TEST PILES, EMBEDDED DATA COLLECTOR.
(REV 10-27-06) (FA 11-16-06) (1-07)

SUBARTICLE 455-5.12 (Pages 512 and 513) is deleted and the following substituted:

455-5.12 Test Piles:

455-5.12.1 Description: Furnish test piles with Embedded Data Collectors installed. Ensure that the Embedded Data Collectors have been installed in accordance with Interim Index Number 20602, and in the presence of the Engineer. Obtain the Engineer's approval prior to casting the test piles.

Notify the Engineer at least one day prior to driving the test piles. Do not drive test piles without the presence of the Engineer. Data Collection from the Embedded Data Collector will be the responsibility of the Department, and will be in addition to the information collected in accordance with 455-5.14.

Drive piles of the same cross-section and type as the permanent piles shown in the plans, in order to determine any or all of the following:

(a) the installation criteria for the piles.
(b) the nature of the soil.
(c) the lengths of permanent piles required for the work.
(d) the driving resistance characteristics of the various soil strata.
(e) the amount of work necessary to obtain minimum required pile penetration.
(f) the ability of the driving system to do the work.
(g) the need for point protection.

Because test piles are exploratory in nature, drive them harder (within the limits of practical refusal), deeper, and to a greater bearing resistance than required for the permanent piling. Except for test piles which are to be statically (or Statnamically) load tested, drive test piles their full length or to practical refusal. Build up test piles which have been driven their full length and have developed only minimal required bearing, and proceed with further driving.

As a minimum, unless otherwise directed by the Engineer, do not cease driving of test piles until obtaining the required bearing capacity continuously, where the blow count is increasing, for 10 feet unless reaching practical refusal first. For test piles which are to be statically (or Statnamically) load tested, ignore this minimum and drive these piles as anticipated for the production piles.

When test piles attain practical refusal prior to attaining minimum penetration, perform all work necessary to attain minimum penetration and the required bearing. Where practical, use water jets to break the pile loose for further driving. Where jetting is impractical, extract the pile and install a Preformed Pile Hole through which driving will continue. The Department will consider the work of extracting the pile to be Unforeseeable Work.

When driving test piles other than low displacement steel test piles, have water jets as specified in 455-5.7 and preforming equipment available at the site, ready for use, before the test pile driving begins.

The Engineer may elect to interrupt pile driving up to four times on each test pile, two times for 60 minutes for data collection and two additional times within 72 hours of

initial driving to determine time effects during the driving of test piles at no additional cost to the Department. If set-checks are determined necessary by the Engineer after 72 hours from the end of initial driving, each set-check will be paid for as Pile Redrive.

Install instruments on test piles when dynamic load tests are included in the plans or when directed by the Engineer.

455-5.12.2 Location of Test Piles: Drive all test piles in the position of permanent piles at the designated locations. Ensure that all test piles designated to be statically load tested are plumb. In the event that all the piles are battered at a static load test site, the Engineer will designate an out-of-position location for driving a plumb pile for the static load test.

455-5.12.3 Equipment for Driving: Use the same hammer and equipment for driving test piles as for driving the permanent piles. Also use the same equipment to redrive piles.

455-5.12.4 Ground Elevations: At the time of driving test piles, furnish the Engineer with elevations of the original ground and template at each pile or pile group location. Note the highest and lowest elevation at each required location and the ground elevation at all the test piles. Present the elevations in plotted and tabular form and submit with the test pile data.

SUBARTICLE 455-12.4 (Page 528) is deleted and the following substituted:

455-12.4 Test Piles: Price and payment will be full compensation for all incidentals necessary to complete all the work of this item with the exception of the Embedded Data Collector, splices, build-ups, pile extractions and preformed pile holes authorized by the Engineer and paid for under other pay items or payment methods. The cost of all additional work not listed above necessary to ensure required penetration and attain required bearing of the test piles will be included in the price bid per foot of Test Pile, including driving and all other related costs. Payment will be made in two increments: 70% of the unit price for Test Piles for each foot fabricated and accepted as stockpiled materials, and 30% of the unit price for Test Piles for the entire authorized length upon completion of driving.

SUBARTICLE 455-12.14 (Page 529) is deleted and the following substituted:

455-12.14 Embedded Data Collector: Price and payment will be full compensation for furnishing and installing the Embedded Data Collector.

455-12.15 Payment Items: Payment will be made under:

Item No. 455- 2-	Treated Timber Piling - per foot.
Item No. 455- 14-	Concrete Sheet Piling - per foot.
Item No. 455- 18-	Protection of Existing Structures - lump sum.
Item No. 455- 34-	Prestressed Concrete Piling - per foot.
Item No. 455- 35-	Steel Piling - per foot.
Item No. 455-119-	Test Loads- each.
Item No. 455-120-	Point Protection - each.
Item No. 455-133-	Steel Sheet Piling - per square foot.
Item No. 455-137-	Dynamic Load Tests - each.
Item No. 455-143-	Test Piles (Prestressed Concrete) - per foot.
Item No. 455-144-	Test Piles (Steel) - per foot.
Item No. 455-145-	Test Piles (Concrete Cylinder) - per foot.

Item No. 455-146 Embedded Data Collector – each.