

K-C.3.5# - DESIGNATION OF TIMBER AND SUBDIVISION/PAYMENT UNIT BOUNDARIES

Timber Designation Table

Unit/ Subdivision/Area/Pay ment Unit	Tree Paint Color	Designation or Specification
Contract Area	Green	<u>Roadside Hazard Tree</u> . Notwithstanding C.3.2 all dead and unstable live trees which are leaning towards a road or are otherwise hazardous to a road, and are sufficiently tall to reach Contractor's landings or the roadbed of National Forest System roads within Contract Area, shall be felled by Contractor when Marked in the specified paint color above and below stump height by Forest Service in advance of felling any other timber in the vicinity. Pieces meeting Utilization Standards from such dead and unstable live trees shall be removed unless Contractor is notified in writing that removal would cause unacceptable damage to areas requiring special protection such as residual timber, roads, administrative sites, streamside management zones, and areas identified on Contract Area Map or on the ground.
All Commerical Harvest Units	Blue	<u>Individual Tree Mark</u> . Individual trees are designated for cutting only if Marked above and below stump height with the specified paint color.
N/A		<u>Leave Tree Mark</u> . All live <u>N/A</u> are designated for cutting unless Marked as leave trees. Leave trees are Marked above and below stump height with the specified paint color. Contract Area Map indicates areas plainly identified on the ground where leave trees are Marked to be left uncut.
N/A		<u>Salvage Area</u> . In addition to Roadside Hazard Trees, other dead and dying timber standing or down that meets the size specification in A.2, may be designated for cutting in Salvage Areas shown on the Contract Area Map when Marked with the specified paint color in advance of felling other timber in the vicinity.
Contract Area	White "W"	<u>Wildlife Trees</u> . Notwithstanding the designation for cutting under C.3.1, C.3.3, C.3.4 or C.3.5, trees which are identified by standard Forest Service metal wildlife tree sign or painted with the specified paint color on the uphill and downhill side, shall be left uncut. In event such trees are destroyed in Contractor's Operations, Forest Service may designate alternate trees to be saved.
N/A		<u>Designation by Spacing K-C.3.5.1#</u>
N/A		<u>Designation by Species and Diameter, K-C.3.5.2#</u>
N/A		<u>Designation by Damage Class, K-C.3.5.3#</u>
N/A		<u>Designation by Row Spacing, K-C.3.5.4#</u>

Subdivision/Payment Unit Boundary Designation Table

Subdivision/Payment Unit	Boundary Paint Color	Boundary Designation
All Commerical Harvest Units	Orange	<i>Three diagonal paint strips facing into unit and one vertical strip facing up and down the unit boundary line and orange flasher tags on same three faces of the bole</i>
Mandatory Stewardship Areas	N/A	<i>Red/white striped flagging and yellow flasher tags</i>

K-F.1.2# - USE OF ROADS BY CONTRACTOR

Restricted Road List

Road Number	Road Name	<u>Termini</u> From To		Map Legend	Description of Restrictions
2S05D, G, M, P, R	Mad River Ridge		A	<i>Public Use Restriction – Road Closed to Public Use – Monday Through Friday 6:00 a.m. to 6:00 p.m.</i>	
2S26 and all spurs	Lynch Creek				
3S39 and all spurs	Smith Creek				
2S12 and all spurs	Deep Hollow				
2S13 and all spurs	Smith Peak				
3S51 and all spurs	Armstrong Creek				
3S53 and all spurs	Strong				
3S05A and B	Shannon				
				<i>Public Use Restriction-Road Closed during logging operations</i>	
3S05	Armstrong		A		

K.F.3.1# - ROAD MAINTENANCE REQUIREMENTS

Contract Road Requirements Summary

Road	Miles	Applicable PREHAUL Road Maintenance Specifications									
		801	802	803	804	805	806	807	808	809	810
2S05	5.65			C		C		C	C		
2S05G	0.20			C				C			
2S05M	1.28			C				C			
2S05R	0.29			C				C			
2S12	3.48		C	C				C			
2S12A	0.48			C				C			
2S13	3.55	C		C				C			
2S13A	0.13			C				C			
2S13C	0.67			C				C			
2S13D	0.46			C				C			
2S13F	0.85			C				C			
2S13H	0.15			C				C			C
2S13J	0.20			C				C			
2S13K	0.14			C				C			
2S13L	0.31			C				C			
2S26	1.60		C	C				C			
2S26A	0.30			C				C			
2S26C	0.30			C				C			
3S05	1.34			C				C			
3S05A	0.25			C				C			
3S05B	0.20			C				C			
3S13	2.00	C		C				C			
3S39	0.69			C				C			
3S39A	1.31			C				C			
3S39J	0.92			C				C			
3S39P	0.70			C				C			
3S51	0.73			C				C			
3S53	0.95			C				C			

C = Contractor Performance Item

K.F..3.1# - ROAD MAINTENANCE REQUIREMENTS (continued)

Contract Road Maintenance Requirements Summary

Road	Miles	Applicable DURING Road Maintenance Specifications									
		801	802	803	804	805	806	807	808	809	810
2S05	5.65						C				
2S05G	0.20						C				
2S05M	1.28						C				
2S05R	0.29						C				
2S12	3.48						C				
2S12A	0.48						C				
2S13	3.55						C				
2S13A	0.13						C				
2S13C	0.67						C				
2S13D	0.46						C				
2S13F	0.85						C				
2S13H	0.15						C				C
2S13J	0.20						C				
2S13K	0.14						C				
2S13L	0.31						C				
2S26	1.60						C				
2S26A	0.30						C				
2S26C	0.30						C				
3S05	1.34						C				
3S05A	0.25						C				
3S05B	0.20						C				
3S39	0.69						C				
3S39A	1.31						C				
3S39J	0.92						C				
3S39P	0.70						C				
3S51	0.73						C				
3S53	0.95						C				

C = Contractor Performance Item

K.F.3.1# - ROAD MAINTENANCE REQUIREMENTS (continued)

Contract Road Maintenance Requirements Summary

Road	Miles	Applicable POSTHAUL Road Maintenance Specifications									
		801	802	803	804	805	806	807	808	809	810
2S05	5.65			C							
2S05G	0.20			C							
2S05M	1.28			C							
2S05R	0.29			C							
2S12	3.48			C							
2S12A	0.48			C							
2S13	3.55			C							
2S13A	0.13			C							
2S13C	0.67			C							
2S13D	0.46			C							
2S13F	0.85			C							
2S13H	0.15			C							C
2S13J	0.20			C							
2S13K	0.14			C							
2S13L	0.31			C							
2S26	1.60			C							
2S26A	0.30			C							
2S26C	0.30			C							
3S05	1.34			C							
3S05A	0.25			C							
3S05B	0.20			C							
3S39	0.69			C							
3S39A	1.31			C							
3S39J	0.92			C							
3S39P	0.70			C							
3S51	0.73			C							
3S53	0.95			C							

C = Contractor Performance Item

K-F.3.5# - ROAD AND WATER SUPPLY USE

SPECIFICATIONS PURSUANT TO K-F.3.5# - REQUIREMENTS OF ROAD AND WATER SUPPLY USE

<p>Load Limitations</p>	<p>Contractor shall notify Forest Service in writing of the planned size and load distribution for equipment which exceeds the State of California Vehicle Code legal size and weight, and the National Forest System roads to be used. Such notice may be part of plan of operation under G.3.1.1. Within 15 days after receipt of the written notice Forest Service shall notify Contractor in writing of any regulations or restrictions that may be needed to protect National Forest Transportation Facilities.</p> <p>A written permit shall be required for moving any vehicle which is in excess of the established legal size and weight which is not listed in the above plan, except as may be authorized in prior written agreements.</p>
<p>Existing Non-National Forest System Roads</p>	<p>Roads not shown on Contract Area Map may be used as Temporary Roads if there is agreement before use is started.</p>
<p>Snow Removal</p>	<p>If Contractor removes snow from roads, such work shall be done with Forest Service approval and in a manner that will protect roads and adjacent resources.</p> <p>Snow berms shall be removed or placed to avoid accumulation of melt water on the road and prevent water concentration on erosive slopes or soils.</p> <p>Snow must not be removed to the road surface. A minimum 6 inch snow depth must be left to protect the roadway. If the road surface is damaged, Contractor shall replace lost surface material and repair structures damaged in blading operations prior to hauling, unless climatic conditions prevent necessary work from being accomplished or as otherwise agreed in writing.</p> <p>Single lane roads shall be plowed full width including turnouts. In event double lane roads are not plowed to full width, warning signs shall be required and plowing shall be no less than single lane (12 feet) with intervisible turnouts.</p>
<p>Water Supply Deposits</p>	<p>N/A</p>
<p>Surface Replacement Deposits</p>	<p>N/A</p>

K-G.3.1.5# - PROJECT OPERATIONS SCHEDULE

Schedule Pursuant To K-G.3.1.5# - Sale Operations Schedule (12/2006)

Subdivision/ Area/Unit	Conditions of Operation	Purpose
All units, and associated temporary roads and Stewardship contract areas	<i>No noise generating activity from February 1 through July 9.</i>	<i>Protection of NSO</i>
Units 4a & b, 10, 10a, 14, 34a, b & c, 40a, b, c & d, 43a, b & c, associated temporary roads and Stewardship contract areas	<i>No noise generating activity from February 1 through July 31. If protocol surveys are conducted and nesting is not occurring, period would be changed to February 1 through July 9.</i>	<i>Protection of NSO habitat</i>
Units 16b, 9a (between 2S12 and west side of 2S12A at southern switchback to southern unit boundary), 22b, associated temporary roads and Stewardship contract areas	<i>No noise generating activities from February 1 through September 15. If protocol surveys are conducted and nesting is not occurring, period would be changed to February 1 through July 9</i>	<i>Protection of NSO</i>
Units 8a, 8d, 8e, 8f and h, 7a, 7b, 12	<i>No noise generating activities from March 1 through August 31.</i>	<i>Protection of goshawk</i>
Units 3a, 3b, 3c and 39	<i>Skidding shall only occur when soils are dry to a depth of 10 inches</i>	<i>Prevention of compaction</i>
Unit 40c, 2d	<i>Skyline setup shall avoid botany site on the north end of units</i>	<i>Protection of botanical site</i>
Unit 1a, 2d, 21e, 44a	<i>Skyline setup shall avoid use of adjacent private property</i>	<i>Protection of private property</i>

K-G.4.1# - FELLING, BUCKING, AND LIMBING

SPECIFICATIONS AND TREATMENTS PURSUANT TO K-G.4.1# - FELLING, BUCKING AND LIMBING

Treatment Method and Applicable Map Symbol	Felling, Bucking and Limbing Specifications						
Limbing	Outside of construction clearings, Clearcutting Units and regeneration units, unless otherwise provided by G.4.1.4, Contractor shall, prior to skidding/yarding operations, cut exposed limbs from products which are to be skidded/yarded. Such limbing of stems shall be done to a top diameter of approximately 6 inches, at which point the top shall be cut from the remainder of the stem.						
No Lop "No Lop"	Within units or subdivisions designated NO LOP on Contract Area Map, trees shall be skidded/yarded to agreed landing locations prior to lopping.						
Whole Tree Yarding "Whole"	Notwithstanding the requirements above, within units or subdivisions designated "Whole" on Contract Area Map, trees smaller than <u>24</u> inches DBH shall be skidded/yarded to agreed landing locations prior to limbing, bucking, and lopping. Trees larger than or equal to <u>24</u> inches DBH shall be bucked into two or more pieces with the butt portion being no longer than <u>40</u> feet prior to skidding/yarding. The butt log shall not be limbed prior to skidding/yarding.						
Directional Felling "DF"	Within areas designated DF on Contract Area Map, Included Timber shall be directionally felled away from <i>Forest and County roads, springs, private property, riparian reserve</i> with the use of specialized equipment. Such directional felling shall not be required when in the faller's judgment it is unsafe to do so, and shall be left standing.						
Treatment of Stumps "TS"	N/A						
Maximum Log Length	N/A						
Minimum Stump Height	<table border="1"> <thead> <tr> <th data-bbox="511 1524 794 1602">Unit/Subdivision</th> <th data-bbox="799 1524 1073 1602">Minimum Stump Height (inches)</th> <th data-bbox="1078 1524 1352 1602">Purpose or Reason</th> </tr> </thead> <tbody> <tr> <td data-bbox="511 1608 794 1709"><i>All Units Mechanically harvested</i></td> <td data-bbox="799 1608 1073 1709">4</td> <td data-bbox="1078 1608 1352 1709"><i>Facilitate product accountability</i></td> </tr> </tbody> </table>	Unit/Subdivision	Minimum Stump Height (inches)	Purpose or Reason	<i>All Units Mechanically harvested</i>	4	<i>Facilitate product accountability</i>
Unit/Subdivision	Minimum Stump Height (inches)	Purpose or Reason					
<i>All Units Mechanically harvested</i>	4	<i>Facilitate product accountability</i>					

K-G.4.2# - GROUND BASED SKIDDING

Ground Based Skidding Table

Map Symbol	Requirements
TRAC	<p>Skid road pattern shall be agreed in advance of felling and main skid roads shall be flagged on the ground in advance of felling. Contractor shall stage-log by felling and skidding Included Timber in two or more separate operations when necessary to prevent undue damage to the resources or residual stand. Needed tractor trails shall be constructed in advance of skidding.</p> <p>Products shall be end-lined as needed to protect resources or residual timber from unnecessary damage. The number of chokers shall be limited as necessary to avoid unnecessary damage to resources or residual timber. By agreement, tractors may be used to separate products to prevent stain.</p>
SUSP	<p>Products shall be skidded with leading end clear of ground.</p>
SPACE	<p>Skid roads will average <u>75</u> feet from center to center, except where converging.</p>
ENDL	<p>Endlining shall not be required for distances in excess of <u>50</u> feet uphill, and <u>75</u> feet downhill.</p>
MAX	<p>Tractors used for skidding outside Clearcutting Units, regeneration units or other authorized clearings, shall be of the type (rubber-tired or track-laying) shown on the Contract Area Map and shall not exceed the overall width designated on Contract Area Map.</p>
MH	<p>Contractor shall cut Included Timber and move it to designated skid trails using equipment with a boom having an operating radius of at least <u>15</u> feet for bunching trees, capable of severing, lowering and placing trees up to <u>22</u> inches diameter at stump height on the ground prior to skidding. Such equipment must be capable of operating on slopes up to <u>35</u>%.</p> <p>Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources from unnecessary damage.</p> <p>Trees which exceed capability of specified equipment may be felled, bucked and skidded in a manner consistent with the requirements of G.4.1 - Felling and Bucking, K-G.4.1# - Felling, Bucking, and Limbing Requirements and the above "TRAC", "SUSP", "SPACE", "ENDL", and "MAX" requirements.</p>

Ground Based Skidding Table

<p>CTL</p>	<p>Included Timber shall be felled, limbed and bucked by a self-propelled mechanical harvester capable of producing finished sawlogs or chippable boles. Limbs of Included Timber shall be placed evenly in the machinery skid trail prior to product removal. The harvester shall be an all-wheel drive machine with at least 3 axles and a processing head mounted on a boom having a minimum-operating radius of 20 feet.</p> <p>Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources or residual timber from unnecessary damage.</p> <p>All Products shall be removed by an all-wheel drive forwarder with at least 3 axles capable of self-loading and unloading. The forwarder shall carry all products free of the ground during removal. The loading crane shall have a minimum-operating radius of 15 feet. Log landings and transfer points shall be agreed in advance of harvesting.</p> <p>Included Timber exceeding the harvester's capability may be felled by conventional chainsaw methods, forwarded to nearest skid trail and processed into a finished Product with harvester or chainsaw, consistent with the requirements G.6.1 - Meadow Protection, G.4.1 - Felling and Bucking, K-G.4.1# - Felling, Bucking, and Limbing and the above "TRAC", "SUSP", "SPACE", "ENDL", and "MAX" requirements.</p>
<p>PB</p>	<p>Contractor shall cut Included Timber and move trees to pre-approved skyline corridors to facilitate skyline yarding using equipment with a boom having an operating radius of at least <u>N/A</u> feet for bunching trees, capable of severing, lowering and placing trees up to <u>N/A</u> inches diameter at stump height on the ground prior to yarding. Such equipment must be capable of operating on slopes up to <u>N/A</u>%. Bundles shall not exceed yarder capability or cause unnecessary damage to residual stand.</p> <p>Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources from unnecessary damage. Such trees shall be felled away from the corridor in a manner that minimizes residual stand damage during yarding.</p> <p>Included Timber exceeding the feller's capability may be felled by conventional chainsaw methods.</p>
<p>HCTL</p>	<p>Included Timber shall be felled, limbed and bucked by a self-propelled mechanical harvester capable of producing finished sawlogs or chippable boles. Such equipment must be capable of operating on slopes up to <u>N/A</u>%. The harvester shall be an all-wheel drive machine with at least 3 axles, or track mounted, and a processing head mounted on a boom having a minimum-operating radius of 20 feet.</p> <p>Notwithstanding above, hand felling using chainsaws may be required in or adjacent to sensitive areas to protect resources or residual timber from unnecessary damage.</p> <p>Included Timber exceeding the harvester's capability may be felled by conventional chainsaw methods.</p>

K-G.6 – EROSION PREVENTION AND CONTROL

SPECIFICATIONS PURSUANT TO K-G.6# - EROSION PREVENTION AND CONTROL.

Vegetative Soil Stabilization N/A

Special Erosion Prevention Measures Contractor shall give adequate treatment by spreading slash or wood chips, or by agreement giving other treatment to portion of tractor roads, skid trails, landings, cable yarding corridors, tractor-end lined corridors and Temporary Road fills where necessary to supplement other erosion prevention measures required elsewhere in this contract. In no event shall Contractor be required to treat more acres than that shown in the legend of Contract Area Map. The specific locations to be treated shall be designated on the ground by Forest Service. These special erosion prevention measures are to be done within the same date and time periods as stated above.

Soil Scarification. N/A

Backblading Within recreation development sites and public use areas designated on Contract Area Map, Contractor shall, at Forest Service request, backblade skid trails in lieu of cross ditching.

Tillage In addition to meeting the requirements of G.6.4, unless otherwise agreed in writing, tillage shall be required on the areas listed in the following table.

Tillage shall be accomplished by equipment that will lift and fracture the soil by vertical and lateral shattering, leaving soil loosened through the full width and depth of the compacted layer with the topsoil remaining substantially in place rather than being inverted.

Tillage depth is shown in the following table. Agreement in writing may be made to a lesser depth if rocks or other limiting site conditions are encountered.

Tillage shall be limited to periods when soil dryness will result in crumbled soil, avoiding the formation of large clods. Contractor and Forest Service shall agree in writing on the timing of completion of such work to coordinate with desirable soil moisture conditions.

Areas to Till	Tillage Depth (Inches)	Maximum Acres to Treat
Landings (Units 3a, 3b, 3c and 39)	18	3
Main Skid Roads and Tractor Roads designated by Forest Service (Units 3a, 3b, 3c and 39: First 100 feet from landing)	18	3
Temporary Roads (Units 3a, 3b, 3c and 39)	18	3

K-G.7# - SLASH TREATMENT

SPECIFICATIONS PURSUANT TO K-G.7# - SLASH TREATMENT (12/2006)

Specified slash treatment methods shall be shown on Contract Area Map or listed in the following tables by the following symbols:

Slash Treatment Methods

<u>Symbol</u>	<u>Method</u>	<u>Definition</u>
Buck-L	“Bucking Large Logging Slash”	Tops and limbs over 4 inches diameter outside bark (d.o.b.), not to be otherwise treated, shall be bucked into lengths not to exceed 6 feet, unless agreed otherwise. <u>N/A</u>
Buck-P	“Bucking and Piling”	Logging Slash smaller than <u>N/A</u> inches and larger than 4 inches in large end d.o.b. shall be bucked into lengths not to exceed <u>N/A</u> feet and left in place. Logging Slash <u>4</u> inches and small in large end d.o.b. shall be hand piled within Required Disposal Strip for Forest Service disposal.
Bury	“Buring”	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. <u>N/A</u>
Chip	“Chipping”	Chippable Logging Slash up to 4 inches in d.o.b. shall be processed through a chipping machine. Chips shall be scattered to a loose depth not exceeding <u>6</u> inches.
Deck	“Decking” large material	Logging Slash <u>N/A</u> inches or larger in large end d.o.b and <u>N/A</u> feet or more in length shall be Decked for disposal by Forest Service by piling pieces parallel to each other.
Mach	“Machine Piling”	Concentrations of Logging Slash, excluding scattered individual pieces, shall be Machine Piled by tractor equipped with brush rake for disposal by Forest Service. <u>N/A</u>
Pile	“Piling” small material	Logging Slash small than <u>N/A</u> inches in large end d.o.b. and <u>N/A</u> feet long shall be hand Piled for disposal by Forest Service.
Remove	“Removing”	Logging Slash shall be moved or hauled to locations shown on Contract Area Map and designated on the ground where it shall be piled for disposal by Forest Service. <u>N/A</u>

SPECIFICATIONS PURSUANT TO C6.7# - SLASH TREATMENT (12/2006) (continued)

Scat 18" Scat 30"	"Scattering"	Logging Slash shall be scattered to reduce slash concentrations with slash being generally left within 18 or 30 inches of the ground as shown on Contract Area Map. Logging Slash shall be scattered into openings away from and without unnecessary damage to residual trees. All scattered logs shall be limbed, placed away from trees and positioned so they will not roll. When Scattering is specified, another method may be used by agreement.									
Stack	"Stacking" small material	Logging Slash <u>N/A</u> inches or smaller in large end d.o.b. and <u>N/A</u> feet or more in length shall be stacked for disposal by Forest Service by piling pieces parallel to each other.									
View	"Visible Slash Treatment"	Designated on Contract Area Map with boundaries posted on the ground are <u>N/A</u> with distance limitations for visible slash treatment. Within such units and the area of visible Logging Slash adjacent thereto, Logging Slash shall be treated by Contractor. Primary treatment shall be by Removing, Burying, Chipping, Piling, Machine Piling, or a combination of these means unless a method is specified or prohibited on Contract Area Map. Logging Slash not readily treated by the selected or specified method shall be removed to designated areas or treated as agreed.									
YUMD	"Yarding Unutilized Material-Decking"	All unutilized material developed by Contractor's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All Unutilized material shall be Yarded to landings and Decked. Where this is impractical, or other reason, other locations shall be agreed upon. <table border="1" data-bbox="586 1199 1424 1373"> <thead> <tr> <th data-bbox="586 1199 1052 1278">Unit</th> <th data-bbox="1052 1199 1256 1278">Large End d.o.b. (in.)</th> <th data-bbox="1256 1199 1424 1278">Length (feet)</th> </tr> </thead> <tbody> <tr> <td data-bbox="586 1278 1052 1327">N/A</td> <td data-bbox="1052 1278 1256 1327"></td> <td data-bbox="1256 1278 1424 1327"></td> </tr> <tr> <td data-bbox="586 1327 1052 1373"></td> <td data-bbox="1052 1327 1256 1373"></td> <td data-bbox="1256 1327 1424 1373"></td> </tr> </tbody> </table>	Unit	Large End d.o.b. (in.)	Length (feet)	N/A					
Unit	Large End d.o.b. (in.)	Length (feet)									
N/A											
YUME	"Yarding Unutilized Material-Exterior Boundary"	All unutilized material developed by Contractor's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized material shall be yarded to locations a minimum of 50 feet slope distance within the exterior boundaries of such units and positions so the yarded material will not roll. <table border="1" data-bbox="586 1577 1424 1747"> <thead> <tr> <th data-bbox="586 1577 1052 1656">Unit</th> <th data-bbox="1052 1577 1256 1656">Large End d.o.b. (in.)</th> <th data-bbox="1256 1577 1424 1656">Length (feet)</th> </tr> </thead> <tbody> <tr> <td data-bbox="586 1656 1052 1705">N/A</td> <td data-bbox="1052 1656 1256 1705"></td> <td data-bbox="1256 1656 1424 1705"></td> </tr> <tr> <td data-bbox="586 1705 1052 1747"></td> <td data-bbox="1052 1705 1256 1747"></td> <td data-bbox="1256 1705 1424 1747"></td> </tr> </tbody> </table>	Unit	Large End d.o.b. (in.)	Length (feet)	N/A					
Unit	Large End d.o.b. (in.)	Length (feet)									
N/A											

SPECIFICATIONS PURSUANT TO C6.7# - SLASH TREATMENT (12/2006) (continued)

YUML	"Yarding Unutilized Material-Landing"	<p>All unutilized material developed by Contractor's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized shall be yarded to locations within 100 feet slope distance of landing. Where this is impractical, or other reasons, other locations shall be agreed upon.</p> <table border="1" data-bbox="586 472 1424 646"> <thead> <tr> <th data-bbox="586 472 1052 552">Unit</th> <th data-bbox="1052 472 1256 552">Large End d.o.b. (in.)</th> <th data-bbox="1256 472 1424 552">Length (feet)</th> </tr> </thead> <tbody> <tr> <td data-bbox="586 552 1052 596">N/A</td> <td data-bbox="1052 552 1256 596"></td> <td data-bbox="1256 552 1424 596"></td> </tr> <tr> <td data-bbox="586 596 1052 646"></td> <td data-bbox="1052 596 1256 646"></td> <td data-bbox="1256 596 1424 646"></td> </tr> </tbody> </table>	Unit	Large End d.o.b. (in.)	Length (feet)	N/A					
Unit	Large End d.o.b. (in.)	Length (feet)									
N/A											
YUMR	"Yarding Unutilized Material-Remove"	<p>All unutilized material developed by Contractor's Operations shall be treated by the d.o.b. and length specifications as shown in the unit specification table. All unutilized shall be removed to locations shown on Contract Area Map and designated on the ground, or other agreed locations, and Decked.</p> <table border="1" data-bbox="586 846 1424 1022"> <thead> <tr> <th data-bbox="586 846 1052 926">Unit</th> <th data-bbox="1052 846 1256 926">Large End d.o.b. (in.)</th> <th data-bbox="1256 846 1424 926">Length (feet)</th> </tr> </thead> <tbody> <tr> <td data-bbox="586 926 1052 970">N/A</td> <td data-bbox="1052 926 1256 970"></td> <td data-bbox="1256 926 1424 970"></td> </tr> <tr> <td data-bbox="586 970 1052 1022"></td> <td data-bbox="1052 970 1256 1022"></td> <td data-bbox="1256 970 1424 1022"></td> </tr> </tbody> </table>	Unit	Large End d.o.b. (in.)	Length (feet)	N/A					
Unit	Large End d.o.b. (in.)	Length (feet)									
N/A											
Cover	"Covering Piles"	<p>All piles shall be covered with a durable waterproof covering as approved by Forest Service. The material shall be at least six feet in width. Piles shall not be less than fifty percent covered, with the covering extending not less than half way down all sides. Pieces of burnable material shall be placed on top of the durable waterproof covering to keep the covering from blowing off the pile.</p>									
Fell	"Damaged Small Trees"	<p>Unless treated under other provisions, all trees smaller than the minimum d.b.h. in A2, over 5 feet in height, and damaged beyond recovery by Contractor's Operations shall be felled. Such trees shall be limbed to a stem diameter outside bark of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and shall be bucked into lengths not exceed 20 feet.</p>									

SPECIFICATIONS PURSUANT TO C6.7# - SLASH TREATMENT (12/2006 (continued)

<p>Fire-L</p>	<p>“Firelines”</p>	<p>Shown on Contract Area Map and to be flagged on ground after logging by Forest Service are firelines to be constructed by Contractor unless otherwise agreed in writing. Contractor shall construct not more than <u>N/A</u> chains of fireline by hand and not more than <u>N/A</u> chains of fireline by tractor.</p> <p>Firelines constructed by hand shall be cleared on all vegetative debris larger than one inch in d.o.b and three feet long. The width of firelines shall be at least <u>N/A</u> feet, except across the top of cutting units where the width shall be at least <u>N/A</u> feet. At least <u>N/A</u> feet shall be scraped to mineral soil. In areas where there is potential for burning material to roll, the fireline shall be constructed in a trenched manner on the downhill side.</p> <p>Tractor lines shall be cleared on all vegetative debris, larger than one inch in diameter and three feet long, to a width of at least <u>N/A</u> feet, with at least <u>N/A</u> feet to mineral soil. No slash, brush, or other vegetative debris shall be buried in or under berms created in the construction of firelines. All limbs overhanging into the fireline, shall be removed to a minimum height of 8 feet.</p> <p>Firelines shall be completed on each unit in accordance with G.3.1.1 unless otherwise agreed in writing.</p> <p>In subdivisions <u>N/A</u> and shown on Contract area Map, Logging Slash shall be scattered within <u>N/A</u> feet slope distance of the inside edge of firelines.</p>
<p>Fuel-B</p>	<p>“Fuelbreaks”</p>	<p>Shown on Contract Area Map, with boundaries designated on the ground, are “Fuelbreaks” of varying width. Within such Fuelbreaks all Logging Slash and Construction slash shall be treated by Contractor. Primary treatment shall be by Removing, Burying, Chipping, Piling, Machine Piling, or a combination of these methods unless a method is specified or prohibited on Contract Area Map. Slash larger than treatment size requirements of selected or specified methods shall be scattered outside Fuelbreak, or treated as agreed. <u>N/A</u></p>

PILING SPECIFICATIONS. All piles shall be reasonably compact and free of soil to facilitate burning and shall be constructed of such size and at such distance from trees so that burning shall not result in unnecessary damage to residual timber. Such Logging Slash shall be bucked into lengths not exceeding ten feet prior to piling. Maximum width of tractor, with brush rake attached, shall not exceed N/A inches. Machine Piling is not required on area where use of tractors would cause undue damage to residual timber or where slopes exceed N/A percent. Piles shall be located a distance of at least twice their height in feet from the outer edge of tree crowns or snags. Piles shall be no less than four feet in height or greater than N/A feet in height. An eight foot fuelbreak shall be cleared of all but fine material around each Machine Pile and an 18 inch wide fireline shall be cleared to mineral soil around the outer right of the fuelbreak. For hand piles, Contractor shall construct a fireline cleared to mineral soil and at least 3 feet wide around each pile. In areas where there is a potential for burning material to roll, firelines, including those for Machine Piles, shall be trenched on the downhill side of each pile to adequately prevent material from crossing firelines. Trenches shall be constructed by hand unless otherwise agreed.

SPECIFICATIONS PURSUANT TO K-G.7# - SLASH TREATMENT (12/2006) (continued)

UNIT AND SUBDIVISION, SLASH TREATMENT SPECIFICATIONS.

SLASH TREATMENT		
Subdivision or Unit No.	Specified Method	Prohibited Method
Commercial harvest units and outside Mandatory Stewardship areas	<i>Scat 18"</i>	<i>Scat 30"</i>

LANDINGS AND DISPOSAL SITES. Unutilized logs accumulated at landings and disposal sites shall be Decked by Contractor for disposal by Forest Service. The maximum height of decks is shown in the following table. Other slash accumulated at landings and disposal sites shall be kept separate from unutilized logs and treated by the method shown in the following table.

SLASH TREATMENT			
	Subdivision or Unit No.	Specified Method	Masimum Height of Decks
<u>Landings</u>	<i>All Units</i>	<i>Machine. Cover</i>	<i>10</i>
<u>Disposal Sites</u>	<i>All Disposal Sites</i>	<i>Machine, Cover</i>	<i>10</i>

TREATMENT ALONG PERMANENT ROADS. Permanent roads that require roadside slash treatment are listed in the attached table and shown on the Contract Area Map. All Logging and Construction Slash within Required Disposal Strips shall be treated by Contractor. "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 and regeneration units shall 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.

Logging Slash larger than treatment sized 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.

SLASH TREATMENT				
Road No.	Subdivision and/or Unit No. or Road Junctions (From To)	Width of Required Disposal Strip	Specified Method	Slash Larger Than Treatment Size Requirements of Specified Method
N/A				

SPECIFICATIONS PURSUANT TO K-G.7# - SLASH TREATMENT (12/2006) (continued)

TREATMENT ALONG TEMPORARY ROADS. Outside of Clearcutting Units or regeneration units, all trees felled or pushed over and trees damaged beyond recovery by Temporary Road construction shall be felled, limbed to a stem d.o.b. of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and stem shall be bucked into length not exceed 5 feet. Such slash shall be Scattered free of soil to reduce concentrations unless treatment is required by another specified method.

ADDITIONAL SLASH TREATMENT REQUIREMENTS. Within areas shown on Contract Area Map, Contractor shall perform work according to the specifications in the attached table, unless otherwise agreed in writing.

Subdivision, Payment Units, Roads and/or Road Segments	Additional Slash Treatment Requirements
<i>N/A</i>	Yard all stem material to a top d.o.b. of 1 inch, from timber designated for cutting, with the following exception: broken portions of logs and tops less than 4 feet in length need not be yarded.
<i>N/A</i>	Broken ends of merchantable logs shall not be bucked off in the units.
<i>N/A</i>	Slash and Substandard Material accumulated at the landings shall be Decked or Machine Piled, in accordance with specifications above.
<i>All Units</i>	Material Accumulated at landings shall be considered as Timber Subject to Agreement under K-C.1.1#, described as Substandard Material and may be removed and paid for a Contractor's option.

ASSISTANCE IN SLASH BURNING. If Forest Service requests, Contractor shall furnish equipment and equipment operators to assist in preparation for slash burning at agreed times prior to the normal slash burning season in the area.

Contractor shall furnish equipment and equipment operators for burning and mop-up when requested. The amount and kind of equipment requested shall be that normally used in slash treatment work and reasonably available under the existing equipment organization of Contractor. Forest Service shall reimburse Contractor for such work at rates common in the area or at previously agreed rates.

K-G.9# - CONSERVATION PROJECTS**Project Number 1: Mandatory - Fuel Treatment Corridor Construction within Commercial Harvest Units:**

Objective and Desired Future Condition: Construction of fuel corridors within the Wildland Urban Interface. Fuel loading will be reduced in timber harvest units. These corridors are located along key Forest Service roads and are generally 300 feet wide from either side of the road. This contract will require only constructing those portions of fuel treatment corridors that are located **within** the timber harvest units. The photo below is representative of what the DESIRED FUTURE CONDITION would like after thinning treatments and jackpot burning.

**WORK ITEMS AND SPECIFICATIONS**

Fuel Treatment Corridors are designated with red/ white striped and green flagging, with yellow flashers stapled on trees at DBH. Payment shall be based on acres completed based on measurement by GPS to be completed by the Forest Service.

Stewardship Work

A1. Cutting and removing all live and dead conifers **3.0 to 7.9 inches** DBH in ***ground-based units*** and **5.0 to 7.9 inches** in ***skyline units***. Stumps will be cut to a height of 4 inches or less above ground and will be skidded or yarded as a whole tree to the landing.

B1. Cutting of live and dead small conifers, hardwoods, and brush **less than 3.0 inches** in ***ground-based units*** and **less than 5.0 inches** in ***skyline units***. Treatment shall be by Scat 18" – Material would be cut and scattered to a depth of 18 inches or less.

K-G.9# - CONSERVATION PROJECTS (continued)

Optional Stewardship Work:

A2. Cutting and removing all live and dead conifers **3.0 to 7.9 inches** DBH in ***ground-based units*** and **5.0 to 7.9 inches** in ***skyline units***. Stumps will be cut to a height of 4 inches or less above ground and will be skidded or yarded as a whole tree to the landing.

B2. Cutting of live and dead small conifers, hardwoods, and brush ***less than 3.0 inches*** in ***ground-based units*** and ***less than 5.0 inches*** in ***skyline units***. Treatment shall be by Scat 18” – Material would be cut and scattered to a depth of 18 inches or less.

QUALITY ASSURANCE PLAN

Item	Acceptable Quality Level - AQL	Monitoring Method	Incentives to meet AQL	Disincentives for failing to meet AQL
1	95% Compliance	Visual	100% Payment Positive Performance Report	Payment Reduction for this task Operations suspended

TREATMENT SUMMARY - Mandatory Stewardship Work

UNIT #	TOTAL ACRES	LOGGING SYSTEM	**FUELS CORRIDOR ACRES
1a	13.5	Skyline	5
1c	22.6	Ground based	9
1e	11.3	Skyline	3
3a	7.8	Skyline	4
3d	3.8	Skyline	3
4a	2.4	Ground based	2
4b	2.7	Ground based	2
9a	64.5	Skyline	9
16b	3.8	Ground based	3
TOTAL	132.4		40

**Estimated included acres within timber harvest units, final acreage will be determined by GPS upon completion of work.

TREATMENT SUMMARY – Optional Stewardship Work

UNIT #	TOTAL ACRES	LOGGING SYSTEM	**FUELS CORRIDOR ACRES
40b	14.9	Skyline	3
43a	3.4	Ground based	1
43c	2.0	Skyline	2
TOTAL	20.3		6

**Estimated included acres within timber harvest units, final acreage will be determined by GPS upon completion of work.

K-H.2# - SPECIFIED FIRE PRECAUTIONS

Specific Equipment Requirements and Fire Precautionary Measures Table – K-H.2# (10/2010)

<p>A. <u>Fire Tools and Equipment</u></p>	<p>Contractor shall meet applicable parts of Section 4428 of the California Public Resources Code (CPRC).</p> <p>Unless agreed otherwise, fire tools kept at each Active Landing shall be sufficient to equip all employees in the felling, yarding, loading, chipping, and material processing operations associated with each landing. Fire equipment shall include two tractor headlights for each tractor dozer used in Contractor’s Operations. Tractor headlights shall be attachable to each tractor and served by an adequate power source. Fire tools shall be kept in a sealed weather proof fire tool box adjacent to the Active Landing and readily accessible in event of fire. The tool box shall be painted red and have “Fire Tools” written on the box in 3-4 inch letters.</p> <p>Where cable yarding is used, Contractor shall provide a size 0 or larger shovel with an overall length of not less than 46 inches and a serviceable 5 gallon backpack pump filled with water or a fire extinguisher bearing a label showing at least a 4-A rating must be within 25 feet of each tail and corner block.</p> <p>Trucks, tractors/skidlers, pickups and other similar mobile equipment shall be equipped with and carry at all times a size 0 or larger shovel with an overall length of not less than 46 inches and a 2-1/2 pound axe or larger with an overall length of not less than 28 inches.</p> <p>The fire patrol vehicle shall be equipped to fight fire with the following: 1) a serviceable 5 gallon backpack pump filled with water, 2) a shovel or McLeod fire tool, 3) either a double bit ax or serviceable chainsaw with a minimum 20-inch base, and 4) serviceable communications equipment (K-G.2 Item O).</p> <p>All required fire tools shall be maintained in suitable and serviceable condition for fire fighting purposes</p>
<p>B. <u>Fire Extinguishers</u></p>	<p>Contractor shall equip each internal combustion yarder, fuel truck, and loader with a (4-A:60-B:C) fire extinguisher for oil and grease fires.</p> <p>Log trucks, pickups and other similar mobile equipment, including skidders and tractors, shall be equipped with a minimum 5-BC fire extinguisher.</p> <p>Fire extinguishers shall be mounted, readily accessible, properly maintained and fully charged.</p> <p>Contractor shall equip all mechanized harvesting machines and log processors with hydraulic systems, powered by an internal combustion engine (e.g. masticator, chipper, feller/buncher, harvester, forwarder, Hot Saw, stroke delimeter, etc), with at least two 4-A:60-B:C fire extinguishers or equivalent. (K-G.2 Item M)</p>
<p>C. <u>Spark Arresters and Mufflers</u></p>	<p>Except for tractors and other equipment with exhaust-operated turbochargers, Contractor shall equip each operating tractor with any other internal combustion engine with an approved spark arresters. There shall be no exhaust bypass on any system.</p> <p>Spark Arresters shall be a model tested and approved under Forest Service Standard 5100-1a as shown in the National Wildfire Coordinating Group Spark Arrester Guide, Volumes 1 and 2, and shall be properly mounted and maintained according to manufacturer’s specifications.</p> <p>Every motor vehicle subject to registration shall at all times be equipped with an adequate exhaust system meeting the requirements of the California Vehicle Code.</p>

Specific Equipment Requirements and Fire Precautionary Measures Table – K-H.2# (10/2010) (continued)

<p>D. <u>Power Saws</u></p>	<p>Each power saw shall be equipped with a spark arrester approved and maintained in effective working order as identified in the Spark Arrester Guide in C above and according to applicable parts of CPRC Section 4442 or 4443. An Underwriters Laboratories (UL) approved fire extinguisher containing a minimum 14 ounces of fire retardant shall be kept with each operating saw, unless provided otherwise in CPRC Section 4431.</p> <p>A size 0 or larger shovel with an overall length of not less than 38 inches shall be kept with each gas can, but not more than 300 feet from each power saw when used off cleared landing areas.</p>
<p>E. <u>Fire Supervisor & Fire Patrolperson</u></p>	<p>Contractor shall designate in the fire plan required by H.1 and furnish on Sale Area during operating hours a fire supervisor, named in writing and authorized to act on behalf of Contractor in fire prevention and suppression matters.</p> <p>Unless agreed otherwise, Contractor shall furnish and designate in writing, a Fire Patrolperson each operating day when Project Activity Level B or higher is in effect. When on duty, the Fire Patrolperson is required to patrol the operation for the prevention and detection of fires, to take suppression action where necessary, to document the areas covered during the patrol with approximate times of the coverage in each area, and to notify the Forest Service as required under Items K. <u>Reporting Fires</u> and N. <u>Communications</u>.</p> <p>By written agreement, one Fire Patrolperson may provide patrol on this and adjacent projects or sales. No Fire Patrolperson shall be required on Specified Road construction jobs except during clearing operations unless otherwise specified.</p> <p>On operations utilizing mechanized harvesters with High Speed Rotary Saws (Hot saws) or Masticators, the patrol will conduct inspections using an approach capable of detecting small smoldering fires. The patrol must cover, on foot, the area worked that day. The patrol's vehicle shall be parked within or as closely as possible to the area being patrolled. The patrol shall carry a round point shovel with an overall length of at least 46 inches during the patrol.</p>
<p>F. <u>Seasonal Permits</u></p>	<p>Contractor shall obtain written permits from Forest Service before allowing attended warming fires, burning, or blasting, subject to K-G.2.2# - Emergency Precautions. In addition, Contractor shall obtain necessary Explosives Permits as required by California Health and Safety Code, Section 12101.</p>
<p>G. <u>Blasting</u></p>	<p>Contractor shall use electric caps only unless otherwise agreed in writing. When blasting is necessary in slash areas, a watchperson equipped with a size 0 or larger shovel with an overall length of not less than 46 inches and a filled backpack can (4 or 5 gallon) with hand pump shall remain in the immediate area for an hour after blasting has been completed.</p>

Specific Equipment Requirements and Fire Precautionary Measures Table – K-G.2# (10/2010) (continued)

<p>H. <u>Clearing of Fuels</u></p>	<p>Contractor shall clear away, and keep clear, fuels and logging debris as follows:</p> <table border="1"> <tr> <td data-bbox="391 338 805 478"> <p>Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:</p> </td> <td data-bbox="805 338 1414 478"> <p>10 feet slope radius</p> </td> </tr> <tr> <td data-bbox="391 478 805 680"> <p>Tail or corner haulback blocks:</p> </td> <td data-bbox="805 478 1414 680"> <p>During the period when burning permits are required, all tail and side blocks on cable setting shall be located in the center of an area that is either cleared to mineral soil or covered with a fireproof blanket that is at least 15 feet in diameter.</p> </td> </tr> <tr> <td data-bbox="391 680 805 785"> <p>Lines near, between or above blocks:</p> </td> <td data-bbox="805 680 1414 785"> <p>Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material.</p> </td> </tr> <tr> <td data-bbox="391 785 805 898"> <p>Skidders, Harvesters, Chippers, Masticators and other similar equipment:</p> </td> <td data-bbox="805 785 1414 898"> <p>Remove concentrations of wood dust and debris from such equipment daily.</p> </td> </tr> <tr> <td data-bbox="391 898 805 1066"> <p>Mechanized harvesters with High Speed Rotary Saws (Hot Saws):</p> </td> <td data-bbox="805 898 1414 1066"> <p>Equipment operators are required to assure that if wood debris or chips are accumulating in the cutting head, they clean out the blade guard no less frequently than every two hours during operations.</p> </td> </tr> </table>	<p>Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:</p>	<p>10 feet slope radius</p>	<p>Tail or corner haulback blocks:</p>	<p>During the period when burning permits are required, all tail and side blocks on cable setting shall be located in the center of an area that is either cleared to mineral soil or covered with a fireproof blanket that is at least 15 feet in diameter.</p>	<p>Lines near, between or above blocks:</p>	<p>Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material.</p>	<p>Skidders, Harvesters, Chippers, Masticators and other similar equipment:</p>	<p>Remove concentrations of wood dust and debris from such equipment daily.</p>	<p>Mechanized harvesters with High Speed Rotary Saws (Hot Saws):</p>	<p>Equipment operators are required to assure that if wood debris or chips are accumulating in the cutting head, they clean out the blade guard no less frequently than every two hours during operations.</p>
<p>Welding equipment and stationary log loaders, yarders and other equipment listed in California State Law:</p>	<p>10 feet slope radius</p>										
<p>Tail or corner haulback blocks:</p>	<p>During the period when burning permits are required, all tail and side blocks on cable setting shall be located in the center of an area that is either cleared to mineral soil or covered with a fireproof blanket that is at least 15 feet in diameter.</p>										
<p>Lines near, between or above blocks:</p>	<p>Sufficient clearing to prevent line from rubbing on snags, down logs and other dead woody material.</p>										
<p>Skidders, Harvesters, Chippers, Masticators and other similar equipment:</p>	<p>Remove concentrations of wood dust and debris from such equipment daily.</p>										
<p>Mechanized harvesters with High Speed Rotary Saws (Hot Saws):</p>	<p>Equipment operators are required to assure that if wood debris or chips are accumulating in the cutting head, they clean out the blade guard no less frequently than every two hours during operations.</p>										
<p>I. <u>Oil Filters and Glass Jugs</u></p>	<p>Contractor shall remove from National Forest Lands oily rags and used oil filters and shall prohibit use of glass bottles and jugs in Contractor's Operations.</p>										
<p>J. <u>Smoking</u></p>	<p>All smoking shall be confined within a car, truck, crew rig or other enclosed cab after 1:00 PM on Ev days and all hours on E days (K-G.2.2#). At other times, any smoking shall be done while sitting in an area at least 3 feet in diameter, cleared of flammable materials. Burning tobacco and matches shall be extinguished before they are properly disposed.</p>										
<p>K. <u>Reporting Fires</u></p>	<p>As soon as feasible, but no later than 15 minutes after discovery, Contractor shall notify Forest Service of any fires on Sale Area or along roads used by Contractor.</p>										
<p>L. <u>Tank Truck</u></p>	<p>Contractor shall meet minimum requirements of Section 4430 of the CPRC.</p> <p>Contractor shall provide a water tank truck or trailer on or in proximity to Sale Area during Contractor's Operations hereunder during Fire Precautionary Period unless otherwise agreed. When Project Activity Level B or higher is in effect, a tank truck or trailer shall be on or within ten (10) roundtrip minutes to each Active Landing unless otherwise excepted when Hot Saw or masticator is being used. See K-G.2.2# for specific contract requirements.</p> <p>Tank truck or trailer shall contain at least 300 gallons of water and comply with the following requirements:</p> <p>(1) Pump, which at sea level, can deliver 23 gallons per minute at 175 pounds per square inch measured at the pump outlet. Pumps shall be tested on Sale Area using a 5/16 inch orifice in the Forester One Inch In-Line Gauge test kit or an equivalent water flow test kit. Pump shall meet or exceed the pressure value in the following table for nearest temperature and elevation:</p>										

Specific Equipment Requirements and Fire Precautionary Measures Table – K-G.2# (10/2010) (continued)

Temp	Sea Level		1000 Feet		2000 Feet		3000 Feet		4000 Feet		5000 Feet		6000 Feet		7000 Feet		8000 Feet		9000 Feet		10,000 Feet	
55	17 9	23	17 4	23	16 9	23	16 5	22	16 1	22	15 7	22	15 3	22	15 0	21	14 6	21	14 2	21	13 9	21
70	17 5	23	17 1	23	16 6	22	16 2	22	15 8	22	15 4	22	15 0	21	14 7	21	14 3	21	13 9	21	13 6	20
85	17 1	23	16 8	23	16 3	22	15 9	22	15 5	22	15 1	21	14 7	21	14 4	21	14 0	21	13 6	20	13 3	20
100	16 8	23	16 4	23	15 9	22	15 5	22	15 2	22	14 8	21	14 4	21	14 1	21	13 7	20	13 3	20	13 1	20
	P S I	G P M																				

	<p>The pump outlet shall be equipped with 1-1/2 inch National Standard Fire Hose thread. A bypass or pressure relief valve shall be provided for other than centrifugal pumps.</p> <p>(2) 300 feet of <u>3/4-inch inside diameter</u> rubber-covered high-pressure hose mounted on live reel attached to pump with no segments longer than 50 feet, when measured to the extreme ends of the couplings. Hose shall have reusable compression wedge type 1-inch brass or lightweight couplings (aluminum or plastic). One end of hose shall be equipped with a coupling female section and the other end with a coupling male section. The hose shall, with the nozzle closed, be capable of withstanding 200 PSI pump pressure without leaking, distortions, slipping of couplings or other failures.</p> <p>(3) A shut-off combination nozzle that meets the following minimum performance standards when measured at 100 P.S.I. at the nozzle:</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th></th> <th>G.P.M.</th> <th>Horizontal Range</th> </tr> </thead> <tbody> <tr> <td>Straight Stream</td> <td>10</td> <td>38 feet</td> </tr> <tr> <td>Fog Spray</td> <td>6-20</td> <td>N/A</td> </tr> </tbody> </table>		G.P.M.	Horizontal Range	Straight Stream	10	38 feet	Fog Spray	6-20	N/A
	G.P.M.	Horizontal Range								
Straight Stream	10	38 feet								
Fog Spray	6-20	N/A								
	<p>(4) Sufficient fuel to run pump at least 2 hours and necessary service accessories to facilitate efficient operation of the pump.</p> <p>(5) Ample power and hitch shall be readily accessible for promptly and safely moving tank truck or trailer over roads serving Sale Area or terrain traveled by Hot saws or masticators.</p> <p>(6) When Contractor is using Mechanized harvesters with High Speed Rotary Saws (Hot Saws) or Masticators, an additional 250 feet of comparable hose shall be immediately available for use and be capable of connecting to the 300 feet of hose and appurturances in (2) and (3) above. Additional hose lengths shall not exceed 100 feet in length.</p>									

Specific Equipment Requirements and Fire Precautionary Measures Table – K-G.2# (10/2010) (continued)

<p>M. <u>Compressed Air Foam System (CAFS)</u></p>	<p>By agreement, Contractor may substitute a CAFS or functional equivalent in lieu of the tank truck, trailer or fire extinguishers, provided it meets or exceeds the following specifications:</p> <ol style="list-style-type: none"> 1. Variable foam expansion ratio – 10:1 to 20:1. 2. Units shall be kept fully charged with air; water and foam concentrate as recommended by the manufacturer and have the appropriate tools to service the system. 3. The unit shall contain enough energy to empty tank and clear hose prior to exhausting propellant.
	<ol style="list-style-type: none"> 4. The unit shall be capable of being completely recharged within 10 minutes. 5. When used on yarder landings, the unit shall be outfitted for immediate attachment to carriage and transported without damage to the unit. <p>Fire extinguishers required for Hot Saws, masticators and similar equipment identified in B. above may be substituted with a CAFS that provides a minimum of 3 gallons of water and has a minimum discharge range of 20 feet. The system must have enough water, air and foam concentrate to recharge the system once.</p> <p>Tank truck, trailer, All Terrain Tank Truck or equivalent may be substituted with a CAFS. Systems shall provide a minimum of 60 gallons stored energy with 500 feet of one inch hose, an adjustable one inch nozzle providing a minimum discharge range of 70 feet and must have enough water, air and foam concentrate for a minimum of two recharges or a system that provides a minimum of 30 gallons stored energy with enough water, air and foam concentrate for a minimum of five recharges. Systems shall be mobile, readily accessible and equipped so that it can be moved saafely over Sale Area roads or terrain traveled by Hot Saws or masticators.</p> <p>If, in the opinion of the Contracting Officer, it becomes apparent that this equipment cannot provide fire protection equal to the tank truck or trailer listed above, the Contracting Officer will rescind this substitution of requirements.</p>
<p>N. <u>Portable Fire Tank</u></p>	<p>By agreement, Contractor may substitute a Portable Fire Tank in lieu of the tank truck or trailer. A portable water tank, pump and accessories that meets all K-G.2# Tank Truck minimum specifications, with the exception of the live reel, plus a charged hose lay within 200 feet of operations and enough additional hose on site to complete the hose lay to where the Hot Saw or masticator is working.</p>

Specific Equipment Requirements and Fire Precautionary Measures Table – K-G.2# (10/2010) (continued)

<p>O. <u>Communications</u></p>	<p>Contractor shall furnish a serviceable communications system such as a telephone, radio-telephone, radio system or satellite phone connecting each operating side within the Sale Area with Contractor’s headquarters, and capable of notifying Forest Service within <u>15 minutes of discovery of any fires</u> on the Sale Area or along Contractor’s haul route. When such headquarters is at a location which makes communication to it clearly impractical, Forest Service may agree to a reasonable alternative notification method.</p> <p>The communication system shall provide prompt and reliable communications during all hours of operations, including fire patrol person, between Contractor’s headquarters or the agreed to alternative notification method and Forest Service during the Fire Precautionary Period.</p> <p>A Citizen’s Band (CB) radio is not acceptable communication for timber sale operations as FCC Regulations prohibit commercial use.</p>
<p>P. <u>Skyline Tank Unit</u></p>	<p>When all or part of Included Timber will be yarded by a long span (over 1,500 feet) skyline, Contractor shall provide at each active skyline landing a suitable tank trailer, or tank unit or CAFS which can be lifted and transported the skyline carriage.</p> <p>The unit shall meet the same requirements as specified for the water tank truck or trailer or approved substitute.</p> <p>The CAFS shall be located and outfitted for immediate use at the landing, and equipped for undamaged delivery to any portion of the operation by use of the rigging system.</p> <p>The tank unit of CAFS shall be deliverable to a fire, in the area of skyline operations, within 15 minutes of detection.</p>
<p>Q. <u>Helicopter Yarding Fire Precautions</u></p>	<p>Contractor shall provide and maintain fire equipment as follows:</p> <ol style="list-style-type: none"> 1. The fire tool bos required under this provision shall be equipped for attachment to the helicopter long line so that it may be hauled to needed locations. Such attachment device shall not interfere with access to fire tools. Unless agreed otherwise, the fire tool box shall be located at the Active Landing ready for immediate dispatch. 2. An external helibucket readily attachable to the helicopter, with a capacity of at least 500 gallons, and having a remote control door mechanism adequate for rapid dropping of water. The helibucket shall be located at the helicopter service landing and shall be filled with water ready for immediate dispatch unless otherwise agreed. 3. All aircraft used in conjunction with Contractor’s Operations shall be equipped with an operable radio system capable of meeting Region Five avionics requirements. 4. For protection of fuel servicing operations, fire extinguishers which have the following ratings based on the open hose discharge capacity, i.e. “broken hose,” of the aircraft fueling system shall be readily available: <ol style="list-style-type: none"> a. Where said capacity does not exceed 200 gallons per minute, at least one approved extinguisher having a minimum rating of 20-B; b. Where said capacity is in excess of 200 gallons per minute, but not over 350 gallons per minute, one approved extinguisher having a minimum rating of 80-B. Where said capacity is in excess of 350 gallons per minute, two approved extinguishers, each having a minimum rating of 80-B. 5. By agreement, a suitable CAFS may also be used in lieu of the above extinguishers. 6. Extinguishers of over 50 pounds gross weight shall be of wheeled type or be mounted on carts to provide mobility and ease of handling.

K-H.7.7# - EMERGENCY PRECAUTIONS (10/2010)

PROJECT ACTIVITY LEVEL TABLE

Level	<i>Project Activity Minimum Requirements and Restrictions. Restrictions at each level are cumulative.</i>
A	Minimum required by H.19.
B	<ol style="list-style-type: none"> 1. Fire Patrolperson is required for at least one hour after operations cease, the Fire Patrolperson(s) must walk and visually inspect all areas operated that day.(H.19) 2. Tank truck, trailer, or comparable CAFS, shall be on or within 10 roundtrip minutes road travel to each Active Landing. (H.19) 3. Mechanized harvesters with High Speed Rotary Saws (Hot Saws) and Masticators: <ol style="list-style-type: none"> A. Fire patrol is required throughout the first two hours after cessation of felling, the Fire Patrolperson(s) must walk and visually inspect all areas operated that day (H.19) B. Equipment operating within one-quarter mile of the Active Landing. <ol style="list-style-type: none"> 1) All Terrain Tank Truck, trailer or comparable CAFS shall be on or within ten (10) roundtrip minutes to each Active Landing. 2) Serviceable Communications shall exist between the equipment operators, landing personnel, and designated Fire Supervisor. C. Equipment operating beyond one-quarter mile of the Active Landing. <ol style="list-style-type: none"> 1) In addition to the above requirements, an approved CAFS with minimum requirements of 20 gallons stored energy, 100 feet of 1 inch hose and adjustable 1 inch nozzle, minimum discharge range of 60 feet (H.19,Item M) or equivalent within the Immediate Vicinity of the equipment is required. D. Equipment operating independently without an Active Landing. <ol style="list-style-type: none"> 1) All Terrain Tank Truck or Equivalent shall be within the Immediate Vicinity of the equipment. 2) Serviceable Communications shall exist between the equipment operators, Contractor's main office and designated Fire Supervisor (H.19, Item O).
C	<p>The following operations are prohibited from 1:00 PM until 8:00 PM except as noted:</p> <ol style="list-style-type: none"> a. Mechanized harvesters with High Speed Rotary Saws (Hot Saws) and Masticators – except that Hot Saws and masticators may operate between 1:00 PM and 8:00 PM provided that an All Terrain Tank Truck or Equivalent or comparable CAFS shall be within the Immediate Vicinity of the equipment. b. Blasting c. Dead tree felling, except recently dead.

K-H.7.7# - EMERGENCY PRECAUTIONS (10/2010) (continued)

<p>D</p>	<p>The following restrictions apply:</p> <ol style="list-style-type: none"> 1. The following activities may operate when a Fire Patrolperson(s) walks all areas operated that day, starting at 1:00 PM, at least once per hour until sunset: <ol style="list-style-type: none"> a) Track-laying equipment in skidding, erosion control, felling, and piling operations. b) Chipping outside of approved landings and roadbeds. c) Cable Yarding with Approved Motorized Carriages. Carriage shall remain a minimum of ten feet above the ground at all times, except while at the landing. d) Mechanical limbing and log manufacturing outside of approved landings and roadbeds. e) Ripping roads and landings, sub soiling and water barring. f) Chainsaw operations outside of approved landings and roadbeds. 2. Mechanized harvesters with High Speed Rotary Saws (Hot Saws) and Masticators may operate; provided that: <ol style="list-style-type: none"> a) An All Terrain Tank Truck or Equivalent shall be within the Immediate Vicinity of the equipment. b) Within the first hour of mechanized harvester operation and at least once per hour until sunset, the Fire Patrolperson(s) must walk and visually inspect all areas operated that day. 3. No blasting after 10:00 AM. 4. Welding or cutting of metal only by special permit. 5. No burning.
<p>Ev</p>	<ol style="list-style-type: none"> 1. The following operations are prohibited: <ol style="list-style-type: none"> a) Blasting b) Welding or cutting metal c) Burning d) Smoking outside a vehicle 2. The following activities may operate all day: <ol style="list-style-type: none"> a) Loading and hauling logs decked at approved landings b) Loading and hauling chips stockpiled at approved landings c) Servicing equipment at approved sites d) Dust abatement, road maintenance (Chainsaw use prohibited), culvert installation within cleared area, chip sealing, paving, earth moving or rock aggregate stock pile loading and installation (does not include pit or quarry development) e) Chainsaw and log processing operations associated with loading logs or other forest products at approved landings 3. Mechanized harvesters with High Speed Rotary Saws (Hot Saws) or Masticators may operate until 1:00 PM; provided that: <ol style="list-style-type: none"> a) An All Terrain Tank Truck or Equivalent shall be within the Immediate Vicinity of the equipment b) Within the first hour of mechanized harvester operation and at least once per hour until sunset, the Fire Patrolperson(s) must walk and visually inspect all areas operated that day 4. All other Mechanical Operations are permitted until 1:00 PM when a Fire Patrolperson(s) walks all areas operated that day, starting at 9:00 AM, at least once per hour and continues until at least two hours after Mechanical Operations cease. 5. Some operations, on a case-by-case basis, may be permitted after 1:00 PM under the terms of a PAL Ev Variance Agreement. Activities for which a Variance may be issued are limited to the following operations: <ul style="list-style-type: none"> • Rubber tire skidding • Chipping on Landings • Helicopter Yarding

	<p>When approved by a Line Officer, a Variance Agreement can be implemented when the criteria specified in the agreement are met and mitigation measures are in place. This approval is good for ten (10) days unless cancelled sooner or extended by the Contracting Officer for an additional ten (10) days. Variance approval can be withdrawn at the sole discretion of the Forest Service. Variance approval is contingent on the 10-day fire weather forecast, fuel conditions, site characteristics, current fire situation, state of Contractor's equipment for prevention and suppression readiness, type of operation and social and community considerations etc. (See attached Project Activity Level Variance Agreement).</p>
--	--

Region 5 Project Activity Level (PAL) Ev Variance Application/Agreement

Project Name: _____

Contract Number: _____

Purchaser/Contractor Name: _____

Request #__, for period: _____

Units/Subdivisions Affected: _____

Location of operation:	
-------------------------------	--

Slope	
Aspect	
Elevation	
Fuels on site	
Fuels in surrounding area	
10 day Forecast	
Short range predictions (Red Flags)	
Fuel Moistures	
Response time of suppression resources	
Potential for ignition	
RAWS location	

Current Fire Situation:	
--------------------------------	--

Draw down information	
National Readiness Level	

Contractual considerations:	
------------------------------------	--

Normal Operating Season	
Frequency of recent contract fires in area	
Type of operation	
Purchaser/Contractor's past/current performance & equipment readiness	
Other site-specific mitigation or precaution (i.e. Purchaser/Contractor's proposals)	

Social & Community Considerations:	
---	--

Proximity of high value resources	
Sensitivity of location	

Remarks:

Ev Proposed Actions

Rubber Tired Skidding

Chipping on Landings

Helicopter Yarding

Description of Mitigation Measures

Fire Management Officer Concurrence

Date

Line Officer Approval

Date

I have considered the above request and determined the specified mitigation measures or actions must be implemented to continue operations in Project Activity Level Ev. Unless extended, the approval remains in effect for ten (10) calendar days unless cancelled sooner or extended by the Forest Service for an additional ten (10) days. At the sole discretion of the Forest Service, this variance can be modified and/or cancelled at no cost to the government.

Contracting Officer

Date

Purchaser/Contractor Rep.

Date

Contract Name: Smith Peak Stewardship

Road Maintenance T-Specifications
For
Timber Sale and Stewardship Contracts
(To be used with Contract Form IRTC)

No.	Specification Title
T-800	Definitions
T-801	Slide and Slump Repair
T-802	Ditch Cleaning
T-803	Surface Blading
T-804	Surface Repair
T-805	Drainage Structures
T-806	Dust Abatement
T-807	Roadway Vegetation
T-808	Miscellaneous Structures
T-809	Waterbars
T-810	Barriers
T-811	Surface Treatment

SPECIFICATION T-800 DEFINITIONS

Wherever the following terms or pronouns are used in Specifications T-801 through T-811, the intent and meaning shall be interpreted as follows:

800-1.1 - Agreement. Maintenance projects require a mutually acceptable method to resolve the problems which arise when incompatible situations arise between drawings and specifications and actual conditions on the ground to allow orderly and satisfactory progress of the maintenance.

These specifications have been developed in anticipation of those problem areas and have provided that such changes will be by agreement.

It is intended that drawings and specifications will govern unless "on-the-ground" conditions warrant otherwise, when specifications call for "agreement", "agreed", or "approval" such agreement or approval shall be promptly confirmed in writing.

800-1.2 - Annual Road Maintenance Plan. A plan prepared by various users of one or several roads. The plan is an agreement on maintenance responsibilities to be performed for the coming year.

800-1.3 - Base Course. Material used to reinforce subgrade or, as shown on drawings, placed on subgrade to distribute wheel loads.

800-1.4 - Berm. Curb or dike constructed to prevent roadway run-off water from discharging onto embankment slope.

800--1.5 - Borrow. Select material taken from designated borrow sites.

800-1.6 - Crown, Inslope and Outslope. The cross slope of the traveled way to aid in drainage and traffic maneuverability.

800-1.7 - Culverts. A conduit or passageway under a road, trail or other obstruction. A culvert differs from a bridge in that it is usually entirely below the elevation of the traveled way.

800-1.8 - Drainage Dip. A dip in the traveled way which intercepts surface runoff and diverts the water off the traveled way. A drainage dip does not block the movement of traffic.

800-1.9 - Drainage Structures. Manufactured structures which control the runoff of water from the roadway including culverts, overside drains, aprons, flumes, downdrains, downpipes, and the like.

800-1.10 - Dust Abatement Plan. A table which lists the road, dust palliative, application rates and estimated number of subsequent application.

800-1.11 - Lead-Off Ditches. A ditch used to transmit water from a drainage structure or drainage dip outlet to the natural drainage area.

800-1.12 - Material. Any substances specified for use in the performance of the work.

800-1.13 - Prehaul Maintenance. Road maintenance work which the Contractor determines must be accomplished to maintain the roads to a satisfactory condition commensurate with Contractor's use, provided Contractor's Operations do not damage improvements under G.2.2.2 or National Forest resources and hauling can be done safely. This work will be shown in the Annual Road Maintenance Plan as provided in G.3.1.

Prehaul maintenance work the Contractor elects to perform will be in compliance with the Road Maintenance T-Specifications.

800-1.14 - Roadbed. The portion of a road between the intersection of subgrade and sideslopes, excluding the portion of the ditch below subgrade.

800-1.15 - Road Maintenance Plan. A table which shows applicable road maintenance specifications to be performed by Contractor on specified roads.

800-1.16 - Roadside. A general term denoting the area adjoining the outer edge of the roadway.

800- 1.17 - Roadway. The portion of a road within the limits of excavation and embankment.

800-1.18 - Shoulder. That portion of roadway contiguous with traveled way for accommodation of stopped vehicles, for emergency use, and lateral support of base and surface course, if any.

800-1.19 - Slide. A concentrated deposit of materials from above or on backslope extending onto the traveled way or shoulders, whether caused by mass land movements or accumulated raveling.

800-1.20 - Slough. Material eroded from the backslope which partially or completely blocks the ditch, but does not encroach on the traveled way to as to block passage of traffic.

800-1.21 - slump. A localized portion of the roadbed which has slipped or otherwise become lower than that of the adjacent roadbed and constitutes a hazard to traffic.

800-1.22 - Special Project Specifications. Specifications which detail conditions and requirements peculiar to the individual project.

800-1.23 - Subgrade. Top surface of roadbed upon which base course or surface course is constructed. For roads without base course or surface course, that portion of roadbed prepared as the finished wearing surface.

800-1.24 - Surface Course. The material placed on base course or subgrade primarily to resist abrasion and the effects of climate. Surface course may be referred to as surfacing.

800-1.25 - Surface Treatment Plan. A table which lists the roads and surface treatments to be applied.

800-1.26 - Traveled Way. That portion of roadway, excluding shoulders, used for the movement of vehicles.

800-1.27 - Turnouts. That portion of the traveled way constructed as additional width on single lane roads to allow for safe passing of vehicles.

800-1.28 - Water Source. A place designated on the Road Maintenance Map for acquiring water for road maintenance purposes.

800-1.29 - Waterbar. A dip in the road bed which intercepts surface runoff and diverts the water off the roadway. A waterbar is not designed to be traversable by logging trucks.

SPECIFICATION T-801 - SLIDE AND SLUMP REPAIR

DESCRIPTION

1.1 Slide removal is the removal from roadway and disposal of any material, such as soil, rock, and vegetation that cannot be routinely handled by a motor grader during Ditch Cleaning, T-802, and Surface Blading, T-803 operations.

Slump repair is the filling of depressions or washouts in Roadway which cannot be routinely filled by a motor grader during Surface Blading, T-803 operations.

Slide removal and slump repair includes excavation, loading, hauling, placing, and compacting of waste or replacement material and the development of disposal or borrow areas.

REQUIREMENTS

3.1 Slide material, including soil, rock and vegetative matter which encroaches into the Roadway, shall be removed. The slope which generated the slide material shall be reshaped during the removal of the slide material with the excavation and loading equipment. Slide material deposited on the fill slope and below the Traveled Way will not be removed unless needed for slope stability or to protect adjacent resources.

Surface and Base Courses shall not be excavated during slide removal operations.

Slide material which cannot be used for other beneficial purposes shall be disposed of at disposal sites shown on the Contract Area Map. material placed in disposal sites will not require compaction unless compaction is shown on the road maintenance plan.

3.2 When filling slumps or washouts, material shall be moved from agreed locations or borrow site shown on the Contract Area Map, placed in layers, and compacted by operating the hauling and spreading equipment uniformly over the full width of each layer.

Existing aggregate surfacing shall be salvaged when practical and relaid after depressions have been filled.

Damaged aggregate base, aggregate surfacing, and bituminous pavement shall be repaired under Specification T-804 Surface Repair.

The repaired areas of the slump shall conform to the cross section which existed prior to the slump and shall blend with the adjacent undisturbed Traveled Way.

3.3 The maximum volume of Contractor responsibility for slide and slump repair is shown on road maintenance plan. Greater volumes of slide and slump repair not qualifying as Catastrophic Damage are Forest Service responsibility.

SPECIFICATION T-802 DITCH CLEANING

DESCRIPTION

1.1 Ditch cleaning is removing and disposing of all slough material from roadside ditches to provide a free-draining waterway.

REQUIREMENTS

3.1 Ditch cleaning shall be repeated during the year as often as necessary to facilitate proper drainage.

3.2 All slough material or other debris which might obstruct water flow in the roadside ditch shall be removed. Material removed from the ditch, if suitable, may be blended into existing native road surface or Shoulder or placed in designated Berms in conjunction with Surface Blading T-803 operations.

Material removed from ditches that is not by agreement blended into existing roads or placed in Berms shall be loaded and hauled to the disposal site shown on the Contract Area Map.

3.3 Roadway backslope or Berm shall not be undercut.

SPECIFICATION T-803 SURFACE BLADING

DESCRIPTION

1.1 Surface blading is keeping a native or aggregate Roadbed in a condition to facilitate traffic and provide proper drainage. It includes maintaining the crown, inslope or outslope of Traveled Way, Turnouts, and Shoulder; repairing Berms, blending approach road intersections; and cleaning of bridge decks, Drainage Dips and Lead-off Ditches.

REQUIREMENTS

3.1 Surface blading shall be performed before, during, and after Contractor's use as often as necessary to facilitate traffic and proper drainage.

3.2 The surface blading shall preserve the existing cross section. Surface irregularities shall be eliminated and the surface left in a free draining state and to a smoothness needed to facilitate traffic. Surface material which has been displaced from the Shoulders or Turnouts shall be returned to the Traveled Way. The blading operation shall be conducted to prevent the loss of surface material and to provide for a thorough mixing of the material being worked.

3.3 Water, taken from Water Sources designated on the Contract Area Map, shall be applied during blading if sufficient moisture is not present to cut, mix, or compact the surface material.

3.4 On native surfaced roads, Material generated from backslope sloughing and ditch cleaning may be blended with the surface material being worked. On aggregate surfaced roads this Material shall not be blended with Surface or Base Course material unless agreed otherwise.

3.5 Roadway backslopes or Berms shall not be undercut nor shall new Berms be established unless agreed otherwise.

3.6 Drainage Dips and Lead-off Ditches shall be cleaned and maintained to reasonably blend with existing line, grade, and cross section.

3.7 Intersecting roads shall be bladed for a distance of 50 feet to assure proper blending of the two riding surfaces.

3.8 Rocks or other material remaining on the Traveled Way after the final pass that are larger than 4 inches in diameter or are larger than the maximum size of imported surfacing shall be removed from the Traveled Way. The oversized material shall be disposed of by sidecasting unless shown otherwise on the Contract Area Map. Sidecasting into streams, leakes or water courses will not be permitted.

3.9 Material resulting from work under this specification shall not remain on or in structures, such as Culverts, overside drains, cattleguards, ditches, Drainage Dips, and the like.

3.10 Material resulting from work under this specification plus any accumulated debris shall be removed from bridge decks and the deck drains opened.

SPECIFICATION T-804 SURFACING REPAIR

DESCRIPTION

1.1 Surfacing repair is repairing potholes or small, soft areas in the Traveled Way. It includes area preparation and furnishing and placing all necessary materials, and other work necessary to repair the surface.

MATERIAL

2.1 Material used in the repair of soft areas on aggregate or native surfaced roads may be acquired from approved commercial sources, Forest Service borrow areas shown on the Contract Area Map or borrow sources agreed to. The quality and quantity of the imported Material used in the repair will be limited to that needed to provide a stable Traveled Way or hauling and to minimize damage to the road and adjacent resources. The quantity of imported repair material used in the appraisal estimate will be shown on the Road Maintenance Plan. However, the magnitude of the work may vary depending on Purchase's hauling schedule and ground conditions.

2.2 Material used in the repair of bituminous pavements may be acquired from local commercial sources. If a mixing table is required, the location shall be approved by the Forest Service. The bituminous mixture to be used by the Contractor shall be approved by the Forest Service. The Contractor's share of the quantity of bituminous mixture used in the appraisal estimate will be shown on the Road Maintenance Plan. However, Contractor's share of the work may vary depending on Contractor's hauling schedule, ground conditions, other traffic, etc.

REQUIREMENTS

3.1 Work under this specification shall be performed in a timely manner to reduce further deterioration of the Traveled Way.

3.2 Soft spots on aggregate or native surfaces shall be repaired by placing the imported surface course on top of the soft spot. Layers of imported material shall be placed until a firm surface is produced.

3.3 Bituminous Pavement Repairs

The areas to receive bituminous pavement repairs will be marked on the road surface by the Forest Service just prior to Contractor performing the work.

3.4 Potholes (deep patch

Surface Course and Base Course materials shall be excavated to a depth necessary to reach firm, suitable material. The minimum depth of excavation shall be two inches and the maximum depth of excavation shall be to the top of the Subgrade.

The edges of the prepared hole shall be extended to form a vertical face in unfractured asphalt surfacing. The prepared hole shall generally be circular or rectangular in shape, dry, and cleaned of all loose material.

Prepared potholes shall be patched or barricaded immediately.

The faces of the prepared hole shall be tacked with a slow-setting emulsified asphalt.

The bituminous mixture shall be placed in layers not exceeding a compacted depth of two inches. Each layer shall be compacted thoroughly with hand or mechanical tampers or rollers. Compaction shall not be done with equipment wheels.

Upon completion, the compacted patch in the pothole shall be flush, with a tolerance or approximately one-fourth inch to one-half inch above the level of the adjacent pavement.

3.5 Skin Patches

Prior to skin patching, potholes shall be patched, and the surface shall be cleaned of loose or deleterious material. Apply a tack coat with a slow-setting emulsified asphalt at the rate of 0.1 gallons per square yard.

Bituminous mixture shall be distributed uniformly with feathered edges in layers not to exceed two inches compacted depth. When multiple layers are ordered, joints shall be offset at least six inches between layers.

Each layer shall be compacted by two passes with a 7-10 tin steel roller or comparable vibratory roller.

3.6 Asphalt Berms

Damaged segments of Berm shall be removed and the exposed ends beveled at approximately forty-five degrees from vertical. The Berm foundation shall be cleaned and patched as necessary. The foundation and joining surfaces shall be coated with a slow-setting emulsified asphalt. Asphalt mix shall be placed and compacted to conform with the shape and alignment of the undamaged segment.

3.7 Disposal

All materials removed from potholes, patches, and Berms shall be disposed of at disposal sites shown on the Contract Area Map.

SPECIFICATION T-805 DRAINAGE STRUCTURES

DESCRIPTION

1.1 This work consists of maintaining Drainage Structures and related items such as inlet and outlet channels, existing riprap, trash racks, and drop inlets.

MATERIALS

2.1 All materials used in the maintenance of Drainage Structures shall conform by type and specification to the material in the structure being maintained.

REQUIREMENTS

3.1 Drainage Structures and related items shall be cleared of all foreign material which has been deposited above the bottom of the structure and all vegetative growth which interferes with the flow pattern. Material removed that cannot be incorporated into maintenance work shall be hauled to a disposal site shown on the Contract Area Map.

3.2 If outlet or inlet riprap was installed by Contractor as a construction item or existed prior to Contractor's haul, it shall be maintained in a good condition including the replacement of riprap if necessary to previous line, grade, and cross section.

3.3 Perform maintenance to insure the proper functioning of the head walls, aprons, inlet assemblies, overside drains, riprap, trash racks, and other facilities related to the Drainage Structure.

SPECIFICATION T-806 DUST ABATEMENT

DESCRIPTION

1.1 This work shall consist of preparing Traveled Way and furnishing and applying materials to abate dust.

MATERIALS

2.1 The roads requiring dust abatement, type of dust abatement material to be used, the rates of application, and frequency of applications will be shown on the Dust Abatement Plan (K-F-.3.1#). The Dust Abatement Plan may be changed by written agreement.

2.2 Water

Water sources are covered under K-F.3.6, and the locations are shown on the Contract Area Map.

2.3 Dust abatement materials shall met the requirements of the following subsections of Forest Service Standard Specifications for Construction of Roads and Bridge or attached Special Project Specifications.

Bituminous Materials

- Liquid Asphalts 702.02
- Bituminous Dust Palliatives . 702.04
- Application Temperatures. . . 702.05

Blotter Material703.14

Lignin Sulfonate712.09

Application Temperature . . . 412.04

Magnesium Chloride712.11

Application Temperature . . . 412.04

2.4 Testing of Materials

Certification and sampling of bituminous materials lignin sulfonate and magnesium chloride shall be in accordance with Subsection Specifications for Construction of Roads and Bridges.

REQUIREMENTS

3.1 General

Dust abatement materials shall be applied to the road surface as necessary to control road surface loss, provide for road user safety, and minimize damage to adjacent resources.

3.2 Compaction

When the methods listed below specify compaction, Traveled Way shall be compacted by an 8- to 10-tine pneumatic, steel-wheeled or equivalent vibrating roller making 2 passes over the full Traveled Way and Shoulder width, unless compaction is not required on the Dust Abatement Plan (K-G.3.1#).

3.3 Preparation for Dust Abatement Materials Other Than Water

The following applies to all methods of preparation:

Bituminous residue shall be scarified and pulverized to produce loosened material not exceeding 4 inches in greatest dimension.

Traveled Way shall be bladed in accordance with T-803.

Prior to applying DO-6BA, or DO-8, the top 2 inches of Traveled Way shall contain not less than 80 percent nor more than 120 percent of optimum moisture as determined by ASSHTO T-99, Method C. Prior to applying other bituminous material Traveled Way shall have a moisture content between 1 and 3 percent. If surface dusting prevents the bituminous material from penetrating, a light application of water shall be applied just prior to applying the bituminous material.

Lignin Sulfonate and magnesium chloride shall be applied when the top 1 inch of Traveled Way contains not less than 3 percent moisture or more than 120 percent of optimum moisture as determined by ASSHTO T-99, Method C.

Moisture content will be determined in accordance with AASHTO T-217 or T-239.

To prevent any runoff when the road is within 200 feet of a watercourse or running water:

1. Construct a berm along the edge of the road where needed prior to starting a dust abatement project.
2. Block or berm lead off ditches, culverts, drain dips, overside drains and areas where runoff concentrates.
3. Remove the berms and reopen blocked or bermed drainage structures after treatment has stabilized.

Spill containment materials shall be available during dust palliative or oiling operations. The spill containment material will be at least three bales or straw, or equal material as a minimum.

One or more of the following methods shall be used as specified in the Dust Abatement Plan (K-F.3.1#). Unless otherwise specified, method 1 shall be used for placement of lignin sulfonate or magnesium chloride.

Method 1. Compact Traveled Way and apply the dust abatement material.

Method 2. Develop a layer of loose material approximately one inch in depth for the full width of Traveled Way. Apply the dust abatement material to this loose material and compact after penetration. If traffic makes maintenance of the loose material difficult, one inch of the material may be bladed into a windrow along the shoulder. The specified moisture content shall be maintained in the windrow and the top one inch of Traveled Way. The windrow shall be bladed to a uniform depth across Traveled Way just prior to applying the dust abatement material. When the dust abatement material has penetrated, Traveled Way shall be compacted.

Method 3. Blade one inch of material from traveled Way into a windrow along the Shoulder. Maintain the specified moisture content in the windrow and the top inch of Traveled Way. Apply half the dust abatement material. When the dust abatement material has penetrated, the windrow shall be bladed to a uniform depth across dust abatement Traveled Way, and the remaining dust abatement material shall be applied. Traveled Way shall be compacted.

Method 4. Develop a layer of loose material approximately 2 inches in depth for the full width of Traveled Way. Apply half of the dust abatement material to the loose material. Blade the top 2 inches into a windrow along the Shoulder. Apply the remaining dust abatement material to Traveled Way and the Berm. Spread the Berm evenly across Traveled Way and compact.

3.4 Preparation for Dust Abatement with Water

Traveled Way shall be prepared in accordance with Specification T-803 Surface Blading when required.

3.5 Application Tolerance

Dust abatement materials other than water shall be applied within 0.05 gallons per square yard of the rate specified.

3.6 Mixing Requirements

DO-6BA, DO-6PA, and DO-8 shall be thoroughly circulated in the distributor within one hour of application. Magnesium chloride shall be applied concentrated. Lignin sulfonate shall be applied diluted (1:1) with water unless otherwise SHOWN ON DUST ABATEMENT PLAN (C(T)5.31#).

3.7 Weather Limitations

Dust abatement materials shall not be applied when it is raining.

Prior to starting a dust palliative or oiling project, the Forest Service shall be notified at least 24 hours in advance. The Engineer will obtain a spot weather forecast covering the period of time for application through stabilization. The forecast will be updated daily. If conditions exist, or are projected to exist, that do not meet the specification equipments, the project will be postponed until favorable weather and soil moisture conditions are met. Forecasts will be obtained far enough in advance to allow cancellation of a load of oil or dust palliative.

Bituminous material shall be applied when the surface temperature of Traveled Way is 50 degrees Fahrenheit or higher.

Lignin surfonate and magnesium chloride shall be applied when the atmospheric temperature is 50 degrees Fahrenheit or higher.

3.8 Blotter Material

Blotter material shall be spread in a sufficient quantity to prevent tire pickup.

SPECIFICATION T-807 ROADSIDE VEGETATION

DESCRIPTION

1.1 This work includes removal of brush and trees from within the Roadway limits.

REQUIREMENTS

3.1 Vegetative matter within the Roadway which impedes vehicular travel or interferes with road maintenance operations such as surface blading, ditch and culvert cleaning, shall be removed. Downed timber meeting utilization standards shall be cut in appropriate lengths and decked along the Roadside in locations where the Traveled Way or sight distances will not be impaired.

3.2 Vegetative matter removed from the roadway shall be windrowed and/or scattered outside the roadbed.

SPECIFICATION T-808 MISCELLANEOUS STRUCTURES

DESCRIPTION

1.1 Maintenance of miscellaneous structures includes cattleguards, gates, and other similar structures that have been previously installed to insure the safe and efficient operation of the road.

MATERIALS

2.1 Any materials needed in the maintenance of miscellaneous structures shall be similar in type and quality to the material in the structure being maintained.

REQUIREMENTS

3.1 Cattleguards

Loose rails shall be welded or bolted back in place.

Excess material carried into the cattleguard shall be removed when drainage is blocked or when it reaches 6 inches from the bottom of the cattleguard frame. Drainage into and from the cattleguard shall be kept open.

3.2 Gates

Gates shall be kept in good repair and made to swing easily. Hinges or latches shall be repaired if not operating properly.

Brush and debris shall be removed from within the swinging radius.

SPECIFICATION T-809 WATERBARS

DESCRIPTION

1.1 This work consists of installing or removing waterbars in the Roadbed.

REQUIREMENTS

3.1 Waterbars shall be installed on roads shown on the Road Maintenance Plan in accordance with the attached drawing and at locations designated or staked on the ground.

All material excavated shall be used in the installation of the Waterbar. Bermed material shall be compacted by operating heaving equipment over the length and width of the Berm.

3.2 Waterbars shall be removed on roads shown on Road Maintenance Plan by blading the Berm into the adjacent depression to form a smooth transition along the Traveled Way. The length and width of the fill material shall be compacted by the equipment performing the work.

3.3 Waterbars may be required to be installed between seasons of use and then removed when haul is resumed. Waterbar installation may also be required when use of a road has been completed.

SPECIFICATION T-810 BARRIERS

DESCRIPTION

1.1 This work shall consist of furnishing, installing, or removing barriers. Gates are not included.

MATERIALS

2.1 Materials for barriers shall meet the requirements as shown on the attached drawings.

REQUIREMENTS

3.1 Barriers shall be installed in accordance with the attached drawings.

The location of barriers to be removed or installed is shown on the Contract Area Map. Installation or removal may occur as often as road use is terminated and resumed.