



# Existing Structures – Structure Rehabilitation – Bridge Deck Repair and Preparation

## Revision and Approval

Revision	Date	Nature of Changes	Approved By
0	07-15-2021	Original Issue	Michael Francis

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## Background

This process establishes Structure Construction (SC) roles and responsibilities for bridge deck repair and preparation of the bridge deck for sealing or an overlay. Structure Construction acts to preserve and extend the life of the State’s infrastructure by the most economical and efficient means.

Prior to reviewing this Bridge Construction Memo (BCM), it is essential to review the [Contract Specifications](#), Section 60-3.02, *Existing Structures – Structure Rehabilitation – Bridge Deck Repair and Preparation*, that this BCM is based on as identified in the title block above. The information in the *Contract Specifications* typically will not be repeated in the text of this BCM.

## Process Inputs

1. Submittals required by the *Contract Specifications* for work that requires bridge deck repair.

## Procedure

1. All work associated with this process is charged as: [Project Direct – Construction](#).
2. Inspection of field work for this process is:

- a. [Benchmark](#) for removal of bridge deck surfacing, seals, and unsound concrete; and preparing the bridge deck surface for sealing or overlays.
  - b. [Continuous](#) for installing rapid setting concrete patches, sealing and/or overlays.
3. Before construction begins:
- a. Review the following:
    - i. Contract plans for bridge deck preparation limits.
    - ii. *Contract Specification* requirements for removing concrete deck surfaces, removing asphalt concrete surfaces, removing seals, removing unsound concrete, patching with rapid setting concrete and preparing concrete deck surfaces.
    - iii. Documents from the Structures Maintenance and Investigations BIRIS website for each site planned for repair:
      1. The as-built plans.
      2. Latest bridge inspection reports.
      3. Previous test results conducted by bridge maintenance staff for each site.
    - iv. For methacrylate application, review the *Contract Specifications, Section 41-3, Existing Concrete Pavement – Crack Treatment*, and applicable sections of the Special Provisions for the Contractor’s Public Safety and Application Plan.
    - v. [Concrete Technology Manual](#), Chapter 6, *Structure Concrete Repair and Rehabilitation*.
  - b. Review and authorize contractor’s work plan chip seal removal submittal.
  - c. Verify the concrete repair material the contractor plans to use is on the [Authorized Materials List](#) (AML), Precast Concrete Cementitious Based Repair Materials (These products are also used on non-precast concrete).
  - d. Take photos to document the existing condition of all sites that will be repaired.
  - e. Review freeway lane closure charts with the Resident Engineer, and discuss any issues (discrepancies, omissions, etc.) that could affect deck repair and preparation work.
  - f. Suggest scheduling a preconstruction meeting to discuss submittals, quantities, correspondence, communication, request for information (RFI’s), material release or any issues that may need stakeholder’s input.
4. During construction:

- a. Determine the limits of unsound concrete by chaining the deck.
  - b. Mark the areas that require repair and discuss with the contractor.
  - c. Store and/or dispose of materials removed per the authorized submittal for chip seal removal.
  - d. After unsound concrete is repaired, calculate payment quantities per *Contract Specifications*, 60-3.02D, *Existing Structures – Structure Rehabilitation – Payment*, and document in the daily diaries.
  - e. Document all inspection, construction, and quality assurance activities, pertinent to this BCM, in the daily reports per [BCM C-7](#), *Daily and Weekly Reports*.
  - f. Transfer all field changed details and dimensions from the original plans to the new as-built plans. Document as-built changes on the as-built plans.
5. Following construction:
    - a. Enter material information on the Report of Completion.
  6. File all materials acceptance documentation and daily reports in the appropriate category in the project records as specified in the *Construction Manual*, [Section 5-102](#), *Contract Administration – Project Records and Reports – Organization of Project Documents*.

## **Process Outputs**

1. Authorized submittals
2. Information on Required Document including Report of Completion and as-builts
3. Daily reports and quantities

## **Attachments**

None