

Assigned to pile driving project... What do I do?

1. Get a copy if the GRLWEAP analysis from the Contractor. Make sure that the brand/model pile hammer that the Contractor will be using matches the one listed in the WEAP analysis. You need an analysis for each hammer being used and hammer settings for each structure being driven. Use the same hammer to drive the test piles and to drive the foundation piles. Review with Br Office if any questions. Mark M. at 651-366-4464 or Mark S. at 651-366-4564.
2. Review soil borings vs. test pile depth...where do you think the pile will reach final design bearing? Are there some higher blow count readings in the soil bearing info that will require driving through?
3. Has the Contractor furnished certification on the piles? Check and document type, length, size, heat numbers, condition and Mill Test Reports. Verify that the material was "Melted and Manufactured in the USA" on Federally Funded Projects.
4. Review Plans/Proposal for pile layout, design bearing, pile size and thickness required estimated pile lengths.
5. Are there pile points required on the piling?
6. Has the Contractor staked the pile location and inspector checked the location? Pile locations are tied to the Working Points.
7. Download the "Inspector Chart" program from Bridge Office web site if you feel it will assist you.
8. Certified welders are required for welding splices, driving shoes or pile points. Must be AWS D1.1 Certified with 6 month continuity records for similar welds. All welds must be watertight
9. Are commercial drive fit splices to be used? Watch for the six restrictions on their use in the Spec Book (2452.3.H), and any notes regarding their use in the Special Provisions
10. Are the Piles going to be exposed to view? ...painted section or galvanized top to be spliced on?
11. Battered pile are indicated with an arrow in the plans.
12. Driving ...get accurate drop of ram by timing 10 stokes and use the MPF12 Inspector Chart (found on the MnDOT Bridge website.) to compute the Drop Height. Or use an "app" available for purchase online for either Apple or Droid cell phones.
13. Count blows per foot on Test Pile to determine "S" (set of the pile), record on the Test Pile Report while driving to required penetration and bearing (LRFD 0.05"/blow-240 blows per foot or a minimum of 115% of the nominal resistance formula indicated in the plan after test pile has been driven full length.)
14. When driving the Test Pile, calculate the bearing for each foot below cut-off and record on the Test Pile Report.
15. If your bridge has a pay quantity for "Piling Delivered", email completed Test Pile Report to Mark at the Bridge Office prior to calling for authorization of foundation pile lengths.
16. When driving the Foundation Pile, calculate the bearing achieved during the last ten blows and record on the Pile Driving Report, along with the length of pile below cut-off elevation (follow directions on the back of the pile driving report.)
17. After driving, inspect each pile for depth to driving shoe, and for condition of the shell. Notify the Bridge Office if any damage is observed while using a light to inspect the full length of the shell. Check placement and alignment (Batter and plumbness within 1/2"/foot and having a final position within 6" of the plan location within the footing area. Requirements for Pile Bents are tighter,

being within ¼"/foot for both batter and plumbness, and within 3" of plan location within the Bent.)

18. Contact the Bridge Office with any concerns or if a pile fails.
19. Cut-off steel piles to within plus or minus 1" of cut-off elevation
20. Fill Shell Pile with 1P62 concrete mix. Protect concrete in piles from freezing for at least 3 days after placement. If placing concrete in pile during freezing temperatures, provide 30% additional cement to the concrete above 10 feet below the ground line or waterline.
21. Complete both front and back of all reports and submit all Test Pile Reports and Pile Driving Reports to the Bridge Office (or as directed on the reports)