

**Forest Service Handbook
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Forest Service Handbook 2409.15 – Timber Sale Administration Handbook

Chapter 50 - Transportation Facilities

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Digest: Following is an explanation of the changes throughout the directive by section.

50: Retitles chapter to TRANSPORTATION FACILITIES. Revises, reorganizes, recodes sections and updates entire chapter. Removes references to obsolete contract forms and obsolete procedures such as purchaser credit. Updates references to contract forms dated 2004 and newer. Substantive changes have been made to the entire chapter.

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50 - Transportation Facilities

This chapter addresses construction, reconstruction, and maintenance of roads, bridges, and other transportation facilities needed for harvesting timber under the following contract forms:

1. FS-2400-6/6T versions (6/06) and (4/04).
2. FS-2400-13/13T version (9/04) and (10/19).

This chapter addresses road use, road maintenance, and temporary roads in the following contract forms:

1. FS-2400-3S/3T/3P version (6/06).
2. FS-2400-4 version (4/12).
3. FS-2400-2 version (10/02).

Integrated Resource Timber Contract forms FS-2400-13 and FS-2400-13T are timber sale contract forms used for stewardship end result projects where the value of products sold is greater than the cost of services performed (FSH 2409.19, sec. 62.11). The numbering system for contract provisions differs between FS-2400-6/6T contracts and the September 2004 version of the FS-2400-13/13T contracts. For ease in reading this chapter, and unless noted otherwise, references to a timber sale contract provision apply to the corresponding provision with the same descriptive title in a (9/04) Integrated Resource Timber Contract. FS-2400-13/13T contracts with an issue date of (10/19) use the same division structure and provision numbers as the FS-2400-6/6T contracts.

50.4 - Responsibility

In addition to the responsibilities described in section 04 of this handbook, the following specific responsibilities apply to administration of transportation facility contract provisions.

50.41 - Contracting Officer

1. Designates the Engineering Representative, in writing, unless that authority has been delegated to the Forest Service Representative.
2. Approves agreements with the Purchaser for construction cost adjustments, or delegates, in writing, the authority to the Forest Service Representative or the Engineering Representative, as indicated by the circumstances.
3. Approves design changes.
4. Accepts specified roads pursuant to B/BT6.361, unless this authority has been delegated to the Forest Service Representative.

50.42 - Forest Service Representative

1. Designates the Engineering Representative, in writing. Describes the scope of the responsibilities and authority that the Engineering Representative may exercise, if authorized by the Contracting Officer to delegate this authority.
2. Ensures that the Engineering Representative receives written instructions concerning the Forest Service's concerns and points of emphasis for the timber sale and informs him/her, in writing, about any conditions peculiar to the specific sale.
3. Approves estimates before crediting purchasers for specified road construction or reconstruction work unless this authority is delegated to the Engineering Representative.
4. Accepts specified roads pursuant to B/BT6.361 if this authority has been delegated from the Contracting Officer.

50.43 - Sale Administrator

1. Works with the Engineering Representative in operations relating to timber harvest in right-of-way and specified road construction.
2. Administers assigned road maintenance responsibilities.

50.44 – Engineering Representative

1. Administers the construction of specified roads, which includes:
 - a. Documenting when a road is substantially complete;
 - b. Advising the Contracting Officer on cost adjustments for differences in quantities specified in the contract and the actual measured quantities;
 - c. Advising the Contracting Officer on design changes needed for differences in anticipated and actual field conditions; and
 - d. Documenting any agreements that may be necessary during administration of the construction, and securing approval by the Purchaser and Contracting Officer as necessary. The Engineering Representative shall also approve those agreements within the delegated authority.
2. Coordinates activities with the Sale Administrator, including:
 - a. Approving the use and hauling of right-of-way timber;
 - b. Inspecting for compliance with fire precautions;
 - c. Approving right-of-way slash disposal sites;

- d. Approving right-of-way landing sites;
- e. Calculating advance deposits (contract provision C/CT4.221); and
- f. Providing technical assistance to the Sale Administrator in matters associated with temporary roads and maintenance of National Forest System roads.

50.45 - Construction Inspector

It is the responsibility of the Construction Inspector to:

- 1. Carry out the instructions of the Engineering Representative and/or Forest Service Representative in the inspection of the Purchaser's road construction and maintenance activities.
- 2. Check for compliance with drawings and specifications through day-to-day contacts with the Purchaser's Field Supervisor.
- 3. Refer any unresolved problems and contractual issues to the Engineering Representative or the Forest Service Representative.
- 4. Prepare a written report summarizing each inspection.

50.5 - Definitions

The following terms and phrases are used in timber sale contract provisions related to roads:

In Excess of Normal. Road maintenance caused by events that would not be considered part of the normal traffic or weather patterns.

Reconstruction. Rebuilding an existing road in its existing location to meet the design standards listed in A/AT7. The term construction is often used interchangeably with reconstruction (B/BT 5.1) when applied to an existing road or transportation facility listed in A/AT7.

51 - B/BT5.1 Authorization

This contract provision authorizes the Purchaser to construct, reconstruct, and maintain roads, bridges, and other transportation facilities needed for harvesting included timber. This is only an authorization. It does not require construction of any road not needed for harvesting included timber. Once construction of a specified road starts, the Purchaser must complete the road to an agreed terminus (contract provision B/BT5.2). The Contracting Officer may make adjustment to an agreed terminus as a result of:

- 1. Physical Change (B/BT5.252);
- 2. Changed Conditions (B/BT8.31);

3. Modification for Catastrophe (B/BT8.32);
4. Modification to prevent environmental degradation or resource damage (B/BT8.33);
5. Termination by Forest Service (B/BT8.341); or
6. Termination by Purchaser (B/BT8.342).

This contract provision also authorizes the construction of temporary roads or facilities, by agreement with the Forest Service, for the purpose of harvesting included timber. Refer to section 53 for direction pertaining to temporary roads.

B/BT/BP5.1 in contract forms FS-2400-3S/3T/3P authorize the Purchaser to construct and maintain roads, bridges, and other transportation facilities, as needed to harvest included timber. Construction is limited to temporary facilities since these contract forms do not authorize the construction of specified transportation facilities. Refer to section 53 for direction pertaining to temporary roads.

Contract forms FS-2400-2 and FS-2400-4 do not authorize the Purchaser to construct permanent or temporary transportation facilities.

51.1 - B/BT5.11 Requirements of Rights-of-Way

Regional contract provision C/CT5.11# - Requirements of Rights-of-Way are included in contracts subject to the terms of an easement or right-of-way. Contracts may include other Regional C/CT provisions pertaining to road use agreements between the Forest Service and other land owners. The entire sale administration team must know and observe the stipulations of each easement, right-of-way document, or road use agreement. If more rights are desired by the Purchaser, they must be negotiated with the grantor.

Easements, rights-of-way (ROW) documents, and road use agreements are available in the offices of the Forest Supervisor and/or District Ranger. When crossing non-National Forest System lands with a ROW easement it is essential for property line locations to be clearly identified. The easement will specify whether title to the timber within the easement was conveyed to the Government. If this is the case the timber should be disposed of as part of the timber sale volume. If title did not pass to the Government, ROW timber shall be disposed of in accordance with the terms in the easement. Do not permit timber whose title did not pass to the Government to be mixed with federal timber when hauling volume from the sale.

51.11 - C/CT5.111# Right-of-Way Reversion (4/04)

This provision is used in contracts where rights-of-way will revert to the grantors unless roads are constructed prior to the dates shown in the provision. This date should be reflected in the Purchaser's Plan of Operations for Road Construction under B/BT6.312 and the Contracting Officer must closely monitor the Purchaser's road construction progress to assure roads are completed prior to the reversion date.

51.2 - B/BT5.12 Use of Roads by Purchaser

This contract provision establishes conditions for using existing roads in addition to specified roads listed in specific condition A/AT7. Justification, including environmental analysis, is necessary if the Purchaser proposes use of a road not listed in A/AT7 where there is a need for road reconstruction or where the use is prohibited or restricted in the contract. The Purchaser is required to comply with all road use restrictions including weight restrictions posted on roads and bridges. The Purchaser is required to obtain an oversized load permit from the Forest Service before exceeding weight, width, or length restrictions on National Forest System roads.

Contract provision C/CT5.12# - Use of Roads by Purchaser (6/99) is used in contract forms FS-2400-6/6T and FS-2400-3S/3T/3P to identify existing roads shown on the Sale Area Map where use is prohibited or restricted.

In FS-2400-4 contracts, WO-OC5.12# - Use of Roads by Purchaser identifies existing roads shown on the Sale Area Map (GC 1.0) where use is prohibited or restricted.

FS-2400-2 contracts, (GC5.12) state that the Purchaser is authorized to use existing National Forest System roads when such use will not cause damage to the roads or National Forest System resources and when hauling can be done safely.

51.3 - C/CT 5.13# Road Completion Date (4/04)

This provision is included in contracts when (a) the estimated road construction cost is \$50,000 or more; (b) the sale requires construction of one or more specified roads to a higher standard than needed for the sale; or (c) road(s) must be completed by a specific date to meet Forest Service management needs. The provision requires specified roads to be completed by the date(s) stated in the provision regardless of whether the Purchaser or Forest Service is constructing the roads.

The road completion date(s) can be adjusted for causes qualifying for a contract term adjustment or at the request of the Purchaser, the Contracting Officer shall modify the completion date to conform to the approved Plan of Operations under B/BT6.311.

If the Forest Service is responsible for road construction, and the actual date of road completion is one year or more after the completion date stated above, the Purchaser may request a rate redetermination under B/BT3.3 for remaining volume.

A contract term extension shall not be granted if the Purchaser fails to complete construction of any specified roads by the applicable completion date(s), as adjusted.

52 - B/BT5.2 Specified Roads

“Specified Roads” are roads, including related transportation facilities and appurtenances, shown on Sale Area Map and listed in A/AT7.

Construction initiated by the Purchaser on any such specified road shall be completed to an agreed terminus that meets Purchaser's needs and prevents unnecessary impact on National Forest System resources.

Specified roads or segments of specified roads not needed by the Purchaser for harvesting included timber may be deleted under a mutually agreed design change including adjustment of costs pursuant to B/BT5.25. Do not modify a contract to delete a specified road in order to build a temporary road in its place.

The Purchaser may haul timber adjacent to the road or from within the right-of-way before the road is substantially completed subject to the conditions in B/BT5.23 (sec. 52.3). The Purchaser may not haul right-of-way timber from roads constructed by the Forest Service until authorized by the Forest Service or by written agreement between the Purchaser and public works contractor. Such agreement must hold the Forest Service harmless for any increased costs the public works contractor incurs as a result of hauling over roads that have not been accepted.

52.1 - B/BT5.21 Engineering

This provision specifies the procedures and timeline for completing survey, design and construction staking of specified roads by either the Forest Service or Purchaser after sale advertisement. Dates when this work is to be completed are stated in A/AT8 when the work will be performed by the Forest Service and in the Schedule of Items under A/AT7 when the work will be performed by the Purchaser.

In event Forest Service is unable to complete engineering work by the date specified in A/AT8, by written agreement, the Purchaser may assume the engineering responsibilities including cost adjustment in the Schedule of Items.

The provision also specifies the procedures for revising estimated costs stated in the Schedule of Items upon completion of survey, design, and construction staking.

52.11 - B/BT5.211 Contract Plans

This provision addresses both plans and shop drawings.

1. Plans are documents that show location, details, and dimensions of the work to be performed.
2. Shop drawings include drawings, diagrams, layouts, schematics, descriptive literature, illustrations, lists or tables, performance and test data, and similar materials furnished by the Purchaser to explain in detail specific portions of the work required by the contract.

The provision addresses the format and quantity of shop drawings and the Forest Service process for accepting or rejecting the drawings.

Follow the procedures in the provision when a change in the amount of construction work exceeding construction tolerances specified in the specifications identified in A/AT7 is caused by a Forest Service error in construction staking.

When incompatible situations arise between plans, specifications, and actual conditions on the ground, the Purchaser is required to make corrections pursuant to B/BT5.253 Design Change.

52.12 - B/BT5.212 Construction Staking

This provision addresses setting and, if necessary, replacement of construction stakes.

When A/AT7 shows that construction stakes are to be set by Forest Service after clearing, the Purchaser is required to submit to the Forest Service a written schedule for clearing, construction staking, and construction that will provide Forest Service a reasonable period for setting construction stakes. Time for setting construction stakes may be modified by written agreement.

The provision requires the Forest Service to perform construction staking in a timely manner so as to not hinder or delay the Purchaser.

If the Forest Service is unable to perform construction staking in a timely manner, the Purchaser may assume responsibility upon written agreement including cost adjustment in the Schedule of Items. Construction staking by the Purchaser shall be approved by the Forest Service before the Purchaser starts construction.

The Purchaser is required to replace construction stakes, flags, or marks damaged or destroyed through its negligence.

52.13 - C/CT5.213# Deposits for Reconstruction Engineering Services (4/04)

When included in the contract, this provision requires the Purchaser to make a cash deposit for engineering services (preconstruction and during construction) provided by Forest Service for reconstruction of National Forest System roads. Refer to FSH 2409.15, sec. 44.220 for additional information pertaining to this deposit.

52.14 - C/CT5.214# Deposits for Actual Reconstruction (4/04)

When included in the contract, this provision requires the Purchaser to make a cash deposit for actual reconstruction work to be done by the Forest Service. This provision will normally involve merging deposits from several timber sales to reconstruct a single facility needed by each of the sales. Consequently, coordination between two or more purchasers may be necessary.

Refer to FSH 2409.15, sec. 44.221 for additional information pertaining to this deposit.

52.15 - C/CT5.215# Cooperative Construction (7/09)

This provision is included in contracts at time of execution when the Purchaser agrees to cooperate in constructing a higher standard road or facility than needed for the sale only. The

provision describes the amount of cash and/or materials the Forest Service will contribute to the Purchaser to offset the increased cost of construction to a higher standard than needed for the sale only. These amounts are determined prior to advertising the sale and are not changed following bidding.

This provision may also be used when contributed funds or materials are to be used when augmenting a deficit sale. In those situations the actual amounts listed in the provision were determined following bidding.

Materials furnished by the Forest Service are subject to the delivery schedule addressed in B/BT5.22. Refer to FSH 2409.15, sec. 44.224 for instructions on processing cash contributions.

52.2 - B/BT5.22 Material Delivery

This provision addresses delivery dates and locations for materials supplied by the Forest Service.

52.21 - C/CT5.221# Material Sources (4/04)

This provision is included in contracts with specified roads when National Forest sources of stone, gravel, sand, or other material found in excavation are available for use in construction. It is also used when the Forest Service obtained an agreement prior to advertisement as to price, quantity, and time material is available from private or non-National Forest System sources.

Sources of local material are designated on plans and shown on Sale Area Map.

Follow the procedures in the provision if the designated source contains insufficient material or when Purchaser elects to not use the designated source.

This provision will not appear in contracts where material from private or non-National Forest System sources was used in the appraisals without obtaining a commitment on price, quantity, or when or if such material will be available. When this occurs, bidders were advised in the prospectus that they must make their own determination of price, availability, quantity, and time when material will be available. Liability for differences in obtaining the designed quantities or presale cost estimates is with the Purchaser.

52.3 - B/BT5.23 Use of Partially Constructed Roads

This provision requires the Purchaser to substantially complete construction of specified roads before timber hauling begins unless the Contracting Officer determines there is justification to waive this requirement. For example, allowing removal of timber cut within the right-of-way that is interfering with construction. The term "substantially completed" is defined in the provision as:

1. Completion of grading and installation of drainage structures so they will function effectively; and

2. Laying the specified depth of base course, if any.

When waiving this requirement, the Contracting Officer must document the justification including a determination that undue resource damage will not result. The Contracting Officer should consider ground conditions and safety considerations when making this determination. This might include factors such as frozen ground and the status of hazard tree removal along partially completed roads. The waiver must stipulate that no more than half of the included timber may be hauled over roads until they are substantially completed and that the waiver may be rescinded at anytime by written notice to the Purchaser if the Contracting Officer determines that the justification for the waiver is no longer valid.

Use of partially constructed roads applies only to new construction of specified roads listed in the contract. There is no authorization in the contract for use of substantially completed existing roads being reconstructed. Reconstruction must be completed and accepted prior to hauling unless otherwise agreed.

52.4 - B/BT5.24 Estimated Cost

Estimated costs by road components for specified roads listed in A/AT7 are stated by segments in the Schedule of Items.

Estimated costs are subject to adjustment under:

1. B/BT3.3 Rate Redetermination.
2. B/BT5.2 Specified Roads.
3. B/BT5.21 Engineering.
4. B/BT5.212 Construction Staking
5. B/BT5.25 Construction Cost Adjustment.
6. B/BT5.251 Variation in Quantities.
7. B/BT5.252 Physical Change.
8. B/BT5.253 Design Change.
9. B/BT5.26 Alternate Facilities.

Appropriately adjusted costs shall be made a part of a revised Schedule of Items and shown as adjustments to the timber sale account. The revised Schedule of Items shall supersede any prior Schedule of Items when it is dated and signed by Contracting Officer and a copy is furnished to the Purchaser.

During construction the Engineering Representative shall submit monthly progress estimates on the appropriate form to the Forest Products Resource Specialist responsible for the area where the sale is located and a copy to the Forest Service Representative.

52.41 - C/CT5.241 Estimated Costs for Cooperative Roads (4/04)

The provision provides instructions when making a rate redetermination under B/BT3.3 in contracts that include provision C/CT5.215# Cooperative Construction.

52.5 - B/BT5.25 Construction Cost Adjustment

This provision instructs the Contracting Officer to adjust specified road construction cost estimates in the Schedule of Items and show the adjustments as credits or debits to timber sale account, in the month when the road segment is accepted, when costs are adjusted pursuant to the following:

1. B/BT5.21 Engineering.
2. B/BT5.212 Construction Staking.
3. B/BT5.251 Variation in Quantities.
4. B/BT5.252 Physical Change.
5. B/BT5.253 Design Change.

When construction costs increase, appropriated funds, generally Capital Improvements and Maintenance (CMRD) funds, are used to pay for the increase to the extent that above base value for stumpage paid to date is insufficient to cover the amount of the increase. Whether a road has been accepted or not has implications on who is responsible (Forest Service or Purchaser) for repairing subsequent damage not resulting from negligence. In addition, failing to accept a completed road within the time specified in B/BT6.36 - Acceptance of Work, and pay the Purchaser in a timely manner for construction cost adjustments could result in a claim. For these reasons, accepting specified road segments should not be delayed in anticipation of eventually collecting sufficient above base stumpage value to cover the cost adjustment or for any other reason.

52.51 - B/BT5.251 Variation in Quantities

This contract provision applies only to differences between quantities shown in the Schedule of Items and measured quantities actually constructed and accepted that are not covered under B/BT5.252 or B/BT5.253. Only changes in quantities where other than “contract quantity” or “lump sum” is specified in the Schedule of Items are subject to this item.

Changes in diameter, type, quantity, or location of culverts are specifically addressed under B/BT5.253 - Design Change and should not be considered under the variation in quantities

provision. Changes in only the length of culverts shown in the drawings are not considered to be design changes and are measured and paid for under B/BT5.251.

Follow the procedures described in the provision when adjusting costs for a variation in quantities.

52.52 - B/BT5.252 Physical Change

This contract provision applies only to roads not accepted under contract provision B/BT6.36 - Acceptance of Work. Adjustments may be made when an event that is beyond the control of the Purchaser and that is not due to negligence of the Purchaser; such as landslide, rain, flood, fire, earthquake, and so forth; and causes an increase or decrease in work and/or materials furnished by the Purchaser resulting in additional estimated costs of:

1. More than \$10,000; or
2. More than 10 percent of total specified road construction cost, whichever is less.

Consider cumulative costs when determining if the threshold above has been met and recognize that a single event may occur over an extended period of time. For example, spring runoff following a heavy snow year may result in numerous slumps and slides. The event is spring runoff, which may have occurred over a 6-8 week period. Individually none of the slumps or slides may meet the threshold for physical change, but if two of more do collectively, then physical change may have occurred.

If it is determined that failure was the result of inadequate design on the part of the Forest Service, such as an incorrectly sized culvert, then a correction in cost should occur under the design change provision (B/BT5.253).

Follow the procedures described in the provision when adjusting costs for a variation in quantities.

52.53 - B/BT5.253 Design Change

“Design Change” is a change in work and/or materials shown in the Schedule of Items and described in plans or specifications that have been mutually agreed to in writing or ordered by Contracting Officer. Minor changes within specified tolerances and variation in quantities described in B/BT5.251 are not design changes.

1. Ordered Design Change. The Contracting Officer may order the Purchaser to perform work that results in a change in costs. Make ordered design changes in response to differences between anticipated and actual field conditions. Such changes must be necessary in order to construct roads to the standard on the plans and to ensure stability of the road. Work needed to prevent damage to soil and water immediately adjacent to the road may also be included. Since the original design should have been for the construction of the least cost road needed to meet the resource objectives of the sale (36 CFR 223.38), virtually all ordered design changes will result in an increase in cost.

Ordered design changes are documented in a contract modification on form FS-2400-0009 or FS-2400-0010; a pen and ink change should be noted on the form itself indicating that pursuant to B/BT5.253 ordered design change. The signature of the Purchaser is not required. For an ordered design change no agreement with the Purchaser is needed and the use of the Agreement to Modify forms is appropriate with pen and ink changes stating such and striking out the irrelevant portions of the form such as the signature block.

Increases in costs associated with a design change shall be processed pursuant to B/BT5.25 -Construction Cost Adjustment and are paid for with appropriated funds, generally CMRD monies where the above base value for stumpage paid to date is insufficient to cover the amount of the increase. Further direction can be found at FSH 2409.15, sec. 44.26.

An ordered design change is effective once the Contracting Officer signs the appropriate forms, the Purchaser must perform all the work included in an ordered design change.

Examples of ordered design changes include:

- a. Additions, deletions, or changes in types or diameter of culverts shown in plans and changes in designated water sources shown on plans. Changes in only the length of a culvert shown on the plans are considered a variation of quantities under B/BT5.251;
 - b. Location changes, including redesign of a road segment to avoid unstable soils or to move the location away from streams;
 - c. Changes in road cross section;
 - d. Addition of or change in base thickness to support design traffic load.
2. Mutually Agreed Design Change. Either the Purchaser or the Forest Service may propose a mutual change. Mutually agreed design changes are documented in a contract modification on form FS-2400-0009 or FS-2400-0010, and shall not be injurious to the United States (36 CFR 223.112). For example: the Purchaser proposes applying gravel, at no cost to the Government, to segments of a native surface road in order to extend the hauling season. This assumes that the gravel was not needed to ensure stability of the road or prevent soil damage if hauling is limited to the designed periods of use. Since the Forest Service didn't design the road for an extended hauling period, adding the gravel at Government expense would be injurious to the Government by adding a benefit for the Purchaser without an offsetting benefit to the Government. Furthermore, the Forest Service should not propose design changes based on an increase in stumpage value due to bid premium or escalation. Using the previous example, it would be inappropriate for the Forest Service to initiate a design change adding gravel at Government expense simply because additional money became available due to bid premium. Doing so undermines the premise of "least cost road" under 36 CFR 223.38 and changes a premise of the sale that may have affected bids from other interested parties.

3. Minor Change. Changes of a minor nature that do not exceed specified tolerances necessary to maintain or balance earthwork quantities substantially as designed and variation in quantities, as described in B5.251, shall not be considered a design change. There is no adjustment of costs for a minor change. Minor changes are generally documented on form FS-7700-42 Specified Road Construction Agreement and/or Notice.

Examples of minor changes include:

- a. Adjustments in horizontal or vertical alignment that do not exceed tolerances;
- b. Changes in culvert locations when there is minimal change in installation methods;
- c. Changes in turnout locations that cause minimal change in clearing or excavation; or
- d. Changes in log deck location that cause minimal change in clearing.

52.6 - B/BT5.26 Alternate Facilities

This provision provides for making additions and deletions to the specified road(s) listed in A/AT7 to better meet the needs of the Purchaser provided the change(s) are acceptable as part of the National Forest System transportation facilities and are National Environmental Policy Act (NEPA) compliant. The Purchaser is responsible for location, survey, design, and construction staking of alternative facilities.

Forest Service shall estimate the cost of alternative facilities using methods consistent with the original computation of Schedule of Items. The Purchaser must bear the cost of any changes that exceed the estimates in the original Schedule of Items. Forest Service will adjust the timber sale account to reflect any decrease in estimated cost.

Acceptance of alternate facilities is documented in a contract modification on form FS-2400-0009 or FS-2400-0010.

52.7 - B/BT5.27 Temporary Credit for Unamortized Specified Road Construction Cost

This provision allows the Purchaser to request a temporary refund of unamortized specified road construction costs when ordered under B/BT8.33 to delay or interrupt scheduled operations for more than 30 days. This refund is processed as a credit to the Purchaser's timber sale account but is limited to stumpage already paid above base rates. However, if the Purchaser has an outstanding debt owed, the Contracting Officer must apply the amount of credit to be refunded to the debt owed as per the Debt Collection Improvement Act of 1996, as amended.

Upon written notice from Contracting Officer that the basis for the delay or interruption no longer exists, the Purchaser shall pay for timber on/at a per unit amount, in addition to current contract rates, that is equal to the amount credited to the Purchaser's Timber Sale Account divided by 80 percent of the estimated remaining volume of the contract, until the full amount credited to the Purchaser has been returned.

53 - Temporary Roads

Forest Service direction pertaining to temporary roads for timber sales is at FSM 2432.34b. Initial planning for temporary roads begins during sale preparation. The Sale Administrator should have a logging plan or other documentation from sale preparation (for example, appraisal report) indicating the approximate location(s) and quantity (such as, miles) of temporary roads planned for the sale.

A temporary road is defined in 36 CFR 212.1 as a road authorized by contract, permit, lease, or other authorized written notice that is not a forest road and is not included in a forest transportation atlas. These roads are not intended to be part of the forest transportation system or necessary for long term resource management. Temporary roads are not to be constructed where specifications are needed to control road location and design standards necessary to minimize impacts on resources (FSH 2409.18, Ch. 23.41).

The primary function of temporary roads is to provide access to landings with the least impact on the natural resource. Accordingly, control points for temporary roads are as much determined by satisfactory landing locations, stand protection, watershed protection, and other resource protection considerations as they are topographic controls.

FS-2400-4 or FS-2400-2 contracts do not permit the construction of temporary roads. Direction below is applicable to the following contract versions:

1. FS-2400-6/6T Contracts dated (4/04) and (6/06).
2. FS 2400-13/13T Contracts dated (9/04) and (10/19).
3. FS-2400-3S/3T/3P Contracts dated (6/06).

Pursuant to contract provision B/BT5.1, the Purchaser is authorized to construct and maintain roads, bridges, and other transportation facilities, as needed, for harvesting included timber on National Forest System lands. The FS-2400-6/6T and FS-2400-13/13T contracts specifically reference temporary roads in the provision while the FS-2400-3S/3T/3P contracts do not. Regardless of this difference, B/BT5.1 in all of these contract forms requires that the location and clearing widths of all roads or facilities shall be agreed to in writing before construction is started. Fully document agreements under this contract provision, including how the road will be stabilized and closed pursuant to B/BT6.63 or B/BT6.631. Mark location and clearing limits on the ground as needed to achieve resource protection objectives.

Do not authorize temporary road construction to cut skidding distances unless that flexibility was addressed in the environmental analysis per NEPA and the logging plan. Any substantial deviations in location or quantity of temporary roads should be reviewed for NEPA compliance before approval by the Sale Administrator. To achieve resource protection objectives in temporary road construction activities, use best management practices and the following fundamentals:

1. Location. Do not limit temporary road location considerations solely to meeting timber harvest needs. Carefully weigh additional considerations, such as drainage, ease of meeting stabilization requirements, natural opportunities for barricades, water quality protection, aesthetics, and safety when locating temporary roads.
2. Clearing. Clearing limits of temporary roads should be marked on the ground to establish control. They should be designed to facilitate the required method of temporary road slash disposal and to designate the right-of-way timber under contract provision B/BT2.32.

When locating temporary road clearing limits both within and outside cutting units on tree measurement sales, ensure merchantable timber within the clearing limits has been marked, measured, and paid for prior to felling. Treat slash associated with temporary road clearings pursuant to specifications in C/CT6.7.

3. Excavation. Construction of temporary roads should normally rely on self-balanced construction methods. Minimize extensive excavation.
4. Drainage. Strive to construct temporary roads that take advantage of natural features to achieve drainage. Be specific in written agreements for temporary road construction with regard to drainage, such as outsloping, berms, and so forth.
5. Density of Roads. The timber sale planning intent related to temporary road density can be found in the environmental analysis and/or timber sale appraisal reports and maps. Temporary road density is based on resource objectives, topography, and the commonly accepted skidding and yarding distances in the area.
6. Coordination with Permanent Roads. Ensure timber haul from temporary roads compliments the forest development road system. Locate temporary road approaches to National Forest System roads to ensure safety and protection of investments and resources. Ensure temporary roads do not interfere or block drainage on National Forest System roads.
7. Streamcourse Crossings. Crossing streamcourse with temporary roads should be avoided when possible. When unavoidable, streamcourse crossings must be planned and implemented with great care. Sale administrators should consult with the hydrologist, fisheries biologist, soils scientist and engineering as appropriate to the situation when locating, constructing and removing streamcourse crossings. Contract provision B/BT6.5 - Streamcourse Protection, requires use of culverts or bridges at all points where it is necessary to cross streamcourses with roads. Do not use log fills in live streamcourses or streamcourses which are anticipated to be live during the period of expected use. Ensure culvert diameter is adequate to carry the flow and culvert length is adequate for embankment cover. Ensure that sufficient fill is placed over the culvert to prevent damaging the culvert during hauling.

8. Maintenance. The major objectives of temporary road maintenance are user safety and protection of resource values.
9. Stabilization and Closure. The final treatment for temporary roads, after the Purchaser's use is completed, is described in contract provision B/BT6.63 - Temporary Roads. This treatment is designed to reduce erosion, preclude further use of the road, and to reestablish vegetative cover on the roadway and on areas disturbed by road construction as required by the National Forest Management Act of 1976 (16 U.S.C. 472a). Road locations that cannot be stabilized in a manner that will meet erosion control requirements should not be approved.

Purchasers shall give notice to the Forest Service when they have finished using a temporary road and before beginning erosion control closure work. A temporary road should be closed as soon as practicable unless it is designated to remain open under B/BT6.631.

10. Temporary Roads to Remain Open. Contract provision B/BT6.631 allows the Purchaser to leave certain temporary roads designated as “Remain Open” on the Sale Area Map to be left open after the Purchaser’s use is completed when short-term use by the Forest Service is needed for post-sale activities. Construction of temporary roads to remain open should not be to a higher standard than normally allowed. Erosion control structures must be installed by the Purchaser where directed by Forest Service and left in functional condition. Temporary roads designated to remain open for short-term post-sale use should have been identified in the NEPA document and the travel analysis process.

54 - B/BT5.3 Road Maintenance

Proper road maintenance includes promoting safe use of roads, protecting substantial investments in permanent roads, preventing excessive loss of road material, protecting roads from seasonal weather damage, and safeguarding soil, water, and other resources. Road maintenance responsibilities and deposits under all of the contract forms are based on expected use. Purchasers are responsible for repairing, at their cost, damage to roads caused by their operations that have been determined by the Forest Service to exceed use authorized under the contract. Road maintenance on specified roads begins when the road is accepted. Prior to that, it is a construction or reconstruction function.

1. Road Maintenance in FS-2400-6/6T Contracts. Purchasers are responsible for maintaining National Forest System roads commensurate with their use. Commensurate use is initially estimated during sale preparation for the designated haul route and forms the basis for the provisions in the contract pertaining to road maintenance. Stumpage rates reflect the allowances made in the appraisal for recurrent and deferred road maintenance along the designated haul route. The designated haul route used to appraise the sale reflected the route with the lowest combined cost for haul and associated road maintenance. If the Purchaser elects to use different roads than those listed in C/CT5.31#, Forest Service shall determine commensurate use for the alternate haul route

and revise road maintenance deposits in C/CT5.32#. The Purchaser must bear any increases in road maintenance costs associated with its commensurate use of an alternate haul route it chooses to use. Do not redetermine stumpage rates when deposits for road maintenance are adjusted either up or down.

Recurrent road maintenance may be required prior to, during, and after each period of use. The Purchaser may be required to perform recurrent road maintenance, make deposits for Forest Service performance, make deposits to a third party for performance, or any combination of the three. Road maintenance requirements are specified in C/CT5.31# (sec. 54.1). Road maintenance deposits in lieu of the Purchaser performance are specified in C/CT5.32# (sec. 54.2). If the sale includes use of roads within a cost share agreement area, deposits for maintenance of cost share roads are specified in C/CT4.219#.

Delegations from the Contracting Officer or Forest Service Representative determine whether the Engineering Representative or Sale Administrator is responsible for checking a purchaser's compliance with road maintenance requirements.

2. Road Maintenance in FS-2400-13/13T Contracts. Road maintenance requirements are cost items that are included in the timber appraisal and are prepared in the same manner as in FS-2400-6/6T contracts (FSH 2409.19, ch. 60). However, some road maintenance activities may be included as a separate biddable service work item for roads in the contract area that are not necessary to haul timber cut and removed under the contract but require road maintenance work such as replacement of a culvert to allow for fish passage (FSH 2409.19, sec. 62.81 and sec. 62.82). In these cases, B/BT 5.3 and C/CT 5.31# in the 10/19 contract version and FT.3 and K(T)-FT3.1# in the 9/04 contract version would not be needed for these roads.
3. Road Maintenance in FS-2400-3S/3T/3P Contracts. The road maintenance provisions used in the FS-2400-3 contracts are identical to those in the FS-2400-6 contracts. Refer to paragraph 1 above.
4. Road Maintenance in FS-2400-4 Contracts. GC5.3 Road Maintenance requires the Purchaser to pay for road maintenance commensurate with use. This amount is included in the associated charges on page 1 of the contract. If the Purchaser elects to use different roads than those in the Forest Service Road Maintenance Plan, Forest Service shall determine the Purchaser's commensurate share of road maintenance and revise road maintenance deposits. The Purchaser must bear any increases in road maintenance costs associated with its commensurate use of an alternate haul route it chooses to use. This is addressed in GC 20 of the FS-2400-4 (04/12) contract version.

WO-OC5.31 - Road Maintenance Requirements lists the road maintenance requirements including reference to the applicable T-specifications discussed below in section 54.1 for the FS-2400-6/6T contracts. Other Condition 13# in the FS-2400-4 (4/12) version lists the road maintenance requirements including reference to the applicable T-specifications.

GC5.3 - Road Maintenance also requires the Purchaser to promptly restore roads and trails damaged by its operations.

5. Road Maintenance in FS-2400-2 Contracts. The Purchaser is authorized to use existing roads when such use will not cause damage to the roads. The Purchaser is required to pay for road maintenance commensurate with use. This is a lump sum payment made when the contract is executed. Deposits per unit of measure are stated in the contract for any additional timber added to the sale after award. If the Purchaser elects to use different roads than those in the Forest Service Road Maintenance Plan, Forest Service shall determine the Purchaser's commensurate share of road maintenance and revise road maintenance deposits. The Purchaser must bear any increases in road maintenance costs associated with its commensurate use of an alternate haul route it chooses to use. In the newer version of the FS-2400-2 contract this is addressed in GC5.3 and GC5.12.

54.1 - C/CT5.31# Road Maintenance Requirements (7/01)

Depending on the delegation of authority, road maintenance will be administered by either the Engineering Representative or Sale Administrator. The individual responsible for administering road maintenance requirements should be thoroughly familiar with the condition of roads prior to the Purchaser's use and be prepared to present facts to establish maintenance responsibility. A series of photographs taken prior to log hauling at photo points such as route markers, curves, drainage structures, and so forth, may dispel controversy at a later date.

Contract provision C/CT5.31# - Road Maintenance Requirements (7/01) is included in contracts requiring road maintenance work or road maintenance deposits. The provision includes tables for identifying road maintenance T-specifications by road number for prehaul, during-haul, and post-haul maintenance; whether the maintenance will be performed by the Purchaser and deposits to the Forest Service or deposits to a third party. Each Region maintains a portfolio of T-specifications that describe the performance requirements for various road maintenance activities such as surface blading, brushing, ditch cleaning, drainage structures, and so forth. When administering road maintenance, refer to the T-specifications listed in C/CT5.31# and included in the contract.

If the Purchaser elects to use an alternate haul route, the change must be documented in a written agreement or contract modification showing the applicable roads and T-specifications and any changes in road maintenance deposits. Prior to approving an alternate route verify that none of the roads are listed in C/CT5.12# - Use of Roads by Purchaser, has use limitations incompatible with hauling planned by the Purchaser. If the requested roads lie outside of the sale area boundary, ensure coordination occurs with potentially affected resource areas and the contract is modified if needed.

The Purchaser must perform prehaul maintenance needed to facilitate the Forest Service's safe and practical inspection of the Purchaser's operations or needed to prevent resource damage tributary to the road. Performance of prehaul maintenance not listed in C/CT5.31# needed for efficiency of operations is discretionary with the Purchaser.

It is the Purchaser's responsibility to ensure roads used for hauling are maintained to meet safety and resource protection objectives and left in no less than the same condition that existed prior to log hauling at the time the contract is complete. An exception to this rule is when the Purchaser is required to cross ditch and close roads to meet Level 1 maintenance objectives (FSH 7709.59, ch. 60).

54.2 - C/CT5.32# Road Maintenance Deposit Schedule (7/01)

Provision C/CT5.32# is included in contracts when the Purchaser is required to make deposits to the Forest Service or a third party in lieu of the Purchaser's performance of road maintenance. The initial amounts of the deposits are determined at the time of appraisal as rates per unit of measure based on the estimated volume and distance hauled and the Purchaser's commensurate use of roads listed in C/CT5.31#. The deposits may be for recurrent and/or deferred maintenance. The Purchaser and Forest Service may agree in writing to an adjustment of the rates if for example the Purchaser requests the Forest Service perform blading, the Purchaser is required to complete or the Purchaser chooses to use an alternate haul route. Depending on the circumstances deposits may increase or decrease (sec. 54).

55 - B/BT5.4 Use by Others

This provision gives the Forest Service the right to use any road constructed under the contract for any and all purposes in connection with the protection and administration of the applicable National Forest. The provision also allows the Contracting Officer to permit other parties logging tributary National Forest System timber, to use roads constructed or reconstructed by the Purchaser subject to the conditions specified in the provision.

56 - Purchaser Elected Government Constructed Roads

At the time of submission of bid, small businesses may elect to have the Forest Service construct specified roads when the estimated cost of construction exceeds \$50,000. Likewise, any purchaser may elect to have Forest Service construct roads being built to a higher standard than that needed solely for the sale. When a bidder elects Government construction, the work is performed through a Public Works contract.

Maintain close coordination between the Sale Administrator and the Contracting Officer's Representative (COR) for the public works contract during road construction in order to meet sale objectives. Examples of this coordination include, but are not limited to:

1. Monitoring the progress of construction. Forest Service is required to complete roads constructed under the Public Works contract in accordance with the terms and conditions in C/CT5.13# - Road Completion Date (sec. 51.3);
2. Ensuring the Contractor meets log accountability, export, utilization, scaling, and log haul requirements;

3. Assisting the COR in the administration of the utilization and fire requirements of the Public Works contract;
4. Assisting the COR in agreeing with the Purchaser on construction slash disposal areas and right-of-way decking areas that can also be used during harvesting operations;
5. Assisting the COR in the selection of Contractor's campsites and work staging areas.

Pursuant to C/CT5.13# the Purchaser may not use roads constructed under the Public Works contract until Forest Service furnishes the Purchaser with written notice authorizing use of road. Notwithstanding the foregoing, the Public Works contractor may enter into an agreement with the Purchaser to allow the Purchaser to remove right-of-way timber prior to Forest Service acceptance of road(s).

57 - B/BT6.33 Safety

1. FS-2400-6/6T and FS-2400-13/13T Contracts. Contract provision B/BT6.33 addresses traffic control and safety requirements associated with operations on and adjacent to transportation facilities (FSH 2409.15, sec. 66.33).

Notify Forest Service Law Enforcement if the Purchaser's use of Forest Service controlled roads outside of the sale area are conducted in an unsafe manner.

2. FS-2400-3S/3T/3P Contracts. Safety is addressed in provision B/BT/BP6.33 which reads the same at B/BT6.33 in the FS-2400-6/6T contracts (FSH 2409.15, sec. 66.33).
3. FS-2400-4 Contract. The FS-2400-4 contract does not include a General Condition addressing safety. Notwithstanding that omission, administer safety in the same manner as the FS-2400-6/6T contracts.
4. FS-2400-2 Contract. The FS-2400-2 contract does not include a General Condition addressing safety. However it does address the Use of Roads by Purchaser which specifies that use of roads is limited to when hauling can be done safely. Administer safety in the same manner as the FS-2400-6/6T contracts.