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Maine State Report – NEPPP 2014

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Outline

- Customer Service Levels
- Corridor Priorities Work Plan
- Current Preservation Program
- Common Treatments - Barriers
- Innovations – Moving Forward
- Durability Concerns

Customer Service Levels

- **Safety** comprised of:
  - Crash History
  - Paved Roadway Width
  - Pavement Rutting
  - Bridge Reliability
- **Condition** comprised of:
  - PCR
  - Road Strength
  - Bridge Condition
  - Ride Quality
- **Service** comprised of:
  - Posting of roads / bridges
  - Congestion

SAFETY CSL = Lowest Grade from the following (deduct one letter grade if Paved Width fails test)

Crash History

Measure: Lane Departure Rate vs. the Statewide Average for the Corresponding HCP, using 2006-2010 Statewide Averages as the baseline.

PRIORITY	Excellent A	Good B	Fair C	Poor D	Unacceptable F
1 thru 5	< 1.0	1.0 – 1.5	1.51 – 2.0	2.01 – 3.0	> 3

Pavement Rutting

Measure: Maximum Wheelpath Rut Depth in Inches.

PRIORITY	Excellent A	Good B	Fair C	Poor D	Unacceptable F
1	< 0.25	0.25 – 0.41	0.42 – 0.58	0.59 – 0.75	> 0.75
2	< 0.25	0.25 – 0.50	0.51 – 0.75	0.76 – 1.00	> 1.00
3	< 0.35	0.35 – 0.65	0.66 – 0.95	0.96 – 1.25	> 1.25
4 & 5	< 0.45	0.45 – 0.80	0.81 – 1.15	1.16 – 1.50	> 1.50

Paved Roadway Width (if paved roadway width does not meet minimum then the Safety CSL is lowered by one grade)

Measure: Paved Width in Feet, including Lanes and Shoulders.

PRIORITY	Minimum Paved Width
1	32
2	30
3	28
4 & 5	22

Bridge Reliability

Measure: NBI Ratings.

Safety CSL = Automatic F	Rating
Superstructure Condition	<=3
Substructure Condition	<=3
Deck Condition (If an overpass)	<=3
Culvert Rating, or	<=3
Scour Critical Bridge	<=3 or U

Revision Date: 4/25/2012 2

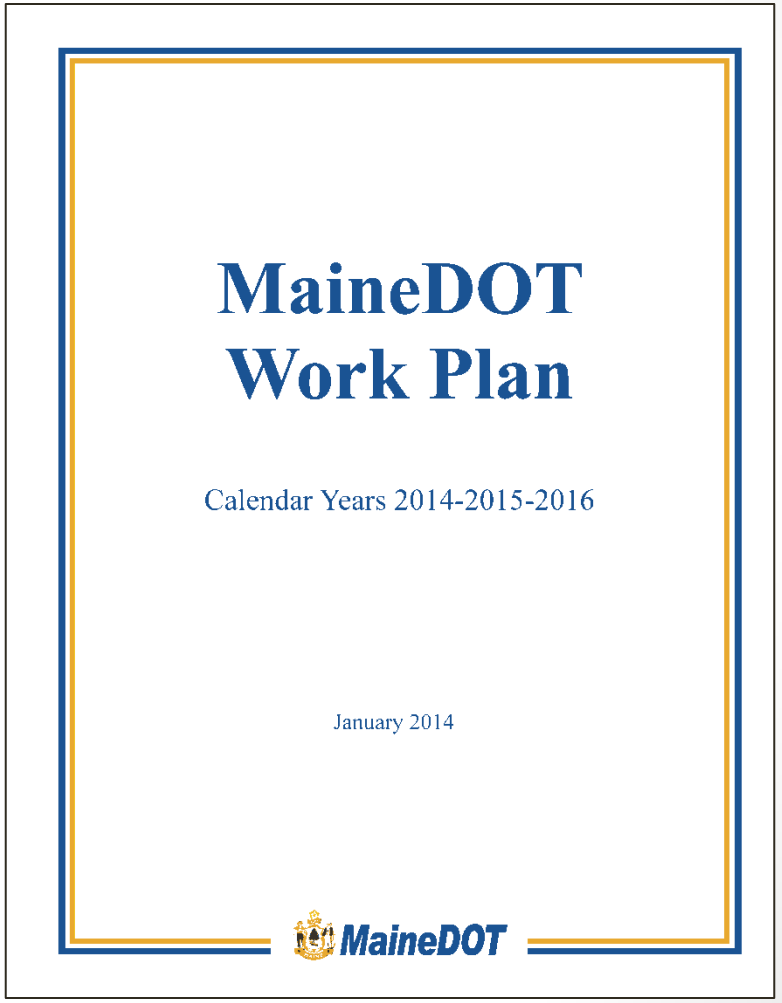
Corridor Priorities

- Statute requires all 1's & 2's to have no D's & F's by 2022
- Statute requires all 3's to have no D's or F's by 2027

HIGHWAY CORRIDOR PRIORITIES SUMMARY							
Priority	Miles (CL)	Miles	Cumulative Miles	VMT (Billions)	VMT	Cumulative VMT %	Average VMT / Mile (Thousands)
1 - MTA	247	1%	1%	1.3	9%	9%	5,408
1 - DOT	1,503	6%	7%	4.7	32%	41%	3,094
2	965	4%	12%	1.7	12%	53%	1,759
3	1,982	8%	20%	2.4	17%	70%	1,234
4	1,961	8%	28%	1.3	9%	79%	688
5	2,405	10%	38%	1.1	8%	87%	472
6	14,394	61%	100%	1.8	13%	100%	128
TOTAL	23,457	100%		14.5	100%		

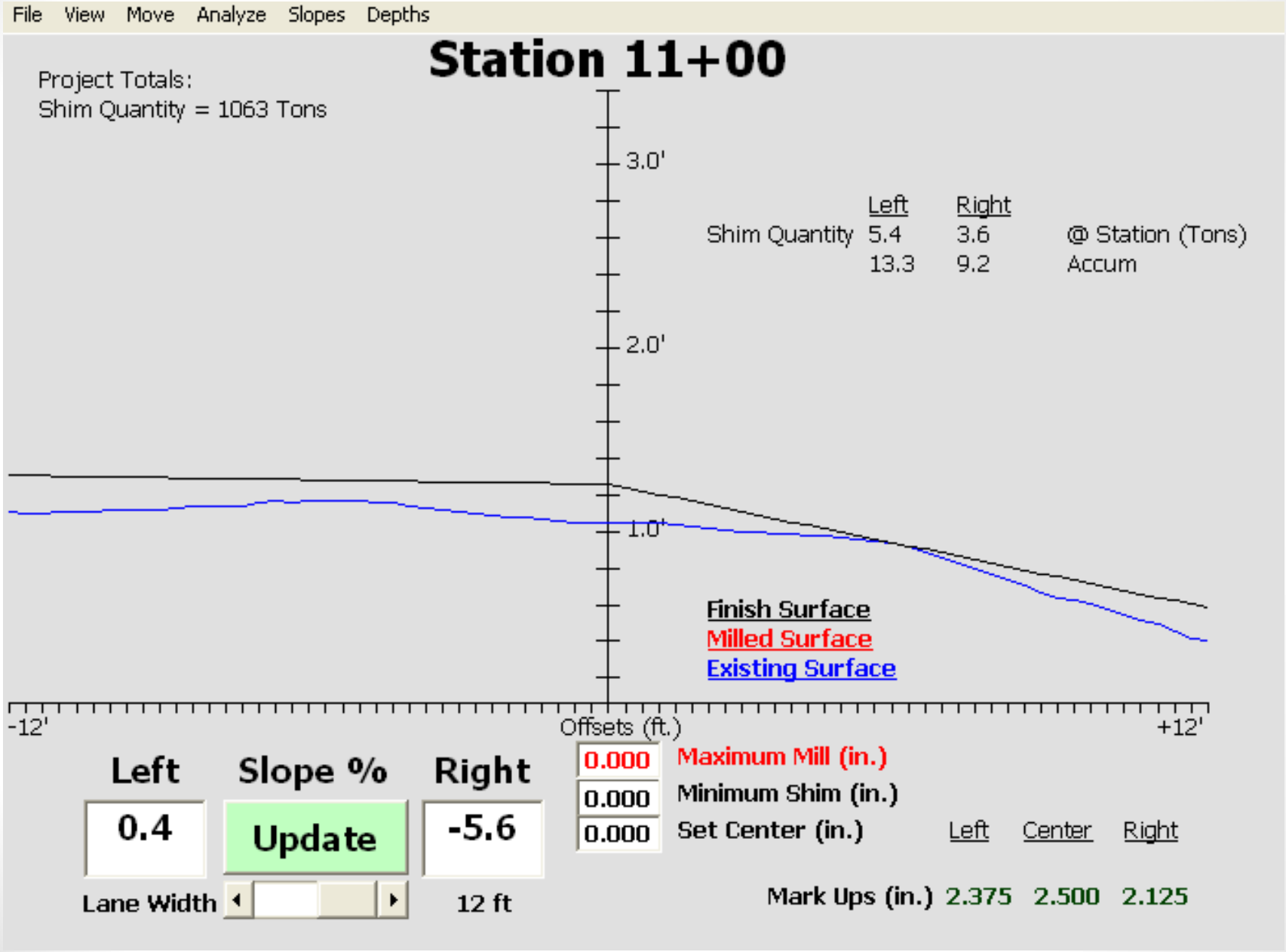
Work Plan

- MaineDOT now produces a Work Plan that is updated **annually** instead of biannually
- Published online with interactive features that is open to the public
- Capital program underfunded at an estimated 30% ~ $100 million per year
- $2.02 Billion over 3 years
- http://maine.gov/mdot/projects/workplan/



Preservation Program

- 2014 Work Plan includes:
  - 258 miles of preservation paving ($72 million)
  - 600 miles of Light Capital Paving ($27 million dollars)
- Analysis finds that biggest shortfall in funding is in preservation (41%) at about $50 million / year
- Workhorse treatments comprised of thin overlays:
  - 5/8” HMA overlay (no shim)
  - ¾” HMA overlay w/ shim
  - 1 ¼” HMA overlay w/ shim
  - Mill & Fill (1 ½” – 2”)
- Key limitation to preservation is cross-sectional shape of roadway in Maine due to nature of roadways


File View Move Analyze Slopes Depths
Station 11+00
Project Totals:
Shim Quantity = 1063 Tons
3.0'
2.0'
1.0'
Left Right
Shim Quantity 5.4 3.6 @ Station (Tons)
13.3 9.2 Accum
Finish Surface
Milled Surface
Existing Surface
-12'
Offsets (ft.)
+12'
Left
Slope %
Right
0.4
Update
-5.6
Lane Width
12 ft
0.000 Maximum Mill (in.)
0.000 Minimum Shim (in.)
0.000 Set Center (in.)
Left Center Right
Mark Ups (in.) 2.375 2.500 2.125

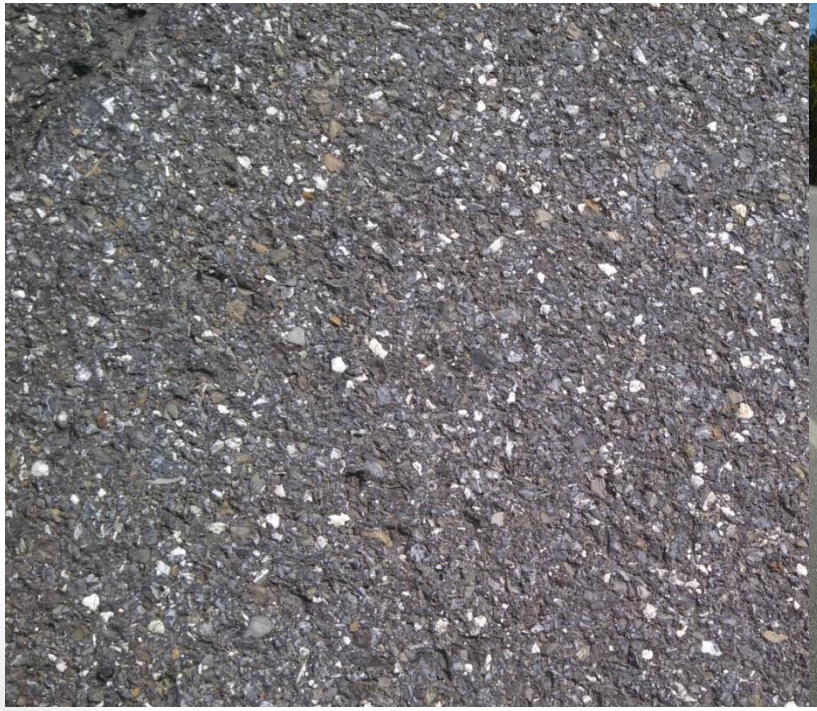
Innovations

- Maine is looking to use more treatments other than thin HMA overlays to complement our preservation program
  - Asphalt Rubber Gap-Graded
  - Ultra-Thin Bonded Wearing Course
  - Fog Seals (Travelway & Shoulders)
  - Hot In-Place Recycling

Asphalt Rubber Gap-Graded

Durability Concerns

- Raveling or “aggregate loss” of HMA has increased in recent years
- Reduction is service life of treatments exceeding 50% in cases
- Driving movement for lighter treatments to maintain investment in roadways



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Questions?