

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
COMPLEX STRUCTURE DEMOLITION PLAN

STR:JAB

1 of 3

APPR:REL:BMW:12-22-21
FHWA:APPR:01-06-22

a. Description. This work consists of developing and submitting working drawings, calculations, erection diagrams, catalog data, structural evaluations based on current structure condition, and other pertinent information for the proposed methods of structure demolition and the location(s) and type(s) of equipment to be used. Furnish all work and materials for structure demolition in accordance with the standard specifications and the *AASHTO Guide Design Specifications for Bridge Temporary Works*, except as modified herein.

An Existing Structure Information Package (ESIP) will be provided by the Engineer to the Contractor in the RID documents. This package will include available old plans, anticipated material properties, and the latest bridge safety inspection report, structure inventory and appraisal (SI&A) form, and load rating. The information from the Engineer is solely for the convenience and information of the Contractor and does not relieve the Contractor of the duty to make, and the risk of making, examinations and investigations as required to assess conditions affecting the work. Any data furnished in the ESIP is for information only and does not constitute a part of the contract. The Engineer makes no representation or warranty, express or implied, as to the information conveyed or as to any interpretations made from the data.

b. Complex Structure Demolition Plan. Submit a Complex Structure Demolition Plan and calculations for the portions of the structure detailed for removal on the plans, sealed by a Professional Engineer licensed in the State of Michigan. The plan must include, but is not limited to, the following:

1. Evaluation of the structure condition.
2. Equipment to be used and catalog data for heavy equipment.
3. Demolition sequence, including staging and equipment locations, counterweights, tie-downs, etc.
4. Proposed methods of demolition including equipment utilized.
5. Locations of traffic, utilities, railroads, and waterways.
6. Locations and types of protective measures used for the protection of people, traffic, railroads, property, utilities, and pavements.
7. Locations of barges and other equipment to be staged in waterways.
8. Evaluation of capacity and stability of the structure during all stages of demolition, that considers construction loading, changes to statical systems, deflections, and displacements.

9. If applicable, locations and descriptions of monitoring equipment needed to assess deflections and displacements.

10. Pertinent specifications for equipment loading and allowable positioning during the demolition.

11. The allowable positions and magnitudes of stockpiled materials and/or spoils, if planned to be located on the structure.

12. Design and details for temporary shoring and/or bracing, counterweights, and tie-down systems if required by the Contractor's means and methods.

13. Demonstrate that the proposed means and methods to accomplish the work does not compromise the structural adequacy of the bridge or, if applicable, the new poured deck under construction.

14. If applicable, evaluate the stability of the existing girders with removed deck when placing crane(s) and equipment on another part of the existing or new deck.

15. If applicable, evaluate the effect of the deck removal operation and sequence on any new poured section of the deck.

c. Submittal Materials. Submit Complex Structure Demolition Plan and calculations in PDF. Bookmark pages where appropriate. Furnish a cover sheet with each submission that lists the item(s) included in the submission, revision number, Contractor, fabricator or manufacturer, control section number, structure number, applicable federal job number, and state job number. Submit Complex Structure Demolition Plan and calculations to the Engineer and the MDOT Bureau of Bridges and Structures Project Manager, Engineer of Record, and Bridge Construction Engineers at least 21 calendar days before starting deck removal and/or demolition. Do not start operations unless approved by the Engineer. Approval or acceptance of demolition plans will not relieve the Contractor of any responsibility for the successful completion of the work.

d. Materials. None specified.

e. Construction. Perform all work in accordance with the contract and the approved Complex Structure Demolition Plan. Perform the demolition operation and sequence in a safe and controlled manner that will preserve the capacity and stability of the structure at any time during the work activities being performed. Account for the stability of the existing structure when placing crane(s) and equipment on another part of the structure. Protect all pavements from damage.

Prior to commencing demolition operations, hold an on-site pre-demolition meeting with the Engineer, Contractor, and the MDOT Bureau of Bridges and Structures. During the meeting review the approved Complex Structure Demolition Plan, all applicable safety requirements, and the MDOT Memorandum on Authority for Bridge Closures.

The Engineer will issue a Notice of Non-Compliance with Contract Requirements (Form 1165) and demolition activities must stop when one or more of the following are observed.

1. The Engineer determines that the work has created an unsafe condition.

2. The approved Complex Structure Demolition Plan is not being followed.
3. Anticipated deflections or displacements are greater than calculated.

The Engineer will issue a Notice to Resume Work (Form 1165) only after all necessary adjustments are made to restore conformance and the necessary changes to the demolition plans are documented and approved.

Report any accidental incidents or unintentional collapses to the MDOT Bureau of Bridges and Structures Chief Bridge Construction Engineer at 231-590-3382 and Bridge Construction Engineer at 517-937-7400.

f. Measurement and Payment. The completed work, as described, will be measured as a lump sum and paid for at the contract price using the following pay item:

Pay Item	Pay Unit
Structure Demolition Plan, Complex (Structure Identification).....	Lump Sum

Structure Demolition Plan, Complex (Structure Identification) includes all costs associated with developing and submitting Complex Structure Demolition Plan, calculations, monitoring equipment, and other pertinent information for the proposed methods of structure demolition as described in this special provision and performing a site inspection. Payment includes all costs associated with the onsite pre-demolition meeting. Expenses incurred due to revisions to submitted documents prior to obtaining Engineer's approval, or because of changes due to unsafe conditions, are included in the payment. No additional compensation will be made for delays caused by modifications or revisions to the submitted documents prior to obtaining approval by the Engineer.