

**Forest Service Handbook
National Headquarters - Washington Office
Washington, DC**

**Forest Service Handbook 7709.57 – Road Construction Handbook
Chapter 2 - Controls**

Amendment: 7709.57-1992-1

Effective date: September 4, 1992

Duration: This amendment is effective until superseded or removed.

Superseded Directive: Entire Handbook issued September 1986; Title Page; 0--1 thru 7.3

Approved by: F. Dale Robertson, Chief

Date approved:

Responsible Staff:

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

This amendment is a reissuance of FSH 7709.57 to conform the format and structure of the Handbook to the requirements of electronic directive issuance.

This amendment makes no substantive changes to the text. The only changes made are those necessary to meet new format requirements or to correct spelling, punctuation, or unit names.

This Handbook is now available electronically in the National Information Center in the same format as the paper copy. Henceforth, amendments to this Handbook will be issued to Forest Service units electronically on a document basis.

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2.1 - Staking

1. Ensure that the construction survey is performed at a precision compatible with the design survey (FSH 7709.56) and with the specified construction tolerance.

Construction surveys may include:

- a. Benchmarks and elevations.
- b. Centerline and catch points.
- c. Clearing and project limits.
- d. Reference points for the above.

2. For Forest Service staking, establish points on the ground as necessary to control the work and measure quantities.

3. For Contractor staking, provide the contractor with stakeout notes and drawings and discuss them in detail at the prework conference and at the beginning of work.

2.2 - Costs

Take advantage of opportunities to reduce costs after the work has begun, such as:

- 1. Steepening backslopes when encountering rock which is more stable than anticipated in the design.
- 2. Reducing the depth or changing the type of the aggregate base when subgrade materials yield more structural support than assumed in the design.
- 3. Using suitable excavated materials found on the project instead of hauling from designated sources.
- 4. Using grade sags or draws to relieve surface water.
- 5. Encouraging the contractor to submit a value engineering proposal when appropriate.

Ensure that construction changes are compatible with project design criteria and other design features and that they are coordinated with the Contracting Officer.

2.3 - Inspections

1. Most standard specifications for road construction define the final product rather than work methods or processes. The contractor decides how to accomplish the

work, controls the work, and ensures that the work meets contract requirements. The Engineer verifies that the end product complies with the drawings and specifications.

2. Conduct inspections with specific objectives in mind. The primary objectives for onsite inspections are to:

- a. Determine if ongoing and completed work meets contract requirements.
- b. Measure quantities for payment or verify contractor's measurement.
- c. Anticipate the need for changes.
- d. Gather data and develop solutions to problems and changes.
- e. Answer the contractor's questions.
- f. Provide timely material and work approvals required by the contract.

3. Inspect work and materials in a thorough, timely, and responsive manner and document the findings. Notify the contractor promptly when inspections show that work or material does not meet contract requirements.

4. Notices of noncompliance shall be:

- a. Given orally when a deficient item of work is first discovered.
- b. Given orally and in writing if the contractor has demonstrated a tendency to forget or ignore oral notices, to emphasize critical deficiencies, or if the deficiency may adversely impact resources or the environment.
- c. Documented in the daily diary including oral notices.
- d. Follow up notices of noncompliance with a formal letter from the Contracting Officer when the contractor continues to ignore oral and written notices, when correction of the deficiency is outside the authority of the Engineer, or when the deficiency is a breach of a material provision of a timber sale contract.

5. Use common sense and good judgment in deciding which form of notice to use. Document all notices in the project diary and perform and document followup inspections on deficiencies to ensure they have been corrected within a reasonable time.

6. Discuss with the Contracting Officer and concerned staff, rejection or acceptance conditions of work not done according to the specifications.

2.4 - Health and Safety

Health and safety on a road construction project involves everyone. The contractor is required to comply with Occupational Safety and Health Administration regulations, Mining Safety and Health Administration regulations, and other applicable Federal, State, and local requirements.

The Government's health and safety responsibilities differ between public works and timber sale contracts. See Federal Acquisition Regulations sections 36.513 and 52.236-13 for public works contracts and the Timber Sale Contract section B/BT6.33. If there is imminent danger of serious personal injury, take immediate action such as the following, to ensure that hazardous conditions are corrected:

1. Isolate the hazard. For example, remove personnel from the site, or block the road and post flag persons to keep people away from the hazard.
2. Issue a work order to correct the hazard.
3. If the contractor does not immediately eliminate the hazard, suspend the work in that part of the operation involving the hazard.
4. Contact the Contracting Officer immediately for assistance in resolving the problem if the hazard is not corrected. Assistance may be requested from the appropriate inspection agency such as the Occupational Safety and Health or the Mine Safety and Health Agencies.
5. Document all events in the contract diary.