

**Quadrant:** S  
**Section:** 12  
**Sublot:** 1

**Laboratory Diary**

General Description of Mix and Materials

Design Method: TLA  
 Compactive Effort: 80 gyrations  
 Binder Performance Grade: 67-28  
 Modifier Type: TLA  
 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):	73	83
2.36 mm (#8):	57	61
1.18 mm (#16):	45	47
0.60 mm (#30):	30	32
0.30 mm (#50):	15	16
0.15 mm (#100):	10	9
0.075 mm (#200):	6.5	6.1
Binder Content (Pb):	5.7	6.1
Eff. Binder Content (Pbe):	5.0	5.5
Dust-to-Binder Ratio:	1.3	1.1
Rice Gravity (Gmm):	2.481	2.473
Avg. Bulk Gravity (Gmb):	2.382	2.361
Avg Air Voids (Va):	4.0	4.5
Agg. Bulk Gravity (Gsb):	2.659	2.675
Avg VMA:	15.5	17.2
Avg. VFA:	74	74

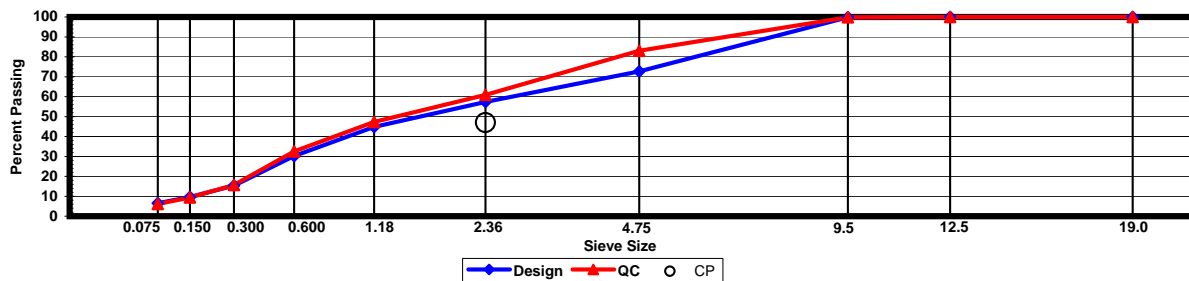
**Construction Diary**

Relevant Conditions for Construction

Completion Date: August 10, 2009  
 24 Hour High Temperature (F): 94  
 24 Hour Low Temperature (F): 75  
 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)	5.9
89 Columbus Granite	36.0
8910 Opelika Limestone Screenings	23.0
M10 Columbus Granite	10.0
Shorter Coarse Sand	31.0
TLA	25.0
As-Built Sublot Lift Thickness (in):	1.4
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):	0.03
Approx. Avg. Temperature at Plant (F):	335
Avg. Measured Mat Compaction:	94.5%



**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:** S  
**Section:** 12  
**Sublot:** 2

**Laboratory Diary**

General Description of Mix and Materials

Design Method: TLA  
 Compactive Effort: 80 gyrations  
 Binder Performance Grade: 67-28  
 Modifier Type: TLA  
 Aggregate Type: Lms/Sand/Grn  
 Design Gradation Type: Fine

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Design	QC
25 mm (1"):	100	99
19 mm (3/4"):	93	94
12.5 mm (1/2"):	82	84
9.5 mm (3/8"):	71	74
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	7
0.075 mm (#200):	3.9	4.4
Binder Content (Pb):	4.7	4.7
Eff. Binder Content (Pbe):	4.4	4.5
Dust-to-Binder Ratio:	0.9	1.0
Rice Gravity (Gmm):	2.557	2.534
Avg. Bulk Gravity (Gmb):	2.468	2.421
Avg Air Voids (Va):	3.5	4.5
Agg. Bulk Gravity (Gsb):	2.737	2.715
Avg VMA:	14.0	15.0
Avg. VFA:	75	70

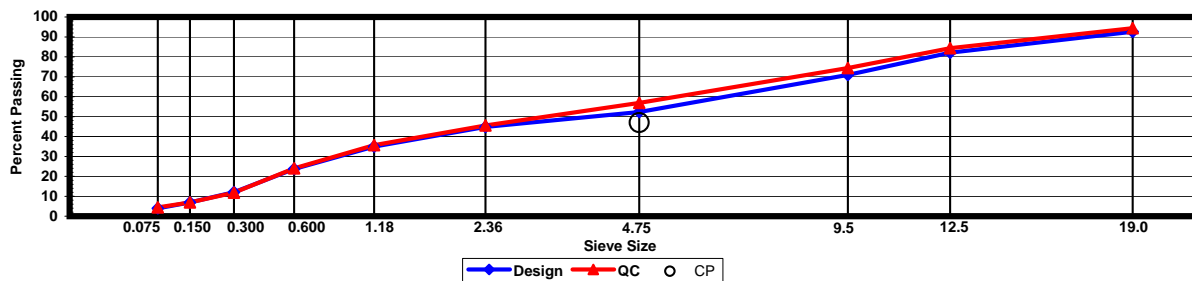
**Construction Diary**

Relevant Conditions for Construction

Completion Date: August 7, 2009  
 24 Hour High Temperature (F): 94  
 24 Hour Low Temperature (F): 70  
 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)	4.8
78 Opelika Limestone	30.0
57 Opelika Limestone	18.0
M10 Columbus Granite	25.0
Shorter Coarse Sand	27.0
TLA	25.0
As-Built Sublot Lift Thickness (in):	2.9
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):	0.03
Approx. Avg. Temperature at Plant (F):	335
Avg. Measured Mat Compaction:	95.2%



**General Notes:**

- Mixes are referenced by quadrant (E=East, N=North, W=West, and S=South), section # (sequential) and sublot (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 antistrip additive at a rate of 0.5 percent

**Quadrant:** S  
**Section:** 12  
**Sublot:** 3

**Laboratory Diary**

General Description of Mix and Materials

Design Method: TLA  
 Compactive Effort: 80 gyrations  
 Binder Performance Grade: 67-28  
 Modifier Type: TLA  
 Aggregate Type: Lms/Sand/Grn  
 Design Gradation Type: Fine

Avg. Lab Properties of Plant Produced Mix

Sieve Size	Design	QC
25 mm (1"):	100	99
19 mm (3/4"):	93	93
12.5 mm (1/2"):	82	85
9.5 mm (3/8"):	71	74
4.75 mm (#4):	52	57
2.36 mm (#8):	45	45
1.18 mm (#16):	35	36
0.60 mm (#30):	24	25
0.30 mm (#50):	12	12
0.15 mm (#100):	7	7
0.075 mm (#200):	3.9	4.9
Binder Content (Pb):	4.7	4.9
Eff. Binder Content (Pbe):	4.4	4.7
Dust-to-Binder Ratio:	0.9	1.1
Rice Gravity (Gmm):	2.557	2.533
Avg. Bulk Gravity (Gmb):	2.468	2.434
Avg Air Voids (Va):	3.5	3.9
Agg. Bulk Gravity (Gsb):	2.737	2.722
Avg VMA:	14.0	14.9
Avg. VFA:	75	74

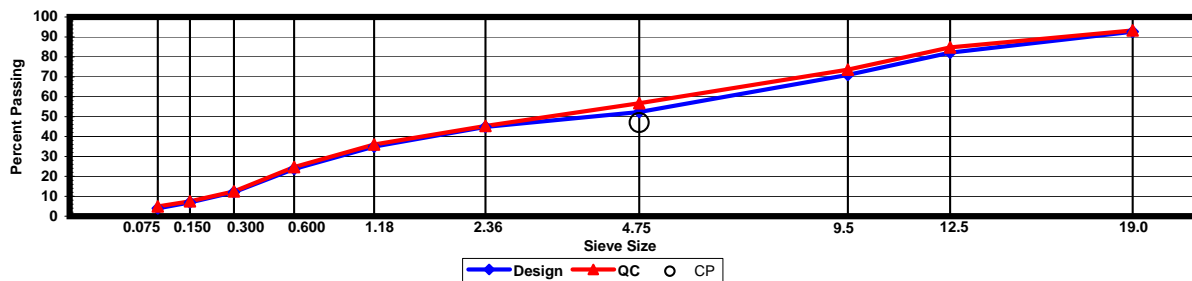
**Construction Diary**

Relevant Conditions for Construction

Completion Date: August 7, 2009  
 24 Hour High Temperature (F): 94  
 24 Hour Low Temperature (F): 70  
 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)	4.8
78 Opelika Limestone	30.0
57 Opelika Limestone	18.0
M10 Columbus Granite	25.0
Shorter Coarse Sand	27.0
TLA	25.0
As-Built Sublot Lift Thickness (in):	2.6
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):	335
Avg. Measured Mat Compaction:	93.9%



**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