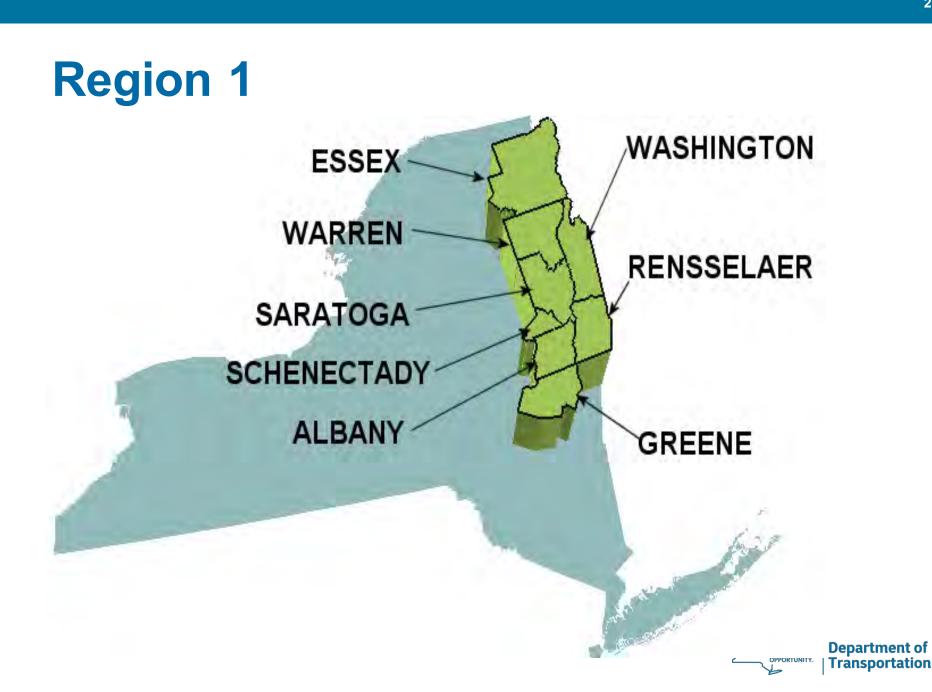
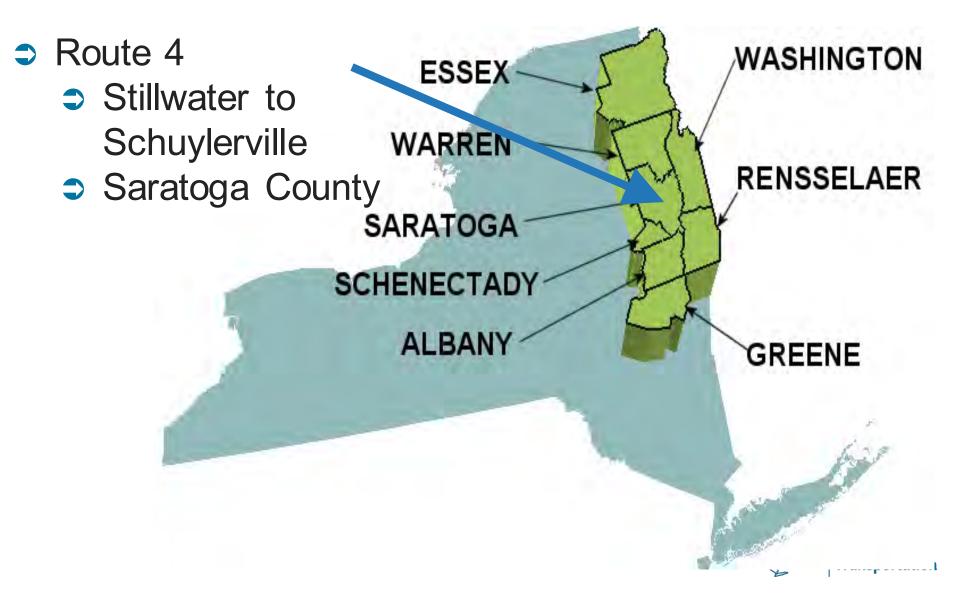


# Cold Recycled Asphalt Interlayer for Low Traffic Volume PCC Pavement Rehab Route 4 – Saratoga County

Greg Wichser, P.E. Regional Capital Program Manager NYSDOT Region 1 (Capital Region) Tuesday, November 1, 2022



#### **Project Location**



# **Route 4 Condition**

- Portland Cement Concrete with Flexible Shoulders
- ⇒ Year of Last Work 1957
- Rated a 5 Poor
  - As far back as 1981
- Severe Faulting
- IRI over 300 (Terrible)
- Grass Growing out of Centerline
- Shoulders Heaved over time, Plowed off, Gravel Shoulders in Spots
- Recurring Flooding
- ⇒ AADT 2,300
- Segment 6.4 Miles Long



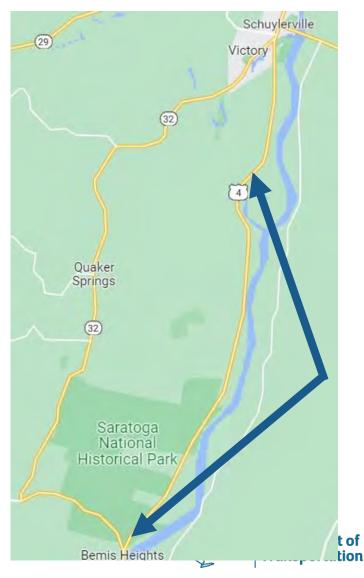


# Pavement Treatment Recommendation

- Major Rehabilitation
- Crack and Seat with Multi-course Overlay
  - Drainage, Geometry, Roadside Improvements
- □ 2R or 3R Design Standards
- □ \$750,000 \$1,000,000 per Lane Mile
- □ \$12,800,000 +/- Construction Cost
  - Region 1 Letting Program in 2013 \$100,000,000



Project Limits



- Project Limits
- Saratoga Battlefield





- Project Limits
- Saratoga Battlefield
- Current Champlain Canal



Saratoga National Historical Park

#### A Route Well Traveled

From Native Americants to today's busines, the gap between the Adironduck and Green Mournains has long been a corridor for rnvel, trade, and warfare. The Champlain Carnal, opened in 1823, created an all-water connection between Lake Champlain and New York City. The canal carried forest products, ore, and farm produce from the Adirondacks. Vermoon, and Quebec to factories and markets along the Atlantic coast. In 1916, Champlain Canal traffic moved from the narrow hand-dug dich on the right to the larger channel in the Fludson River to the left. The canal is popular today for recreational boating and puddling. The 60-milelong Champlain Canalway Trail provides off-road and on-road experiences for bicycliets and hikers.

Again: Samming Batterbrich bluffli overhook the Champitain Ganal while a pair of trade drawn canad boats jocker for position. We pair such other, the reason apposite the two regists (where the modes weld) would ware to be now rope alecters and data drap to the beation of the canad. The basic on the coupled to date would then constance forward posing over the roy of the automated for a constance forward posing. 2021.

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Algite New York State Canal Institut Survey Map, Inilimates, New York showing the Champian Canal, Hudeon Rives, and adjacent instemate properties, 1 1854

Light A commute view by Bernon-Lessing ubsecting multis traving a same boost currying geords and passengers needs along the Charpping Gansi. The Hadam River and Taconic Mountains are in the Sankground. 1851 Hatmes Withes

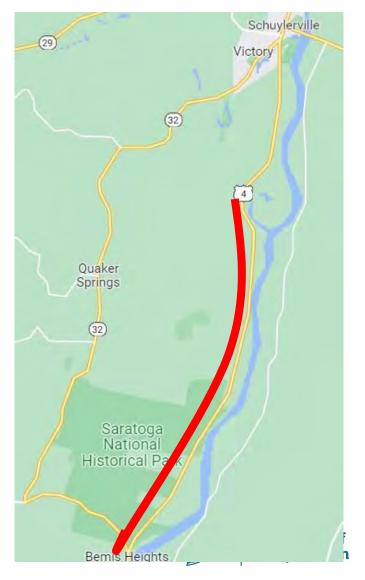
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This interpretive paniel usin developed in partnership with the first Constancy Mathematic Rentings Correcting with support from the Mathematic Parts

- Project Limits
- Saratoga Battlefield
- Current Champlain Canal
- Former Champlain Canal – Vintage 1820's



# Old Canal - Flooding Issues



# What to do?

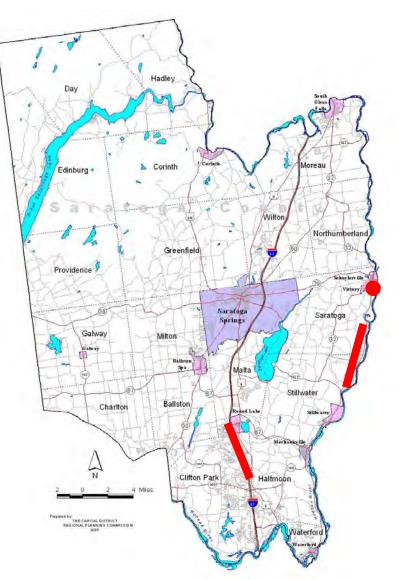
- Null Alternative?
- Defacto for Decades
- Major RehabRiddled with issues
- Single Course Overlay?
  Life Cycle
  - Cold Recycling?
  - Nothing to Recycle





# **Shopping for Millings**

- I-87 Mill and Fill Project
- 2012 Construction
- Schuylerville DOT Yard
- 2.5 Miles from Route 4 Segment
- ⇒ ~20 Miles Haul
- **36,000 Tons**



partment of nsportation

#### **Portable Batch Plant**



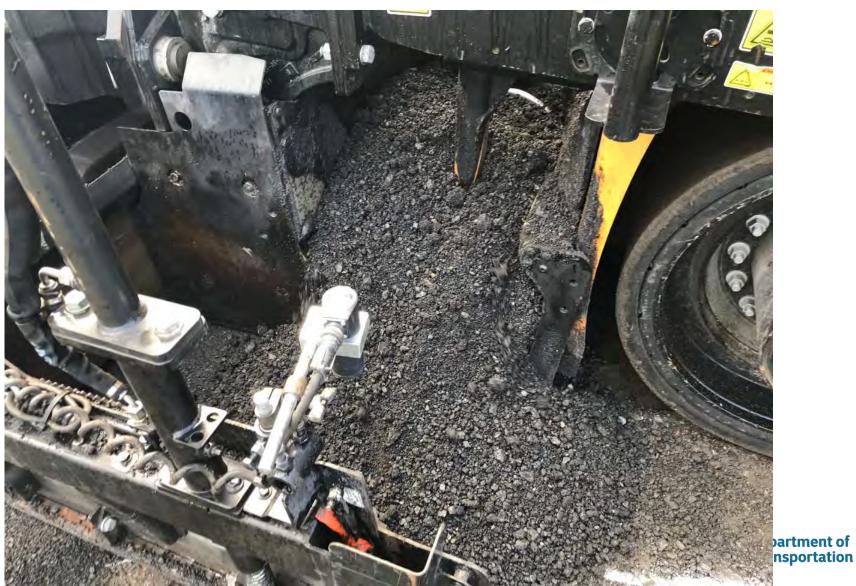


#### **Portable Batch Plant**



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# **Cold Recycle Mix Paving**



# **Cold Recycle Mix Paving**



#### **Construction Issues**

- Travel Time
  - Workability –
    Dragging
- Stability
  - Unconfined Edge
  - 4" Single Lift
    - Too Thick
  - Cross Slope





#### **Construction Issues**

- Travel Time
  - Workability Dragging
- Stability
  - Unconfined Edge
  - 4" Single Lift
    - Too Thick
  - Cross Slope
- Pavement Width
  - 20' Lane + Shoulder





# **Going Smoothly**



• Until....



#### **Post Construction**



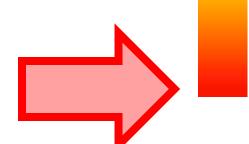
- \$2,250,000 Cost
  - \$175,000/LM



### **Post Construction**

- Pavement Score
- Rideability Improvement

IRI Scale (in/mi)	Description
<u>≤</u> 60	Very Smooth
61 - 120	Smooth
121 - 170	Fair
171 - 220	Rough
<u>&gt; 220</u>	Very Rough





#### **Post Construction**

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- Rideability Improvement

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> 220	Very Rough



#### **9 Years Later**



- Rated 7 (Good)
  - IRI 100-120



### Questions

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