APPENDIX A

TECHNICAL SPECIFICATIONS FOR SERVICE WORK ITEMS

SECTION I – DESCRIPTION OF WORK:

The following needs were identified for the analysis area to meet the desired conditions addressed in the Southern Sacramento Restoration Project Environmental Impact Statement, the Lincoln National Forest Land and Resource Management Plan:

- To restore overall forest health for each ecological response unit and reduce the potential for large-scale, uncharacteristic wildfire.
- To reduce high-severity fire risks and post-fire flooding potential to protect life, property, and natural resources by reducing the acres currently classified as having high, very high, and extreme crown fire hazard potential
- To increase forest resiliency to insects and disease by shifting forest structure, composition, and diversity toward desired conditions.
- To produce and supply local industry with Forest Products such as Timber, Fuelwood, Pulpwood, and Biomass in adherence to EO 14225 – Immediate Expansion of American Timber Production and Secretary's Memorandum 1078-006

This project will meet these objectives by accomplishing the following:

1. Thin from below in mixed conifer and aspen forest stands.
2. Remove included timber from the Contract Area.
3. Mechanically treat slash and other materials directly generated from Thinning activities.

SECTION II – WORK ITEMS

Mandatory Item 1: Cut and Remove Included Timber

Units 1, 2, 3, 4, 5 and 6. (237 Acres)

1. Cut and Remove trees meeting minimum tree specifications in Appendix B. Road maintenance is commensurate with product removal, specifications are identified in Appendix C.

Mandatory Item 2: Machine Piling of Slash

Units 1,2,3,4,5 and 6. (237 Acres)

Slash generated from Item 1 shall be treated according to the following Specifications:

1. Slash within partial cut areas and road construction clearings shall be moved to take advantage of previously constructed or natural clearings 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 highwater marks of live streams, or in intermittent stream courses.

2. Piles shall be constructed to facilitate burning and shall be located a minimum of 25 feet from standing live trees or physical improvements such as fences, poles, buildings, signs, tables, grills, and cattleguards to minimize damage. The minimum spacing between piles shall be equivalent to one and one-half the diameter of the adjacent pile.

3. Machine piles shall be compacted by pushing slash from all sides towards the center of the pile. A machine pile will not exceed a diameter of 25 feet and pile height shall not be less than one-third the average diameter of the pile. The ideal average dimensions of Machine Piles is 12 feet x 12 feet x 12 feet. All slash protruding 4-feet or more from outer edge of the pile shall be bucked off and placed on pile.

4. Only materials which have been directly generated from operations required for the removal of included timber shall be machine piled. Dead standing trees, dead and down trees, and other vegetation which is not designated for removal shall not be piled.

Mandatory Item 3: Purchase, Delivery and Installation of Gate

Unit 4 (1 Gate)

1. A Stockyard gate measuring no less than 10 feet in length shall be purchased by contractor, transported to project area and installed at location shown on Contract Area Map. See Attachment 5 for gate details.

2. Gate shall be installed level, held in place by two posts sunk into native surrounding soils to the extent where gate is easily opened and closed, can be locked closed with a chain and can allow the passage of cattle and small vehicles. The following diagram depicts an acceptable gate installation:

Optional Item 4: Small Diameter Thinning and Slash Treatment

Units 1,2,3,4,5 and 6. (237 Acres)

Small Diameter Thinning:

Trees 5”-8.9” DBH will be cut and piled concurrently with Item 1. This work item will treat the smaller, poorer formed, and damaged/diseased/insect infested trees as necessary to meet stand density targets. Designation by Description (DxD) specifications are as follows:

- Cut trees 5 - 8.9 inches in diameter (DBH) to an average spacing of 15 feet or approximately 194 trees left per acre. Create irregular spacing to leave the best trees at a variable distance of 5-20 feet. Spacing shall be measured off of any leave tree greater than 5 inches DBH.
- Leave trees shall generally be those of the tallest height, largest crown, and largest diameter that are free of damage due to insects, disease, physical, or mechanical causes. If no healthy undamaged tree exists at the required spacing interval, trees with minor damage may be left.
- Dead Standing Trees and Hardwoods species such as Oak, Maple and Aspen shall NOT be cut nor used to measure residual spacing.
- Trees prioritized for cutting include unhealthy trees which show signs disease , overstocked thickets of white fir, young poorly formed saplings, and trees directly under the drip line of any tree measured more than 18 inches DBH.
- Stump height shall not exceed 6 inches. All felled trees shall be completely severed from the stumps. All live limbs below the stump height shall be removed, except when prevented by natural obstacles.

Slash Treatment:

1. Slash within partial cut areas and road construction clearings shall be moved to take advantage of previously constructed or natural clearings 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 highwater marks of live streams, and in intermittent stream courses.

2. Piles shall be constructed to facilitate burning and 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.

3. Machine piles shall be compacted by pushing slash from all sides towards the center of the pile. A machine pile will not exceed an diameter of 25 feet and pile height shall not be less than one-third the average diameter of the pile. The ideal average dimensions of Machine Piles is 12 feet x 12 feet x 12 feet. All slash protruding 4-feet or more from outer edge of the pile shall be bucked off and placed on pile.

4. Dead standing trees, existing dead and down material shall not be piled.

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. The Contractor shall perform Quality Control in accordance with the work item specific Contractor Quality Control plan(s).

QUALITY CONTROL

The Contractor, not the Government, is responsible for management and quality control actions to meet the terms of the contract. The role of the Government is quality assurance to ensure contract standards are met. The Contractor shall provide a Quality Control Plan (QCP) with the technical proposal.

The general QCP must demonstrate how the Contractor will assure quality meets the requirements and specifications of each work item, mandatory and optional items, included in this contract. It shall specify how quality will be monitored to ensure the performance standards are met; the supervision of crew and work; and the personnel that will be performing the quality control. Quality control includes monitoring of quality while work is progressing. The Contractor may utilize a range of methods to determine the Contractor's compliance with the contract specifications. During the issuance of certain work items, the Contractor may propose or the Government may require the use of a plot-based quality control to determine the actual quality percentage. In addition to the description of how quality will be monitored to assure that performance standards are met, the plan shall also include: (1) corrective or preventive actions that will be taken to meet quality standards; (2) control procedures for security of Government-provided items such as keys, and lock combinations; and (3) location of the inspection documents and other quality control records.

Records of quality inspections shall be kept and made available to the Government throughout the performance period and for the period after contract completion until final settlement of any claims under this contract.

GOVERNMENT QUALITY ASSURANCE SURVEILLANCE PLAN - QASP

Quality assurance will be performed by the Government during the contract at regular intervals. Methods may include random sampling, 100% inspection of the work, and/or visual survey and review of contractor quality control documents. Unacceptable work shall require rework at no cost to the Government. All work shall meet all the standards listed in above sections.

Quality assurance will ensure proposed activity in the Project Implementation Plan adhere to the purpose and need, project objectives and site-specific silviculture, fuels reduction, harvest plan and resource protection requirements as stated within the attached project design criteria.

Government Inspection Procedures - The COR, or a designated inspector (GTM) for each work item, will make periodic inspections while work is in progress as needed to ensure 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. Units 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.

UNSATISFACTORY PERFORMANCE

1. If the work quality falls below AQL shown in table 1 below, the COR will immediately notify the Contractor, in writing, and order him to improve the quality of subsequent work. If the quality of subsequent work is not raised to the AQL 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 AQL, the Government may elect to do one of the following:
   (a) Order rework to be performed and withhold payment until the results of a post-rework Government inspection shows quality to be at AQL 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 Inspection Report.
3. Repeated failure to produce work quality at or above the AQL 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, <u>plots from the initial inspection and the reinspection will be combined</u> and used to calculate work quality and payment, and the Contractor shall bear the cost of reinspection.

GOVERNMENT INSPECTION PROCEDURES

Item 1-Cut and Remove Included Timber: Refer to Appendix B, Divisions A, B, and C for specific inspection and acceptance language.

Item 2-Machine Piling of Slash and Item 4-Small Diameter Thinning and Slash Treatment: For all associated work, the COR or Government Technical Monitor will conduct periodic visual inspections of each work item to assure full compliance.

Work Activity	Acceptable Quality Level (AQL)	Government Method of Assessment	Incentive/Deduction
Machine Piling of Slash Small Diameter Thinning and Slash Treatment	90% Meets work activity specifications & requirements.	COR or Government Technical Monitor conduct periodic monitoring	**Meeting or Exceeding AQL:** • Payment made at the full quoted task order price. • Good Past Performance ratings. **Failure to meet AQL:** • Rework at contractor's expense. • Total payment reduced by AQL deduction % if cannot meet AQL.

Item 3-Purchase, Delivery, and Installation of Gate: Visual inspection will be accomplished by the government with an Acceptable Quality level of 100%.

1. Pre-Delivery Requirements Review
   a. Confirm the gate model matches the contract details (size, material, and configuration)
2. Delivery Inspection
   a. Visually inspect gate for any defects and ensure no signs of damage from transport.
   b. Confirm dimensions appear consistent with specifications, and that all hardware is present.
3. Installation Verification
   a. Ensure the gate is installed in the correct location per contract.
   b. Verify alignment and ensure hinges and hardware are properly secured and tightened.
4. Final Acceptance Inspection
   a. Visually confirm the gate is fully functional, safe, and free from defects.

Validate that all deliverables are complete and meet 100% AQL

SECTION IV – PAYMENT METHODS

Method of Measurement for Acreages

Acreages provided were determined by using Global Positioning Systems (GPS).

- All unit boundaries are marked with Orange paint.

Discernable Boundaries are locations that are readily identifiable features on the ground (such as portions of existing roads or powerline corridors etc.) in locations shown on the Contract Area Map.

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 (10%) or less exists on units of 1 to 5 acres, five percent (5%) or less exists on units of more than five but less than 20 acres, or if three percent (3%) 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

Items 2 and 4

1. If informal visual inspection indicates acceptable work quality, the Contractor will be paid 100 percent of their bid rate.
2. Contractor shall rework any areas or entire units at no additional cost to the Government, when work is deemed to be unacceptable by visual inspection.
3. If after rework, the work quality is measured with formal inspection to be between 85% and 89%, payment will be made by the actual percentage. If the percentage is less than 85%, the work is unacceptable, and no payment will be made. For work quality 84 percent and less after rework, no payment made to the Contractor.

Item 3

1. Full payment will be made once the Government verifies that all work has been completed in accordance with contract specifications. Work that is incomplete or non-compliant must be corrected before final approval and may be rejected for payment.

* **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.

BROWNS TRANSECT: A line intercept method for measuring the amount of fuel on the ground.

BRUSH: Vegetation consisting of shrub species with single or multi-stems originating at or near ground level not normally reaching more than 15 feet in height.

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.

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.

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 bole.

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.

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.

LOPPING AND/OR SCATTERING: Cutting limbs from trunks of cut trees, bucking, and moving and rearranging of slash concentrations to reduce the fuel bed height as specified.

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.

PILING: Gathering and stacking of downed wood and activity slash by hand or mechanical methods into piles constructed and located as indicated by technical specification and project maps.

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.

VIRTUAL BOUNDARY: A unit boundary that is shown on the map but is not demarcated on the ground. The contractor must use mapping applications in order to locate these boundaries in the unit.

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.