

FOREST SERVICE SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES

SPECIFICATION LIST

Project Name <u>Twin Skin TS</u>		Road Number.	2269	2404A	2549	2584			Latest
		Road Name	Tuin	Solomon Lake A	Solomon Mountain	Knife			Revision
Date Prepared <u>May 30, 2008</u>		Termini	1.3-3.30	0.0-0.22	0.0-0.90	0.0-0.90			Date
Spec. No.	Title	Const. - Reconst. . . .	R	R	R				
101-106	General Specifications		X	X	X	X			4/85
SPS-101	Abbreviations		X	X	X	X			6/30/08
SPS-104	Maintenance for Traffic		X	X	X	X			6/30/08
201	Clearing and Grubbing					X			4/85
SPS-201A	Roadside Brushing		X		X				6/30/08
203	Excavation				X	X			4/85
204	Soil Erosion & Water Pollution Control		X	X	X	X			4/85
SPS-204	Soil Erosion & Water Pollution Control		X	X	X	X			6/30/08
206A	Excavation for Culverts & Minor Structures				X	X			4/85
SPS-206A	Excavation for Culverts & Minor Structures				X	X			6/30/08
304	Aggregate Base or Surface Course		X			X			4/85
SPS-304	Aggregate Base or Surface Course		X			X			6/30/08
306	Reconditioning Existing Road		X	X	X	X			4/85
SPS-306	Reconditioning Existing Road		X	X	X				6/30/08
601	Mobilization		X	X	X	X			4/85
SPS-601	Mobilization		X	X	X	X			6/30/08
603	Metal Pipe				X	X			4/85
SPS-603	Metal Pipe				X	X			6/30/08
619	Riprap				X				4/85
SPS-619	Riprap				X				6/30/08
703	Aggregates		X			X			4/85
707	Metal Pipe				X	X			4/85

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Section 101 - Abbreviations

101.02 Delete in its entirety and substitute the following:

Pay Items &

Pay Units

"&	And	M.....	Metal
AC	Acre	MAX.....	Maximum
AL.....	Aluminum	MBF.....	One Thousand Feet Board Measure
ASP.....	Asphalt	MGALS.....	One Thousand Gallons
AVAIL.....	Available	MHD.....	Method
BARR.....	Barrier	MI.....	Mile
BKN.....	Broken	MIN.....	Minimum
BST.....	Bituminous Surface Treatment	MISC.....	Miscellaneous
CATTLEGD.....	Cattleguard	MP.....	Mile Post
CLEAR (CLG).....	Clearing	MSF.....	One Thousand Square Feet
CLEAR/GRUB.....	Clearing & Grubbing	OTBC.....	Open Top Box Culvert
CMP.....	Corrugated Metal Pipe	P M.....	Placement Method
COMP.....	Compaction	PVC.....	Polyvinylchloride
CONC.....	Concrete	RD.....	Road
CONST.....	Construction (Construct)	RECOND.....	Reconditioning
CTD.....	Coated (Coating)	RECONST.....	Reconstruction (Reconstruct)
CUSH.....	Cushion	REFL.....	Reflectorized
CY (CU YD).....	Cubic Yard	RT.....	Right
CY MI (CYM).....	Cubic Yard Mile	STMP (STP).....	Stump(s)
DIA.....	Diameter	SB.....	Self Balance
DL.....	Double Lane	SEC.....	Section
DWGS.....	Drawings	SF.....	Square Foot (Feet)
EA.....	Each	SL.....	Single Lane
EMB.....	Embankment	SLD.....	Solid
EXC.....	Excavation	ST.....	Slash Treatment
F&I.....	Furnish & Install	STA.....	Station (100 Feet)
FDN.....	Foundation	STA YD.....	Station Yard
FT.....	Foot (Feet)	STL.....	Steel
FUNC.....	Function	STR (STRUC).....	Structural
GAL.....	Gallon	SY (SQ YD).....	Square Yard
GR.....	Grade	SZ.....	Size
GRUB.....	Grubbing	T&L.....	Tops & Limbs
HDPE.....	High Density Polyethylene	TBR.....	Timber
HOR.....	Horizontal	TH.....	Thickness
HR.....	Hour	TM.....	Ton Mile
HT.....	Height	TO.....	Turnout
I.....	Install	TOL.....	Turnout Left
IN.....	Inches	TOR.....	Turnout right
INCL.....	Including (Includes)	TRS.....	Trees
IND.....	Individual	UOT.....	Utilization of timber
JCT.....	Junction	VERT.....	Vertical
L.....	Logs	W.....	Width
LBS.....	Pounds	W/.....	With
LDG.....	Loading	W/O.....	Without
LF (LIN FT).....	Linear (lineal) Foot	X-SEC.....	Cross Section
LS.....	Lump Sum	YD.....	Yard
LT.....	Left		
MAT'L.....	Material		

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Section 104 - Maintenance for Traffic

104.01

Roads to be
Constructed

Delete the first two paragraphs and replace with the following:

"All roads on this project may be closed during construction work.

Prior to the Contractor shutting down any operations, the Contractor shall take such precautions as may be necessary to prevent damage to the project, such as approaches, crossings or intersections; and shall make provisions for normal drainage and minimization of erosion.

CONSTRUCTION SIGNING

The contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient signs, and other traffic control devices and shall take necessary precautions for the protection of the work and safety of the public as SHOWN IN THE DRAWINGS.

PAYMENT

104.06

Basis

The following shall be added:

"Payment for construction signing and traffic control under this section shall be considered subsidiary to Pay Item 601 - Mobilization and no separate payment will be made."

SECTION 201A - ROADWAY BRUSHING

DESCRIPTION

201A.01 Work This work shall consist of removing limbs, residual slash, live roadside brush, and small trees between, or obtruding into, the designated brushing limits. The brushing limits shall be AS SHOWN ON THE DRAWINGS. Brushing areas shall include turnouts.

CONSTRUCTION

201A.02 Clearing & Brushing All brush and small trees (6 inches diameter, or less, at the point of cut) inside the brushing limits and outside the roadbed shall be cut off no higher than 4 inches above ground level (6 inches for machine brushing). Should rocks or other obstructions be encountered, the cutting height shall be no higher than 6 inches above the obstruction. Live trees with a diameter larger than 6 inches should be limbed to a height of 14 feet above the road surface. All brush and trees located on the roadbed shall be cut as nearly flush to the road surface as possible so stumps will not become a hazard to automobile tires.

201A.03 Windfalls Windfalls lying within or across the brushing limits shall be limbed and cut off at a horizontal distance of 10 feet from each shoulder or at the brushing limit, which ever is least. Cut windfall material shall be disposed of as slash.

201A.04 No brushing debris shall be deposited in the traveled way Road Junctions and/or ditches of adjoining roads.

201A.06 Slash Treatment All slash shall be scattered outside the brushing limits without damaging residual trees. Slash shall be defined as any material cut that has a length greater than 36 inches or with a diameter greater than 3 inches at any point. No material shall be deposited in streams, streambeds, culvert inlets or outlets, or drainage ways.

MEASUREMENT

201A.07 Method The method of measurement, described in Section 106, will be DESIGNATED in the SCHEDULE OF ITEMS.

Linear measurements will be horizontal along the road centerline.

Quantities will be the number of miles (or stations) and fractions thereof along the road centerline, regardless of the amount of work required.

Section 204 - Soil Erosion & Water Pollution Control

DESCRIPTION

204.01
Work

Delete in entirety and substitute the following:

"This work consists of special temporary and/or permanent construction measures as SHOWN ON THE DRAWINGS and/or listed in this specification to control soil erosion and water pollution. Such measures may include (but are not limited to) filter windrows, slash blankets, brush barriers, drainage devices, earth berms, earthen water bars, sediment basins, aggregate base/surfacing, rock ditches, riprap, seeding, mulching, and/or straw bales.

This work shall also include special construction methods SHOWN ON THE DRAWINGS to control erosion at control areas."

MATERIALS

204.02
Requirements

Delete the 2nd paragraph and substitute the following:

"All other materials shall meet commercial grade standards and shall be approved before being incorporated into the project."

CONSTRUCTION

204.03
Performance

Delete the 2nd paragraph and substitute the following:

"Erosion control measures shall be incorporated into the project no later than the dates specified in Table 204.1. Variations in this schedule must be approved in writing by the Engineer."

Add the following after the 3rd paragraph:

"The following construction requirements shall apply:

- a.- Earthwork. Clearing and grubbing, excavation, borrow and embankment operations shall be scheduled and performed so that grading operations and permanent erosion control measures can follow without interference or be constructed within the time periods listed in Table 204.1.

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- b.- Wet Conditions. The contractor shall conduct operations so as to minimize erosion and not develop conditions that will cause erosion. Work may continue during wet conditions as long as erosion and rutting is controlled.
- c.- End of Construction Season and prior to Move-out. Any rutted areas and other damaged areas shall be smoothed, sloped and graded to drain. All temporary stream course diversion conduits and temporary culverts shall be removed and the stream returned to its natural channel. All erosion control measures required under this specification shall be functional and approved by the Engineer.

MEASUREMENT

204.04
Method

Add the following to the first paragraph:

"Items not shown in the SCHEDULE OF ITEMS will not be measured."

PAYMENT

204.05
Basis

Add the following:

"Other erosion control work required under this specification and not shown in the SCHEDULE OF ITEMS is considered incidental to pay items in the Section listed in Table 204.1."

TABLE 204.1

SECTION	DURATION	DESCRIPTION OF WORK	TIMING OF CONSTRUCTION
203	Permanent	<u>Culvert Catch Basins and Ditch Transitions</u>	Concurrently with culvert installation.
Incidental to 201 203 304 603 or 625		<u>Special Construction Methods.</u> Specific locations and requirements shown on the drawings, and/or described in the Special Project Specifications.	As described on the drawings and/or in the Special Project Specifications.
Incidental to 203	Temporary	<u>Straw Bales/Straw Mulch.</u> As necessary to stabilize eroding areas.	Immediately upon discovery of active erosion.
304	Permanent	<u>Aggregate Base/Surfacing</u> The total length of all areas of disturbed earth (including pioneer roads and completed subgrades) on which gravel has not been placed shall not exceed the length of the disturbed site and be placed concurrently with the other work at the site. This requirement <u>may</u> be waived by the Engineer based on a review of the Contractor's operations, methods, and progress in controlling erosion and keeping erosion control features current as described in this specification. Such waiver, if given, shall be in writing.	See description of work.
603	Permanent	<u>Culverts and Cross Drains</u>	concurrently with road reconstruction.
619	Permanent	<u>Rock Buttress Wall</u>	Concurrently with removal of slide material

Section 306 - Reconditioning Existing Road

DESCRIPTION

- 306.01 Delete "scarifying and" from the text.
Add: "and catch basins" following "outlets"

CONSTRUCTION

- 306.02 Delete the first two paragraphs including (a) and (b) of the second paragraph
Performance and replace with the following:
"Scarification of the traveled way and shoulders is not required. Any rock protruding less than two inches may be left in place. Rock protruding in excess of two inches shall be removed or the tops blasted. Resulting holes in the roadway or shoulders shall be backfilled with compacted suitable material."

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Section 601 - Mobilization

DESCRIPTION

601.01 Add the following to this subsection:
Work

Preparatory work shall include cleaning of all equipment used at the project site. The contractor(s) is required to clean all construction equipment prior to entry on the project site. This cleaning shall remove all dirt, plant parts and material that may carry noxious weed seeds into the area. Only construction equipment inspected by the Forest Service will be allowed to operate within the project area. All subsequent move-ins of equipment shall be treated the same as the initial move-in. Truck beds and dump boxes hauling to the project site must also be cleaned prior to entering the work area.

Unless otherwise agreed, the Contractor shall give the Contracting Officer at least 24 hours notice of when the equipment is ready for inspection (not including weekends and holidays). Notification will include an agreed upon time and location where the equipment will be available for inspection.

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Section 603 - Metal Pipe

MATERIALS

603.02 Delete the second sentence, last paragraph, and add:
Requirements

"Pipe should not be ordered until culvert locations are DESIGNATED ON THE GROUND and the correct lengths are determined."

CONSTRUCTION

603.06 Replace the last sentence of the first paragraph with the following:
Joining Pipes

"Dimpled bands shall not be used unless approved by the Engineer in writing."

603.08 At the end of the second paragraph, after "Method A or B," add:
Backfilling

"or C"

After Method B, add:

"Method C - Compaction shall be obtained by a minimum of two passes with a mechanical tamper, approved by the Engineer, for each 6-inch layer (loose thickness) of backfill unless otherwise SHOWN ON THE DRAWINGS."

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Section 619 - Riprap

RIPRAP CLASS	STONE WEIGHT IN LBS	% SMALLER THAN THE GIVEN	1. 2. & 3. EQUIVALENT CUBIC SIZE INCHES	% BETWEEN	EQUIVALENT CUBIC SIZE MM	REMARKS
	<---weight		Size----->			
V	250	100	14		356	
	150	70	12	30	305	
	50	30	8	40	203	
	15	<10	5	20	127	
				<10		