

# IOWA SHRP UPDATE No. 3

Iowa Department of Transportation  
Highway Division  
Office of Materials  
7-89

## POLK COUNTY SPS-6 SITE UPDATE

Much activity concerning the SPS-6 site on I-35 in Polk County has taken place since the last update was issued.

An additional test section was field verified and marked at the site on June 14. This section will be prepared for overlay using standard Iowa DOT overlay preparation techniques and will receive a 4" overlay. This section is SHRP ID 190609 and is located at milepost 95.80 to 95.70 (station 438+89 - 433+89). Figure 1 showing the SPS-6 layout has been updated to include this section.

The construction contract for the overlay project encompassing the SHRP site has been awarded to Des Moines Asphalt and Paving Company of Des Moines. At the preconstruction conference held on July 13 the SHRP SPS site was discussed in detail. Resident Construction Engineer, Vicki Dumdei, reviewed each of the sections in the experiment and noted the variations in construction. The contractor noted the following preliminary work schedule: July 24 begin patching at the north end of the project, August 7 begin paving, August 10 begin crack and seat operation. These dates are approximate only.

A majority of the sampling and testing at the SPS-6 site was completed on July 11 and 12. Testing performed at the site included Falling Weight Deflectometer (FWD), collection of concrete cores, and soil boring and sampling. This work, originally scheduled for the fall, was rescheduled so it could be completed prior to the overlay.

On July 11, concrete cores and soil boring and sampling were completed on the north three test sections. The FWD data collection was completed for only one section and part of another before being halted by heavy rainfall. The FWD data collection for these sections is not as critical as the other six sections because the north three will not receive an overlay. On July 12 FWD testing, concrete cores, and soil boring and sampling was completed for the south six test sections.

In conjunction with the FWD testing, the Iowa DOT operated its Model 400 Road Rater at the SHRP sites. Both types of testing, FWD and Road Rater, are performed for the purposes of structural evaluation but use different methods. While the FWD uses weights dropped at known heights to produce deflections, the Road Rater uses a vibrating mass to produce deflections. The Road Rater followed behind the FWD equipment testing at the same locations. The information obtained from

the two types of equipment will be analyzed to see how well they correlate and what relationships can be established. The DOT is also planning to perform Road Rater testing after the crack and seat for comparison purposes.

Test pits were not opened at the Polk County SPS-6 site during the week of July 10. Test pits involve careful removal of a section of pavement (four by six foot minimum recommended) for the purpose of obtaining in-place nuclear densities of the base and subgrade and samples of the materials. The required test pits for I-35 will be opened and repaired by the patching contractor during project construction. The densities and samples will be collected by DOT personnel.

#### GPS SITE SAMPLING AND TESTING

During the week of July 10 sampling and testing was completed at three GPS sites. Pavement coring, soil boring and sampling, and FWD testing was completed at sites in Worth (199116), Franklin (195046), and Hamilton (193055). In addition to the routine sampling and testing, the Hamilton site also included a test pit; the first to be opened in Iowa. No test pits are planned for Worth and Franklin Counties because of the difficulty of removal and repair of continuously reinforced concrete pavement sections.

#### PASCO AND GM PROFILOMETER TESTING

The PASCO unit, which makes a photographic record of pavement surface condition, made a pass through Iowa in June. Interstate 35 SHRP sites were surveyed on this pass to acquire a preoverlay condition in Polk and Worth Counties. The remaining Iowa sites are scheduled for PASCO survey later this year.

GM Profilometer testing was completed on the Polk County SPS June 16-19. The profilometer performing the testing was enroute from Detroit to the SHRP Western Region. Arrangements were made to route this profilometer to the I-35 site so preoverlay conditions could be surveyed. The profilometer records pavement profile information for smoothness evaluation and comparison. Other Iowa SHRP sites will be profiled later this fall.

#### I-74 Site Update

The I-74 SHRP site (195038) in Scott County is being dropped from the program. After reviewing the site conditions and the length of time required to complete the sampling and testing, it was decided that the lane closure required would be unnecessarily hazardous. An alternate site meeting SHRP experimental criteria for traffic and construction has been tentatively identified on I-35 in Wright County. Field verification of this site will take place in the fall.

MAINTENANCE DATA FORMS

Revised Maintenance Data Collection forms and Maintenance Data collection guidelines have been received from SHRP. SHRP has requested that they be given the opportunity to perform additional surface condition surveys prior to any maintenance work that will significantly alter the pavement surface. These guidelines provide direction on the maintenance operations considered significant as well as directions for filling out the forms for routine maintenance. These are presently in reproduction and will be sent to Resident Maintenance Engineers when complete.

REMINDERS

All time and expenses related to SHRP activities should be reported to Function 777, Project Control No. 72 00 1054-000.

If you have any comments or concerns or require further information about items in this SHRP update or SHRP in general, please contact one of the following:

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# SPS SITE

POLK COUNTY  
ACC RESURFACING  
IR-35-4(59)42--12-77

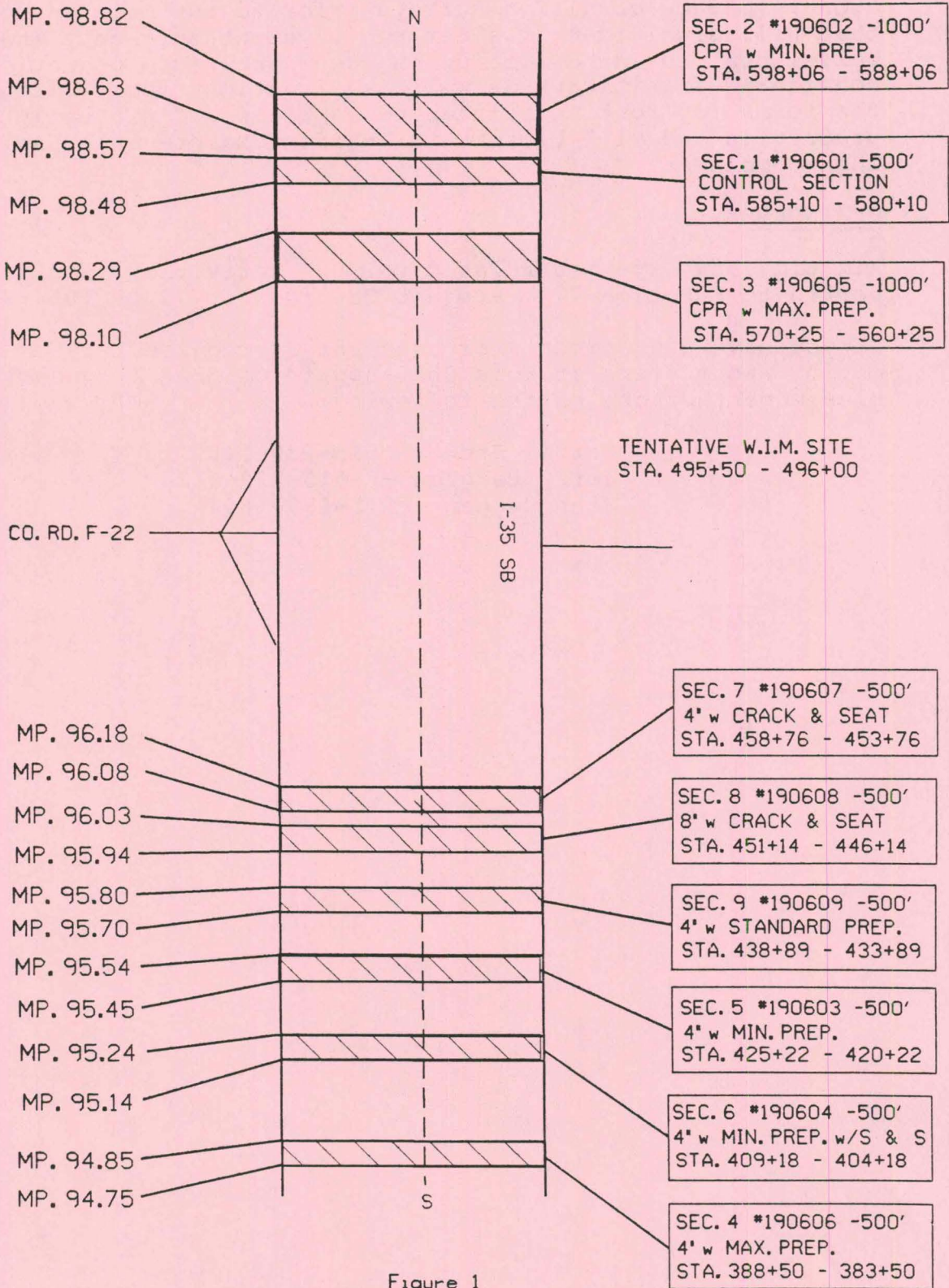


Figure 1