

PENNSYLVANIA GAME COMMISSION

NORTHCENTRAL REGION



Northcentral Region
1566 South RT 44 Hwy
Jersey Shore, PA 17740

September 22, 2023

REQUEST FOR BIDS
ROAD IMPROVEMENT PROJECT
PA GAME COMMISSION
NORTHCENTRAL REGION

Prospective Bidders:

The Northcentral Region of the Pennsylvania Game Commission (PGC) in conjunction with the Pennsylvania Department of Conservation and Natural Resources (DCNR) Moshannon State Forest District, is soliciting bids for road improvement work, whole tree and stump removal on Moshannon State Forest located in Clearfield County. The locations of the projects are depicted on the attached maps. Specifications are detailed in Attachment 1.

Bids are to be submitted electronically thru the Commonwealth's "PA Supplier Portal" system by **October 31, 2024**. If you have not registered as a vendor with the state, you must first complete this at www.pasupplierportal.state.pa.us prior to submitting an electronic bid. Any questions regarding this may be directed to Bobbi Mercer (bmercer@pa.gov) at 717 787-6594.

The bid shall be awarded on a **single contract basis**. The unit price shall include the cost of labor, materials, insurance, and all miscellaneous expenses necessary for the completion of the tasks. Prices bid shall be in dollar and cents only. Payment will be dispersed based on the amount of work completed as per the required specifications. **The work may begin after PO is received by the contractor and performance bond is provided to the PGC. Work must be completed by June 24, 2025. No extension of time will be awarded.**

The attached documents provide all necessary specifications, instructions, contact information, maps, etc.

Questions can be directed to:

Shawn Seeley
State Game Warden / Land Management Group Supervisor
(814) 505-9059
Email: shseeley@pa.gov

GENERAL SPECIFICATIONS
Fairview Savanna Improvement Project

I. SCOPE OF WORK:

- A. The Pennsylvania Game Commission (PGC), Northcentral Region, requires services for the felling/whole tree removal, stump grinding, and Mulching of **87 acres** on Moshannon State Forest, Clearfield County. Services shall include, but not be limited to, the furnishing of all labor, superintendence, tools, equipment, and seed for the entire project as per Attachment 1. ***All Purchase Orders require the contractor to provide the equipment, materials, labor, insurance, and all miscellaneous expenses to complete the operation.*****
- B. This project is being bid as one contract.**

Any questions concerning the technical aspects of this project should be directed to the Land Management Group Supervisor (LMGS):

Shawn Seeley
State Game Warden / Land Management Group Supervisor
Pa Game Commission, Northcentral Region
1566 South Rt. 44 HWY
Jersey Shore, PA 17740
(814) 505-9059
shseeley@pa.gov

II. PROJECT LOCATION:

Moshannon State Forest in Huston Twp. Clearfield County. Access to Project location is off Tyler Road. Coordinates: N 41.20811/ W -78.49385. See attached map.

III. CONTRACT TASKS:

- A. The contractor will supply all necessary equipment and labor for felling and removing of all unmarked trees and stumps within the project boundary.**

Contractor shall comply with Attachment 1, Fairview Savanna Project

IV. SITE INSPECTION AND ASSISTANCE:

The PGC and DCNR will **not** conduct a tour of the work site. **PGC recommends potential operators visit project site location.** Coordinates are listed under Section II.

V. CONTRACT REQUIREMENTS:

A. The project will begin within 10 days of the contractor's receipt of the Purchase Order that includes a notice to proceed (weather permitting). All work must be completed by June 24,2025. No extensions will be granted.

B. Bid Package Line Items

- i. Project bond-\$5,000
 - 1. Bid once
- ii. Felling and whole tree removal of all unmarked trees-87 acres
 - 1. Bid price per acre
- iii. Mulching of all saplings 0"-5"-87 acres
 - 1. Bid price per acre
- iv. Stump grinding all stumps 6" and greater-87 acres
 - 1. Bid price per acre
- v. Final grading-87 acres
 - 1. Bid per acre
- vi. Ag Lime and spreading entire project area at a rate of 2 tons/acre(174 tons)-87 acres
 - 1. Bid price per acre
- vii. Seeding and E&S Controls-One item for project areas
 - 1. Bid one price for all

- 1) The contractor agrees to comply with all attachments. The Commission reserves the right to reject any or all bids.
- 2) The Operator is obligated to furnish equipment, materials, support equipment, and personnel necessary to complete the project as specified. The Operator maintains responsibility for the entire project even if another organization/subcontractor is providing part of the equipment and/or personnel.
- 3) As further guarantee of faithful performance of the conditions set forth in this Contract, the successful bidder hereby agrees to furnish the PGC with a cashier's, treasurer's, or certified bank check, payable to the "Pennsylvania Game Commission", **as bond in the amount of \$5,000.00**, within 7 days of receiving notice and prior to commencing work on the SGL. The check shall be mailed to the address stated above in Section 1. The contractor agrees that said deposit, upon failure on the part of the contractor to fulfill all and singular the conditions and requirements herein set forth or made a part hereof, shall be retained by the Commission to be applied to satisfy the contractors obligations assumed hereunder.
- 4) Failure to comply with any of the terms or conditions of the Contract may result in cancellation of the agreement.
- 5) The contractor shall comply with all State Forest Lands regulations.
- 6) An emergency spill kit must be available on site at all times during active operations on the project site.

VI. INSURANCE REQUIREMENTS:

- A.** The contractor will provide Worker's Compensation insurance sufficient to cover all the employees of contractor working to fulfill this contract.
- B.** Comprehensive General Liability Insurance, including bodily injury and property damage insurance, to protect the Commonwealth and the contractor from claims arising out of the performance of the contract. The amount of Bodily Injury Insurance shall not be less than \$300,000.00 for injury to or death of persons per occurrence. The amount of Property Damage Insurance shall not be less than \$300,000.00 per occurrence.

Such policies shall name the Commonwealth as an additional insured. Prior to the commencement of work under this contract, the contractor must provide the Commonwealth with current Certificates of Insurance. These Certificates shall contain a provision that coverage afforded under the policy shall not be canceled or changed until at least thirty (30) days prior written notice has been given to the Commonwealth.

HOLD HARMLESS: The contractor shall be responsible for and agrees to indemnify and hold harmless the Commonwealth from and against damages to property or injuries (including death) to any persons and other losses, damages, expenses, claims, demands, suits, and actions by any party against the Commonwealth.

VII. BID AWARD:

Bidders must offer prices for all items as listed in the electronic bid form.

The bid will be awarded to the bidder with the lowest total price for the project. One purchase order will be awarded for the project.

Bids are to be submitted electronically thru the Commonwealth's "PA Supplier Portal" system by **October 31, 2024 @ 2:30 PM** If you have not registered as a vendor with the state, you must first complete this at www.pasupplierportal.state.pa.us prior to submitting an electronic bid. Any questions regarding this may be directed to Bobbi Mercer (bmercer@pa.gov) at 717-787-6594.

The Commission reserves the right to reject any and all bids and to choose the bid that, in its sole opinion, best meet the needs of this project.

ALL VENDORS WHO CONDUCT BUSINESS WITH THE PENNSYLVANIA GAME COMMISSION MUST HAVE A VENDOR NUMBER ASSIGNED TO THEM IN ORDER TO RECEIVE PAYMENT FROM THE COMMONWEALTH.

Vendors may access the website www.pasupplierportal.state.pa.us or phone (877) 435-7363 or (717) 346-2676 or email ra-srmhelp@state.pa.us for assistance to register as a new vendor or, if you are an existing vendor, to change a main or remit to address. This is a Dept of General

services (DGS) website, so you need to contact them directly if you have any problems with the website.

VIII. CONTRACT TERM:

The contract term shall commence upon receipt of required bond, certificate of insurance, signed General Specifications page, and terminate **June 24, 2025**. No extensions will be granted.

IX. PAYMENT TERMS:

Payment for contract: The price shall include all labor, equipment, tools, insurance, and all items necessary for the completion of the project.

The contractor shall be paid on a reimbursement basis after the final inspection verifies work was successfully completed to the terms and specifications outlined in the contract.

ATTACHEMNTS:

Attachment 1 – Project General Specifications

Attachment 2 – Tree Clearing Map

Attachment 3 – Curwensville Conservation Mix

Attachment 4 – DCNR E&S Plan

Attachment 1:

Fairview Savanna Project

1. GENERAL SPECIFICATIONS:

A. Mulching

- i. **All** sapling stage tree species **0"-5" DBH** must **FIRST** be mulched in place with a mulching type of attachment. Machine operating attachment must be greater than 200 HP. Chip size must **not** exceed **4"** in length or width.

B. Harvesting and Removal of Designated Trees

- i. Block Boundaries are indicated by a **Blue Two Stripe** style marking facing into the designated cutting block.
- ii. **All oak species greater than 10.0" DBH** and **black cherry greater than 12.0" DBH** are to be saved and **remain uncut** within the designated cutting block regardless of Blue Dot paint. (Ignore Blue Dots) All trees within island areas indicated by **ORANGE BANDS** are designated to remain uncut and left in place undisturbed.
- iii. **Whole tree harvesting** and removal of all above-ground tree products is **mandatory** except for saplings less than 5" DBH which are to be mulched in place. All pole wood, and sawtimber trees not designated as described as a save tree must be cut, removed in entirety from the designated cutting block, and marketed or otherwise utilized.

C. Stump Grinding

- i. **All designated trees to be cut must have stumps ground** to the following specifications. All designated trees to be cut greater than 6" diameter at ground level must have residual stump ground down to greater than 3" below the surrounding natural soil surface elevation contour. **Stump grinding machine must be greater than 300 HP.**

D. Final Mulching and Grading

- i. **All harvested areas** must have a final grading to smooth the surface to the original land contour. All chip debris must be less than 4" in size left on site from the mulching process. All stumps must be ground to 3" below the soil surface. **Machine operating attachment must be greater than 200 HP.**

E. Ag Lime Spreading

- i. Upon completion of the final grading of the entire project area, ag lime shall be provided by the contractor, and spread, at a rate of 2 ton/acre over the entire project area (approximately 87 acres).

F. Erosion and Sediment Control

- i. Standard DCNR Bureau of Forestry timber sale erosion and sedimentation control measures must be followed. See **Attachment 4**.
- ii. Any area requiring seeding and mulch shall use the seed type in **Attachment 3** and straw mulch.
- iii. **Rutting greater than 6" deep is prohibited.** This depth is to be measured downward from the edge of the elevation of the natural surface of the adjacent land.
- iv. **Wet weather cutting and skidding is prohibited.** The PGC or DCNR designee has the authority to decide as to the suitability of the weather conditions, environmental concerns, and potential shutdown period.

G. All existing water bars and turnouts will be cleaned out and opened.

H. Safety: The Buyer, his employees and sub-contractors are required to perform all logging operations in a safe manner as required by applicable laws and regulations. The Department expects the Buyer to ensure that logging crewmembers dress in protective attire and perform their duties with equipment in accordance with standards established by the logging industry and the Occupational Safety and Health Administration (OSHA).

I. Logger Certification: On-site crew leaders for all logging crews working on this project must be trained under the Pennsylvania Sustainable Forestry Initiative. Information relating to this training may be found on the Internet at www.sfiopfa.org. Each crew leader operating on the sale must present a valid PA SFI Core Level Training card as proof of training to the LMGS prior to beginning logging operations on the sale. Comparable training from other states may be accepted in lieu of Pennsylvania Sustainable Forestry Initiative training.

J. All work, including site cleanup, must be completed by the expiration date of the project.

K. The Pennsylvania Game Commission and The Department of Conservation and Natural Resources reserves the right to inspect/evaluate the equipment which will be used to complete the contract. If in the opinion of the LMGS the equipment is not adequate to meet the specifications of the contract, the contractor will have two (2) options: Option 1 is to secure and utilize other equipment acceptable to the LMGS for the project. Option 2 is to decline the contract. If the contractor does not have adequate equipment to complete the project and does not obtain satisfactory equipment, the contract will be terminated. The decision of the LMGS as it relates to proper equipment and its ability to complete the work will be final.

L. Hauling Road Usage

- i. All State Forest Roads must be kept passable at all times for use by passenger automobiles except during periods when roads are covered with ice or snow or

following other extreme weather-related events. The Department does not guarantee the successful bidder the use of roads maintained by the Pennsylvania Department of Transportation (PENNDOT), townships, or other agencies or owners. Buyer must contact the PENNDOT posted highway coordinator and officials of other said roads for possible weight or other restrictions that would prevent use.

- ii. Plowing of State Forest Roads is prohibited unless authorized in writing by the district forester. With the following exceptions the successful bidder may use all State Forest Roads that lead into and/or within the project area except:
 - i. Mud Run Rd. is closed to stone trucks and heavy hauling
 - ii. All other State Forest Roads are closed from March 1 – May 1 to stone trucks and heavy hauling unless authorized in writing by the District Forester, DCNR Designee, or LMGS.
- iii. Damage to existing infrastructure (roads, trails, food plots, etc.), private or public, will be the responsibility of the contractor to repair, at their expense, to the pre-existing or better condition. The need for repair will be determined by DCNR & the LMGS prior to the conclusion of the project.

- M. The contractor is responsible for contacting PA One Call (8-1-1) at least three (3) business days prior to any earth moving activities or hauling to ensure all utility lines are clearly identified. For more information, visit www.pa1call.org. Failure to provide adequate lead time will delay the start of the project.
- N. All DCNR gates are to be kept closed at all times, except when the contractor is present on the site.
- O. The following will be “No-Work Days” during the contract period:
 - i. The opening day and on all Saturdays during small game season.
 - ii. The first two days and all Saturdays and Sundays during rifle deer season
 - iii. The first two days of rifle bear season
- P. Attachment 1 contains maps that provides location and specific site information for the project areas.
- Q. The contractor shall comply with all DCNR Lands regulations.
- R. Contractors will not remove anything from the property including flora, fauna, or artifacts.
- S. The contractor will remove all trash and garbage, personal and otherwise, generated from the work performed. Burning is not permitted on this project.

T. Oil Spills:

- i. An emergency spill kit, for hydraulic fluids, lubricating oils, fuels, and other environmentally hazardous fluids large enough for equipment being used, will be available at all times during active operations on the project site. Spill kits must include pads and containment socks that are rated to absorb at least 8 gallons of petroleum-based fluids and containers (or heavy-duty bags) capable of holding an equivalent amount of contaminated soil and other absorbents. A shovel should also be available on-site. Pads must be capable of absorbing fluids in water as well as on the ground. Any leaks or spills shall be contained immediately. Soil and absorbents shall be properly disposed of through a landfill approved by the Department of Environmental Protection (DEP). All leaks that exceed 5 gallons in size or a leak of any size into water must be reported immediately to DEP and to the LMGS. 911 or DEP regional offices may be called directly 24-hours per day to report the spill to DEP: Northwest: (800) 373-3398 Northcentral: (570) 327-3636 Northeast: (570) 826-2511 Southwest: (412) 442-4000 Southcentral: (877) 333-1904 Southeast: (484) 250-5900 DEP should provide over the phone advice for smaller spills and for larger spills they may send someone to aid in directing the most cost-effective clean up and disposal of the oil spill.
- ii. Excessive Oil Leakage- Equipment must be maintained to minimize excessive fluid leakage. The LMGS may require equipment with excessive fluid leakage to be removed from the site and oil soiled areas to be excavated and properly disposed.
- iii. Oil drained from equipment shall be placed in suitable containers and disposed of as directed by the LMGS.
- iv. Equipment Parking- Equipment may not be parked overnight within 100 feet of sinkholes, streams, intermittent streams with a defined bed and banks, and any other water body where fluids can leak into them.

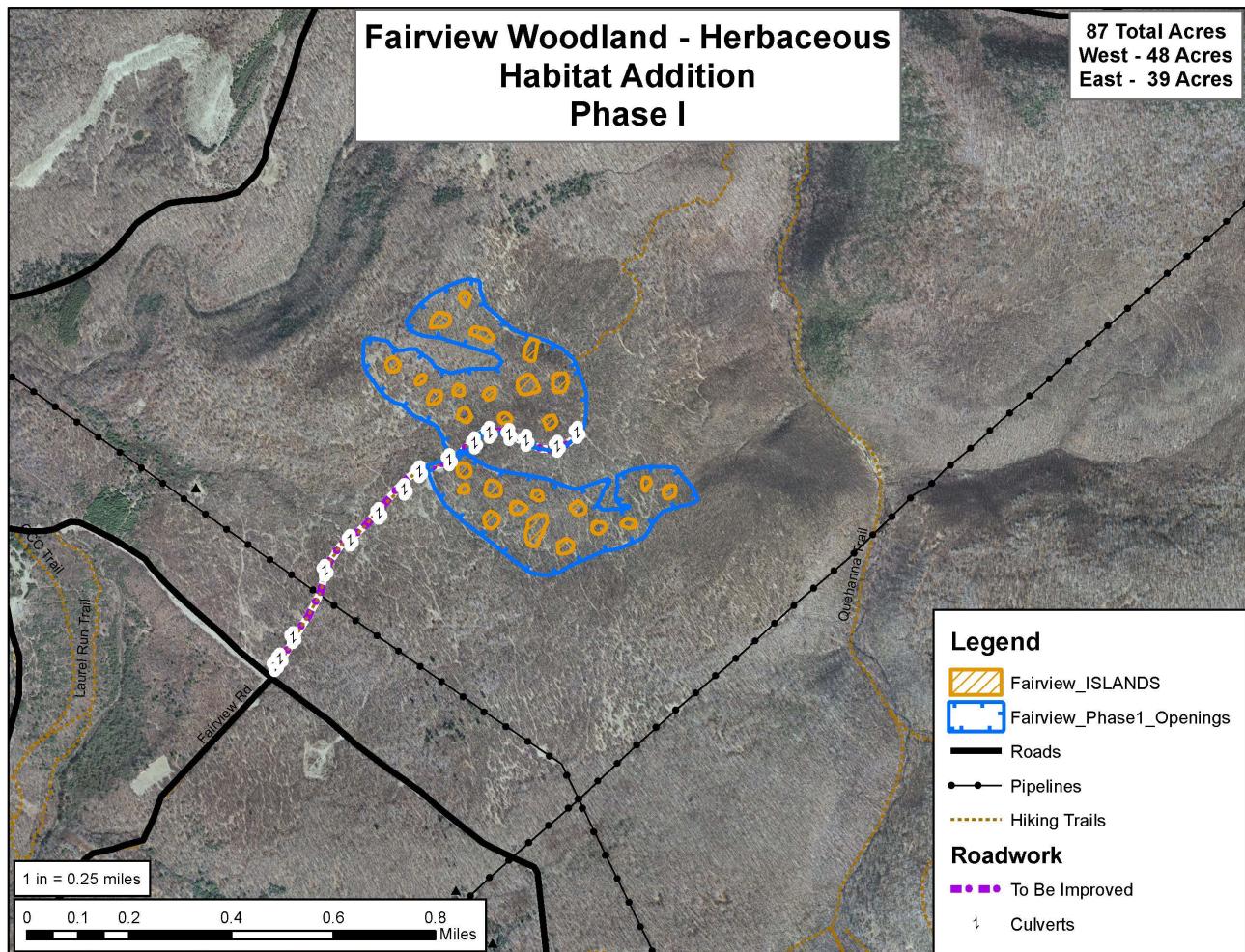
- U.** The contractor will notify the LMGS three days (72 hours) prior to beginning and completion of the project work. The contractor may work at times other than the schedule of the LMGS.
- V.** The LMGS will inspect the work and may direct contractor to rework certain road areas or other tasks to meet required specifications. Inspection of the project will occur during normal working hours.
- W.** Final inspection of the project will be conducted by the LMGS. The contractor may be present at the final inspection. Upon successful completion of the required work, payment will be released to the contractor
- X.** Failure to meet and follow the terms and conditions of the project will be grounds to terminate the contract and forfeiture of the bond to the Pennsylvania Game Commission.

Y. Forest Fire Prevention:

- i. Buyer shall independently and in cooperation with the Department take all reasonable and practicable action to prevent and extinguish forest fires on or in the vicinity of the sale area and should require his employees, contractors, and employees of contractors to do likewise.
- ii. During periods of abnormal forest fire danger, LMGS may suspend all or part of operations on all or part of the sale area until the forest fire danger subsides. Suspensions and lifting of suspensions will be confirmed immediately in writing by the LMGS.
- iii. Operator must remove regularly all brush, twigs, leaves and other flammable material which accumulates around the engine, gearboxes and transmission pan, of rubber-tired skidders, stationary engines including chip harvesters, and crawler tractors.
- iv. All equipment must be parked at the end of each day's operation in areas from which all brush, tops and other flammable debris have been removed, within a radius of 25 feet of the equipment.
- v. A fire extinguisher for Class B and C fires must be carried at all times on all rubber-tired skidders, logging tractors, felling machines, mulching equipment, stump grinders and chippers.

Z. GREEN CERTIFICATION STATEMENT: # SCS-FM/COC-00011N FSC 100% and NSF-SFI-FM-C0435749 - SFI 100% Certified Forest Content indicate that the timber in this project comes from a forest that is well-managed according to strict environmental, social and economic standards. This forest has been independently inspected and evaluated according to the principles and criteria for forest management agreed and approved by the Forest Stewardship Council® and the Sustainable Forestry Initiative®.

Attachment 2:
Tree Felling Project Location Map



Attachment 3:
Curwensville Conservation Mix

Species	Percentage
Annual Ryegrass	20%
Perrenial Ryegrass	18%
Orchardgrass	17%
Alsike Clover	15%
Climax Timothy	15%
Birdsfoot Trefoil	10%
White Clover	5%
Total	100%

Attachment 4

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

SILVICULTURE SECTION

EROSION AND SEDIMENT CONTROL PLAN

The Erosion and Sediment Control Plan will be included with all Tree Estimate Timber Stumpage Sale (FM-T-7) and District Timber Sale (FM-T-4) Contracts. State law requires a copy of the erosion and sedimentation plan be on site at all times for all timber harvesting operations. Any timber sale with more than 25 acres of haul road, skid trail and landing construction or disturbance must have the appropriate Title 25 Pa. Chapter 102 permit. Buyers must comply with the plan and take any additional precautions that are necessary in the opinion of the district forester to prevent soil erosion and sedimentation during the operation of this sale. Should soil erosion and sedimentation occur on state or adjacent private lands from the operation of this sale, the buyer, at his own expense, must correct the conditions immediately to the satisfaction of the Department. All sale operations must conform with erosion and sediment control regulations. The following are the standard requirements for all timber sales conducted on state land. The forester responsible for the sale must adapt this general plan for any special or unusual circumstances that occur in a timber sale. The requirements to satisfy these special or unusual circumstances are found in the prospectus.

SPECIAL REQUIREMENTS NO. 8 EROSION AND SEDIMENT CONTROL PLAN

In accordance with Rules and Regulations of Code Chapter 102. Supplement to Tree Estimate Timber Stumpage Sale (FM-T-7). District Timber Sale (FM-T-4) Contracts and Forest Product Permit (FM-T-15). The buyer must comply with Paragraphs III, A through G below, and take any additional precautions necessary in the opinion of the district forester to prevent soil erosion and sedimentation during the operation of this sale. Should soil erosion and sedimentation occur on State or private lands from the operation of this sale, the buyer, at his expense, must correct said conditions immediately to the satisfaction of the Department.

I. LOGGING

Hauling or skidding or placing fills or other obstructions in live or intermittent streams is prohibited. Skidding across live or intermittent streams is prohibited except over bridges or culverts that are approved according with Chapter 105 regulations and by the district forester. Hauling across live or intermittent streams is permissible over bridges, culverts or fords that are approved according to Chapter 105 regulations and by the district forester. Fords are prohibited on all sale areas that are located on the watershed of a municipality, institution or domestic water supply.

II. DISPOSAL OF TOPS, SLASH AND OTHER LOGGING DEBRIS

No tops or slash shall be left on any drainage ditch leading from a culvert, water bar, intercepting dip or break in berm of the road, or within 25 feet of a stream, dam, or lake. The exception to this is if in the opinion of the district forester, the tops and slash are needed to control an existing erosion problem.

III. HAUL AND SKID ROADS AND SKID TRAILS

The buyer, prior to the start of logging on the sale area, shall construct or improve main haul roads and/or secondary haul roads, including the installation of bridges, culverts at stream crossings and fords as marked on the ground and show on sketch (Attachment A of the prospectus.) The district forester must approve

additional roads requested by the buyer. All haul roads, spur haul roads, skid roads and skid trails required for the operation of this sale shall be constructed or improved, maintained and abandoned by the buyer at his expense. The following specifications must be followed under the direction of the district forest.

III. HAUL AND SKID ROADS AND SKID TRAILS (Continued)

A. Main Haul Road Specifications

1. Location – Main haul roads shall be constructed by the buyer prior to the start of logging operations as delineated on the sketch of the sale or as designated on the ground
2. Clearing – Clearing shall be wide enough to allow the construction of a road having a minimum width of 24 feet including ditches. Where turnouts are required, additional clearing may be necessary.
3. Grading – Roads shall be in-sloped or crowned as directed. Cut slopes may be as steep as the soil formation or material will allow. Undercutting of slopes is prohibited.
4. Drainage – Open top culverts, underground culverts (e.g., metal, plastic, concrete, wood), intercepting dips of the size and type specified. The devices shall be installed or constructed by the buyer at locations designated. When any cross drainage or intercepting dip is less than 25 feet from a stream crossing on a public or domestic watershed, the buyer shall install a sump at the discharge at the discharge end of dip to receive the water before it is discharged. The berm on the outside of the road shall be broken at strategic locations marked on the ground to allow run-off to flow away from the road. Such breaks may be made with a bulldozer. For soil washes at the discharge end of culverts, intercepting dips, water bars, or breaks in the berm of the road, a floor of 2-inch plank or hand-placed rock shall be installed.
5. Culverts, Fords, and Bridges – All the follow stream crossings must be installed and maintained as specified in the Chapter 105 permit approved for each structure. The buyer shall install specified culverts where roads cross intermittent or perennial streams. Culverts shall be placed on the stream bottom and shall be of sufficient length to extend beyond the toe of road embankment. The locations of approved fords are shown on the sketch of the sale area (Attachment A to the prospectus). Fords must be at right angle to stream and must have solid approaches. A heavy application of clean stone or shale for minimum distance of 100 feet on each side of the stream may be required to provide a solid approaches. Bridges may be required when culverts or fords are not feasible.
6. Maintenance – Drainage structures shall be kept open and functioning at all times. Stone or shale shall be spread on intercepting dips that are graded to allow run-off to drain into ditches and other structures. All bridges, drain pipes and culverts installed by buyer shall be removed unless otherwise specified in the contract or the buyer is notified in writing to leave certain installations in place. All drainage ways shall be opened and deepened so as to handle major storm water events. The buyer may be required to install additional earth or log water bars or scatter brush between water bars. The above provisions shall be carried out as each haul road or portion is abandoned prior to the completion of logging operations. All haul roads must be retired with an approved seed mixture upon retirement unless otherwise directed.
7. Retirement or Abandonment – The surface of the road shall be graded to remove all wheel ruts. Fenders and high shoulders shall be graded to allow run-off to drain into ditches and other structures. All bridges, drain pipes and culverts installed by buyer shall be removed unless otherwise specified in the contract or the buyer is noticed in writing to leave certain installations in place. Cross drains and culverts shall be replaced by earthen or log water bars as directed. All drainage ways shall be opened and deepened so as to handle major storm water events. The buyer may be required to install additional earth or log water bars or scatter brush between water bars. The above provisions shall be carried out as each haul road or portion is abandoned prior to completion of logging operations. All haul roads must be retired with an approved seed mixture upon retirement unless otherwise directed.

B. Secondary Haul Road Specifications

1. Location – Secondary haul roads shall be constructed by the buyer prior to the start of logging operations as delineated on the sketch of the sale or as designated on the ground.
2. Clearing – Clearing shall be wide enough to allow the construction of a road having a minimum width of 18 feet including ditches. Where turnouts are required, additional clearing may be necessary.
3. All other specifications described under Main Haul Road Specifications Paragraph A, 3 through 7 shall apply.

III. HAUL AND SKID ROADS AND SKID TRAILS (Continued)

- C. Spur Haul Road Specifications
 1. Location – Spur Roads will be located on the ground by the administering forester in company with the buyer. The buyer, at his expense, will construct these roads as the timber operations progress.
 2. Clearing – Clearing for right-of-way and roadway will be only enough to allow safe and unhindered movement of trucks and other equipment.
 3. All other specifications described under Main Haul Road Specifications Paragraph A, 3 through 7 shall apply.
- D. Skid Road Specifications
 1. Location – Skid roads will be located on the ground by the administering forester in company with the buyer. The buyer, at his expense, will construct these roads as the timer operations progress. Skidding across live or intermittent streams is prohibited, except over approved culverts or bridges.
 2. Clearing – Forester will specify the width of clearing to accommodate the type of skidding equipment to be used.
 3. All other specifications described under Main Haul Road Specifications Paragraph A, 3 through 7 shall apply.
- E. Skid Trail Specifications
 1. Location – The location of skid trails shall be carefully selected by the buyer. Any skid trail that does not meet the approval of the district forester shall be relocated immediately as directed. Skid trails shall be wide enough to accommodate the type of equipment used. Grades shall be kept as low as possible. Skidding across live or intermittent streams is prohibited, except over approved culverts or bridges.
 2. Drainage – Water turnouts shall be constructed and maintained as necessary.
 3. Maintenance and Abandonment – Skid trails shall be maintained and abandoned to keep water off the trails and prevent washing. Where required the buyer shall scatter brush on trails to prevent washing. The buyer shall repair immediately any damage to State Forest roads, including camp access roads as a result of his logging activities.
- F. The district forester may notify the buyer in writing to temporarily discontinue use of any roads and trails when in his opinion such action is necessary to prevent serious damage.
- G. The buyer must make frequent inspections of haul and skid roads and skid trails and complete the essential maintenance as required by Paragraph III, A hereof immediately to the satisfaction of the district forester, when in the opinion of the district forester conditions are satisfactory for completion of said maintenance. Commencing November 1st, and ending May 1st, said inspections must be made as necessary and essential maintenance completed immediately in anticipation of freezing temperatures and/or snowfall. Serious soil erosion and stream pollution could result before next spring if said maintenance is not completed before freezing temperatures make it impossible. The buyer should make every effort to insure roads and trails are in a condition that allows ease of maintenance.
- H. Failure of buyer to complete said maintenance immediately as required above, when in the opinion of district forester conditions are satisfactory for completion of said maintenance, will result in suspension of sale operations by the district forester until said maintenance has been completed to his satisfaction. The buyer must notify the district forester immediately when said maintenance has been completed.
- I. Should the buyer fail to complete said maintenance within 48 hours following suspension of operations, when in the opinion of the district forester conditions were satisfactory for completion of said maintenance, the buyer must make a payment of \$200.00 promptly to the district forester by certified or cashier's check payable to the Commonwealth of Pennsylvania. The district forester will refer the matter to the Sivilculture Section for further action, which could result in the termination of sale and appropriation of performance deposit.
- J. Construction and/or improvement of main haul roads, spur roads and skid roads must be generally started during dry, unfrozen soil conditions and must not be completed during wet or frozen conditions, unless otherwise authorized in writing by the district forester.

IV. SUSPENSION OF OPERATIONS AND TERMINATION OF CONTRACT

All or any part of the logging operations, including the removal of felled timber, may be suspended upon written notice by the district forester if any condition or requirement contained in this plan is disregarded by the buyer. Failure of the buyer to comply with any one of said conditions or requirements shall be sufficient cause for the termination of this contract. In the event of such termination, the buyer shall be liable for all damages sustained by the Department arising from buyers operations.

V. NOTIFICATION BY BUYER OF SUSPENSION OF SALE OPERATIONS FOR THE WINTER

The buyer must notify the district forester in writing when he discontinues operations of this sale for the winter, also when he desires to resume operations of sale the following spring. The buyer must not resume operations until he has received a written reply from the district forester that haul and skid roads and skid trails are in satisfactory condition to resume operations.

VI. SEEDING SALE AREA

Seeding specifications are found in the "Seeding Sale Area" clause of the contract for this sale.

EXHIBIT B

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF CONSERVATION OF NATURAL RESOURCES

DIVISION OF STATE FOREST MANAGEMENT

HAUL ROADS

CLASSIFICATIONS

1. Main Haul Roads

Main haul roads are primarily for access to a timber sale area or where the volume to be cut requires a road which will bear traffic during most of the year with minimum wear and tear on equipment or where future use is planned to access additional sales or compartments.

2. Secondary Haul Roads

Secondary haul roads are roads which provide access to State Forest areas from which limited timber volume will be removed, where construction of main haul roads is unnecessary or impractical, or where no future use of the road is planned.

3. Spur Haul Roads

Spur haul roads are roads that are generally extensions of other haul roads and are designed for light traffic and limited use on a specific timber sale area. Spur haul roads which lead into the main haul road are for use over a short period of time and over which a minimum volume will be hauled.

4. Skid Roads

Skid roads are for primary removal of timber products from a portion of the sale area to the landing or yarding areas. They must bear heavy use in all types of weather and must be located and constructed prior to start of cutting in each block.

5. Skid Trails

Skid trails are used to skid logs from the stump to the main skid road and other destinations and are selected as logging progresses. Trails receive limited use and generally require no construction.

MAIN HAUL ROAD SPECIFICATIONS

1. Location

Main haul roads, including all drainage facilities, will be located and designated on the ground by the District Forester and will be shown on the sketch of the area. Adequate sediment filtration strips as specified by the Timber Management Manual must be left adjacent to all watercourses.

2. Clearing

Clearing shall be wide enough to allow the construction of a road having a minimum width of 18 feet including ditches (a 16 feet running surface). Where turnouts are required, additional width will be cleared as designated by Forester. The right-of-way width must be 24 feet minimum to allow proper drying action by the wind and sun. Tree stumps in the right-of-way may be pushed out with a bulldozer. All stumps, roots, and other debris must be moved back beyond cleared right-of-way. Slash resulting from clearing of right-of-way for roadwork shall be immediately lopped and scattered sufficiently.

3. Road Width

Main haul roads will have a sixteen (16) foot wide running surface. This does not include ditches.

4. Grading

Main haul road shall either be insloped, outsloped, or crowned as specified by District Forester. See sketch B. Ditches must be constructed on all roads except- where roads cross rock formations. Banks and cut slopes may be as steep as the soil formation or material will allow, as determined by District Forester during construction. Undercutting of slopes is prohibited. Rock and surfacing material is sometimes available from State Forest land and in those cases may be used without charges. Such material will be available only from locations designated by the District Forester.

MAIN HAUL ROAD SPECIFICATIONS (continued)

5. Drainage

Broad based dips, underground culverts and intercepting dips (Sketch D) of sizes and types specified by the District Forester will be installed or constructed at locations designated by the District Forester. When any cross drainage or intercepting dip is within 25 feet of stream crossing on a general watershed or within 50 feet of a stream crossing on a public or private watershed, Buyer shall install a sedimentation basin at the discharge end to receive water before it is discharged into the woods.

Berm on the outside of the road shall be broken at strategic locations to allow drainage of the road surface. Such breaks maybe be with a bulldozer and will be located by the District Forester. If soil washes at the discharge end of culverts, intercepting dips, water bars, or breaks in the berm, a floor of two inch plank or hand placed rock shall be provided. At discharge ends, tail ditches will be of sufficient length to insure drainage does not back up to road surface.

6. Culverts, Bridges, and Fords

Culverts, as specified by the District Forester and approved according to Chapter 105 regulations shall be placed in the bottom on the stream channel and covered with appropriate fill material. Culvert ends shall extend several feet beyond the toe of road embankment. All culverts must be installed in accordance with the provisions of the Encroachment Permit.

Bridges, as specified by the District Forester and approved according to Chapter 105 regulations must be installed where roads cross intermittent or live stream channels in accordance with the provisions of the Encroachment Permit. Any bridge design must be approved by the District Forester prior to construction.

Fords, as specified by the District Forester and approved accordance to Chapter 105 regulations are permissible only when it is not feasible to install a bridge or culvert. Fords must have solid bottoms and approaches that contain rock, stone, timber, or gravel. Fords must always be located at right angles to the stream channel. SKIDDING ACROSS FORDS IS PROHIBITED.

7. Maintenance

Drainage structures shall be kept open and functioning at all times. Gravel or shale shall be spread on intercepting dips which become subject to erosion. Road surfaces shall be maintained so as to allow water to be drained from the roadway. Loose bounders and slide material shall be removed from roadway and side ditches.

8. Gates

All main haul roads must be gated with an approval type of gate as shown on the attached gate specifications. When main haul roads are retired, they will remain gated or otherwise closed to travel.

9. Permits

All terms, conditions and specifications of Highway Occupancy Permits, Encroachment Permits and Erosion and Sedimentation Control Plans applicable to this road will be followed.

10. Retirement

Roadways should be graded to eliminate any wheel ruts and to make certain that water runs off in the ditches. Fenders and high outside shoulders shall be removed. Prior to termination of the contract, the Buyer must remove all bridges, culverts and other structures which he installed. However, the District Forester may require that certain said structures be left in place and must notify the Buyer accordingly in writing.

Cross drains and culverts are to be replaced by earth or log water bars. Additional water bars are to be installed when they are necessary to prevent erosion and allow grass to become established. All drainage ways are to be opened and deepened to carry the water off and away from the road. All road and disturbed areas will be seeded as specified by the District Forester.

SECONDARY HAUL ROAD SPECIFICATIONS

All specifications for main haul roads will apply to secondary haul roads with the following exceptions:

1. Clearing

The road right of way clearing will be wide enough to permit construction of the secondary haul road. Where a wider width is required, it will be specified by the District Forester.

2. Road Width

Secondary haul roads will have at least a twelve (12) foot running surface. Where a wider road is required, it will be specified by the District Forester.

3. Gates

A gate will not be required if the secondary haul road intersects a gated or otherwise barricaded road.

SPUR HAUL ROAD SPECIFICATIONS

All specifications for secondary haul roads will apply to spur roads with the following exceptions:

1. Location

The location of spur haul roads will be approved by the District Forester in advance of, or in the company of the Buyer or his representative. The location is not normally shown on the sketch of the sale area.

2. Width

Spur haul roads will be wide enough to allow the safe movement of trucks and equipment.

3. Gates

Gates will not normally be required for spur haul roads.

SKID ROAD AND TRAIL SPECIFICATIONS

Specifications applicable to spur haul roads will apply to skid roads and skid trails with the following exceptions

1. Location

The location of skid roads and trails must be satisfactory with the District Forester. Grades must be kept as low as practical

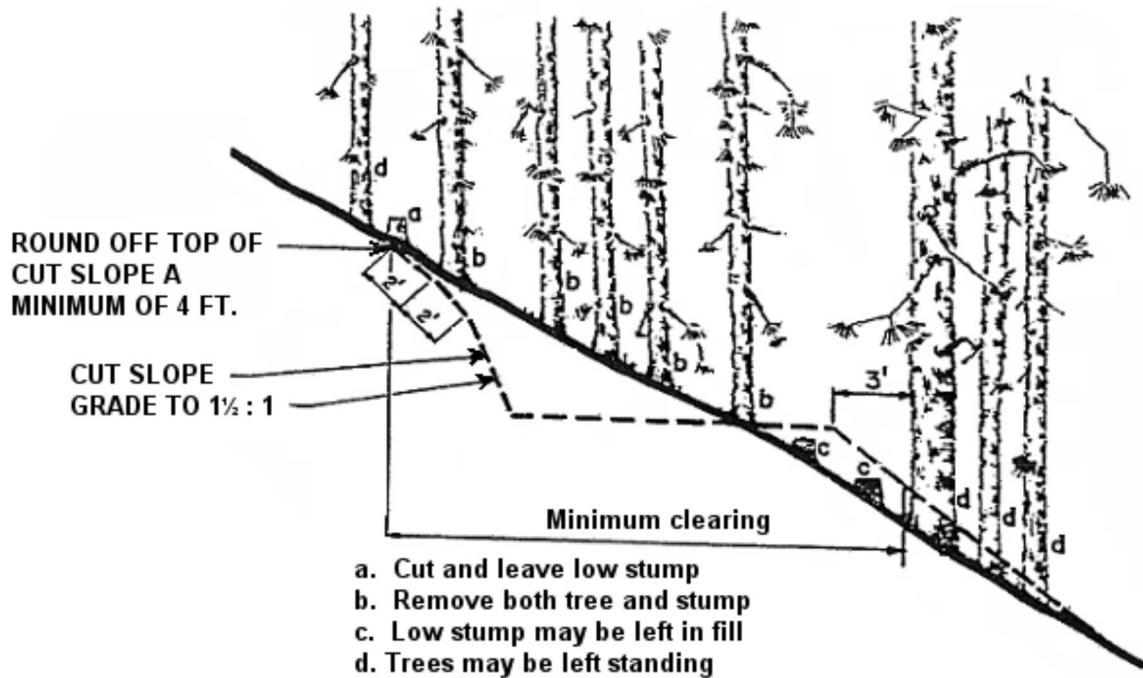
2. Width

The District Forester will specify the width of clearing permitted and will adjust same to accommodate the type of equipment being used. The width of skid roads and trails will be no wider than necessary. In most cases right-of-way clearing will not be necessary.

3. Maintenance and Retirement

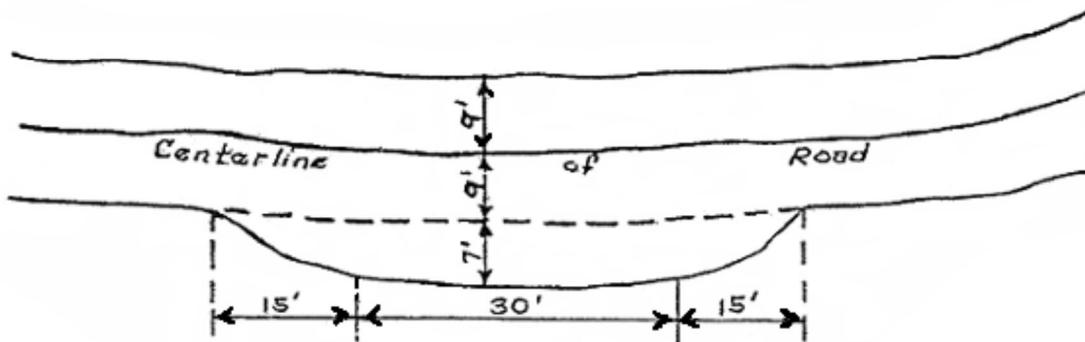
Drainage structures shall be constructed and maintained as necessary. Action will be taken immediately to correct erosion problems which are associated with skid roads and skid trails.

HAUL ROAD CONSTRUCTION
SKETCH A
CLEARING FOR A CUT AND FILL ROAD



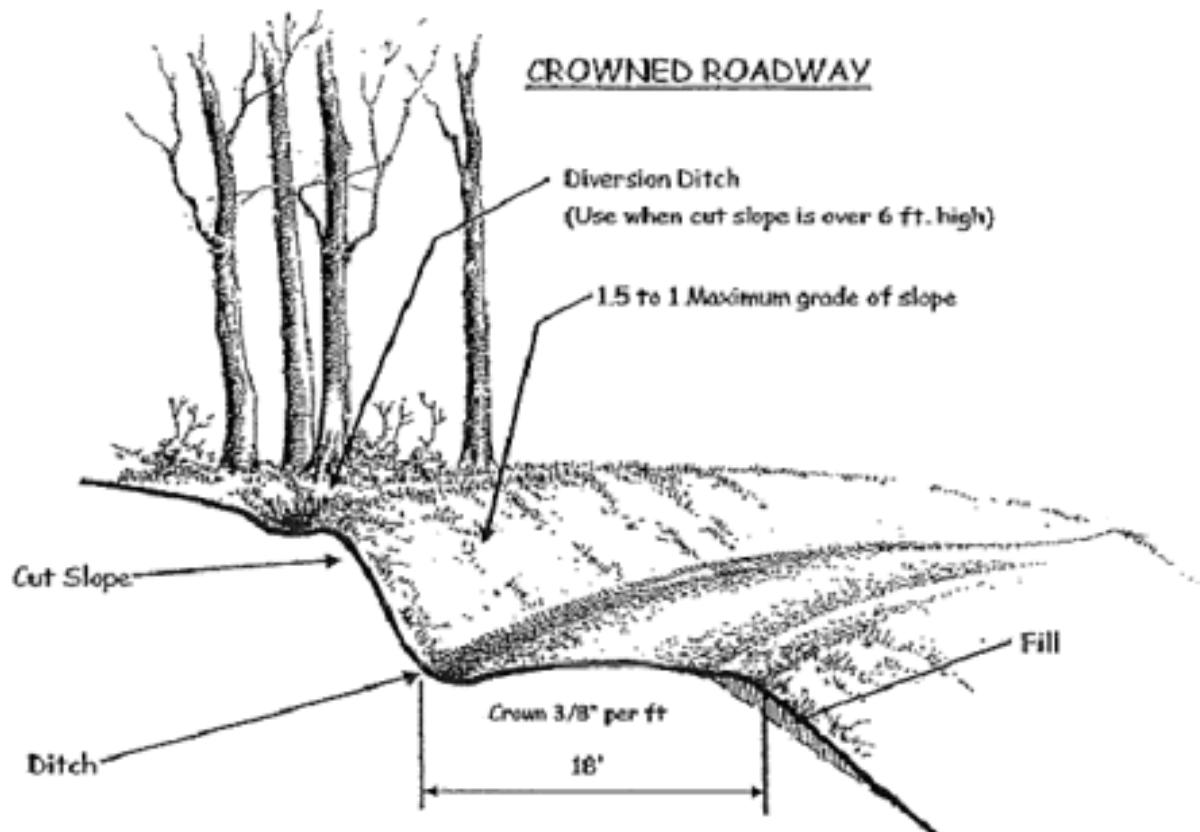
1. Construct road so that hauling will be on solid ground, not on fill.
2. In slope from fill to cut shall have a fall of not less than $1/4"$ and not more than $3/8"$ per foot.
3. Drainage water shall be carried across the road to fill slope by intercepting dips or culverts.

TURNOUT FOR HAUL ROAD

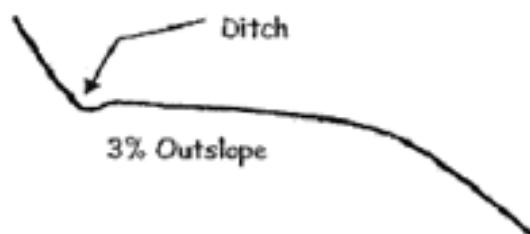


SKETCH B

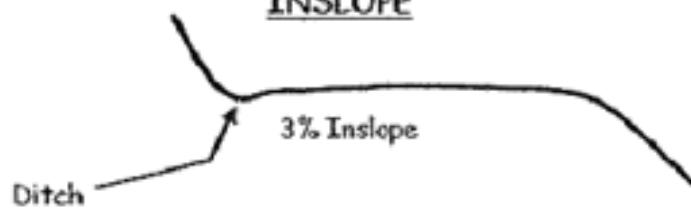
ROADWAY DRAINAGE



OUTSLOPE

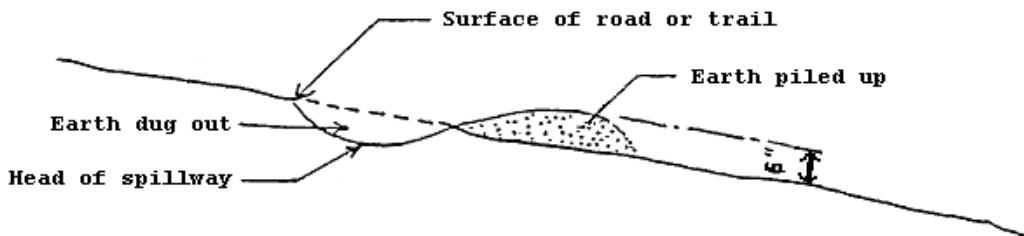


INSLOPE

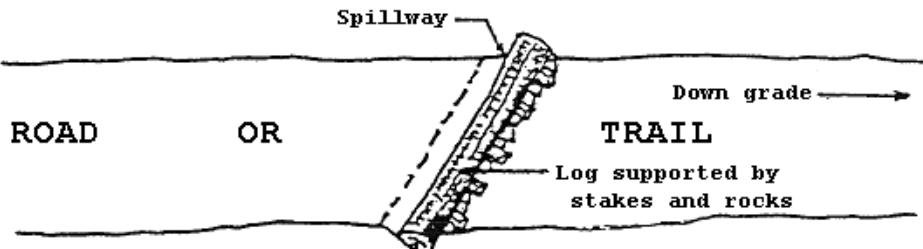
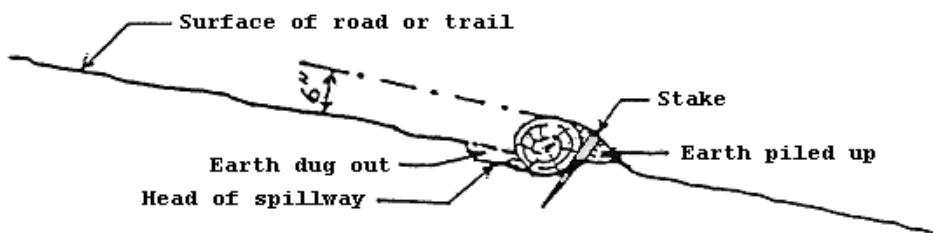


SKETCH C

EARTHEN WATER BAR

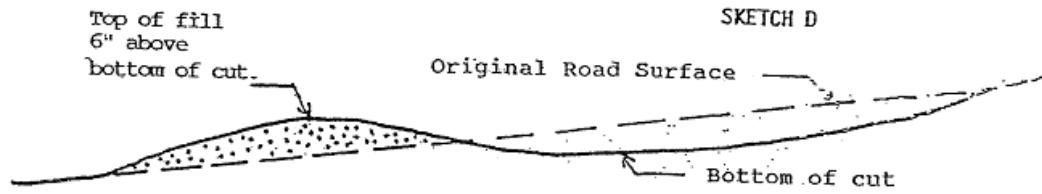


LOG WATER BAR

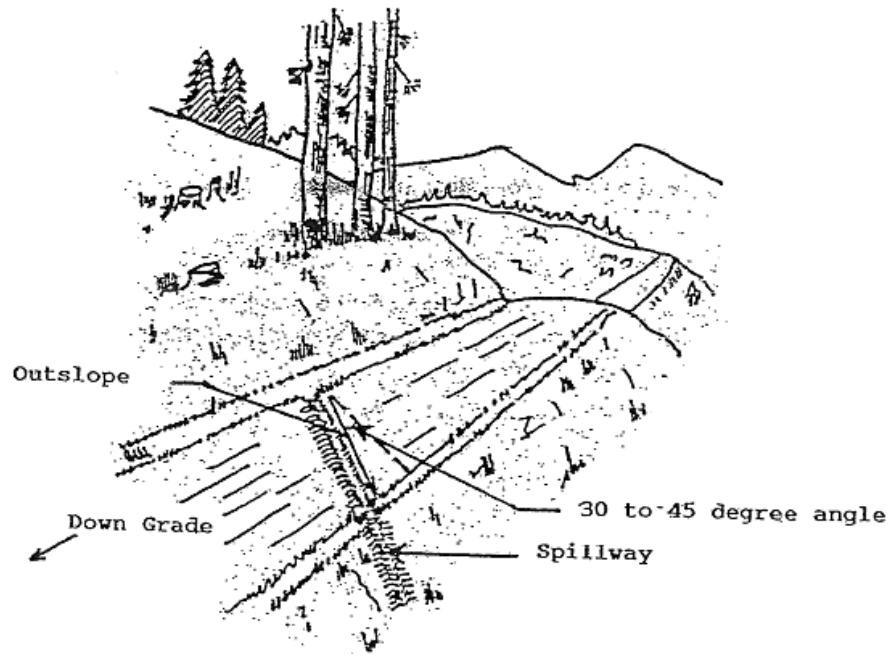


1. Dig trench with mattock at slight angle to road or trail. Fall across road or trail to head of spillway should be no less than $1/8"$ nor more than $3/8"$ per foot.
2. Cut log 8" diameter for water bar. Recommend use of crooked, damaged or broken-top tree. Fender logs also make good water bars.
3. Place log in trench. make sure trench is deep enough to keep water from running under log.
4. Place stakes or rocks on down hill side to hold log in trench.

INTERCEPTING DIP



SKETCH D



1. Dip to be below outcurves, above incurves, and elsewhere as required by Forester.
2. Horizontal distance from top of fill to bottom of cut is 15' for all Roads. Horizontal distance from bottom of cut to original road surface (upslope from dip) is as follows: Grade to 5% - 50'; grades over 5% - add 5' for each % over 5.
3. Dip shall be outsloped. Spillway from dip shall be protected from erosion.
4. Dip should be placed at an angle of 30 to 45 degrees across road.
5. Dip shall have a fall of 1/8" to 1/4" per foot.
6. If spillway erodes, provide a floor of 2" plank or hand-placed rock.
7. Intercepting dips shall not be used for grades over 10%. An approved culvert is used for grades exceeding 10%.