

**Quadrant:** N  
**Section:** 6  
**Sublot:** 1

**Laboratory Diary**

General Description of Mix and Materials

Design Method: Super  
 Compactive Effort: 80 gyrations  
 Binder Performance Grade: 76-22  
 Modifier Type: SBS  
 Aggregate Type: Grn/Sand/Lms  
 Design Gradation Type: Fine

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Design	QC
25 mm (1"):	100	100
19 mm (3/4"):	100	100
12.5 mm (1/2"):	100	100
9.5 mm (3/8"):	100	100
4.75 mm (#4):	78	82
2.36 mm (#8):	60	55
1.18 mm (#16):	46	45
0.60 mm (#30):	31	30
0.30 mm (#50):	16	16
0.15 mm (#100):	10	10
0.075 mm (#200):	5.8	6.4
Binder Content (Pb):	5.8	6.1
Eff. Binder Content (Pbe):	5.1	5.4
Dust-to-Binder Ratio:	1.1	1.2
Rice Gravity (Gmm):	2.483	2.466
Avg. Bulk Gravity (Gmb):	2.384	2.370
Avg Air Voids (Va):	4.0	3.9
Agg. Bulk Gravity (Gsb):	2.667	2.662
Avg VMA:	15.8	16.4
Avg. VFA:	75	76

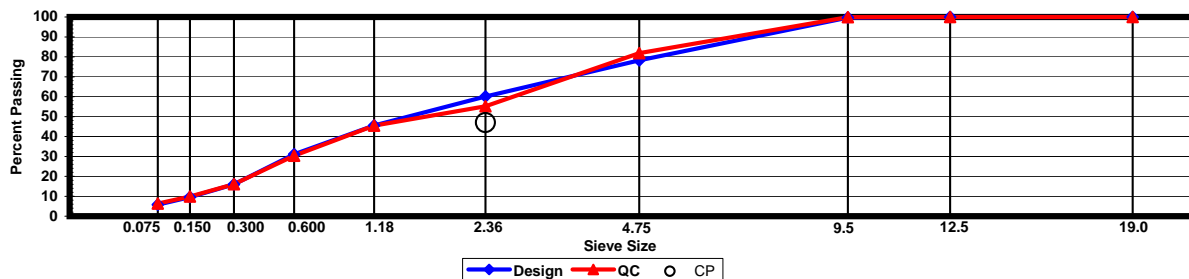
**Construction Diary**

Relevant Conditions for Construction

Completion Date: August 3, 2009  
 24 Hour High Temperature (F): 91  
 24 Hour Low Temperature (F): 72  
 24 Hour Rainfall (in): 0.00  
 Planned Sublot Lift Thickness (in): 1.3  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Asphalt Content (Plant Setting)	6.2
89 Columbus Granite	36.0
8910 Opelika Limestone Screenings	23.0
M10 Columbus Granite	13.0
Shorter Coarse Sand	28.0
As-Built Sublot Lift Thickness (in):	1.1
Total Thickness of All 2009 Sublots (in):	6.9
Approx. Underlying HMA Thickness (in):	0.0
Type of Tack Coat Utilized:	PG67-22
Target Tack Application Rate (gal/sy):	0.05
Approx. Avg. Temperature at Plant (F):	340
Avg. Measured Mat Compaction:	93.8%



**General Notes:**

- Mixes are referenced by quadrant (E=East, N=North, W=West, and S=South), section # (sequential) and subplot (top=1);
- The total HMA thickness of all structural study sections (N1-N11 and S8-S12) ranges from 5-3/4 to 14 inches by design;
- All non-structural sections are supported by a uniform perpetual foundation in order to study surface mix performance;
- SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- All liquid asphalt purchased for use in Track reconstruction contained LOF 6500 antistripping additive at a rate of 0.5 percent

**Quadrant:** N  
**Section:** 6  
**Sublot:** 2

**Laboratory Diary**

General Description of Mix and Materials

Design Method: WMA-T  
 Compactive Effort: 60 gyrations  
 Binder Performance Grade: 67-22  
 Modifier Type: Thiopave  
 Aggregate Type: Lms/Sand/Grn  
 Design Gradation Type: Fine

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Design	QC
25 mm (1"):	100	100
19 mm (3/4"):	93	89
12.5 mm (1/2"):	82	82
9.5 mm (3/8"):	71	75
4.75 mm (#4):	52	57
2.36 mm (#8):	45	46
1.18 mm (#16):	35	36
0.60 mm (#30):	24	24
0.30 mm (#50):	12	12
0.15 mm (#100):	7	8
0.075 mm (#200):	3.9	4.9
Binder Content (Pb):	6.2	5.7
Eff. Binder Content (Pbe):	5.6	5.2
Dust-to-Binder Ratio:	0.7	0.9
Rice Gravity (Gmm):	2.581	2.554
Avg. Bulk Gravity (Gmb):	2.491	2.440
Avg Air Voids (Va):	3.5	4.5
Agg. Bulk Gravity (Gsb):	2.737	2.768
Avg VMA:	14.6	16.9
Avg. VFA:	76	74

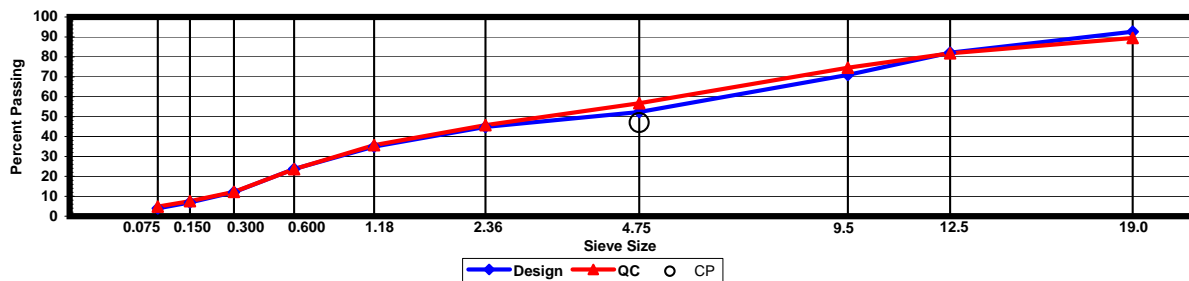
**Construction Diary**

Relevant Conditions for Construction

Completion Date: July 24, 2009  
 24 Hour High Temperature (F): 90  
 24 Hour Low Temperature (F): 68  
 24 Hour Rainfall (in): 0.00  
 Planned Sublot Lift Thickness (in): 2.8  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Asphalt Content (Plant Setting)	4.0
78 Opelika Limestone	30.0
57 Opelika Limestone	18.0
M10 Columbus Granite	25.0
Shorter Coarse Sand	27.0
Thiopave	40.0
Compaction Agent	1.0
As-Built Sublot Lift Thickness (in):	2.8
Total Thickness of All 2009 Sublots (in):	6.9
Approx. Underlying HMA Thickness (in):	0.0
Type of Tack Coat Utilized:	NTSS-1HM
Target Tack Application Rate (gal/sy):	0.05
Approx. Avg. Temperature at Plant (F):	275
Avg. Measured Mat Compaction:	92.9%



**General Notes:**

- Mixes are referenced by quadrant (E=East, N=North, W=West, and S=South), section # (sequential) and subplot (top=1);
- The total HMA thickness of all structural study sections (N1-N11 and S8-S12) ranges from 5-3/4 to 14 inches by design;
- All non-structural sections are supported by a uniform perpetual foundation in order to study surface mix performance;
- SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- All liquid asphalt purchased for use in Track reconstruction contained LOF 6500 antistripping additive at a rate of 0.5 percent

**Quadrant:** N  
**Section:** 6  
**Sublot:** 3

**Laboratory Diary**

General Description of Mix and Materials

Design Method: WMA-T  
 Compactive Effort: 60 gyrations  
 Binder Performance Grade: 67-22  
 Modifier Type: Thiopave  
 Aggregate Type: Lms/Sand/Grn  
 Design Gradation Type: Fine

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Design	QC
25 mm (1"):	100	100
19 mm (3/4"):	93	93
12.5 mm (1/2"):	82	82
9.5 mm (3/8"):	71	74
4.75 mm (#4):	52	55
2.36 mm (#8):	45	45
1.18 mm (#16):	35	35
0.60 mm (#30):	24	24
0.30 mm (#50):	12	12
0.15 mm (#100):	7	8
0.075 mm (#200):	3.9	4.8
Binder Content (Pb):	6.3	6.1
Eff. Binder Content (Pbe):	5.8	5.6
Dust-to-Binder Ratio:	0.7	0.8
Rice Gravity (Gmm):	2.558	2.521
Avg. Bulk Gravity (Gmb):	2.507	2.448
Avg Air Voids (Va):	2.0	2.9
Agg. Bulk Gravity (Gsb):	2.737	2.747
Avg VMA:	14.1	16.3
Avg. VFA:	86	82

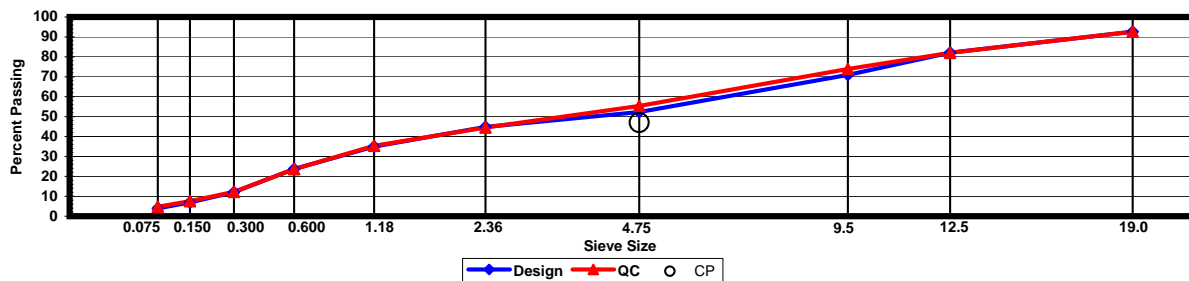
**Construction Diary**

Relevant Conditions for Construction

Completion Date: July 23, 2009  
 24 Hour High Temperature (F): 89  
 24 Hour Low Temperature (F): 74  
 24 Hour Rainfall (in): 0.00  
 Planned Sublot Lift Thickness (in): 3.0  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

Component	% Setting
Asphalt Content (Plant Setting)	5.1
78 Opelika Limestone	30.0
57 Opelika Limestone	18.0
M10 Columbus Granite	25.0
Shorter Coarse Sand	27.0
Thiopave	30.0
Compaction Agent	1.0
As-Built Sublot Lift Thickness (in):	3.1
Total Thickness of All 2009 Sublots (in):	6.9
Approx. Underlying HMA Thickness (in):	0.0
Type of Tack Coat Utilized:	NA
Target Tack Application Rate (gal/sy):	NA
Approx. Avg. Temperature at Plant (F):	275
Avg. Measured Mat Compaction:	93.7%



**General Notes:**

- Mixes are referenced by quadrant (E=East, N=North, W=West, and S=South), section # (sequential) and subplot (top=1);
- The total HMA thickness of all structural study sections (N1-N11 and S8-S12) ranges from 5-3/4 to 14 inches by design;
- All non-structural sections are supported by a uniform perpetual foundation in order to study surface mix performance;
- SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- All liquid asphalt purchased for use in Track reconstruction contained LOF 6500 antistripping additive at a rate of 0.5 percent