

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE  <b>TIMBER SALE CONTRACT</b> (Applicable to Sales to be Measured before Felling)		Name of Purchaser	
<b>National Forest</b> Ottawa	<b>Ranger District</b> Ontonagon	<b>Region</b> Eastern	<b>Contract Number</b>
<b>Sale Name</b> Gandy Dancer PR		<b>Award Date</b>	<b>Termination Date</b> 10/01/2019

The parties to this contract are The United States of America, acting through the Forest Service, United States Department of Agriculture, hereinafter called Forest Service, and \_\_\_\_\_ hereinafter called Purchaser.

Forest Service having advertised a sale at which either (1) Purchaser, whose required bid deposit is now held by Forest Service as an initial deposit, was the successful bidder, or (2) no bids were received and Purchaser having subsequently offered at least the minimum advertised price and made an initial deposit in the same amount as the bid deposit specified in the sale advertisement; and the parties hereto desiring to record their agreement; now therefore,

Unless provided otherwise herein, Forest Service agrees to sell and permit Purchaser to cut and remove Included Timber and Purchaser agrees to purchase, cut, and remove Included Timber.

This contract consists of three Divisions: AT - Specific Conditions, BT - Standard Provisions, and CT - Special Provisions, together with Sale Area Map, Plans and specifications for developments (if any), and such attachments as may be provided for in Division CT. Specific Conditions are numbered and apply to the Part, Section, Subsection, or Item of the Standard Provisions, as indicated hereunder. Other conditions of this contract are stated in Division CT - Special Provisions.

IN WITNESS WHEREOF, the parties hereto have executed this contract as of the award date.

**UNITED STATES OF AMERICA**

Two Witnesses:<sup>1/</sup>

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Address)

By: \_\_\_\_\_  
Contracting Officer

\_\_\_\_\_  
(Title)

By: \_\_\_\_\_<sup>2/</sup>  
(Purchaser)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Business Address)

I, <sup>3/</sup> \_\_\_\_\_, certify that I am the \_\_\_\_\_  
Secretary of the corporation named as Purchaser herein; that \_\_\_\_\_  
who signed this contract on behalf of Purchaser, was then \_\_\_\_\_  
of the corporation; that the contract was duly signed for and in behalf of the corporation by authority of its governing body, and is  
within the scope of its corporate powers.

**CORPORATE  
SEAL** <sup>4/</sup>

Sale Name: Gandy Dancer PR

Contract No:

**INSTRUCTIONS:**

- 1/ The signatures and addresses of two witnesses are required if Purchaser is other than a corporation.
- 2/ If Purchaser is a co-partnership, the signatures should be: XYZ Company, by John Doe, a member of the firm. If Purchaser is a corporation, form of signature should be: XYZ Company, by John Doe, President (or other officer or agent) and the seal of the corporation must be impressed or indicated.
- 3/ The certificate must be completed if Purchaser is a corporation.
- 4/ If the corporation has no corporate seal that fact shall be stated, in which case a scroll or adhesive seal shall follow the corporate name.

**EXAMPLE 1/**

Subcontractor Certification  
Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion

Timber Sale Name: \_\_\_\_\_  
 National Forest: \_\_\_\_\_

The prospective subcontractor (participants in lower tier covered transactions) certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this timber sale by any Federal department or agency.

Where the prospective subcontractor is unable to certify to any of the statements in this certification, such prospective subcontractor shall attach an explanation to this proposal.

Name of Subcontractor: \_\_\_\_\_  
 Business Address: \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_ Date \_\_\_\_\_ Signature

1/ It is the Purchaser's responsibility to have subcontractors complete this certification and to maintain a file of completed certifications. This certification does not need to be returned to the Forest Service, except at the written request of the Contracting Officer.

**Sale Name:** Gandy Dancer PR

**Contract No:**

The following conditions apply to the indicated portions of Division BT - Standard Provisions issued June 2006.

**AT1 - Location and Area**, applicable to BT1.1

This Sale Area of 430 acres more or less is located in:

T49N-R38W S.36, Ontonagon County, MI; T49N-R37W S. 29, 30,31, Houghton County, MI

**AT2 - Volume Estimate and Utilization Standards**, applicable to BT2.1, BT2.2, BT2.4, and BT6.4

Species	Product	Estimated Quantity *	Unit of Measure	Minimum Specifications				
				Merchantable Tree		Piece Required to be Removed		
				Diameter Breast High (d.b.h.) (inches)	Number of Minimum Pieces per Tree	Length (feet)	Diameter Inside Bark at Small End (inches)	Net Scale in % of Gross Scale
Mixed Conifer	Sawtimber	38.00	CCF	9.0	1	8	7.6	40
Mixed Hardwood	Sawtimber	262.00	CCF	11.0	1	8	9.6	50
Sugar Maple	Sawtimber	175.00	CCF	11.0	1	8	9.6	50
Aspen	Pulpwood	302.00	CCF	5.0	1	8	4.0	70
Mixed Conifer	Pulpwood	103.00	CCF	5.0	1	8	4.0	70
Mixed Hardwood	Pulpwood	1,485.00	CCF	5.0	1	8	4.0	70
<b>Total Quantity</b>		2,365.00	CCF					

\* Quantities not included here are described in BT2.4.

**AT3- Timber Designations**, applicable to BT2.3; acres are approximate:

	Number	Acres
Clearcutting Units (BT2.31)	_____	_____
Specified Road Clearing (BT2.32)	_____	_____
Overstory Removal Units (BT2.33)	_____	_____
Understory Removal Units (BT2.34)	_____	_____
Individual Trees (BT2.35)	_____	183
Incompletely Measured Payment Units (BT2.36)	_____	_____

Sale Name: Gandy Dancer PR

Contract No:

**AT4 - Timber Payment Rates**, applicable to BT3.1 and BT4.0

**AT4a** - For Species and Products to be Paid for at Rates Escalated under BT3.2

**Not Applicable**

**AT4b**- For Species and Products to be Paid for at Flat Rates

Species	Product	Unit of Measure	Rates per Unit of Measure				
			Base \$	Advertised \$	Bid Premium \$	Bid (Flat) \$	Required Deposits Slash Disposal \$
Mixed Conifer	Sawtimber	CCF	1.00	1.00			.00
Mixed Hardwood	Sawtimber	CCF	4.99	33.95			.00
Sugar Maple	Sawtimber	CCF	10.92	146.62			.00
Aspen	Pulpwood	CCF	1.31	8.27			.00
Mixed Conifer	Pulpwood	CCF	1.00	1.00			.00
Mixed Hardwood	Pulpwood	CCF	1.00	1.00			.00

For purposes of convenience in collection and bookkeeping, Bid Rates stated in AT4 include payment of deposits for sale area betterment required pursuant to 16 USC 576b. Such deposits are not included as Required Deposits defined hereunder.

Sale Name: Gandy Dancer PR

Contract No:

**AT4c - Schedule of Payment Units**

Payment Unit No.	App rox. Acres	Quantity of Species and Products to be Escalated under AT4a	Total Tentative Payment \$	Quantity of Species and Products to be Paid for at Flat Rates under AT4b	Total Flat Rate Payment \$	Total Required Deposits for Slash Disposal \$
001	42			Mixed Conifer Sawtimber 0.00 CCF		.00
				Mixed Hardwood Sawtimber 37.00 CCF		
				Sugar Maple Sawtimber 11.00 CCF		
				Aspen Pulpwood 8.00 CCF		
				Mixed Conifer Pulpwood 14.00 CCF		
				Mixed Hardwood Pulpwood 188.00 CCF		
					<b>Total PU Quantity And Value</b>	
002	64			Mixed Conifer Sawtimber 9.00 CCF		.00
				Mixed Hardwood Sawtimber 102.00 CCF		
				Sugar Maple Sawtimber 76.00 CCF		
				Aspen Pulpwood 5.00 CCF		
				Mixed Conifer Pulpwood 14.00 CCF		
				Mixed Hardwood Pulpwood 589.00 CCF		
					<b>Total PU Quantity And Value</b>	
003	76			Mixed Conifer Sawtimber 29.00 CCF		.00
				Mixed Hardwood Sawtimber 94.00 CCF		
				Sugar Maple Sawtimber 67.00 CCF		
				Aspen Pulpwood 286.00 CCF		
				Mixed Conifer Pulpwood 53.00 CCF		
				Mixed Hardwood Pulpwood 548.00 CCF		
					<b>Total PU Quantity And Value</b>	
004	1			Mixed Conifer Sawtimber 0.00 CCF		.00
				Mixed Hardwood Sawtimber 29.00 CCF		
				Sugar Maple Sawtimber 21.00 CCF		
				Aspen Pulpwood 3.00 CCF		
				Mixed Conifer Pulpwood 22.00 CCF		
				Mixed Hardwood Pulpwood 160.00 CCF		
					<b>Total PU Quantity And Value</b>	

**Sale Name:** Gandy Dancer PR

**Contract No:**

The following definitions are established for the terms used in AT4:

**Base Rates** are the lowest rates of payment for timber that are authorized by this contract. Base Rates remain constant throughout the life of this contract and are not subject to change by rate redetermination, except for reduction under BT3.31, BT3.32, or BT3.33.

**Advertised Rates** are the minimum acceptable Bid Rates for timber, exclusive of Required Deposits. These rates are those indicated by appraisal, with a cost allowance made for construction of Specified Roads listed in AT7, but are never less than Base Rates.

**Bid Premium Rates** are the amounts by which Purchaser's bid is in excess of Advertised Rates. The Bid Premium Rates are constant during this contract, except as provided in BT3.31, BT3.32, and BT3.33.

**Bid Rates** are the rates bid by Purchaser (exclusive of Required Deposits for slash disposal and road maintenance) and are the sum of Advertised Rates and Bid Premium Rates. Until a rate redetermination becomes effective, the Bid Rate for species and products in AT4a is the Tentative Rate that is subject to quarterly adjustment under BT3.2; for species and products in AT4b, the Bid Rate is the Flat Rate.

**Required Deposits** are deposits that Purchaser may be required to pay for slash disposal (16 USC 490) and road maintenance (16 USC 537). Required Deposits may be adjusted as part of a rate redetermination or a Contract Term Extension. The table shows only Required Deposits for slash disposal; road maintenance deposits, if any, are given in CT5.32#.

**Base Index** is the specified average of the lumber or other product selling value index used as the basis for computing adjustment in rates for variance in product selling value, as provided in BT3.2.

**AT5 - Indices Used in Quarterly Adjustment**, applicable to BT3.2

**Not Applicable**

**AT6 - High Stumps**, applicable to BT6.412

Species	Product	Maximum Stump Height (inches)
All	Sawtimber	14
All	Pulpwood	10

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Contract No:

**AT7 - Specified Roads**, applicable to BT5.2

Name and Date of Governing Road Specifications: Federal Highway Administration Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects(2003)-english

Project		Design Class	Approx. Length (mi./km.)	Sheet Numbers and Approval Date	Performance Responsibility		
Road No.	Name				Survey	Design	Construction Staking <sup>1/</sup>
1152-A2	FDR1152-A2 (C) (segment 0 to .52)	Single Lane - 10 mph	.52 / .84	SR-1 thru SR-51 03/16/2016	FS	FS	FS AC
1152-A	FDR1152-A (R) (segment 0 to 1.22)	Single Lane - 10 mph	1.22 / 1.96	SR-1 thru SR-51 03/16/2016	FS	FS	FS AC
1152-A1	FDR1152-A1 (R) (segment 0 to .37)	Single Lane - 10 mph	.37 / .6	SR-1 thru SR-51 03/16/2016	FS	FS	FS AC

<sup>1/</sup> Indicate timing, i.e., before clearing (BC) or after clearing (AC). Applicable to BT5.212.

**AT8 - Forest Service Engineering Completion Schedule**, applicable to BT5.21

Road No.	Road Name	Type of Work	Completion Date
<b>NOT APPLICABLE</b>			

**AT9 - Fire Precautionary Period**, applicable to BT7.2

April 01 to November 15, inclusive

**AT10 - Purchaser Responsibility to Furnish Crews and Equipment for:**

**Initial Fire Suppression**, applicable to BT7.3

Within 5.0 road miles

**Fire Suppression Reinforcement**, applicable to BT7.312 and BT7.313

Within 20.0 road miles

**AT11 - Purchaser's Obligation per Operations Fire**, applicable to BT7.41

**Maximum Amount:** \$ \$1,000

**AT12 - Termination Date**, applicable to BT8.2

October 01, 2019

**AT13 - Normal Operating Season**, applicable to BT6.31, BT6.66, BT8.21 and BT9.3

**First Period:** December 15 to March 15, inclusive

**Second Period:** \_\_\_\_\_ to \_\_\_\_\_, inclusive

**AT14 - Performance Bond**, applicable to BT9.1

**Performance Bond Amount:** \_\_\_\_\_

Sale Name: Gandy Dancer PR

Contract No:

**AT15 - Downpayment**, applicable to BT4.211

**Downpayment Amount:** \_\_\_\_\_

**AT16 - Periodic Payment Amount**, applicable to BT4.213

	<u>Periodic Payment Determination Date</u>	<u>Amount</u>
<b>Initial Payment:</b>	_____	_____
<b>Additional Payment:</b>	_____	_____

**AT17 - Market-Related Contract Term Addition Producer Price Index**, applicable to BT8.212

**Index Name:** Wood Chips      **Index Number:** 3211135

**AT18 - Inapplicable Standard Provisions**

The following listed Sections, Subsections, or Items of Division BT - Standard Provisions - are hereby made inapplicable. (Instructions: List by reference number and title.)

BT4.211	DOWNPAYMENT
BT4.4	PAYMENTS NOT RECEIVED
BT8.212	MARKET-RELATED CONTRACT TERM ADDITION

**AT19 - List of Special Provisions**

The following listed special provisions are attached to and made a part of this contract as Division CT. Provisions with reference numbers followed by # contain blanks into which data have been entered for this sale. (Instructions: List by reference number, title, and date.)

CT2.302#	BOUNDARY TREES (06/2009)
CT2.355#	INDIVIDUAL TREES, CUT TREE MARKING (06/2009)
CT4.211	DOWNPAYMENT (06/2007)
CT4.212	TEMPORARY REDUCTION OF DOWNPAYMENT (08/2009)
CT4.4	PAYMENTS NOT RECEIVED (08/2012)
CT5.12#	USE OF ROADS BY PURCHASER (06/1999)
CT5.221#	MATERIAL SOURCES (04/2004)
CT5.31#	ROAD MAINTENANCE REQUIREMENTS (07/2001)
CT5.32#	ROAD MAINTENANCE DEPOSIT SCHEDULE (08/2012)
CT5.33#	SNOW REMOVAL (06/2009)
CT6.314#	OPERATING REQUIREMENTS (06/2009)
CT6.412	STUMP MARKS (06/2009)
CT6.62#	SITE SPECIFIC WETLANDS PROTECTION MEASURES (07/2001)
CT6.63#	TEMPORARY ROAD CLOSURE (06/2009)
CT6.7#	SLASH DISPOSAL MEASURES (06/2009)
CT7.2	FIRE PRECAUTIONS (06/2009)
CT8.212	MARKET-RELATED CONTRACT TERM ADDITION (11/2008)

There are no pages 108-109.

Sale Name: Gandy Dancer PR

CT2.302# - BOUNDARY TREES (06/2009)

Boundary trees for all harvest units have been designated with Orange 3-slash paint at eye level on exterior boundary trees facing into the Payment Units; Orange 2-slash paint at eye level on interior boundaries on both sides of trees facing into the Payment Units, paint marks above and below stump height. Boundary trees shall not be cut.

CT2.355# - INDIVIDUAL TREES, CUT TREE MARKING (06/2009)

Individual trees to be cut are Marked with indicated color above and below stump height in all or parts of the following Payment Unit(s). Areas of cut tree marking are shown on the Sale Area Map with the symbol "CTM."

PAYMENT UNIT(S)	PAINF COLOR
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R9-CT2.355# - INDIVIDUAL TREES. (09/2004)

Cut Tree Marking Table

Payment Units	Paint Color
01 - 03	Green
04(ROW)	Yellow

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CT4.211 - DOWNPAYMENT (06/2007)

The downpayment amount shown in AT15 may not be applied toward any other payment required under the provisions of this contract, except damages determined pursuant to BT9.4, transferred to other timber sales, or refunded until (a) stumpage value representing 25 percent of the total bid value of the timber sale is shown on Timber Sale Account to have been cut, removed, and paid for, or (b) the estimated value remaining to be cut and removed, as shown on Timber Sale Account, is equal to or less than the amount of the downpayment, or (c) if 36 CFR 223.49(e) is applicable, the estimated value remaining to be cut and removed, as shown on Timber Sale Account, is equal to or less than the amount of the downpayment. For lump sum timber sales, the downpayment may be applied to payment for release of the single payment unit.

If Forest Service makes a determination that this contract should not have been included under increased downpayment requirements (36 CFR 223.49(e)), the downpayment shall be revised and applied in accordance with 36 CFR 223.49(f).

CT4.212 - TEMPORARY REDUCTION OF DOWNPAYMENT (08/2009)

Notwithstanding BT4.211 or CT4.211, upon the Purchaser's written request Forest Service may temporarily reduce the downpayment when Purchaser's scheduled operations are delayed or interrupted for 30 or more consecutive days, or the contract term is extended for 30 or more consecutive days for any of the following reasons:

- (1) Forest Service requests or orders Purchaser to delay or interrupt scheduled operations for reasons other than breach;
- (2) Purchaser interrupts or delays scheduled operations to work on a sale designated by the Forest Service as in urgent need of harvesting; or
- (3) An adjustment of the contract term authorized upon a determination of substantial overriding public interest, including a market-related contract term addition, or an urgent removal contract term extension under 36 CFR 223.53.

When Purchaser is not cutting or removing timber under contract during a qualifying period of delay, interruption, or extension listed above the downpayment may be reduced to \$1000 or 2 percent of the downpayment amount stated in the contract, whichever is greater. The Purchaser must restore the downpayment to the full amount stated in the contract within 15 days from receipt of the bill for collection and written notice from the Contracting Officer that the basis for temporarily reducing the downpayment no longer exists. Purchaser shall not cut or remove timber on a contract where the downpayment has been temporarily reduced until the downpayment amount stated in the contract is fully restored.

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CT4.4 - PAYMENTS NOT RECEIVED (08/2012)

(a) Payments are due and payable on the date of issue indicated on the bill for collection. When a payment for timber cut and other charges is not received at the location designated by Forest Service by the date specified in the bill for collection, Contracting Officer will suspend all or any part of Purchaser's Operations until payment or acceptable payment guarantee is received. Other charges include, but are not limited to:

- (i) Slash disposal and road maintenance deposits;
- (ii) Cooperative work at rates established by specific agreement under BT4.218;
- (iii) Damages pursuant to BT9.4;
- (iv) Road use fees;
- (v) Restoration of downpayment pursuant to BT4.22;
- (vi) Periodic payments pursuant to BT4.213;
- (vii) Extension Deposits pursuant to BT4.217; and
- (viii) Other mandatory deposits.

(b) Failure to pay amounts due by the date specified in the bill for collection shall be considered a breach under BT9.3. The 30-day notice period prescribed therein shall begin to run as of the end of business on the date specified for receipt of payments. If the performance or payment is guaranteed by surety bond, the surety will receive a copy of the written notification of breach. Demand will be made on the surety or other institution providing the guarantee or bond instrument for immediate payment 10 days after issuance of written notification of the breach.

(c) Pursuant to the Debt Collection Improvement Act of 1996, as amended, if payment is not received by Forest Service within 15 days after the date of issue indicated on the bill for collection:

(i) Simple interest shall be assessed at the Current Value of Funds Rate as established by the Secretary of the Treasury. Interest will begin to accrue as of the date of issue indicated on the initial bill for collection.

(ii) Debtors will be assessed administrative charges, in addition to the delinquent amount due. Administrative charges are those additional costs incurred by the Government in processing, handling, and collecting delinquent debts.

(iii) A penalty charge of six (6) percent per annum will be assessed on any portion of a debt delinquent more than 90 days. This penalty charge is in addition to interest and administrative charges under paragraphs (c) (i) and (c) (ii). The penalty charge shall accrue from the date of issue indicated on the bill for collection and shall be assessed on all outstanding amounts, including interest and administrative costs assessed under paragraphs (c) (i) and (c) (ii).

(iv) Payments will be credited on the date received by the Federal Depository or Collection Officer designated on the bill for collection.

(d) Forest Service remedies for Purchaser's failure to make payment for timber cut and other charges when due, except for accrual of interest, suspension of all or any part of Purchaser's Operations, and administrative offset, shall be stayed for so long as:

- (i) A bona fide dispute exists as to Purchaser's obligation to make such payment and
- (ii) Purchaser files and prosecutes a timely Claim.

Sale Name: Gandy Dancer PR

CT5.12# - USE OF ROADS BY PURCHASER (06/1999)

Purchaser's use of existing roads identified on Sale Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed otherwise:

Code	Use Limitations
X	Hauling prohibited
R	Hauling restricted
U	Unsuitable for hauling prior to completion of agreed reconstruction
P	Use prohibited
A	Public use restriction
W	Regulation waiver

Roads coded A will be signed by the Forest Service to inform the public of use restrictions. Purchaser's use of roads coded R, A, or W shall be in accordance with the following restrictions:

See Restricted Road List Table.

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CT5.12# – USE OF ROADS BY PURCHASER. (6/99)

**Restricted Road List**

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
1152	1152	Intersection with 1152-A	End	P	Use Prohibited.
1152-A	1152-A	0.00	1.22	U	Unsuitable for Hauling prior to agreed upon Reconstruction.
1152-A1	1152-A1	0.00	0.37	U	Unsuitable for Hauling prior to agreed upon Reconstruction.
1152-A2A	1152-A2A	0.00	End	X	Hauling Prohibited. Use for skidding must be approved prior to use.

X – Hauling Prohibited includes empty log trucks and all other "on-road" vehicles.

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CT5.221# - MATERIAL SOURCES (04/2004)

Sources of local materials are designated on Plans and Sale Area Map. Forest Service assumes responsibility for the quality and quantity of material in designated sources. Purchaser shall determine the equipment and work required to produce the specified product, including the selection of acceptable material that is reasonably available in the source that meets specifications. The designation of source includes the rights of Purchaser to use certain area(s) for plant site, stockpiles, and haul roads.

Should the designated source, due to causes beyond the control of Purchaser, contain insufficient acceptable material, Forest Service will provide another source with adjustment in accordance with BT5.253.

When Purchaser elects not to use designated sources, Purchaser shall furnish the specified product with no adjustment in unit rates. Quality testing shall be the responsibility of Purchaser. Test results shall be furnished to Forest Service.

When Purchaser elects not to use designated sources and the Schedule of Items lists pit development separately, cost allowance will be reduced under BT5.253 when Forest Service determines the work will not be required.

When materials are subject to a weight measurement, the specific gravity or weight/volume relationship used as a basis for determination of estimated quantities shall be:

Source I NA, Source II NA, and Source III NA.

Purchaser may, when agreed in writing, use on the project such suitable stone, gravel, and sand, or other material found in the excavation, and will earn a cost allowance for the excavation of such materials at the corresponding contract unit price and for the pay items for which the excavated material is used. Purchaser shall replace, without additional cost allowance, sufficient suitable materials to complete the portion of the work, which was originally contemplated to be constructed with such material. Purchaser shall not excavate or remove any material, except that which is within the excavation limits, without written authorization from Forest Service.

When material is appraised from non-National Forest designated sources, owner charges for the material in terms of unit cost for royalties, purchase of raw materials, or finished products shall be as follows until NA :

See Material Source Table.

Should quantity vary from that estimated, payment to owners shall be for units actually obtained. Purchaser shall make arrangements with owner(s) for measurement and payment for royalties, purchase of raw materials, or finished products, as shown above.

Materials produced or processed from National Forest lands in excess of the quantities required for performance of this contract are the property of Forest Service, unless prior written agreement has been obtained to use excess material on other National Forest sales. Forest Service is not obligated to reimburse Purchaser for the cost of their production.

Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials shall be located to facilitate their prompt inspection. Sites on Forest Service administered land, approved by Forest Service, may be used for storage purposes and for the placing of Purchaser's plant equipment. All storage sites provided by Forest Service shall be restored at Purchaser's expense. Purchaser shall be responsible for making arrangements for storage on other than Forest Service adminis-

Sale Name: Gandy Dancer PR

tered lands.

When the construction of the portion of the project for which Temporary Roads used for hauling materials is completed, all such Temporary Roads shall be restored as nearly as practicable to their original ground profile, unless otherwise agreed in writing.

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CT5.221# – MATERIAL SOURCES. (4/04)

**Material Source Table**

<b>Material</b>	<b>Type of Purchase</b>	<b>Owner(s)</b>	<b>Unit of Measure</b>	<b>Unit Price</b>	<b>Estimated Quantity</b>	<b>Total</b>
Pit Run	N/A	USFS	CY	N/A	403	403 CY

**NOTE:** Pit restoration (per specifications) in the Onion Creek Pit shall be accomplished no later than the end of each operating season.

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CT5.31# - ROAD MAINTENANCE REQUIREMENTS (07/2001)

Purchaser shall maintain roads in accordance with the following Contract Road Maintenance Requirements Summary:

See Contract Road Maintenance Requirements Summary Table.

**Gandy Dancer PR Timber Sale  
Road Maintenance Specifications – CT5.31#**

**SECTION 3. ROAD MAINTENANCE REQUIREMENTS SCHEDULE**

**Contract Road Maintenance Requirements Summary**

Road	Termini		Miles	Applicable Prehaul Road Maintenance Specifications						
	From	To		T-8130	T-8310	T-8340	T-8350	T-8360	T-8620	
1152	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

Road	Termini		Miles	Applicable During Haul Road Maintenance Specifications							
	From	To		T-8030	T-8110	T-8130	T-8310	T-8340	T-8360	T-8420	
1152	0.00	0.10	0.10	P		P <sup>1/</sup>	P	P		P	
1152-A	0.00	1.22	1.22	P		P <sup>1/</sup>	P	P		P	
1152-A1	0.00	0.37	0.37	P		P <sup>1/</sup>	P	P		P	
1152-A2	0.00	0.52	0.52	P		P <sup>1/</sup>	P	P		P	
1100	1152	Skoglund Rd.	5.4	P	D		D	D			D
Skoglund Rd.	1100	FH-16	2.9	P							

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

<sup>1/</sup> 50 CY Total (65 CY loose) to be spot placed as directed by Forest Service

Road	Termini		Miles	Applicable Post Haul Road Maintenance Specifications							
	From	To		T-8110	T-8310	T-8340	T-8350	T-8360	T-8420	T-8620	
1152	0.00	0.10	0.10			P	P	P	P		P
1152-A	0.00	1.22	1.22			P	P	P	P		
1152-A1	0.00	0.37	0.37			P	P	P	P		
1152-A2	0.00	0.52	0.52			P	P	P	P		
1100	1152	Skoglund Rd.	5.4		D	D	D				D

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

Sale Name: Gandy Dancer PR

CT5.32# - ROAD MAINTENANCE DEPOSIT SCHEDULE (08/2012)

Other provisions herein notwithstanding, when Forest Service requests payment in lieu of Purchaser's performance of road maintenance, Purchaser shall make Required Deposits (16 USC 537) for current and/or deferred road maintenance. Such deposits are based on the estimated volume and distance hauled and Purchaser's commensurate use of each road listed in the Road Maintenance Plan in CT5.31#.

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

The Required Deposits for Forest Service work in lieu of Purchaser performance are \$2.54 per CCF for recurrent maintenance, and \$2.54 per CCF for deferred maintenance.

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

Deposit Made To	Rate	Unit of Measure
N/A		

CT5.33# - SNOW REMOVAL (06/2009)

Snow removal shall be done in a manner that will preserve and protect roads, provide for safe and efficient transport of timber, and prevent erosion damage to streams and adjacent lands. In performing snow removal, Purchaser shall adhere to the following performance standards, unless otherwise agreed:

1. Blade will be equipped with skid shoes to prevent loss of surfacing and damage to the road bed. On gravel and native surface roads, a minimum 4 -inch depth compacted snow mat will be maintained on the roadbed during blading.
2. Snow shall be removed from the entire road width, including turnouts.
3. Snow berms will be reduced at road intersections where plowed road segments join unplowed road segments. Reduce the piled snow in the roadway to create a smooth transition from plowed road to normal snow depth.
4. Openings will be created in snow berms as needed for proper drainage. Remove snow, ice, and debris from culverts and other drainage structures as needed to ensure efficient flow of water.
5. Tracked or clefted vehicles will not be used for snow removal without prior written approval of Forest Service Representative.

Sale Name: Gandy Dancer PR

CT6.314# - OPERATING REQUIREMENTS (06/2009)

Within Sale Area, unless changed by written agreement, the following operating requirements apply:

Restricted operations/activities:

Within Payment Units 01 - 03: Harvest Operations are restricted during the period of 03/16 through 07/31 (due to soils) and during the period of 10/01 through 12/14 (due to soils).

Prohibited operations/activities:

NA

CT6.412 - STUMP MARKS (06/2009)

Trees designated for cutting under BT2.35 have been marked with paint at breast height and below stump height. Trees shall be felled so as to leave paint on stump.

CT6.62# - SITE SPECIFIC WETLANDS PROTECTION MEASURES (07/2001)

Measures needed to protect wetlands identified on the Sale Area Map or on the ground include:

All logging slash, equipment, and vehicles are prohibited within these areas. Any slash resulting from the Purchaser's Operations shall be removed immediately or treated as directed by the Forest Service.

CT6.63# - TEMPORARY ROAD CLOSURE (06/2009)

Notwithstanding Standard Provision BT6.63, measures to effectively block temporary roads to normal vehicular traffic shall consist of the following:

Berm will be placed at an angle of 30 to 45 degrees, relative to the road. Dig a trench, 12 to 18 inches below the surface of the road or trail, and extend it to both sides of the road to prevent runoff from bypassing the berm/waterbar. The uphill end should extend beyond the side ditch of the road and into the earth berm to intercept any ditchflows. The outflow end is to be fully open and extended far enough beyond the edge of the road or trail to safely disperse runoff onto the undisturbed forest floor. When placement of the closure device does not require the berm to function as a waterbar for drainage, the trench will not be required. Height of the berm will be approximately 4 feet. Rocks/boulders, logging slash, cull logs, and stumps may be incorporated into the ridge of earth during construction as long as proper drainage is maintained and the road is completely blocked; unless otherwise agreed in writing. (See Typical Drawing)

Sale Name: Gandy Dancer PR

CT6.7# - SLASH DISPOSAL MEASURES (06/2009)

Slash resulting from Purchaser's operations shall be removed from lakes, ponds, private land, right-of-way clearings for telephone lines, power lines, pipelines, and other authorized facilities, and landings to be seeded under Special Provision CT6.6#.

The tops of felled trees shall not be left hanging in standing trees. All trees cut or pushed for landing and other construction clearings shall be completely felled and not left leaning. Slash resulting from construction clearing shall be treated concurrent with operations.

Slash Disposal treatment zones are shown on the Sale Area Map with symbol "SDZ."

Other specific slash disposal requirements are as follows:

SDZ - Shown on Sale Area Map for Payment Units 01 - 03: Slash resulting from construction clearing (such as from landings and right-of-way clearing associated with pre-haul maintenance requirements listed in Special Provision CT5.31#), including Specified Road Construction, shall be lopped and scattered to lie within 3 feet of the ground. All root wads shall be severed from the stem and righted on the ground or otherwise disposed of as directed by the Forest Service, concurrent with operations.

SDZ(1) - as shown on the Sale Area Map in Payment Unit 01, within a strip 50 feet in width, measured from the forested edge of the road along FR 1100, all slash resulting from the Purchaser's operations shall be lopped and scattered to lie within 36 inches of the ground. SDZ(1) shall be performed concurrent with operations.

SDZ(2) - Within the Sale Area, except as specified elsewhere in this Contract, all debris/slash resulting from the Purchaser's Operations shall be removed from landings and roadsides and scattered to lie within 3 feet of the ground or otherwise disposed of as directed by the Forest Service, concurrent with operations.

Material described above used in the construction of closure berms is excluded from this requirement.

Pit restoration (per specifications) in the Onion Creek Pit will be accomplished no later than the end of each operating season.

Sale Name: Gandy Dancer PR

CT7.2 - FIRE PRECAUTIONS (06/2009)

Unless other methods are agreed to in writing between the Purchaser and the Contracting Officer, the following specific precautionary measures are applicable during Purchaser's Operations in Fire Precautionary Period indicated in AT9.

1. Purchaser shall maintain Forest Service-approved spark arresting device on any piece of equipment operated by an internal combustion motor. In addition, each piece of motorized equipment shall be equipped with a serviceable round-pointed shovel and an operational fire extinguisher of at least five-pound rating suitable for the equipment being used. All chainsaw operators will have a serviceable round-pointed shovel and a one-pound multipurpose fire extinguisher readily available.
2. Purchaser shall require that smoking and the building of lunch or warming fires by Purchaser's employees, contractors, or employees of contractors be confined to designated safe places where flammable debris has been cleared away and where, at the option of the Purchaser, smoking or the building of lunch or warming fires may be permitted.
3. Adequate spark arresters shall be maintained on chimneys or stovepipes where wood or coal is being burned in an enclosed device.
4. Purchaser shall furnish serviceable firefighting tools. Location, numbers, and types of tools shall be specified in the Fire Prevention and Control Plan in accordance with BT7.1.

CT8.212 - MARKET-RELATED CONTRACT TERM ADDITION (11/2008)

The term of this contract may be adjusted when a drastic reduction in wood product prices has occurred in accordance with 36 CFR 223.52. The Producer Price Index used to determine when a drastic reduction in price has occurred is stated in AT17. Purchaser will be notified whenever the Chief determines that a drastic reduction in wood product prices has occurred. If the drastic reduction criteria specified in 36 CFR 223.52 are met for 2 consecutive calendar quarters, after contract award date, Contracting Officer will add 1 year to the contract term, upon Purchaser's written request. For each additional consecutive quarter such a drastic reduction occurs, Contracting Officer will, upon written request, add an additional 3 months to the term during Normal Operating Season, except that no single 3-month addition shall extend the term of the contract by more than one year. Contracting Officer must receive Purchaser's written request for a market-related contract term addition before the expiration of this contract.

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

- (i) The sale was awarded after December 31, 2006; and
- (ii) A drastic reduction in wood product prices occurred in at least ten of twelve consecutive quarters during the contract term, but not including the quarter in which the contract was awarded.

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

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

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

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

**SECTION 1. GENERAL**

Purchaser's main Road Maintenance responsibility begins: (1) after Purchaser performs Prehaul Maintenance on a road listed in the Road Maintenance Requirements Schedule; or (2) for all other roads, when Purchaser begins to use the road. Occasional travel by Purchaser's light vehicles, prior to beginning of construction clearing or logging operations in the area accessed by the road, does not constitute beginning of use. Purchaser is not required to perform routine maintenance during periods of inactivity. During periods of inactivity, Forest Service will perform maintenance only as required to meet its needs.

The Purchaser shall maintain roads, commensurate with the Purchaser's use, in accordance with the Road Maintenance Requirements Summary and Road Maintenance Specifications. Performance of road maintenance work by the Purchaser may be required prior to, during, or after each period of use. The timing of work accomplishment shall be based on the Purchaser's operating schedule under Standard Provision **BT6.31**.

If the Purchaser elects to use different roads than those listed in the Road Maintenance Requirements Summary, the Contracting Officer (CO) or designee shall determine the Purchaser's commensurate share of road maintenance and/or revise road maintenance deposits.

Unless the CO or designee agrees in writing, all Prehaul Maintenance requirements shall be completed on any portion of road prior to hauling on that portion.

The Forest Service shall prepare a revised Road Maintenance Requirements Schedule to reflect changes in the original haul routes when needed.

Any work or materials that are determined to no longer be needed and are waived shall have the estimated cost charged to the Timber Sale Account as described in **BT8.31**.

**SECTION 2. ROAD MAINTENANCE DEFINITIONS**

Wherever the following terms are used in the Road Maintenance Specifications, the meaning shall be:

**Base Course.** Material placed on the Subgrade to distribute concentrated wheel loads.

**Borrow.** Select Material taken from designated borrow sites.

**Crown, Inslope, and Outslope.** The cross slope of the Traveled Way to aid in drainage and traffic maneuverability.

**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.

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

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.

Drainage Structures. Manufactured structures which control the runoff of water from the Roadway including Inslope, overside drains, aprons, flumes, downdrains and downpipes.

During Haul Maintenance. Road maintenance work to be accomplished during the period of timber removal.

Geotextile. A group of construction fabrics with varying attributes designed for different purposes.

Lead-off Ditches. A ditch used to transmit water from a Culvert, Drainage Structure or Drainage Dip outlet to the natural drainage area.

Maintenance Activity. Items of work leading to the restoration and upkeep of a road and necessary to sustain the road's anticipated traffic.

Material. Any substance specified for use in the performance of the work.

Post Haul Maintenance. Road maintenance work to be accomplished after timber removal is completed.

Prehaul Maintenance. Road maintenance work to be accomplished prior to the roads use. Roads receiving prehaul maintenance shall be shown on the Sale Area Map.

Road Maintenance Cost. An estimate of the cost to perform road maintenance activities; as determined by the Forest Service. Estimates may include any or all of the work activities listed in Section 4, Road Maintenance Activity Specifications.

Roadbed. The portion of a road between the intersection of Subgrade and sideslopes, excluding that portion of the ditch below Subgrade.

Roadside. A general term denoting the area adjoining the outer edge of the Roadway.

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

Sand Hole. A hole that develops in the running surface of the road which is quite soft and dangerous in nature. Usually found in very sandy soils.

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.

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.

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.

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.

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

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.

Surface Course. The Material placed on the Base Course or Subgrade to enhance traction, distribute concentrated wheel loads and resist abrasion and the effects of climate. Surface Course may be referred to as surfacing.

Traveled Way. That portion of Roadway, excluding Shoulders, used for the movement of vehicles.

Turnouts. That portion of the Traveled Way constructed as additional width on single lane roads to allow for safe passing of vehicles.

**SECTION 3. ROAD MAINTENANCE REQUIREMENTS SCHEDULE**

See Summary in CT 5.31#.

**SECTION 4. ROAD MAINTENANCE SPECIFICATIONS**

**INCLUDED SPECIFICATIONS**

<u>Specification No.</u>	<u>Specification Title</u>
T-8030	Snow Removal
T-8110	Maintenance Blading/Grading
T-8130	Spot Surface Course Placement/Replenishment
T-8310	Ditch Cleaning
T-8340	Drainage Structure Maintenance
T-8350	Roadway Drainage Maintenance
T-8360	Composite High Clearance Road Maintenance
T-8420	Cutting Roadway Vegetation
T-8620	Miscellaneous Maintenance

**T-8030 Snow Removal**

**DESCRIPTION**

- 1.1 This Section provides for removal of snow from roads to facilitate logging operations and safe use. Remove snow from all or part of the traveled way, including sufficient turnouts for safe and efficient use for timber transportation and to protect the road. Remove intruding windfalls, debris or slough and slide material and dispose of only as necessary to provide passage for timber transportation. Removed materials may be deposited off the traveled way or outside the traveled way at locations designated by the Forest Service Representative (FSR). Snow may also be compacted as needed to freeze down soft areas or wet areas. This work is considered part of this specification. Equipment used for this work shall be in accordance with this specification and approved in advance by the FSR.

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

**EQUIPMENT**

- 2.1** Purchaser may use any type of equipment to remove snow, providing:
- a. Type or use of equipment is not restricted in **CT5.12#** or Schedule document.
  - b. Equipment is of the size and type commonly used to remove snow and will not cause damage to the road. Tracked or cleated vehicles shall not be used unless approved in writing by the FSR.
  - c. The Blade will be equipped with skid shoes to prevent loss of surfacing and damage to the road bed. On gravel and native surface roads, a minimum **4** -inch depth compacted snow mat will be maintained on the roadbed during blading.

**REQUIREMENTS**

- 3.1** Erect signs required by the Sign Plan in the SUPPLEMENTAL SPECIFICATIONS or as shown on the Section 3. Road Maintenance Requirements Schedule. Perform work in a manner to preserve and protect roads and appurtenances, and prevent erosion damage to roads, streams, and other forest values.
- 3.2** Space, construct, and maintain drainage holes in the dike of snow or berm caused by snow removal operations. Place drain holes to obtain surface drainage without discharging on erodible fills.
- 3.3** Upon seasonal completion of Purchaser's Operations, effectively block the road by a snow barricade, unless otherwise approved by the Contracting Officer.
- 3.4** Ice control may be performed by Purchaser when approved by the FSR in writing. Such approval will include ice control materials, application rates, and any specific requirements of use.
- 3.5** Snow berms will be reduced at road intersections where plowed road segments join unplowed road segments. Reduce the piled snow in the roadway to create a smooth transition from plowed road to normal snow depth.

**T-8110     Maintenance Blading/Grading**

**DESCRIPTION**

- 1.1** Maintenance Blading/Grading is keeping an aggregate surfaced 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 Drainage Dips and Lead-off Ditches.

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

**EQUIPMENT**

2.1 The equipment required to shape, spread, and compact surfacing is listed below.

<b>Road Number</b>	<b>Road Termini - From</b>	<b>Road Termini - To</b>	<b>Equipment Description</b>
1100	1152	Skoglund Road	Motor-grader (or equivalent)

**REQUIREMENTS**

- 3.1 Maintenance Blading/Grading shall be performed to facilitate traffic and proper drainage before, during, or after Purchaser's use as required by Section 3. Road Maintenance Requirements Schedule.
- 3.2 The surface blading shall preserve the existing cross-section. Surface irregularities shall be eliminated and the surface left in a smooth, free-draining state needed to facilitate traffic. Surface Course Material which has been displaced to the Shoulders or Turnouts shall be returned to the Traveled Way. The blading operation shall be conducted to conserve Surface Material and to provide for a thorough mixing of the Material being worked.
- 3.3 On aggregate surfaced roads Material generated from back slope Sloughing and ditch cleaning shall not be blended with Surface or Base Course Material unless agreed otherwise
- 3.4 Roadway back slopes shall not be undercut.
- 3.5 Drainage Dips and Lead-off Ditches shall be cleaned and maintained to retain the existing line, grade, and cross-section.
- 3.6 Intersecting roads shall be bladed for a distance of 50 feet to assure blending of the surfaces.
- 3.7 Rocks or other Material remaining on the Traveled Way after the final pass that are 4 inches in diameter or larger shall be removed. The unsuitable Material shall be disposed of by side casting unless agreed otherwise. Side casting into streams, lakes, or water courses will not be permitted.
- 3.8 Material resulting from this activity shall not remain on or in structures, such as Culverts, cattle guards, ditches, bridges, and Drainage Dips.
- 3.9 Material resulting from this activity, plus any accumulated debris, shall be removed from roadway structures, such as concrete low-water crossings or fords.

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

**T-8130 Spot Surface Course Placement/Replenishment**

DESCRIPTION

1.1 Spot Surface Course Placement/Replenishment includes Subgrade preparation, furnishing, hauling, spreading and shaping materials in accordance with the requirements.

MATERIALS

2.1 Surface Course Material will be in accordance with the subsection 3.2 of these specifications. Only commercial sources of aggregate will be accepted, except surfacing material may also be purchased from the government, where available, by filling out a form 2600, paying the required fees, and obtaining a permit.

REQUIREMENTS

3.1 Subgrade Preparation. Prepare Subgrade to receive Surface Course Material at locations as designated on-the-ground by the Forest Service on roads listed below. Prepare the Subgrade by shaping the Roadbed to approximately the original cross-section and consistent with adjacent sections.

3.2 Furnish, haul and spread Material at locations designated on the ground by the Forest Service (FS). Compact the aggregate by operating spreading and hauling equipment over the full width of each layer of the aggregate, or by other methods as specified below.

Road Number	Type Material	Finished Compacted Thickness Specified	Total Quantity (Tons or cu.yds.)	Compaction Method
1152 (MP 0.00 – 0.01)	Crushed Aggregate <sup>1/</sup>	Surface Entrance 4”Depth	15 CY (19.5 CY) <sup>2/</sup>	See 3.2 Above
<b>1152, 1152-A, 1152-A1, or 1152-A2</b>	<b>Pit Run Gravel<sup>1/</sup></b>	<b>To Be Placed as Directed by USFS (During Haul Road Maintenance).</b>	<b>50 CY (65 CY)<sup>2/</sup></b>	<b>See 3.2 Above</b>

<sup>1/</sup> Furnish, Haul, Place. Must meet M-DOT Designation 22A.

<sup>2/</sup> Quantity of Material in ( ) = Approximate Loose Volume.

<sup>3/</sup> Onion Creek Pit, as shown on Sale Area Map.

3.3 Variations. The Purchaser will be required to furnish weight tickets to the FS for each load of commercially obtained crushed aggregate prior to the final inspection. For aggregate purchased from the government, a count of truck loads will be required in addition to finished depth checks for the placed and compacted aggregate. Widths and lengths will be as staked or from schedule. When it is mutually agreed that all or part of the Surface Course Material is not needed, the estimated cost of surfacing not placed shall be charged to the Timber Sale Account in accordance with **BT8.31**.

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

**T-8310 Ditch Cleaning**

DESCRIPTION

- 1.1 Ditch cleaning is the removal and disposal of all accumulated organic and Slough Material from Roadway ditches to provide a positive draining waterway of uniform width, depth, and grade.

REQUIREMENTS

- 3.1 Ditch cleaning shall be repeated during sale operations 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 ditches that are not suitable for blending into the existing surface course shall be disposed of in places agreed to in writing by the FSR.
- 3.3 Roadway back slopes shall not be undercut.

**T-8340 Drainage Structure Maintenance**

DESCRIPTION

- 1.1 This work consists of maintaining and/or installation/removal of Drainage Structures and related items such as: inlet and outlet channels, existing riprap, trash racks, necessary geotextiles, pipes, and drop-inlets.

MATERIALS

- 2.1 All Materials used in the maintenance and/or installation/removal of Drainage Structures shall conform by type and specification to the Material in the structure being maintained or as indicated in the subsection 3.3 below.

REQUIREMENTS

- 3.1 Drainage Structures and related items shall be cleared of all foreign Material deposited above the bottom of the structure and all vegetative growth which interferes with the water flow. Material removed that cannot be incorporated into maintenance work shall be uniformly placed on fill slopes unless agreed otherwise.
- 3.2 Perform maintenance to insure the proper functioning of the head walls, aprons, inlet assemblies, riprap, trash racks and other facilities related to the Drainage Structure.

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

- 3.3 Install/remove ditches, drainage dips, rock crossings and/or culverts as shown below, and as marked on the ground. Installation of structures shall not begin without the presence of a FSR unless agreed to in writing by the FSR.
- 3.4 Installation shall be in accordance with construction industry standards and practices.
- 3.5 Culverts designated for removal/disposal shall become the property of the Purchaser and shall be disposed of properly.
- 3.6 Temporary culverts provided by the USFS shall remain the property of the government.
- 3.7 Bridges. Any miscellaneous parts needing repair or replacement during normal use of any bridge during haul shall be considered maintenance. This includes minor items such as object markers, running planks that have loosened or cracked deck boards, or drainage structures which may become plugged. Bridge decks that are dirt and dust covered shall be cleaned to allow for proper drainage and for safety of the user.

**T-8350 Roadway Drainage Maintenance**

DESCRIPTION

- 1.1 This work consists of providing Post Haul drainage on roads.

MATERIALS

- 2.1 All Materials used in the maintenance and/or installation/removal of Drainage Structures shall conform by type and specification to the Material in the structure being maintained, or as indicated in subsection 3.3.

REQUIREMENTS

- 3.1 Upon completion of work, shape the roadway to provide for the removal of surface water. The roadway need not be passable to vehicles (ML-1 roads). Repair and reinstall waterbars, barriers or berms existing prior to the Purchaser's operation. Areas where water is ponded by existing centerline profile sags in through cuts may be left untreated.
- 3.2 Any of the following methods are acceptable for use at eroded or rutted locations:
- (a) Method A: Outsloping the roadbed at not less than ½ inch per yard of width.
  - (b) Method B: Insloping the roadbed at not less than ½ inch per yard of width.
  - (c) Method C: Water bar roadbed at locations staked on the ground and construct as shown on the enclosed detail.
  - (d) Method D: Crown the roadbed as shown in the attached detail as the typical section for that length of road.

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

- 3.3 Drainage structures located in roadbed through fills and natural watercourses shall be fully functional without obstructions, including inlet and outlet channel within 20 feet of the structure (**all structures within termini indicated in CT5.31# Summary Table**).
- 3.5 Entrance Devices. Upon completion of work, replace entrance devices to effectively eliminate access by motorized vehicles (ML-1).
- 3.6 Seed and fertilize all disturbed areas in accordance with requirements set forth in T-8410 Vegetation Establishment.

**T-8360 Composite High Clearance Road Maintenance**

DESCRIPTION

- 1.1 This work consists of making limited use roads passable for project use by Purchaser and providing drainage from the traveled way and roadbed.

MATERIALS

- 2.1 Required materials are listed in subsection 3.2.

REQUIREMENTS

3.1 Traveled Way

A. Purchaser may smooth or fill existing cross ditches and waterbars and, by agreement, modify existing road junction to enable vehicle access. Prior to beginning haul and resumption of haul after an extended stoppage:

1. Remove brush, fallen trees, rocks, and other debris from traveled way, including turnouts, turnarounds, and other locations that interfere with needed maintenance. No object extending over 4 inches above the road surface shall remain within the 12 feet usable traveled way.
  2. Center the usable width of the roadbed or position away from the fill slope.
  3. Cut and remove standing or down trees, logs, brush, and limbs from within the 12 feet usable traveled way. Remove encroaching limbs to a height of 14 feet above the traveled way surface. Scatter material not meeting utilization standards outside and below the roadbed on the fill side. Limb and remove designated timber which meets utilization standards or deck at agreed locations.
  4. Place all removed material away from drainages and in locations previously agreed to in writing by the FSR.
  5. During use, maintain drainage structures including dips, ditches and culverts in a usable condition and surface in a flat, Insloped or Outsloped, or Crowned usable condition.
- 3.2 Drainage Facilities. Clean and recondition drainage facilities in accordance with T-8310 Ditch Cleaning and T-8340 Drainage Structure Maintenance. **See Table in T-8340 for new structures; maintain all other structures per 3.1, item 5 above within termini indicated in CT5.31# Summary Table.**

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

**3.3** Slough and Slides

1. Slough and Slides may be left in place provided surface drainage is adequately provided and at least 12 feet of width is available for vehicle passage.
2. Purchaser may reposition or ramp over Slides and Slough when the Traveled Way is less than 12 feet providing the material is capable of supporting vehicles. Limit Outslope to no more than six percent.
3. Reposition Slough or Slide materials, which are not capable of supporting a vehicle, on the roadbed to provide the 12 feet width. When directed by Forest Service, Slough or Slide material will be removed under Section T-8320 Slide, Slump, and Erosion Repair.

**3.4** Slumps, Eroded areas, and Washouts

1. Drain the roadbed immediately upgrade of Slumps and longitudinal cracks to prevent water from entering Slump area.
2. Slumps and longitudinal cracks at the edge of the roadbed shall not be considered a part of the usable width. Usable width may be reduced to ten feet in the area of the Slump.
3. Unless Forest Service agrees to material being placed on Slumps, ramp the Slumps on both ends into undisturbed roadbed to provide at least ten feet usable width. Use removed materials to guide vehicles to the ramp location or to aid in draining the area.
4. Eroded areas/washouts may be filled with suitable material and compacted by operating equipment over the fill area.

**3.5** Posthaul

- A. At the end of hauling or prior to entering into seasonal shutdowns or a period of extended inactivity:
1. Shape the traveled way and disturbed roadbed to provide functional drainage.
  2. Reinstall removed cross ditches and waterbars and provide any additional drainage structures necessary to offset changes caused through use and maintenance.
  3. Leave roads useable for high clearance vehicles. Remove or reshape Purchaser modifications at road junctions to leave the entrance as it was before use, or as agreed at the time of improvement.
  4. Close all roads which were closed previously, using prior existing methodology.

**T-8420      Cutting Roadway Vegetation**

**DESCRIPTION**

- 1.1** This work includes removal of brush, trees and other vegetative growth from within the clearing limits. This may include brush mowing of shoulders to prevent larger growth which would inhibit travel in the future.

**GANDY DANCER ROAD MAINTENANCE REQUIREMENTS**  
**FS-2400-6T Contracts (06/06)**  
**CT5.31## Special Provisions**

EQUIPMENT

- 2.2 Equipment use may include farm tractor mounted mowing or brushing equipment. If brushing equipment is required it must be of a size and power to cut off and masticate stems up to four inches in diameter. Larger growth may require hand clearing with a chainsaw or mechanized equipment able to handle larger trees.

REQUIREMENTS

- 3.1 Vegetative matter within the Roadway which impedes vehicular travel, and/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 in locations where agreed upon and the Traveled Way or sight distances will not be impaired.
- 3.2 Vegetative matter removed from the clearing limits shall be scattered outside the clearing limits at least 3 (and lopped to within 3 feet of ground) feet perpendicular to the road surface.
- 3.3 Trim tree branches that extend over the road surface and shoulders to attain a clear height of 14 feet. Trim branches flush with the tree or as close as possible without causing damage or scarring to the bole. Area shall be left neatly trimmed.
- 3.4 Any stump removed shall be placed in an upright position out of the clearing limits.
- 3.5 Area shall not be left in an unsightly condition. The FSR shall have the final say over how the area is left.

**T-8620 Miscellaneous Maintenance**

DESCRIPTION

- 1.1 Maintenance of miscellaneous structures includes cattle guards, gates (this includes all types of closure devices such as logs, rocks, dirt berms, dirt and slash berms, metal gates, etc), signs, 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 Cattle guards. Loose rails shall be welded or bolted back in place.

## GANDY DANCER ROAD MAINTENANCE REQUIREMENTS

### FS-2400-6T Contracts (06/06)

#### CT5.31## Special Provisions

Excess Material carried into the cattle guard shall be removed when drainage is blocked or when it reaches six inches from the bottom of the cattle guard frame. Drainage into and from the cattle guard shall be kept open.

3.2 Gates (and other closure devices). 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. Weathered berms or wood piles shall be reconstructed to a height which discourages use and blocks the road.

3.3 Signs. Any signs needing repair or replacement shall be installed per sign placement detail or MUTCD direction. All roads shall have legible sign numbers. ML 3-5 roads shall have horizontal numbering and ML 1-2 roads shall have vertical numbers. The material used shall be as directed by the Forest Service Representative. All new signs must meet retro reflectivity requirements.

<b>Road Number</b>	<b>Road Name</b>	<b>Location</b>	<b>Remove/Install</b>	<b>Type of Item</b>	<b>Size</b>	<b>Quantity</b>
1152	1152	MP 0.02	Remove	Earthen Berm	existing	1
1152	1152	MP 0.02	Install	Earthen Berm	<sup>1/</sup>	1

<sup>1/</sup> Per Typical Drawing—Earthen Berms/Road Closure Devices

**GANDY DANCER PR TIMBER SALE  
SPECIFIED ROAD SCHEDULE OF ITEMS**

	Item Description & Milepost	C or R <sup>1</sup>	Unit & M of M <sup>2</sup>	Quantity	Road Std. (W,D,S) <sup>3</sup>	Unit Allowance	Estimated Allowance
1 of 4						DATE:	3/16/2016
	<b>FR 1152-A</b>	<b>R</b>			<b>D</b>		
	M.P. 0.00-1.22						
249 02	Reconstruct road by clearing/grubbing and shaping to crown or outslope. Re-establish roadside ditches left and right. See typical drawings for road prism details. As directed by Forest Service.		Mile	1.22		\$4,200	\$5,124
	M.P. 0.20						
204 20	Construct 30' outlet ditch-right		Each	1		\$30	\$30
	M.P. 0.21-0.22						
213 01	Furnish and place 50 linear feet (50'x15'=84 sy) 8 oz non-woven, geotextile fabric as separator below unclassified borrow. (pit run)		S.Y DQ	84		\$3	\$252
	M.P. 0.21-0.22						
301 13	Haul and place 37 cy (48 cy loose) unclassified borrow (pit run from Onion Creek Pit) for surfacing. (50'x15'x16")Compaction Method-A.		C.Y. DQ	37		\$13	\$481
	M.P. 0.24-0.25						
213 01	Furnish and place 50 linear feet (50'x15'=84 sy) 8 oz non-woven, geotextile fabric as separator below unclassified borrow. (pit run) Compaction Method-A		S.Y DQ	84		\$3	\$252
	M.P. 0.24-0.25						
301 13	Haul and place 37 cy (48 cy loose) unclassified borrow (pit run from Onion Creek Pit) for surfacing. (50'x15'x16")Compaction Method-A.		C.Y. DQ	37		\$13	\$481
	M.P. 0.25-0.26						
204 20	Prepare culvert bed. Cost includes removing saturated soil and replacing with dry soil from adjacent borrow area to encapsulate culvert. Place saturated soil in borrow pit and restore to natural		Each	1		\$350	\$350

<sup>1</sup>C = Construction; R = Reconstruction<sup>2</sup>Method of Measure<sup>3</sup>W = Winter; D = Dry Summer; S = Summer

**GANDY DANCER TIMBER SALE  
SPECIFIED ROAD SCHEDULE OF ITEMS**

	Item Description & Milepost	C or R <sup>1</sup>	Unit & M of M <sup>2</sup>	Quantity	Road Std. (W,D,S) <sup>3</sup>	Unit Allowance	Estimated Allowance
2 of 4						Date:	3/9/2013
	<b>FR 1152-A Cont.</b>	<b>R</b>			<b>D</b>		
	M.P. 0.255						
602 74	Furnish and install 15"X24' HDPE dual walled culvert with smooth interior. As directed by Forest Service.		LinFt/ DQ	24		\$14	\$336
	M.P. 0.25-0.26						
213 01	Furnish and place 50 linear feet (50'x15'=84 sy) 8 oz non-woven, geotextile fabric as separator below unclassified borrow. (pit run)		S.Y DQ	84		\$3	\$252
	M.P. 0.25-0.26						
301 13	Haul and place 37 cy (48 cy loose) unclassified borrow (Onion Creek Pit) for surfacing. (50'x15'x16")Compaction Method-A.		C.Y. DQ	37		\$13	\$481
	M.P. 0.28-0.29						
213 01	Furnish and place 50 linear feet (50'x15'=84 sy) 8 oz non-woven, geotextile fabric as separator below unclassified borrow. (pit run)		S.Y DQ	84		\$3	\$252
	M.P. 0.28-0.29						
301 13	Haul and place 37 cy (48 cy loose) unclassified borrow (from Onion Creek Pit) for surfacing. (50'x15'x16")Compaction Method-A.		C.Y. DQ	37		\$13	\$481
	M.P. 0.32-0.33						
213 01	Furnish and place 50 linear feet (50'x15'=84 sy) 8 oz non-woven, geotextile fabric as separator below unclassified borrow. (pit run) Compaction Method-A		S.Y DQ	84		\$3	\$252
	M.P. 0.32-0.33						
301 13	Haul and place 37 cy (48 cy loose) unclassified borrow (from Onion Creek Pit) for surfacing. (50'x15'x16")Compaction Method-A.		C.Y. DQ	37		\$13	\$481

<sup>1</sup>C = Construction; R = Reconstruction<sup>2</sup>Method of Measure<sup>3</sup>W = Winter; D = Dry Summer; S = Summer

**GANDY DANCER TIMBER SALE  
SPECIFIED ROAD SCHEDULE OF ITEMS**

	Item Description & Milepost	C or R <sup>1</sup>	Unit & M of M <sup>2</sup>	Quantity	Road Std. (W,D,S) <sup>3</sup>	Unit Allowance	Estimated Allowance
3 of 4							
	<b>FR 1152-A Cont.</b>	<b>R</b>			<b>D</b>		
	M.P. 0.58						
204 20	Prepare culvert bed.		Each	1		\$150	\$150
	M.P. 0.58						
602 74	Furnish and install 24"X24' HDPE dual walled culvert with smooth interior. As directed by Forest Service.		LinFt/ DQ	24		\$29	\$696
	M.P. 0.575-0.585						
213 01	Furnish and place 50 linear feet (50'x15'=84 sy) 8 oz non-woven, geotextile fabric as separator below unclassified borrow. (pit run)		S.Y DQ	84		\$3	\$252
	M.P. 0.57-0.59						
301 13	Haul and place 56 cy (71.5 cy loose) unclassified pit run borrow (from Onion Creek Pit) for surfacing. (75'x15'x16") Compaction Method-A.		C.Y. DQ	56		\$13	\$728
	M.P. 0.65						
204 20	Prepare culvert bed.		Each	1		\$150	\$150
	M.P. 0.65						
602 74	Furnish and install 15"X24' HDPE dual walled culvert with smooth interior. As directed by Forest Service.		LinFt/ DQ	24		\$14	\$336
	M.P. 0.645-0.655						
213 01	Furnish and place 50 linear feet (50'x15'=84 sy) 8 oz woven, geotextile fabric as separator below unclassified sand fill.		S.Y DQ	84		\$3	\$252
	M.P. 0.64-0.66						
301 13	Haul and place 56 cy (73 cy loose) unclassified pit run borrow (from Onion Creek Pit) for surfacing. (75'x15'x16") Compaction Method-A.		C.Y. DQ	56		\$13	\$728
	M.P. 0.91						
204 20	Prepare culvert bed.		Each	1		\$150	\$150
	M.P. 0.91						
602 74	Furnish and install 15"X24' HDPE dual walled culvert with smooth interior. As directed by Forest Service.		LinFt/ DQ	24		\$14	\$336

<sup>1</sup>C = Construction; R = Reconstruction<sup>2</sup>Method of Measure<sup>3</sup>W = Winter; D = Dry Summer; S = Summer

Prepared by Eric Cromell Civil Engineering Technician

**GANDY DANCER TIMBER SALE  
SPECIFIED ROAD SCHEDULE OF ITEMS**

	Item Description & Milepost	C or R <sup>1</sup>	Unit & M of M <sup>2</sup>	Quantity	Road Std. (W,D,S) <sup>3</sup>	Unit Allowance	Estimated Allowance
4 of 4	<b>FR 1152-A Cont.</b>	<b>R</b>			<b>D</b>		
	M.P. 0.905-0.915						
213 01	Furnish and place 50 linear feet (50'x15'=84 sy) 8 oz woven, geotextile fabric as separator below unclassified sand fill.		S.Y DQ	84		\$3	\$252
	M.P. 0.90-0.92						
301 13	Haul and place 56 cy (73 cy loose) unclassified pit run borrow (from Onion Creek Pit) for surfacing. (75'x15'x16") Compaction Method-A.		C.Y. DQ	56		\$13	\$728
<b>FR 1152-A Total Specified Road Re-Construction</b>							<b>\$14,263</b>
	<b>FR 1152-A1</b>	<b>R</b>			<b>D</b>		
	M.P. 0.00-0.37						
249 02	Reconstruct road by clearing/grubbing and shaping to crown or outslope. Re-establish roadside ditches left and right. See typical drawings for road prism details. As directed by Forest Service.		Mile	0.37		\$4,200	\$1,554
	M.P. 0.20						
204 20	Construct 30' outlet ditch-right		Each	1		\$30	\$30
<b>FR 1152-A1 Total Specified Road Re-Construction</b>							<b>\$1,584</b>
	<b>FR 1152-A2</b>	<b>C</b>			<b>D</b>		
	M.P. 0.00-0.52						
249 02	Construct a new road segment by clearing/grubbing and shaping to crown or outslope. Construct roadside ditches left and right. See typical drawings for road prism details. As directed by Forest Service.		Mile	0.52		\$6,000	\$3,120
<b>FR 1152-A2 Total Specified New Construction</b>							<b>\$3,120</b>
<b>Gandy Dancer Grand Total Specified Road Work</b>							<b>\$18,967</b>

<sup>1</sup>C = Construction; R = Reconstruction<sup>2</sup>Method of Measure<sup>3</sup>W = Winter; D = Dry Summer; S = Summer

## GANDY DANCER PR TIMBER SALE

### SPECIFIED ROAD NOTES

- NOTE:** There may be underground utility lines in unknown locations on this project. Call **MISS DIG** three full working days before any work begins. **1-800-482-7171**.
- NOTE:** All finished roadbeds shall be 12' as shown in the typical details for crowned roads with no ditches, 1' ditches and out sloped roads.
- NOTE:** Construct the road bed to conform to the typical detail as noted in the narrative description.
- NOTE:** Additional outlet or lead out ditches may be required at road segment locations to allow for proper drainage. Locations for placement shall be determined by the Forest Service and are included in appraised allowance for clearing and shaping.
- NOTE:** During clear and grub operations, **slash** resulting from purchasers operations shall be treated as per **CT 6.7#**. The construction requirements for composite road construction slash disposal shall be Method A as described in the Supplemental Specification Item 249.
- NOTE:** High density polyethylene drainage pipes shall be dual walled and have a smooth interior. **All HDPE culverts shall have a minimum of 18" of compacted material over the top of the culvert.**
- NOTE:** Geotextile (**segments totaling 400'L x 15'W**, or 667 SY) shall be placed as directed by the Forest Service as subgrade stabilization as noted on Schedule of Items. **Geotextile Type II separation material must be equivalent to or greater than US 205 non-woven 8 oz. fabric.**
- NOTE:** There is **353 C.Y. of pit run** material required for specified road segments. This volume plus the normal compaction factor of 130% computes to a loose volume of 459 C.Y. The borrow source for this project is the **Onion Creek Pit** located on Forest Road 1130 in **T48N, R37W, Section 6**. Some pit development may be required and is considered incidental to associated items. **Material will need to be loaded with an excavator.** Compaction shall be Method A.
- NOTE:** During gravel hauling operations safety signs shall be placed as directed by the Forest Service. See Sale Area Map for specific sign locations and *Traffic Control Plan* for sign size and type. *Signs shall be in place prior to hauling.*

## Standard Specifications for Construction of Roads & Bridges on Federal Highway Projects

### Specification List

**Project Name: GANDY DANCER PR TIMBER SALE**

**Date Prepared: 1/19/2016**

Road Number		FR 1152-A FR 1152-A1		1152-A	1152-A1	
Road Name			Termini.....			
			Construction Reconstruction	----	----	
Spec. No.	Title			1.22	0.37	Latest Revised Edition
101 thru 109	General Requirements			X	X	2003
204	Excavation and Embankment			X	X	2003
207	Earthwork Geotextiles			X		2003
301	Untreated Aggregate Course			X		2003
602	Culverts and Drains			X		2003

**NOTE: The Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.**

**Standard Specifications for Construction of Roads & Bridges on Federal Highway Projects**

**Specification List**

**Project Name: GANDY DANCER PR TIMBER SALE**

**Date Prepared: 1/19/2016**

<b>Road Number</b>	<b>FR 1152-A2</b>		1152-A2		
Road Name		Termini.....			
		Construction Reconstruction	0.52 ----	---- ----	
<b>Spec. No.</b>	<b>Title</b>				Latest Revised Edition
101 thru 109	General Requirements		X		2003

**NOTE: The Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.**

**GANDY DANCER PR TIMBER SALE**

**SUPPLEMENTAL SPECIFICATIONS**

Section 101-109	General Requirements
Section 204	Excavation and Embankment
Section 249	Composite Road Construction
Section 301	Untreated Aggregate Course
Section 602	Culverts and Drains

## Preface

Preface\_wo\_03\_15\_2004\_m

Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.

## 101 - Terms, Format, and Definitions

101.00\_nat\_us\_07\_25\_2005

101.01\_nat\_us\_01\_22\_2009

### 101.01 Meaning of Terms

Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.01\_nat\_us\_01\_22\_2009

### 101.01 Meaning of Terms

Delete all references to the FAR (Federal Acquisition Regulations) in the specifications.

101.03\_nat\_us\_06\_16\_2006

### 101.03 Abbreviations.

Add the following to (a) Acronyms:

AFPA	American Forest and Paper Association
MSHA	Mine Safety and Health Administration
NIST	<a href="#">National Institute of Standards and Technology</a>
NESC	National Electrical Safety Code
WCLIB	West Coast Lumber Inspection Bureau

.

Add the following to (b) SI symbols:

mp	Milepost
ppm	Part Per Million

101.04\_nat\_us\_03\_29\_2007

### 101.04 Definitions.

Delete the following definitions and substitute the following:

**Bid Schedule**--The Schedule of Items.

**Bridge**--No definition.

**Contractor**--The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the “purchaser”.

**Culvert**--No definition.

**Right-of-Way**--A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Add the following:

**Adjustment in Contract Price**--“Equitable adjustment,” as used in the Federal Acquisition Regulations, or “construction cost adjustment,” as used in the Timber Sale Contract, as applicable.

**Change**--“Change” means “change order” as used in the Federal Acquisition Regulations, or “design change” as used in the Timber Sale Contract.

**Design Quantity**--“Design quantity” is a Forest Service method of measurement from the FS-96 *Forest Service Specifications for the Construction of Roads and Bridges*. Under these FP specifications this term is replaced by the term “Contract Quantities”.

**Forest Service**--The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

**Neat Line**--A line defining the proposed or specified limits of an excavation or structure.

**Pioneer Road**--Temporary construction access built along the route of the project.

**Purchaser**--The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

**Protected Streamcourse**--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

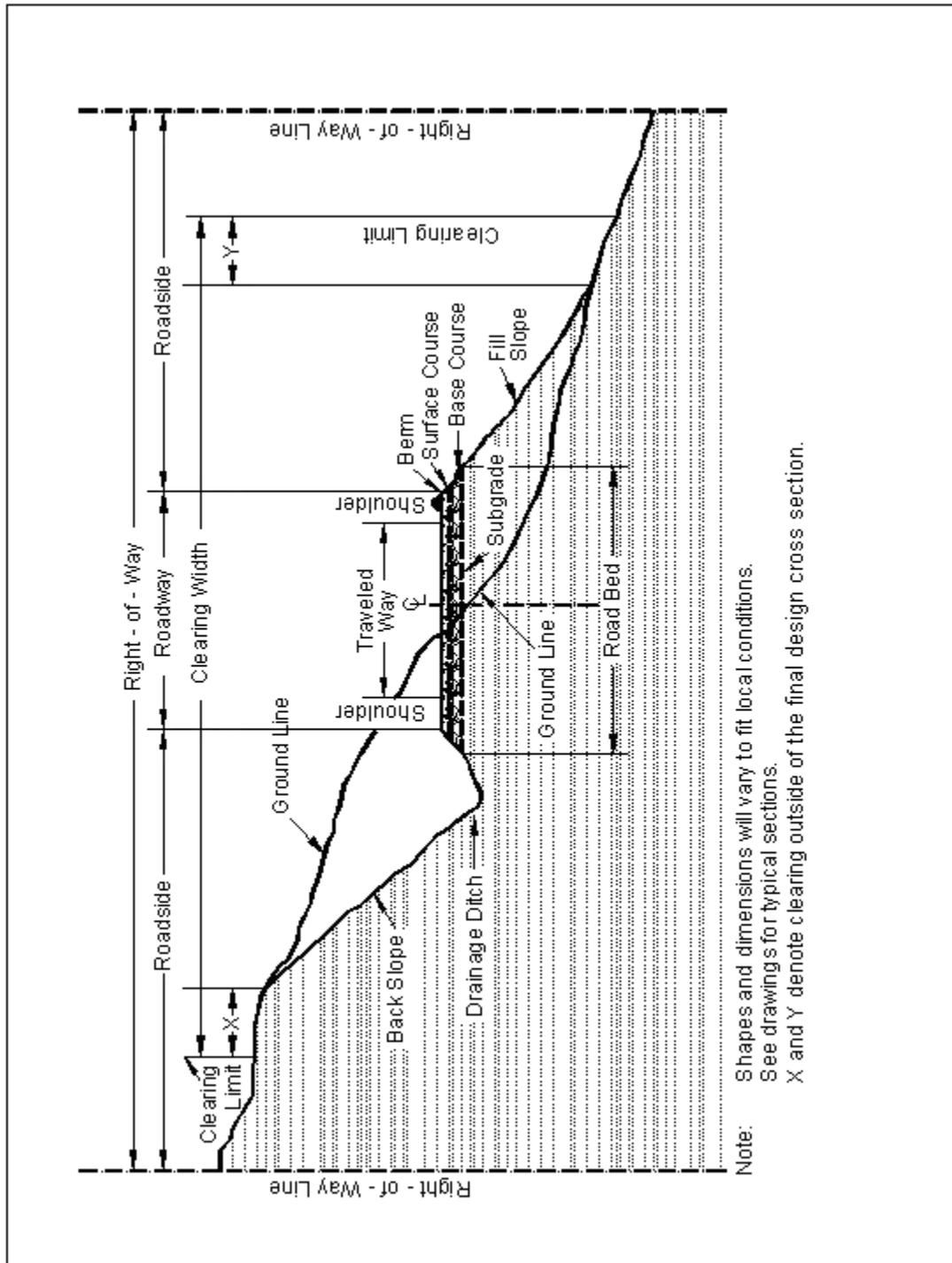
**Road Order**--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

**Schedule of Items**--A schedule in the contract that contains a listing and description of construction items, quantities, units of measure, unit price, and amount.

**Utilization Standards**--The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Add Figure 101-1—Illustration of road structure terms:

Figure 101-1—Illustration of road structure terms.



101.04\_nat\_us\_11\_06\_2007

**101.04 Definitions.**

Delete the following definitions:

Contract Modification

Day

Notice to Proceed

Solicitation

## **102 - Bid, Award, and Execution of Contract**

102.00\_nat\_us\_02\_16\_2005

### **102 Bid, Award, and Execution of Contract**

Delete Section 102 in its entirety.

## **103 - Scope of Work**

103.00\_nat\_us\_02\_16\_2005

### **Deletions**

Delete all but subsection 103.01 Intent of Contract.

## **104 - Control of Work**

104.00\_nat\_us\_06\_16\_2006

### **Deletions**

Delete Sections 104.01, 104.02, and 104.04.

104.03\_nat\_us\_02\_22\_2005

**104.03 Drawings and Specifications**Delete subsection 104.03

104.03\_nat\_us\_01\_22\_2009

**104.03 Specifications and Drawings.**Delete 104.03.

104.03\_nat\_us\_02\_22\_2005

**104.06 Use of Roads by Contractor**

The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

104.07\_nat\_us\_02\_17\_2005

Add Subsection.**105 - Control of Material**

105.02\_nat\_us\_01\_18\_2007

**105.02 Material Sources.****105.02(a) Government-provided sources.**Add the following:

Comply with the requirements of 30 CFR 56, subparts B and H. Use all suitable material for aggregate regardless of size unless otherwise designated. When required, re-establish vegetation in disturbed areas according to section 625.

Government-provided Sand Fill source for this project is identified as follows:

Onion Creek Pit, FR 1130, Town 48 North, Range 37 West, Section 6

There is no charge for material taken from these pits for use on this project.

105.02\_nat\_us\_02\_17\_2005

### **105.05 Use of Material Found in the Work.**

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. The Government is not obligated to make reimbursement for the cost of producing these materials.

## **106 - Acceptance of Work**

106.01\_nat\_us\_01\_17\_2013

### **106.01 Conformity with Contract Requirements.**

Delete Subsection 106.01 and substitute the following:

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown on the plans or specified in the contract.

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is more strict.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the

Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with the contract.

Remove and replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted, at no cost to the Government.

(a) Disputing Government test results. **If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:**

- (1) Sampling method;
- (2) Number of samples;
- (3) Sample transport;
- (4) Test procedures;
- (5) Testing laboratories;
- (6) Reporting;
- (7) Estimated time and costs; and
- (8) Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third party laboratory. Use a third party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory's accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol.

If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

**(b) Alternatives to removing and replacing non-conforming work.** As an alternative to removal and replacement, the Contractor may submit a written request to:

- (1) Have the work accepted at a reduced price; or
- (2) Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

106.07\_nat\_us\_05\_11\_2004

### **106.07 Delete**

Delete subsection 106.07.

## **107 - Legal Relations and Responsibility to the Public**

107.05\_nat\_us\_05\_11\_2004

### **107.05 Responsibility for Damage Claims.**

Delete the entire subsection.

107.06\_nat\_us\_06\_16\_2006

### **107.06 Contractor's Responsibility for Work.**

Delete the following from the first paragraph.

“except as provided in Subsection 106.07”.

107.08\_nat\_us\_03\_29\_2005

***107.08 Sanitation, Health, and Safety***

Delete the entire subsection.

**107 - Legal Relations and Responsibility To the Public**

107.08\_nat\_us\_05\_11\_2004

**107.08 Sanitation, Health, and Safety.**

Add the following:

Perform all operations in a prudent, conscientious, safe and professional manner. Ensure that all personnel involved in handling and packaging the hazardous waste are trained for the level of expertise required for the proper performance of the task and, in particular, in the areas of chemical incompatibility, general first aid procedures, and spills. Provide handling and personal protective equipment appropriate to ensure safe handling of the hazardous waste according to 29 CFR 1910.120). Notify the Forest Service of all hazardous material that may be brought onto the National Forest.

**107 - Legal Relations and Responsibility to the Public**

107.09\_nat\_us\_06\_16\_2006

**107.09 Legal Relationship of the Parties.**

Delete the entire subsection.

107.10\_nat\_us\_06\_16\_2006

**107.10 Environmental Protection.**

Add the following:

Design and locate equipment repair shops, stationary refueling sites, or other facilities to minimize the potential and impacts of hazardous material spills on Government land.

Before beginning any work, submit a Hazardous Spill Plan. List actions to be taken in the event of a spill. Incorporate preventive measures to be taken, such as the location of mobile refueling

facilities, storage and handling of hazardous materials, and similar information. Immediately notify the CO of all hazardous material spills. Provide a written narrative report form no later than 24 hours after the initial report and include the following:

- Description of the item spilled (including identity, quantity, manifest number, and other identifying information).
- Whether amount spilled is EPA or state reportable, and if so whether it was reported, and to whom.
- Exact time and location of spill including a description of the area involved.
- Containment procedures.
- Summary of any communications the Contractor had with news media, Federal, state and local regulatory agencies and officials, or Forest Service officials.
- Description of clean-up procedures employed or to be employed at the site including final disposition and disposal location of spill residue.

When available provide copies of all spill related clean up and closure documentation and correspondence from regulatory agencies.

The Contractor is solely responsible for all spills or leaks that occur during the performance of this contract. Clean up spills or leaks to the satisfaction of the CO and in a manner that complies with Federal, state, and local laws and regulations.

## 108 - Prosecution and Progress

108.00\_nat\_us\_02\_16\_2005

### 108 Delete.

Delete Section 108 in its entirety.

## 109 - Measurement and Payment

109.00\_nat\_us\_02\_17\_2005

### 109 Deletions

Delete the following entire subsections:

#### **109.06 Pricing of Adjustments.**

**109.07 Eliminated Work.****109.08 Progress Payments.****109.09 Final Payment.**

109.02\_nat\_us\_06\_16\_2006

**109.02 Measurement Terms and Definitions.****(b) Contract quantity.**Add the following:

Contract quantities will be adjusted only when there are errors in the original design of 15% or more.

Change the following:

“(b) Cubic yard” to “(c) Cubic yard”.

Add the following definition:

**(p) Thousand Board Feet (Mbf).** 1,000 board feet based on nominal widths, thickness, and extreme usable length of each piece of lumber or timber actually incorporated in the job. For glued laminated timber, 1,000 board feet based on actual width, thickness, and length of each piece actually incorporated in the job.

109.03\_nat\_us\_02\_17\_2005

**204 - Excavation and Embankment**

204.00\_nat\_us\_03\_26\_2009

**Replace Section 204 in its entirety with the following:****Description**

**204.01** This work consists of excavating material and constructing embankments. This includes furnishing, hauling, stockpiling, placing, disposing, sloping, shaping, compacting, and finishing earthen and rocky material.

**204.02 Definitions.**

**(a) Excavation.** Excavation consists of the following:

**(1) Roadway excavation.** All material excavated from within the right-of-way or

easement areas, except subexcavation covered in (2) below and structure excavation covered in Sections 208 and 209. Roadway excavation includes all material encountered regardless of its nature or characteristics.

**(2) Subexcavation.** Material excavated from below subgrade elevation in cut sections or from below the original groundline in embankment sections. Subexcavation does not include the work required by Subsections 204.05, 204.06(b), and 204.06(c).

**(3) Borrow excavation.** Material used for embankment construction that is obtained from outside the roadway prism. Borrow excavation includes unclassified borrow, select borrow, and select topping.

**(b) Embankment construction.** Embankment construction consists of placing and compacting roadway or borrow excavation. This work includes:

- (1) Preparing foundation for embankment;
- (2) Constructing roadway embankments;
- (3) Benching for side-hill embankments;
- (4) Constructing dikes, ramps, mounds, and berms; and
- (5) Backfilling subexcavated areas, holes, pits, and other depressions.

**(c) Conserved topsoil.** Excavated material conserved from the roadway excavation and embankment foundation areas that is suitable for growth of grass, cover crops, or native vegetation.

**(d) Waste.** Excess and unsuitable roadway excavation and subexcavation that cannot be used.

### Material

**204.03** Conform to the following Subsections:

Backfill material	704.03
Select borrow	704.07
Select topping	704.08
Topping	704.05
Unclassified borrow	704.06
Water	725.01

### Construction Requirements

**204.04 Preparation for Roadway Excavation and Embankment Construction.** Clear the area of vegetation and obstructions according to Sections 201 and 203.

**204.05 Reserved.**

**204.06 Roadway Excavation.** Excavate as follows:

**(a) General.** Do not disturb material and vegetation outside the construction limits. Incorporate only suitable material into embankments. Replace any shortage of suitable material caused by premature disposal of roadway excavation. Dispose of unsuitable or excess excavation material according to Subsection 204.14.

At the end of each day's operations, shape to drain and compact the work area to a uniform cross-section. Eliminate all ruts and low spots that could hold water.

Retrieve material deposited outside of the clearing limits as directed by the CO. Place unsuitable material in designated areas.

**(b) Rock cuts.** Blast rock according to Section 205. Excavate rock cuts to 6 inches below subgrade within the roadbed limits. Backfill to subgrade with topping or with other suitable material. Compact the material according to Subsection 204.11

**(c) Earth cuts.** Scarify earth cuts to 6 inches below subgrade within the roadbed limits. Compact the scarified material according to Subsection 204.11.

**(d) Pioneer Roads.** Road pioneering, slash disposal, and grubbing of stumps may proceed concurrently with excavation. Conduct excavation and placement operations so material to be treated under Section 201 will not be incorporated into the roadway unless specified in the slash treatment method. Maintain drainage during pioneering operations.

Remove snow and ice in advance of the work and deposit beyond the roadway limits in a manner that will not waste material or generate sediment. Do not incorporate snow and ice into embankments. Place snow or ice in a manner to prevent resource damage.

**204.07 Subexcavation.** Excavate material to the limits designated by the CO. Take cross-sections according to Section 152. Prevent unsuitable material from becoming mixed with the backfill. Dispose of unsuitable material according to Subsection 204.14. Backfill the subexcavation with topping, or other suitable material. Compact the material according to Subsection 204.11.

**204.08 Borrow Excavation.** Use all suitable roadway excavation in embankment construction. Do not use borrow excavation when it results in excess roadway excavation. Deduct excess borrow excavation from the appropriate borrow excavation quantity.

Obtain borrow source acceptance according to Subsection 105.02. Develop and restore borrow sources according to Subsection 105.03. Do not excavate beyond the established limits. When applicable, shape the borrow source to permit accurate measurements when excavation is complete.

**204.09 Preparing Foundation for Embankment Construction.** Prepare foundation for embankment construction as follows:

**(a) Embankment less than 4 feet high over natural ground.** When designated, remove topsoil and break up the ground surface to a minimum depth of 6 inches by plowing or scarifying. Compact the ground surface according to Subsection 204.11.

**(b) Embankments over an existing asphalt, concrete, or gravel road surface.** Scarify gravel roads to a minimum depth of 6 inches. Scarify or pulverize asphalt and concrete roads to 6 inches below the pavement. Reduce all particles to a maximum size of 6 inches and produce a uniform material. Compact the surface according to Subsection 204.11.

**(c) Embankment across ground not capable of supporting equipment.** Dump successive loads of embankment material in a uniformly distributed layer to construct the lower portion of the embankment. Limit the layer thickness to the minimum depth necessary to support the equipment.

**(d) Embankment on an existing slope steeper than 1V:3H.** Cut horizontal benches in the existing slope to a sufficient width to accommodate placement and compaction operations and equipment. Bench the slope as the embankment is placed and compacted in layers. Begin each bench at the intersection of the original ground and the vertical cut of the previous bench.

**204.10 Embankment Construction.** Incorporate only suitable roadway excavation material into the embankment. When the supply of suitable roadway excavation is exhausted, furnish unclassified borrow to complete the embankment. Obtain written approval before beginning construction of embankments over 6 feet high at subgrade centerline. Construct embankments as follows:

**(a) General.** At the end of each day's operations, shape to drain and compact the embankment surface to a uniform cross-section. Eliminate all ruts and low spots that could hold water.

During all stages of construction, route and distribute hauling and leveling equipment over the width and length of each layer of material.

Compact embankment side slopes flatter than 1V:1.75H with a tamping type roller or by walking with a dozer. For slopes 1V:1.75H or steeper, compact the slopes as construction of the embankment progresses.

Where placing embankment on one side of abutments, wing walls, piers, or culvert headwalls, compact the material using methods that prevent excessive pressure against the structure.

Where placing embankment material on both sides of a concrete wall or box structure, conduct operations so compacted embankment material is at the same elevation on both sides of the structure.

Where structural pilings are placed in embankment locations, limit the maximum particle size to 4 inches.

**(b) Embankment within the roadway prism.** Place embankment material in horizontal layers not exceeding 12 inches in compacted thickness. Incorporate oversize boulders or rock fragments into the 12-inch layers by reducing them in size or placing them individually as required by (c) below. Compact each layer according to Subsection 204.11 before placing the next layer.

Material composed predominately of boulders or rock fragments too large for 12-inch layers may be placed in layers up to 24 inches thick. Incorporate oversize boulders or rock fragments into the 24-inch layer by reducing them in size or placing them individually according to (c) below. Place sufficient earth and smaller rocks to fill the voids. Compact each layer according to Subsection 204.11 before placing the next layer.

**(c) Individual rock fragments and boulders.** Place individual rock fragments and boulders greater than 24 inches in diameter as follows:

- (1) Reduce rock to less than 48 inches in the largest dimension.
- (2) Distribute rock within the embankment to prevent nesting.
- (3) Place layers of embankment material around each rock to a depth not greater than that permitted by (b) above. Fill all the voids between rocks.
- (4) Compact each layer according to Subsection 204.11 before placing the next layer.

**(d) Embankment outside of roadway prism.** Where placing embankment outside the staked roadway prism, place material in horizontal layers not exceeding 24 inches in compacted thickness. Compact each layer according to Subsection 204.11.

**204.11 Compaction.** Compact the embankment using one of the following methods as specified:

**(a) Compaction A.** Use AASHTO T 27 to determine the amount of material retained on a Number 4 sieve. If there is more than 80 percent retained on the No. 4 sieve use procedure (1). If there is 50 to 80 percent retained on the No. 4 sieve use procedure (2). If there is less than 50 percent retained on the No. 4 sieve use procedure (3).

(1) Adjust the moisture content to a level suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Use compression-type rollers at speeds less than 6 feet per second and vibratory rollers at speeds less than 3 feet per second. Compact each layer of material full width with one of the following and until there is no visible evidence of further consolidation.

(a) Four roller passes of a vibratory roller having a minimum dynamic force of 40,000 pounds impact per vibration and a minimum frequency of 1000 vibrations per minute.

(b) Eight roller passes of a 20-ton compression-type roller.

(c) Eight roller passes of a vibratory roller having a minimum dynamic force of 30,000 pounds impact per vibration and a minimum frequency of 1000 vibrations per minute.

Increase the compactive effort for layers deeper than 12 inches as follows:

- For each additional 6 inches or fraction thereof, increase the number of roller passes in (a) above by four passes.
- For each additional 6 inches or fraction thereof, increase the number of roller passes in (b) and (c) above, by eight passes.

(2) Use AASHTO T 99 to determine the optimum moisture content of the portion of the material passing a No. 4 sieve. Multiply this number by the percentage of material passing a No. 4 sieve, and add 2 percent to determine the optimum moisture content of the material. Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content.

Use compression-type rollers at speeds less than 6 feet per second and vibratory rollers at speeds less than 3 feet per second. Compact each layer of material full width according to (1) above.

(3) Classify the material according to AASHTO M 145. For material classified A-1 or A-2-4, determine the maximum density according to AASHTO T 180, method D. For other material classifications, determine the optimum moisture content and maximum density according to AASHTO T 99, method C.

Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content.

Use compression-type or vibratory rollers. Compact each layer of material full width to at least 95 percent of the maximum density. Determine the in-place density and moisture content according to AASHTO T 310 or other approved test procedures. When required, use AASHTO T 224 to correct for coarse particles.

**(b) Compaction B.** Place material by end dumping to the minimum depth needed for operation of spreading equipment. Adjust the moisture content of the material to obtain a mass that will not visibly deflect under the load of the hauling and spreading equipment. Operate compaction equipment over the full width of each layer until there is no visible evidence of further consolidation or, if when a sheepfoot roller is used, the roller “walks out” of the layer. Make at least three complete passes.

**(c) Compaction C.** Place material by end dumping to the minimum depth needed for operation of spreading equipment. Level and smooth each embankment layer before placing the next layers. Operate hauling and spreading equipment uniformly over the full width of each layer. Construct a solid embankment with adequate compaction by working smaller rock and fines in with the larger rocks to fill the voids, and by operating hauling and spreading equipment uniformly over the full width of each layer as the embankment is constructed.

**204.12 Ditches.** Slope, grade, and shape ditches. Remove all projecting roots, stumps, rock, or similar matter. Maintain all ditches in an open condition and free from leaves, sticks, and other debris.

Form furrow ditches by plowing or using other acceptable methods to produce a continuous furrow. Place all excavated material on the downhill side so the bottom of the ditch is approximately 18 inches below the crest of the loose material. Clean the ditch using a hand shovel, ditcher, or other suitable method. Shape to provide drainage without overflow.

**204.13 Sloping, Shaping, and Finishing.** Complete slopes, ditches, culverts, riprap, and other underground minor structures before placing aggregate courses. Slope, shape, and finish as follows:

**(a) Sloping.** Leave all earth slopes with uniform roughened surfaces, except as described in (b) below, with no noticeable break as viewed from the road. Except in solid rock, round tops and bottoms of all slopes including the slopes of drainage ditches. Round material overlaying solid rock to the extent practical. Scale all rock slopes. Slope rounding is not required on tolerance class D through M roads.

If a slide or slipout occurs on a cut or embankment slope, remove or replace the material, and repair or restore all damage to the work. Bench or key the slope to stabilize the slide. Reshape the cut or embankment slope to an acceptable condition.

**(b) Stepped slopes.** Where required by the contract, construct steps on slopes of 1½V:1H to 1V:2H. Construct the steps approximately 18 inches high. Blend the steps into natural ground at the end of the cut. If the slope contains nonrippable rock outcrops, blend steps into the rock. Remove loose material found in transitional area. Except for removing large rocks that may fall, scaling stepped slopes is not required.

**(c) Shaping.** Shape the subgrade to a smooth surface and to the cross-section required. Shape slopes to gradually transition into slope adjustments without noticeable breaks. At the ends of cuts and at intersections of cuts and embankments, adjust slopes in the horizontal and vertical planes to blend into each other or into the natural ground.

**(d) Finishing.** Finish the roadbed to be smooth and uniform, and shaped to conform to the typical sections. Remove unsuitable material from the roadbed and replace it with suitable material. Finish roadbeds to the tolerance class shown in table 204-2. Ensure that the subgrade is visibly moist during shaping and dressing. Scarify to 6 inches below the bottom of low sections, holes, cracks, or depressions and bring back to grade with suitable material. Maintain proper ditch drainage.

For surfaced roads, remove all material larger than 6 inches from the top 6 inches of the roadbed.

For unsurfaced roads, use one of the following methods to finish the roadbed:

- (1) **Method A.** Remove all material larger than 6 inches from the top 6 inches of the roadbed and replace with suitable material.
- (2) **Method B.** Use a vibratory grid roller or approved equal with a minimum weight of 10 tons. Roll at least 5 full-width passes or until there is no visible evidence of further consolidation.
- (3) **Method C.** For roads designated as Construction Tolerance Class K, L, or M, finish the roadbed by spreading the excavation. Eliminate rock berms.

**204.14 Disposal of Unsuitable or Excess Material.** Dispose of unsuitable or excess material at designated sites or legally off of the project.

When there is a pay item for waste, shape and compact the waste material in its final location. Do not mix clearing or other material not subject to payment with the waste material.

**204.15 Acceptance.** See Table 204-1 for sampling and testing requirements.

Material for embankment and conserved topsoil will be evaluated under Subsections 106.02 and 106.04.

Excavation and embankment construction will be evaluated under Subsections 106.02 and 106.04.

Clearing and removal of obstructions will be evaluated under Sections 201 and 203.

### **Measurement**

**204.16** Measure the Section 204 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

(a) **Roadway excavation.** Measure roadway excavation in its original position as follows:

- (1) Include the following volumes in roadway excavation:
  - (a) Roadway prism excavation;
  - (b) Rock material excavated and removed from below subgrade in cut sections;
  - (c) Unsuitable material below subgrade and unsuitable material beneath embankment areas when a pay item for subexcavation is not shown in the bid schedule;
  - (d) Ditches, except furrow ditches measured under a separate bid item;
  - (e) Topsoil;
  - (f) Borrow material used in the work when a pay item for borrow is not shown in the bid schedule;
  - (g) Loose scattered rocks removed and placed as required within the roadway;
  - (h) Conserved material taken from stockpiles and used in Section 204 work; and
  - (i) Slide and slipout material not attributable to the Contractor's method of operation.
- (2) Do not include the following in roadway excavation:
  - (a) Overburden and other spoil material from borrow sources;
  - (b) Overbreakage from the backslope in rock excavation;

- (c) Water or other liquid material;
- (d) Material used for purposes other than required;
- (e) Roadbed material scarified in place and not removed;
- (f) Material excavated when stepping cut slopes;
- (g) Material excavated when rounding cut slopes;
- (h) Preparing foundations for embankment construction;
- (i) Material excavated when benching for embankments;
- (j) Slide or slipout material attributable to the Contractor's method of operation;
- (k) Conserved material taken from stockpiles constructed at the option of the Contractor; and
- (l) Material excavated outside the established slope limits.

(3) When both roadway excavation and embankment construction pay items are shown in the bid schedule, measure the following as roadway excavation only:

- (a) Unsuitable material below subgrade in cuts and unsuitable material beneath embankment areas when a pay item for subexcavation is not shown in the bid schedule;
- (b) Slide and slipout material not attributable to the Contractor's method of operations; and
- (c) Drainage ditches, channel changes, and diversion ditches.

**(b) Unclassified borrow, select borrow, and select topping.** When measuring by the cubic yard measure in its original position. If borrow excavation is measured by the cubic yard in place, take initial cross-sections of the ground surface after stripping overburden. Upon completion of excavation and after the borrow source waste material is returned to the source, retake cross-sections before replacing the overburden.

Do not measure borrow excavation used in place of excess roadway excavation.

**(c) Embankment construction.** Measure embankment construction in its final position. Do not make deductions from the embankment construction quantity for the volume of minor structures.

(1) Include the following volumes in embankment construction:

- (a) Roadway embankments;
- (b) Material used to backfill subexcavated areas, holes, pits, and other depressions;
- (c) Material used to restore obliterated roadbeds to original contours; and
- (d) Material used for dikes, ramps, mounds, and berms.

(2) Do not include the following in embankment construction:

- (a) Preparing foundations for embankment construction;
- (b) Adjustments for subsidence or settlement of the embankment or of the foundation on which the embankment is placed; and
- (c) Material used to round fill slopes.

**(d) Rounding cut slopes.** Measure rounding cut slopes horizontally along the centerline of the roadway if a pay item for slope rounding is included in the bid schedule. If a pay item for slope

rounding is not included in the bid schedule slope rounding will be considered subsidiary to excavation.

**(e) Waste.** Measure waste by the cubic yard in its final position. Take initial cross-sections of the ground surface after stripping over burden. Upon completion of the waste placement, retake cross-sections before replacing overburden.

**(f) Slope scaling.** Measure slope scaling by the cubic yard in the hauling vehicle.

### **Payment**

**204.17** The accepted quantities will be paid at the contract price per unit of measurement for the Section 204 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

**Table 204-1**  
**Sampling and Testing Requirements**

<b>Material or Product</b>	<b>Type of Acceptance (Subsection)</b>	<b>Characteristic</b>	<b>Category</b>	<b>Test Methods Specifications</b>	<b>Sampling Frequency</b>	<b>Point of Sampling</b>	<b>Split Sample</b>	<b>Reporting Time</b>
Topping (704.05) & unclassified borrow (704.06)	Measured and tested for conformance (106.04)	Classification	—	AASHTO M 145	1 per soil type	Processed material before incorporating in work	Yes, when requested	Before using in work
		Moisture-density	—	AASHTO T 180, method D <sup>(1)</sup> or T 99, method C <sup>(1)</sup>	1 per soil type but not less than 1 per	“	“	“
		Compaction	—	AASHTO T 310 or other approved procedures	1 per 6000 yd <sup>2</sup> but not less than 1 per layer	In-place	—	Before placing next layer
Select borrow (704.07) & Select topping (704.08)	Measured and tested for conformance (106.04)	Classification	—	AASHTO M 145	1 per soil type but not less than 1 for each day of production	Processed material before incorporating	Yes, when requested	Before using in work
		Gradation	—	AASHTO T 27	“	“	“	“
		Liquid limit	—	AASHTO T 89	“	“	“	“
		Moisture-density	—	AASHTO T 180, method D <sup>(1)</sup> or T 99, method C <sup>(1)</sup>	1 per soil type but not less than 1 per	“	“	“
		Compaction	—	AASHTO T 310 or other approved procedures	1 per 6000 yd <sup>2</sup> but not less than 1 per layer	In-place	—	Before placing next layer

(1) Minimum of 5 points per proctor

**Table 204-1 (continued)**  
**Sampling and Testing Requirements**

<b>Material or Product</b>	<b>Type of Acceptance (Subsection)</b>	<b>Characteristic</b>	<b>Category</b>	<b>Test Methods Specifications</b>	<b>Sampling Frequency</b>	<b>Point of Sampling</b>	<b>Split Sample</b>	<b>Reporting Time</b>
Earth embankment (204.11, Compaction A)	Measured and tested for conformance (106.04)	Classification	—	AASHTO M 145	1 per soil type	Source of Material	Yes, when requested	Before using in work
		Moisture-density	—	AASHTO T 180, method D <sup>(1)</sup> or T 99, method C <sup>(1)</sup>	1 per soil type but not less than 1 per 13,000 yd <sup>3</sup>	“	“	“
		Compaction	—	AASHTO T 310 or other approved procedures	1 per 3500 yd <sup>2</sup> but not less than 1 per layer	In-place	—	Before placing next layer
Top of subgrade (204.11 Compaction A)	Measured and tested for conformance (106.04)	Compaction	—	AASHTO T 310 or other approved procedures	1 per 2500 yd <sup>2</sup>	In-place	—	Before placing next layer

(1) Minimum of 5 points per proctor.

**Table 204-2  
Construction Tolerances**

	Tolerance Class <sup>(a)</sup>												
	A	B	C	D	E	F	G	H	I	J	K	L	M
Roadbed width (ft)	+0.5	+0.5	+1.0	+1.0	+1.0	+1.0	+1.5	+1.0	+2.0	+2.0	+2.0	+2.0	+2.0
Subgrade elevation (ft)	±0.1	±0.2	±0.2	±0.5	±0.5	±1.0	±1.0	±1.5	±2.0	±3.0	±2.0	±3.0	(c)
Centerline alignment (ft)	±0.2	±0.2	±0.5	±0.5	±1.0	±1.0	±1.5	±1.5	±2.0	±3.0	±3.0	±5.0	(c)
Slopes, excavation, and embankment (% slope) <sup>(b)</sup>	±3	±5	±5	±5	±5	±5	±10	±10	±10	±10	±20	±20	±20

(a) Maximum allowable deviation from construction stakes and drawings.

(b) Maximum allowable deviation from staked slope measured from slope stakes or hinge points.

(c) Unless otherwise shown the centerline alignment and subgrade elevation, as built, have no horizontal curves with a radius of less than 80 feet, and no vertical curves with a curve length of less than 80 feet when the algebraic difference in the grade change is less than 10 percent, or a curve length of less than 100 feet when the algebraic difference of the grade change is greater than or equal to 10 percent. The centerline grade is not to exceed 20 percent in 100 feet of length.

**204.05 Conserved Topsoil**

Delete the entire paragraph.

204.06\_nat\_us\_03\_02\_2005

**204.06 Roadway Excavation****(a) General.**

Add the following:

Retrieve material deposited outside of the clearing limits as directed by the CO. Place unsuitable material in designated areas.

204.06\_nat\_us\_03\_02\_2005

**204.06 Roadway Excavation.**

Add the following:

**d) Pioneer Roads.** Road pioneering, slash disposal, and grubbing of stumps may proceed concurrently with excavation. Conduct excavation and placement operations so material to be treated under Section 201 will not be incorporated into the roadway unless specified in the slash treatment method. Maintain drainage during pioneering operations.

Remove snow and ice in advance of the work and deposit beyond the roadway limits in a manner that will not waste material or generate sediment. Do not incorporate snow and ice into embankments. Place snow or ice in a manner to prevent resource damage.

204.06\_nat\_us\_03\_02\_2005

**204.06 Roadway Excavation****(b) Rock Cuts.**

Add the following:

When blasting rock, use blasting methods according to Subsection 205.08

204.09\_nat\_us\_03\_02\_2005

**204.09 Preparing Foundation for Embankment Construction.**

Delete subsection (a) and replace it with the following:

(a) **Embankment less than 4 feet high over natural ground.** When designated, remove topsoil and break up the ground surface to a minimum depth of 6 inches by plowing or scarifying. Compact the ground surface according to Subsection 204.11.

204.10\_nat\_us\_03\_02\_2005

### 204.10 Embankment Construction.

Add the following:

Obtain written approval before beginning construction of embankments over 6 feet high at subgrade centerline.

(a) General.

Delete the third paragraph and add the following:

Compact embankment side slopes flatter than 1V:1.75H with a tamping type roller or by walking with a dozer. For slopes 1V:1.75H or steeper, compact the slopes as construction of the embankment progresses.

204.11\_nat\_us\_04\_11\_2005

### 204.11 Compaction.

Delete the first paragraph and replace it with the following:

For compaction according to method (a), (b), or (c), use AASHTO T 27 to determine the amount of material retained on a Number. 4 sieve. For compaction methods (d) or (e) no sieve test is required.

Add the following compaction methods:

**(d) Layer Placement Method (Hauling and Spreading Equipment).** Place material by end dumping to the minimum depth needed for operation of spreading equipment. Level and smooth each embankment layer before placing the next layers. Operate hauling and spreading equipment uniformly over the full width of each layer. Construct a solid embankment with adequate compaction by working smaller rock and fines in with the larger rocks to fill the voids, and by operating hauling and spreading equipment uniformly over the full width of each layer as the embankment is constructed.

**(e) Layer Placement (Roller Compaction) Method.** Place material by end dumping to the minimum depth needed for operation of spreading equipment. Adjust the moisture content of the material to obtain a mass that will not visibly deflect under the load of the hauling and spreading equipment. Operate compaction equipment over the full width of each layer until visible deformation of the layer ceases or, in when a sheepsfoot roller is used, the roller “walks out” of the layer. Make at least three complete passes.

204.13\_nat\_us\_03\_02\_2005

**204.13 Sloping, Shaping, and Finishing.**

Delete section (d) and add the following:

(d) Finishing. For surfaced roads, remove all material larger than 6 inches from the top 6 inches of the roadbed. For all roads, finish the roadbed to be smooth and uniform, and shaped to conform to the typical sections. Remove unsuitable material from the roadbed and replace it with suitable material. Finish roadbeds to the tolerance class shown in table 204-2.

Ensure that the subgrade for both surfaced and unsurfaced roads is visibly moist during shaping and dressing. Scarify to 6 inches below the bottom of low sections, holes, cracks, or depressions and bring back to grade with suitable material. Maintain proper ditch drainage.

For unsurfaced roads, use one of the following methods to finish the roadbed:

- (1) Method A. Remove all material larger than 6 inches from the top 6 inches of the roadbed and replace with suitable material.
- (2) Method B. Use a vibratory grid roller or approved equal with a minimum weight of 10 tons. Roll at least 5 full-width passes or until visible displacement ceases.
- (3) Method C. For roads designated as Construction Tolerance Class K, L, or M, finish the roadbed by spreading the excavation. Eliminate rock berms.

Add Table 204-2—Construction Tolerances:

**Table 204-2 Construction tolerances.**

	Tolerance Class <sup>(a)</sup>												
	A	B	C	D	E	F	G	H	I	J	K	L	M
Roadbed width (ft)	+0.5	+0.5	+1.0	+1.0	+1.0	+1.0	+1.5	+1.0	+2.0	+2.0	+2.0	+2.0	+2.0
Subgrade elevation (ft)	±0.1	±0.2	±0.2	±0.5	+0.5	±1.0	±1.0	±1.5	±2.0	±3.0	±2.0	±3.0	(c)
Centerline alignment (ft)	±0.2	±0.2	±0.5	±0.5	±1.0	±1.0	±1.5	±1.5	±2.0	±3.0	±3.0	±5.0	(c)
Slopes, excavation, and embankment (% slope <sup>(b)</sup> )	±3	±5	±5	±5	±5	±5	±10	±10	±10	±10	±20	±20	±20

a. Maximum allowable deviation from construction stakes and drawings.

b. Maximum allowable deviation from staked slope measured from slope stakes or hinge points.

c. Unless otherwise shown the centerline alignment and subgrade elevation, as built, have no horizontal curves with a radius of less than 80 feet, and no vertical curves with a curve length of less than 80 feet when the algebraic difference in the grade change is less than 10 percent, or a

curve length of less than 100 feet when the algebraic difference of the grade change is greater than or equal to 10 percent. The centerline grade is not to exceed 20 percent in 100 feet of length.

204.13\_nat\_us\_03\_02\_2005

### **204.13 Sloping, Shaping, and Finishing.**

(a) Sloping.

Add the following:

Slope rounding is not required on tolerance class D though M roads.

204.14\_nat\_us\_03\_02\_2005

### **204.14 Disposal of Unsuitable or Excess Material.**

Delete the text of the first paragraph and substitute the following:

Dispose of unsuitable or excess material at designated sites or legally off of the project.

204.15\_nat\_us\_02\_07\_2007

### **204.15 Acceptance**

#### **Table 204-1 Sampling and Testing Requirements.**

Add the following note to the table:

(2) When compaction methods (d) or (e) are used AASHTO M 145, T 99, T 180, and T 310 are not required for earth embankment test methods.

## **249 - Composite Road Construction**

### **Description**

**249.01** This work consists of clearing and grubbing, excavation and embankment, and removal of all construction slash including all trees designated for removal. Excavation and embankment includes on site borrow excavation; drainage excavation; placing all excavated material; and shaping the roadway; including approaches, turnarounds, ditches and drainage dips. Construct the roadway in conformance with the dimensions “shown on the plans” or as staked on the ground.

## Construction Requirements

### 249.02 Clearing & Disposal

Protect construction stakes and construction control markers. Remove or treat all trees, snags, downed timber, brush, and stumps within the clearing limits according to the following specifications.

**(a) Merchantable Timber.** Treat according to the Utilization Standards of the Timber Sale Contract.

**(b) Unmerchantable Timber.** Treat according to Subsection 249.02 Method A.

**(c) Large Construction Slash.** Treat construction slash larger than 3 inches in diameter and longer than 3 feet by one or more of the following methods.

**(1) Method A.** Construction slash shall be scattered outside the clearing limits without damaging trees outside the clearing area. Logs shall be placed away from trees, positioned so that they will not roll, not placed on top of one another or left leaning on other trees. Scattered stumps shall be placed in an upright position

**(2) Method B.** Stumps, roots, rocks, topsoil and other grubbing debris shall be concentrated in stump dump areas. Stump dump areas shall be located by the Engineer, be a maximum of 300 feet apart along the road centerline, and generally be located in natural depressions or tucked away behind denser vegetation or ground rises. Stump dumps will vary in size depending on each site, but shall not be closer than 10 feet outside of the clearing limits. Stump dump material shall be matted down as much as possible and shall not obstruct natural drainages.

**(d) Small Construction Slash.** Construction slash less than 3 inches in diameter and less than 3 feet in length may be incorporated into embankments so long as the material is distributed so that it does not result in concentrations or matting.

Immediately remove slash deposited in stream courses.

### 249.03 Pioneering.

Do not undercut the final back slope during pioneer operations. Deposit material inside the roadway limits. Do not restrict drainages.

### 249.04 Grubbing.

Grub within the specified limits. Stumps outside the grubbing limits remain if cut no higher than 1 foot or one-third of the stump diameter, whichever is greater, above the original ground, measured on the uphill side, unless otherwise designated. Grub all stumps from the Roadway, or stumps that have less than 1 foot of cover, in the Fill slopes, providing they do not interfere with the placement or compaction of embankments.

#### **249.05 Excavation and Embankment.**

Construct the roadway to conform to the typical sections shown on the plans. Protect backslopes from being undercut. Embankment shall be placed in layers no more than 12 inches thick.

Locate and use borrow material, and remove and treat unsuitable excess material, as designated.

Place rocks that are too large to be incorporated in the embankment outside the traveled way on the downhill side such that they will not roll, obstruct drainage, or hinder roadbed use and maintenance.

Shape and finish the roadbed to the condition ordinarily accomplished by a crawler tractor with dozer blade to provide drainage of surface water. Do not permit individual rocks to protrude more than 4 inches above the subgrade of the roadbed. A motor grader finish is not required.

Observe a width tolerance of (+) 18 inches max. for the roadbed.

Where shown on the drawings or designated on the ground, offtake ditches shall be constructed to drain water away from the roadbed.

#### **249.06 Erosion Control.**

Perform erosion control measures, where shown on the drawings, or staked on the ground.

### **Measurement**

#### **249.07 Method.**

Measure the section 249 items listed in the schedule of items according to subsection 109.02

## Payment

### 249.08 Basis.

The accepted quantities will be paid at the contract price per unit of measurement for Section 249 pay items listed in the Bid Schedule. Payment will be full compensation for the work prescribed in this section. See Subsection 109.05

## 301 - Untreated Aggregate Courses

301.00\_nat\_us\_03\_03\_2005

### 301 Title Change.

Change the title to: **Section 301 Aggregate Courses**

301.01\_nat\_us\_03\_03\_2005

### 301.01 Work.

Add the following:

Work includes producing aggregate by pit-run, grid rolling, screening, or crushing methods, or placing Government-furnished aggregate. Work may include additive mineral filler, or binder.

301.02\_nat\_us\_05\_16\_2005

### 301.02 Material.

Add the following:

Bentonite	725.30
Calcium Chloride Flake	725.02
Lignon Sulfonate	725.20
Magnesium Chloride Brine or Calcium Chloride Liquid	725.02

301.03\_nat\_us\_02\_28\_2013

### 301.03 General.

#### Add the following:

Written approval of the roadbed is required before placing aggregate.

For pit run or grid-rolled material, furnish material smaller than the maximum size. No gradation other than maximum size will be required for pit-run or grid-rolled material. For grid rolling, use all suitable material that can be reduced to maximum size. After processing on the road, remove all oversize material from the road and dispose of it as directed by the CO.

Provide additives or binder, if required, at the proportions specified.

Develop and use Government furnished sources according to Section 105.

If the aggregate is produced and stockpiled before placement, handle and stockpiled according to Section 320. Establish stockpile sites at locations approved. Clear and grub stockpile sites according to Section 201.

301.04\_nat\_us\_03\_03\_2005

### 301.04 Mixing and Spreading.

#### Delete the first sentence of the first paragraph and add the following:

Ensure that aggregate and any required additives, water, mineral filler, and binder are mixed by the specified method except, if crushed aggregate products are being produced and mineral filler, binder, or additives are required, uniformly blend following crushing. Control additive proportions to 0.5 percent dry weight.

**(a) Stationary Plant Method.** Mix the aggregate with other required materials in an approved mixer. Add water during the mixing operation in the amount necessary to provide the moisture content for compacting to the specified density. After mixing, transport the aggregate to the jobsite while it contains the proper moisture content, and place it on the roadbed or base course using an aggregate spreader.

**(b) Travel Plant Method.** After placing the aggregate for each layer with an aggregate spreader or windrow-sizing device, uniformly mix it with other required materials using a traveling mixing plant. During mixing, add water to provide the necessary moisture content for compacting.

**(c) Road Mix Method.** After placing the aggregate for each layer, mix it with other required materials at the required moisture content until the mixture is uniform throughout. Mix aggregate, water, and all other materials until a uniform distribution is obtained.

Spread the aggregate in a uniform layer, with no segregation of size, and to a loose depth that will provide the required compacted thickness.

When placing aggregate over geotextile, place aggregate in a single lift to the full depth specified.

Route and distribute hauling and leveling equipment over the width and length of each layer.

301.05\_nat\_us\_05\_17\_2005

### 301.05 Compacting

Delete and replace with the following:

Compact each layer full width. Roll from the sides to the center, parallel to the centerline of the road. Along curbs, headers, walls, and all places not accessible to the roller, compact the material with approved tampers or compactors.

Compact the aggregate using one of the following methods as specified:

**Compaction A.** Operating spreading and hauling equipment over the full width of the travelway.

**Compaction B.** Operate rollers and compact as specified in Subsection 204.11(a)(1).

**Compaction C.** Moisten or dry the aggregate to a uniform moisture content between 5 and 7 percent based on total dry weight of the mixture. Operate rollers and compact as specified in Subsection 204.11(a)(1).

**Compaction D.** Compact to a density of at least 95 percent of the maximum density, as determined by AASHTO T 99, method C or D.

**Compaction E.** Compact to a density of at least 96 percent of the maximum density, as determined by the Modified Marshall Hammer Compaction Method (available upon request from USDA Forest Service, Regional Materials Engineering Center, P.O. Box 7669, Missoula, MT 59807).

**Compaction F.** Compact to a density of at least 95 per-cent of the maximum density, as determined by AASHTO T 180, method C or D.

**Compaction G.** Compact to a density of at least 100 percent of the maximum density as determined by the Modified Marshall Hammer Compaction Method (available upon request from USDA Forest Service, Regional Materials Engineering Center, P.O. Box 7669, Missoula, MT 59807).

For all compaction methods, blade the surface of each layer during the compaction operations to remove irregularities and produce a smooth, even surface. When a density requirement is specified, determine the in place density and moisture content according to AASHTO T 310 or other approved test procedures.

301.05\_nat\_us\_10\_14\_2011

### 301.05 Compacting

Delete and replace with the following:

Compact each layer full width. Roll from the sides to the center, parallel to the centerline of the road. Along curbs, headers, walls, and all places not accessible to the roller, compact the material with approved tampers or compactors.

Compact the aggregate using one of the following methods as specified:

**Compaction A.** Operate spreading and hauling equipment over the full width of the travelway.

**Compaction B.** Operate rollers and compact as specified in Subsection 204.11(a)(1).

**Compaction C.** Moisten or dry the aggregate to a uniform moisture content between 5 and 7 percent based on total dry weight of the mixture. Operate rollers and compact as specified in Subsection 204.11(a)(1).

**Compaction D.** Compact to a density of at least 95 percent of the maximum density, as determined by AASHTO T 99, method C or D.

**Compaction E.** Removed.

**Compaction F.** Compact to a density of at least 95 per-cent of the maximum density, as determined by AASHTO T 180, method C or D.

**Compaction G.** Removed.

For all compaction methods, blade the surface of each layer during the compaction operations to remove irregularities and produce a smooth, even surface. When a density requirement is specified, determine the in place density and moisture content according to AASHTO T 310 or other approved test procedures.

301.06\_nat\_us\_03\_03\_2005

### **301.06 Surface Tolerance.**

Add the following:

Thickness and Width requirements:

The maximum variation from the compacted specified thickness is  $\frac{1}{2}$  inch. The compacted thickness is not consistently above or below the specified thickness and the average thickness of 4 random measurements for any  $\frac{1}{2}$  mile of road segment is within  $+\frac{1}{4}$  inch of the specified thickness.

The maximum variation from the specified width will not exceed +12 inches at any point. The compacted width is not consistently above the specified width and the average of any four random measurements along any  $\frac{1}{2}$  mile of road segment is within +4 inches of the specified width.

301.08\_nat\_us\_03\_03\_2005

Table 301-1: Add the following:

**Table 301-1—Acceptance Sampling and Testing Requirements.**

<b>Material or Product</b>	<b>Type of Acceptance (Subsection)</b>	<b>Characteristic</b>	<b>Category</b>	<b>Test Methods Specifications</b>	<b>Sampling Frequency</b>	<b>Point of Sampling</b>	<b>Split Sample</b>	<b>Reporting Time</b>
Subbase & Base Courses L, M, N, O, P, Q, R	Measured and tested conformance (Subsection 106.04)	Plastic Limit	-	AASHTO T 90	1 per each 1,000 T	From the windrow or roadbed after processing	Yes	4 Hours

**Table 301-1—Acceptance Sampling and Testing Requirements.**

<b>Material or Product</b>	<b>Type of Acceptance (Subsection)</b>	<b>Characteristic</b>	<b>Category</b>	<b>Test Methods Specifications</b>	<b>Sampling Frequency</b>	<b>Point of Sampling</b>	<b>Split Sample</b>	<b>Reporting Time</b>
Aggregate Width	Measured and tested conformance (Subsection 106.04)	Width	-	-	4 per each 0.5 mi	Roadbed after processing	-	4 Hours
Aggregate Thickness	Measured and tested conformance (Subsection 106.04)	Thickness	-	-	4 per each 0.5 mi	Roadbed after processing	-	4 Hours
Additive	Measured and tested conformance (Subsection 106.04)	Amount of Additive	-	-	1 per each 1,000 T	From the windrow or roadbed after processing	No	4 Hours

301.08\_nat\_us\_10\_14\_2011

**Table 301-1 Field Density Requirements.**

Table 301-1: Delete laboratory and field density requirements for base, subbase, and surfacing and replace with the following:

<b>Material or Product</b>	<b>Type of Acceptance (Subsection)</b>	<b>Characteristic</b>	<b>Category</b>	<b>Test Methods Specifications</b>	<b>Sampling Frequency</b>	<b>Point of Sampling</b>	<b>Split Sample</b>	<b>Reporting Time</b>
Base and Subbase	Measured and tested conformance (Subsection 106.04)	Moisture Density	---					
		Method C	---	AASHTO T 99	1 per type and source of material	Source of material	Yes	Before using in work
			---		“	“	“	“
		Method D	---	AASHTO T 180	“	“	“	“
			---		“	“	“	“
		Compaction	---					
		Method C, D	---	AASHTO T 310 or other approved procedures	1 per 500 t	In-place	---	Before placing the next layer
Surfacing	Measured and tested conformance (Subsection 106.04)	Moisture Density						
			---		“	“	“	Before using in work
		Method D	---	AASHTO T 180	“	“	“	“
			---		“	“	“	“
		Compaction						
		Method C, D	---	AASHTO T 310 or other approved procedures	1 per 500 t	In-place	---	Before placing the next layer

301.08\_nat\_us\_03\_30\_2005

### **301.08(b) Plasticity Index.**

Add the following to the first sentence:

“and under 703.05(c)(1)”.

301.09\_nat\_us\_07\_07\_2005

### **301.09 Measurement.**

Replace the second paragraph with the following:

Measure aggregate by cubic yard compacted in place when payment is by contract quantities.

301.10\_nat\_us\_03\_03\_2005

### **301.10 Payment**

Delete the following:

adjusted according to Subsection 106.05

## **602 - Culverts and Drains**

602.03\_nat\_us\_09\_06\_2005

### **602.03 General.**

Add the following:

Ensure that the final installed alignment of all pipe allows no reverse grades, and does not permit horizontal and vertical alignments to vary from a straight line drawn from center of inlet to center of outlet by more than 2 percent of pipe center length or 1.0 feet, whichever is less.

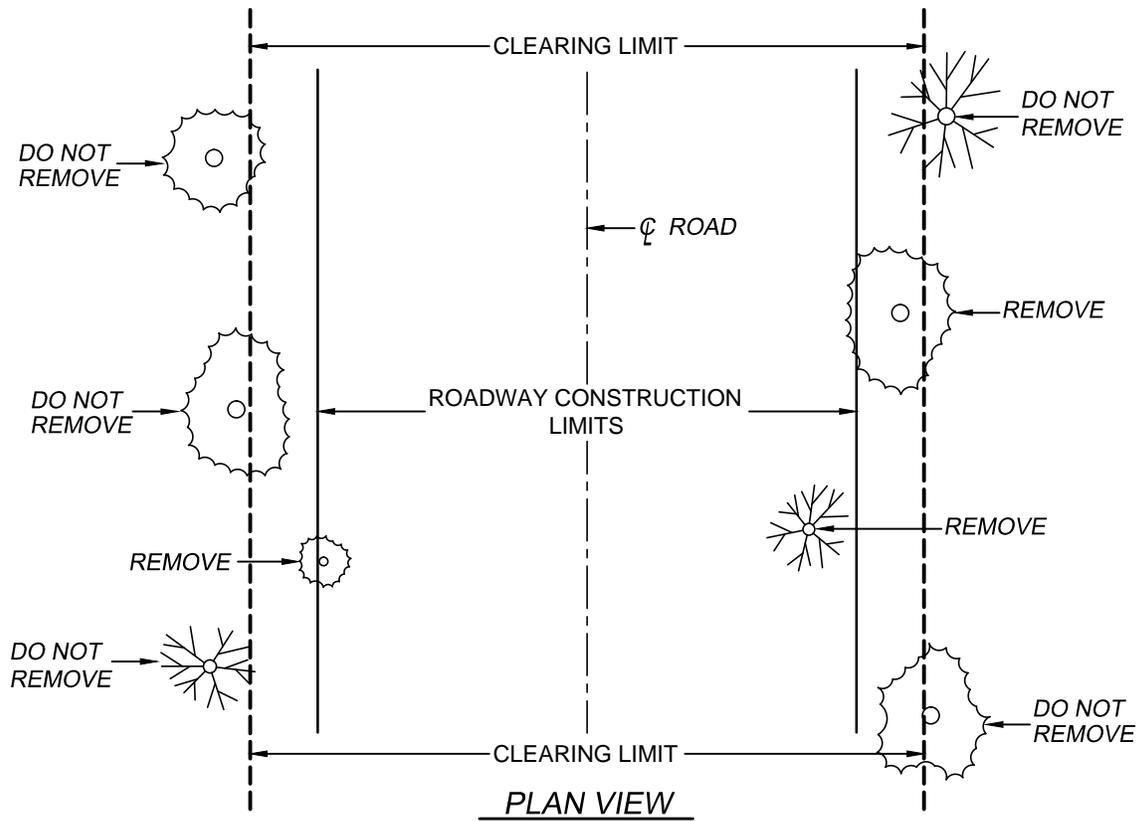
602.06\_nat\_us\_08\_05\_2009

### **602.06 Laying Plastic Pipe.**

Delete the second paragraph and substitute the following:

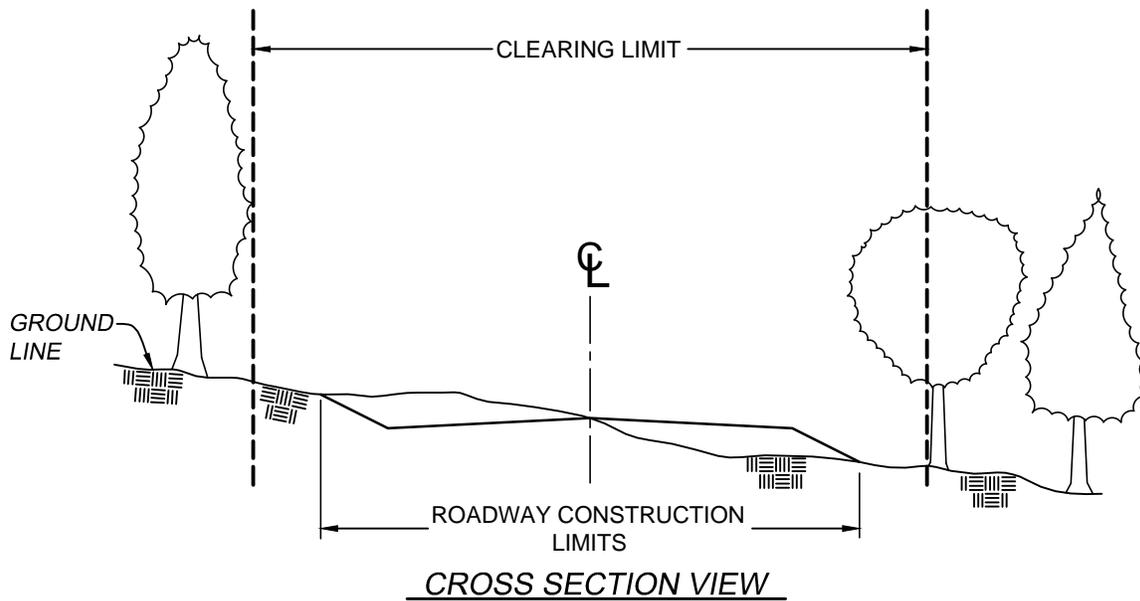
Provide soil-tight bell and spigot joints for plastic pipe culverts.



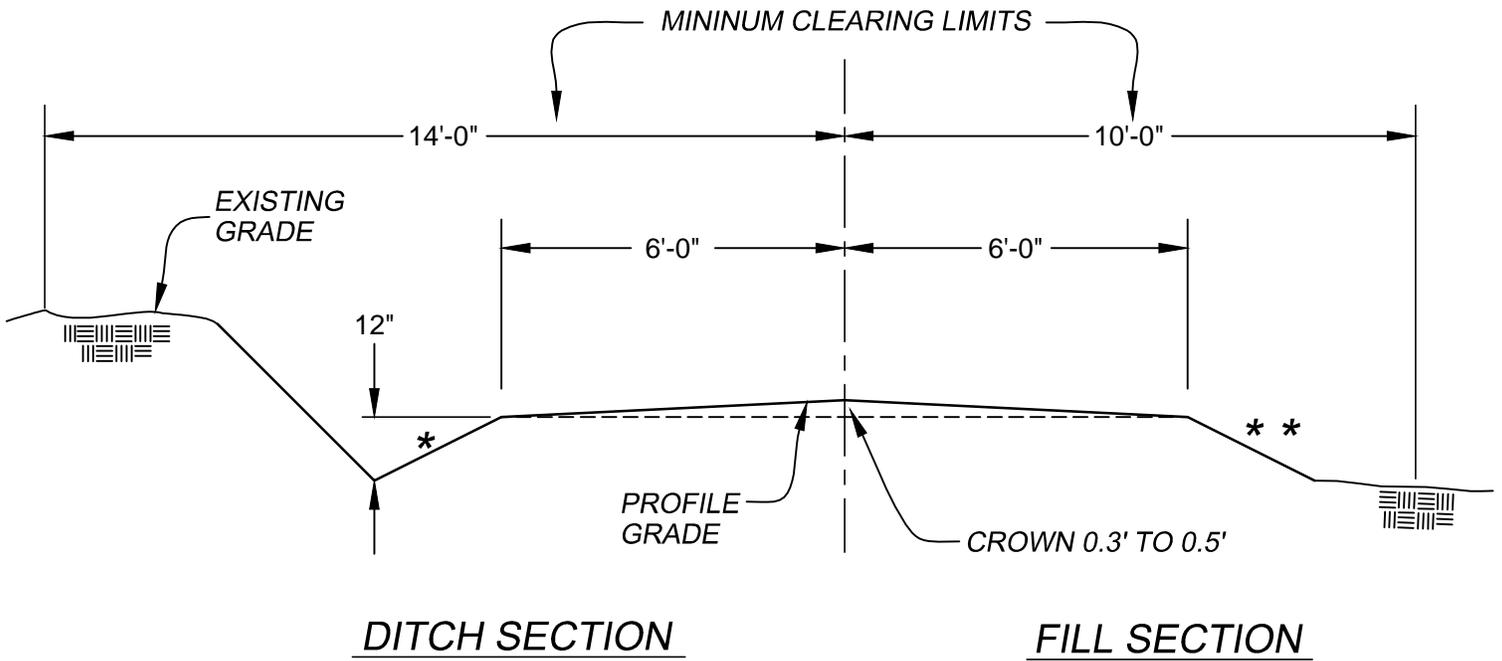


NOTE: TREES ON THE CLEARING LIMIT LINE ARE TO REMAIN UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.

NOTE: YELLOW PAINT INDICATES TREES TO BE REMOVED.



**CONSTRUCTION STAKING**  
NOT TO SCALE



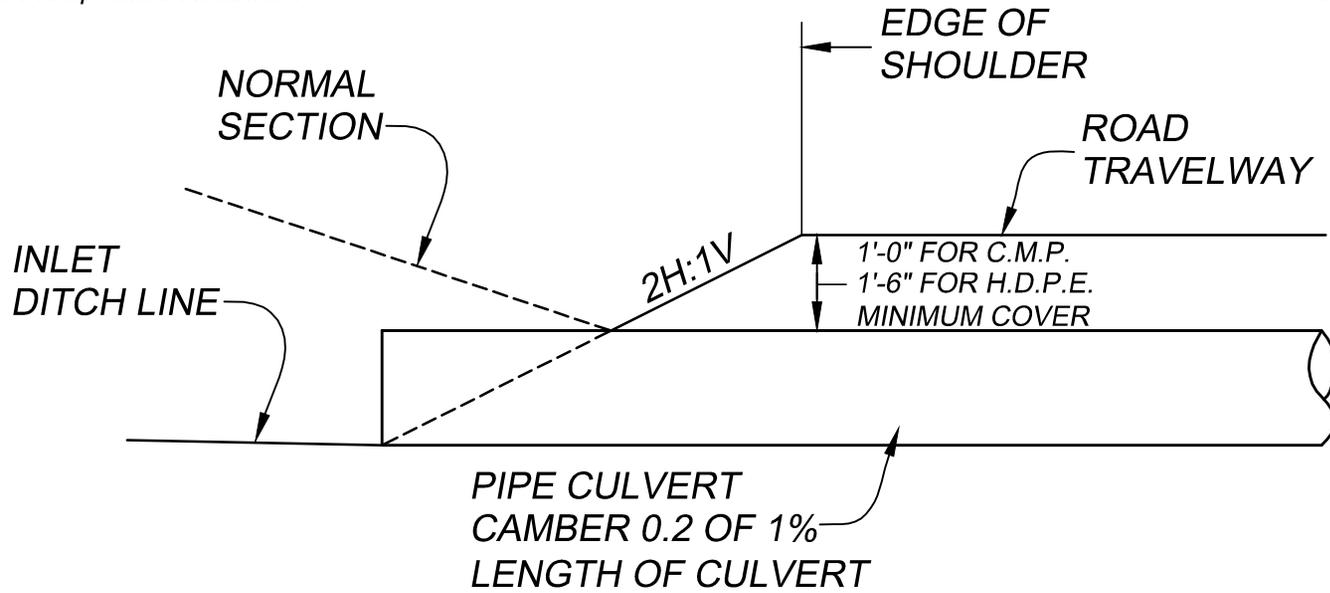
\*BACKSLOPE AND DITCH SLOPES MAY VARY FROM 1H:1V TO 2H:1V WHEN CUTS ARE UNDER 2 FT. CUTS OVER 2 FT. SHALL HAVE SLOPES OF 2H:1V

\*\*FILL SLOPES MAY VARY FROM 1-1/2H:1V TO 3H:1V

(SEE NARRATIVE FOR LOCATION)

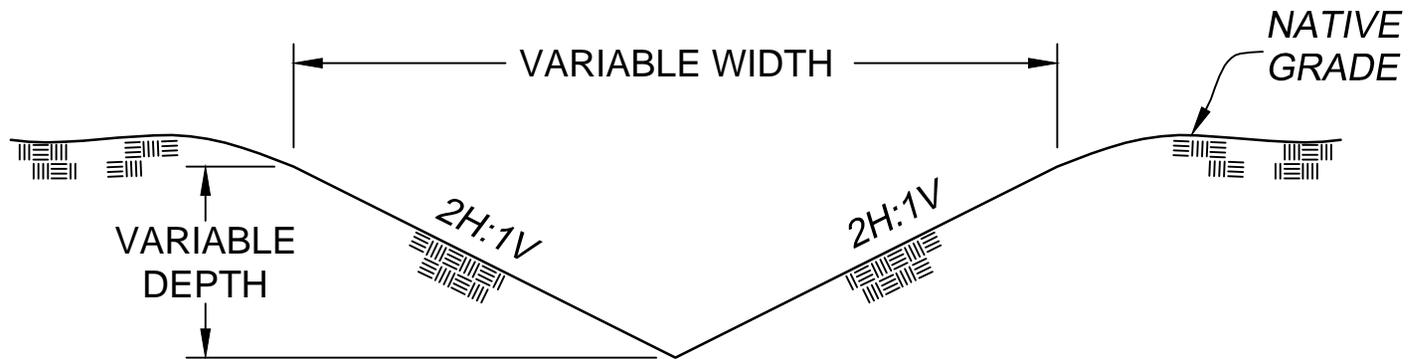
**TYPICAL CROSS SECTION WITH 1 FOOT DITCH**

NOT TO SCALE



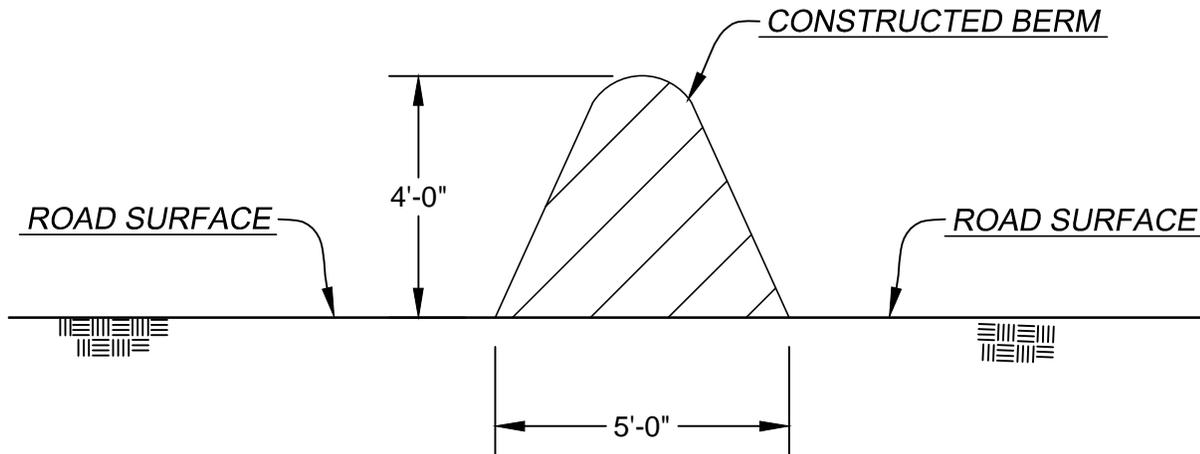
**TYPICAL DITCH SECTION AT CULVERT INLET**

NOT TO SCALE



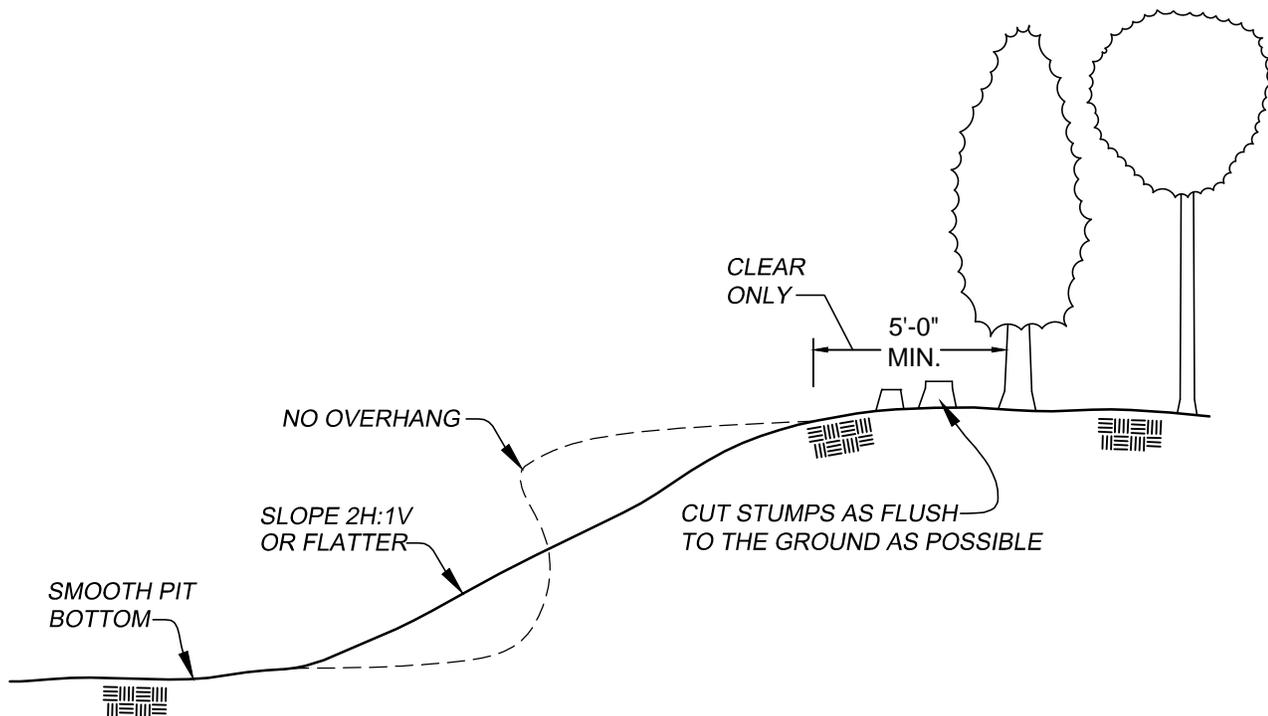
**TYPICAL INLET AND OUTLET DITCH SECTION**

NOT TO SCALE



NOTE:  
BERM TO BE CONSTRUCTED AFTER SALE IS COMPLETED WITH  
ROCKS/BOULDERS, LOGGING SLASH, CULL LOGS, STUMPS AND EARTH.  
AS SHOWN IN ABOVE DRAWING, DO NOT DIG DITCHES ON EITHER SIDE  
OF BERM FOR BORROW MATERIAL TO CONSTRUCT BERM.

**TYPICAL BERM DETAIL**  
NOT TO SCALE



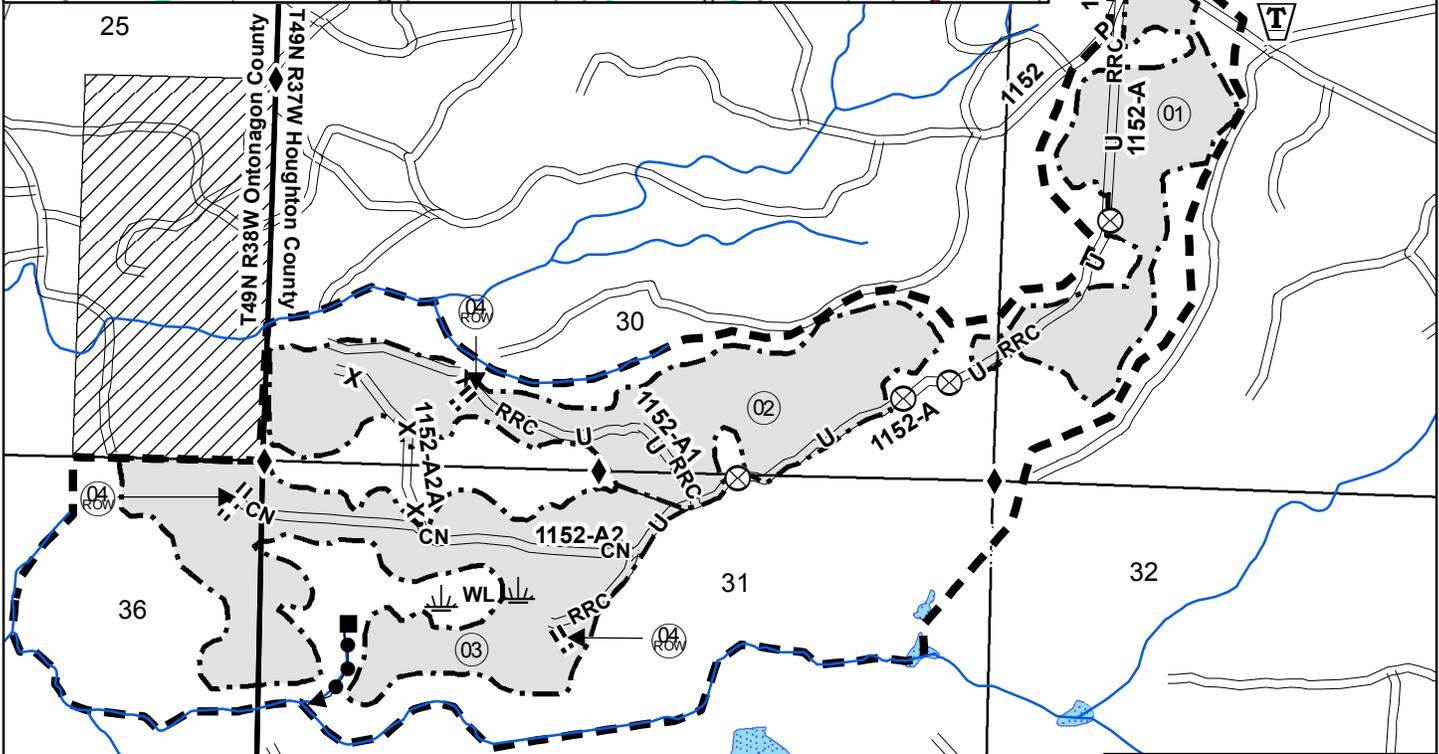
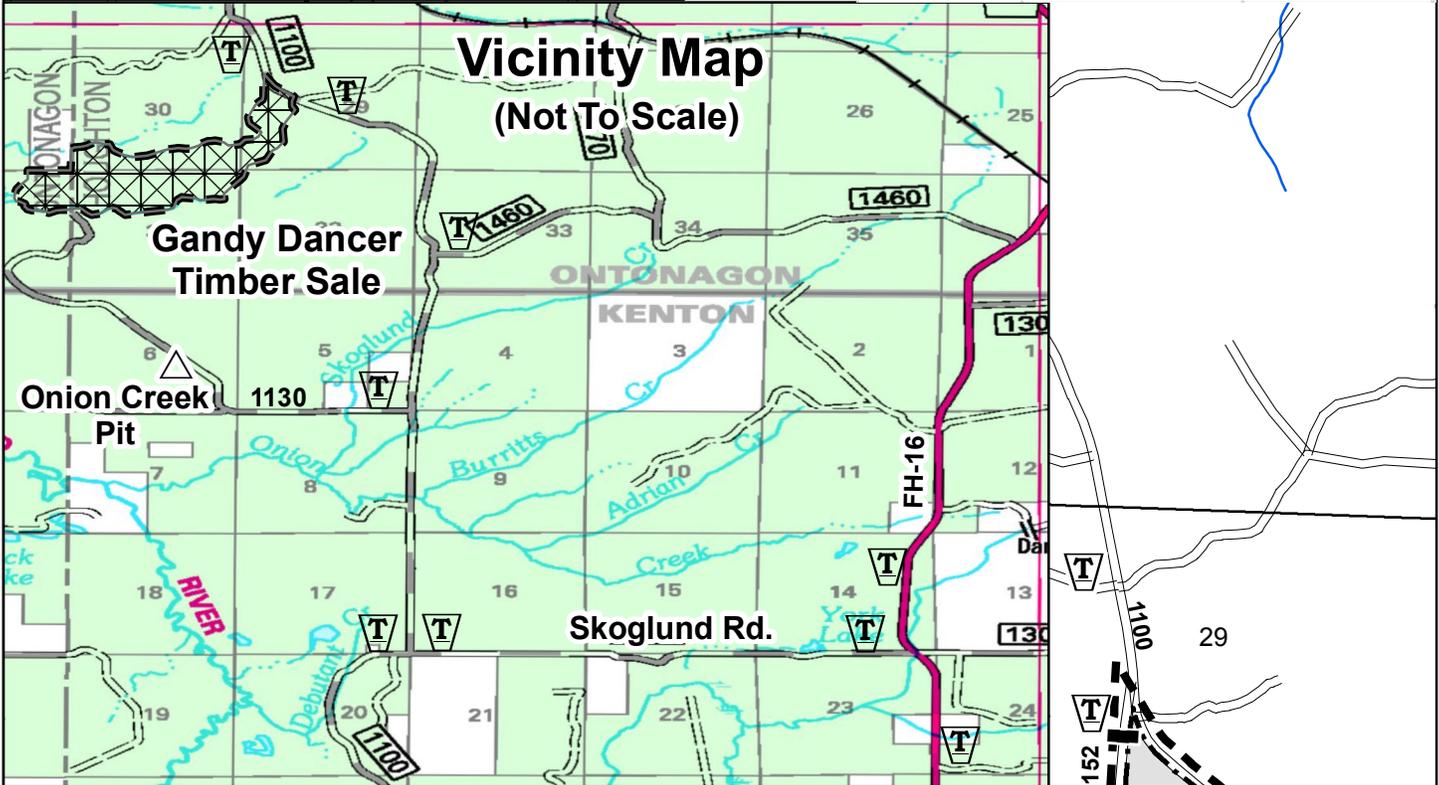
NOTE: TOPS, STUMPS AND TRUNKS SHALL BE DISPOSED OF AS DIRECTED BY THE FOREST SERVICE. STUMPS SHALL BE SEVERED FROM ALL TREES. OVERSIZED ROCK SHALL BE DISPOSED OF IN EXISTING PILES OR AS DIRECTED BY THE FOREST SERVICE. SMOOTH PIT BOTTOM TO REDUCE THE COLLECTION OF WATER. HAUL ROADS SHALL BE MADE SMOOTH AND REPAIRED OF DAMAGE CAUSED BY THE CONTRACTORS HAULING OPERATION OR EQUIPMENT.

## **BORROW PIT CLEAN UP**

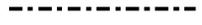
Gandy Dancer PR Timber Sale  
 Sale Area Map  
 Ontonagon Ranger District  
 Ottawa National Forest  
 T49N R38W Sec. 36 Ontonagon County, MI  
 T49N R37W Sec. 29, 30 & 31 Houghton County, MI  
 Compartments 149 and 151  
 Gross Acres: 430                      Net Acres: 183



Payment Unit	Timber Designation	Slash Treatment
01	CTM	SDZ, (1) (2)
02	CTM	SDZ, (2)
03	CTM	SDZ, (2)
04(ROW)	CTM	SDZ



# Gandy Dancer PR Timber Sale Sale Area Map Legend

	Sale Area Boundary, BT1.1
	Payment Unit Boundary, BT1.1
	Payment Unit Number, BT1.1
<b>CTM</b>	Cut Tree Marked Prior to Advertisement, BT2.35, CT2.355#, CT6.412
	Existing Transportation System Road, BT5.1
	Existing Road, Hauling Prohibited, BT5.12, CT5.12#
	Existing Road, Use Prohibited, BT5.12, CT5.12#
	Existing Transportation System Road, Unsuitable for Hauling prior to Completion of agreed ReConstruction, BT5.12, CT5.12#
	Reconstruction - AT.7, AT.8, BT5.2, BT6.22, BT6.222, BT6.361 & Schedule of Items
	New Construction - AT7, BT5.2, BT5.23, BT6.22, BT6.222, BT6.361
	Specified Drainage Structure, Purchaser Remove/Furnish/Install Culverts, AT7, AT8, BT5.2, BT6.22, BT6.222, BT6.361, Schedule of Items
	Purchaser Remove and/or Install Berm on System Road, CT5.31#, T-8620
<b>SDZ</b>	Slash Disposal, BT6.7, CT6.7#
<b>SDZ(1)</b>	Slash Disposal Zone, BT6.7, CT6.7#
<b>SDZ(2)</b>	Slash Disposal Zone, BT6.7, CT6.7#
 <b>WL</b>	Wetland Protection, BT6.62, CT6.62#
	Lakes/Ponds
	Other Ownership
	Safety - Purchaser to Provide and Maintain Traffic Control Signs, BT6.33
	Protect Known Survey Monuments, BT6.23
	Streams/Rivers
	Streamcourse Protection, Arrow shows Flow Direction Block Marks Upper Limit, BT6.5
	Material Source, CT5.221#, T-8130 Spot Surface Replacement/Replenishment (Onion Creek Pit, T48N-R37W, Section 06 Houghton County, MI)