

Item 5L

Control of the Work

# Authority of Engineer

The Engineer has the authority to observe, test, inspect, approve, and accept the work (either in writing or orally). The Engineer decides all questions about the quality and acceptability of materials, work performed, work progress, Contract interpretations, applicability of standard details, and acceptable Contract fulfillment. The Engineer has the authority to enforce and make effective these decisions.

* Unless noted elsewhere in the Contract or by the Engineer, payment for Contractor work is in accordance with the Contract requirements at that time. This payment does not eliminate the Contractor’s responsibilities for the work as defined in Article 7L.17., “Contractor’s Responsibility for Work,” or Article 5L.12., “Final Acceptance.”
* The Engineer acts as a referee in all questions arising under the terms of the Contract.
* The Engineer’s decisions are final and binding.

The Engineer will pursue and document actions against the Contractor as warranted to address Contract performance issues. Contract remedies include, but are not limited to, the following:

* requiring the Contractor to remove and replace defective work, or reducing payment for defective work,
* removing an individual from the project,
* suspending the work without suspending working day charges,
* assessing standard liquidated damages to recover the Owner’s administrative costs, including additional project-specific liquidated damages when specified in the Contract withholding estimates, and
* declaring the Contractor to be in default of the Contract

The Engineer will consider and document any events outside the Contractor’s control that contributed to the failure to meet performance standards, including consideration of sufficient time.

Follow the issue escalation ladder if there is disagreement regarding the application of Contract remedies.

# Plans and Working Drawings

When required, provide working drawings to supplement the plans with all necessary details not included on the Contract plans. Prepare and furnish working drawings in a timely manner and obtain approval, if required, before the beginning of the associated work. For all working drawing submittal requirements, the Engineer may allow electronic and other alternative submission procedures. Have a licensed professional engineer sign, seal, and date the working drawings as shown in Table 1.

Prepare working drawings using United States standard measures in the English language. The routing of submittals for review and approval will be established at the preconstruction conference. The Contractor is responsible for the accuracy, coordination, and conformity of the various components and details of the working drawings. Owner approval of the Contractor’s working drawings will not relieve the Contractor of any responsibility under the Contract. The work performed in accordance with this Article will not be measured or paid for directly, but will be subsidiary to pertinent Items.

Table 1

Signature and Approval Requirements for Working Drawings

|  |  |  |  |
| --- | --- | --- | --- |
| Working Drawings For | | Requires Licensed Professional Engineer’s Signature, Seal, and Date | Requires Owner Approval |
| 1. Alternate or optional designs submitted by Contractor | | Yes | Yes |
| 2. Supplementary shop and fabrication drawings for structural Items | | No  unless required on the plans | See applicable Item |
| 3. Contractor-proposed temporary facilities that affect the public safety, not included on the plans | | Yes | Yes |
| 4. Form and falsework details | Bridges, retaining walls, and other major structures | Yes unless otherwise shown on the plans | No1 |
| Minor structures | No  unless otherwise shown on the plans | No |
| 5. Erection drawings | | Yes | No1,2 |
| 6. Contractor-proposed major modifications to traffic control plan | | Yes | Yes |
| 1. The Engineer may require that the Contractor have a licensed professional engineer certify that the temporary works are constructed according to the sealed drawings. 2. Approval is required for items spanning over live traffic or where safety of the traveling public is affected, as determined by the Engineer. | | | |

Submit shop drawings electronically for the fabrication of structural items in accordance with the Owner’s procedures and as directed for other items required by the Contract. References to 11 × 17‑in. sheets in individual specifications for structural items imply electronic computer-aided design sheets.

# Conformity with Plans, Specifications, and Special Provisions

Furnish materials and perform work in reasonably close conformity with the lines, grades, cross-sections, dimensions, details, gradations, physical and chemical characteristics of materials, and other requirements shown in the Contract. Reasonably close conformity limits are defined in the respective Items of the Contract or, if not defined, as determined by the Engineer. Obtain approval before deviating from the plans and approved working drawings. Do not perform work beyond the lines and grades shown on the plans or any extra work without the Engineer’s authority. Work performed beyond the lines and grades shown on the plans or any extra work performed without authority is considered unauthorized and excluded from pay consideration. The Owner will not pay for material rejected due to improper fabrication, excess quantity, or any other reasons within the Contractor’s control.

## **Acceptance of Defective or Unauthorized Work**.When work fails to meet Contract requirements, but is adequate to serve the design purpose, the Engineer will decide the extent to which the work will be accepted and remain in place. The Engineer will document the basis of acceptance by letter and may adjust the Contract price.

## **Correction of Defective or Unauthorized Work**.When work fails to meet Contract requirements and is inadequate to serve the design purpose, it will be considered defective. Correct, or remove and replace, the work at the Contractor’s expense, as directed.

The Owner has the authority to correct or to remove and replace defective or unauthorized work. The cost may be deducted from any money due or to become due to the Contractor.

# Coordination of Plans, Specifications, and Special Provisions

The specifications, accompanying plans, special provisions, change orders, and supplemental agreements are intended to work together and be interpreted as a whole.

Numerical dimensions govern over scaled dimensions. Special provisions govern over plans (including general notes), which govern over standard specifications and special specifications. Job-specific plan sheets govern over standard plan sheets.

However, in the case of conflict between plans (including general notes) and specifications regarding responsibilities for hazardous materials and traffic control in Items 1L–10L, “Local Government General Requirements and Covenants,” and Item 502, “Barricades, Signs, and Traffic Handling,” special provisions govern over standard specifications and special specifications, which govern over the plans.

Notify the Engineer promptly of any omissions, errors, or discrepancies upon discovery so necessary corrections and interpretations can be made. Failure to promptly notify the Engineer of discovered omissions, errors, or discrepancies will constitute a waiver of all Contract claims against the Owner for misunderstandings or ambiguities that result from the errors, omissions, or discrepancies.

# Cooperation of Contractor

Cooperate with the Engineer. Respond promptly to instructions from the Engineer. Provide all information necessary for the successful completion of the Contract.

Designate in writing a competent, English-speaking Superintendent employed by the Contractor. The Superintendent must be experienced in the work being performed and capable of reading and understanding the Contract. Ensure the Superintendent is available at all times and able to receive instructions from the Engineer or authorized Owner representatives and to act for the Contractor. The Engineer may suspend work without suspending working day charges if a Superintendent is not available or does not meet the above criteria.

At the written request of the Engineer, immediately remove from the project any employee or representative of the Contractor or a subcontractor who, in the opinion of the Engineer, does not perform work in a proper and skillful manner or who is disrespectful, intemperate, disorderly, uncooperative, or otherwise objectionable. Do not reinstate these individuals without the written consent of the Engineer.

Furnish suitable machinery, equipment, and construction forces for the proper prosecution of the work.

Provide adequate lighting to address quality requirements and inspection of nighttime work.

# Cooperating with Utilities

Use established safety practices when working near utilities. Consult with the appropriate utilities before beginning work. Notify the Engineer immediately of utility conflicts. The Engineer will decide whether to adjust utilities or adjust the work to eliminate or lessen the conflict. Unless otherwise shown on the plans, the Engineer will make necessary arrangements with the utility owner when utility adjustments are required.

Use work procedures that protect utilities or appurtenances that remain in place during construction. Cooperate with utility companies to remove and rearrange utilities to avoid service interruption or duplicate work by the utility companies. Allow utilities access to the right of way.

Immediately notify the appropriate utility of service interruptions resulting from damage due to construction activities. Cooperate with utilities until service is restored. Maintain access to fire hydrants when necessary.

# Cooperation Between Contractors

Cooperate and coordinate with other Contractors working within the limits or adjacent to the limits.

# Cooperation with Railroads

Plan and prosecute portions of the work involving a railway to avoid interference with or hindrance to the railroad company.

If the work is on railroad right of way, do not interfere with the operation of the railroad company’s trains or other property.

## **Railroad Coordination Meeting**. When shown on the plans or directed by the Engineer, schedule and attend a railroad coordination meeting with the Engineer before beginning work or as agreed upon (may be a part of the preconstruction conference described in Article 4L.2., “Preconstruction Conference”). Prepare a list of attendees and invite personnel, including, but not limited to Owner, Contractor, subcontractor, and railroad representatives.

Provide the invitation to the railroad representatives at least 21 calendar days before the railroad coordination meeting.

## **Project-Specific Information**. Refer to project-specific plan sheets in the Contract for specific information concerning the work to be completed by the Contractor and the railroad within railroad right of way; railroad right of way locations impacted by construction; percentage of Contract work at each location; train movements at each location; and requirements for railroad insurance, flagging, and Right of Entry (ROE) Agreements.

## **Right of Entry Agreement by the Owner**. When shown on the plans, the process for obtaining a fully executed ROE Agreement is as follows.

* The Owner will send the unexecuted ROE Agreement to the Contractor with the unexecuted Contract.
* Partially execute the ROE Agreement and return it to the Owner with the partially executed Contract and required insurance.
* The Owner will coordinate with the railroad company regarding the further execution of the ROE Agreement and associated fees. The Owner will pay any ROE Agreement fees directly to the railroad company.
* Once the Owner has received the fully executed ROE Agreement from the railroad company, the Owner will forward the fully executed ROE Agreement to the Contractor.

8.4. **Right of Entry Agreement by the Contractor**. When shown on the plans, contact the railroad company to obtain the ROE Agreement before beginning work on the Contract.

Provide the required insurance to the Owner before beginning work on the Contract.

Execute the ROE Agreement and pay any associated fees to the railroad company. Provide a copy of the fully executed ROE Agreement to the Owner.

# Construction Surveying

Use Method C unless otherwise specified in the Contract. Upon request, the Engineer will allow the Contractor to copy available earthwork cross-sections, computer printouts or data files, and other information necessary to establish and control work. Preserve all control points, stakes, marks, and right of way markers. Assume cost and responsibility of replacing disturbed control points, stakes, marks, and right of way markers damaged by the Contractor’s or its subcontractor’s operations. If the Owner repairs disturbed control points, stakes, marks, or right of way markers, the cost of repair may be deducted from money due or to become due to the Contractor. Replace right of way markers under the direction of an RPLS. This work performed under this Article will not be measured or paid for directly, but will be subsidiary to pertinent Items.

The Engineer reserves the right to make measurements and surveys to determine the accuracy of the work and determine pay quantities. The Engineer’s measurements and surveys do not relieve the Contractor’s responsibility for accuracy of work. Allow the Engineer adequate time to verify the surveying.

## **Method A**. The Engineer will set control points for establishing lines, slopes, grades, and centerlines and for providing both vertical and horizontal control.

At minimum, provide a controlling pair of monument points at both the beginning and end of construction project for projects less than 2 mi. in length. For projects greater than 2 mi. in length, monuments will be set in pairs at a minimum of 2 mi. based on the overall length of the project. Use these control points as reference to perform the work.

Furnish materials, equipment, and qualified workforce necessary for the construction survey work. Place construction points, stakes, and marks at intervals sufficient to control work to established tolerances. Place construction stakes at intervals of no more than 100 ft., or as directed. Place stakes and marks so as not to interfere with normal maintenance operations.

## **Method B**. The Engineer will set adequate control points, stakes, stationing, and marks to establish lines, slopes, grades, and centerlines. Furnish additional work, stakes, materials, and templates necessary for marking and maintaining points and lines.

## **Method C**. Set adequate control points, stakes, and marks to establish lines, slopes, grades, and centerlines. Place construction points, stakes, and marks at intervals sufficient to control work to established tolerances. Place construction stakes at intervals of no more than 100 ft., or as directed. Place stakes and marks so as not to interfere with normal maintenance operations.

# Inspection

Inspectors are authorized representatives of the Engineer. Inspectors are authorized to examine all work performed and materials furnished, including preparation, fabrication, and material manufacture. Inspectors inform the Contractor of failures to meet Contract requirements. Inspectors may reject work or materials and may suspend work until any issues can be referred to and decided by the Engineer. The Engineer may authorize Inspectors to adjust the traffic control. Inspectors cannot alter, add, or waive Contract provisions, issue instructions contrary to the Contract, act as foremen for the Contractor, or interfere with the management of the work. Inspection or lack of inspection will not relieve the Contractor from obligation to provide materials or perform the work in accordance with the Contract.

Provide safe access to all parts of the work and provide information and assistance to the Engineer to allow a complete and detailed inspection. Give the Engineer sufficient notice to inspect the work. Work performed without suitable inspection, as determined by the Engineer, may be ordered removed and replaced at Contractor’s expense. Remove or uncover portions of finished work as directed. Once inspected, restore work to Contract requirements. If the uncovered work is acceptable, the costs to uncover, remove, and replace or make good the parts removed will be paid for in accordance with Article 4L.4., “Changes in the Work.” If the work is unacceptable, assume all costs associated with repair or replacement, including the costs to uncover, remove, and replace or make good the parts removed.

When a government entity, utility, railroad company, or other entity accepts or pays a portion of the Contract, that organization’s representatives may inspect the work but cannot direct the Contractor. The right of inspection does not make that entity a party to the Contract and does not interfere with the rights of the parties to the Contract.

# Final Cleanup

Upon completion of the work, remove construction project litter, debris, objectionable material, temporary structures, excess materials, and equipment from the work locations. Clean and restore property damaged by the Contractor’s operations during the prosecution of the work. Leave the work locations in a neat and presentable condition.

Remove from the right of way cofferdams, construction buildings, material and fabrication plants, temporary structures, excess materials, and debris resulting from construction. Where work is in a stream, remove debris to the ground line of the bed of the stream. Leave stream channels and rights of way in a neat and presentable condition. Clean structures to the flow line or the elevation of the outfall channel, whichever is higher. Dispose of all excess material in accordance with federal, state, and local regulations.

The work performed under this Article will not be paid for directly, but will be subsidiary to Items of the Contract.

# Final Acceptance

## **Routine Maintenance Contracts**. Not applicable to Locally Let projects.

## **Construction Contracts**. Final acceptance is made when all work is complete and the Engineer, in writing, accepts all work for the work locations in the Contract. Final acceptance relieves the Contractor from further Contract responsibilities.

### **Work Completed**. Work completed must include work for vegetative establishment and maintenance, test and performance periods, and work to meet the requirements of Article 5L.11., “Final Cleanup.”

### **Final Inspection**. After all work is complete, the Engineer in charge of the work will request a final inspection by the Engineer authorized to accept the work.

The final inspection will be made as soon as possible and not later than 10 calendar days after the request. No working day charges will be made between the date of request and final inspection.

After the final inspection, if the work is satisfactory, the Engineer will notify the Contractor in writing of the final acceptance of the work. If the final inspection finds any work to be unsatisfactory, the Engineer will identify in writing all deficiencies in the work requiring correction. Correct the deficiencies identified. Working day charges will resume if these deficiencies are not corrected within 7 calendar days, unless otherwise authorized by the Engineer. Upon correction, the Engineer will inspect to verify that all deficiencies were corrected satisfactorily. The Engineer will provide written notice of the final acceptance.

### **Final Measurement**. Final measurements and pay quantity adjustments may be made after final acceptance. Final acceptance will not be held for final measurements or pay quantity adjustments.

### **Removal of Traffic Control Devices**. Remove any remaining construction traffic control devices and advance warning signs upon final acceptance or as directed.

## **Multiple Work Orders**. Not applicable to Locally Let projects.