REVISION OF SECTION 107

PERFORMANCE OF SAFETY CRITICAL WORK

Section 107 of the Standard Specifications is hereby revised as follows:

Add subsection 107.061 immediately following subsection 107.06 as follows:

**107.061 Performance of Safety Critical Work.** The following work elements are considered safety critical work for this project: ♦

1. Overhead girder erection▲
2. Overhead structure construction or repair▲
3. Removal of bridge▲
4. Removal of portion of bridge▲
5. Temporary works: falsework, shoring that exceeds 5 feet in height, cofferdams, and temporary bridges
6. Work requiring the use of cranes or other heavy lifting equipment to set a girder, to make overhead repairs, or includes special provisions for Removal of Bridge or Removal of Portion of Bridge. Also when construction materials are being lifted that may fall onto active traffic lanes.
7. Blasting
8. Excavation and embankment adjacent to the roadway, especially if it requires shoring**♥**
9. Tunneling
10. Work operations such as pile driving and jack hammering which may create vibration and cause debris to fall into traffic.
11. Rockfall mitigation

The Contractor shall submit, for record purposes only, an initial detailed construction plan that addresses safe construction of each of the safety critical elements. When the specifications already require an erection plan, a bridge removal plan, or a removal of portion of bridge plan, it shall be included as a part of this plan. The detailed construction plan shall be submitted two weeks prior to the safety critical element conference described below. The construction plan shall be stamped “Approved for Construction” and signed by the Contractor. The construction plan will not be approved by the Engineer.

The Construction Plan shall include the following:

1. Safety Critical Element for which the plan is being prepared and submitted.
2. Contractor or subcontractor responsible for the plan preparation and the work.
3. Schedule, procedures, equipment, and sequence of operations, that comply with the working hour limitations
4. Temporary works required: falsework, bracing, shoring, etc.
5. Additional actions that will be taken to ensure that the work will be performed safely.
6. Names and qualifications of workers who will be in responsible charge of the work:
	1. Years of experience performing similar work
	2. Training taken in performing similar work
	3. Certifications earned in performing similar work
7. Names and qualifications of workers operating cranes or other lifting equipment
8. Years of experience performing similar work
9. Training taken in performing similar work
10. Certifications earned in performing similar work

REVISION OF SECTION 107

PERFORMANCE OF SAFETY CRITICAL WORK

1. The construction plan shall address how the Contractor will handle contingencies such as:
	* 1. Unplanned events (storms, traffic accidents, etc.)
		2. Structural elements that don’t fit or line up
		3. Work that cannot be completed in time for the roadway to be reopened to traffic
		4. Replacement of workers who don’t perform the work safely
		5. Equipment failure
		6. Other potential difficulties inherent in the type of work being performed
2. Name and qualifications of Contractor’s person designated to determine and notify the Engineer in writing when it is safe to open a route to traffic after it has been closed for safety critical work.
3. Erection plan or bridge removal plan when submitted as required elsewhere by the specifications. Plan requirements that overlap with above requirements may be submitted only once.

A safety critical element conference shall be held two weeks prior to beginning construction on each safety critical element. The Engineer, the Contractor, the safety critical element subcontractors, and the Contractor’s Engineer shall attend the conference. Required pre-erection conferences or bridge removal conferences may be included as a part of this conference.

After the safety critical element conference, and prior to beginning work on the safety critical element, the Contractor shall submit a final construction plan to the Engineer for record purposes only. The Contractor’s Engineer shall sign and seal temporary works, such as falsework, shoring etc., related to construction plans for the safety critical elements, (3) Removal of Bridge, (4) Removal of Portion of Bridge and (5) Temporary Works.♣ The final construction plan shall be stamped “Approved for Construction” and signed by the Contractor.

The Contractor shall perform safety critical work only when the Engineer is on the project site. The Contractor’s Engineer shall be on site to inspect and provide written approval of safety critical work for which he provided signed and sealed construction details. Unless otherwise directed or approved, the Contractor’s Engineer need not be on site during the actual performance of safety critical work, but shall be present to conduct inspection for written approval of the safety critical work.

When ordered by the Engineer, the Contractor shall immediately stop safety critical work that is being performed in an unsafe manner or will result in an unsafe situation for the traveling public. Prior to stopping work, the Contractor shall make the situation safe for work stoppage. The Contractor shall submit an acceptable plan to correct the unsafe process before the Engineer will authorize resumption of the work.

When ordered by the Engineer, the Contractor shall remove workers from the project that are performing the safety critical work in a manner that creates an unsafe situation for the public in accordance with subsection 108.06.

Should an unplanned event occur or the safety critical operation deviate from the submitted plan, the Contractor shall immediately cease operations on the safety critical element, except for performing any work necessary to ensure worksite safety, and provide proper protection of the work and the traveling public. If the Contractor intends to modify the submitted plan, he shall submit a revised plan to the Engineer prior to resuming operations.

All costs associated with the preparation and implementation of each safety critical element construction plan will not be measured and paid for separately, but shall be included in the work.

Nothing in the section shall be construed to relieve the Contractor from ultimate liability for unsafe or negligent acts or to be a waiver of the Colorado Governmental Immunity Act on behalf of the Department.

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**INSTRUCTIONS** **TO** **DESIGNERS** (delete instructions and symbols from final draft):

♦ Include only items from this list deemed appropriate by the Resident Engineer. Consider work from this list that is performed or will remain in close proximity to traffic. Consider activities from this list that require a temporary road closure. Consider each item according to the following guidelines:

1. Overhead girder erection: List this element when the work requires an erection plan.
2. Overhead structure construction or repair: List this element when the work requires an erection plan or when repair work is occurring on a structure over traffic. Consider this element when the project includes pedestrian bridges and cast-in-place concrete structures.

1. Removal of bridge: List this element when the work requires a bridge removal plan.

1. Removal of portion of bridge: List this element when the work requires a bridge removal plan.
2. Temporary works: falsework, shoring that exceeds 5 feet in height, cofferdams, and temporary bridges: List this element when the work requires an erection plan or a bridge removal plan or the work includes retaining walls, minor structures, etc.

1. Work requiring the use of cranes or other lifting equipment: List this element when the work requires an erection plan or a bridge removal plan. Consider this element when the project includes the erection of high mast lighting, overhead signs, variable message signs, and the placement or movement of concrete barrier, etc. that pose unusual risks to passing traffic and construction personnel.
2. Blasting: List this element when blasting will be required adjacent to the roadway or may induce vibrations or shock waves when adjacent to older structures, traffic, or buildings, or rock cut faces and slopes.
3. Excavation and embankment adjacent to the roadway, especially if it requires shoring**:** Consider this element when material from cuts, fills, or rock scaling, may enter the roadway.
4. Tunneling: List this element whenever the project includes tunneling.
5. Pile driving, jack hammering, etc.: Consider this element when work operations such as pile driving and jack hammering in the vicinity of structures in poor condition may create vibration and cause debris to fall into traffic.
6. Rockfall mitigation: List this element when work includes hand and mechanical scaling, installation of rock anchors, blasting, or installation of rockfall fencing or draped netting.

**▲** You may wish to identify a specific structure by Structure Number.

**♥** You may wish to specify the depth or proximity of the earthwork that is considered safety critical work.

♣ Delete this sentence if the elements Removal of Portion of Bridge and Temporary Works are not safety critical work elements for this project.