

KT-CT.2.1 - UTILIZATION AND REMOVAL OF INCLUDED TIMBER (09/2004)

CT.2(b) notwithstanding, bucking lengths shall be varied to ensure that the maximum sawlog piece that may be left is 2 feet and that the maximum small roundwood piece that may be left is 5 feet.

Where cut trees are identified by paint, the Contractor shall leave stumps of a minimum height to avoid obliterating paint markings that indicate individual trees to be cut.

KT-CT.3.0# - PAYMENT UNIT BOUNDARIES (09/2004)

The boundaries of Payment Units are designated as shown in the following table. The trees used for boundary designation are not to be cut.

See Table KT-CT.3.0# - Payment Unit Boundaries, Payment Unit Boundary Designation Table

**KT-CT.3#- Payment Unit Boundaries,
Payment Unit Boundary Designation Table**

Payment Unit	Paint Color	Designation
All	Orange	Payment unit boundary trees are designated with 3 diagonal blazes at eye level and one stump mark. Only one blaze on smaller trees. Blaze marks face INTO the payment unit.

KT-CT.3.5.2# - DESIGNATION BY SPECIES AND DIAMETER (09/2004)

Trees that meet Utilization Standards are designated for cutting, as shown on the Tree Designation Table and Sale Area Map, except trees Marked with orange paint or described to be left uncut.

See Tree Designation Table.

Additional trees to be cut, if any, are Marked with blue paint.

All short leaf pine, table mountain pine, pitch pine greater than 5" DBH and oak, hickory, dogwood and redbud greater than 6" DBH shall be left as leave trees, unless Marked with blue paint. Leave not applicable trees of the designated cut species, not applicable inches stump diameter or greater, to avoid leave tree spacing greater than not applicable feet. Cutting unit boundaries and other trees that shall be left uncut are Marked with orange paint.

Distances are measured horizontal distance, outside bark stump height to outside bark stump height. Stump diameter is measured outside bark at stump height in a horizontal and is the average of a measurement across the short axis through the true center of the stump and a second measurement at right angles to the short axis.

Contractor and Forest Service shall agree to skid trail location under BT6.422. Skid trails shall be no greater than not applicable feet wide with a not applicable foot spacing. Quantities of trees located in skid trails are Included Timber under AT2.

KT-CT.3.5.2#- Tree Designation Table

Cutting Unit(s) (not payment units)	Designated Species <u>1/</u>	More than Stump Diameter (inches) <u>2/</u>	Less than Stump Diameter (inches) <u>2/</u>
1, 2, 4, 5, 7, 11, 12 ^a	loblolly pine and Virginia pine ^b	7” ^c	N/A
3, 6, 8, 9, 10, 13, 14, 15 ^a	loblolly pine, Virginia pine, white pine, yellow-poplar, red maple, sourwood, and black gum, sweet gum	7” ^c	N/A
<p>^aLoblolly pine is the only species designated for cutting in Streamcourses (SMZs - streamside management zones), shown on the Contract Area Map with the symbol “SMZ”, and whose boundaries are designated on the ground by green paint. Loblolly pine inside streamcourses (SMZs) is included timber in AT.2.</p> <p>^bother species in these cutting units are designated by cut-tree-mark (CTM), see provision KT-CT.3.5.5#</p> <p>^cMinimum diameter at breast height (DBH) for pine species is 5”, and for hardwood species is 6”</p>			

KT-CT.3.5.5# - INDIVIDUAL TREES (09/2004)

CT.3.5 notwithstanding, the following individual trees are Marked with paint above and below stump height:

Cut Tree Marking. Individual trees to be cut are Marked in all or parts of the following Payment Units. Areas of cut tree marking are shown on the Contract Area Map with the symbol CTM.

See Table KT-CT.3.5.5# - Individual Trees, Cut Tree Marking

Leave Tree Marking. Individual trees to be left uncut are Marked in all or parts of the following Payment Units. Unmarked trees meeting Utilization Standards in AT.2 shall be cut. Areas of leave tree marking are shown on the Contract Area Map with the symbol LTM.

See Table KT-CT.3.5.5# - Individual Trees, Leave Tree Marking

KT-CT.3.5.5#- Individual Trees

Tree Designation

Cut Tree Marking

Cutting Units (not payment units)	Paint Color
1, 2, 4, 5, 7, 11, 12	Blue

Leave Tree Marking
--Not applicable

KT-ET.2.1.5 - DEPOSITS WHEN PAYMENT GUARANTEED (05/2010)

To the extent payment guarantee is provided under ET.3, requirements for advance cash deposits under ET.2.1.2 shall be waived for the value of Included Timber removed except for:

- (a) Base Rates,
- (b) associated charges, and
- (c) the value of Included Timber exceeding the sum of stewardship credits that have not been established under ET.2.2 for mandatory stewardship projects listed in AT.4.4 plus optional stewardship projects listed in AT.4.4 authorized by Contracting Officer.

Charges for (a), (b) and (c) shall be waived for not more than a monthly billing period, subject to the provisions of ET.4.

KT-ET.4 - PAYMENTS NOT RECEIVED (08/2012)

(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, 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 and road maintenance deposits;
- (ii) Cooperative work at rates established by specific agreement under ET.2.1.8;
- (iii) Damages pursuant to JT.4;
- (iv) Road use fees;
- (v) Restoration of downpayment pursuant to ET.2.2;
- (vi) Periodic payments pursuant to ET.2.1.3;
- (vii) Extension Deposits pursuant to ET.2.1.7; and
- (viii) Other mandatory deposits.

(b) Failure to pay amounts due by the date specified in the bill for collection shall be considered a breach under JT.3. The 30-day notice period prescribed therein shall begin 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 breach. 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.

KT-FT.2.1.3# - DEPOSIT FOR RECONSTRUCTION ENGINEERING SERVICES (09/2004)

Contractor shall make a cash deposit for engineering services (preconstruction and construction) provided by Forest Service for reconstruction of National Forest system roads necessary to accommodate Contractor's use under this contract, pursuant to 16 USC 537.

The total amount to be deposited by Contractor for reconstruction related engineering services to be completed by Forest Service personnel or by public works contract is \$ \$6,176.00 . Contractor shall make this deposit at the end of the first full Normal Operating Season or 12 months from contract award, whichever occurs first. In the event a different deposit schedule is agreed to, such deposit shall be due within 15 days after the date of issue indicated on the initial bill for collection, pursuant to ET.4.

The amount of the required deposit will be shown as an associated charge on Contractor's Integrated Resource Account. Forest Service shall retain any unexpended deposit for reconstruction related engineering services.

The deposit for reconstruction related engineering services shall be commensurate with project need and Contractor's road use. Forest Service shall complete reconstruction related engineering services on the following schedule unless a different completion schedule is agreed in writing:

Road or Facility No.	Termini		Engineering Services Completion Date
	From	To	

N/A

Reconstruction related engineering services may consist of some or all of the engineering work and expense of: preparing, setting out, controlling, inspecting, and measuring the reconstruction of a National Forest system road.

KT-FT.3.2# - ROAD MAINTENANCE DEPOSIT SCHEDULE (09/2004)

Other provisions herein notwithstanding, when Forest Service requests payment in lieu of Contractor's performance of road maintenance, Contractor shall make Required Deposits (16 USC 537) for current and/or deferred road maintenance. Such deposits are based on the estimated volume and distance hauled and Contractor's commensurate use of each road listed in the Road Maintenance Plan in KT-FT.3.1#.

Contractor and Forest Service may agree in writing on adjustment of such rates. If Contractor uses roads under jurisdiction of Forest Service other than those listed in the Road Maintenance Plan, Forest Service shall establish rates commensurate with Contractor's use of such roads.

The Required Deposits for Forest Service work in lieu of Contractor performance and for deferred maintenance is: \$.11 per CCF.

The following table lists who Contractor will make deposits for road maintenance to, and the rate per unit of measure of the deposit. The Road Maintenance Agreement is available for inspection at the Forest Supervisor's Office.

Deposit Made To	Rate	Unit of Measure
No Third Party Deposit on this contract	\$.00	CCF

KT-GT.2.3.1 - PROTECTION OF LAND SURVEY MONUMENTS (09/2004)

The Forest Service shall appropriately designate on the ground all known surveying monuments, section corners and other corner accessories. Bearing trees shall be posted by the Forest Service with at least one bearing tree sign and a 6-inch red paint band around bole of tree about 6 feet above ground.

If any known monuments, corners or accessories are destroyed, obliterated, or damaged during the Contractor's Operations, the Contractor may make Required Deposits (16 U.S.C. 572) at rates stated in the Monument Restoration Schedule listed below. Such deposits shall be the minimum rates charged, and will be deposited in a special account. Minimum rates shall be adjusted upwards to cover actual costs incurred on all restoration projects.

The Contractor and the Forest Service may agree in writing on actual cost for partial restoration projects. If the Contractor destroys, obliterates or damages Land Survey Monuments or accessories other than those listed in said schedule, Forest Service shall establish rates commensurate with the Contractor's liability.

Monument Restoration Deposit Schedule

Type of Monument-----	Deposit
Exterior F.S. Survey Monument-----	\$100.00/monument
Interior F.S. Survey Monument-----	\$100.00/monument
Witness Tree____-	\$75.00/witness tree
Exterior Property Lines-----	\$750.00/mile

KT-GT.2.4# - SITE SPECIFIC SPECIAL PROTECTION MEASURES (09/2004)

Special protection measures needed to protect known areas identified on Sale Area Map or on the ground include:

Cultural Resource Protection Measures: not applicable

Wildlife and Botanical Protection Measures: managed wildlife openings (mowed grass meadows) are not to be used as a truck turn around or as a landing.

Cave Resource Protection Measures: not applicable

KT-GT.4.0.2# - LOGGING EQUIPMENT RESTRICTIONS (09/2004)

Unless otherwise agreed in writing, Contractor shall take the following measures to minimize breakage of logs and to protect residual trees and other National Forest resources:

Not applicable Tractors used for shearing, felling/bunching, or skidding shall not exceed the overall width and shall be of the type designated below:

See Table KT-GT.4.0.2# - Logging Equipment Restrictions

Not applicable In Payment Unit(s) not applicable , logging shall be conducted with not applicable .

Applicable In Payment Unit(s) 3 and 8 (inside designated streamcourse protection areas, a.k.a streamside management zones, or SMZs), the following equipment shall be prohibited: all mechanized equipment except felling machines (harvesters, feller bunchers, etc) or forwarders. Felling machines or forwarders may operate in Streamcourses (SMZs) when ground conditions are dry and under the following additional conditions:

- 1) stream crossings only at designated points approved in advance by the Forest Service
- 2) work as perpendicular to the channel to the extent practicable
- 3) utilize directional felling away from the stream channel
- 4) remove tops or other logging debris dropped into the stream channel
- 5) handle and store toxic and hazardous material such as fuels, lubricants, and solvents outside of the Streamcourse

Seed/mulch shall be applied to exposed soil resulting from operations inside the Streamcourse as soon as practicable upon completion of work inside these zones.

KT-GT.4.0.2#- Logging Equipment Restrictions

Payment Unit	Tractor Type	Tractor Width
All	Not applicable	Not applicable

KT-GT.4.1.4# - DIRECTIONAL FELLING OBJECTIVES (09/2004)

Unless otherwise agreed in writing, in areas shown on Contract Area Map as subject to this provision, the Contractor shall control the direction of fall of Included Timber by wedging, jacking, lining, or other appropriate methods. Methods used shall result in felling trees ...away from filter or shade strips along Streamcourses
...in a manner that will prevent them from entering any Streamcourse
...away from private land boundaries.

Applicable Unless otherwise agreed, the location of tractor skid roads shall be approved in advance of felling operations.

KT-GT.5# - STREAMCOURSE PROTECTION (09/2004)

The following are required in addition to the Standard Provisions under GT.5:

Not applicable Fords may be permitted with written authorization in locations containing rock or rock-fragment bottoms or where streams can be protected with corduroy or gravel.

Applicable (Except for felling machines or forwarders - - see KT - GT. 4.0.2) All vehicles are prohibited within a green Marked boundary along either side of Streamcourses that are shown on the Contract Area Map. Vehicles will be allowed to cross Streamcourses only at locations designated by the Forest Service or as essential to construction or removal of culverts or bridges.

KT-GT.6.0.1# - REVEGETATION PLAN AND SPECIFICATIONS (09/2004)

Where soil has been disturbed by Contractor's operations and vegetation is needed to minimize erosion, Contractor shall take appropriate measures according to the following specifications or other agreed stabilization measures:

Temporary road cuts, fill slopes, and shoulders shall be seeded and fertilized within 15 days of construction during the seeding season(s).

Temporary road surfaces, landings, and skid trails shall be seeded when not to be used for a period exceeding 60 days during the seeding season(s).

Temporary road cuts, fill slopes, and other soil disturbance within 25 feet slope distance of a streamcourse shall be seeded and mulched within 3 days of the disturbance.

Exposed soil on temporary roads, skid trails and landings no longer needed for the Contractor's operations shall be seeded and fertilized within 30 days of discontinued use during the seeding season(s). Soil tilling to cover seed may be required under dry site conditions.

Bare areas or roads with soil compaction will require harrowing, disking or ripping. Fertilizer shall be applied and mixed thoroughly with the soil prior to seeding. Due to compaction, it may be necessary to till the soil to a depth of 6 inches or more.

The seeding season(s) shall be during the inclusive listed below, unless otherwise agreed.

See KT-GT.6.0.1# - Revegetation Plan and Specifications, Seeding Season(s) Table

The following kinds and amounts per acre of seed and fertilizer shall be applied, unless otherwise agreed:

See KT-GT.6.0.1# - Revegetation Plan and Specifications, Fertilizer and Seed Table

Applicable Mulch at the rate of 2000 pounds per acre shall be applied. The Forest Service will identify the areas where mulch is required in addition to those specified elsewhere in this contract. Hay, straw, pine straw or shredded bark or other mulch acceptable to the Forest Service may be used as mulching material.

Applicable The Forest Service shall agree to the timing of the seeding operations.

Applicable Seeding operations shall not begin without the presence of a Forest Service representative.

Applicable Other revegetation specification: All landings, primary skid trails, temporary roads, and other compacted areas identified by the Forest Service shall be ripped to a 6" depth, disked, seeded, and mulch. Apply seed and mulch as specified in table KT-GT.6.0.1#- Revegetation Plan and Specifications, Seeding Season(s). Forest Service may make exceptions for occasional areas where compaction is determined to be minimal.

If the Forest Service performs such work as provided under a written cooperative agreement (16 U.S.C. 572), the Contractor shall make the following deposit:

See KT-GT.6.0.1# - Revegetation Plan and Specifications, Cooperative Deposit Table

KT-GT.6.0.1#- Revegetation Plan and Specifications

Seeding Season

Season	From	To
Spring	April 2	June 1
Summer	June 2	August 31
Fall/Winter	Sept 1	April 1

Seed and Fertilizer Table

SPRING (April 2 to June 1)	
__Dixie Re-seeding Clover	15
__Brown Top Millet	25
SUMMER (June 1 to August 31)	
__Brown Top Millet	15
__Buckwheat	30
FALL / WINTER (Sept 1 - April 1)	
__Pre-inoculated Ladino Clover	15
__50/50 Wheat/Oats	50
ALL SEASONS	
Fertilizer (17-17-17)	400
Straw Mulch	2000

Cooperative Deposit Table

Task	Lump Sum Amount
Seed & Fertilizer Work, including labor	\$2240.58
Water bars / ripping / disking / seeding landings, primary skid trails, and temp roads	\$2717.59
Lump Sum Amount	\$4957.98
Amount Per Unit of Volume	\$1.06

KT-GT.6.3.2# - TEMPORARY ROADS (09/2004)

Not applicable Unless otherwise agreed in writing, Temporary Road construction shall not be scheduled to occur outside the seeding season(s) listed in KT-GT.6.0.1#.

applicable Unless otherwise agreed in writing, Temporary Road construction shall not be scheduled to occur outside the Normal Operating Season(s) listed in AT.13.

The location and clearing widths of all Temporary Roads shall be agreed to and all timber within the clearing limits shall be paid for before construction is started. Temporary roads shall follow the general contour insofar as practical with maximum grades not to exceed not applicable percent for lengths up to not applicable feet. Construction shall include frequent broad-based dips or breaks in grade as necessary to remove runoff from the road. Clearing width shall not exceed that needed for safe and efficient operations, and the travel way shall not exceed 12 feet except at turnouts and landings. Crossings shall be located perpendicular to any stream or drainage.

Concurrent with Temporary Road construction, the Contractor shall install straw or hay bales, silt fence or brush/slash barriers at the base of the fill along Temporary Roads adjacent to Streamcourses and at other sensitive areas shown on Contract Area Map per the following requirements:

See Table KT-GT.6.3.2# - Temporary Roads, Silt Barrier Table

At Streamcourse crossings, cut and fill slopes and other disturbed areas within 25 feet slope distance of the Streamcourse shall be protected by seeding and mulching the same day construction occurs

As necessary to attain stabilization of roadbed and cut and fill slopes of Temporary Roads, the Contractor shall employ such measures as outsloping, revegetation, mulching, drainage dips, water spreading ditches and silt barriers.

Unless otherwise agreed, cut banks and fill slopes shall be sufficiently sloped to facilitate revegetation.

The Contractor shall place and maintain the following depth of gravel or crushed stone on all Temporary Roads at the following locations:

See Table KT-GT.6.3.2# - Temporary Roads, Gravel Requirements Table

Contractor shall maintain all erosion control structures such as silt barriers, water-spreading ditches and broad based dips in a functional condition during Contractor's Operations. Contractor shall stabilize and close to vehicular traffic all Temporary Roads prior to periods of inactivity.

Except for Temporary Roads to remain open under GT.6.3.1, after a Temporary Road has served Contractor's purpose, the Contractor shall give notice to the Forest Service and shall remove bridges and culverts, eliminate ditches, out-slope roadbed, remove ruts, remove outside berms by pulling the material back onto the road surface, effectively block the road to normal vehicular traffic, and build cross ditches and water bars as staked or otherwise marked on the ground by Forest Service unless agreed otherwise in writing. When bridges and culverts are removed, associated fills shall also be removed to the extent necessary to restore channel to natural size, slope and bottom, and to permit normal maximum flow of water and protection of adjacent resources.

KT-GT.6.3.2# – Temporary Roads

Silt Barriers Table

Side Slope Grade	Distance from Streamcourse
30%	100 Feet

Gravel Requirements Table

Location	Distance	Percent Grade	Inches of Crushed Stone
Approaches to surfaced roads for a distance back from the surfaced road	50 Feet	n/a	n/a
Streamcourse crossings for a distance on either side of the streamcourse	50 Feet	n/a	n/a
Steep grades of short distance	15 Feet	n/a	n/a
Wet or erosive prone soils	15 Feet	n/a	n/a
Dips, moist sites, erosive prone soils, and fills over culverts	15 Feet	n/a	n/a

KT-GT.6.6.1 - CURRENT OPERATING AREAS (09/2004)

Where logging or road construction is in progress but not completed, unless otherwise agreed, the Contractor shall, before beginning a period of inactivity anticipated to last 30 days or more, and before any expected period of seasonal precipitation or runoff, remove all temporary log culverts, and construct cross drains, drainage ditches, dips, berms, culverts or other facilities needed to control erosion.

KT-GT.7# - SLASH TREATMENT (09/2004)

Slash is defined as all vegetative debris resulting from the Contractor's operations, including limbs, tops, cull logs, bark, wood chunks, pushed-out stumps, damaged brush, and damaged residual trees. Tops from felled trees and all trees to be removed from roads, landings, or other construction clearings shall be completely felled and not left leaning or hanging in other trees. Slash associated with construction of Specified Roads is construction slash subject to treatment according to road construction specifications.

Other Ownership. The Contractor shall conduct operations so that slash does not enter non-National Forest System lands, as shown on Contract Area Map. In event slash is deposited on other ownership, the Contractor shall immediately remove such slash. The Contracting Officer may agree in writing to other treatment requirements if the Contractor provides a written slash disposal agreement between the Contractor and the landowner.

Roads and Other Clearings. Along roads available for public use the Contractor shall immediately remove slash from traveled surfaces, shoulders, and drainage facilities. Other slash along roads available for public use and all slash along roads not available for public use shall be removed from the clearing limits within four days after adjacent skidding or yarding to each landing is complete. In areas where skidding or yarding is delayed or interrupted, slash shall be removed within ten days after being created.

Trails open to public use shall be kept free of slash. Slash within the clearing limits of powerlines, telephone lines, pipelines, and similar clearings shall be removed within ten days after adjacent skidding or yarding to each landing is substantially complete.

Slash removed from roads and other clearings shall be scattered outside the clearing limits, or otherwise disposed of as agreed. The time requirements for completion of slash removal may be changed by written agreement, except where immediate removal is required.

Other Treatment Areas. The Contractor shall complete slash treatment in other areas as described below. The Forest Service and the Contractor shall jointly agree to a schedule for completion of such slash treatment, which shall be included in the Contractor's Annual Operating Schedule required under GT.3.1.

Applicable At or adjacent to log landings, delimiting areas, and similar areas of slash accumulation within contract area, concentrations of slash greater than 3 feet in height and N/A feet in length, measured at greatest distances, shall be limbed, lopped and scattered

Slash treatments described below are required at locations shown on the Contract Area Map by the following symbols:

See Table KT-GT.7# - Slash Disposal, Slash Disposal Requirements Table

KT-GT.7#- Slash Disposal

Slash Disposal Requirements Table

MAP SYMBOL	TITLE	TREATMENT	SPECIFIED METHOD
LOP	Lop	In all cutting units, lop to 3' height and scatter. Lop to a 2' height within 100 feet of Cassidy Bridge Road (S37-290)	
SD	Other designated areas	All	Remove slash from within 50' of private land boundary

KT-GT.8 - MEASURING (09/2004)

The estimated quantity of timber has been determined by tree measurement in accordance with the methods described in the Timber Cruising Handbook (FSH 2409.12), a copy of which may be examined in the Forest Supervisor's or the Ranger's Offices.

KT-GT.9# - STEWARDSHIP PROJECTS (09/2004)

Performance of stewardship projects shall be in accordance with the following specifications.

Stewardship Projects

KT-GT.9# - Stewardship Projects

Mandatory Projects				
Project Number	Project Description	Location	Unit of Measure	Quantity
M1	Felling non-merchantable trees in harvest units	All payment units	Acres	147
M2	Felling loblolly pine trees in cut & leave units	See map	Acres	5

Optional Projects*				
Project Number	Project Description	Location	Unit of Measure	Quantity
O1	Road Maintenance – heavy brushing	See map and road list in this provision	Mile	15.5
O2	Installation of road closure gates	See list of road junctions and map	Each	7
*Contracting Officer discretion				

Access

All service project areas are accessible via public State/County or Forest Service roads.

DESCRIPTION OF THE REQUIREMENTS:***M1 – FELLING NON-MERCHANTABLE TREES IN HARVEST UNITS***

M1 includes all payment units listed in AT4.3 and shown on the Contract Area Map. Streamside management zone (SMZ) areas are not included. The timing of stewardship work may be before, concurrent with, or after timber harvest.

The requirement is to fell all live pine trees between 2.0” and 4.9” DBH and all live hardwood trees between 2.0” and 5.9” DBH. Trees smaller than 2” DBH are desired to be cut, but not required.

Manual or mechanized methods may be used.

No bucking is required. Slash lop height requirement specified in KT-GT.7# applies to felled trees under this service work item. Felled tree material must be cleared from any road way or trail, including drainage ditches and culverts. Felled tree material must not impede or alter streamflow.

Stump height requirement is the same for pulp listed in AT.6.

Removal of this material is optional by mutual agreement subject to provisions DT4.1, FT.3, KT-FT3.1, and KT-FT3.2. Authorization must be obtained in writing prior to removal.

Inspection procedure

1. The Forest Service Representative or designated contract inspector will make periodic inspections. The Contractor representative is encouraged to observe the inspection and will receive inspection summaries upon request.
2. Each unit will be examined to record findings on the items listed below:
 - a. Number of trees left that should have been cut
 - i. desirable is 0
 - ii. acceptable is up to 10 per acre
 - iii. unacceptable is over 10 per acre
 - b. Number of stumps higher than 6 inches
 - i. desirable is 0
 - ii. acceptable is up to 10 per acre

- iii. unacceptable is over 10 per acre
 - c. Percent of the unit area meeting slash requirements per KT-GT.7#
 - i. desired is 100%
 - ii. acceptable is 90%
 - iii. unacceptable is below 90%
- 3. Each unit will be inspected separately
 - a. The designated contract inspector will conduct whole-unit walkthroughs of each cutting unit. Rework will be required on any portion of the cutting unit not meeting acceptable criteria

M2 – FELLING LOBLOLLY PINE TREES IN CUT & LEAVE UNITS

M2 units are listed in AT4.4 and are shown on the Contract Area Map with a “M2” label.

The timing of M2 stewardship work may be before, concurrent with, or after timber harvest.

The requirement is to fell all live loblolly pine trees regardless of tree size. Most trees are seedling/sapling size.

Contract workers’ ability to identify and distinguish pine tree species is critical.

The target cut species - loblolly pine, is not marked. Untrained personnel can easily confuse loblolly pine with desirable (do not cut) native shortleaf pine, pitch pine, and Table mountain pine.

Only manual methods may be used, with powered or non-powered tools (i.e. – chainsaws, brushcutters, hand saws). No mechanized methods are allowed (i.e. – feller buncher, harvester)

No lopping, bucking, or pullback is required. Felled tree material must be cleared from any road way, including drainage ditches/culverts.

When felling overstory trees, use directional felling to minimize damage to the residual stand and avoid felled trees being stacked on top of one another (jackstrawed).

There is no upper size limit on loblolly pine trees to be cut. For a lower limit, all visible loblolly pine seedlings must be cut. For inspection purposes, visible seedlings will be considered those that are at least 6 inches tall.

Stump height of trees over 11” DBH must be 12 inches or lower.

Stump height of trees between 1” and 10” DBH must be 6 inches or lower.

Stumps of trees less than 4.5 feet tall must be cut as flush to the ground as practicable to ensure no live branches remain and to minimize chances for resprout. Brush saws are the recommended tool for cutting seedlings/saplings, although any manual tool may be used if the contractor demonstrates it is effective.

1. The Forest Service Representative or designated contract inspector will make periodic inspections. The Contractor representative is encouraged to observe the inspection and will receive inspection summaries upon request.
2. Each unit will be examined to record findings on the items listed below:

- a. Number of trees left that should have been cut
 - i. desirable is 0
 - ii. acceptable is up to 3 per acre
 - iii. unacceptable is over 3 per acre

 - b. Number of stump heights not meeting requirements
 - i. desirable is 0
 - ii. acceptable is up to 10 per acre
 - iii. unacceptable is over 10 per acre
3. Each unit will be inspected separately
- a. The designated contract inspector will conduct whole-unit walkthroughs of each cutting unit. Rework will be required on any portion of the cutting unit not meeting acceptable criteria

O1 – ROAD MAINTENANCE – HEAVY BRUSHING

O1 units (roads) are listed in table 1 of this provision and are shown on the Contract Area Map-Stewardship Items O1 & O2.

Work under item O1 must be completed by October 1st, 2016.

The requirement is to perform heavy brushing on the listed roads identified in the following table and on the contract area map.

DESCRIPTION – HEAVY BRUSHING

Contractor shall furnish all labor, equipment, materials, tools, transportation, supplies (including safety), supervision, and perform all work necessary for heavy brushing, and or mowing in accordance with these specifications and drawings. The work consists of mechanical and hand heavy brushing on road right-of-ways as described below.

PUBLIC SAFETY AND TRAFFIC CONTROL

The Contractor shall exercise caution and care while pursuing the work to prevent unnecessary conflict with, or potential hazard to road users. The Contractor shall post warning signs with flags on each end of the section of road being worked. Signs shall be of the size, quantity and colors as required in the current edition of the “Manual of Uniform Traffic Control Devices”, (MUTCD). A copy of MUTCD is located in each Forest Service office and will be available to the Contractor for in-office reference on request. These signs shall be moved as needed to properly delineate and identify the section of road being maintained. At no time shall these signs be more than 2 miles from operating equipment and shall be in place only when equipment or personnel are actually performing operations. All slow-moving equipment shall have a reflectorized “slow moving” vehicle emblem properly attached.

All work shall be scheduled so that at the end of the workday, the road is passable for the type of traffic normally using the road. If, for any reason, traffic hazards are left adjacent to the road after normal work period, they shall be properly signed as hazards and visibly illuminated at night. Segments of unfinished work, which may present a hazard to road users, shall not be left in the roadway overnight, during weekends or holidays.

TECHNICAL SPECIFICATIONS

Heavy brushing shall consist of machine or hand cutting of all brush, tree limbs, and tree boles (up to 5” diameter at breast height) from road shoulder for a distance of 12 feet from road centerline or to the original clearing limits on both sides of the road, and for a vertical distance of 14’ above ground level. The work shall include brushing of all plant growth around signs, culverts, and bridges within designated cutting areas. Brush and trees shall be cut to within 3 inches of ground level, mower height or mower height above standing water in ditches. Trees leaning into the roadway shall be cut at the base.

Overhanging branches or limbs shall be trimmed to give a clear height of 14 feet in traveled way and clearing limits. Work includes any additional brushing needed beyond 12 feet for safe sight distance at road intersections and blind curves, as determined by the Engineer Representative. Contractor can dispose of all cut material by means other than removing cut material out of the clearing limits.

Contractor shall perform plumbing (vertical alignment) of all culvert marker posts.

All heavy brush and trees shall be cut to fall away from the roadway as much as practicable. Debris cut or thrown by machinery into road ditches shall be removed to outside of ditch and placed in such a way as not to fall or wash back into ditch.

All dead or down trees that lie across the road regardless of diameter shall be removed from the riding surface.

All rock larger than 3 inches in diameter that are thrown onto the riding surface through the Contractor's operations shall be removed from the riding surface. All woody material larger than 1 inch in diameter or 2 feet in length and any other debris, which could cause tire damage, shall be removed from the riding surface.

Road signs, culverts, culvert markers, barrier posts, gates, and other appurtenances damaged by the contractor's operations shall be repaired or replaced by the contractor at his/her expense.

B. EQUIPMENT SPECIFICATIONS

1. General - All Equipment proposed to be used for performance of the work shall be of the size, type, in satisfactory operating condition and capable of producing at the manufacturer's rated horsepower. Contractor shall furnish all fuel, oil, grease, repairs, and pay any other expenses incidental to operation of the equipment.

To reduce the chance of invasive plants being spread into the National Forest, any mechanical equipment shall be pressure washed prior to beginning work on the National Forest. This applies to any mechanical equipment that could harbor clumps of vegetative material; such as bush hogs. Any equipment removed from the forest shall require cleaning as stated above before being moved back onto the forest.

Any movement or transportation of equipment to or from the work areas required to pursue the work, to repair or replace the equipment, or for Contractor's convenience, shall be at the Contractor's expense.

2. Tractor and Rotary Mower – Equipment furnished may be heavy-duty farm tractor or motor grader equipment with an operable articulated or telescopic boom mower. The vehicle shall have a minimum of 60 PTO horsepower and a minimum weight of 5000 pounds capable of cutting to clearing limits while being within the traveled way. The

mower shall be a rotary type that has a minimum reach of 12 feet, and can efficiently cut grass, brush, and trees with diameters up to 3 inches.

3. Inspection of Equipment – The Contractor’s proposed equipment shall be made available to the Forest Service for inspection prior to award of the contract. If, at any time, during the course of the contract any equipment is deemed unsatisfactory, the Contracting Officer may order removal of the unsatisfactory equipment and may require that satisfactory replacement equipment be provided at Contractor’s expense.

All equipment shall be inspected on site by the Forest Service prior to starting work to verify equipment has been properly cleaned to meet specifications.

C.04 - INSPECTION AND ACCEPTANCE

Inspection of the work performed under this contract shall be made by the ER or the designated Inspector as the work progresses to ensure compliance with the contract specifications and provisions.

TABLE 1: LIST OF ROADS FOR HEAVY BRUSHING (STEWARDSHIP ITEM 01)			
<u>FS Road Number</u>	<u>Road Name</u>	<u>Length (miles)</u>	<u>Site ID</u>
757A	Owl Branch	0.1	1
757C	Long Creek C	0.7	2
761	Road 761	0.2	3
744A	Lower Buzzard Roost	0.9	4
2533	Collins Field	0.4	5
2382	Poor Mtn Ridge	0.2	6
716A	Lost Falls	0.4	7
2152	Crossland Cove	2.1	8
2042	Pitch Pine Ridge	0.2	9
2077	Berry Ridge	0.1	10
2021	Indian Boundary	0.1	11
715B	Horsebone B	0.4	12
2050	Lee Ridge	0.2	13
2123	Lower Keith Quarter	0.1	14
704	Cherry Cove	0.6	15
2630	Rocky Ford	0.1	16
748-1	Spy Rock	5.8	17
750	West Rocky Fork	1.3	18
748B	Riley Moore Ford	0.8	19
748C	Riley Moore Shoals	0.8	20
Total		15.5	

O2 – Gate Installation

The requirement is installation of new road closure gates at specified locations, and for the removal of existing gates (if present). New gates are “farm” style gates as illustrated in figure 1. Existing gates (if present) are guardrail, pipe, or wooden gates.

The timing of gate installation work may be before, concurrent with, or after timber harvest.

Gate installation specifications are provided figure 1.

Gate signs per specification in figure 1 shall be provided by the Contractor. Sign product information and vendor contact information is provided in figure 1. Forest Service shall supply stickers for Motor Vehicle Use sign.

Gate installation locations are listed in table 2 of this provision and shown on Contract Area Map-Stewardship Items O1 & O2. Example gate installations will be shown at pre-bid field trip.

Inspection procedure

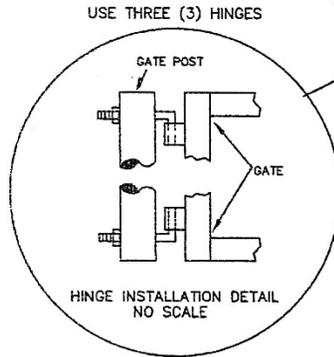
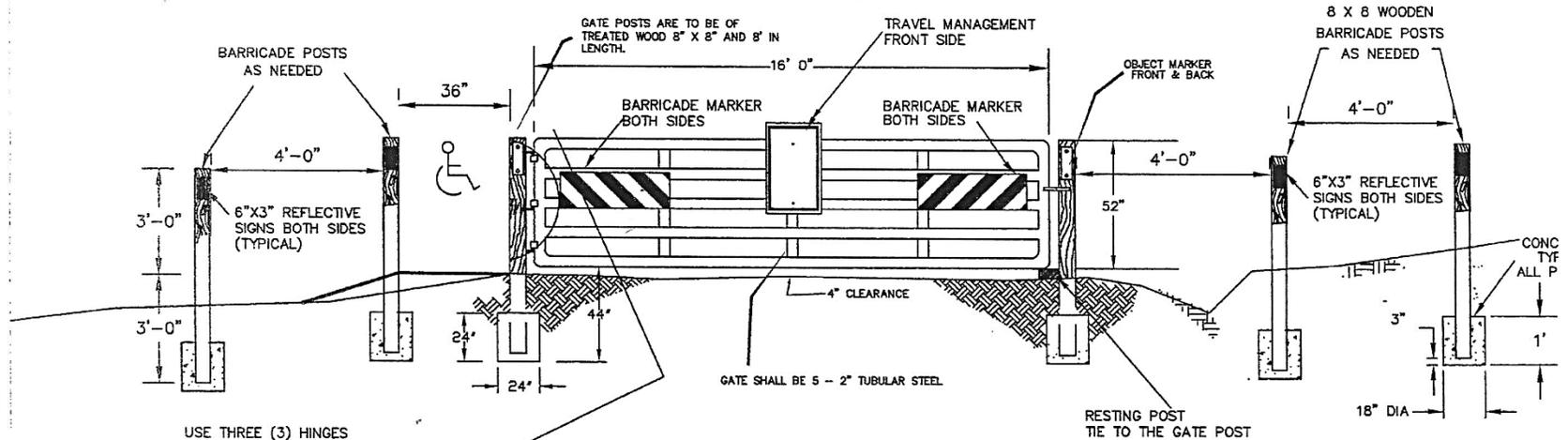
Installed gates will be inspected according to the specifications provided in figure 1.

Deviation from these specifications without prior approval from the Forest Service may require re-work.

**TABLE 2: LIST OF ROAD JUNCTIONS FOR GATE INSTALLATION
(STEWARDSHIP ITEM O2)**

Gate ID	Road Junction	Existing Barrier
1	FS 715 - Horsebone and FS 715B – Horsebone B	Guardrail gate
2	C37CH9 – Jumping Branch Road and FS 2021 – Indian Boundary	Guardrail gate
3	FS 762 – Jumping Branch and FS 2042 – Pitch Pine Ridge	Guardrail gate
4	FS 715 – Horsebone and FS 2050 – Lee Ridge	Guardrail gate
5	FS 762 – Jumping Branch and FS 2077 – Berry Ridge	Guardrail gate
6	C37CH9 – Jumping Branch Road and FS 2123 – Lower Keith Quarter	Guardrail gate
7	FS 705 – Hill Cove and FS 2630 – Rocky Ford	Guardrail gate

FARM GATE DETAIL



ACCESSIBILITY NOTES:

1. ACCESSIBLE ACCESS CAN BE PROVIDED ON EITHER SIDE OF THE GATE, WHERE GROUND CONDITION AND SHAPE FIT BETTER.
2. DO NOT BLOCK ROAD DITCH, RELOCATION MAY BE NEEDED
3. ACCESS SHALL BE 36" WIDE AT ROAD HEIGHT, BYPASSING SHALL MATCH ROAD SURFACE WITHOUT ANY OBSTACLES.
4. HINGE BOLTS SHALL BE FREE OF ANY SHARP EDGES, ON THE ACCESSIBILITY ACCESS SIDE.

NOTES:

1. WOODEN POSTS SHALL BE TREATED WITH 0.40 OF ACQ - OR CHROMATE COPPER ARSENATE (CCA), MINIMUM RETENTION 0.40 POUNDS PER CUBIC FOOT
2. GATE SHALL BE 16 GAUGE STEEL FARM TYPE, 2" TUBULAR 52" HIGH X 16" WIDE. ALL FARM GATES SHALL HAVE STANDARD RED COLOR FOR PAINT.
3. CONTRACTOR SHALL FURNISH AND INSTALL 3 GATE HINGES AND PROVIDE LOCKING CHAIN TO COR, 1/4" X 6' LONG, GALVANIZED AT EACH FARM GATE INSTALLATION.
4. ALL SIGNS, OBJECT MARKERS, AND HARDWARE SHALL BE FURNISHED AND INSTALL BY THE CONTRACTOR. FOREST SERVICE WILL APPLY STICKERS TO TRAVEL MANAGEMENT SIGN.
5. SIGN SUPPLIER INFORMATION:

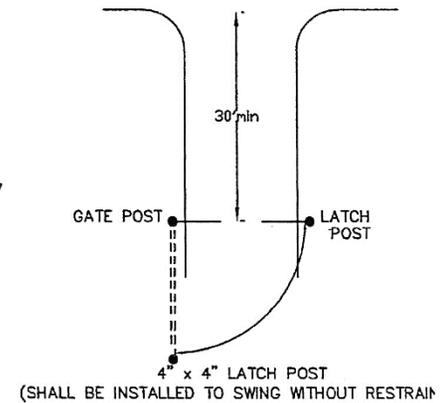
UNICOR; PHONE 1-805-735-6211, FAX 1-805-735-4507

BARRICADE MARKERS FOR GATES
 ALUMINUM, UNICOR PT#ALSP0025
 RED/WHITE, RIGHT, DIAMOND GRADE, 8X24

BARRICADE MARKERS FOR GATES
 ALUMINUM, UNICOR PT#ALSP0025
 RED/WHITE, LEFT, DIAMOND GRADE, 8X24

TRAVEL MANAGEMENT P7115
 ALUMINUM, UNICOR PT#ALSP0075
 12X18, HI-INTENSITY

OBJECT MARKER
 ALUMINUM, UNICOR PT#ALDC0025,
 YELLOW 3"X6", HI-INTENSITY



GATE PLAN

NOT TO SCALE

KT-HT.2.0.1 - TRUCK, TRACTOR, AND POWER SAW MUFFLERS (09/2004)

Effective muffler systems installed by the manufacturer as standard equipment shall be maintained on exhausts of trucks, power saws and other internal combustion engines used in the Contractor's Operations.

KT-HT.2.0.2# - FIRE FIGHTING EQUIPMENT (09/2004)

When the Forest Service advises the Contractor that local fire weather conditions are becoming critical, the Contractor shall keep with gasoline chain saws at all times dry chemical extinguisher, shovel and rake and take precautionary measures requested by the Forest Service. The Contractor shall act as custodian of fire fighting equipment furnished by the Forest Service. Equipment shall be stored in sealed boxes provided for this purpose and shall be transported to locations in the immediate vicinity of current logging and milling operations on Contract Area. The Forest Service shall be reimbursed for any damage to or loss of fire fighting equipment furnished by the Forest Service, which occurs on Negligently-Caused Fires or as a result of using equipment for unauthorized purposes.

KT-HT.2.2.1 - EMERGENCY FIRE PRECAUTIONS (09/2004)

The Contractor shall limit or restrict operations in accordance with the Fire Danger Rating schedule shown below. The Forest Service will determine Fire danger ratings by using the National Fire Danger Rating System.

The Forest Service shall notify the Contractor of predicted fire danger that may limit or restrict operations. In all cases, the actual weather elements shall govern over the predicted weather elements in determining Fire Danger. Fire danger ratings are based on a severity index from A (low) to E (highest).

Fire Danger Rating:	Limitations or Restrictions on Contractor Operations:
A to C:	Normal fire precautionary operations
C+ to D (Very High)	Forest Service may suspend any or all of Contractor's operations.
E (Extreme)	In addition to above restrictions, internal combustion engines or other spark-producing equipment shall not be operated within any areas of the timber sale without specific written approval by the Forest Service.

KT-IT.2.1.2 - MARKET-RELATED CONTRACT TERM ADDITION (11/2008)

The term of this contract may be adjusted when a drastic reduction in wood product prices has occurred in accordance with 36 CFR 223.52. The Producer Price Index used to determine when a drastic reduction in price has occurred is stated in AT.17. Contractor will be notified whenever the Chief determines that a drastic reduction in wood product prices has occurred. If the drastic reduction criteria specified in 36 CFR 223.52 are met for 2 consecutive calendar quarters, after contract award date, Contracting Officer will add 1 year to the contract term, upon Contractor's written request. For each additional consecutive quarter such a drastic reduction occurs, Contracting Officer will, upon written request, add an additional 3 months to the term during Normal Operating Season, except that no single 3-month addition shall extend the term of the contract by more than one year. Contracting Officer must receive Contractor's written request for a market-related contract term addition before the expiration of this contract.

No more than 3 years shall be added to a contract's term by market-related contract term addition unless the following conditions are met:

(i) The contract was awarded after December 31, 2006; and

(ii) A drastic reduction in wood product prices occurred in at least ten of twelve consecutive quarters during the contract term, but not including the quarter in which the contract was awarded.

For each qualifying quarter meeting the criteria in paragraphs (i) and (ii) of this provision, the Forest Service will, upon the Contractor's written request, add an additional 3 months during the normal operating season to the contract, except no single 3-month addition shall extend the term of a contract by more than 1 year.

In no event shall a revised contract term exceed 10 years as a result of market-related contract term addition.

Additional contract time may not be granted for those portions of the contract that have a required completion date or for those portions of the contract where Contracting Officer determines that the timber is in need of urgent removal or that timber deterioration or resource damage may result from delay.

KT-IT.2.3.1# - ADDITION OF NET GROWTH (09/2004)

In event of Contract Term Extension, net growth shall be added to all uncut designated timber, except on the partially cut Payment Units exempt from redetermined rates under DT.1. On the partially cut Payment Units to which redetermined rates apply under DT.1, the Forest Service shall determine the approximate percentages of area remaining uncut. These percentages shall be applied to the original estimates of timber quantity in each Payment Unit to determine the approximate quantity of designated timber remaining in each Payment Unit. The growth percentages listed herein shall be applied to these estimated remaining quantities to obtain total net growth of uncut timber in the partially cut Payment Units. For both un-entered and partially cut Payment Units, the determination of volume subject to addition of growth shall be made as of 45 days prior to the original Termination Date shown in AT.12 with no adjustment for any timber subsequently Released for Cutting or cut and removed prior the effective date of Contract Term Extension. Growth shall be calculated on the basis of total number of full growing seasons from January, 2015 until the Termination Date, including any Contract Term Adjustment.

Applicable annual growth percents by species or species groups and products are:

See Table KT-IT.2.3.1# - Addition of Net Growth, Percent Growth Table

Payment for the additional growth in partially cut Payment Units for which growth is applicable shall be made prior to the effective date of Contract Term Extension.

KT-IT.2.3.1#- Addition of Net Growth Table

SPECIES	PRODUCT	ANNUAL GROWTH PERCENT
Southern Yellow Pine	Sawtimber	4
Southern Yellow Pine	Pulpwood	8