Guidance for Completing Required Documents Submitted to SC HQ

This attachment includes guidance, expectations, and background information for completing required documents that are submitted to Structure Construction (SC) headquarters (HQ), listed in BCM C-6, Attachment 1, *List of Required Documents Submitted to SC HQ*. For examples of completed required documents refer to Attachment 4, *Samples of Required Documents Submitted to SC HQ*.

1 - Project Status Initial & Project Status Final

The SC Oversight Engineer or Structure Representative (SR) must submit Project Status Initial (PSI) and Project Status Final (PSF) data for all projects administered by SC.

Structure Construction (SC) uses the PSI and PSF information in numerous ways, including checking resource needs against the project cost, to provide the current status of the project, and to establish completion of the project for final records.

The SC project management web application, VISION, is used to complete and submit PSI and PSF data. VISION automatically notifies SC Headquarters Office Associates via email when PSI or PSF data has been submitted.

The SR is responsible for entering PSI and PSF data in VISION. If a SR is unable to submit PSI and PSF data for the project that they are assigned to, then the project Bridge Construction Engineer must verify that the SR is currently assigned to the project in VISION and the project working calendar is current. If the SR is not assigned and/or the project working calendar is not current, the BCE will update VISION.

The PSI and PSF web forms can be accessed through VISION on the SC Intranet website.

1. The *Project Status Initial* data is to be submitted after the Task 275 start date in VISION and after the Division of Work memo has been written. Refer to *BCM C-5, Division of Project Work*.

2. The *Project Status Final* data is to be submitted when all structure work is complete and after the Task 275 end date in VISION. *Project Status Final* data for projects with pending claims must be entered at this time with known costs and updated with the final costs after all claims are resolved. Enter a note in the comment field in VISION that the project has pending claims.
3. More detailed instructions on how to submit PSI and PSF data in VISION can be found by clicking the VISION guidance link on the VISION home page.

2 - Driven Pile Records

The SR is responsible to provide pile inspection and to develop pile records during the construction of the project.

The following forms are used to record the required data for driven piles:

1. Form SC-4803, Pile Quantity & Driving Record (Driven Piles)
2. Form SC-4805, Log Pile Sheet
3. Form SC-4806, Pile Layout Sheet

Preparation and completion of these forms is performed as described in BCM 49-2, Piling – Driven Piling.

The driven pile records will become a permanent part of the files maintained by the Office of Geotechnical Services.

2.1 Form SC-4803, Pile Quantity & Driving Record (Driven Piles)

When using Form SC-4803, list only one bridge or structure per form. Form SC-4803 provides a basis of payment to the Contractor for each item of work; therefore, one form should be prepared for each class or type of pile within the bridge or structure.

The pile number shown on Form SC-4803 corresponds to the pile numbers on Form SC-4806, Pile Layout Sheet.

2.2 Form SC-4805, Log Pile Sheet

Form SC-4805 is used for driven piles to log the blow count for each foot of penetration. The penetration must be referenced to some known elevation to establish the actual pile tip elevation.

Form SC-4805 is prepared for each pile logged. All piles are logged.

Additional piles should be logged when significant changes in the driving conditions are encountered within an individual footing.
2.3 Form SC-4806, **Pile Layout Sheet**

Each pile number on Form SC-4806, *Pile Layout Sheet*, corresponds to the pile number on Form SC-4803, *Pile Quantity & Driving Record (Driven Piles)* or Form SC-4804, *Pile Quantity & Drilling Record (CIDH Piles)*.

Information shown on Form SC-4806 must be sufficient to enable SC Staff to verify the Contractor's layout for the unit of work to be done.

2.4 Disposition of Pile Records

Form SC-4803, *Pile Quantity & Driving Records (Driven Piles)*, is filed in the job records in Category 48, *Contract Item Quantity Documents*, to serve as a source document for progress payment purposes.

For driven piles, a copy Form SC-4803, *Pile Quantity & Driving Records (Driven Piles)*, along with copies of each Form SC-4805, *Log Pile Sheet*, and each Form SC-4806, *Pile Layout Sheet*, for the driven piles, must be sent to SC HQ immediately after a structure or major portion of the work is complete. Refer to Attachment 1, *List of Required Documents Submitted to SC HQ*, for details on how to submit pile records.

Upon receipt by SC HQ, the pile driving records will be logged into VISION and then forwarded to Office of Geotechnical Services for inclusion in the permanent records. Do not send pile records directly to Office of Geotechnical Services. The pile driving records are used for future design of structure rehabilitation or replacement reference on ongoing and future projects.

3 - Cast-In-Drilled-Hole (CIDH) Piling Records

The following forms are used to record the required data for CIDH piles:

1. Form SC-3803, *Drilled Shaft Excavation Log*
2. Form SC-4804, *Pile Quantity & Drilling Record (CIDH Piles)*
3. Form SC-4806, *Pile Layout Sheet*

Refer to BCM 49-3, *Piling – Cast-in-Place Concrete Piling*, for procedures for CIDH piling. Form SC-3803, Form SC-4804, and Form SC-4806 will become a permanent part of the files maintained by the Office of Geotechnical Services.
3.1 Form SC-4804, Pile Quantity & Drilling Record (CIDH piles)

When using Form SC-4804, list only one bridge or structure per form. Form SC-4804 provides a basis of payment to the Contractor for each item of work; therefore, one form should be prepared for each class or type of pile within the bridge or structure.

The layout of the piles on Form SC-4806, Pile Layout Sheet, corresponds to the layout shown in the project plans and are referred to by a number which corresponds to the pile number on Form SC-4804.

3.2 Disposition of Pile Records

Form SC-4804, Pile Quantity & Drilling Records (CIDH piles), are filed in the job records in Category 48, Contract Item Quantity Documents, and serves as the source document for progress payment purposes.

Upon receipt by the SC-HQ, the CIDH pile records will be logged into VISION and then forwarded to the Office of Geotechnical Services for future design of structure rehabilitation or replacement reference for ongoing and future projects inclusion in the permanent records. Do not send pile records directly to the Office of Structural Foundations.

After a test report from the Foundation Testing Branch (FTB) is sent to the SR, the CIDH Pile Mitigation Committee Chair will send an electronic copy of Form SC-3812, CIDH Pile Information for Piles Tested by the Foundation Testing Branch, to the SR.

When all of the CIDH piles are complete for a given contract, the SR will make one submittal of the final results to the CIDH Pile Mitigation Committee Chair. A sample of a completed Form SC-3812 is shown in Attachment 4.

If there are piles for a contract that require mitigation, wait to complete this form until after mitigation is completed and the piles are accepted. Refer to the Table 2, Required Documents Submitted to the SC Substructure Engineer, for the three documents that are submitted to the SC Substructure Engineer in addition to Form SC-3812 for mitigating piles.

4 - Joint Seal Calculations

Form DSD-D-0129, Joint Movement Calculations, is furnished by the designer, the contract manager (for consultant contract managed projects), or the liaison engineer (for externally financed projects), upon request by the SR, if Form DSD-D-0129 is not included in the RE Pending File.
Note that a separate Form DSD-D-0129, *Joint Movement Calculations*, should be completed for a structure when a Type B Joint Seal or Joint Seal Assembly is used. Refer to **BCM 51-2, Concrete Structures – Joints**, for guidance. Each form should be submitted as soon as all joint seal placements are completed on that structure. Do not wait until the completion of all the structures or completion of the contract.

Upon receipt by SC-HQ, Form DSD-D-0129 will be logged into the project management database and then forwarded to the Structure Maintenance and Investigations (SM&I) for inclusion in the permanent records. Do not send Form DSD-D-0129 directly to SMI. Form DSD-D-0129 is referenced for ongoing and future projects.

**5 - Paint Records**

Review **BCM 59-2, Structural Steel Coatings – Painting Structural Steel**, Attachment 1, *Cleaning and Painting of Structural Steel*, which includes a section titled, *Paint Records and Reports*. Submit **Form SC-6305, Paint Record**, immediately after the structure is painted to SC-HQ. Upon receipt by SC-HQ, the paint record will be logged into VISION, and then forwarded to the SM&I Paint Specialist and inclusion in the permanent records.

**6 - Permanent Vertical Clearance**

The change in clearance or permit rating of a structure can affect the issuance of transportation permits and the routing of oversize and overweight vehicles. The notification procedures for changes in the clearance or permit rating of a structure are addressed in the Caltrans **Construction Manual**, Section 3-703, *Public Safety*. The clearance changes addressed by Section 3-703 are not limited to bridge structures, but also include the clearance changes caused by the installation or modification of sign structures. Any changes in existing clearances or permit rating, even if the resulting clearance or permit rating satisfies legal clearance or load limitations, must be documented. The timely reporting of changes in clearance or permit rating on a statewide basis is essential to maintaining the accuracy of the clearance and permit rating database and ultimately the safety of the traveling public. Refer to **Deputy Directive 57, Route Information for Oversize and Overweight Vehicles**.

Permanent Vertical Clearance forms must be completed when:

1. A physical object (permanent or temporary) encroaches toward or over the traveled roadway.
2. There is a theoretical vertical and/or horizontal clearance change noted in the authorized falsework shop drawings.
3. Changes to a bridge’s permit rating specified in the contract *Special Provisions* or by the designer.

Tasks to be completed for permanent vertical clearance documents are as follows:

1. Review the contract documents for potential temporary and permanent impairments to the travelled way. Typically, these involve construction of overhead sign structures or falsework for permanent structures. However, this can also include less common items, such as temporary containment systems for bridge painting or substructure rehabilitation work requiring a temporary permit load reduction. Temporary construction clearances and notifications will be specified in the *Railroad Relations and Insurance Requirements*. The railroad must be notified prior (typically 25 day prior) to any construction that affects clearance to railroad property. The notification must be given to the Regional/Railroad Agents through the Resident Engineer. The minimum permanent vertical and horizontal clearances to the railroad tracks must be noted on the structure as-built General Plan sheet. Vertical clearance is measured from the top of rail to the structure. Horizontal clearance is measured to the centerline of the tack to the structure.

2. Discuss Transportation Permits Branch (TPB) notification protocols with the Resident Engineer (RE).

3. Discuss requirements for temporary impairment notifications at the preconstruction conference and with the Contractor as work progresses.

4. For temporary impairments to the travelled way:
   a. Upon receipt of falsework shop drawings or other submittals that temporarily impair the travelled way:
      i. Estimate the impending clearance.
      ii. Complete [Form TR-0019](#), *Notice of Change in Clearance or Bridge Weight Rating*, [Form TR-0020](#), *Notice of Change in Vertical or Horizontal Clearance*, or [Form TR-0029](#), *Notice of Change in Clearance or Bridge Weight Rating*, as appropriate.
      iii. Notify TPB at least 15 calendar days prior to construction of the impairment.
      iv. Notify the affected agency in writing if the clearance change is on a local jurisdiction roadway.
      v. Take appropriate action if the measured clearance is less than that previously reported.
   b. Upon construction of the temporary impairment:
      i. Verify actual dimensions of clearance.
ii. Update forms TR-0019, TR-0020, or TR-0029.
iii. Notify TPB.

c. Notify the RE when a temporary impairment is removed when applicable.

5. For permanent impairments to the travelled way:
   a. Follow procedure for construction of the temporary impairment (Step 4b).
   b. Send form(s) for permanent changes in impairments to SC HQ. Refer to Attachment 1, *List of Required Documents Submitted to SC HQ*, for details on how to submit the forms.

6. For temporary changes of bridge permit rating specified in the contract *Special Provisions* or by designer:
   a. Notify RE in writing and the Bridge Rating Engineer (BRE) 15 days before implementing proposed bridge permit rating changes
      i. Complete Form TR-0019 or TR-0029 as appropriate.
      ii. Notify TPB.
   b. Notify RE in writing and the BRE within three days of rescinding the temporary bridge permit rating.

7. For permanent changes of bridge permit rating specified in the contract *Special Provisions* or by designer:
   a. Notify RE in writing and the BRE 15 days before implementing proposed bridge permit rating changes.
      i. Complete Form TR-0019 or TR-0029 as appropriate.
      ii. Notify TPB.

8. Place a copy of all notification forms in the project records.

### 7 - Report of Completion for Structures

All structures, including buildings and earth retaining structures, which have been assigned a structure/bridge number on the contract project plans require a Report of Completion.

The SR must complete *Form SC-6303, Report of Completion – Bridges*, and *Form SC-6304, Report of Completion – Buildings*, immediately upon completion of a structure. Refer to Attachment 1, *List of Required Documents Submitted to SC HQ*, for details on how to submit the form. This form is completed for new construction, widenings, deck replacement, joint seal replacement, retrofit, etc. of bridges, MSE walls, retaining walls, etc.
Do not wait until completion of all the structures or completion of the contract before submitting the individual structure completion reports. After SC Headquarters logs the receipt of the completion report, the report is forwarded to the SM&I and entered in the Bridge Inspection Records Information System (BIRIS). SM&I keeps bridge books for every individual bridge in the State Highway inventory, thus creating the need to have individual completion reports for each structure. For structures in the seismic retrofit program, Form SC-6303 is also sent to the Office Earthquake Engineering.

The following provides guidance to assist the SR when preparing Form SC-6303 and Form SC-6304:

1. Total cost recorded should include contract change orders. (Do not delay the report submittal while waiting for final accounting information. Enter the estimated final cost and indicate “Estimated Cost”).

2. List only the materials incorporated into the structure covered by the report.

3. The resin manufacturer’s name should be listed under Deck Seal when methacrylate treatment is used on a structure.

4. If there are more than two items in the same classification, then the “Other” category at the bottom of the list should be used.

5. When the structure is an earth retaining structure, the following should be used as a guide for classification of the non-standard material:
   a. Tieback anchors:
      i. Strand is under Prestressing Systems
      ii. Grout is under Cement
      iii. Bearing plate is under Structural Steel
   b. Mechanically Stabilized Embankment (MSE):
      i. Manufacturer of the system is under Other
      ii. Soil reinforcement is under Structural Steel
      iii. Structural Backfill is under Fine Aggregate
   c. Soil Nail:
      i. Soil Nail is under Reinforced Steel, Grade
      ii. Grout is under cement

6. List the name of the utility owner and encroachment permit number.
7. List only construction details that are unusual or of special interest and use additional sheets if necessary. Include any attachments that are deemed appropriate by the SR and identify them in the Attachments section of the report.

8 - Structure Complete Notification

To comply with Federal Highway Administration (FHWA) regulations, SM&I needs to inspect each structure and enter it into the National Bridge Inventory or National Tunnel Inventory.

Completion for all new or widened structures will be defined as:

1. Bridges or Tunnels constructed in place
2. Falsework removed
3. Barrier rail completed
4. Traffic in final configuration
   a. When practical and applicable, notification should be given with ample lead time to allow SM&I an inspection opportunity before the structure is open to traffic, but completion would be recognized when the traffic was in the final configuration.
5. Stream bed in final configuration
6. Final surface finishing need not be completed.

8.1 Responsibilities When Caltrans is the Implementing Agency

8.1.1 Structure Representative:

Notifies by email SM&I (BridgelInfo@dot.ca.gov), the Bridge Design Structure Project Engineer (Structure.Design.Quality@dot.ca.gov), and SC (SC.Office.Associates@dot.ca.gov), within the expected timeframe of 15 days of the completion of all new or widened structures with the following information:

1. Bridge Name
2. Bridge Number
3. County
4. Route
5. Post Mile
6. Short description of the completed work (e.g., new structure, bridge widening)
7. Copy of the General Plan sheet of the project plans.
8.2 Responsibilities When Caltrans is not the Implementing Agency

8.2.1 Agency Representative:

1. Completes the form, *Request to Add Structure to the National Inventory* within 15 days of completion of all new or widened structures.

2. Submits (by email) the above mentioned form and a copy of the General Plan sheet of the project plans to SM&I (*BridgelInfo@dot.ca.gov*), the Oversight SR, and SC (*SC.Office.Associates@dot.ca.gov*).

8.2.2 Department:

1. Ensures Caltrans Division of Maintenance, SM&I, has been notified of structure completion. When Caltrans is the implementing agency, the SC HQ Office Associate will ensure that SM&I has been notified of structure completion.

The following is an example email to SM&I, the Bridge Design Project Engineer, and SC, informing them of structure completion:

To: *BridgelInfo@dot.ca.gov*, *Bridge.Design.Quality@dot.ca.gov* and *SC.Office.Associates@dot.ca.gov*

Subject: Structure Completion (Br. No. XX-XXXX)

**For bridge widenings:**

Bridge Name: <Insert Bridge Name>
Bridge Number: <Insert Bridge Number XX-XXXX>
County: <Insert County Name>
Route: <Insert Route Number>
Post Mile: <Insert Post Mile>

The widening of the above-named bridge is complete. The General Plan for this structure is attached for your use.

**For new bridges or tunnels:**

Bridge Name: <Insert Bridge Name>
Bridge Number: <Insert Bridge Number XX-XXXX>
County: <Insert County Name>
Route: <Insert Route Number>
Post Mile: <Insert Post Mile>
The above-named bridge or tunnel is complete. The General Plan for this structure is attached for your use.

I.M. Engineer
Structure Representative
(XXX) XXX-XXXX

9 - As-Built CPM Schedule

The Structure Office Engineer – Cost Estimates Branch obtains as-built progress schedule from SC. The as-built progress schedule information is used to improve the accuracy of the Engineer’s estimates to better determine duration of construction activities.

Progress schedules are required to be submitted by the Contractor per the Contract Specifications. For contracts that use a critical path method (CPM) schedule, the SR must submit a copy of the most accurate version of the as-built CPM progress schedule to the SC HQ. The most accurate CPM schedule should depict the actual sequence and duration of activities during the life of the contract. The initial baseline CPM schedule does not properly represent the actual work duration of each contract item over the life of the project. Typically, the last update of the CPM schedule prior to the project completion is the most accurate progress schedule to submit to SC HQ. Refer to Attachment 1, List of Required Documents Submitted to SC HQ, for details on how to submit the schedule.

If the as-built CPM schedule is not available due to claims or other special circumstances, the most accurate CPM schedule may be submitted instead. However, once claims or special circumstances are resolved, a revised CPM schedule should be submitted.

The Contract Specifications, Section 8-1.02, Prosecution and Progress – General – Schedule, generally discusses progress schedules. In addition, progress schedules should be filed in Category 26, Progress Schedules.

10 - As-built Structure Project Plan Sheets

Accurate, detailed, and informative as-builts are essential for the design and construction of future rehabilitation and/or demolition projects.
To complete the as-built project plans, before construction begins, procure a complete set of structure project plans that will be used as a working set to document as-built changes.

During construction:

1. The SR or delegate:
   a. Accurately documents change order (CO) work affecting structure work on designated as-built structure project plans. If new structure project plan sheets have been provided for a CO, insert the new project plan sheets into the as-built project plan set in front of the project plan sheet it is replacing. On the project plan sheet being replaced, strike across the sheet and note that the project plan sheet is replaced by project plan sheet XXXRX.
   b. Accurately documents as-built changes on the designated working set of structure project plans continuously as work is completed with red-colored markings.
   c. Accurately records necessary supplemental information on as-built structure project plans per the requirements of Attachment 3, Guidance for Completing As-Built Project Plans.

2. The Bridge Construction Engineer (BCE) verifies that the SRs and Assistant SRs are progressively recording as-built changes on the designated working set of as-built project plans, and documents this on Form SC-6301, Project Record Review.

Refer to the Contract Specifications, Section 99-1, Building Construction – General Requirements, for contract requirements and BCM 99-1, Building Construction – General Requirements, for guidance on the review and authorization of as-built drawings for building construction.

Following construction, the SR or delegate must:

1. Stamp the as-built project plans with as-built stamp and fills in the required information. A digital as-built stamp for use in Adobe Acrobat is available on the SC web page.

2. Submit as-built project plans to SC HQ no later than 30 days after completion of structure work per Attachment 3, Guidance for Completing As-Built Project Plans. Refer to Attachment 1, List of Required Documents Submitted to SC HQ, for details on how to submit as-built project plans.

The SR and the BCE verifies in VISION that the as-built structure project plans are marked as received. If they have not been received contact the SC HQ Office Associate.
11 – Project Status Final

See list item #1, Project Status Initial & Project Status Final, on page 1.

12 - Confirmation of Sending Report of Permanent Horizontal and Vertical Clearances to Permits

The SR must submit written confirmation which can be an email response saying “confirmation”. This is needed for quality assurance to verify this is done.

13 - Authorized Shop Drawings

The SR must submit a copy of the authorized shop drawings to SC HQ immediately after authorization. If the as-built of authorized shop drawings are not submitted, the authorized shop drawings will be noted as-designed authorized shop drawings and submitted to SM&I for inclusion in the permanent records.

14 - As-Built of Authorized Shop Drawings

The SR should review the contract documents to ensure that required as-built shop drawings are sent to SC-HQ by email to sc.office.associates@dot.ca.gov prior to contract acceptance. The SR should take administrative deductions per the Construction Manual, Section 3-907, Payment After Contract Acceptance, until all outstanding job records (including as-built of authorized shop drawings) have been received.

Typical submittals requiring final or as-built shop drawings include:

1. Alternative Column Casings
2. Joint Seal Assemblies
3. Mechanically Stabilized Embankment (MSE) Walls
4. Micropiles
5. Prestressing Cast-in-Place Concrete
6. Prestressed Girders
7. Precast/Prestressed (PC/PS) Concrete Deck Panels
8. PTFE Bearings
9. PTFE Spherical Bearings
10. Falsework
11. Shoring
12. Seismic Isolation Bearings
13. Shock Transmission Devices
14. Soil Anchors
15. Steel Column Casings – Flared columns only
16. Structural Steel
17. Viscous Dampers
18. Proprietary Alternative Retaining Wall Systems
19. Proprietary Alternative Pile Systems
20. Proprietary Soundwalls (Carsonite, Port-O-Wall)
21. Column Guying

It is important that the SR reviews the contract documents for project specific requirements. If the shop drawings are sent directly to the SR, the SR should review for accuracy, then if complete, forward the drawings to SC-HQ by email to sc.office.associates@dot.ca.gov. Effective July 2020, the Contract Specifications, Section 5-1.23B(2), Control of Work – General – Submittals – Action Submittals – Shop Drawings, was revised to add the following requirements:

Do not submit paper copies to OSD, Document Unit. For submittals to OSD, Documents Unit, e-mail shop drawings and calculation sheets electronically to sc.office.associates@dot.ca.gov. …"

If contracts do not include this requirement in the Special Provisions, a Change Order should be issued as the OSD Documents Unit is no longer processing submittals.

Upon receipt by SC-HQ, the as-built shop drawings are reviewed by the SC HQ Office Associates will be logged into the project management data base and then forwarded to SM&I for inclusion in the permanent records.

15 - Complaint, Summons, and Subpoena

If a complaint, summons, subpoena, or potential damage claim is received, contact the SC HQ Office Associate for the district the document was received, and submit a copy to the SC HQ immediately. Refer to the reference document, Complaint, Summons, Subpoena and Potential Damage Claim, on the SC intranet under the Field Resources tab. A member of the SC HQ staff will outline the proper procedures to follow.

16 – Potential Damage Claim

Same guidance as list item #15, Complaint, Summons, and Subpoena.

17 – Completed Pile Design Data Form

For guidance refer to BCM 49-3, Attachment 2, CIDH Concrete Piling – Contract Administration and Department Acceptance.
18 - Authorized CIDH Pile Mitigation Plan

For guidance refer to BCM 49-3, Attachment 2, CIDH Concrete Piling – Contract Administration and Department Acceptance.

19 - CIDH Pile Post Mitigation Plan

For guidance refer to BCM 49-3, Attachment 2, CIDH Concrete Piling – Contract Administration and Department Acceptance.

20 - CIDH Pile Information for Piles Tested by the Foundation Testing Branch FTB memo

For guidance refer to BCM 49-3, Attachment 2, CIDH Concrete Piling – Contract Administration and Department Acceptance.

21 - Authorized Temporary Support Shop Drawings (for Falsework, Column Guying, Bridge Removal Plan, Shoring, etc.)

Review and authorize the shop drawings per guidance in BCM C-11, Shop Drawing Review of Temporary Structures, and the Falsework Manual, Chapter 2, Review of Shop Drawings. As soon as the shop drawings are authorized, the SR will submit a copy of the shop drawings and transmittal letter to SC HQ. If the as-built shop drawings are not received, the authorized shop drawings will be submitted to Structure Design as the “As-Designed As-Builts”.

22 – Change of Address for Check Disbursement

Complete all sections for Form SC-0102, Change of Address for Check Disbursement and Other Mailings, as this information is used to mail any checks received, and information that must be mailed. This information is for use by SC HQ only. Form SC-0102 is not used by Caltrans Human Resources and does not take the place of Form STD 686, Employee Action Request (EAR).