

Cutting Unit Boundary Designation Table

Cutting Unit	Paint Color	Designation
ALL	Orange	Orange stripes of paint on opposite sides of the cutting unit boundary tree facing the direction of the next cutting unit boundary tree and an orange dot on one side of the cutting unit boundary tree facing into the cutting unit. The cutting unit number is painted on approximately every fourth cutting unit boundary tree. Cutting unit boundary trees are marked with two stump marks below stump height.

Tree Designation Table

Cutting Unit(s)	Designated Species	More than Stump Diameter (inches)	Less than Stump Diameter (inches)
1, 3, 4, 5, 6, 7, 9, 9B, 12, 12B 19, 21, 22, 26, 30, 30B, 31, 32, 35, 36, 37, 39	Lodgepole Pine (LP)	8	NA

Restricted Road List

Road Number	Road Name	Termini		Map	Description of Restrictions
		From	To	Legend	
430.1	Hinman Lake	Mile post 0.00	Mile post 0.28	R	No hauling the day before and the first weekend of deer and elk archery, muzzleloader and rifle hunting seasons as determined by Colorado Parks and Wildlife.
429.1	Coulton Creek	Mile post 0.00	End	R	No hauling the day before and the first weekend of deer and elk archery, muzzleloader and rifle hunting seasons as determined by Colorado Parks and Wildlife.
429.1	Coulton Creek	Mile post 0.00	End	A	Public motor vehicle use is restricted.

Contract Road Maintenance Requirements Summary

Prehaul Maintenance Table													
Road	Termini		Miles	Applicable Prehaul Road Maintenance Specifications									
	From	To		T800	T801	T802	T803	T804	T805	T806	T807	T808	
429.1	0.00	6.68	6.68			P	P	P	P		P	P	
429.1B	0.00	0.40	0.40			P	P	P	P		P	P	
429.1H	0.00	0.60	0.60			P	P	P	P		P	P	
429.1J	0.00	0.60	0.60			P	P	P	P		P	P	

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

During Haul & Post Haul Maintenance Table													
Road	Termini		Miles	Applicable During Haul & Post Haul Road Maintenance Specifications									
	From	To		T800	T801	T802	T803	T804	T805	T806	T807	T808	
400.1	End of pavement	NFSR 430.1	0.30		P	P	P	P	P		P	P	
429.1	0.00	6.68	6.68			P	P	P	P		P	P	
429.1B	0.00	0.40	0.40			P	P	P			P		
429.1D	0.00	0.70	0.70			P	P	P			P		
429.1G	0.00	0.30	0.30			P	P	P			P		
429.1H	0.00	0.60	0.60			P	P	P			P		
429.1J	0.00	0.60	0.60			P	P	P			P		
430.1	0.00	0.30	0.30			P	P	P	P		P		
430.1A	0.00	0.10	0.10			P	P	P	P		P		

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Notes:

T801-2 - 3.3 The maximum volume of Purchaser responsibility for Slide and Slump repair is 10 cubic yards.

T804-1 – 2.1 The quantity of imported surface repair material used in the appraisal estimate will be a maximum of 10 cubic yards.

Road Maintenance T-Specifications
for
Timber Sale Contracts

To be used with Timber Sale Contract Form 2400-6, C5.31#

No.	Specification Title
T-800	Definitions
T-801	Slide and Slump Repair
T-802	Ditch Cleaning
T-803	Surface Blading
T-804	Surfacing Repair
T-805	Drainage Structures
T-807	Roadway Vegetation
T-808	Miscellaneous Structures

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 runoff 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.

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800-1.9 - Drainage Structures. Manufactured structures which control the runoff of water from the Roadway including Inslope, 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 applications.

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 must be accomplished to maintain the roads to a satisfactory condition commensurate with the Purchaser's use, provided Purchaser's Operations do not damage improvements under B6.22 or National Forest resources and hauling can be done safely. This work will be shown in the Annual Road Maintenance Plan as provided in C5.31#.

Prehaul Maintenance work the Purchaser 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 that portion of the ditch below Subgrade.

800-1.15 - Road Maintenance Plan. A table which shows applicable road maintenance specifications to be performed by Purchaser on specific 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 ravelling.

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800-1.20 - Slough. Material eroded from the backslope which partially or completely blocks the ditch, but does not encroach on the Traveled Way so 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 Roadbed which intercepts surface runoff and diverts the water off the Roadway. A Waterbar is not designed to be traversable by logging trucks.

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 motorgrader 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 fillslope 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 Sale Area Map. Material placed in disposal sites will not require compaction unless compaction is shown on Road Maintenance Plan.

3.2 When filling Slumps or washouts, Material shall be moved from agreed locations or borrow sites, 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 Surfacing 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 Purchaser 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.

DESCRIPTION

1.1 Ditch cleaning is removing and disposing of all Slough Material from Roadway 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 Roadway 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 designated by the Forest Service.

3.3 Roadway backslope or Berm shall not be undercut.

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 the Traveled Way, Turnouts, and Shoulder; repairing Berms; blending approach road intersections; and cleaning bridge decks, Drainage Dips, and Lead-off Ditches.

REQUIREMENTS

3.1 Surface blading shall be performed before, during, and after Purchaser'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 to 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 Sale 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.

Berms shall be repaired by placing Material, as needed to restore the Berm, to reasonably blend with existing line, grade, and cross-section.

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

T-803-1

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. Unless otherwise designated by the Forest Service, the oversized Material shall be disposed of by sidecasting. Sidecasting into streams, lakes, 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.

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.

MATERIALS

2.1 Material used in the repair of soft areas on aggregate or native surfaced roads may be acquired from approved commercial sources, designated Forest Service Borrow areas, 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 for hauling and to minimize damage to the road and adjacent resources. The quantity of imported surface repair Material used in the appraisal estimate will be shown on Road Maintenance Plan. However, the magnitude of the work may vary depending on Purchaser'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 Purchaser shall be approved by the Forest Service. The Purchaser's share of the quantity of bituminous mixture used in the appraisal estimate will be shown on Road Maintenance Plan. However, Purchaser's share of the work may vary depending on Purchaser'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 Purchaser performing the work.

T-804-1

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 2 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 2 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 ¼ inch to ½ inch above the level of the adjacent pavement.

3.5 Skin Patches. Bituminous mixture shall be distributed uniformly with feathered edges in layers not to exceed 2 inches compacted depth. When multiple layers are ordered, joints shall be offset at least 6 inches between layers.

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

3.6 Asphalt Berm. Damaged segments of Berm shall be removed and the exposed ends beveled at approximately 45 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 designated by the Forest Service.

DESCRIPTION

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

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 designated by the Forest Service.

3.2 If outlet or inlet riprap was installed by Purchaser as a construction item or existed prior to Purchaser's haul, it shall be maintained in 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.

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 and 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 treated by the specified method and as required by C6.7#.

DESCRIPTION

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

Cutting Unit(s)	Type of Facility	Closure Method
1, 3, 4, 5, 6, 7, 9, 9B, 12, 12B, 19, 21, 26, 30, 30B, 3, 32, 35, 36, 37, 39	Temporary Roads	Entire lengths of temporary roads will be obliterated. The compacted driving surface will be ripped to a minimum depth of 4-6 inches and recontouring road prism, including all cut and fill slopes to natural ground contour will occur. Scatter enough slash to achieve 30-50% ground cover.
31, 22	Temporary Roads	Temporary roads will be ripped 1-2 inches only.
ALL UNITS	Main Skid Trails	Main skid trails as designated by the Forest Service will be ripped 4-6 inches periodically lifting ripper teeth and enough slash will be scattered to achieve 30-50% ground cover.
ALL UNITS	Landings	Rip to a depth of 4-6 inches. In addition to seeding as per C6.601#, retain enough slash not included in piles and scatter to achieve 30-50% ground cover.
ALL UNITS	Landings and Skid Trails	If excavated landings or skid trails are needed, recontour where specified by Forest Service.

A.

Gate Location(s)				
Road Number	Location	Gate Furnished By 1/	Gate Installed By 1/	In Place 3/
429.1	Sta. 14+59	FS	FS	Yes

B.

Percent Grade	Maximum Spacing

C.

Close and Lock Existing Gate(s)

Closure Location(s)				
Road Number	Location	Closure Method 2/	Furnished By 1/	In Place 3/

C6.310# - Cutting Schedule

<u>Cutting Unit</u>	<u>Completion Date and/or Sequence of Cutting</u>
15	10/31/18

Sale Operation Restriction Schedule

Subdivision / Cutting Unit	Restriction	Purpose
All	No operations unless soil is dry, or covered with 1 foot packed snow, or 2 inches of frozen soil.	Prevent resource damage to wet soils.
3, 4, 6, 7, 9, 15, 19, 22, 26, 37, 39	No operations from December 1 to May 1.	To protect against additional resource damage in low/wet depressions. To allow for appropriate scarification for natural regeneration.

Cutting Unit	Special Objectives
All	To restrict residual stand damage, trees shall be felled, insofar as safety permits, to angle in the direction of skidding.

Cutting Unit	Special Objectives
All	To reduce ground disturbance; logs shall be skidded with leading end free of the ground.
39, 32, 30B	Skidding across national forest system trails in Forest Service designated locations only.

Seed Application Table

Species of Seed	PLS Pounds Per Acre
Big Bluegrass (Poa Ampla)	1
Mountain Bromegrass (Bromus Marginatus)	10
Blue Wildrye (Elymus Glaucus)	8
Slender Wheatgrass (Elymus Trachycaulus)	6

Fertilizer Application Table

Type of Fertilizer	Pounds Per Acre
N/A	N/A

C6.602# - PROTECTION OF DISTURBED AREAS FROM ESTABLISHMENT OF NOXIOUS WEEDS. (11/98)

Seed Application Table

Species of Seed	PLS Pounds Per Acre
Big Bluegrass (Poa Ampla)	1
Mountain Bromegrass (Bromus Marginatus)	10
Blue Wildrye (Elymus Glaucus)	8
Slender Wheatgrass (Elymus Trachycaulus)	6

Fertilizer Application Table

Type of Fertilizer	Pounds Per Acre
N/A	N/A

Purchaser's Slash Responsibility Table

Cutting Units	Type of Slash Disposal
All Units	1. Landing Cleanup
All Units	2. Fell Damaged Residual
All Units	3. Slash Depth
Roads	4. Roadway Vegetation
All Units	5. Slash Throwback
1, 3, 4, 5, 6, 9, 9B, 12, 12B, 15, 19, 21, 26, 30, 30B, 31, 35, 36, 37	6. Skid Limbs and Tops
7, 22, 32, 39	7. Leave Limbs and Tops

1. Landing Cleanup

A landing is considered a place where any logs or products are gathered for loading. Pieces of trees not meeting utilization standards accumulated at landings shall be piled unless needed to be retained for landing obliteration as per C5.34# to achieve 30-50% landing ground cover. Pieces of trees not meeting utilization standards and not require for landing obliteration as per C5.34# to achieve 30-50% landing groundcover may be returned to the cutting unit as agreed to in writing by the Forest Service.

Piles shall be reasonably compact and free of soil to facilitate burning. Piles will not be less than 8 feet in height. Piles shall be of a size and location which will not impair road use or result in damage to residual timber. Piles shall be located at least 20 feet from residual timber. Piles shall not be more than 50 feet long. A continuous slash mat will not be left surrounding the pile.

Landing debris along temporary roads within the cutting units may be piled in conjunction with temporary road construction slash. Landing piles shall be placed along the lower side of the road.

All objects which extend more than 10 feet in any direction from the windrow or pile profile will be cut off and returned to the windrow or pile.

2. Fell Damaged Residual

Purchaser shall fell all species over 16 feet in height not meeting minimum diameter specifications for Included Timber that are damaged beyond recovery by the Purchaser's Operations. Such trees shall be limbed to a stem diameter of approximately 6 inches, at which point the top shall be cut from the remainder of the stem. These stems shall be bucked into lengths shorter than 30 feet.

3. Slash Depth

Purchaser shall treat slash created by purchasers operations within the entire unit so that slash lies within 24 inches of the ground by trampling, spreading and/or lopping.

4. Roadway Vegetation

Purchaser shall treat slash created by removal of roadway vegetation by lopping and scattering slash so that it lies within 24 inches of the ground or stockpiled at the edge of the right of way for use during closure of the road.

5. Slash Throwback

Purchaser shall move all logging slash created by purchasers operations that is outside of the unit boundary 4 inch or larger in large end diameter, and 8 feet or more in length to locations at least 50 feet within the boundaries of such units.

6. Skid Limbs and Tops

Purchaser shall leave limbs and tops of felled trees attached to included timber and yard them to landings within the entire cutting unit as shown on the sale area map. Limbs and tops which are lost on the way to the landing site due to normal felling and skidding operations are not required to be yarded.

7. Leave Limbs and Tops

All included timber shall have the tops and limbs cut from the stems prior to skidding as shown on Sale Area Map. These tops and limbs shall be scattered around the point of felling and not concentrated in skid trails.