

## SECTION E1

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	5.3%
General Aggregate Type:	Quartzite
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	5.77
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

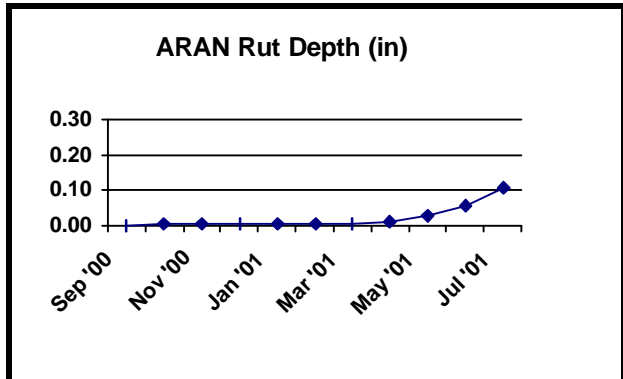
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.12
Rutting via Transverse Profile (in):	NA
Approximate Fn:	36.4



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION E10

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	5.8%
General Aggregate Type:	Granite
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.33
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

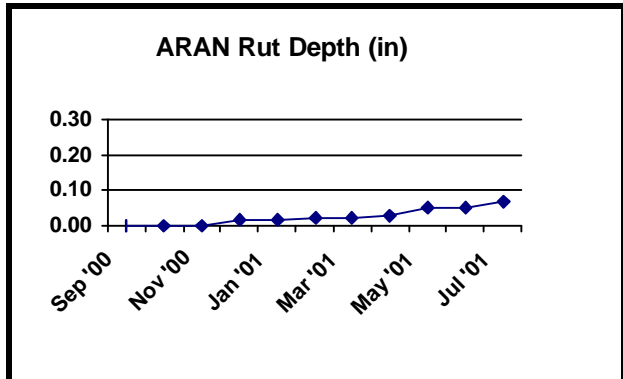
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.07
Rutting via Transverse Profile (in):	NA
Approximate Fn:	41.8



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION E2

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	4.7%
General Aggregate Type:	Granite
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.26
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

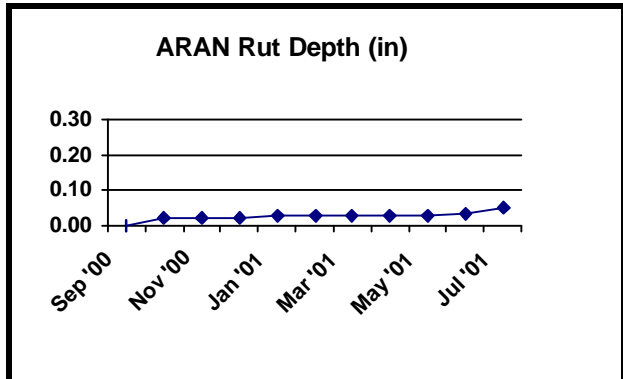
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.05
Rutting via Transverse Profile (in):	NA
Approximate Fn:	40.6



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION E3

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	4.8%
General Aggregate Type:	Granite
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.25
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

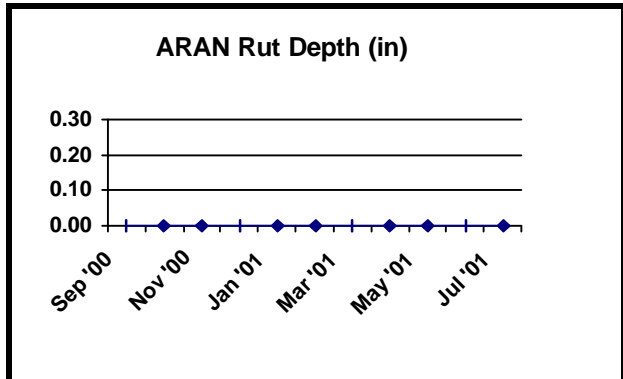
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0
Rutting via Transverse Profile (in):	NA
Approximate Fn:	39.8



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION E4

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	4.7%
General Aggregate Type:	Granite
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.47
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

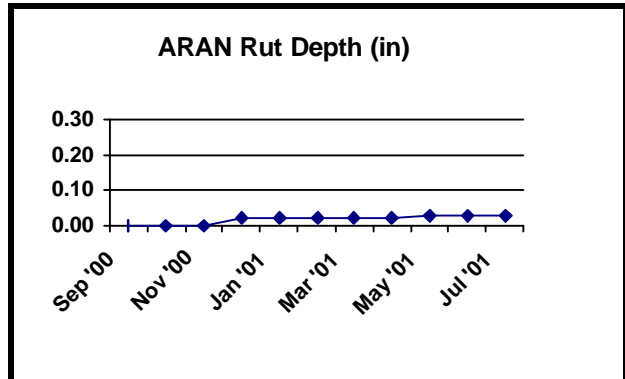
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.03
Rutting via Transverse Profile (in):	NA
Approximate Fn:	36.3



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION E5

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	5.1%
General Aggregate Type:	Granite
Approximate Gradation Type:	TRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.83
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

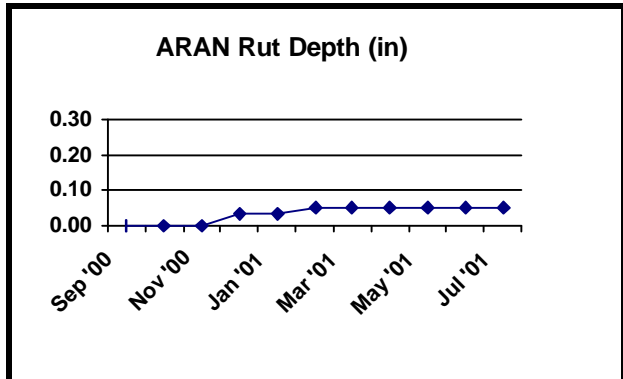
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.05
Rutting via Transverse Profile (in):	NA
Approximate Fn:	36.4



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION E6

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	5.0%
General Aggregate Type:	Granite
Approximate Gradation Type:	TRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.25
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

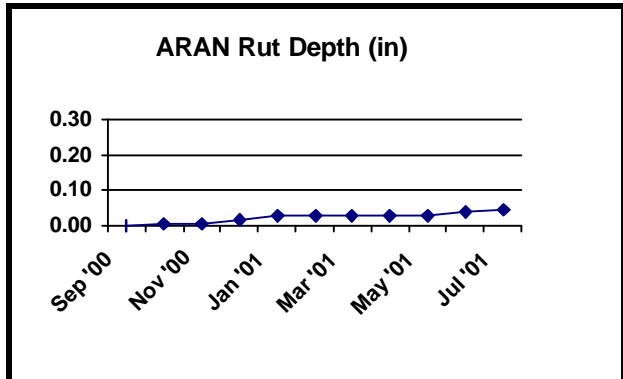
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.05
Rutting via Transverse Profile (in):	NA
Approximate Fn:	37.4



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION E7

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	4.8%
General Aggregate Type:	Granite
Approximate Gradation Type:	TRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	0.71
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

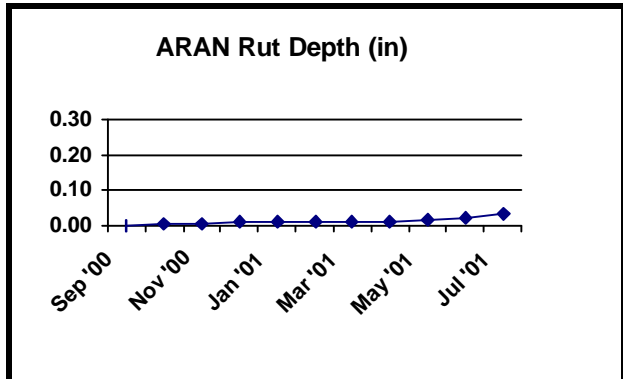
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.05
Rutting via Transverse Profile (in):	NA
Approximate Fn:	37.0



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION E8

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	5.6%
General Aggregate Type:	Granite
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	4.56
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

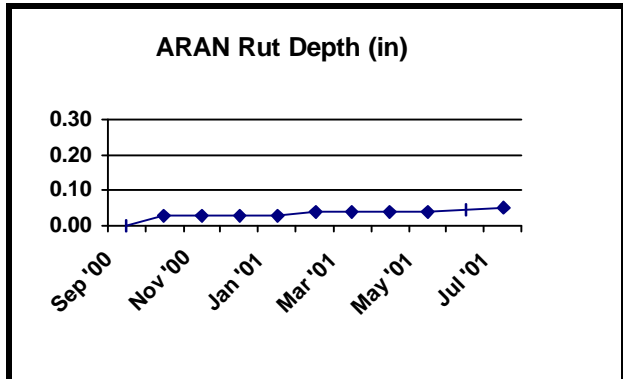
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.07
Rutting via Transverse Profile (in):	NA
Approximate Fn:	35.6



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION E9

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	5.4%
General Aggregate Type:	Granite
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	3.64
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

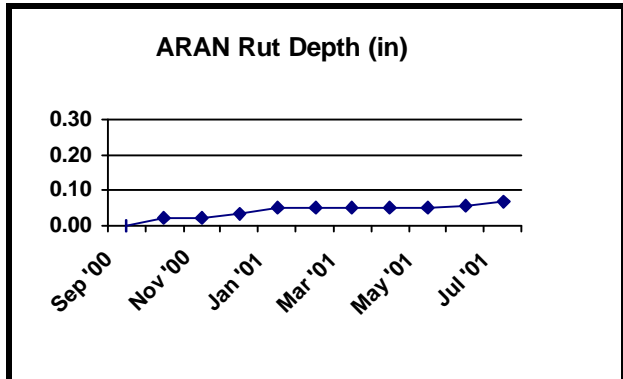
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.07
Rutting via Transverse Profile (in):	NA
Approximate Fn:	40.6



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N1

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	7.4%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.13
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

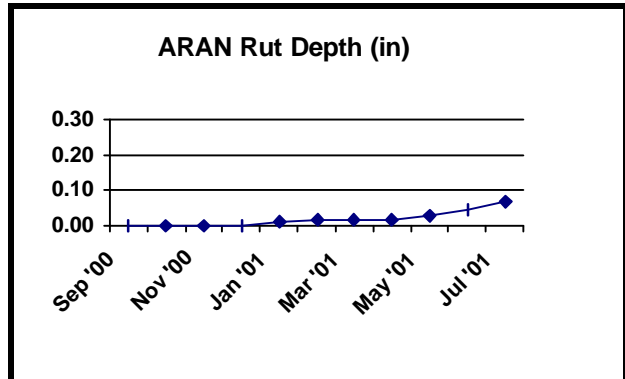
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.08
Rutting via Transverse Profile (in):	NA
Approximate Fn:	36.3



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N10

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	6.8%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.10
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

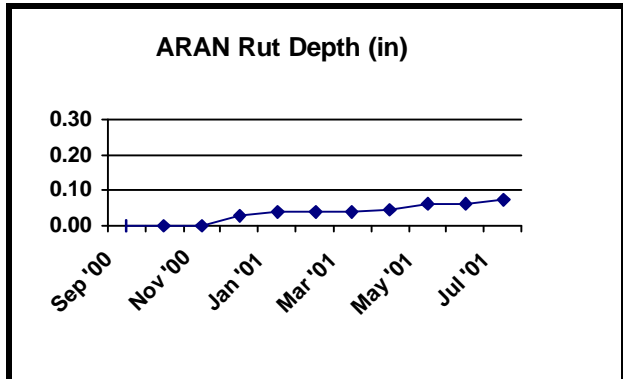
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.09
Rutting via Transverse Profile (in):	NA
Approximate Fn:	39.4



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N11 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	4.3%
General Aggregate Type:	Granite
Approximate Gradation Type:	TRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.71
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

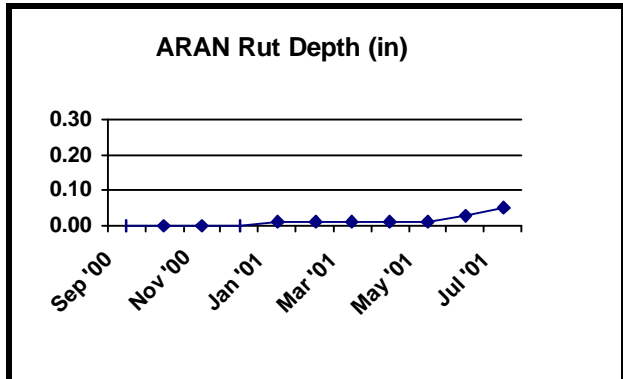
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.06
Rutting via Transverse Profile (in):	NA
Approximate Fn:	43.0



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N12 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	SMA
Compactive Effort:	50 blows
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	6.2%
General Aggregate Type:	Granite
Approximate Gradation Type:	SMA

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.55
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

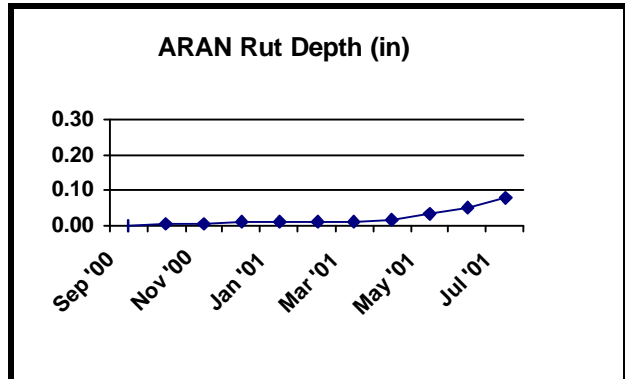
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.08
Rutting via Transverse Profile (in):	NA
Approximate Fn:	44.6



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N13 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	SMA
Compactive Effort:	50 blows
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	6.8%
General Aggregate Type:	Gravel
Approximate Gradation Type:	SMA

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	3.30
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

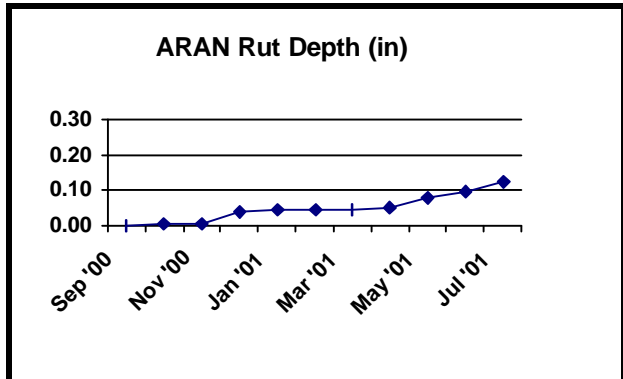
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.14
Rutting via Transverse Profile (in):	NA
Approximate Fn:	43.5



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N2

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	7.8%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.92
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

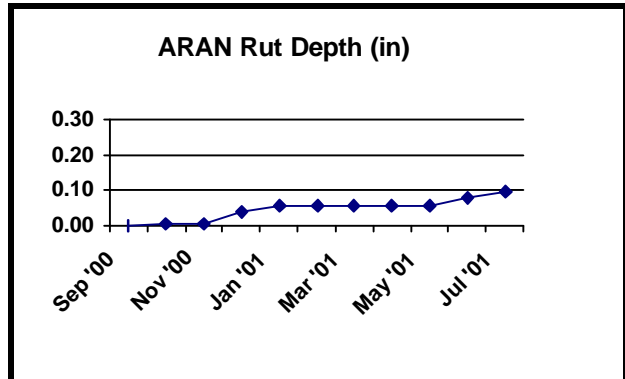
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.1
Rutting via Transverse Profile (in):	NA
Approximate Fn:	37.8



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N3

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	7.6%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	3.27
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

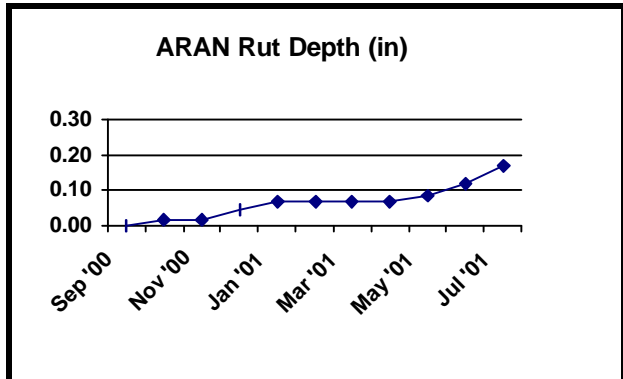
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.19
Rutting via Transverse Profile (in):	NA
Approximate Fn:	35.7



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N4

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	6.8%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	4.28
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

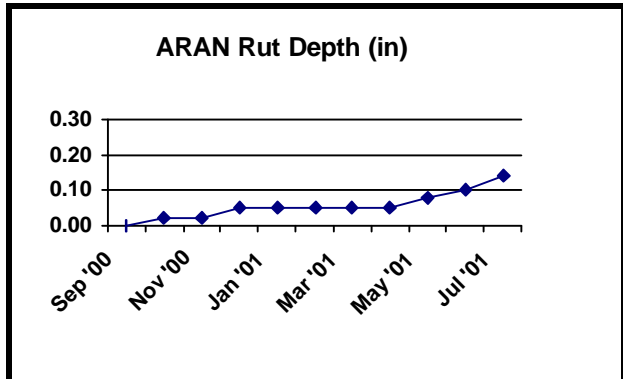
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.15
Rutting via Transverse Profile (in):	NA
Approximate Fn:	36.3



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N5

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	6.9%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.68
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

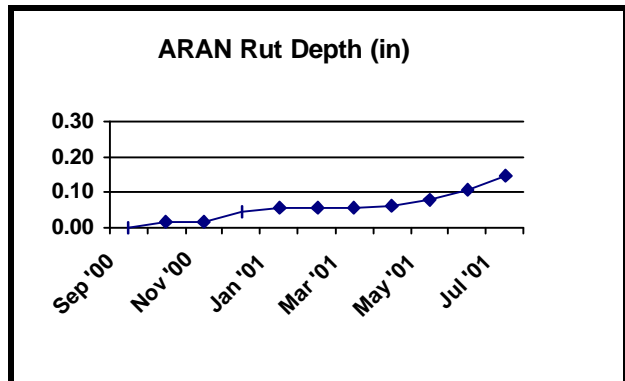
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.17
Rutting via Transverse Profile (in):	NA
Approximate Fn:	37.8



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N6

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	6.8%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	6.55
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

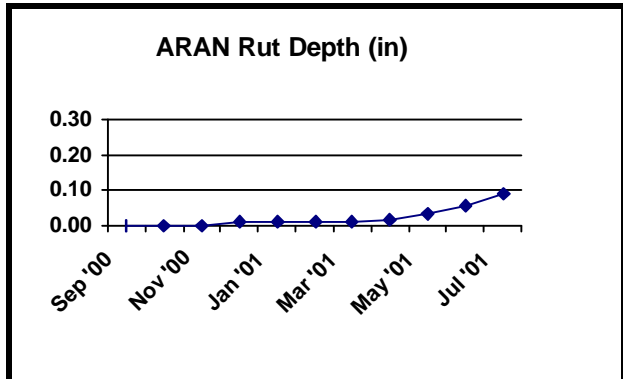
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.11
Rutting via Transverse Profile (in):	NA
Approximate Fn:	41.3



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N7

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	6.9%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.50
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

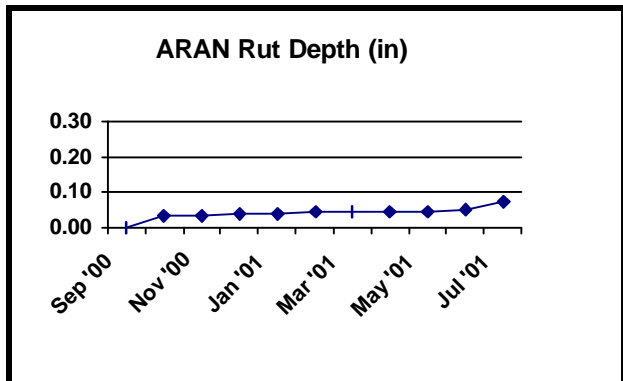
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.08
Rutting via Transverse Profile (in):	NA
Approximate Fn:	40.2



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N8

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	6.6%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.51
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

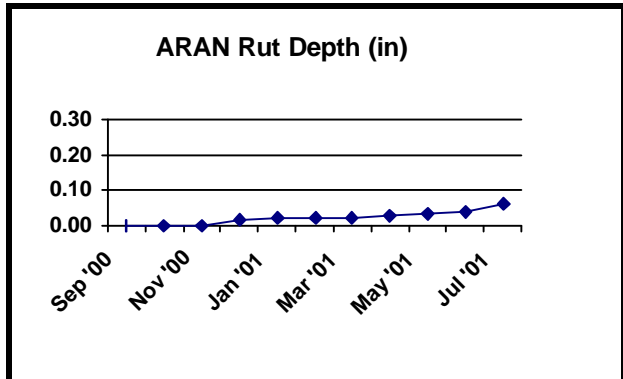
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.07
Rutting via Transverse Profile (in):	NA
Approximate Fn:	38.8



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION N9

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	6.7%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.42
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

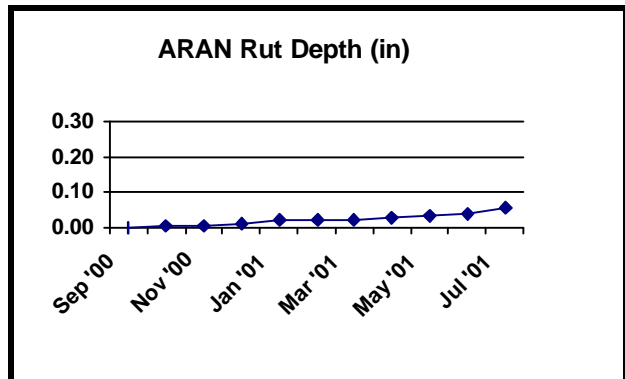
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.06
Rutting via Transverse Profile (in):	NA
Approximate Fn:	38.9



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S1 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	5.0%
General Aggregate Type:	Granite
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.86
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

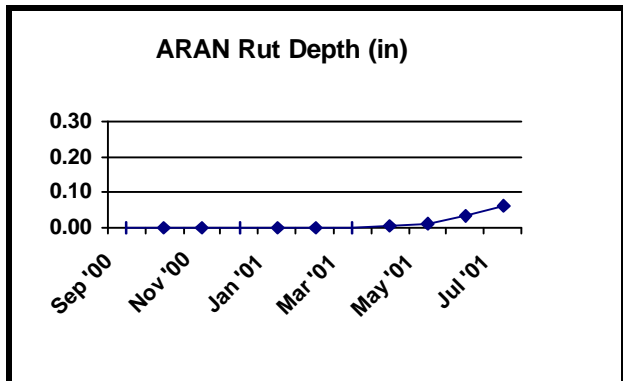
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.07
Rutting via Transverse Profile (in):	NA
Approximate Fn:	42.9



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S10

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	5.2%
General Aggregate Type:	Granite
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.55
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

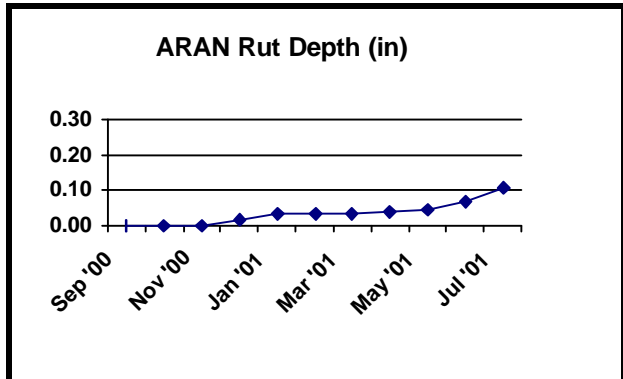
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.12
Rutting via Transverse Profile (in):	NA
Approximate Fn:	39.7



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S11 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	3.9%
General Aggregate Type:	Granite
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.12
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

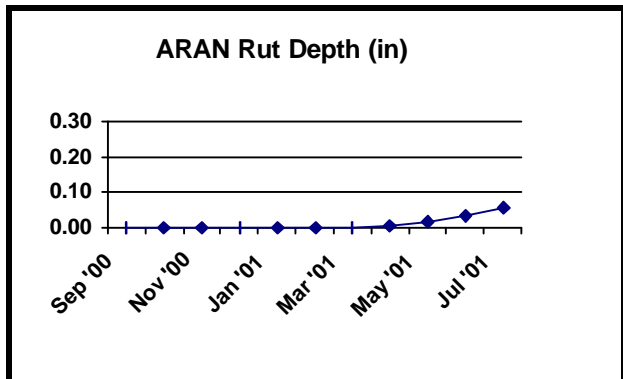
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.06
Rutting via Transverse Profile (in):	NA
Approximate Fn:	38.2



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S12

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Hveem
Compactive Effort:	NA
Binder Performance Grade:	70-28
Modifier Type:	SB
Laboratory Determined Asphalt Content:	4.5%
General Aggregate Type:	Limestone
Approximate Gradation Type:	TRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.58
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

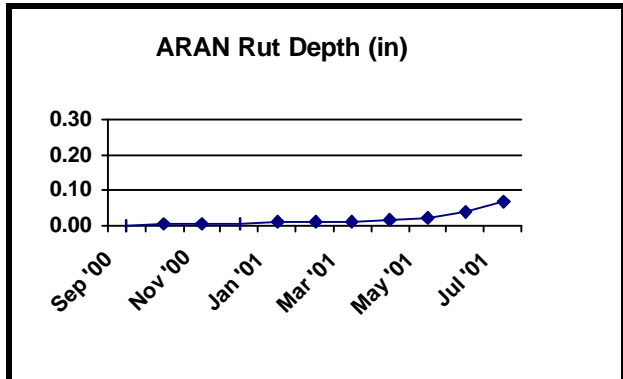
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.07
Rutting via Transverse Profile (in):	NA
Approximate Fn:	31.5



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S13

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	70-28
Modifier Type:	SB
Laboratory Determined Asphalt Content:	5.3%
General Aggregate Type:	Granite
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.24
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

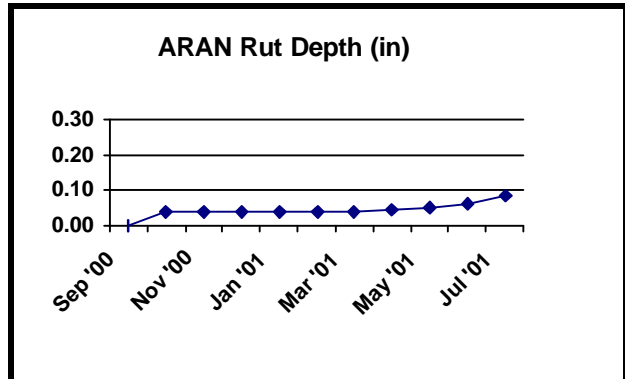
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.09
Rutting via Transverse Profile (in):	NA
Approximate Fn:	52.7



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S2 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	6.0%
General Aggregate Type:	Gravel
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.43
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

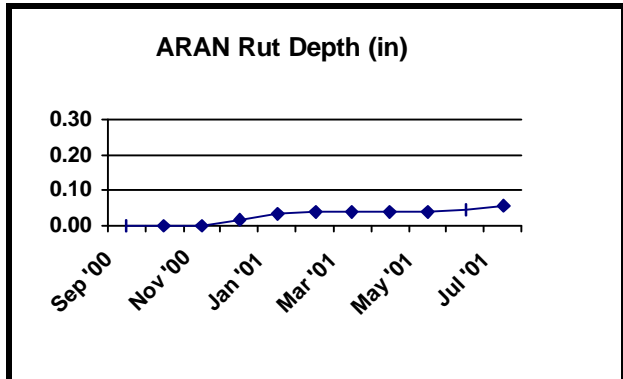
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.06
Rutting via Transverse Profile (in):	NA
Approximate Fn:	43.2



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S3 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	5.6%
General Aggregate Type:	Lms/gravel
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.34
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

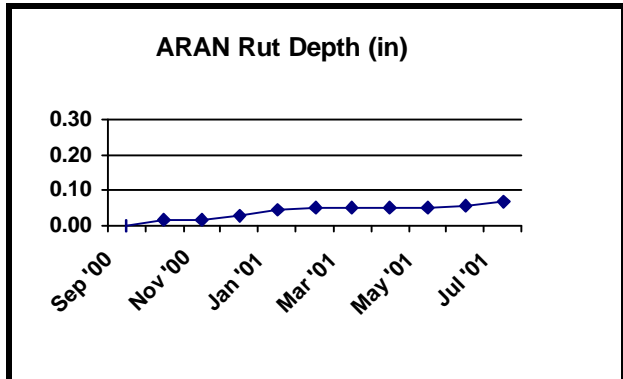
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.07
Rutting via Transverse Profile (in):	NA
Approximate Fn:	40.1



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S4 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	5.3%
General Aggregate Type:	Limestone
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.18
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

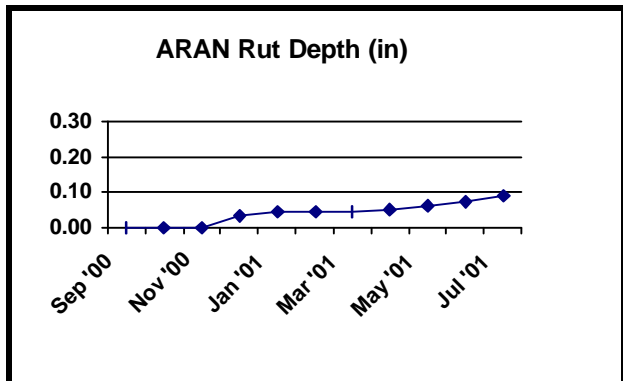
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.09
Rutting via Transverse Profile (in):	NA
Approximate Fn:	42.1



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S5 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	5.6%
General Aggregate Type:	Gravel
Approximate Gradation Type:	TRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	3.17
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

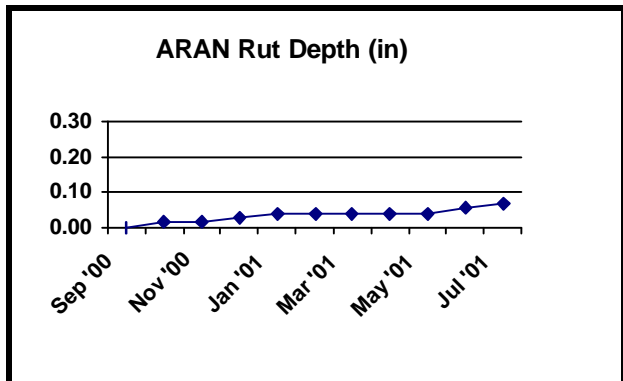
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.07
Rutting via Transverse Profile (in):	NA
Approximate Fn:	36.3



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S6

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	6.2%
General Aggregate Type:	Lms/RAP
Approximate Gradation Type:	ARZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.71
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

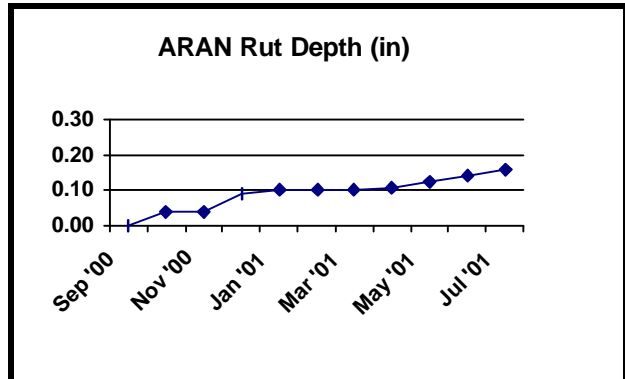
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.16
Rutting via Transverse Profile (in):	NA
Approximate Fn:	30.1



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S7

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	6.6%
General Aggregate Type:	Lms/RAP
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.60
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

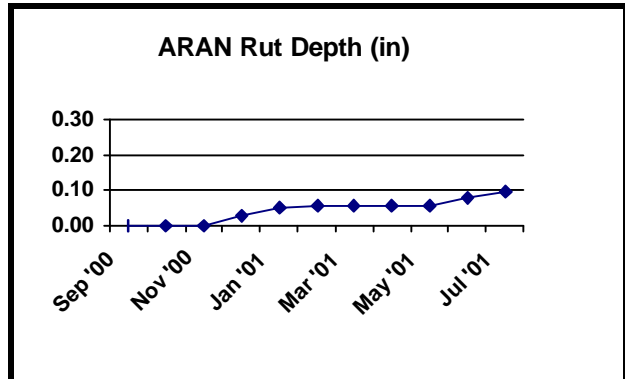
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.11
Rutting via Transverse Profile (in):	NA
Approximate Fn:	31.2



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S8 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	4.2%
General Aggregate Type:	Granite
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	1.15
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

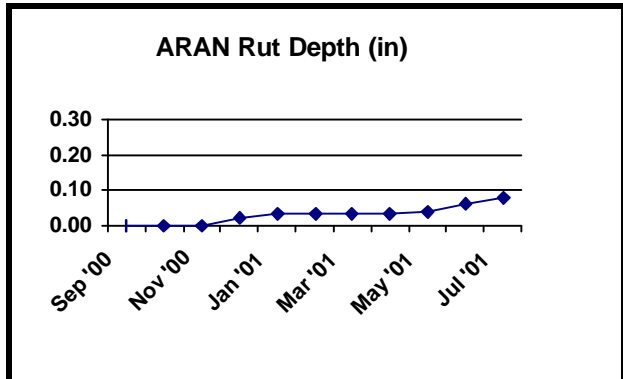
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.09
Rutting via Transverse Profile (in):	NA
Approximate Fn:	36.7



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION S9

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	4.7%
General Aggregate Type:	Granite
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.15
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

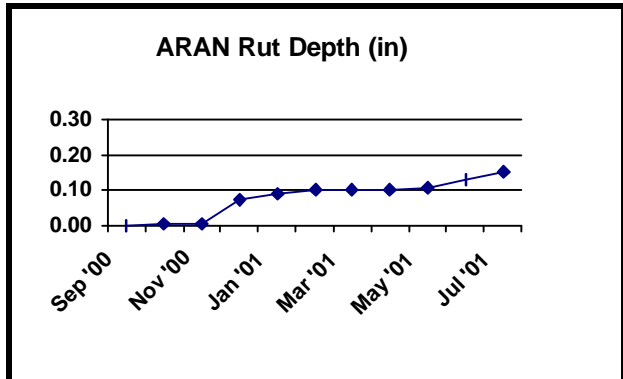
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.16
Rutting via Transverse Profile (in):	NA
Approximate Fn:	44.1



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION W1

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	SMA
Compactive Effort:	50 blows
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	6.1%
General Aggregate Type:	Granite
Approximate Gradation Type:	SMA

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.00
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

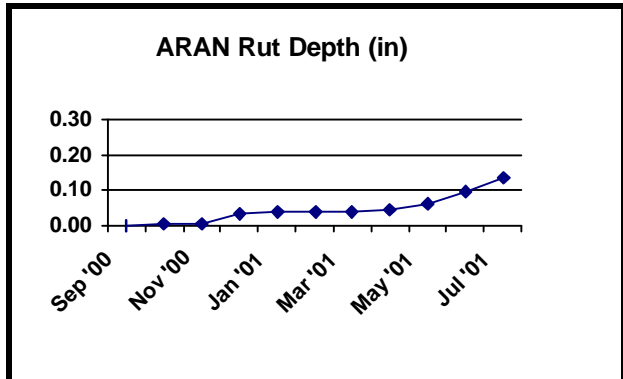
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.15
Rutting via Transverse Profile (in):	NA
Approximate Fn:	44.7



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION W10

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	5.0%
General Aggregate Type:	Qtz gravel
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.28
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

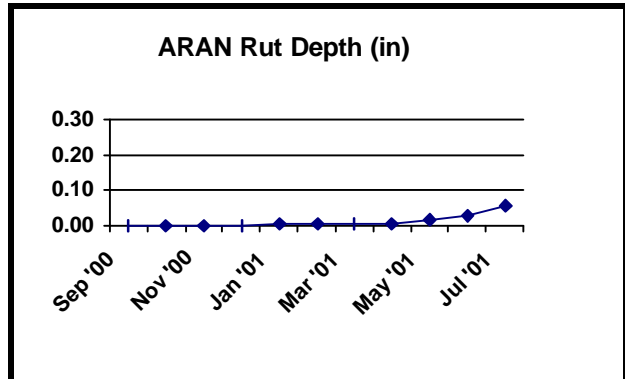
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.06
Rutting via Transverse Profile (in):	NA
Approximate Fn:	42.6



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION W2

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	SMA
Compactive Effort:	50 blows
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	8.0%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	SMA

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.43
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

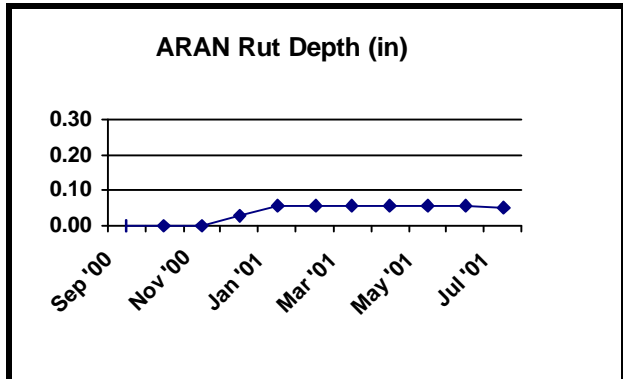
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.05
Rutting via Transverse Profile (in):	NA
Approximate Fn:	39.9



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION W3 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	OGFC
Compactive Effort:	50 blows
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	7.6%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	OGFC

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	NA
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

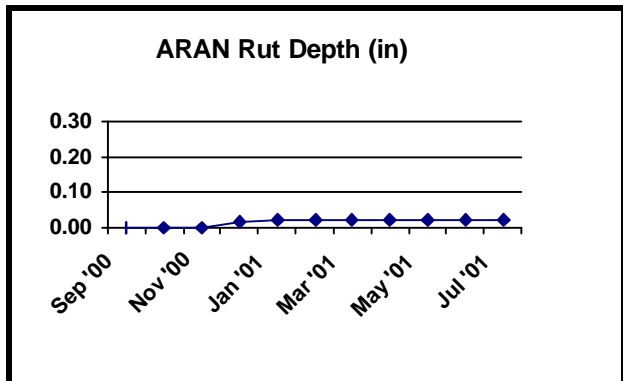
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.02
Rutting via Transverse Profile (in):	NA
Approximate Fn:	38.1



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION W4 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	OGFC
Compactive Effort:	NA
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	6.1%
General Aggregate Type:	Granite
Approximate Gradation Type:	OGFC

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	NA
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

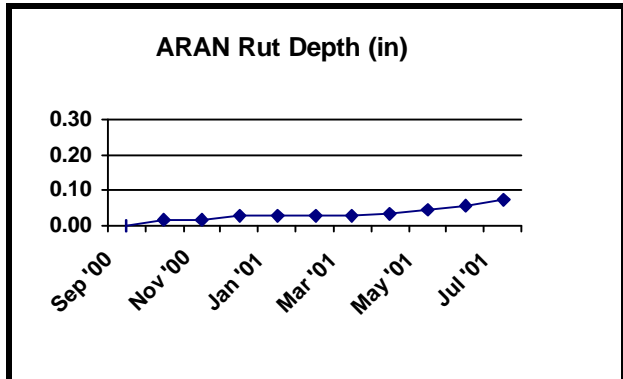
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.08
Rutting via Transverse Profile (in):	NA
Approximate Fn:	40.9



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION W5 (Upper Layer)

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	OGFC
Compactive Effort:	NA
Binder Performance Grade:	76-22
Modifier Type:	SBS
Laboratory Determined Asphalt Content:	6.2%
General Aggregate Type:	Granite
Approximate Gradation Type:	OGFC

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	NA
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

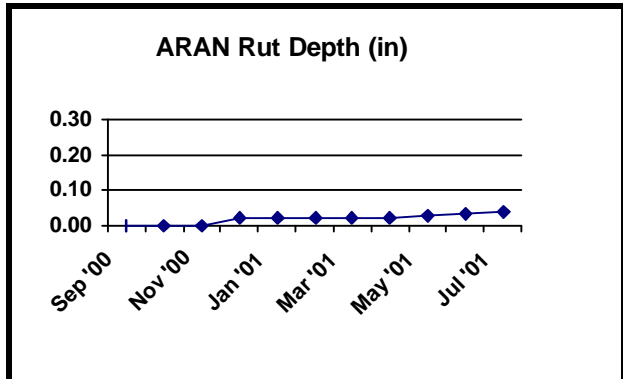
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.04
Rutting via Transverse Profile (in):	NA
Approximate Fn:	40.2



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION W6

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	6.8%
General Aggregate Type:	Lms/Slag
Approximate Gradation Type:	TRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.38
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

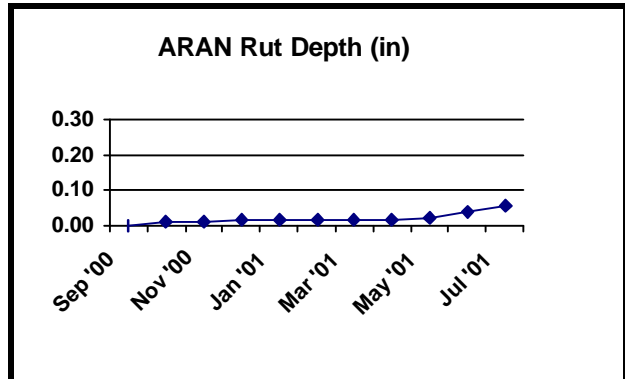
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.06
Rutting via Transverse Profile (in):	NA
Approximate Fn:	31.1



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION W7

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	SMA
Compactive Effort:	50 blows
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	5.9%
General Aggregate Type:	Limestone
Approximate Gradation Type:	SMA

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyrotory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	3.29
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

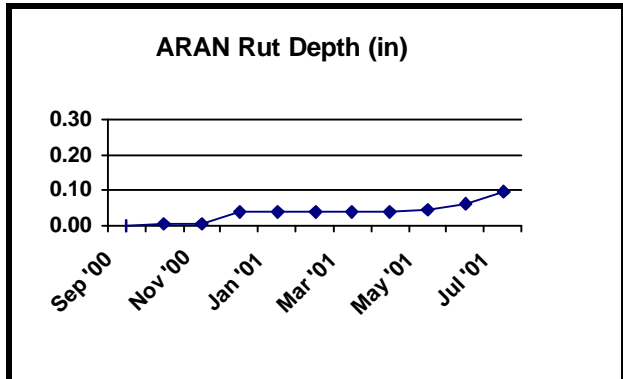
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.1
Rutting via Transverse Profile (in):	NA
Approximate Fn:	21.0



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyrotory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION W8

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	SMA
Compactive Effort:	50 blows
Binder Performance Grade:	76-22
Modifier Type:	SBR
Laboratory Determined Asphalt Content:	7.5%
General Aggregate Type:	Sandstone
Approximate Gradation Type:	SMA

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	2.88
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

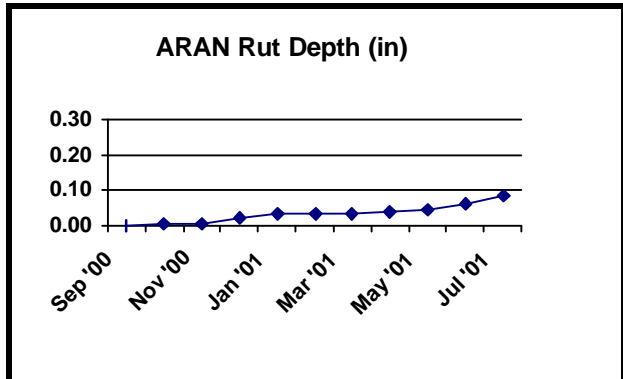
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.09
Rutting via Transverse Profile (in):	NA
Approximate Fn:	38.8



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.

## SECTION W9

### Laboratory Performance

#### General Description of Mix and Materials

Design Method:	Superpave
Compactive Effort:	100 gyrations
Binder Performance Grade:	67-22
Modifier Type:	NA
Laboratory Determined Asphalt Content:	5.0%
General Aggregate Type:	Qtz gravel
Approximate Gradation Type:	BRZ

#### Avg. Lab Properties of Plant Produced Mix

SST Repeated Load Perm. Strain (microns):	NA
Unconfined Creep Perm. Strain:	NA
Confined Creep Perm. Strain:	NA
Unconfined Dynamic Perm. Strain:	NA
Confined Dynamic Perm. Strain:	NA
Dynamic Modulus:	NA
COE Gyratory Shear Index:	NA
SGC Shear Ratio:	NA
Asphalt Pavement Analyzer (mm):	5.63
Hamburg Loaded Wheel Tester (mm):	NA
Rotary Loaded Wheel Tester (mm):	NA
Purwheel Loaded Wheel Tester (mm):	NA

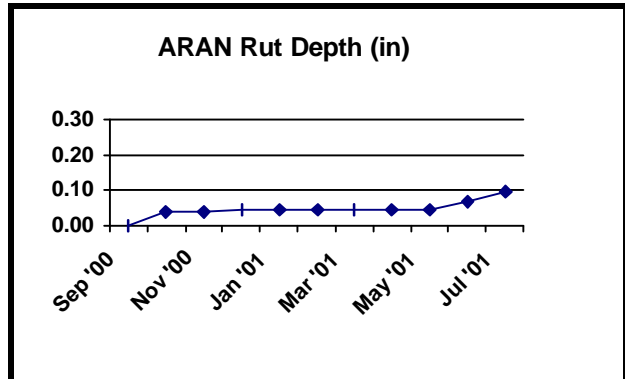
### Roadway Performance (7/30/01)

#### Relevant Field Conditions

Total Traffic Applied (ESAL's):	3,428,732
Highest Surface Temp in 2001 (F)	NA
Avg. Surface Temp in 2001 (F):	NA
Avg Surface Temp in Past Week (F):	NA

#### Roadway Performance Properties

Rutting via ARAN 3 Point Approx. (in):	0.1
Rutting via Transverse Profile (in):	NA
Approximate Fn:	39.7



### **General Notes:**

- 1) Test specimens were compacted to 7 +/- 1% air voids for tensile strength ratio (TSR) testing.
- 2) Test specimens were compacted to avg QC +/- 1% air voids for SST, creep, APA, and assorted LWT testing.
- 3) The vast majority of pills used as research test specimens were compacted during construction.
- 4) When an insufficient quantity of construction-compacted pills met target air voids, reheated mix was used.
- 5) All suitable pills were randomly assigned to test protocols in a manner to achieve equal avg and std dev in VTM.
- 6) All test protocols utilized sample sets consisting of 3 replicates per test (e.g., APA result is avg of 3 pills).
- 7) Loaded wheel testing consisted of 8000 cycles in the dry state with samples conditioned at 147.2 F long enough to insure a uniform temperature throughout the specimen but in no case longer than 24 hours.
- 8) APA testing utilized 1 inch OD hose, 120 psi pressure, 120 lb load, cylindrical specimens, manual depths.
- 9) Gyratory shear testing was conducted at mat compaction temperatures based upon construction measurements.