

SAMPLE

CONTRACT

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE INTEGRATED RESOURCE CONTRACT (Applicable to Contracts with Measurement before Harvest)		Name of Contractor	
National Forest Ottawa	Ranger District Bessemer	Region Eastern	Contract Number
Contract Name Kakabika Stewardship		Award Date	Termination Date 10/15/2016

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 Contractor.

Unless provided otherwise herein, Forest Service agrees to sell and permit Contractor to cut and remove Included Timber and Contractor agrees to purchase, cut, and remove Included Timber and complete required stewardship projects.

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

UNITED STATES OF AMERICA

Two Witnesses:^{2/}

By: _____
Contracting Officer

(Name)

(Title)

(Address)

By: _____
(Contractor) ^{3/}

(Name)

(Title)

(Address)

(Business Address)

I, ^{4/} _____, certify that I am the _____
 Secretary of the corporation named as Contractor herein; that _____
 who signed this contract on behalf of Contractor, 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 ^{5/}

Contract Name: Kakabika Stewardship

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INSTRUCTIONS:

1/ If Contractor is a corporation, state a "corporation organized and existing under the laws of the State of _____" and specify the State; if Contractor is a partnership, state a "partnership consisting of _____" and specify the names of each partner; and if Contractor is a sole proprietor doing business under an assumed name, state "(n) individual doing business under the name of _____ City of _____, State of _____."

2/ The signatures and addresses of two witnesses are required if Contractor is other than a corporation.

3/ If Contractor is a co-partnership, the signatures should be: XYZ Company, by John Doe, a member of the firm. If Contractor 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.

4/ The certificate must be completed if Contractor is a corporation.

5/ For companies incorporated in States that require a corporate seal, 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

Contract 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 contract 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 Contractor'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.

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AT.0 - SPECIFIC CONDITIONS. The following conditions apply to the indicated portions of Division BT Standard Provisions Issued September 2004.

AT.1 - Location and Area, applicable to BT.1

This Contract Area of 978 acres more or less is located in:
T46N-R41W, Sections 22, 23, 26 & 27

AT.2 - Volume Estimate and Utilization Standards, applicable to CT.1, CT.2, CT.4, and GT.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	3.00	CCF	9.0	1	8	7.6	40
Mixed Hardwood	Sawtimber	93.00	CCF	11.0	1	8	9.6	50
Sugar Maple	Sawtimber	123.00	CCF	11.0	1	8	9.6	50
Aspen	Pulpwood	395.00	CCF	5.0	1	8	4.0	70
Mixed Conifer	Pulpwood	6.00	CCF	5.0	1	8	4.0	70
Mixed Hardwood	Pulpwood	2,724.00	CCF	5.0	1	8	4.0	70
Total Quantity		3,344.00	CCF					

* Quantities not included here are described in CT.4.

AT.3- Timber Designations, applicable to CT.3; acres are approximate:

	Number	Acres
Clearcutting Units (CT.3.1)	_____	_____
Specified Road Clearing (CT.3.2)	_____	_____
Overstory Removal Units (CT.3.3)	_____	_____
Understory Removal Units (CT.3.4)	_____	_____
Individual Trees (CT.3.5)	<u> </u>	290
Incompletely Measured Payment Units (CT.3.6)	_____	_____

AT.4 - Timber Payment Rates, applicable to DT.1 and ET.0

AT.4.1 - Escalated Rates, applicable for Species and Products to be Paid for at Rates Escalated under DT.2

Species	Product	Unit of Measure	Rates per Unit of Measure				Required Deposits Slash Disposal \$	Base Index
			Base \$	Advertised \$	Bid Premium \$	Bid (Tentative) \$		
Not Applicable								

AT.4.2- Flat Rates, applicable for Species and Products to be Paid for at Flat Rates

Species	Product	Unit of Measure	Rates per Unit of Measure				Required Deposits Slash Disposal \$
			Base \$	Advertised \$	Bid Premium \$	Bid (Flat) \$	
Mixed Conifer	Sawtimber	CCF	1.75	19.33			.00
Mixed Hardwood	Sawtimber	CCF	3.57	64.50			.00
Sugar Maple	Sawtimber	CCF	7.03	150.11			.00
Aspen	Pulpwood	CCF	1.50	13.34			.00
Mixed Conifer	Pulpwood	CCF	1.34	9.19			.00
Mixed Hardwood	Pulpwood	CCF	1.61	15.99			.00

For purposes of convenience in collection and bookkeeping, Bid Rates stated in AT.4 include payment of deposits for contract area betterment required pursuant to 16 USC 576b. Such deposits are not included as Required Deposits defined hereunder.

AT.4.3 - Schedule of Payment Units

Payment Unit No.	App rox. Acres	To be Escalated under AT.4.1				Total Tentative Payment \$	To be Paid for at Flat Rates under AT.4.2				Total Flat Rate Payment \$	Total Required Deposits for Slash Disposal \$
		Species	Product	Qty	UOM		Species	Product	Qty	UOM		
001	37					Mixed Conifer	Sawtimber	0.00	CCF			
						Mixed Hardwood	Sawtimber	11.00	CCF			
						Sugar Maple	Sawtimber	5.00	CCF			
						Aspen	Pulpwood	29.00	CCF			
						Mixed Conifer	Pulpwood	2.00	CCF			
						Mixed Hardwood	Pulpwood	295.00	CCF			
		Total PU Quantity And Value							342.00			CCF
002	13					Mixed Conifer	Sawtimber	0.00	CCF			
						Mixed Hardwood	Sawtimber	7.00	CCF			
						Sugar Maple	Sawtimber	2.00	CCF			
						Aspen	Pulpwood	6.00	CCF			
						Mixed Conifer	Pulpwood	1.00	CCF			
						Mixed Hardwood	Pulpwood	99.00	CCF			
		Total PU Quantity And Value							115.00			CCF
003	25					Mixed Conifer	Sawtimber	0.00	CCF			
						Mixed Hardwood	Sawtimber	9.00	CCF			
						Sugar Maple	Sawtimber	6.00	CCF			
						Aspen	Pulpwood	2.00	CCF			
						Mixed Conifer	Pulpwood	0.00	CCF			
						Mixed Hardwood	Pulpwood	224.00	CCF			
		Total PU Quantity And Value							241.00			CCF
004	27					Mixed Conifer	Sawtimber	0.00	CCF			
						Mixed Hardwood	Sawtimber	7.00	CCF			
						Sugar Maple	Sawtimber	13.00	CCF			
						Aspen	Pulpwood	5.00	CCF			
						Mixed Conifer	Pulpwood	0.00	CCF			
						Mixed Hardwood	Pulpwood	243.00	CCF			
		Total PU Quantity And Value							268.00			CCF
005	34					Mixed Conifer	Sawtimber	0.00	CCF			
						Mixed Hardwood	Sawtimber	13.00	CCF			
						Sugar Maple	Sawtimber	17.00	CCF			
						Aspen	Pulpwood	30.00	CCF			
						Mixed Conifer	Pulpwood	0.00	CCF			
						Mixed Hardwood	Pulpwood	312.00	CCF			
		Total PU Quantity And Value							372.00			CCF
006	30					Mixed Conifer	Sawtimber	0.00	CCF			
						Mixed Hardwood	Sawtimber	10.00	CCF			
						Sugar Maple	Sawtimber	17.00	CCF			
						Aspen	Pulpwood	8.00	CCF			
						Mixed Conifer	Pulpwood	0.00	CCF			
						Mixed Hardwood	Pulpwood	352.00	CCF			
		Total PU Quantity And Value							387.00			CCF
007	26					Mixed Conifer	Sawtimber	0.00	CCF			
						Mixed Hardwood	Sawtimber	15.00	CCF			
						Sugar Maple	Sawtimber	19.00	CCF			
						Aspen	Pulpwood	1.00	CCF			
						Mixed Conifer	Pulpwood	0.00	CCF			
						Mixed Hardwood	Pulpwood	224.00	CCF			
		Total PU Quantity And Value							259.00			CCF

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Payment Unit No.	App rox. Acres	To be Escalated under AT.4.1	Total Tentative Payment \$	To be Paid for at Flat Rates under AT.4.2				Total Flat Rate Payment \$	Total Required Deposits for Slash Disposal \$
008	9			Mixed Conifer	Sawtimber	3.00	CCF		.00
				Mixed Hardwood	Sawtimber	12.00	CCF		
				Sugar Maple	Sawtimber	11.00	CCF		
				Aspen	Pulpwood	30.00	CCF		
				Mixed Conifer	Pulpwood	1.00	CCF		
				Mixed Hardwood	Pulpwood	199.00	CCF		
				Total PU Quantity And Value					
009	17			Mixed Conifer	Sawtimber	0.00	CCF		.00
				Mixed Hardwood	Sawtimber	0.00	CCF		
				Sugar Maple	Sawtimber	0.00	CCF		
				Aspen	Pulpwood	47.00	CCF		
				Mixed Conifer	Pulpwood	1.00	CCF		
				Mixed Hardwood	Pulpwood	95.00	CCF		
				Total PU Quantity And Value					
010	26			Mixed Conifer	Sawtimber	0.00	CCF		.00
				Mixed Hardwood	Sawtimber	3.00	CCF		
				Sugar Maple	Sawtimber	3.00	CCF		
				Aspen	Pulpwood	191.00	CCF		
				Mixed Conifer	Pulpwood	0.00	CCF		
				Mixed Hardwood	Pulpwood	246.00	CCF		
				Total PU Quantity And Value					
011	45			Mixed Conifer	Sawtimber	0.00	CCF		.00
				Mixed Hardwood	Sawtimber	0.00	CCF		
				Sugar Maple	Sawtimber	19.00	CCF		
				Aspen	Pulpwood	12.00	CCF		
				Mixed Conifer	Pulpwood	0.00	CCF		
				Mixed Hardwood	Pulpwood	320.00	CCF		
				Total PU Quantity And Value					
012	1			Mixed Conifer	Sawtimber	0.00	CCF		.00
				Mixed Hardwood	Sawtimber	6.00	CCF		
				Sugar Maple	Sawtimber	11.00	CCF		
				Aspen	Pulpwood	34.00	CCF		
				Mixed Conifer	Pulpwood	1.00	CCF		
				Mixed Hardwood	Pulpwood	115.00	CCF		
				Total PU Quantity And Value					

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AT.4.4 - Stewardship Credits, applicable to ET.2.2 and KT-GT.9#

Mandatory Stewardship Projects					
Project Number	Project Description	Units of Measure	Quantity	Bid Rate \$	Total Credits
1-013	Long-lived Conifer Release	Acres	23.00		
2-053	Long-lived Conifer Release	Acres	43.00		

Optional Stewardship Projects						
Priority	Project Number	Project Description	Units of Measure	Quantity	Bid Rate \$	Total Credits
2	3-008	Aspen Site Prep	Acres	9.00		

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The following definitions are established for the terms used in AT.4:

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 DT.3.1, DT.3.2, or DT.3.3.

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 AT.7, but are never less than Base Rates.

Bid Premium Rates are the amounts by which Contractor's bid is in excess of Advertised Rates. The Bid Premium Rates are constant during this contract, except as provided in DT.3.1, DT.3.2, and DT.3.3.

Bid Rates are the rates bid by Contractor (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 AT.4.1 is the Tentative Rate that is subject to quarterly adjustment under DT.2; for species and products in AT.4.2, the Bid Rate is the Flat Rate.

Required Deposits are deposits that Contractor 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 KT-FT.3.2#.

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 DT.2.

AT.5 - Indices Used in Quarterly Adjustment, applicable to DT.2

Species	Index Name and Date
Not Applicable	

AT.6 - High Stumps, applicable to GT.4.1.2

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

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AT.7 - Specified Roads, applicable to FT.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 1/
6911	FDR6911 (R) (segment 0 to .1)	Single Lane - 15 mph	.1 / .16	SR 1 - 24 06/12/2012	FS	FS	FS AC

1/ Indicate timing, i.e., before clearing (BC) or after clearing (AC). Applicable to FT.2.1.2

AT.8 - Forest Service Engineering Completion Schedule, applicable to FT.2.1

Road No.	Road Name	Type of Work	Completion Date
	Not Applicable		

AT.9 - Fire Precautionary Period, applicable to HT.2

April 01 to November 15, inclusive

AT.10 - Contractor Responsibility to Furnish Crews and Equipment for:

Initial Fire Suppression, applicable to HT.3

Within 5.0 road miles

Fire Suppression Reinforcement, applicable to HT.3.1.2 and HT.3.1.3

Within 20.0 road miles

AT.11 - Contractor's Obligation per Operations Fire, applicable to HT.4.1

Maximum Amount: \$ \$1,000

AT.12 - Termination Date, applicable to IT.2

October 15, 2016

AT.13 - Normal Operating Season, applicable to GT.3.1, GT.6.6, IT.2.1, and JT.3

First Period: July 15 to September 30, inclusive

Second Period: December 15 to March 15, inclusive

AT.14 - Performance Bond, applicable to JT.1

Performance Bond Amount: N/A

AT.15 - Downpayment, applicable to E.T.2.1.1

Downpayment Amount: Not Applicable

AT.16 - Periodic Payment Amount, applicable to ET.2.1.3

	<u>Periodic Payment Determination Date</u>	<u>Amount</u>
Initial Payment:	<u> N/A </u>	<u> N/A </u>
Additional Payment:	<u> N/A </u>	<u> N/A </u>

AT.17 - Market-Related Contract Term Addition Producer Price Index, applicable to IT.2.1.2

Index Name: Wood Chips Index Number: 3211135

AT.18 - Inapplicable Provisions

The following listed provisions are hereby made inapplicable. (Instructions: List by reference number and title.)

- ET.2.1.5 DEPOSITS WHEN PAYMENT GUARANTEED
- ET.4 PAYMENTS NOT RECEIVED
- IT.2.1.2 MARKET-RELATED CONTRACT TERM ADDITION

AT.19 - List of Special Provisions in Part KT

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

- KT-CT.3.0.1# PROTECTED AREAS (06/2009)
- KT-CT.3.5.2# DESIGNATION BY SPECIES AND DIAMETER (09/2004)
- KT-CT.3.5.5# INDIVIDUAL TREES, CUT TREE MARKING (06/2009)
- KT-ET.2.1.5 DEPOSITS WHEN PAYMENT GUARANTEED (05/2010)
- KT-ET.4 PAYMENTS NOT RECEIVED (08/2012)
- KT-FT.1.0.3# APPROACHES TO SURFACED ROADS (06/2009)
- KT-FT.1.2# USE OF ROADS BY CONTRACTOR (09/2004)
- KT-FT.2.2.1# MATERIAL SOURCES (09/2004)
- KT-FT.3.1# ROAD MAINTENANCE REQUIREMENTS (09/2004)
- KT-GT.2.4# SITE SPECIFIC SPECIAL PROTECTION MEASURES (09/2004)
- KT-GT.3.1.3# CUTTING SCHEDULE (06/2009)
- KT-GT.3.1.4# OPERATING RESTRICTIONS (06/2009)
- KT-GT.4.1.2 STUMP MARKS (06/2009)
- KT-GT.6.2# SITE SPECIFIC WETLANDS PROTECTION MEASURES (09/2004)
- KT-GT.6.3# TEMPORARY ROAD CLOSURE (06/2009)
- KT-GT.7# SLASH DISPOSAL MEASURES (06/2009)
- KT-GT.9# STEWARDSHIP PROJECTS (09/2004)
- KT-HT.2 FIRE PRECAUTIONS (06/2009)
- KT-IT.2.1.2 MARKET-RELATED CONTRACT TERM ADDITION (11/2008)

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KT-CT.3.0.1# - PROTECTED AREAS (06/2009)

Notwithstanding the designations for cutting under CT.3.1, CT.3.3, CT.3.4, and CT.3.5, trees within the area to be protected in Payment Unit between Payment Units 3 and 7, and within Payment Unit 10 shall be left uncut. Boundary trees along the perimeter of Protected Areas have been identified by 3 ORANGE paint slashes, and "PA" at eye level (facing AWAY from the Protected Area), and painted at the stump. . Boundary trees are not to be cut. Contract Area Map indicates with the symbol "PA" units within which Protected Areas are identified on the ground and are to be left uncut.

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

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

See Tree Designation Table.

Additional trees to be cut, if any, are Marked with blue paint at eye level with stump mark paint.

All N/A shall be left as leave trees, unless Marked with N/A paint. Leave N/A trees of the designated cut species, N/A inches stump diameter or greater, to avoid leave tree spacing greater than N/A feet. Cutting unit boundaries and other trees that shall be left uncut are Marked with Orange (See Tree Designation Table) paint.

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

Contractor and Forest Service shall agree to skid trail location under BT6.422. Skid trails shall be no greater than N/A feet wide with a N/A foot spacing. Quantities of trees located in skid trails are not (unless included as designated species in Designation Table) Included Timber under AT2.

Contract Name: Kakabika Stewardship

FS-2400-13T (9/04)

WO-KT-CT.3.5.2# – DESIGNATION BY SPECIES AND DIAMETER. (09/04)

Tree Designation Table

Payment Unit(s) or Cutting Unit(s)	Designated Species <u>1/</u>	More Than Stump Diameter (inches) <u>2/</u>	Less Than Stump Diameter (inches) <u>2/</u>
8	All trees that meet minimum merchantability specifications in AT.2 EXCEPT PINE, HEMLOCK, CEDAR, OAK, ELM	>=6.0"	

Payment Unit boundaries: Exterior boundaries are marked with 3 ORANGE paint slashes above stump height; interior boundaries are marked with 2 ORANGE paint slashes above stump height on each side of the boundary. Boundary trees are also marked below stump height. Paint marks face to the INSIDE of the Payment Unit. BOUNDARY TREES ARE NOT TO BE CUT.

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KT-CT.3.5.5# - 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 Units. Areas of Cut Tree Marking are shown on the Contract Area Map with the symbol "CTM."

PAYMENT UNIT(S)

PAIN'T COLOR

Contract Name: Kakabika Stewardship

R9-KT-CT.3.5.5# - INDIVIDUAL TREES. (11/2007)

Cut Tree Marking Table

Payment Units	Paint Color
1, 2, 3, 4, 5, 6, 7, 9, 10, 11	Blue
12 (ROW)	Yellow

Payment Unit boundaries: Exterior boundaries are marked with 3 ORANGE paint slashes above stump height; interior boundaries are marked with 2 ORANGE paint slashes above stump height on both sides of the tree. Boundary trees are also marked below stump height. Paint marks face to the inside of the Payment Unit. These boundary trees are NOT to be cut, unless designated by the Forest Service.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

KT-FT.1.0.3# - APPROACHES TO SURFACED ROADS (06/2009)

Contractor shall apply and maintain PU 11 temporary "back-in" (special use road-south): 15 CY crushed aggregate; PU 11 temporary road (middle): 45 CY pitrun; & PU 11 temporary road (north): 15 CY pit run. inches of as directed by Forest Service on all Temporary Road approaches to surfaced roads for a distance of as directed by Forest Service feet back from the surfaced road. Surfaced roads include those with: crushed gravel - County Road 527; Contractor will be provided a WORK MAP showing the approximate locations of these entrances

KT-FT.1.2# - USE OF ROADS BY CONTRACTOR (09/2004)

Contractor's use of existing roads identified on Contract 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. Contractor'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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FS-2400-13T (94/04)

WO-KT-FT.1.2# – USE OF ROADS BY CONTRACTOR. (09/04)

Restricted Road List

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
5191	FR 5191	MP 0.68	End	X	Hauling Prohibited
5191-A	FR 5191-A	MP 0.00	End	X	Hauling Prohibited
5194	FR 5194	MP 0.05	End	X	Hauling Prohibited
6911	FR 6911	MP 0.00	0.10	U	Unsuitable for Hauling prior to Reconstruction
County Line Lake Pit Road (FR 5134)	Gate			R	Gate shall be closed and locked when operations are not in progress
Special Use Road in South Portion PU 11	N/A	MP 0.00	End FS Ownership	KO	Keep Open
All Unidentified Roads Marked with "P"				P	Use Prohibited
All Unidentified Roads Marked with "X"				X	Hauling Prohibited, Use for skidding must be approved prior to use.

KT-FT.2.2.1# - MATERIAL SOURCES (09/2004)

Sources of local materials are designated on Plans and Contract Area Map. Forest Service assumes responsibility for the quality and quantity of material in designated sources. Contractor 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 Contractor to use certain area(s) for plant site, stockpiles, and haul roads.

Should the designated source, due to causes beyond the control of Contractor, contain insufficient acceptable material, Forest Service will provide another source with adjustment in accordance with FT.2.5.3.

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

When Contractor elects not to use designated sources and Schedule of Items lists pit development separately, cost allowance will be reduced under FT.2.5.3 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 N/A, Source II N/A, and Source III N/A.

Contractor 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. Contractor 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. Contractor 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 N/A:

See Material Source Table.

Should quantity vary from that estimated, payment to owners shall be for units actually obtained. Contractor 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 contracts. Forest Service is not obligated to reimburse Contractor 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 Contractor's plant equipment. All storage sites provided by Forest Service shall be restored at Contractor's expense.

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CONTRACT

Contract Name: Kakabika Stewardship

Contractor shall be responsible for making arrangements for storage on other than Forest Service administered 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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CONTRACT

Contract Name: Kakabika Stewardship

FS-2400-13T (09/04)

WO-KT-FT.2.2.1# – MATERIAL SOURCES. (09/04)

Material	Type of Purchase	Owner(s)	Unit of Measure	Unit Price	Estimated Quantity	Total
N/A						

Contract Name: Kakabika Stewardship

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CONTRACT

KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS (09/2004)

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

See Contract Road Maintenance Requirements Summary Table.

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Contract Name: Kakabika Stewardship

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FS-2400-13T (9/04)

WO-KT-FT.3.1# – ROAD MAINTENANCE REQUIREMENTS. (09/04)

Contract Road Maintenance Requirements Summary

Road	Termini		Miles	Applicable Prehaul Road Maintenance Specifications									
	From	To		T-8030	T-8130	T-8310	T-8340	T-8350	T-8360	T-8620			
5177	MP 0.00	MP 1.01	1.01		P	P	P		P	P			
5191	MP 0.00	MP 0.68	0.68		P	P	P		P	P			
5194	MP 0.00	MP 0.05	0.05		P	P	P		P	P			

P = Contractor 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-8130	T-8310	T-8340	T-8350	T-8360	T-8620			
5177	MP 0.00	MP 1.01	1.01	P		P	P		P				
5191	MP 0.00	MP 0.68	0.68	P		P	P		P				
5194	MP 0.00	MP 0.05	0.05	P		P	P		P				
6911	MP 0.00	MP 0.10	0.10	P		P	P		P				

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

Road	Termini		Miles	Applicable Post Haul Road Maintenance Specifications									
	From	To		T-8030	T-8130	T-8310	T-8340	T-8350	T-8360	T-8620			
5177	MP 0.00	MP 1.01	1.01			P	P	P	P	P			
5191	MP 0.00	MP 0.68	0.68			P	P	P	P	P			
5194	MP 0.00	MP 0.05	0.05			P	P	P	P	P			
6911	MP 0.00	MP 0.10	0.10			P	P	P	P	P			

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

SAMPLE CONTRACT

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

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

Cultural Resource Protection Measures: Cultural resource sites have been identified within the Contract Area Boundary. A Confidential WORK MAP showing locations of the sites to be protected will be provided to the Contractor prior to operations.

Wildlife and Botanical Protection Measures: None known at this time.

Cave Resource Protection Measures: None known at this time.

KT-GT.3.1.3# - CUTTING SCHEDULE (06/2009)

Unless changed by written agreement, only 2 (does not include Payment Unit 12 - road clearing Included Timber) Payment Units may be released for operations at one time, and the sequence of cutting Payment Units shall be : Option of Purchaser .

Unless there is agreement in writing to postpone specific requirements, all contractual requirements on a Payment Unit shall be accepted by Forest Service prior to the release of an additional Payment Unit.

KT-GT.3.1.4# - OPERATING RESTRICTIONS (06/2009)

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

Restricted operations/activities:

Within Payment Units 1, 3, 4, 5, 7, 9 and 11: Harvest operations are restricted during the period of 3/16 thru 7/14 (due to soils and protection of residual trees) and 10/1 thru 12/14 (due to soils).

Within Payment Unit 8: Harvest operations are restricted during the period of 3/16 thru 12/14 (due to aspen regeneration requirements - dormant season logging and soils).

Within Payment Units 2, 6 and 10: Harvest operations are restricted during the period of 3/16 thru 12/14 (due to soils).

Temporary road construction associated with GOG 527 entrances shall be completed in compliance with Gogebic County Road Commission Permit 1016. (Construction Permit expires 8/30/2014)

Pit restoration (per specifications) in the designated gravel permit (County Line Lake Pit) shall be accomplished no later than the end of each operating season.

Prohibited operations/activities:

N/A

SAMPLE CONTRACT

KT-GT.4.1.1.2 - STUMP MARKS (06/2009)

Trees designated for cutting under CT.3.5 have been marked with paint at breast height and below stump height. Trees shall be felled so as to leave paint on stump.

KT-GT.6.2# - SITE SPECIFIC WETLANDS PROTECTION MEASURES (09/2004)

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 Contractor's operations shall be removed immediately, or treated as directed by the Forest Service.

KT-GT.6.3# - TEMPORARY ROAD CLOSURE (06/2009)

In addition to GT.6.3, measures to effectively block temporary roads to normal vehicular traffic shall consist of the following:

After use, Temporary roads & landings which intersect with Gogebic County Road 527 shall have aggregate removed from ditches, restore original ditch-line. The temporary roadbed shall be restored to natural slopes and covered with a minimum of 12" of logging slash the entire length to lie within 24" of the ground.

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 ditch flows. 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 also function as a waterbar for drainage, the trench will not be required. Height of the berm will be approx 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.

SAMPLE CONTRACT

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

Slash resulting from Contractor'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 KT-GT.6#.

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

Other specific slash disposal requirements are as follows:

SDZ - Slash resulting from construction clearing (such as from landings and right-of-way clearing associated with pre-haul maintenance requirements listed in Special Provision KT-GT.7#), shall be lopped and scattered to lie within 3 feet of the ground (EXCEPT within SDZ(1) described below). 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 Contract Area Map, in Payment Units 1, 2, 3, 9 and 11 within a strip 25 feet in width, measured from the forested edge of the road along Gogebic County Roads 206 and 527, all slash resulting from the Contractor's operations shall be lopped and scattered to lie within 2 feet of the ground. SDZ(1) shall be performed concurrent with operations.

SDZ(2) - Within the Contract Area, except as specified elsewhere in this Contract, all debris/slash resulting from the use of slashers/processors or similar equipment 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 the above requirements.

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

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

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

Stewardship Projects

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Stewardship Projects

Mandatory Stewardship Projects		
Project Number	Project Description	Specification Pages
1-013	Long-lived Conifer Release, South Unit	SP-2 and SP-3
2-053	Long-lived Conifer Release, North Unit	SP-2 thru SP-3

Optional Stewardship Projects		
Project Number	Project Description	Specification Pages
3-008	Aspen Site Preparation	SP-4 thru SP-5

KT-HT.2 - FIRE PRECAUTIONS (06/2009)

Unless otherwise agreed in writing between the Contractor and the Contracting Officer, the following are specific precautionary measures applicable during Contractor's Operations in Fire Precautionary Period as indicated in AT.9:

1. Contractor shall maintain Forest Service-approved spark arresting devices 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 one-pound multipurpose fire extinguisher readily available.
2. Contractor shall require that smoking and the building of lunch or warming fires by Contractor's employees, contractors, or subcontractors be confined to designated safe places where flammable debris has been cleared away and where, at the option of the Contractor, 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. Contractor shall furnish serviceable firefighting tools. Location, numbers, and types of tools shall be specified in the Fire Prevention and Control Plan in accordance with HT.1.

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

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

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

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

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

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

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

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04)

WO-KT-FT.3.1# Special Provisions

REQUIREMENTS
SAMPLE
CONTRACT

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 **GT.3.1**.

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 **IT.3.3**.

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04)
WO-KT-FT.3.1# Special Provisions

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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.

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.

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04)
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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.

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 WO-KT-FT.3.1# Summary Table

SECTION 4. ROAD MAINTENANCE SPECIFICATIONS

INCLUDED SPECIFICATIONS

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

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

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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.

EQUIPMENT

- 2.1 Purchaser may use any type of equipment to remove snow, providing:
- Type or use of equipment is not restricted in **KT-FT.1.2#** or Schedule document.
 - 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.
 - 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.

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04)
WO-KT-FT.3.1# Special Provisions

SAMPLE
CONTRACT

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.

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04)
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Road Number	Type Material	Finished Compacted Thickness Specified	Total Quantity (Tons or cu.yds.)	Compaction Method
5177 (MP 0.00 – 0.01)	Crushed Aggregate ^{3/}	As Directed by USFS	15 CY (19.5) ^{2/}	See 3.2 Above
5191 (MP 0.02 – 0.06)	3" Screened Pit Run ^{5/}	200'L x 12'W x 6"D	45 CY (58.5 CY) ^{2/}	See 3.2 Above
5191 (MP 0.08)	Geotextile Fabric ^{4/}	50'L x 15'W	84 SY	See 3.2 Above
5191 (MP 0.07 – 0.09)	Pit Run Gravel ^{1/}	100'L x 12' x 8"D	30 CY (39 CY) ^{2/}	See 3.2 Above
5191 (MP 0.15)	Pit Run Gravel ^{1/}	100'L x 12' x 8"D	30 CY (39 CY) ^{2/}	See 3.2 Above
5191 (MP 0.23)	Local Borrow	As Directed by USFS	15 CY	See 3.2 Above
5191 (MP 0.27 – 0.29)	Pit Run Gravel ^{1/}	100'L x 12' x 8"D	30 CY (39 CY) ^{2/}	See 3.2 Above
5191 (MP 0.33)	Geotextile Fabric ^{4/}	50'L x 15'W	84 SY	See 3.2 Above
5191 (MP 0.31 – 0.35)	Pit Run Gravel ^{1/}	200'L x 12' x 8"D	31 CY (40 CY) ^{2/}	See 3.2 Above
5191 (MP 0.39)	Geotextile Fabric ^{4/}	50'L x 15'W	84 SY	See 3.2 Above
5191 (MP 0.39)	Pit Run Gravel ^{1/}	As Directed by USFS	15 CY (19.5CY) ^{2/}	See 3.2 Above
5191 (MP 0.35 – 0.40)	3" Screened Pit Run ^{5/}	200'L x 12'W x 6"D	45 CY (58.5 CY) ^{2/}	See 3.2 Above
5191 (MP 0.40)	Pit Run Gravel ^{1/}	50'L x 12' x 8"D	15 CY (19.5 CY) ^{2/}	See 3.2 Above
5191 (MP 0.42 – 0.45)	Pit Run Gravel ^{1/}	150'L x 12' x 8"D	45 CY (58.5 CY) ^{2/}	See 3.2 Above
5191 (MP 0.54)	Geotextile Fabric ^{4/}	50'L x 15'W	84 SY	See 3.2 Above
5191 (MP 0.54)	Pit Run Gravel ^{1/}	50'L x 12' x 8"D	15 CY (19.5 CY) ^{2/}	See 3.2 Above
5191 (MP 0.02 – 0.68)	Pit Run Gravel ^{1/}	As Directed by USFS	70 CY (91 CY) ^{2/}	See 3.2 Above
5194 (MP 0.00 – 0.01)	Crushed Aggregate ^{3/}	As Directed by USFS	15 CY (19.5) ^{2/}	See 3.2 Above
5194 (MP 0.01 – 0.03)	Pit Run Gravel ^{1/}	As Directed by USFS	30 CY (39 CY) ^{2/}	See 3.2 Above
5194 (MP 0.03 – 0.05)	Pit Run Gravel ^{1/}	As Directed by USFS	30 CY (39 CY) ^{2/}	See 3.2 Above

^{1/}County Line Lake Pit (as shown on Contract Area Map)

^{2/}Quantity of Material in () = Approximate Loose Volume

^{3/}Furnish, haul and place. Must meet M-DOT Designation 22A.

^{4/}Furnish, haul and place. Must be equivalent or greater than US 205-8 oz. non-woven geotextile fabric.

^{5/}Screen, haul and place. Pit-run from County Line Lake Pit screened through Grizzly 3"X 3" mesh provided by Forest Service.

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

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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 **IT.3.3**.

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.

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04) WO-KT-FT.3.1# Special Provisions

SAMPLE
CONTRACT

- 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.
- 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.

Road Number	Location	Remove/Install	Type of Structure	Size	Quantity
5177	M.P. 0.18 – 0.21	Install	Construct Special Deepened Ditch Left to Inlet	150'	As Directed ^{2/}
5177	M.P. 0.21	Remove	Culvert	Existing	1
5177	M.P. 0.21	Install	Culvert ^{1/}	24"x30'	1
5177	M.P. 0.22	Excavate/Fill	Local Borrow	50 CY Right, 30 CY Left	As Directed
5177	M.P. 0.55 – 0.57	Install	Construct Special Deepened Ditch Left to Pipe Inlet. Construct Outlet Ditch Right	150'	As Directed ^{2/}
5177	M.P. 0.57	Remove	Culvert	Existing	1
5177	M.P. 0.57	Install	Culvert ^{1/}	18"x24'	1
5177	M.P. 0.60	Excavate/Fill	Local Borrow	60 CY Right	As Directed
5191	M.P. 0.01	Remove	Culvert	Existing	1
5191	M.P. 0.01	Install	Culvert ^{1/}	15"x24'	1
5191	M.P. 0.01	Haul and Place	Pit Run Gravel	15 CY (19.5) ^{3/}	As Directed
5194	M.P. 0.01	Remove	Culvert	Existing	1
5194	M.P. 0.01	Install	Culvert ^{1/}	15"x30'	1

^{1/} Smooth lined, dual walled, high density polyethylene drainage pipe (HDPE)

^{2/} Per Inlet and Outlet Ditch Section Typical Drawing

^{3/} County Line Lake Pit (as shown on Contract Area Map)

- 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.

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04)
WO-KT-FT.3.1# Special Provisions

SAMPLE
CONTRACT

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.

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 WO-KT-FT.3.1# Summary Table).

3.4 Entrance Devices. Upon completion of work, replace entrance devices to effectively eliminate access by motorized vehicles (ML-1).

3.5 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.

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04)
WO-KT-FT.3.1# Special Provisions

SAMPLE
CONTRACT

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, **per Typical Drawing**.

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 WO-KT-FT.3.1# Summary Table.**

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.

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04)

WO-KT-FT.3.1# Special Provisions

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-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.

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.

KAKABIKA STEWARDSHIP ROAD MAINTENANCE REQUIREMENTS

FS-2400-13T Contracts (09/04) WO-KT-FT.3.1# Special Provisions

SAMPLE CONTRACT

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 retroreflectivity requirements.

Road Number	Road Name	Location	Remove/Install	Type of Item	Size	Quantity
5177	FR 5177	1/	Remove/Install ^{1/}	Berm	2/	1
5191	FR 5191	1/	Remove/Install ^{1/}	Berm	2/	1
5194	FR 5194	1/	Remove/Install ^{1/}	Berm	2/	1
6911	FR 6911	1/	Install ^{1/}	Berm	2/	1
5134	FR 5134	3/	Maintain	Gate	3' x 20'	1

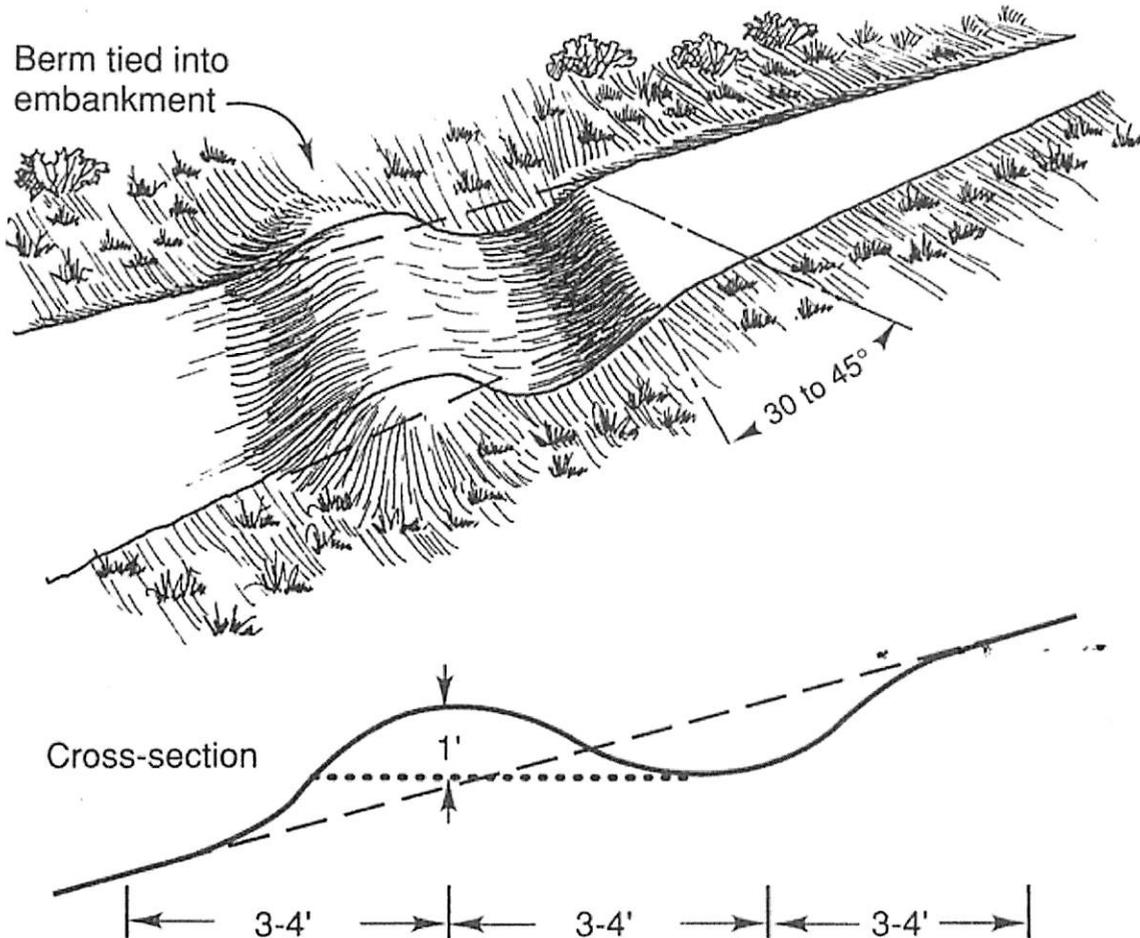
^{1/} At Location Designated by Forest Service

^{2/} Per Typical Berm Drawing

^{3/} Shown on Contract Area Map

Earthen Berms/Road Closure Devices (Typical Drawing)

SAMPLE
CONTRACT



Earth berm/water bars are narrow, earthen ridges built across roads or trails. They divert water off and away from roads or trails into vegetated areas before it causes erosion. When properly built, they prevent exposed soil from moving, protecting the area until grass vegetation is firmly established.

As shown in the above drawing, the berm/water bar should be placed at an angle of 30 to 45 degrees, relative to the road, to allow for runoff to drain from the inlet, through the trench, and into the adjacent forest floor or vegetation.

Dig a trench, 12 to 18 inches below the surface of the road or trail, and extend it beyond both sides of the road or trail to prevent runoff from bypassing the water bar. The uphill end of the water bar should extend beyond the side ditch of the road and into an earth-berm to fully intercept any ditch flows. The outflow end of the water bar is to be fully open and extended far enough beyond the edge of the road or trail to safely disperse runoff water onto the undisturbed forest floor. When placement of the closure device does not require the berm to also function as a water bar 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 of the berm as long as proper drainage will be maintained and the road is completely blocked; unless otherwise agreed in writing.

KAKABIKA STEWARDSHIP SALE
SPECIFIED ROAD SCHEDULE OF ITEMS

Item Number	Item Description & Milepost	C or R ¹	Unit & M of M ²	Quantity	Road Std. (W,D,S) ³	Unit Allowance	Estimated Allowance
	FR 6911						
	M.P. 0.0-0.10	R			D/W		
249(02)	Composite Road Construction Reconstruct existing road with exaggerated crown to match typical drawing typical and to allow for drainage.		LS LSQ	1		650	\$ 650.00
	M.P. 0.0-0.02						
204 (52)	Unclassified borrow. Haul and place 30 C.Y. pit run from County Line Lake Pit placed at entrance to widen radius and surface travel way. (39 C.Y. loose material)		CY DQ	30		10	\$ 300.00
	M.P. 0.02-0.10						
204 (52)	Unclassified borrow. Haul and place 63 C.Y. screen pit run. Material passing through 3" opening grizzly from County Line Lake Pit to surface travel way. (82 C.Y. loose material) (425' L x 12'W x 4" D)		CY DQ	63		13	\$ 819.00
	FR 6911 Total Specified Road						\$ 1,769.00
	Kakabika Specified Road Schedule Grand Total						\$ 1,769.00

SAMPLE CONTRACT

¹C = Construction, R = Reconstruction
²Method of Measure
³W = Winter, D = Dry Summer, S = Summer

KAKABIKA STEWARDSHIP SALE
SPECIFIED ROAD APPRAISAL NOTES

SAMPLE
CONTRACT

- NOTE:** The construction requirements for composite road construction slash disposal shall be Method A as described in the supplemental specification Item 249. During clear and grub operations, all slash resulting from Contractor's operations shall also be treated per KT-GT.7#.
- NOTE:** Construct the road bed to conform to the typical detail as noted in the narrative description.
- NOTE:** There is **93 C.Y. of pit run borrow material** required for **FR 6911**. This volume plus the normal compaction factor of 130% for pit run computes to a **loose volume of 121 C.Y.** This material may be taken from the **County Line Lake Pit** which is located at **T45N R40W Section 2**. Some pit development may be required and is considered incidental to associated items.
- NOTE:** During borrow hauling operations "**Trucks Hauling**" signs shall be placed on **County Line Lake Road**. Hauling shall not commence until all signs have been put in place as directed by the Forest Service.
- NOTE:** There may be underground utility lines in unknown locations on this project. Call **MISS DIG THREE** full working days before any work begins.
Phone 1-800-482-7171
- NOTE:** Grizzly screen will be provided by the Forest Service at the County Line Lake Pit for separation of pit run material.

KAKABIKA STEWARDSHIP SALE
SUPPLEMENTAL SPECIFICATIONS

SAMPLE
CONTRACT

- Section 101-109 General Requirements
- Section 204 Excavation and Embankment
- Section 249 Composite Road Construction

SUPPLEMENTAL SPECIFICATION

SAMPLE
CONTRACT

PREFACE

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.

SUPPLEMENTAL SPECIFICATION

Section 101 – TERMS, FORMAT, AND DEFINITIONS

101.01 Meaning of Terms.

Add the following:

Delete all references in FP-03 to Transportation Acquisition Regulations (TAR). For Timber Sales, delete all references in FP-03 to Federal Acquisition Regulations (FAR).

101.03 Abbreviations.

Add the following to (a) Acronyms:

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

.

Add the following to (b) SI Symbols:

mp	Milepost
ppm	Part Per Million

SAMPLE
CONTRACT

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.

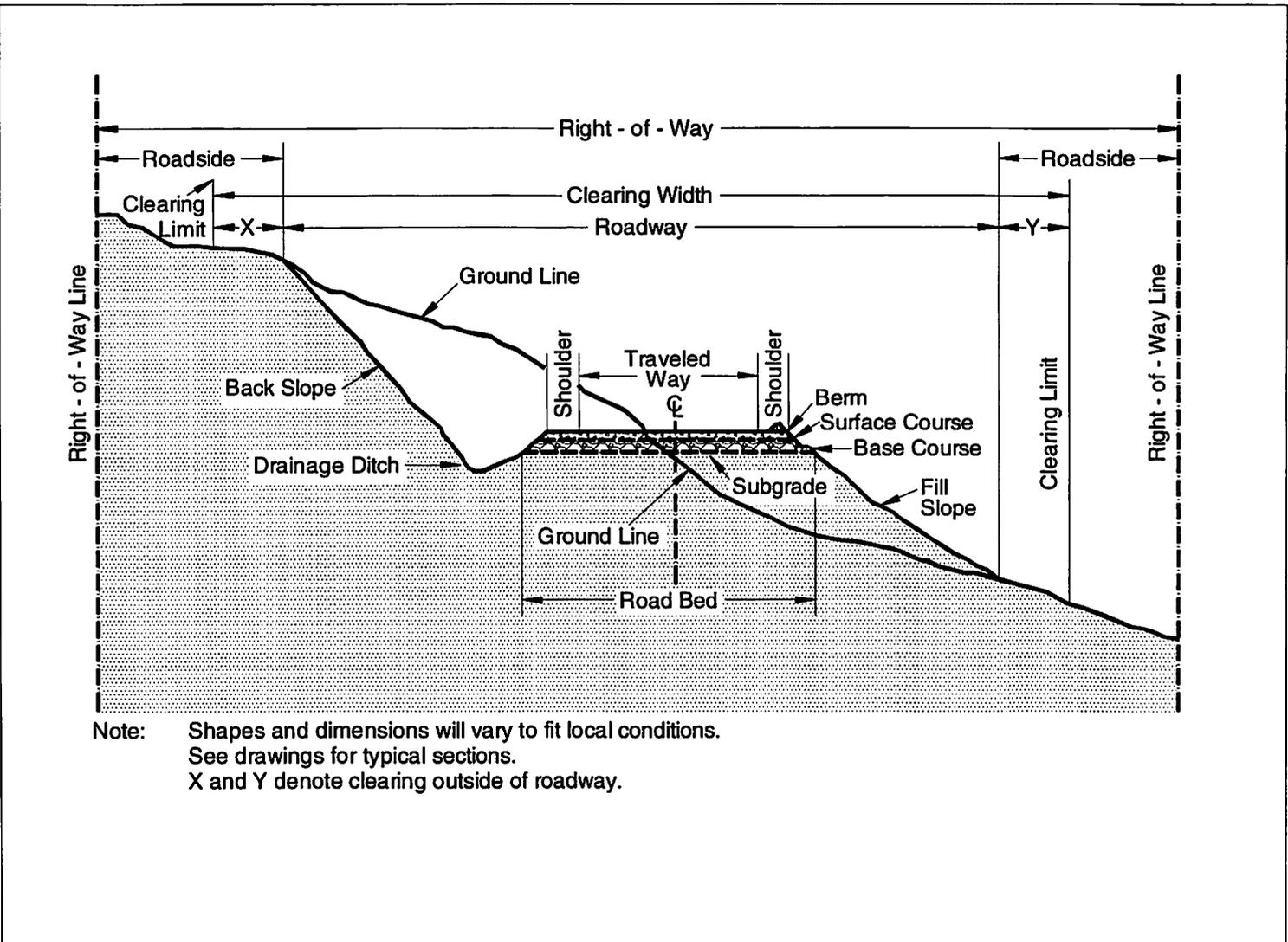
Protected Streamcourse--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

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.



SAMPLE
 CONTRACT

SUPPLEMENTAL SPECIFICATION **SAMPLE**
Section 102 – BID, AWARD, AND EXECUTION OF CONTRACT **CONTRACT**

102 Delete

Delete Section 102 in its entire

SUPPLEMENTAL SPECIFICATION

Section 103 – SCOPE OF WORK

103 Delete

Delete all but subsection 103.01 Intent of Contract.

SUPPLEMENTAL SPECIFICATION

Section 105- CONTROL OF MATERIAL

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 6

Government-provided optional sources for this project are identified as follows:

Material is available for use as (Borrow/pit run) from the County Line Lake Pit. This Pit is located at T45N R40W Section 2.

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

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.

SUPPLEMENTAL SPECIFICATION **SAMPLE**
Section 106- ACCEPTANCE OF WORK **CONTRACT**

106.05 Statistical Evaluation of Work and Determination of Pay Factor (Value of Work).

106.07 Partial and Final Acceptance.

Delete subsection 106.07

SUPPLEMENTAL SPECIFICATION

Section 107- LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

107.05 Responsibility for Damage Claims.

Delete the entire subsection.

107.09 Legal Relationship of the Parties.

Delete the entire subsection.

SUPPLEMENTAL SPECIFICATION

Section 108- PROSECUTION AND PROGRESS

Delete Section 108 in its entirety.

SUPPLEMENTAL SPECIFICATION

Section 109- MEASUREMENT AND PAYMENT

109.02 Measurement Terms and Definitions

Add: One of the following methods of measurement for determining final payment is DESIGNATED on the SCHEDULE OF ITEMS for each pay item:

- SAMPLE
CONTRACT
- (a) Designated Quantities (DQ). These quantities denote the final number or units to be paid for under the terms of the contract. They are based upon the original design data available prior to advertising the project. Original design data include the preliminary survey information, design assumptions, calculations, drawings, and the presentation in the contract. Changes in the number of units SHOWN in the SCHEDULE OF ITEMS may be authorized under any of the following conditions:
- (1) As a result of changes in the work authorized by the Contracting Officer.
 - (2) As a result of the Contracting Officer determining that errors exist in the original design that cause a pay item quantity to change by 15 percent or more.
 - (3) As a result of the contractor submitting to the Contracting Officer a written request showing evidence of errors in the original design that cause a pay item quantity to change by 15 percent or more. The evidence must be verifiable and consist of calculations, drawings, or other data that show how the designated quantity is believed to be in error.
- (b) Staked Quantities (SQ). These quantities are determined from staked measurements prior to construction.
- (c) Actual Quantities (AQ). These quantities are determined from measurements of completed work.
- (d) Vehicle Quantities (VQ). These quantities are measured or weighed in hauling vehicles.
- (e) Lump Sum Quantities (LSQ). These quantities denote one complete unit of work as required by or described in the contract, including necessary materials, equipment, and labor to complete the job. They will not be measured.

Quantity Measurements. The Forest Service shall make all measurements for computation of quantities for all work items except those specified for payment by Design Quantity (DQ). The Engineer shall compute the quantities for periodic payments and for final payment.

The Contractor shall certify in writing at the completion of contract work, that the quality of construction conforms to the drawings, specifications, and requirements of the Contract.

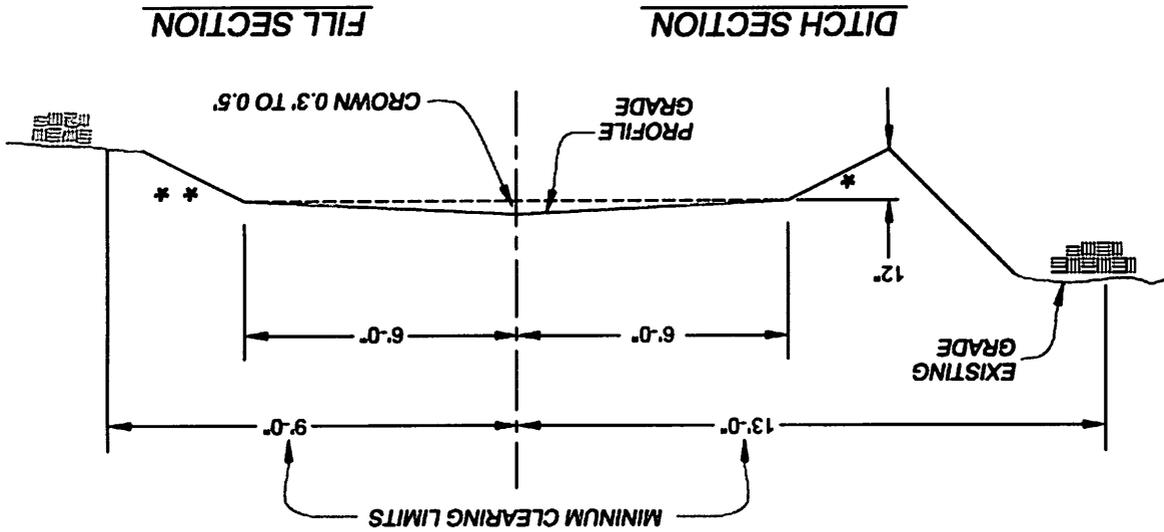
109 Deletions

Delete the following entire subsections:

TYPICAL CROSS SECTION WITH 1 FOOT DITCH
NOT TO SCALE

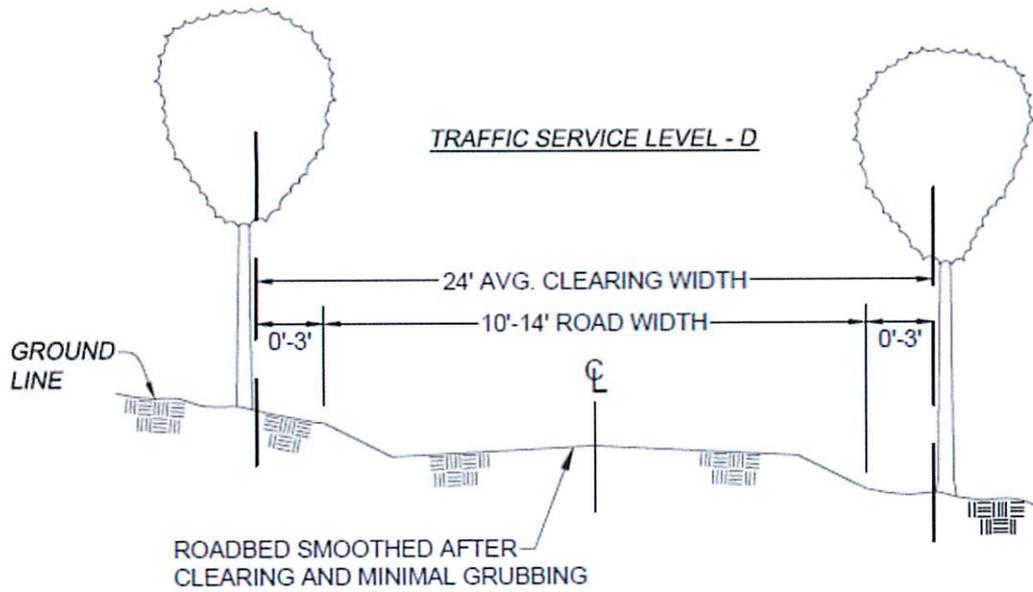
(SEE NARRATIVE FOR LOCATION)

BACKSLOPE AND DITCH SLOPES MAY VARY FROM 1H:1V TO 2H:1V WHEN CUTS ARE UNDER 2 FT.
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



SAMPLE CONTRACT

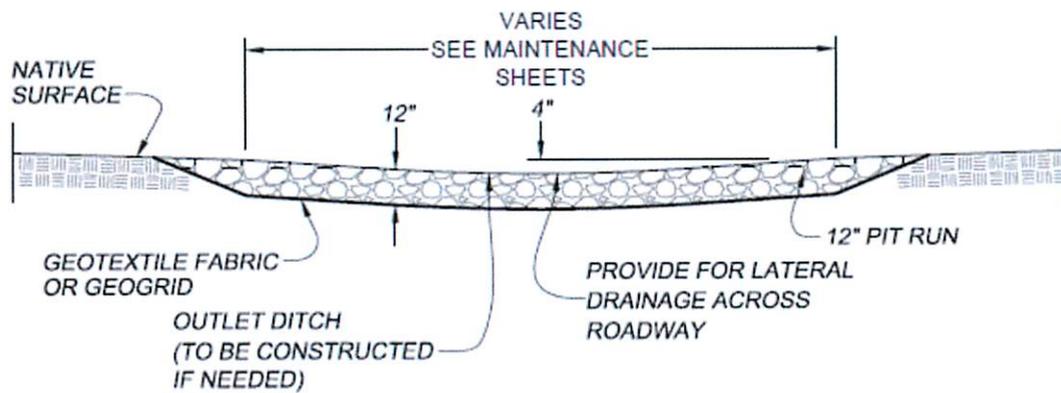
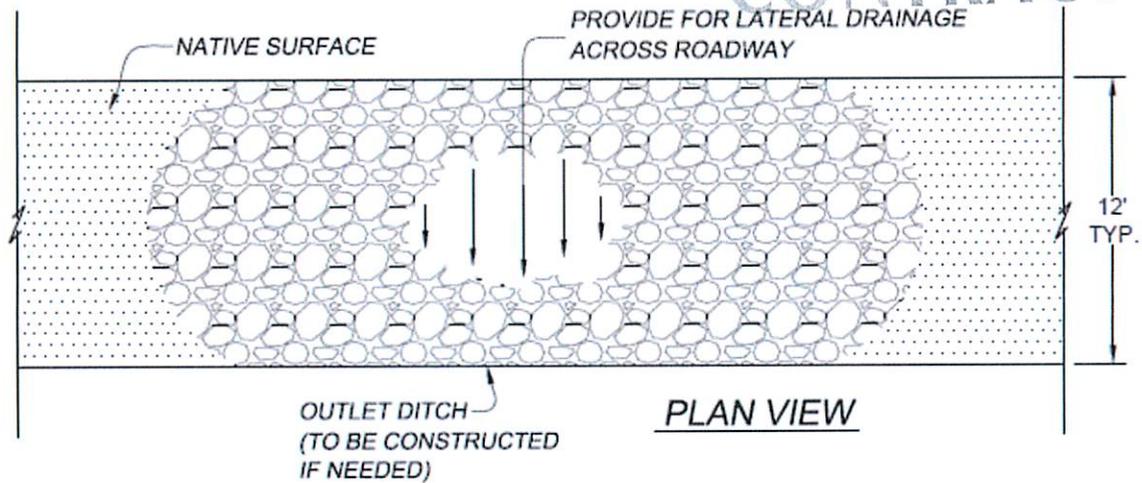
SAMPLE CONTRACT



CROSS SECTION VIEW

WINTER ONLY ROAD STANDARD
NOT TO SCALE

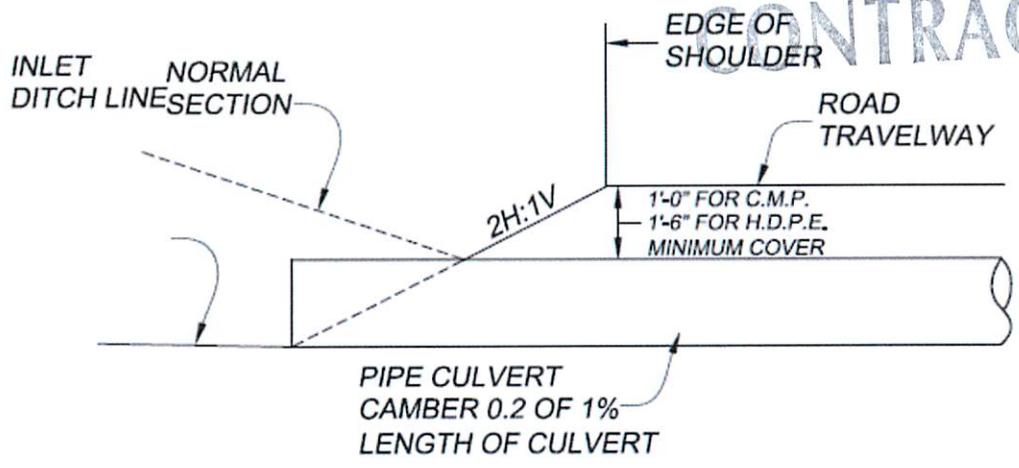
SAMPLE CONTRACT



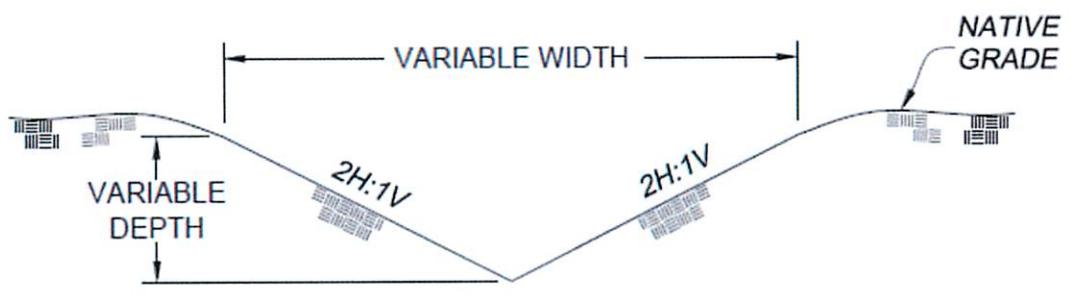
NOTE:
HARDENED DIPS WILL BE EXCAVATED 16" DEEP
AND BACKFILLED WITH 12" OF PIT RUN. GEOTEXTILE
OR GEOGRID SHALL BE PLACED UNDER PIT RUN
MATERIAL AS DIRECTED BY THE FOREST SERVICE.

TYPICAL HARDENED DIP
NOT TO SCALE

SAMPLE CONTRACT

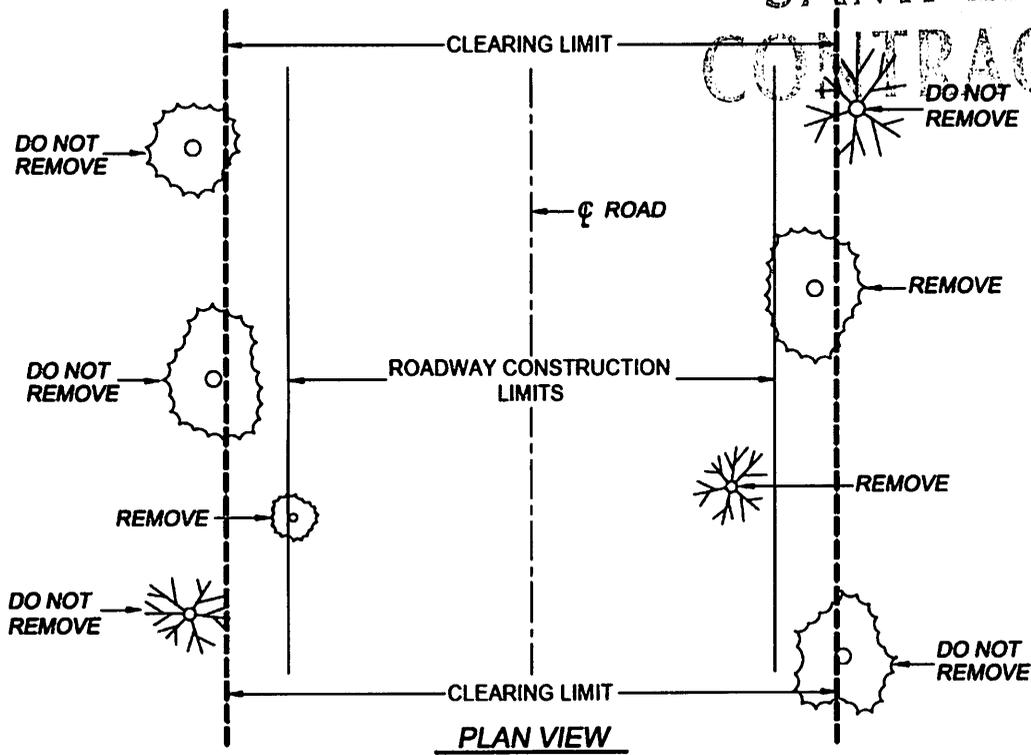


TYPICAL DITCH SECTION AT CULVERT INLET
NOT TO SCALE



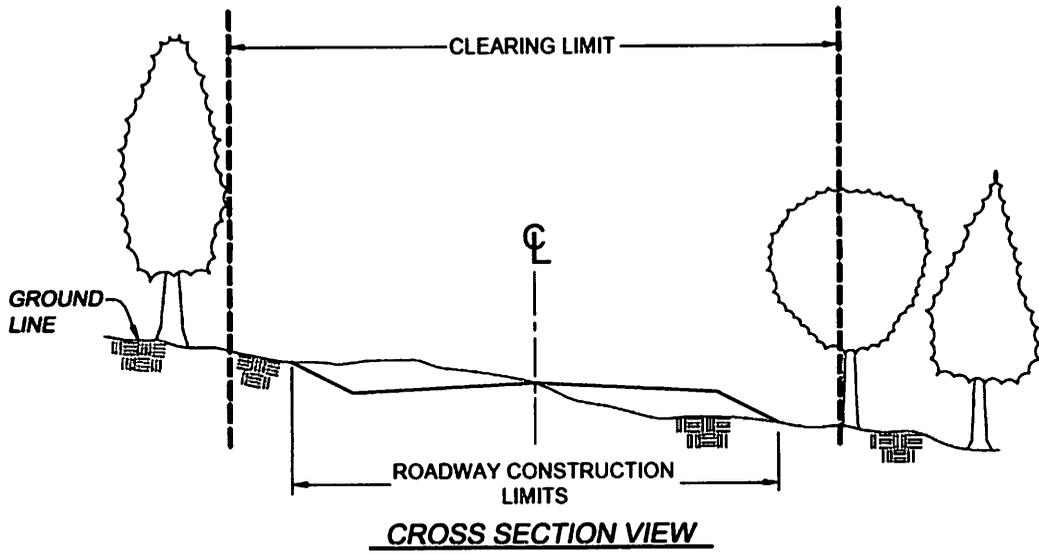
TYPICAL INLET AND OUTLET DITCH SECTION
NOT TO SCALE

SAMPLE CONTRACT



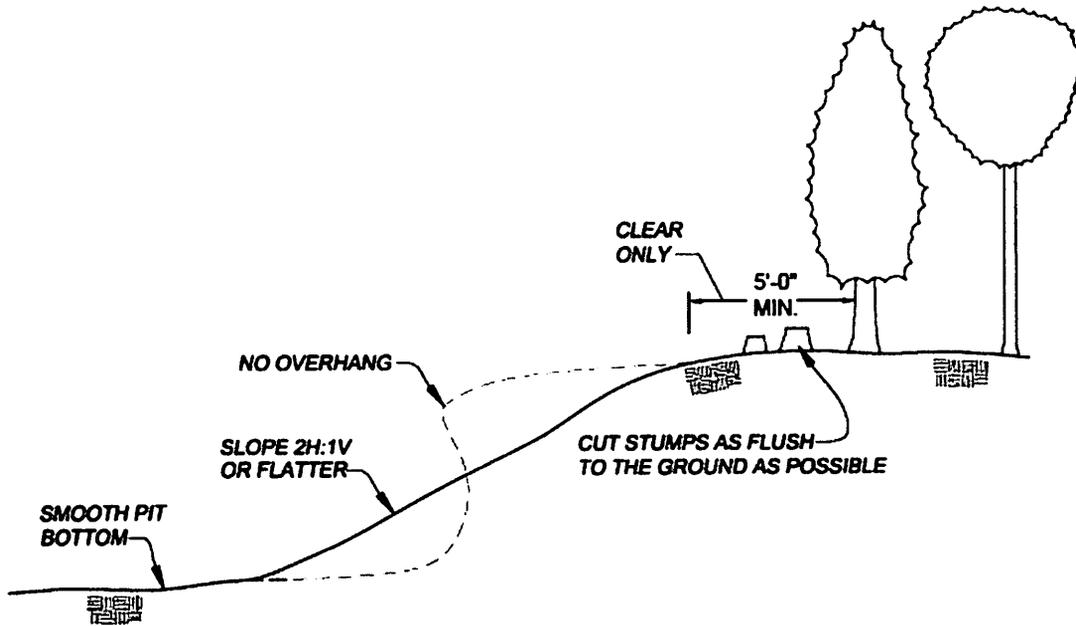
NOTE: TREES ON THE CLEARING LIMIT LINE ARE TO REMAIN UNLESS OTHERWISE DESIGNATED BY THE ENGINEER.

NOTE: YELLOW PAINT INDICATES TREES TO BE REMOVED.



CONSTRUCTION STAKING
NOT TO SCALE

SAMPLE CONTRACT



NOTE: TOPS, STUMPS AND TRUNKS SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER. STUMPS SHALL BE SEVERED FROM ALL TREES. ALL TIMBER SHALL REMAIN PROPERTY OF THE GOVERNMENT. OVERSIZED ROCK SHALL BE DISPOSED OF IN EXISTING PILES OR AS DIRECTED BY THE ENGINEER. 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

Kakabika Stewardship Contract

Supplemental Specifications to Special Provision KT-GT.9# - Stewardship Projects

**SAMPLE
CONTRACT**

PROJECT SPECIFICATIONS INDEX:

Project Name	Page #
Long-lived Conifer Release	SP-2 thru SP-3
Aspen Site Preparation	SP-4 thru SP-5

KAKABIKA STEWARDSHIP CONTRACT

Supplemental Specifications to Special Provision KT-GT.9# - Stewardship Projects

Wildlife Habitat Project - Long-lived Conifer Release

**SAMPLE
CONTRACT**

Project Number¹	Item	Unit of Measure	Quantity	Felling Location
1-013	Fell/Girdle Tree	Acres	23 acres	South Unit (23 acre) between South boundary of PU 11 and Co. Rd. 527.
2-053	Fell/Girdle Tree	Acres	43 acres	North Unit (43 acre) is adjacent to north corner of PU 11 and North of Co. Rd. 527.

^{1/} Location of Project Work will be within designated area, see Contract Area Map. Contractor is responsible for assessing tree size and felling direction for cost determination.

Objective: Improve wildlife habitat and ecosystem diversity by releasing long-lived conifer trees (hemlock, cedar or white pine) from competition; thereby, promoting growth and survival as a seed source to regenerate other conifers.

1. Boundaries of treatment areas are designated by PINK painted three-SLASH boundaries at eye level with a single stump mark facing into the treatment area EXCEPT along Gogebic County Road 527.
2. Trees designated to “fell” are located within units: North Unit (43 acre) is adjacent to north corner of PU 11 and North of Co. Rd. 527; South Unit (23 acre) is between South boundary of PU 11 and Co Rd. 527.
3. Along Gogebic County Road 527, all slash created by the Contractor within 25 feet of the cleared road corridor, shall be lopped and scattered to lie within 24 inches of ground for visual quality.
4. Only hand tools (includes chainsaws) may be used.
5. Trees may need to be limbed and/or bucked so the bole of tree lies in a horizontal resting position where all portions of the bole lie within two feet of the ground.
6. Trees shall be felled away (where possible) from long-lived conifer trees (defined as pine, hemlock, cedar) which may be located adjacent to the felled tree. Felling shall be done in a manner to avoid unnecessary damage to live or dead standing trees ≥ 5.0 ” dbh and to comply with **Contract Provision GT.3.2 – Protection of Residual Trees**. If the Contractor can safely fell the tree without causing excessive damage then they may do so, otherwise, girdling is an option using 2 horizontal cuts (chainsaw kerf width) a minimum of 2” apart, with depth of cuts defined as through the bark and cambium only (so as not to weaken the bole).
7. Stumps shall not exceed 14” in height for sawtimber-sized trees (12.0”+ dbh) or 10” in height for pulpwood-sized trees and smaller (≤ 11.99 ” dbh). The bole of the tree shall be completely severed from the stump.
8. All portions of felled trees (limbs and bucked sections) must be left where they fall but may be pushed aside if necessary to fell other trees.

Wildlife Habitat Project - Long-lived Conifer Release

Selection Criteria for Trees to Be Felled (the Contractor will select the cut trees based on these criteria, trees will not be designated with paint):

1. Determine the residual tree to release. Release trees are defined as a healthy, long-lived conifer (hemlock, cedar, or white pine) with enough crown to persist in the stand for the next 20+ years. Minimum live crown is defined as 30% of the total tree height.
2. Remove competing tree species that are a) in the crown (intermingled) of the “release tree”, b) within the drip-line of the crown, or c) overtopping the “release tree”.
Competing trees to cut (or girdle) in priority order include: Sugar Maple, Red Maple, Ash, Balsam Fir, Cherry, and Yellow Birch. Do not cut any trees species that are ≥ 20 inches dbh. Do not cut any Spruce tree species.
3. Cut all trees that meet the criteria in Item 2 above that are as tall, or taller, than the height to the bottom of the live crown of the “release tree”.
4. Do not release more than 75% of the crown of the “release tree” in order to protect the stability of the “release tree”. If 50% or more of the tree roots are exposed, do not release more than 50% of the crown of the “release tree”.
5. Avoid cutting trees on the west/southwest side of the “release tree”, where possible, to reduce scalding to hemlock and cedar species.
6. If there are two defined “release trees” within ten feet of each other, determine which tree will be the “release tree”: choose the a) healthier b) larger live crown, and c) larger (dbh & height) of the two trees to follow the above release criteria.

KAKABIKA STEWARDSHIP CONTRACT

Supplemental Specifications to Special Provision KT-GT.9# - Stewardship Projects

Aspen Site Preparation

**SAMPLE
CONTRACT**

Optional Projects:

Project Number *	Acres
3-008	9

A. Site Preparation for Aspen Natural Regeneration

- 1) All tree species over 4 feet tall and up to 5 inches DBH (except aspen up to 2 inches DBH, and HEMLOCK, WHITE CEDAR, ELM, PINE, TAMARACK, and BLACK CHERRY or ORANGE PAINT-BANDED TREES) shall be cut.
- 2) Small clumps of young balsam, hemlock or other conifer species should be maintained where they occur in the aspen clearcut after the Included Timber is cut. Retain two to three small clumps of low, dense conifers (about 100 square feet to 1000 square feet in size) per acre, as available, in a manner that still meets aspen regeneration objectives for the stand.
- 3) Shrubs are not required to be cut.
- 4) Annuals such as grasses, sedges, ferns, etc. are not required to be cut.

B. Felling Specifications

- 1) All trees required to be cut shall be cut below the lowest live limb except when prevented by natural obstacles.
- 2) Trees required to be cut shall be completely severed from the stump and lie flush to the ground. No tops shall be left hanging in standing trees.
- 3) The stump height of cut trees shall not exceed 6 inches above the ground level on the high side of the stump, or 4 inches above natural obstacles.
- 4) The cut angle of such stumps shall not exceed 20 degrees measured from a horizontal plane extending from the stump at ground level.
- 5) No boundary trees or Reserve Trees shall be cut or damaged. Boundary trees (KT-CT.3) are defined by 3 ORANGE paint slashes at eye level, with stump mark, for exterior boundaries or 2 ORANGE paint slashes at eye level, with stump mark, for interior boundaries. Reserve Trees (KT-CT.3#) are ringed with a single band of ORANGE paint at eye level, with stump mark.
- 6) All snags shall not be cut.

KAKABIKA STEWARDSHIP CONTRACT

Supplemental Specifications to Special Provision KT-GT.9# - Stewardship Projects

Aspen Site Preparation

SAMPLE
CONTRACT

C. Equipment Requirements.

- 1) The Contractor will provide cutting tools and equipment that are suitable for the job.
- 2) All power tools shall be equipped with Forest Service approved spark arrestors and in good working condition.
- 3) Heavy equipment (such as processors used in logging) are permitted to do this work when ground conditions support the equipment. Site preparation work may be performed concurrent with logging operations. (Reference Special Provision KT-GT.3.1.4# for operating restrictions)

D. Road Use and Maintenance.

- 1) All roads leading into each project area are to be kept open and free of any debris that may occur as a result of the work.
- 2) All roads used by the Contractor will comply with Special Provisions KT-FT.1.2# - Use of Roads by Contractor and KT-FT.3.1# - Road Maintenance Requirements of this Contract.

E. Slash Treatment.

- 1) All slash/felled stems that fall outside of the Project Area boundary shall be pulled back into the Project Area.
- 2) Within a strip 10 feet wide measured from the cleared edge of any numbered Forest Service Road, all slash resulting from the Contractor's site preparation activities shall be removed. Within an adjacent strip 10 feet in width, this slash shall be lopped and scattered to lie within 3 feet of the ground. All slash shall be removed from all road ditches or other drainage structures.

SAMPLE CONTRACT

109.06 Pricing of Adjustments.
109.07 Eliminated Work.
109.08 Progress Payments.
109.09 Final Payment.

SUPPLEMENTAL SPECIFICATION

Section 204-EXCAVATION AND EMBANKMENT

204.05 Conserved Topsoil.

Delete the subsection.

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 Embankment Construction.

Add the following:

When an embankment is to be placed across swampy ground and removal of unsuitable material or subgrade treatment is not required, the lower part of the embankment shall be constructed in a single layer to the minimum depth necessary to support construction equipment.

(c) Individual rock fragments and boulders.

Add the following:

(5) Such rocks and boulders shall be at least 6 inches below subgrade.

204.11 Compaction.

Add the following:

All embankments shall be placed and compacted by one or more of the following methods as SHOWN ON THE DRAWINGS and listed in the SCHEDULE OF ITEMS.

Add the following compaction method:

(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 Method (Roller Compaction). 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 Sloping, Shaping, and Finishing.

(a) Sloping.

Add the following:

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

(c) Shaping.

Add the following:

When excavation is measured on a station basis, excavating, placing of embankment, and shaping and compacting the roadway template shall include only those areas where cuts and fills are generally less than five feet in depth as measured from the finished shoulder grade to the top of the adjacent cut or toe of fill. These areas of station grading shall consist of light dozing or grading of such character that the excavation from backslopes, ditches, and roadbed shall be used in shaping the subgrade, shoulders, and adjacent fills.

When excavation is measured by the station (station grading) as designated in the SCHEDULE OF ITEMS, turnouts, side entrances, approaches, radii and T-turnarounds shall not be measured separately, but will be included as part of the station measurement along the construction centerline.

SAMPLE
CONTRACT

This work shall include all necessary scarifying, dozing, disking, moving, shaping, and compacting to develop the cross-sections SHOWN ON THE DRAWINGS. Loading and hauling will not be included or required in the work.

Compaction of the subgrade shall be accomplished with the construction and hauling equipment.

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. Bring low sections, holes, cracks, or depressions 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 ^(a)												
	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 ^(b))	±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.

SAMPLE
CONTRACT

204.16

(b) Unclassified borrow, select borrow, and select topping.

Add the following:

When borrow is designated as a pay item by the cubic yard in the SCHEDULE OF ITEMS, measurement will be in the final position.

SUPPLEMENTAL SPECIFICATION

Section 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.

**SAMPLE
CONTRACT**

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.

Add Table 249-2—Construction Tolerances:

Table 249-2 Construction tolerances.

	Tolerance Class ^(a)												
	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 ^(b))	±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.

SAMPLE CONTRACT

249.06 Erosion Control.

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

Measurement

249.07 Method.

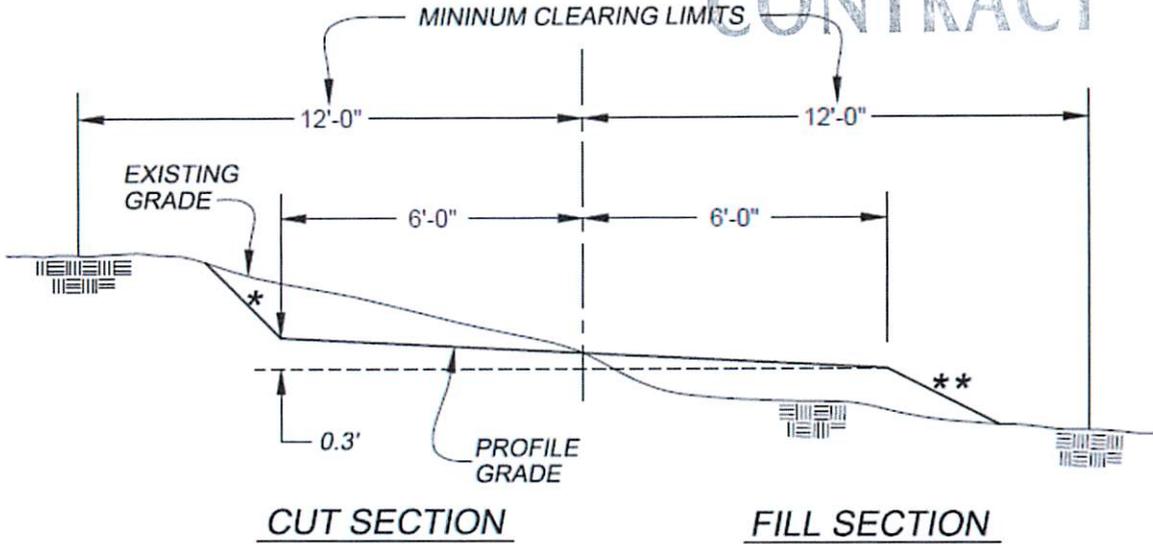
Measure the section 249 items listed in the schedule of items according to subsection 109.02

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

SAMPLE CONTRACT

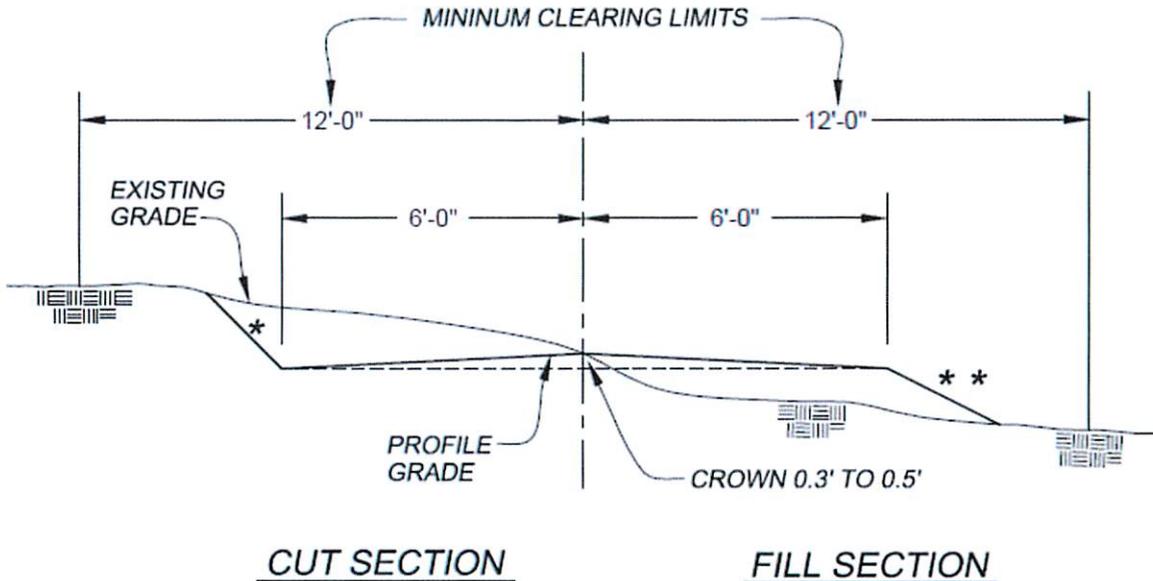


TYPICAL OUTSLOPE DETAIL

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



TYPICAL CROSS SECTION CROWN NO DITCHES

NOT TO SCALE