Water Street Feasibility Study

SCOPING RECOMMENDATIONS

1. Geotechnical Findings

The existing aggregate (subbase) beneath the pavement generally ranges from 7” to 25” in thickness with thicker amounts on the riverside of the roadway. The subbase beneath between Gows Lane and the boat landing varies in thickness and appears to be a thick fill layer containing wood and bricks.

The existing roadway and shoulder aggregate that underlies the pavement is very high in silt-size particles and does not meet the requirements for Aggregate Subbase Course-Gravel or any other roadway aggregate that MaineDOT uses.

Because of the high fines content, the existing aggregate is considered poorly draining and will have lower bearing strength. Aggregate that is slow draining directly beneath the pavement will shorten the design life of the pavement **(wet soils are weak soils).**

Summary:

- Existing aggregate is high in silt and poorly draining
- Soils are highly frost susceptible and subject to rutting
- Existing aggregate is very thin in some areas
- Existing aggregate is too weak and thin for rehabilitation (i.e. removing pavement and adding structure through treated pavement)

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2. Options for Improving Water Street

Option #1 Light Capital Paving (LCP) & spot drainage improvements

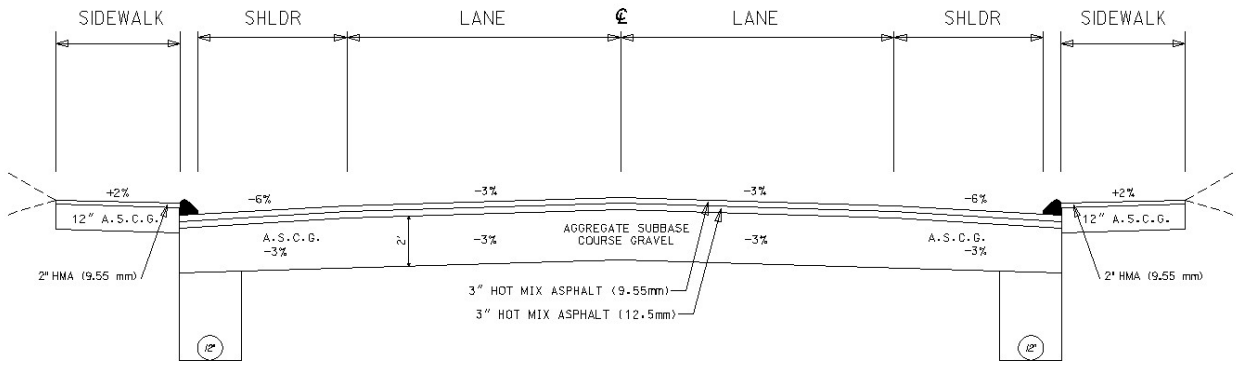
A 5/8" LCP treatment overlay with drainage improvements where necessary. 4- to 6-Year design life. Considerations:

- Crown would remain
- Existing sidewalks would not be replaced
- No opportunity for new sidewalks or parking
- Poor subbase remains

Timeline for Light Capital Paving: Approximately 1 month

Option 2: Reconstruction

Rebuild highway from subgrade up and replace/repair drainage. 20-Year design life.



(24" gravel base, 6"pavement, 30" Total)

Timeline for reconstruction: Approximately 2 construction seasons

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3. Options for minimizing construction impacts

- Ongoing coordination with Highway Committee, local businesses , communities, neighbors, bicyclists, pedestrians during all phases of Planning, design and construction
- Contract incentives for contractors to complete work and get Water Street open to traffic faster than planned and disincentives if they keep highway lanes closed longer than planned.
- Construct project in 2 segments possibly over several years
- Reconstruct Water Street in phases – street first then sidewalks
- Night work
- One way detours along Second Street – alternating NB and SB during AM and PM commute times
- Full two lane detours – possibly one block at a time with sidewalks open
- Work with city identify and sign temp parking