



Driven Piling – General – Submittals

Revision and Approval

Revision	Date	Nature of Changes	Approved By
0	09-04-2018	Original issue.	Steve Altman

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Background

This process establishes the Structure Construction (SC) responsibilities and procedures for review and authorization of general driven piling submittals, including the Driving System Submittal (DSS), Pile and Driving Data forms, and printed hammer energy readouts for pile driving hammers with no way of visually observing the ram stroke.

These are in addition to general submittals for piling described in [BCM 49-1.01C](#), *Piling – General – Submittals*.

Process Inputs

1. [Form CEM-3101](#) – *Notice of Materials to be Used*
2. Driving System Submittal from the Contractor
3. Pile and Driving Data form submittals from the Contractor
4. Printed hammer energy readouts from the Contractor
5. Authorized Pile Handling Plan submittal from the Contractor per [BCM 49-1.01C](#)

Procedure

1. All work associated with this process is charged as [Project-Direct - Construction](#).
2. Before construction begins:
 - a. Using [Form CEM-3101](#), confirm piles meeting the contract requirements are being procured and that Materials Engineering and Testing Services (METS) has been notified.

- b. Discuss requirements for Pile and Driving Data forms and Driving Systems Submittal (DSS) requirements during the preconstruction meeting¹.
 - c. Notify Foundation Testing and Instrumentation (FTI) of pile driving requirements for the project and provide necessary documents.
 - d. Review and authorize or reject the submitted Pile and Driving Data forms:
 - i. Discuss any questions about the Pile and Driving Data forms with FTI.
 - ii. Discuss issues preventing authorization of the Pile and Driving Data forms with the Contractor.
 - e. Perform an initial review of the submitted DSS for completeness:
 - i. Review the DSS with the Resident Engineer to verify compliance with any additional project requirements and request contingency plan from the Contractor as needed.
 - ii. Request additional information from the Contractor if needed until the DSS is complete.
 - f. Review the DSS for completeness. Forward the complete DSS to FTI for review, per the instructions on the [FTI website](#). Authorize or reject the DSS based on FTI recommendation. Refer to the *Foundation Manual*, [Section 7-5](#), *Nominal Resistance/Bearing Capacity* and [Appendix K-1](#), *Driven Piling Construction Checklist*.
 - g. If not previously authorized, perform a concurrent review of the Pile Handling Plan submitted per [BCM 49-1.01C](#) and verify compatibility of the Pile Handling Plan, Pile and Driving Data forms, and the DSS.
 - h. Notify the Contractor in writing of rejection or authorization of the DSS.
3. During construction:
- a. For double-acting pile driving hammers or other hammer types where the ram stroke cannot be visually observed:
 - i. Receive the printed readout of hammer energy for each pile during driving operations from the Contractor.
 - ii. Determine pile acceptance using the printed readout hammer energy delivered at the pile specified tip elevation.

Process Outputs

- 1. Authorized Pile and Driving Data forms:
 - a. Customers: Structure Representative, District

¹ [Foundation Manual](#), Section 7-5, *Nominal Resistance/Bearing Capacity*

- b. Customer Expectations: Timely review, can be used for pile construction and acceptance
- 2. Driving Systems Submittal Review Report from FTI:
 - a. Customers: Structure Representative
 - b. Customer Expectations: Timely review, conclusions clearly stated
- 3. Authorized Driving Systems Submittal:
 - a. Customers: District, Contractor, Assistant Structure Representatives
 - b. Customer Expectations: Contract requirements are met, timely review and authorization

Attachments

None.