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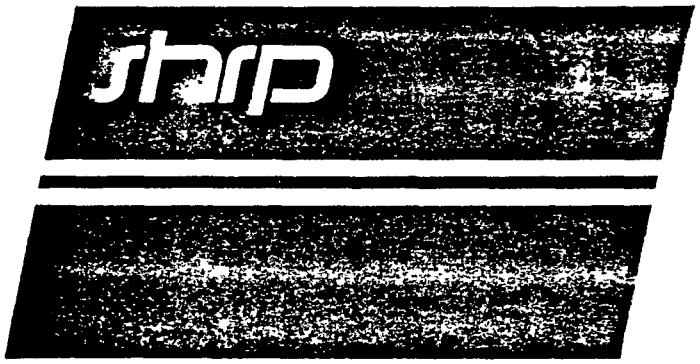
STRATEGIC HIGHWAY RESEARCH PROGRAM



SPECIFIC PAVEMENT STUDIES
GUIDELINES FOR NOMINATION AND EVALUATION OF CANDIDATE PROJECTS FOR EXPERIMENT SPS-2 STRATEGIC STUDY OF STRUCTURAL FACTORS FOR RIGID PAVEMENTS

STRATEGIC HIGHWAY RESEARCH PROGRAM
818 Connecticut Avenue NW
Washington, DC 20006

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GUIDELINES FOR NOMINATION AND EVALUATION OF CANDIDATE PROJECTS FOR EXPERIMENT SPS-2, STRATEGIC STUDY OF STRUCTURAL FACTORS FOR RIGID PAVEMENTS

INTRODUCTION

This document provides guidelines and information for nominating candidate projects for the Specific Pavement Studies experiment SPS-2, "Strategic Study of Structural Factors for Rigid Pavements", and outlines participation requirements. Detailed project nomination forms and instructions are included in this document. Details of the experimental design and study factors developed for this experiment through meetings with and review by interested highway agencies and other concerned parties are contained in the SHRP document, "Specific Pavement Studies: Experimental Design and Research Plan for Experiment SPS-2, Strategic Study of Structural Factors for Rigid Pavements", April 1990.

PARTICIPATION REQUIREMENTS

Highway agencies considering participating in the SPS-2 experiment must be willing to perform the following activities:

1. Construct at least all twelve test sections that make up one of the experimental sets (J through Y) for the basic experiment described in the experimental design document referenced above. As two possible experimental sets of test sections can be built for each subgrade/climate combination, SHRP will consult with and advise the participating highway agency of the specific experimental set that should be built to best satisfy the requirements of the experiment. All test sections on a project must be constructed during the same construction season. Adjacent lanes must be constructed with the same structural details. It is desirable that all test sections be opened to traffic at the same time.

2. Purchase, install, operate and monitor a traffic data collection station at or near the site to measure the same traffic that passes over the test sections. This station must be operated to obtain continuous automatic vehicle classification and weigh-in-motion.

3. Purchase, install, operate, and monitor a weather station at the test site, if the site is not located in the proximity of an acceptable existing station. As a minimum, the weather station must be operated to measure air temperature and precipitation.

4. Perform and/or provide for drilling, coring, sampling and testing of in-place pavement materials and materials used in construction. SHRP will provide sampling plans tailored to the site plus directives and standard protocols for laboratory and field tests. Costs for this work must be borne by the participating agency.

5. Prepare plans, specifications, quantities, and all other documents necessary as a part of the agency's contracting procedures. The agency must also provide construction control, inspection and management in accordance with their standard quality control and assurance procedures.

6. Provide periodic traffic control for on-site data collection activities such as materials drilling and sampling, deflection measurements, and other monitoring activities.

7. Coordinate maintenance activities on the test sections to prevent application of premature treatments which alter the characteristics of the test sections and limit their use in the study.

8. Provide and maintain signing and marking of test sites.

9. Notify SHRP prior to application of overlays or other such treatments, when any of the test sections reaches an unsafe condition or becomes a candidate for rehabilitation. As much lead time as possible is needed to allow terminal condition of the test sections to be recorded.

If highway agency personnel desire to discuss the details of these participating requirements with SHRP, they should contact SHRP regional offices or headquarters.

PROJECT SELECTION CRITERIA

The following criteria will be considered in evaluating candidate projects for inclusion in this experiment:

1. The project must include new construction of all pavement layes for a new route, realignment, reconstruction, or construction of an experimental parallel roadway. Projects in which the experimental sections are constructed as added lanes or as a partial reconstruction (removal and replacement on surface layers only) are not acceptable.

2. The construction project must be of sufficient length to accommodate all of the experimental test sections. Transition zones are required between test sections. The length of these transitions depends on site conditions such as locations of cut and fill and drainage provisions, but a minimum transition length of approximately 180 feet should be provided between test sections.

3. All test sections at one site must be constructed on soils classified as either fine-grained or coarse grained. Further, it is desired that all of the test sections be located on subgrade soils of similar characteristics and classification. Variation in soil characteristics at each site should be minimized as much as possible.

4. Test sections should be located on portions of the project which are relatively straight and have a uniform vertical grade. Horizontal curves greater than 3° and vertical grades greater than 4% should be avoided. Left hand horizontal curves in which superelevation forces surface water to flow towards the inside shoulder should be avoided. All test sections on a project must have the same transverse cross section profile of the pavement surface to obtain the same surface drainage conditions.

5. Ideally, all test sections should be located on shallow fills. The entire length of each test section, however, should be located completely on either a cut or a fill. Cut-fill transitions and side hill fills should be avoided.

6. It is highly desirable that the portion of the project that includes the proposed test sections be opened to traffic at the same time.

7. Culverts, pipes and other substructures beneath the pavement should be avoided within the limits of each test section. It is recommended that subsurface structures, if required, be located in the transition zones between test sections.

8. It is desired that the project be located on a route with an expected traffic loading level in the study lane in excess of 200,000 ESAL/year. However, a project on the primary system with high traffic relative to the region but less than the desired rate will be considered.

9. Traffic flow over all the test sections on a project should be uniform. All sections should carry the same traffic stream. Intersections, rest stops, on-off ramps, weaving areas, quarry entrances, etc. must be avoided on and between test sections on a project.

These criteria and considerations will help identify projects in which the relative performance of the test sections to each other is due to the design parameters used for the test sections and not to other external factors such as changes in the subgrade or traffic patterns. They also serve to identify projects at different locations with relatively similar details so that differences in performance from one location to another are primarily due to differences in climatic conditions and traffic levels.

It is recognized that "perfect" projects containing all of the desirable characteristics are rare. Each proposed site will be evaluated individually and compared to other candidates in order to select the best set of projects to satisfy experimental considerations. Some deviation from the desired project characteristics may be necessary in order to obtain sufficient projects for the experiment. For example, projects will be considered where it is not possible to locate all of the test sections on either completely in cuts or on fills. In this case, it may be necessary to locate some test sections in cuts and others in fills.

The criteria and considerations presented in this document will be used to evaluate and rank candidate projects in cases where more than the required number of projects are available. They can also be used as a guide by an agency to identify candidate projects in their jurisdiction that are most suitable for nomination.

NOMINATION PROCEDURE

Agencies desiring to participate in the SPS-2 experiment should review candidate projects and evaluate them against the criteria and considerations presented in this document. Two projects are being sought for each cell in the experimental design factorial shown in Figure 1. Under certain conditions, additional projects might be included into one or more of the experimental design cells. Agencies should also evaluate their participation in the other SPS experiments. To make the complete set of SPS experiments successful, sufficient projects must be located for all experiments.

SUBGRADE TYPE	CLIMATIC REGION			
	WET-FREEZE	WET-NO FREEZE	DRY-FREEZE	DRY-NO FREEZE
FINE	(2)* (J,K)	(2) (N,O)	(2) (R,S)	(2) (V,W)
COARSE	(2) (L,M)	(2) (P,Q)	(2) (T,U)	(2) (X,Y)

* Numbers in parentheses indicate the number of test sites. Letters in parentheses designate the experimental set of test sections at the test site.

Figure 1. SPS-2 Site Selection Factorial.

Project acceptance will be performed sequentially over time. Decisions on acceptance will be made by the "Latest Date for Approval Notification from SHRP" to be furnished by the nominating agency on the nomination forms contained in this document. Nominating agencies should set this date as late as possible to allow a review of other projects nominated for the same cell and selection of the best suited sites for this experiment. Agencies should coordinate their nomination of projects through the SHRP regional offices.

CANDIDATE PROJECT NOMINATION AND INFORMATION FORMS

The following are instructions for completion of the SPS-2 candidate project nomination and information forms. Each form is referenced according to a sheet letter designation.

To nominate a candidate project, the highway agency must complete and submit Sheets A, B, C, and D. However, an agency may nominate a potential project for early consideration, prior to completion of the agency's typical pavement design for the project, by completing and submitting Sheets A and B. However, Sheets C and D must be completed and submitted, upon design completion, to finalize the nomination process.

Sheet A. General Project Information

This sheet includes information on project location, significant dates, a general project description, and design traffic.

State. State or province in which the project is located.

SHRP Project Number. This six digit SHRP project number is assigned by the SHRP Regional Coordination Office and is used as a project reference number.

Project Location

This portion of the form provides information on the location of the candidate project. In this document, a project refers to the overall construction project. Test sections refer to the portion of the project on which the experimental pavement structures are constructed and monitored over time.

Route Number. This is the number assigned to the route upon which the project is located. The common number used on maps and highway signs should be provided to avoid confusion.

Route Signing. Check the appropriate designation for the project route. If the route is other than Interstate, U. S., State, or county, please write in the appropriate designation in the space provided with a short explanation. For example, a Farm to Market signed route should be entered as: FM - Farm to Market. This designation should refer how the route is signed and indicated on general highway maps.

Project Location. Enter the start and end mileposts or milepoints of the portion of the project suitable for construction of test sections. The milepost or milepoint refer to reference locations signed or marked along the route in the field. If the route is signed with kilometer posts, enter the appropriate post numbers, scratch out milepost and write kilometer post on the form. The start and end station locations are not required but are requested for use in locating the portion of the project proposed for the experimental sections on the plans.

Project Location Description. This is a written description of the location of the start of the project referenced to a permanent landmark such as signed highway intersections, signed or labeled bridges, underpasses, overpasses, rest areas, and railroad crossings. The objective is to provide a reference for field crews to easily locate the section in the field. Distances from a landmark located prior to the section, in the direction of travel, and a landmark located past the start of the section should be specified. For example, "The start of the project is 1.2 miles north of overpass 20-45-431; the intersection with I-

71 is located 2.3 miles north of the start of the project" (assuming the direction of travel is northbound).

County. This is the county or governmental jurisdiction unit the project is located within. If a project occurs in more than one county, indicate the county first encountered in the direction of travel.

Highway Agency District Number. This number identifies the highway agency's district, division, or region in which the project is located.

SHRP Environmental Zone. Check the general environmental zone which is appropriate for the project. Figure 2 shows the distribution of general environmental zones. If the climate at the project deviates significantly from that shown in Figure 2, check the appropriate box on the form which best describes the actual environment and attach a sheet of paper to the form which provides a short explanation on the entry.

Significant Dates

Latest Date of Approval Notification from SHRP. This is the latest date that SHRP can notify the agency of acceptance of a project into the experiment. This date represents the latest date that an agency can start preparation of construction specifications and contractual documents for construction of the test sections. This should be a realistic "drop dead date" that provides SHRP with the longest time possible to evaluate and coordinate other candidate projects so that the best spread and most suitable projects are included into the experiment.

Contract Letting Date. This is the actual date the contract is scheduled for letting.

Estimated Construction Start Date. This is the estimated date that construction on the test section portion of the project is to begin. This date is important for scheduling pre-construction activities.

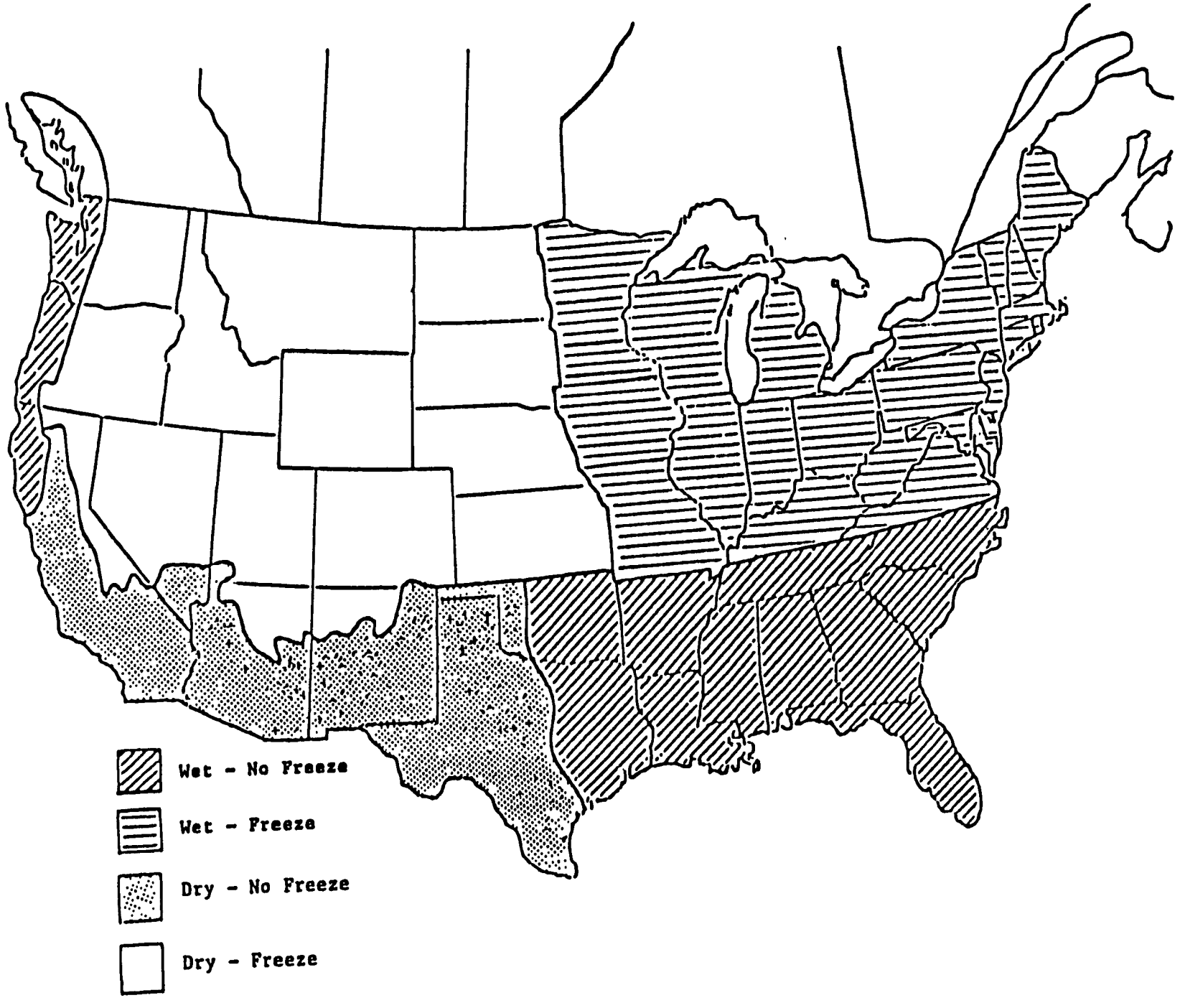

Figure 2. Environmental zones for SHRP-LTPP studies.

Estimated Date Test Sections Opened To Traffic. Indicate the expected date that the SHRP test sections will be opened to traffic.

Estimated Construction Completion Date. This is the date that construction of the project in which the SHRP test sections are located is scheduled for completion. In some instances, the estimated date the test section are opened to traffic and the construction completion date will be the same.

Project Description

Project Type. Indicate the type of construction project. If the project is not (1) a new route location, (2) removal and reconstruction of an existing route, or (3) construction of a roadway parallel to an existing route, provide a brief description in the space provided under other.

Facility. Check the appropriate box to indicate if the roadway is divided or undivided.

Number of Lanes. Indicate the total number of traffic lanes in the direction of travel for the proposed test sections.

Design Traffic Information

Average Annual Daily Traffic. This is the estimate of the annual average daily traffic (AADT), all vehicles, both directions, used in the design of the roadway at the location of the proposed project.

Percent Heavy Trucks and Combinations. This is the ratio of trucks and heavy combinations to total vehicles (AADT), expressed to the nearest tenth of a percent. This excludes all pickups, panels, and other two axle, four tired trucks. This is also for traffic in both directions.

Estimated 18k ESAL Rate in Study Lane (1,000 ESAL/Yr). Provide the design estimate of average application rate of heavy truck loadings, in 18,000 lb equivalent single axle load applications, in the study lane of the proposed project. This should be the design number of ESAL applications divided by the duration of the design period.

Total Design 18K ESAL Applications In Design Lane. Enter the design number of total 18K ESAL application in the study lane over the design period. This should be the average or mean expected number of total applications.

Design Period. Enter the length of the design period, in years, that the design traffic estimate used in the pavement design is based upon.

Sheet B. Test Section Layout and Supplemental Test Sections

This sheet includes details on layout of the SHRP experimental test sections, GPS test sections near the proposed project and supplemental test sections proposed for construction adjacent to the SHRP test sections.

Test Section Layout

This information pertains to the locations of the SHRP experimental test sections on the candidate project. Guidelines for test section locations are presented in the project selection criteria portion of this document.

Subgrade Classification. Provide the classification of the predominate subgrade soils at the proposed locations of the test sections. The general word descriptions presented in Table 4 can be used for this purpose. The indicated subgrade type will be used to classify a project into the fine or coarse grained cells in the sampling factorial shown in Table 1. Provide a description of any known variations in subgrade classifications along the proposed test location under comments on deviations from desired site selection criteria on this sheet.

Number of Test Sections on Cut and Fill. The plan and profile sheets for the candidate project alignment should be reviewed to determine the nature of suitable locations for test sections. It is preferred that all test sections be located either entirely in a fill or a cut. For practical considerations, potential test section locations within cuts or fills should be 600 feet long to accommodate sampling of the subgrade adjacent to the ends of each 500 foot monitoring test section. If all test sections can be located completely in a cut or fill, place a check mark on the appropriate line. If it is not possible to locate all test sections entirely on fills or cuts and it is necessary to locate some test sections on cuts and some on fills, indicate the number of potential locations on cuts and the number of potential locations on fills.

Shortest Transition Between Test Sections. Indicate the shortest transition required between two consecutive test sections in order to fit all of the test sections within the project limits.

Vertical Grade. Enter the average vertical grade slope that the test sections are located on in percent. Downgrades, in the direction of travel, should be indicated as a negative value. If the test sections are located on varying slopes, provide information under comments on deviations from desired site selection criteria on the range in differences between the vertical slopes of test section sites.

Horizontal Curvature. Check the box if the test section are located on a tangent section or indicate the horizontal degree of curvature at the test site. Provide a brief description under deviation from desired site selection criteria if some sections are located on tangents and others on horizontal curves. Provide information on any differences in cross slope of test sections due to superelevations on horizontal curves.

Comments on Deviations from Site Location Criteria. Provide brief comments describing significant deviation from the desired site location criteria presented in this document. Include in these comments items such as test section alignment, unusual traffic patterns, intersections between test sections, sub-structures beneath test sections, test section locations at cut-fill transitions,

variations in subgrade along project, short transitions between test sections (< 100 feet), long transitions between test sections (> ½ mile), and construction constraints. Attach additional sheets of paper to the form if more space is needed for comments.

Other SHRP Test Sections

Project Conformity to GPS 1, 2, 3, 4, or 5 Criteria. If the agency's pavement design for the project conforms to the GPS 1, 2, 3, 4, or 5 criteria check the yes box. Consideration will be given to establishing a GPS test section on the non-SPS portion of the project.

Distance to Nearest GPS Test Section on Same Route. If an existing GPS test section is located on the same route within the state or province, indicate the distance from the candidate project to the GPS test section. If no GPS test sections are located on the same route, leave this space blank.

Test Section Number of Nearest GPS Section. Enter the SHRP test section number of the GPS test section referenced in the previous entry. Leave blank if no sections are located on the same route.

SPS-2 Supplementary Experiments

This information pertains to the SPS-2 supplementary experiments SPS-2A, Undoweled Jointed Plain Concrete Pavements with Skewed Joints and SPS-2B, Jointed Reinforced Concrete Pavements that the agency intends to construct on the same project. Check the appropriate box.

Other Supplemental Test Sections

This information pertains to supplemental test sections that the agency proposes to construct on the same project to investigate factors of direct interest to the agency. These test sections are in addition to the SPS-2 core experiment test sections. This information will be shared with other participating agencies to encourage the coordination of supplemental experiments.

Total Number of Supplemental Test Sections. Indicate the proposed number of additional supplemental test sections of interest by the agency.

Factors to be Investigated. For each proposed supplemental test section, indicate the experimental factors to be investigate. Attach addition sheets if more space is needed.

Sheet C. Agency's Rigid Pavement Structure Design for Project

Complete this sheet only if a portland cement concrete pavement will be constructed by the agency on this project adjacent to the location of the test sections. Sheet D should be completed if an asphaltic concrete pavement structure will be constructed.

The purpose of this sheet is to provide information on the agency's typical pavement structure design for the project site. This should represent the pavement structure adjacent to the test section locations. The information requested on this form is primarily related to the AASHTO pavement design method. If another design method was used to design the pavement structure, please attach additional sheets to these forms providing details of the design method used. Please provide equivalent AASHTO design inputs on this form, as appropriate, to allow comparison with other projects in the experiment.

Layer Number. This layer number convention starts with the naturally occurring subgrade as layer 1 and progresses to the pavement surface as the highest numbered layer. Each unique material layer above the subgrade is assigned a layer number, corresponding material type code and thickness. Eight or fewer layers can be identified with this form.

Layer Description Code. These codes, listed under note 2 on the form, indicate the general name and function of each layer identified in the existing pavement structure.

Many agencies cover poor subgrades with varying thicknesses of select material. Such embankments or shallow fills should be reported as a subbase layer (code 06).

Material Type Class Code. The two digit codes identifying the type of material in each layer of the pavement structure are shown in Tables 2 through 5. The intent is general identification of materials for classification and project selection purposes.

Thickness. Indicate the design thickness of each layer identified. Leave the depth of the subgrade layer blank unless the depth of the subgrade to a rigid layer is known.

Structural Design Method. Indicate if the structural design method is based on (1) 1972 AASHTO Interim Guide for Design of Pavement Structures, (2) 1986 AASHTO Guide for Design of Pavement Structures, (3) an agency modification of the AASHTO Guide concepts and procedures, or (4) an other agency procedure not based on the AASHTO methodology. Please provide a brief description or title of the non-AASHTO design method on Sheet B and attach technical details of the basis of the design method used by the agency for this project. If a modified AASHTO design approach was used, please provide information on the significant technical details of this approach.

Pavement Type. Check the appropriate box to indicate the general type of portland cement concrete pavement to be constructed.

Jointed Pavement Joints. This information applies only to the joints in jointed types of pavement. Check the appropriate boxes to indicate the orientation of joints and presence of load transfer devices. Provide the joint spacing if a constant spacing is used. Enter the patterned sequence of spacings if variable spacings are used. Leave blank if a continuously reinforced concrete pavement will be constructed.

K Values. Provide the K value used for design of the slab thickness as modified for drainage and subbase factors. Also provide the unmodified K value on the top of the subgrade.

AASHTO Reliability Factors. If the 1986 AASHTO Guide for Design of Pavement Structures is used for the design of the pavement structure, please provide the value of the reliability level, R, in per cent, and the overall design standard deviation, S_o, used in the design. Leave blank if not applicable.

Outside Shoulder Type. Check the appropriate box or describe the type of shoulder to be constructed on the project.

Outside Shoulder Width. Enter the approximate width of the outside shoulder in feet.

Subsurface Edge Drains. Check the appropriate box to indicate if subsurface edge drains are used.

Sheet D. Agency's Flexible Pavement Structure Design for Project

Complete this sheet only if an asphaltic concrete pavement structure will be constructed by the agency on this project adjacent to the location of the test sections. Sheet C should be completed if a portland cement concrete pavement structure will be constructed.

The purpose of this sheet is to provide information on the agency's typical pavement structure design for the project site. This should represent the pavement structure adjacent to the test section locations. The information requested on this form is primarily related to the AASHTO pavement design method. If another design method was used to design the pavement structure on this project, please attach additional sheets to these forms providing details of the design method used. Please provide equivalent AASHTO design inputs on this form, as appropriate, to allow comparison with other projects in the experiment.

Layer Number. This layer number convention starts with the naturally occurring subgrade as layer 1 and progresses to the pavement surface as the highest numbered layer. Each unique material layer above the subgrade is assigned a layer number and corresponding material type code, thickness and structural coefficient value. Nine or fewer layers can be identified with this form.

Layer Description Code. These codes, listed under note 2 on the form, indicate the general name and function of each layer identified in the existing pavement structure.

Hot Mixed Asphalt Concrete (HMAC) layers of different mix characteristics than the surface layer should be identified as Code 4, Subsurface HMAC. These layers will be considered as part of the total thickness of the asphalt concrete surface layer. Where HMAC class materials are used as a base, they should be coded as a base layer (code 05).

Many agencies cover poor subgrades with varying thicknesses of select material. Such embankments or shallow fills should be reported as a subbase layer (code 06).

Material Type Class Code. The two digit codes identifying the type of material in each layer of the pavement structure are shown in Tables 2 through 5. The intent is general identification of materials for classification and project selection purposes.

Thickness. Indicate the design thickness of each layer identified. Leave the depth of the subgrade layer blank unless the depth of the subgrade to a rigid layer is known.

Structural Coefficient. Provide the AASHTO structural layer coefficient used in the pavement design or an appropriate design estimate of this value for this type of material. If this value is modified for drainage effects, provide the modified value in this table. For the subgrade, provide a soil support value or resilient modulus value used for design purposes.

Structural Design Method. Indicate if the structural design method is based on (1) 1972 AASHTO Interim Guide for Design of Pavement Structures, (2) 1986 AASHTO Guide for Design of Pavement Structures, (3) an agency modification of the AASHTO Guide concepts and procedures, or (4) an other agency procedure not based on the AASHTO methodology. Please provide a brief description or title of the non-AASHTO design method on Sheet C and attach technical details of the basis of the design method used by the agency for this project. If a modified AASHTO design approach was used, please provide information on the significant technical details of this approach.

AASHTO Reliability Factors. If the 1986 AASHTO Guide for Design of Pavement Structures is used for the design of the pavement structure, please provide the value of the reliability level, R, in per cent, and the overall design standard deviation, S_o, used in the design. Leave blank if not applicable.

Outside Shoulder Type. Check the appropriate box or describe the type of shoulder to be constructed on the project.

Outside Shoulder Width. Enter the approximate width of the outside shoulder in feet.

Subsurface Edge Drains. Check the appropriate box to indicate if subsurface edge drains are used.

APPENDIX A

CANDIDATE PROJECT NOMINATION AND INFORMATION FORMS FOR SPS-2, STRATEGIC STUDY OF STRUCTURAL FACTORS FOR RIGID PAVEMENTS

SHEET A. SPS-2 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE _____ SHRP SECTION NO _____

GENERAL PROJECT INFORMATION

PROJECT LOCATION

ROUTE NUMBER _____

ROUTE SIGNING [] Interstate [] U.S. [] State [] County

Other _____

PROJECT LOCATION Start Milepost _____ End Milepost _____

Start Station _____ End Station _____

DIRECTION OF TRAVEL [] North B. [] South B. [] West B. [] East B.

PROJECT LOCATION DESCRIPTION _____

_____

_____

COUNTY _____

HIGHWAY AGENCY DISTRICT NUMBER _____

SHRP ENVIRONMENTAL ZONE

[] WET FREEZE [] WET NO-FREEZE [] DRY FREEZE [] DRY NO-FREEZE

SIGNIFICANT DATES

LATEST DATE OF APPROVAL NOTIFICATION FROM SHRP _____

CONTRACT LETTING DATE _____

ESTIMATED CONSTRUCTION START DATE _____

ESTIMATED DATE TEST SECTIONS OPENED TO TRAFFIC _____

ESTIMATED CONSTRUCTION COMPLETION DATE _____

PROJECT DESCRIPTION

PROJECT TYPE [] New Route [] Removal and Reconstruction [] Parallel Roadway

Other _____

_____

_____

FACILITY [] Divided [] Undivided NUMBER OF LANES (One Way) _____

DESIGN TRAFFIC DATA

ANNUAL AVERAGE DAILY TRAFFIC (Two Directions) _____

% HEAVY TRUCKS AND COMBINATIONS (Of AADT) _____

ESTIMATED 18K ESAL RATE IN STUDY LANE (1,000 ESAL/YR) _____

TOTAL DESIGN 18K ESAL APPLICATIONS IN DESIGN LANE _____

DESIGN PERIOD (Years) _____

SHEET B. SPS-2 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE _____ SHRP SECTION NO _____

TEST SECTION LAYOUT

SUBGRADE CLASSIFICATION (use Table 4 word descriptions) _____

NUMBER OF TEST SECTIONS ENTIRELY ON: FILL _____ CUT _____

SHORTEST TRANSITION BETWEEN CONSECUTIVE TEST SECTIONS (Feet) _____

VERTICAL GRADE (Avg %) (+ upgrade; - downgrade) _____

HORIZONTAL CURVATURE (Degrees) [] Tangent _____°

COMMENTS ON DEVIATIONS FROM DESIRED SITE LOCATION CRITERIA _____

_____

_____

_____

_____

OTHER SHRP TEST SECTIONS

DOES AGENCY DESIGN CONFORM TO GPS-1, 2, 3, 4, OR 5 CRITERIA? [] YES [] NO

DISTANCE TO NEAREST GPS TEST SECTION ON SAME ROUTE (Miles) _____

TEST SECTION NUMBER OF NEAREST GPS SECTION _____

SPS-2 SUPPLEMENTARY EXPERIMENTS

INTENT TO BUILT SPS-2 SUPPLEMENTARY EXPERIMENTS

SPS-2A: UNDOWELED JPCP [] YES [] NO

SPS-3B: JRCP [] YES [] NO

OTHER SUPPLEMENTAL TEST SECTIONS

IF SUPPLEMENTAL EXPERIMENTAL TEST SECTIONS ARE PROPOSED, COMPLETE THE FOLLOWING

TOTAL NUMBER OF SUPPLEMENTAL TEST SECTIONS _____

FACTORS TO BE INVESTIGATED _____

_____

_____

_____

SHEET C. SPS-2 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE _____ SHRP SECTION NO _____

AGENCY'S RIGID PAVEMENT STRUCTURE DESIGN FOR PROJECT

LAYER[1] NO.	LAYER[2] DESCRIPTION CODE	MATERIAL TYPE[3] CLASS CODE	THICKNESS[4] (INCHES)
1	SUBGRADE (7)	__ __	__ __ __
2	__ __	__ __	__ __.__
3	__ __	__ __	__ __.__
4	__ __	__ __	__ __.__
5	__ __	__ __	__ __.__
6	__ __	__ __	__ __.__
7	__ __	__ __	__ __.__
8	__ __	__ __	__ __.__

STRUCTURAL DESIGN METHOD [] 1972 AASHTO [] 1986 AASHTO [] Modified AASHTO

Other _____

PAVEMENT TYPE [] Jointed Plain [] Jointed Reinforced [] Continuously Reinforced

JOINTED PAVEMENT JOINTS [] Perpendicular [] Skewed

[] Doweled [] Undoweled

Joint Spacing _____ feet

DESIGN k VALUE (as modified) _____ pci SUBGRADE k VALUE _____ pci

AASHTO DESIGN RELIABILITY FACTORS R% _____ S_o _____

OUTSIDE SHOULDER TYPE

[] Turf [] Granular [] Asphalt Concrete [] Surface Treatment

[] PCC [] Tied PCC [] Curb and Gutter Other _____

OUTSIDE SHOULDER WIDTH (Feet) _____

SUBSURFACE EDGE DRAINS [] Yes [] No

NOTES

1. Layer 1 is the natural occurring subgrade soil. The pavement surface will have the largest assigned layer number.

2. Layer description codes:

Surface Layer 03	Base Layer 05	Subgrade 07
Subsurface HMAC .. 04	Subbase Layer 06	Embankment (Fill) 11

3. Refer to Tables 2 through 5 for material class codes.

4. If subgrade depth to a rigid layer is known, enter this depth for subgrade thickness, otherwise leave subgrade layer thickness blank.

SHEET D. SPS-2 CANDIDATE PROJECT NOMINATION AND INFORMATION FORM

STATE _____ SHRP SECTION NO _____

AGENCY'S FLEXIBLE PAVEMENT STRUCTURE DESIGN FOR PROJECT

LAYER[1] NO.	LAYER[2] DESCRIPTION CODE	MATERIAL TYPE[3] CLASS CODE	THICKNESS[4] (INCHES)	STRUCTURAL[5] COEFFICIENT
1	SUBGRADE (7)	___ ___	___ ___ ___	_____
2	___ ___	___ ___	___ ___.___	0.___ ___
3	___ ___	___ ___	___ ___.___	0.___ ___
4	___ ___	___ ___	___ ___.___	0.___ ___
5	___ ___	___ ___	___ ___.___	0.___ ___
6	___ ___	___ ___	___ ___.___	0.___ ___
7	___ ___	___ ___	___ ___.___	0.___ ___
8	___ ___	___ ___	___ ___.___	0.___ ___
9	___ ___	___ ___	___ ___.___	0.___ ___

STRUCTURAL DESIGN METHOD [] 1972 AASHTO [] 1986 AASHTO [] Modified AASHTO

Other _____

AASHTO DESIGN RELIABILITY FACTORS R% _____ S_o _____

OUTSIDE SHOULDER TYPE

[] Turf [] Granular [] Asphalt Concrete [] Surface Treatment

[] PCC [] Curb and Gutter Other _____

OUTSIDE SHOULDER WIDTH (Feet) _____

SUBSURFACE EDGE DRAINS [] Yes [] No

NOTES

1. Layer 1 is the natural occurring subgrade soil. The pavement surface will have the largest assigned layer number.

2. Layer description codes:

Surface Layer 03	Base Layer 05	Subgrade 07
Subsurface HMAC .. 04	Subbase Layer 06	Embankment (Fill) 11

3. Refer to Tables 2 through 5 for material class codes.

4. If subgrade depth to a rigid layer is known, enter this depth for subgrade thickness, otherwise leave subgrade layer thickness blank.

5. Enter AASHTO structural layer coefficient value, as appropriately modified, used in pavement design or typical coefficient used by agency for this material. For the subgrade, enter either AASHTO soil support value or resilient modulus value (psi) used in design.

Table 2. Pavement surface material type classification codes.

MATERIAL TYPE	CODE
Hot Mixed, Hot Laid, Asphalt Concrete, Dense graded	01
Hot Mixed, Hot Laid, Asphalt Concrete, Open Graded (Porous Friction Course)	02
Sand Asphalt	03
Jointed Plain Portland Cement Concrete	04
Jointed Reinforced Portland Cement Concrete	05
Continuously Reinforced Portland Cement Concrete	06
Prestressed Portland Cement Concrete	07
Fiber Reinforced Portland Cement Concrete	08
Plant Mix, Cold Laid, Emulsified Asphalt Material	09
Plant Mix, Cold Laid, Cutback Asphalt Material	10
Single Surface Treatment	11
Double Surface Treatment	12
Hot Recycled, Central Plant Mix, Asphalt Concrete	13
Central Plant Mix, Cold Laid, Recycled Asphalt Concrete	14
Mixed-in-place, Cold Laid, Recycled Asphalt Concrete	15
Heater Scarification/Recompaction, Recycled Asphalt Concrete	16
Jointed Plain Recycled Portland Cement Concrete	17
Jointed Reinforced Recycled Portland Cement Concrete	18
Other	20

Table 3. Base and subbase material type classification codes.

MATERIAL TYPE	CODE
No Base (Pavement Directly on Subgrade)	21
Uncrushed Gravel	22
Crushed Stone, Gravel or Slag	23
Sand	24
Soil-Aggregate Mixture, Predominately Fine-Grained Soil	25
Soil-Aggregate Mixture, Predominately Coarse-Grained Soil	26
Soil Cement	27
BITUMINOUS BOUND BASE OR SUBBASE MATERIALS	
Dense Graded, Hot laid, Central Plant Mix	28
Dense Graded, Cold Laid, Central Plant Mix	29
Dense Graded, Cold Laid, Mixed-in-Place	30
Open Graded, Hot Laid, Central Plant Mix	31
Open Graded, Cold Laid, Central Plant Mix	32
Open Graded, Cold Laid, Mixed-in-place	33
Recycled Asphalt Concrete, Plant Mix, Hot Laid	34
Recycled Asphalt Concrete, Plant Mix, Cold Laid	35
Recycled Asphalt Concrete, Mixed-in-Place	36
Sand Asphalt	46
Cement Aggregate Mixture	37
Lean Concrete (< 3 sacks/cy)	38
Recycled Portland Cement Concrete	39
Sand-Shell Mixture	40
Limerock, Caliche (Soft Carbonate Rock)	41
Lime-Treated Subgrade Soil	42
Cement Treated Subgrade Soil	43
Pozzolanic-Aggregate Mixture	44
Open graded, Untreated Aggregate Drainage Layer	47

Table 4. Subgrade soil description codes.

MATERIAL TYPE	CODE
FINE-GRAINED SUBGRADE SOILS	
Clay (Liquid Limit > 50)	51
Sandy Clay	52
Silty Clay	53
Silt	54
Sandy Silt	55
Clayey Silt	56
COARSE-GRAINED SOILS	
Sand	57
Poorly Graded Sand	58
Silty Sand	59
Clayey Sand	60
Gravel	61
Poorly Graded Gravel	62
Clayey Gravel	63
Shale	64
Rock	65

Table 5. Material type classification codes for thin seals and interlayers.

MATERIAL TYPE	CODE
Chip Seal Coat	71
Slurry Seal Coat	72
Fog Seal Coat	73
Woven Geotextile	74
Nonwoven Geotextile	75
Stress Absorbing Membrane Interlayer	77
Dense Graded Asphalt Concrete Interlayer	78
Aggregate Interlayer	79
Open Graded Asphalt Concrete Interlayer	80
Chip Seal with Modified Binder (Excluding Crumb Rubber)	81
Sand Seal	82
Asphalt Rubber Seal Coat (Stress Absorbing Membrane)	83
Sand Asphalt	84
Other	85