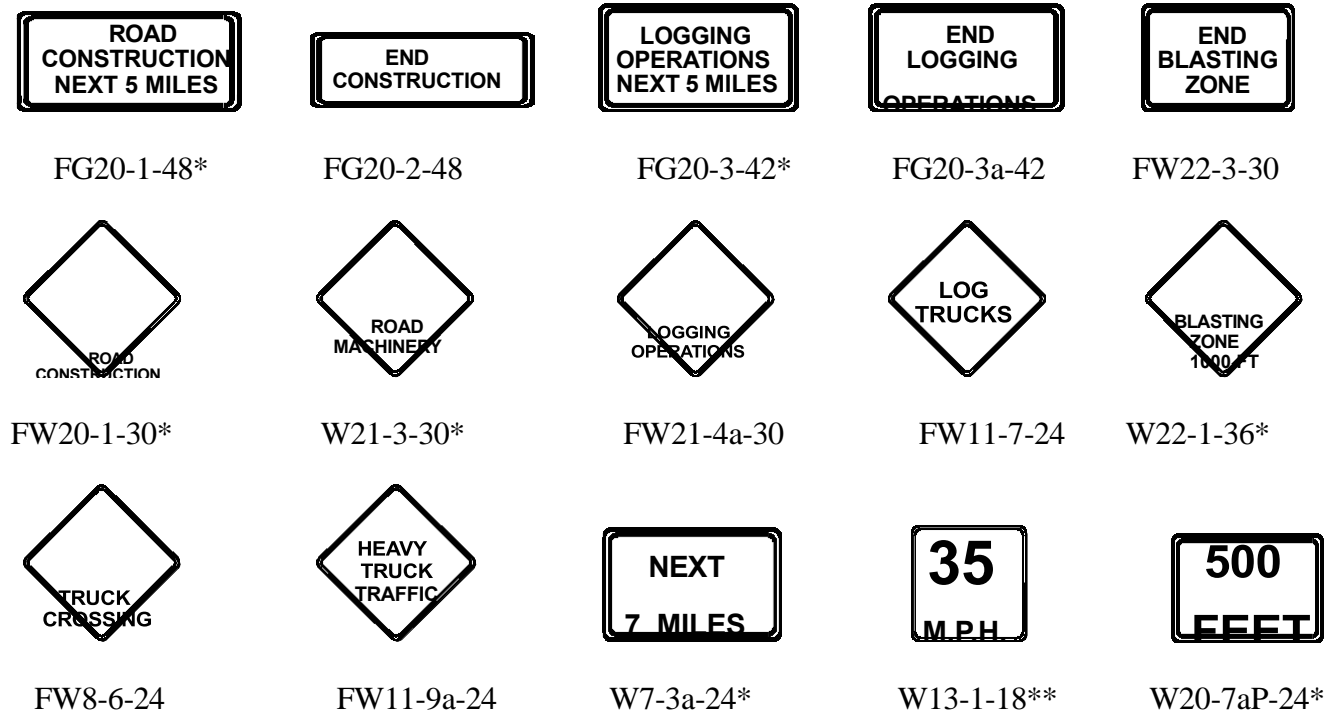


Figure 10: Signs

* Specify Distance ** Specify Speed



BM-L-O



BM-R-O

Figure 11: Barricade Markers (See MUTCD for length and stripe size)

D.5.6. SAFETY (TIMBER HAULING.)

Contractor shall secure all products transported by truck with at least two chain or cable wrappers over the load, such wrappers being securely fastened to effectively contain every bolt or log in at least two places.

D.5.7. ACCIDENT AND INJURY NOTIFICATION

Contractor shall notify Forest Service of any lost time personal injury accident or any accident or vandalism resulting in personal property damage over \$400 in value that occurs as a result of or is associated with Contractor's Operations.

Contractor shall notify Forest Service within 8 hours of any personal injury accident. For vandalism and personal property accidents, Contractor shall notify Forest Service at the same time notification

is given to the state and local law enforcement authorities.

Contractor shall take all reasonable measures after an accident or vandalism event to preserve the scene of the incident and provide information to facilitate a Forest Service investigation.

D.6. SANITATION AND SERVICING

Contractor shall take all reasonable precautions to prevent pollution of air, soil, and water by Contractor's operations. Precautions shall include if facilities for employees are established on the Stewardship Project Area, they shall be operated in a sanitary manner. The parties shall agree to the cleanup and restoration of a polluted site. Contractor shall maintain all equipment operating on Stewardship Project Area in good repair and free of abnormal leakage of lubricants, fuel, coolants, and hydraulic fluid. Contractor shall not service tractors, trucks, or other equipment on National Forest lands where servicing is likely to result in pollution to soil or water. Contractor shall furnish oil-absorbing mats for use under all stationary equipment or equipment being serviced to prevent leaking or spilled petroleum-based products from contaminating soil and water resources. Contractor shall remove from National Forest lands all contaminated soil, vegetation, debris, vehicle oil filters (drained of free-flowing oil), batteries, oily rags, and waste oil resulting from use, servicing, repair, or abandonment of equipment.

D.7. PREVENTION OF OIL SPILLS

If Contractor maintain(s) storage facilities for oil or oil products on the Stewardship Project Area, Contractor shall take appropriate preventive measures to ensure that any spill of such oil or oil products does not enter any stream or other waters of the United States or any of the individual States. If the total oil or oil products storage exceeds 1,320 gallons in containers of 55 gallons or greater, Contractor shall prepare a Spill Prevention Control and Countermeasures Plan. Such plan shall meet applicable EPA requirements (40 CFR 112), including certification by a registered professional engineer. Contractor shall notify the Forest Service and appropriate agencies of all reportable (40 CFR 110) spills of oil or oil products on or in the vicinity of the Stewardship Project Area that are caused by Contractor's employees, agents, contractors or their employees or agents, directly or indirectly, as a result of Contractor's operations. Contractor will take whatever initial action may be safely accomplished to contain all spills.

D.8. HAZARDOUS SUBSTANCES

Contractor shall notify the National Response Center and Forest Service principal contact of all releases of reportable quantities of hazardous substances on or in the vicinity of the Stewardship Project Area that are caused by Contractor's employees, agents, contractors or their employees or agents, directly or indirectly, as a result of Contractor's operations, in accordance with 40 CFR 302.

D.9. WASHING EQUIPMENT

In order to prevent the spread of noxious weeds into the Stewardship Project Area, Contractor shall be required to clean all off-road logging and construction equipment **prior** to entry on to the Stewardship Project Area. This cleaning shall remove all soil, plant parts, seeds, vegetative matter, or other debris that could contain or hold seeds. Only logging and construction equipment so cleaned and inspected by the Contractor will be allowed to operate within the Stewardship Project Area. All subsequent move-ins of equipment to the Stewardship Project Area shall be treated in the same manner as the initial move in. "Off-road equipment" includes all logging and construction machinery, except for log trucks, chip vans, service vehicles, water trucks, pickup trucks, cars, and similar vehicles.

Contractor shall employ whatever cleaning methods are necessary to ensure that off-road equipment is free of noxious weeds. Equipment shall be considered free of soil, seed, and other such debris when a visual inspection does not disclose such material. Disassembly of equipment components or specialized inspection tools is not required.

As agreed upon, Contractor shall inspect equipment at cleaning location, and provide documentation of inspection to the Forest Service.

New infestations of noxious weeds, of concern to Forest Service and identified by either Contractor, NFF or Forest Service, on the Stewardship Project Area or on the haul route, shall be promptly reported to the other party. Contractor, NFF and/or Forest Service shall agree on treatment methods to reduce or stop the spread of noxious weeds when new infestations are found. A current list of noxious weeds of concern to Forest Service is available at each Forest Service office.

D.10. CONDUCT OF LOGGING

Unless otherwise specifically provided herein, Contractor shall fell trees designated for cutting and shall remove the portions that meet Utilization Standards, prior to acceptance of work for completion of logging and stewardship projects. NFF and/or Forest Service may make exceptions for occasional trees inadvertently not cut or trees or pieces not removed for good reason, including possible damage to forest resources or gross economic impracticability at the time of removal of other timber.

D.11. FELLING AND BUCKING

Felling shall be done to minimize breakage of included timber and damage to residual timber.

Unless agreed otherwise, felling shall be done by saws or shears. Bucking shall be done to permit removal of all minimum pieces. Contractor may buck out cull material when necessary to produce pieces meeting utilization standards. Such bucked out material shall contain a minimum amount of sound wood, not in excess of the net scale in percentage of gross scale, or based on the merchantability factor. If necessary to assess extent of defect, Contractor shall make sample saw cuts or wedges.

D.12. FELLING IN CLEARINGS

Insofar as ground conditions, tree lean, and shape of clearings permit, trees shall be felled so that their tops do not extend outside clearcutting units, construction clearings, and areas of regeneration cutting.

D.13. STUMP HEIGHTS

Stumps shall not exceed, on the side adjacent to the highest ground, the maximum heights set forth in C.4. except that occasional stumps of greater heights are acceptable when Contractor determine(s) that they are necessary for safe and efficient conduct of logging. Unless otherwise agreed, Contractor shall re-cut high stumps so they will not exceed heights specified in C.4. and shall dispose of severed portions in the same manner as other logging debris. The stump heights shown in C.4. were selected with the objective of maximum reasonable utilization of the timber, unless the Map shows special areas where stump heights are lower for aesthetic, land treatment, or silvicultural reasons.

D.14. BUCKING LENGTHS

Trees shall be bucked in various lengths to obtain the greatest utilization of material meeting utilization standards.

D.15. LIMBING

Contractor shall cut exposed limbs from products prior to skidding, as necessary to minimize damage to the residual stand during skidding. Contractor may leave uncut those limbs that cannot be cut with reasonable safety.

D.16. SKIDDING AND YARDING

Methods of skidding or yarding specified for particular areas, if any, are indicated on the Map. Outside units and construction clearings, insofar as ground conditions permit, products shall not be skidded against reserve trees or groups of reproduction and tractors shall be equipped with a winch to facilitate skidding.

D.17. RIGGING

N/A.

D.18. LANDINGS AND SKID TRAILS

Location of all landings, tractor roads, and skid trails shall be agreed upon prior to their construction. The cleared or excavated size of landings shall not exceed that needed for efficient skidding and loading operations.

D.19. ARCHES AND DOZER BLADES

Skidding tractors equipped with pull-type arches or dozer blades wider than tractor width or C-frame width, whichever is greater, shall not be used in residual timber outside clearcutting units and other authorized clearings, except on constructed tractor roads or landings, unless there is written agreement that residual timber will not be damaged materially by such use.

D.20. PROTECTION OF STREAMCOURSES

Contractor's Operations shall be conducted to prevent debris from entering streamcourses, except as may be authorized under paragraph (d). In event Contractor causes debris to enter streamcourses in amounts that may adversely affect the natural flow of the stream, water quality, or fishery resource, Contractor shall remove such debris as soon as practicable, but not to exceed 2 days, and in an agreed manner that will cause the least disturbance to streamcourses.

- a) Culverts or bridges shall be required on Temporary Roads at all points where it is necessary to cross Streamcourses. Such facilities shall be of sufficient size and design and installed in a manner to provide unobstructed flow of water and to minimize damage to streamcourses. Trees or products shall not be otherwise hauled or yarded across streamcourses unless fully suspended.
- b) Wheeled or track-laying equipment shall not be operated in streamcourses, except at crossings agreed to by Contractor, NFF and/or the Forest Service or as essential to construction or removal of culverts and bridges.
- c) Flow in streamcourses may be temporarily diverted only if such diversion is necessary for Contractor's planned construction and NFF and/or Forest Service gives written authorization. Such flow shall

be restored to the natural course as soon as practicable and, in any event, prior to a major storm runoff period or runoff season.

D.21. EROSION PREVENTION AND CONTROL

Contractor's operations shall be conducted reasonably to minimize soil erosion. Equipment shall not be operated when ground conditions are such that excessive damage will result. Contractor shall adjust the kinds and intensity of erosion control work done, to ground conditions and weather conditions and the need for controlling runoff. Erosion control work shall be kept current immediately preceding expected seasonal periods of precipitation or runoff.

Prior to periods of accelerated water runoff, especially during the spring runoff and periods of heavy rainfall, Contractor shall inspect and open culverts and drainage structures, construct special cross ditches for road runoff, and take other reasonable measures needed to prevent soil erosion and siltation of streams.

Unless otherwise agreed in writing, Contractor shall complete erosion prevention and control work, including streamcourse protection, within 15 calendar days after completion of skidding and/or yarding operations for each landing.

Designation of on the ground work shall be done as promptly as feasible unless it is agreed that the location of such work can be established without marking on the ground.

When operations are active, erosion control work will be kept current and will be completed as soon as practicable.

D.22. PROTECTION OF IMPROVEMENTS

So far as practicable, Contractor shall protect specified roads and other improvements (such as roads, trails, telephone lines, ditches, and fences):

- i. Existing in the operating area,
- ii. Determined to have a continuing need or use, and
- iii. Designated on the PAM.

Contractor shall keep roads and trails needed for fire protection or other purposes and designated on the Map reasonably free of equipment and products, slash, and debris resulting from Contractor's operations. Contractor shall make timely restoration of any such improvements damaged by Contractor's operations and, when necessary because of such operations, shall move such improvements.

D.23. MEADOW PROTECTION

Reasonable care shall be taken to avoid damage to the cover, soil, and water in meadows shown on the Map. Vehicular or skidding equipment shall not be used on meadows, except where roads, landings, and tractor roads are approved. Unless otherwise agreed, trees felled into meadows shall be removed by endlining. Resulting logging slash shall be removed where necessary to protect cover, soil, and water.

D.24. WETLANDS PROTECTION

Wetlands requiring protection under Executive Order 11990 are shown on the Map. Vehicular or skidding equipment shall not be used in such wetlands, except where roads, landings, and tractor roads are approved.

D.25. TEMPORARY ROADS

As necessary to attain stabilization of roadbed and fill slopes of temporary roads, Contractor shall employ such measures as outsloping, drainage dips, and water-spreading ditches. After a temporary road has served Contractor's purpose, Contractor shall give notice to NFF and/or the Forest Service and shall remove bridges and culverts, eliminate ditches, outslope roadbed, remove ruts and berms, effectively block the road to normal vehicular traffic where feasible under existing terrain conditions, and build cross ditches and water bars, as staked or otherwise agreed to. When bridges and culverts are removed, associated fills shall also be removed to the extent necessary to permit normal maximum flow of water.

D.26. TEMPORARY ROADS TO REMAIN OPEN

All bridges and culverts shall remain in place and ditches shall not be eliminated on Temporary Roads, shown as "Remained Open" on the PAM. All drainage structures shall be left in functional condition.

D.27. LANDINGS

After landings have served Contractor's purpose, Contractor shall ditch and slope them to permit water to drain or spread. Unless agreed to otherwise, cut and fill banks around landings shall be sloped to remove overhangs and otherwise minimize erosion.

D.28. SKID TRAILS AND FIRE LINES

Contractor shall construct cross ditches and water-spreading ditches on tractor roads and skid trails, where needed to prevent erosion. By agreement, Contractor may use other comparable erosion control measures, such as backblading skid trails, in lieu of cross ditching.

D.29. CURRENT OPERATING AREAS

Where logging, road construction, or other stewardship project work is in progress but not completed, unless agreed to otherwise, Contractor shall, before operations cease annually, remove all temporary log culverts and construct temporary cross drains, drainage ditches, dips, berms, culverts, or other facilities needed to control erosion. Such protection shall be provided, for all disturbed, unprotected ground that is not to be disturbed further prior to end of operations each year, including roads and associated fills, tractor roads, skid trails, and fire lines. When weather permits operations, Contractor shall keep such work on any additional disturbed areas as up to date as practicable.

D.30. EROSION CONTROL STRUCTURE MAINTENANCE

During the period of this SPA, Contractor shall provide maintenance of soil erosion control structures constructed by Contractor until they become stabilized, but not for more than one year after their construction.

D.31. SLASH DISPOSAL

Contractor's timing of product removal and preparatory work shall not unnecessarily delay slash disposal. Specific slash disposal measures to be employed by Contractor are stated in E.4.

D.32. SCALING

Scaling includes:

- i. Various volume determination methods, such as log rule, sampling, measuring, linear measuring, counting, weighing, or another method or combination of methods;
- ii. Various sites, such as truck Scaling stations, rollways, weighing stations, woods landings, water Scaling stations, or other sites.
- iii. Various geographic locations.

D.33. SCALING SERVICES

Scaling services shall be performed by Forest Service personnel or parties under contract to Forest Service, except that weighing services may be performed by personnel or parties approved by the Forest Service. Scaling shall be provided in accordance with the instructions and specifications in Appendix C. Scalers shall be currently certified to perform accurate Scaling services. The scaling services provided shall be selected exclusively by the Forest Service. Scaling services may be continuous, intermittent, or extended.

- i. Continuous scaling services is scaling at one site five (5) 8-hour shifts a week, exclusive of Sundays and Federal holidays.
- ii. Intermittent scaling services are non-continuous scaling services.
- iii. Extended scaling services are scaling services exceeding continuous scaling services and may include Sundays and designated Federal holidays.

As mutually agreed to by the parties, the Forest Service may provide other services, such as but not limited to grading, tagging, or marking of Scaled logs.

D.34. SCALING LOCATION

The Forest Service shall provide scaling services at the scaling site(s) shown in C.12. The Scaling site(s) shown in C.12. normally will be a non-exclusive site where more than one National Forest contract/agreement may be served. Contractor may request, in writing, an alternate scaling site, such as at a private mill yard, private truck ramp, or a privately operated log transfer facility. NFF and/or the Forest Service may approve an alternate scaling site, when NFF and/or the Forest Service determines that scaling conditions at an alternate site are acceptable. Such conditions shall include at a minimum:

- i. Scaler safety and comfort,
- ii. Product accountability and security,
- iii. Facilities and practices conducive to accurate and independent Scaling, and
- iv. The ability to provide for remote check Scaling.

Upon approval of an alternate scaling site, NFF and/or the Forest Service and Contractor shall enter into a written memorandum of agreement governing Scaling at that alternate location. Contractor agrees that Forest Service personnel or persons under contract with the Forest Service shall perform scaling services at an alternative scaling site. In no instance shall Contractor perform scaling services.

D.35. SCALING ADJUSTMENTS

The Forest Service shall check the accuracy of the scaling performed on National Forest logs. Scaling will be satisfactory if performed within the accuracy standards in governing instructions identified in C.12. In the event the Forest Service check scale(s) shows a variance in net scale in excess of the allowable variance, an adjustment to volume reported scaled may be made by the Forest Service. Such adjustment will be based on the difference between Forest Service check Scale(s) and original Scale for SPA volume Scaled within the adjustment period. The volume to which this difference will be applied will be:

- i. One-half of the volume Scaled between the last satisfactory check Scale and the first unsatisfactory check Scale or, if a period of 120 days or more occurs without Scaling National Forest timber for stumpage, the adjustment will be applied to 100 percent of the volume Scaled after this period and
- ii. 100 percent of the volume Scaled between unsatisfactory check Scales and
- iii. One-half of the volume Scaled between the last unsatisfactory check Scale and the next satisfactory check Scale, or if no satisfactory check Scale is completed and a period of 120 days or more occurs without Scaling of National Forest timber for stumpage, the adjustment will be applied to 100 percent of the volume Scaled since the last unsatisfactory check Scale.

Adjustments may increase or decrease the original Scaled volume. Adjustments will be applied to Integrated Resource Account to correct charges for Included Timber, plus deposits, Scaled during the adjustment period.

D.36. WEIGHING SERVICES

Weighing services for stumpage payment purposes may be provided by either public or privately owned and operated weighing facilities. A "Weighing Services Agreement," approved by the Forest Supervisor, must be executed at each weighing facility providing weighing services.

Scales used to weigh National Forest products for payment purposes must be a currently certified scale in accordance with State law and be capable of weighing the entire load of logs in a single operation. The weighing of less than the entire load or weighing two loads at once is prohibited. Unless otherwise agreed, the minimum sized weighing facility shall be a 60-ton capacity scale with a 10 foot by 70 foot platform or larger. The weighmaster must work in a position where it is possible to verify that the truck wheels are on or off the scales. Weighing facilities shall meet the following minimum requirements:

- i. Be an electronic design,
- ii. Use electronic load cells or have a fully enclosed and sealed weigh-beam,
- iii. Have digital weight meters sealed with a seal approved by the State,
- iv. Have a zero interlocking device on the printer,
- v. Have an automatic zero-setting mechanism,
- vi. Have an automatic motion-detecting device,
- vii. Be shielded against radio or electromagnetic interference, and
- viii. Have a date and time stamp and gross and tare weights that print electronically with each weighing. The Forest Service may waive electronic printing for public or third party weighing facilities. Contractor shall bear all charges or fees for weighing services.

D.36. PRESENTATION FOR SCALING

Contractor shall present products so that they may be Scaled in an economical and safe manner.

D.37. ACCOUNTABILITY

When Scaling is performed away from Stewardship Project Area, products shall be accounted for in accordance with Forest Service written instructions, as follows:

- i. Contractor shall plainly mark or otherwise identify products prior to hauling;
- ii. Forest Service shall issue removal receipts to Contractor;
- iii. Contractor shall assign a competent individual at the landing to complete removal receipts and attach them to each load of products removed from Stewardship Project Area;
- iv. Removal receipts shall be returned to NFF and/or Forest Service at periodic intervals;
- v. When products are in transit, the truck driver shall possess or display removal receipt and show it upon request as evidence of authority to move products;
- vi. The scaler's portion of removal receipt shall be surrendered at point of Scaling, the unloading point, or as requested by Forest Service; and
- vii. Contractor shall notify NFF and/or Forest Service of lost or off-loaded logs and their location within 12 hours of such loss. Contractor shall not place products in storage for deferred Scaling until an accountability system has been agreed to in writing for a stated period.

D.38. ROUTE OF HAUL

As part of the annual Operating Schedule, Contractor shall furnish a map showing the route of haul over which unscaled products will be transported from the Stewardship Project Area to the approved Scaling location. Such route of haul shall be the shortest, most economical haul route available between the points.

Upon advance written agreement, other routes may be approved. All unscaled products removed from Stewardship Project Area shall be transported over the designated routes of haul. Contractor shall notify NFF and/or Forest Service when a load of products, after leaving Stewardship Project Area, will be delayed for more than 12 hours in reaching Scaling location. Contractor shall require truck drivers to stop, if requested by NFF and/or Forest Service, for the following reasons:

- i. For accountability checks when products are in transit from Stewardship Project Area to the designated Scaling location or
- ii. For a remote check Scale when products are in transit after being truck Scaled at the designated Scaling location.

Contractor, NFF and/or Forest Service shall agree to locations for accountability checks and remote check Scales in advance of haul. Such locations shall be established only in areas where it is safe to stop trucks. NFF and/or the Forest Service shall notify Contractor of the methods to be used to alert truck drivers of an impending stop.

D.39. PRODUCT IDENTIFICATION

Before removal from the Stewardship Project Area, unless the Forest Service determines that circumstances warrant a written waiver or adjustment, Contractor shall:

- i. Hammer brand all products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter.

- ii. West of the 100th meridian, paint with a spot of highway-yellow paint all domestic processing products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter. Each paint spot must be not less than three (3) square inches in size.

The Forest Service shall assign brands and, if the Stewardship Project Area is within a State that maintains a log brand register, brands shall be registered with the State. Contractor shall use assigned brand exclusively on logs under this SPA until Forest Service releases brand. Contractor will furnish and apply highway-yellow paint of a lasting quality (oil-base or equivalent).

All hammer brands and/or highway-yellow paint must remain on logs until they are domestically processed. Contractor shall replace identifying marks if they are lost, removed, or become unreadable. Contractor may remanufacture products into different log lengths. Except for logs remanufactured as part of the mill infeed process immediately before processing, remanufactured products must be rebranded with the assigned SPA brand and repainted with highway-yellow paint, unless otherwise agreed to in writing by NFF and/or the Forest Service Representative. For such remanufactured products, Forest Service may approve use of a brand to be used exclusively as a catch brand, in lieu of the assigned SPA brand.

D.40. SCALING LOST PRODUCTS

The volume of lost products shall be determined by the best methods currently available, using data from the records for the period in which the loss occurred or the most applicable period if loss should occur substantially after cutting. In the absence of specific information indicating size or species of lost products, species distribution and volume for entire truckloads shall be assumed to be the same as the average volume Scaled per truck during the report period, and for individual products it shall be assumed that the volume and species were the average volume of the highest priced species Scaled during the report period.

D.41. SCALING LOST SAMPLE LOADS

If Scaling is being done by sampling loads of logs, Contractor shall present such sample loads for Scaling by Forest Service. If loads of logs selected to be sample Scaled are placed in the decks before they are Scaled, they will be considered as lost sample loads. It will be difficult, if not impossible, to determine the volume and species contained in such loads for payment purposes. Therefore, lost sample loads will be deemed to have a Scale volume and species composition equal to that of the highest value load Scaled during the sampling period, as established by Forest Service. If no sample loads were Scaled during the period, the Scale data for the high valued load will be taken from the most current preceding sampling period with Scale. Sample loads lost as a result of Forest Service actions shall be treated as non-Scaled loads.

D.42. SCALE REPORTS

NFF and/or the Forest Service shall provide Contractor a copy of Forest Service scaler's record, if requested in writing.

D.43. FIRE PRECAUTIONS AND CONTROL

- a) Plans. Prior to initiating Contractor's operations during Fire Precautionary Period, Contractor shall file with Forest Service a Fire Prevention and Control Plan providing for the prevention and

control of fires on the Stewardship Project Area and other areas of Contractor's Operations. Such plan shall include a detailed list of personnel and equipment at Contractor disposal for implementing the plan. This requirement may be met by preparing a single plan for more than one SPA.

- b) **Fire Precautions.** Specific fire precautionary measures listed in this Appendix shall be applicable during Contractor's Operations in "Fire Precautionary Period" described. The dates of Fire Precautionary Period may be changed by agreement, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire fighting at all times during Contractor's operations in Fire Precautionary Period.
 - i. **Substitute Precautions.** The Forest Service may authorize substitute measures or equipment, or waive specific requirements by written notice, if substitute measures or equipment will afford equal protection or some of the required measures and equipment are unnecessary.
- c) **Emergency Precautions.** The Forest Service may require the necessary shutting down of equipment on portions of Contractor's Operations, as specified by the emergency fire precautions schedule. Under such conditions, after Contractor cease(s) active operations, Contractor shall release for hire by Forest Service, if needed, Contractor's shutdown equipment for fire standby on the Stewardship Project Area or other areas of Contractor's Operations and personnel for fire standby or fire patrol, when such personnel and equipment are not needed by Contractor for other fire fighting or protection from fire. Equipment shall be paid for at fire fighting equipment rates common in the area or at prior agreed rates and, if Contractor request(s), shall be operated only by personnel approved by the Contractor. Personnel so hired shall be subject to direction and control by NFF and/or the Forest Service and shall be paid by NFF and/or Forest Service at fire fighting rates common in the area or at prior agreed rates.
 - i. **Fire Precautionary Period and Fire Precautions.** Specific fire precautionary measures are set forth below. Upon request of NFF and/or Forest Service, Contractor shall permit and provide an individual to assist in periodic testing and inspection of required fire equipment. Contractor shall promptly remedy deficiencies found through such inspecting and testing.

The following requirements shall apply during the period of 4/15 – 11/30 and during other such periods as specified by Forest Service.

Industrial Fire plan

Contractor will restrict operations in accordance with the following Emergency Fire Precaution Schedule. When there is a predicted change, Forest Service shall inform the Contractor by 6:00 pm, Mountain Standard Time (7:00 pm MDT), of the predicted change in the Industrial Fire Precaution Plan. The procedure for the Forest Service to notify the Contractor of a change shall be stated in the contract fire plan. The Contracting Officer may, after consultation with the Forest Supervisor, adjust the predicted Industrial Fire Precaution Plan for local weather conditions on Sale Area. Changes in the predicted Industrial Fire Precaution Plan shall be agreed to in writing.

EMERGENCY FIRE PRECAUTION SCHEDULE	
FIRE RESTRICTION/CLOSURE “STAGE”	
“STAGED” RESTRICTION LEVELS	INDUSTRIAL FIRE RECAUTION PLAN
NO RESTRICTIONS	A
STAGE I	B
STAGE II	C
STAGE III (PARTIAL FOREST CLOSURE) **	C or D
STAGE IV (TOTAL FOREST CLOSURE)	D
RED FLAG WARNING (Issued by National Weather Service)	D

**** Partial Forest Closure:** Contract areas which are outside the boundaries of the partial forest closure may continue to operate under Industrial Fire Precaution Plan “C” operating criteria as agreed upon between the CO and Contractor in writing. Contract areas within the boundaries of the proclaimed partial forest closure area are to operate under Industrial

Precaution Plan “D”. Staged restriction levels are determined by the Line Officer in conjunction with Fire Management Officer(s) and Contracting Officer(s). The process is a mix of quantitative and subjective measures which allows Line Officers a broad level of discretion considering local conditions and issues when deciding to implement fire restrictions and/or area closures.

Industrial Fire Precaution Plan – Description

A - Normal Fire Precautions: No fire guard required.

B - Normal Fire Precautions except designated areas for smoking and warming or cooking fires require a written permit. Contractor will provide fire guard.

C - All power saws and mechanical fellers except for mechanical fellers equipped with hydraulic shears will shut down from 9:00 am until 8:00 pm Mountain Standard Time (10:00 am to 9:00 pm MDT), except chainsaws may be used from 9:00 am until 2:00 pm Mountain Standard Time (10:00 am to 3:00 pm MDT), for limbing on landings cleared to mineral soil. Loading is authorized to continue from 12:00 noon until 2:00 pm, Mountain Standard Time (1:00 pm to 3:00 pm MDT), on landings cleared to mineral soil. Product removal vehicles must be out of the Sale Area to a surfaced road by 2:00 pm, Mountain Standard Time (3:00 pm MDT). Shutdown from 12:00 noon until 8:00 pm Mountain Standard Time (1:00 pm to 9:00 pm MDT); all machine treatment of slash; mechanical equipment used for shearing, bunching, or delimbing; skidding; cable yarding; blasting; welding; metal cutting; and clearing. Operations on mineral soil involving road excavation, watering, grading, surfacing, rock crushing, and/or other equipment maintenance may continue. No smoking, warming or cooking fires are permitted at any time. Contractor will provide fire guard.

D - Shutdown all operations; except operations on mineral soil involving road excavation, watering, grading, gravel surfacing, and rock crushing may continue with special Forest Service permit. Contractor will provide fire guard.

Fire Precautions and Control

Contractor shall provide the personnel, tools and equipment to take the following precautionary measures:

Smoking and Lunch Fire Restrictions: Contractor shall prohibit smoking and building of camp and lunch fires by persons engaged in Contractor’s operations, except at established camps or in areas that Forest Service may designate. Smoking may be permitted at these designated areas only after all flammable material has been cleared to mineral soil. All fires and smoking materials shall be completely extinguished at end of lunch or smoking period.

Fire Tools: Contractor shall furnish and maintain; i.e., cutting edges sharp, handles sanded and tightly fitted, clean of rust and foreign material; fire tools to be used only for suppressing forest fires. Each logging operation shall be provided with one firefighting tool per man to equip 100 percent of the personnel engaged in Contractor’s operations. Approved firefighting tools are: double-bit axe; brushhook; pulaski; McLeod; and round-pointed, size 0 or larger lady shovel. The proper tool mix will be stipulated in the contract Fire Plan. These tools are required separate from, and in addition to, the tools required in the section, "Fire Tools on Equipment," and for Fire Guards. Fire tools for firefighting purposes for use of personnel engaged in all phases of the logging

operations shall be located in the active operating area of the sale or as stated in the fire plan.

Burning of Refuse: No camp refuse of slash or other debris, such as that resulting from clearing around camps or on right-of-way, shall be burned without the written consent of the Forest Service.

Spark Arresters and Mufflers: Each internal combustion engine shall be equipped with a spark arrester qualified and rated under USDA Forest Service Standard (Spark Arrester Guide) 5100-1a or the latest revision of Society of Automotive Engineers "medium size engine, SAE recommended practice J350" unless it is:

- (a) Equipped with a turbine-driven exhaust supercharger such as the turbocharger. There shall be no exhaust bypass.
- (b) A multi-position engine, such as on power saws purchased after 6/30/77 which must meet the performance levels set forth in the Society of Automotive Engineers "multi-positioned small engine exhaust fire ignition standard, SAE recommended practice J335B" as now or hereafter amended. Those purchased prior to the above date shall be equipped with an approved spark arrester/muffler containing a 0.023 inch mesh screen in good condition.
- (c) A passenger carrying vehicle or light truck, or medium truck up to 40,000 GVW, used on roads and equipped with a factory designed muffler and an exhaust system in good working condition.
- (d) A heavy duty truck, such as a dump or log truck, or other vehicle used for commercial hauling, used only on roads and equipped with a factory designed muffler and with a vertical stack exhaust system extending above the cab.

Exhaust equipment described in this Subsection, including spark arresters and mufflers, shall be properly installed and constantly maintained in serviceable condition.

Powersaws: During periods of use, each powersaw operator shall have readily available for use one long-handled round-pointed shovel and one chemical-pressurized fire extinguisher of not less than 8-ounce capacity by weight. Muffler, extinguisher, and shovel shall be maintained in good working order at all times. Any fueling or refueling of a powersaw shall be done in an area which has been cleared of material which will carry fire. Powersaws shall be moved at least 10 feet from the place of fueling or refueling before starting.

Fire Tools on Equipment: Each internal combustion fuel carrying truck, loader, skidder, heavy truck, and tractor shall be provided with one long-handled round-pointed shovel, and one 5-pound capacity ABC dry chemical fire extinguisher. Passenger carrying vehicles, including light pickup trucks shall be equipped with one (1) long-handled round-pointed shovel and one (1) ABC chemical fire extinguisher not less than 2 1/2 pounds capacity. Shovels and fire extinguishers shall be so mounted as to be readily reached from the ground.

Inspection Requirements for Internal-Combustion Engines: Each internal-Combustion motor vehicle or item of equipment shall be inspected and approved in advance of use by Forest Service. Contractor shall require that all persons engaged in Contractor's operations submit all internal-combustion motors and equipment for inspection and approval prior to use in Contractor's operations on National Forest lands. Vehicles and equipment not approved for use shall be repaired to meet existing standards, reinspected, and approved by Forest Service prior to use.

Blasting: Use of fuses in blasting shall not be permitted. A long-handled round-pointed shovel and 5-gallon backpack pump with attached handpump filled with water shall be available at all times. During periods when Fire Precaution Plan B or C is in effect, a fire guard shall remain on duty for at least one hour after blasting is finished and shall be equipped with a shovel and backpack. Blasting is prohibited under Fire Precaution Plan D.

Tractor Lights: All crawler tractors and rubber-tired skidders suitable for fire suppression work, and with power source, shall be equipped with two (2) factory type headlights and one (1) backup light, or brackets mounted for portable self-contained battery operated lights. These portable lights shall be furnished and maintained by the Contractor at a location agreed by the Forest Service.

Cable Yarding: Tail and corner blocks shall be located to prevent cables from rubbing against trees, snags, and down logs. Areas adjacent to tail and corner blocks shall be cleared of flammable material within a 5-foot radius. One 5-gallon standard backpack water container (filled at all times and with handpump attached), one shovel, and one pulaski, shall be maintained within 10 feet of each block.

Gas and Oil Storage and Service Areas: The location of equipment service areas and gas and oil storage areas shall be approved in writing by Contracting Officer. All areas shall be cleared of brush, litter, grass or other flammable debris for a radius of 50 feet.

Welding: An area within a 10 foot radius shall be cleared down to mineral soil before welding operations are started. Prior to welding, Contractor shall have available a round-pointed long-handled shovel, a 5-gallon backpack pump filled with water with attached hand pump, and a 5-pound fire extinguisher at each welding site. A fire guard will remain on duty for at least one (1) hour after welding is completed during periods when Fire Precaution Plan B or C is in effect. Welding is prohibited under Fire Precaution Plan D.

Fire Guards: Contractor shall designate at least one representative to train and supervise each woods-working group of men in fire prevention, detection, and suppression. Each such representative shall be named in the fire plan. To prevent, detect, and suppress fire, Contractor shall provide a trained fire guard at each operating area where power-driven equipment has been operated during the day. The fire guards shall constantly perform their duties during operating hours and for three (3) hours after the woodwork stops for the day, when the Fire Precaution Plan is Plan B, C, or D. Fire guard service on one operating area shall satisfy the requirements on adjacent areas if the travel time with available transportation is not in excess of ten (10) minutes to any of the other areas requiring such service. Each fire guard shall be physically able, vigilant, and trained to prevent, detect, and report any fires and to promptly and efficiently take suppression action with available required firefighting equipment and men on any fire that starts on project area. Each fire guard shall be equipped with a vehicle and a fire tool cache consisting of a cache box, 2 four-to-five gallon backpack pumps filled with water, 2 size 0 shovels, 2 Pulaskis, and 2 McLeod tools maintained in serviceable condition.

RED FLAG EVENTS

A “Red Flag Event” by definition, is a combination of environmental factors that can lead to extreme wildland fire behavior. The criteria for a Red Flag Event include a combination of sustained high winds, low relative humidity, and dry fuels. The thresholds for Red Flag Events are established by the local National Weather Service office. Red Flag Events are categorized in the following order:

- FIRE WEATHER WATCH is issued to alert the possibility of the development of conditions that would lead to a Red Flag Alert.
- RED FLAG WARNING is issued to warn of a predicted, impending or ongoing event that will meet the criteria of a Red Flag Alert within the next 24 hour period. This warning will generally precede a full alert.
- RED FLAG ALERT is the most critical stage and implemented when conditions are extreme

When a Red Flag Alert is issued by the National Weather Service, all authorized user operations will adhere to Industrial Fire Precaution Plan “D” and will shut down operations until the Red Flag Alert is rescinded.

b. FIRE CONTROL

Contractor shall, both independently and in cooperation with NFF and/or Forest Service, take all reasonable and practicable action to prevent and suppress fires resulting from Contractor’s Operations and to suppress any forest fire on Stewardship Project Area. Contractor’s independent initial fire suppression action on such fires shall be immediate and shall include the use of all necessary personnel and equipment at Contractor’s disposal on Stewardship Project Area or within the distance of Stewardship Project Area: **10 miles**.

- **Contractor’s Reinforcement Obligations.** Whenever an Operations Fire or Negligent Fire, whether on or off Stewardship Project Area or any other forest fire on Stewardship Project Area, has not been suppressed by initial action and appreciable reinforcement strength is required, NFF and/or Forest Service may require further actions by Contractor until such fire is controlled and mopped up to a point of safety. Such actions may include any or all of the following as necessary to fight such fire:
 - a. **Suspend Operations.** To suspend any or all of Contractor’s Operations.
 - b. **Personnel.** To release for employment by Forest Service any or all of Contractor’s personnel engaged in Contractor’s Operations or timber processing within the distance of Stewardship Project Area: **50 miles**. Any organized crew so hired shall include Contractor’s supervisor, if any. Personnel so employed shall be paid at Forest Service standard emergency fire fighting rates.
 - c. **Equipment.** To make available for Forest Service rental at fire fighting equipment rates common in the area or at prior agreed rates any or all of Contractor’s equipment suitable for fire fighting and currently engaged in Contractor’s Operations within the distance of Stewardship

Project Area: **50 miles**. Equipment shall be operated only by personnel approved by NFF, if so requested by NFF.

c. TEMPORARY ROADS AND SKID TRAILS

Contractor shall locate Temporary Roads and Skid Trails on locations approved by NFF and/or the Forest Service. Such location shall include the marking of road centerline or grade-line and the setting of such construction stakes as are necessary to provide a suitable basis for economical construction and the protection of National Forest lands.

Temporary road surface width shall be limited to truck bunk width plus four (4) feet, except for needed turnouts which shall not exceed two (2) times the bunk width plus four (4) feet. If shovels or cranes with revolving carriage are used to skid or load, temporary road surface width equal to track width plus tail swing shall be permitted.

As necessary to attain stabilization of roadbed and fill slopes of Temporary Roads, Contractor shall employ such measures as out sloping, drainage dips, and water-spreading ditches.