

**Quadrant:** N  
**Section:** 10  
**Sublot:** 1

**Laboratory Diary**General Description of Mix and Materials

Design Method: Super  
 Compactive Effort: 125 gyrations  
 Binder Performance Grade: 70-22  
 Modifier Type: SBS  
 Aggregate Type: St Louis/Porph  
 Design Gradation Type: Dense

Avg. Lab Properties of Plant Produced Mix

<u>Sieve Size</u>	<u>Design</u>	<u>QC</u>
1":	100	100
3/4":	100	99
1/2":	97	96
3/8":	82	83
No. 4:	52	52
No. 8:	30	33
No. 16:	17	21
No. 30:	11	14
No. 50:	8	9
No. 100:	6	7
No. 200:	5.1	5.4
Asphalt Content:	5.6	5.6
Pill Bulk Gravity:	2.358	2.318
TMD (Rice):	2.456	2.456
Avg Air Voids:	4.0	5.6
Avg VMA:	14.4	16.9

**Construction Diary**Relevant Conditions for Construction

Completion Date: October 12, 2006  
 24 Hour High Temperature (F): 75  
 24 Hour Low Temperature (F): 54  
 24 Hour Rainfall (in): 0.00  
 Planned Mill / Lift Thickness (in): 1.75  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

<u>Component</u>	<u>% Setting</u>
Asphalt Content (Plant Setting)	5.6
Iron Mountain, MO Porphyry 3/4"	36.0
Maryland Heights, MO 3/4"	21.0
Maryland Heights, MO 3/8"	15.0
Maryland Heights, MO Man Sand	11.0
Iron Mountain, MO Porphyry Man Sand	16.0
Hyd Lime	1.0
Approximate Length (ft):	206
Survey Mill / Lift Thickness (in):	1.0
Type of Tack Coat Utilized:	67-22
Target Tack Application Rate (gal/sy):	0.05
Avg Temperature at Plant (F):	345
Avg Section Compaction:	91.3%

**General Notes:**

- 1) Mixes are referenced by quadrant (E=East, N=North, W=West, and S=South), section number (sequential) and subplot (top=1);
- 2) The total research thickness of all mix performance sections ranges from 3/4 to 4 inches by design;
- 3) The total HMA thickness of all structural study sections (N1 through N10) ranges from 7 to 14 inches by design;
- 4) ARZ, TRZ and BRZ refer to gradations intended to pass above, through and below the restricted zone, respectively;
- 5) SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- 6) VMA values computed from QC volumetrics are based on design values of Gsb (stockpile gravity testing is ongoing).

**Quadrant:** N  
**Section:** 10  
**Sublot:** 2

**Laboratory Diary**General Description of Mix and Materials

Design Method: Super  
 Compactive Effort: 125 gyrations  
 Binder Performance Grade: 70-22  
 Modifier Type: SBS  
 Aggregate Type: St Louis/Porph  
 Design Gradation Type: Dense

Avg. Lab Properties of Plant Produced Mix

<u>Sieve Size</u>	<u>Design</u>	<u>QC</u>
1":	100	100
3/4":	98	97
1/2":	84	83
3/8":	69	68
No. 4:	45	41
No. 8:	26	26
No. 16:	15	17
No. 30:	9	12
No. 50:	6	8
No. 100:	5	7
No. 200:	4.2	5.6
Asphalt Content:	4.9	4.7
Pill Bulk Gravity:	2.377	2.383
TMD (Rice):	2.476	2.493
Avg Air Voids:	4.0	4.4
Avg VMA:	13.7	13.7

**Construction Diary**Relevant Conditions for Construction

Completion Date: October 11, 2006  
 24 Hour High Temperature (F): 82  
 24 Hour Low Temperature (F): 64  
 24 Hour Rainfall (in): 0.12  
 Planned Mill / Lift Thickness (in): 3.00  
 Paving Machine: Roadtec

Plant Configuration and Placement Details

<u>Component</u>	<u>% Setting</u>
Asphalt Content (Plant Setting)	4.9
Maryland Heights, MO 1"	14.0
Maryland Heights, MO 3/4"	30.0
Maryland Heights, MO 3/8"	20.0
Maryland Heights, MO Man Sand	19.0
Iron Mountain, MO Porphyry Man Sand	16.0
Hyd Lime	1.0
Approximate Length (ft):	206
Survey Mill / Lift Thickness (in):	3.4
Type of Tack Coat Utilized:	67-22
Target Tack Application Rate (gal/sy):	0.05
Avg Temperature at Plant (F):	350
Avg Section Compaction:	92.5%

**General Notes:**

- 1) Mixes are referenced by quadrant (E=East, N=North, W=West, and S=South), section number (sequential) and subplot (top=1);
- 2) The total research thickness of all mix performance sections ranges from 3/4 to 4 inches by design;
- 3) The total HMA thickness of all structural study sections (N1 through N10) ranges from 7 to 14 inches by design;
- 4) ARZ, TRZ and BRZ refer to gradations intended to pass above, through and below the restricted zone, respectively;
- 5) SMA and OGFC refer to stone matrix asphalt and open-graded friction course, respectively; and
- 6) VMA values computed from QC volumetrics are based on design values of Gsb (stockpile gravity testing is ongoing).

**Quadrant:** N  
**Section:** 10  
**Sublot:** 3

**Laboratory Diary**General Description of Mix and Materials

Design Method:	Super
Compactive Effort:	125 gyrations
Binder Performance Grade:	64-22
Modifier Type:	NA
Aggregate Type:	St Louis/Porph
Design Gradation Type:	Dense

Avg. Lab Properties of Plant Produced Mix

<u>Sieve Size</u>	<u>Design</u>	<u>QC</u>
1":	100	100
3/4":	98	98
1/2":	84	88
3/8":	69	74
No. 4:	45	48
No. 8:	26	30
No. 16:	15	19
No. 30:	9	12
No. 50:	6	9
No. 100:	5	7
No. 200:	4.2	6.3
Asphalt Content:	4.9	5.2
Pill Bulk Gravity:	2.377	2.383
TMD (Rice):	2.476	2.486
Avg Air Voids:	4.0	4.1
Avg VMA:	13.7	14.2

**Construction Diary**Relevant Conditions for Construction

Completion Date:	October 10, 2006
24 Hour High Temperature (F):	82
24 Hour Low Temperature (F):	57
24 Hour Rainfall (in):	0.00
Planned Mill / Lift Thickness (in):	3.25
Paving Machine:	Roadtec

Plant Configuration and Placement Details

<u>Component</u>	<u>% Setting</u>
Asphalt Content (Plant Setting)	4.9
Maryland Heights, MO 1"	14.0
Maryland Heights, MO 3/4"	30.0
Maryland Heights, MO 3/8"	20.0
Maryland Heights, MO Man Sand	19.0
Iron Mountain, MO Porphyry Man Sand	16.0
Hyd Lime	1.0
Approximate Length (ft):	206
Survey Mill / Lift Thickness (in):	3.3
Type of Tack Coat Utilized:	67-22
Target Tack Application Rate (gal/sy):	0.05
Avg Temperature at Plant (F):	335
Avg Section Compaction:	93.3%

**General Notes:**

- 1) Mixes are referenced by quadrant (E=East, N=North, W=West, and S=South), section number (sequential) and subplot (top=1);
- 2) The total research thickness of all mix performance sections ranges from 3/4 to 4 inches by design;
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- 6) VMA values computed from QC volumetrics are based on design values of Gsb (stockpile gravity testing is ongoing).