

IOWA SHRP UPDATE No. 7

Iowa Department of Transportation
Highway Division
Office of Materials
March 1992

GPS - General Pavement Study Activity

Materials sampling and testing activity has been completed on Iowa's GPS sites. Site activity now involves periodic testing by PASCO, Falling Weight Deflectometer and GM Profilometer. GPS sites will all need repainting after the winter months. Long Term Pavement Performance test data on GPS sites is now available. SHRP activity has shifted from GPS sites to SPS activity.

SPS - Specific Pavement Study Activity

SPS-1 - Strategic Study of Structural Factors for Flexible Pavements

Iowa has an approved SPS-1 site on US 61 in Lee County from north of Fort Madison to Wever. The project has been let with work scheduled to start in April. Jon Allen from the Des Moines Resident Construction Office will be the SHRP representative on the project and will report to Joe Demeter. Since this is the first SPS-1 site in the nation, there may be a SHRP national open house on the project.

SPS-2 - Strategic Study of Structural Factors for Rigid Pavements

Iowa will nominate new US 65 around the east side of Des Moines which will be built in 1993.

SPS-3 - Preventive Maintenance Effectiveness of Flexible Pavements

The SPS-3 site on IA 196 in Sac County is completed so there is no new or recent activity concerning SPS-3. SHRP contractor will periodically monitor performance of the test sections compared to the control section.

SPS-4 - Preventive Maintenance Effectiveness of Rigid Pavements

SPS-4 sites on US 20 in Hamilton County and on I-380 in Linn County are completed. SPS-4 involved cleaning and sealing joints with a silicone sealer and a control section. SHRP contractor will periodically monitor performance of the test sections compared to the control section.

SPS-5 - Rehabilitation of Asphalt Concrete Pavements

Iowa does not presently have a SPS-5 candidate.

SPS-6 - Rehabilitation of Jointed Portland Cement Concrete Pavements

The SPS-6 site is completed so there is no new or recent activity concerning SPS-6. Future maintenance work will be reported on SHRP data collection sheets by the RME. The SHRP Regional Contractor will periodically monitor performance of the test sections compared to the control sections.

SPS-7 - Bonded Portland Cement Concrete Overlays of Concrete Pavements

Iowa's candidate on I-35 NBL in Hamilton County has been accepted by SHRP and the contract let. The project will be built in 1992 with the SBL constructed first. This will delay the SPS-7 site in the NBL until later in the summer.

SPS-8 - Study of Environmental Effects in the Absence of Heavy Loads

Iowa's candidate on IA 183 in Harrison County has been accepted by SHRP. The SPS-8 site is a bridge replacement over the Willow River 4 miles north of Missouri Valley. Due to the time needed to obtain structural steel, this SPS-8 site will be built in 1993.

Traffic Data Collection Status

Traffic data collection responsibilities have been settled. Transportation Inventory will handle all items related to traffic. Eleven sites of Weigh-in-Motion (WIM) equipment have been installed. After calibration, some WIM sites may be providing data by March 1, 1992. A total of sixteen WIM sites will be necessary. WIM equipment on SPS-1, SPS-7, and SPS-4 on I-380 in Linn County are scheduled for installation in 1992. WIM equipment for SPS-2 and SPS-8 are scheduled for 1993.

New SHRP Products for Highway Operations

There are 100 to 200 new SHRP products for highway operations introduced. There is a snowfence guide and snowfence video. High snowfence (which easily drops and stores) improves visibility. The Wyoming DOT has one year's experience with a new snowplow design, and the New York DOT is going to try it. Robotic crack filling and patching equipment is available in March to view and try. Iowa will not try this equipment at present because it costs \$500,000 each and is used in high traffic areas such as Chicago or New York. Iowa may eventually need this type of equipment in and around Des Moines. Velocity is used to compact patch material so no traditional compaction is required. The robotic patching machine will outproduce a crew and do quality work. The Pennsylvania DOT finds the patches last longer than by manual methods. The robotic machine can be purchased in components. A robotic device for centerline filler is being considered which mounts on a truck for \$90,000.

At least 25% of new HPR funds must be spent on research. A pooled fund to buy new asphalt testing equipment has been established. Iowa has allocated \$335,000 of HPR funds for asphalt testing equipment. Iowa plans to warehouse asphalt cement from projects and will test later when we have the equipment. SPS-9 involves using new SHRP asphalt specification on a project. Brian McWaters and Bernie Brown are scheduled to go to a meeting on SPS-9.

SHRP Cost Accounting Emphasis

All SHRP costs should be charged to function code 777. This includes time and expenses associated with traffic control, painting SHRP site lines, pavement testing activity, project history research, construction inspection, materials sampling and testing, etc. Project Control No. 72-00-1054-000 should be used for all SHRP work except work pertaining to the SPS-3 in Sac County. SPS-3 related work should be charged to Project Control No. 72-00-1056-000. It is important that all SHRP-related time and expenses be recorded so that an accurate cost of the program can be obtained.

If you have any questions concerning this SHRP update or SHRP in general, please contact one of the following:

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SHRP GPS Sites

SHRP#	DIST	COUNTY	ROUTE	DIR	MILEPOST	
JOINTED PAVEMENTS						
193055	1	Hamilton	US 20	WB	152.04	151.95
193033	6	Johnson	US 218	NB	86.35	86.45
193006	6	Clinton	US 30	EB	317.30	317.40
193028	6	Johnson	US 218	NB	95.23	95.33
193009	6	Linn	I-380	NB	18.89	18.99
CONTINUOUS REINFORCED PAVEMENTS						
195046	2	Franklin	I-35	NB	155.40	155.50
195042	2	Wright	I-35	NB	152.20	152.30
ASPHALT PAVEMENTS						
196049	6	Cedar	I-80	WB	261.48	261.38
191044	6	Buchanan	US 20	EB	266.76	266.86
196150	3	Sac	IA 196	NB	Sta. 646	651
ASPHALT OVERLAY OF PC PAVEMENT						
199126	6	Scott	I-80	WB	303.38	303.29
199116	2	Worth	I-35	NB	216.75	216.84

SHRP SPS Sites

SPS-1	5	Lee	US 61	SB	30.32	25.40
SPS-3	3	Sac	IA 196	NB	Sta. 657	710
SPS-4	1	Hamilton	US 20	WB	Sta. 1025+40	1020+40
					Sta. 1032+40	1027+40
SPS-4	6	Linn	I-380	NB	Sta. 246+10	251+10
					Sta. 253+10	258+10
SPS-6	1	Polk	I-35	SB	98.82	94.75
SPS-7	1	Hamilton	I-35	NB	134.14	140.19
SPS-8	3	Harrison	IA 183		Not known as yet. Approx. 4 miles N of Missouri Valley over Willow River	

Acronyms

CPR - Concrete Pavement Repair
 FWD - Falling Weight Deflectometer
 GPS - General Pavement Study
 LTPP - Long Term Pavement Performance
 SHRP - Strategic Highway Research Program
 SPS - Specific Pavement Study
 WIM - Weigh-in-Motion

Numbers

SHRP Function Code - 777

Project control number for all SHRP activity except SPS-3 72-00-1054-000
 Project Control Number for SPS-3 72-00-1056-000

