SPS-8 NY

PAVEMENT MANAGEMENT SYSTEMS

MEMORANDUM

TO:	Wes Yang, NY DOT	**DATE:**	November 06, 1992
FROM:	Bill Phang Bill Phang	**PROJECT:**	50450810
SUBJECT:	NYS DOT SPS-8, Materials Sampling and Testing Plan	**FILE:**	13.12.8
		COPIES TO:	See Below

The materials sampling and testing plans developed by the North Atlantic Regional office in accordance with the Material Sampling and Testing Requirements for SPS-8, Operational Memorandum No. SHRP-LTPP-OM-030, August 1992, is forwarded enclosed and includes the following:

1. a revised SPS-8 layout with the monitoring test sections located with respect to construction stationing
2. Table 1 - NYS DOT SPS-8 Field and Laboratory Materials Testing Plan
3. Table 2 - Scope of Field Testing
4. Table 3 - Scope of Material Sampling
5. Sketch plan showing the locations of sampling and field testing during construction as identified in Table 1

The sampling and testing procedures and protocols are to be carried out by the agency in accordance with the SHRP-LTPP Interim Guide for Laboratory Materials Handling and Testing, SHRP-LTPP-OG-004 with the exception of the Creep Compliance, Resilient Modulus, and Tensile Strength tests which are to be carried out by an FHWA designated laboratory.

The equipment for nuclear density/moisture testing and asphalt concrete density must be in-calibration, and the calibration records made available to the regional office.

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NY DOT SPS–8 Layout: Lake Ontario State Parkway, EB
Brockport, New York

Constr. Station	Length Ft.	Structure		Remarks	Section No.	SHRP Monitor Sta.	Constr. Station
		AC. Thick.	Gran. Base				
				Hamlin Beach State Park Eatbound exit (Yanty Creek) End PCC Pavement – MP 1035			
108+41		4"	8"	Begin reconstruction Sample area 1			
	859'			Begin monitoring section	1	0+00	111+00
				End monitoring section Sample area 2		5+00	116+00
117+00 118+05		7"	12"	Pipe Sample area 3			
				Begin monitoring section	2	0+00	119+00
				End monitoring section Sample area 4		5+00	124+00
124+50				Pipe			
129+50				Pipe			
130+00		6.5"	12"	Sample area 5			
	800'			Begin monitoring section	3	0+00	131+00
				End monitoring section Sample area 6		5+00	136+00
138+00				End reconstruction			

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11/02/92

TABLE 1
NY DOT SPS–8: Field and Laboratory Materials Testing Plan

Material Type and Properties	SHRP Test Designation	SHRP Protocol	Tests Per Layer	Materials Source/ Test Location	Comments
SUBGRADE					
Sieve Analysis	SS01	P51	3	B1–B3	
Hydrometer to 0.01mm	SS02	P42	3	B1–B3	
Atterberg Limits	SS03	P43	3	B1–B3	
Classification and Type of Subgrade	SS04	P52	12	A1–A9, B1–B3,	Visual manual classification ONLY
Moisture–Density Relations	SS05	P55	3	B1–B3	
Resilient Modulus	SS07	P46	3	A1, A4, A7	
Unit Weight	SS08	P56	9	A1–A9	
Natural Moisture Content	SS09	P49	3	B1–B3	
Unconfined Comp. Strength	SS10	P54	3	A2, A5, A8	
Permeability	SS11	P57	1	A3	
In–Place Density		SHRP–LTPP	12	B1–B3, T1–T9	
Depth to Rigid Layer		SHRP–LTPP	3	S1, S2, S3	
Expansion Index	SS12	P60	3	B1–B3	
UNBOUND GRANULAR BASE					
Particle Size Analysis	UG01	P41	3	B4–B6	
Sieve Analysis (washed)	UG02	P41	3	B4–B6	
Atterberg Limits	UG04	P43	3	B4–B6	
Moisture–Density Relations	UG05	P44	3	B4–B6	
Resilient Modulus	UG07	P46	3	B4–B6	
Classification	UG08	P47	3	B4–B6	
Permeability	UG09	P48	3	B4–B6	
Natural Moisture Content	UG10	P49	3	B4–B6	
In–Place Density		SHRP–LTPP	9	T10–T18	
ASPHALT CONTENT SURFACE AND BINDER					
Core Exam/Thickness	AC01	P01	24	All Cores	Bulk samples of HMAC taken at the plant
Bulk Specific Gravity	AC02	P02	24	All Cores	
Maximum Specific Gravity	AC03	P03	3	BV–01, BV–02, BV–03	
AC % (extraction)	AC04	P04	3	BV–01, BV–02, BV–03	
Moisture Susceptibility	AC05	P05	3	BV–01, BV–02, BV–03	
Creep Compliance	AC06	P06	1	C14	
Resilient Modulus	AC07	P07	3	[C1–C3] [C9–C11] [C17–C19]	
Tensile Strength	AC07	P07	12	{C1–C4] [C9–C12] [C17–C20]	
In–Place Density		SHRP–LTPP	9	T19–T26	

TABLE 1 (cont.)
NY DOT SPS–8: Field and Laboratory Materials Testing Plan

Material Type and Properties	SHRP Test Designation	SHRP Protocol	Tests Per Layer	Materials Source/ Test Location	Comments
ASPHALT CEMENT					
Abson Recovery	AE01	P21	3	BV–01, BV–02, BV–03	
Penetration (50F, 77F, 90F)	AE02	P22	3	BV–01, BV–02, BV–03	
Specific Gravity (60F)	AE03	P23	3	BV–01, BV–02, BV–03	
Viscosity at 77F	AE04	P24	3	BV–01, BV–02, BV–03	
Viscosity at 140F, 275F	AE05	P25	3	BV–01, BV–02, BV–03	
EXTRACTED AGGREGATE					
Specific Gravity:					
Coarse Aggregate	AG01	P11	3	BV–01, BV–02, BV–03	
Fine Aggregate	AG02	P12	3	BV–01, BV–02, BV–03	
Type and Classification:					
Coarse Aggregate	AG03	P13	3	BV–01, BV–02, BV–03	
Fine Aggregate	AG03	P13	3	BV–01, BV–02, BV–03	
Gradation of Aggregate	AG04	P14	3	BV–01, BV–02, BV–03	
NAA Test for Fine Aggregate for Particle Shape	AG05	P14A	3	BV–01, BV–02, BV–03	
Coarse Aggregate Shape	AG06	P14B	3	BV–01, BV–02, BV–03	
ASPHALT CEMENT (from tanker)					
Penetration at 50F, 77F, 90F	AE2	P22	3	BC–01, BC–02, BC–03 from plant	Bulk sample of asphalt cement
Specific Gravity (60F)	AE03	P23	3	BC–01, BC–02, BC–03 from plant	
Viscosity at 77F	AE04	P24	3	BC–01, BC–02, BC–03 from plant	
Viscosity at 140F, 275F	AE05	P25	3	BC–01, BC–02, BC–03 from plant	

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Table 2: Scope of Field Testing

Material	Number of Tests	Location Designation
Asphalt Content In–Situ Density	15	T19–T26, SA1–SA6
Unbound Base/Subbase Layers (per layer)		
In–Situ density, moisture content (nuclear gauge)	9	T10–T18
Moisture content samples	3	B4–B6
Subgrade In–Situ density, moisture content (nuclear gauge)	12	T1–T9, B1–B3

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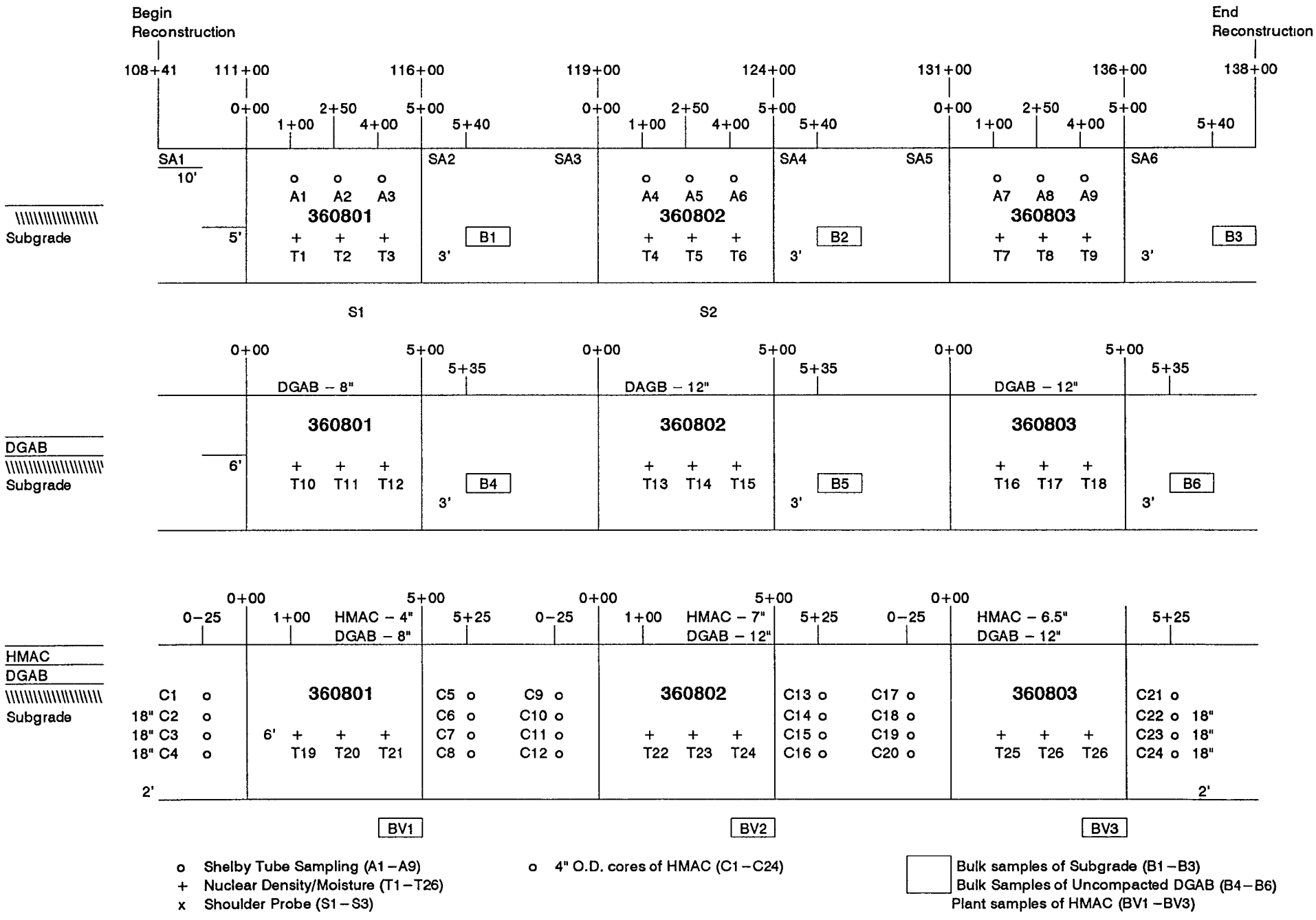
Table 3: Scope of Material Sampling

Material and Sample Description	Number of Samples	Sample Location
Asphalt Content		
Coring – 4" diameter cores	24	C1–C24
Bulk sampling (see note) (100 pounds of each mix, uncompacted)	3	BV–01, BV–02, BV–03 from plant
Unbound Base/Subbase Layers (per layer)		
Bulk sampling	3	B4–B6
Moisture content samples	3	B4–B6
Subgrade		
Splitspoon sampling	18*	A1–A9
Thin–walled tube sampling (*2 tubes or 2 spoons or combination per hole)	18*	A1–A9
Bulk sampling (400 pounds each sample)	3	B1–B3
Moisture content samples	12	A1–A9, B1–B3
Permeability	1	A3
Expansion Index	3	B1–B3
Shoulder Auger Probes (Depth to rigid layer)	3	S1, S2, S3
Asphalt Cement (5 gallon samples)	3	BC–1 , BC–02, BC–03 from plant

NOTE: If different AC mixes are used for the surface course and binder course, bulk samples should be obtained from each mix.

NYS DOT SPS–8
Field Materials Sampling and Testing Plan