TRAFFIC AND CONSTRUCTION MITIGATION FOR PEIRCE ISLAND WASTEWATER TREATMENT FACILITY UPGRADE

CITY COUNCIL WORK SESSION

APRIL 11, 2016
Topics for Discussion

1. Project Information & Status
2. Peirce Island Temporary Staging Areas
   ▪ Parking Mitigation
   • Break for Discussion/Q&A
3. Summary of Traffic Impacts
4. Barging Transportation Options
   • Break for Discussion/Q&A
5. Roadway Modifications
   • Break for Discussion/Q&A
• Major Upgrade of Peirce Island WWTF Mandated by EPA Consent Decree
• Design Complete
• Out to Bid with Barge Bid Alternates
• Construction Between July 2016 and September 2020
Peirce Island Temporary Staging Areas

Contractor Staging Area after September 1, 2016
Closed to Traffic prior to September 1, 2016
Contractor Staging Area after July 1, 2016
Contractor Staging Area after July 1, 2016
Protected Areas
Contractor Staging Area after July 1, 2016
Contractor Staging Area or City Snow Storage after July 1, 2016
Plastic Construction Fencing
Closed to Traffic after September 1, 2016
Peirce Island Pool Access

Install Walkway to Existing Pool Gate

Safety Officer/Flagger

Contractor Staging Area after September 1, 2016

Closed to Traffic after September 1, 2016
Peirce Island Parking Mitigation

- Expand Four Tree Island Parking Lot
- Relocate Path
- Parking Area Closed During Working Hours
- Temporary Parking Area
- Close to Traffic after September 1, 2016
- Safety Officer/Flagger
Parking Mitigation – Expand Four Tree Island Parking Area

EXPAND EXISTING PARKING LOT
(24 EXISTING SPACES, 25 NEW SPACES)
49 SPACES TOTAL INCLUDING 3 HANDICAP SPACES

EXISTING TREE LINE
RELOCATE PATH
EXISTING EDGE OF PAVEMENT
PEIRCE ISLAND ROAD
Parking Mitigation – Expand Boat Ramp Parking Area

EXISTING DIRT PARKING AREA TO BE PAVED
64 SPACES TOTAL INCLUDING 3 HANDICAP SPACES, 1 VAN AND 2 AUTO
Questions and Answers
## Current Traffic Volume

### Summer Condition Traffic Volumes (Trips per Day)

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## Net Change in Traffic Volume

### Summer Condition Traffic Volumes with Peak Day Construction Traffic
(Trips per Day)

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The Peak Day = 137 Trips or 69 Round Trips

Notes: *Outbound Construction Traffic Only  **Inbound Construction Traffic Only
Barging Background


• Tasks Completed to Date:
  ▪ Identified Potential Loading and Unloading Locations
  ▪ Began Underwater Survey of Potential Unloading Locations
  ▪ Defined Bid Alternates & Distributed to Contractors Via Addendum
  ▪ Discussed Barging with Permitting Agencies
Barge Types – Spud Barge

- Fore and Aft Vertical Shafts, or Spuds, Hold Barge in Place
- Provides a Stable Platform
- Floats with the Tide
Barge Types – Jack-Up Barge

- Fore and Aft Vertical Shafts, or Spuds, Hold Barge in Place
- Provides a Fixed Platform
Barge Type – Load On / Load Off (LOLO)

- Crane Loads and Unloads Equipment and Material at Loading & Unloading Locations
- Requires Tug
Barge Type – Roll On / Roll Off (RORO)

- Requires Transfer Bridge
- Trucks Roll On and Off Barge
- Requires Tug
Barge Type – Landing Craft

- Trucks Roll On and Off Barge
- Smaller Capacity
- Requires Boat Ramp
Potential Loading Facility Location

• Port of New Hampshire
• Shared Use
• Limited Laydown Area
• Periodic Shutdowns to Barging Due to Ship Traffic
• Contractor Free to Use Other Sites
Potential Unloading Facility Locations

- Contractor to Choose Location & Type of Barge Operation
- Bathymetric Information to be Provided

Source: *Eelgrass Distribution in the Great Bay Estuary and Piscataqua River for 2013*, UNH.
Permitting

- Ongoing Discussion with Regulators (USACOE, NHDES)
- Ongoing Discussion with Other Agencies (USCG, EPA, Director of Ports, etc.)
- Final Permitting Needs Depend on Selected Contractor’s Proposal
Barge Bid Alternates

• Alternate 1 – Barge Demolition and Surplus Excavated Materials Away

• Alternate 2 – Alternate 1 Plus Barge Selected Construction Materials To Site

• Alternate 3 – Alternate 1 and 2 Plus Barge All Vehicles 3 Axles or Greater and All Construction Equipment (Bulldozers, Excavators, Backhoes, etc.) Except Concrete Trucks and Pump Trucks

• Alternate 4- Alternate 1, 2, and 3 Plus Concrete Batch Plant / Barge Raw Concrete Materials
## Bid Alternates – Impact on Traffic

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<th>Bid Alternate</th>
<th>Approximate Reduction In Construction Vehicles (%)</th>
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<td>Alt. 1 – Barge Demo and Surplus Excavation Materials</td>
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Bid Alternates – Other Considerations

• Barging Not Able to Begin Until Permitting In Place
  ▪ Trucks Allowed Until Barging Starts
  ▪ Necessary to Meet Consent Decree Milestones

• Second and Third Shift Work May Be Necessary

• May Increase Length of Bid Period

• If Bid Alternate(s) Selected, May Need to Increase Bond Authorization
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Downtown Locations

- State St.
- Court St.
- Marcy St.
- Mechanic St.
- Hancock St.
- Pleasant St.
Downtown Locations – State St., Court St. & Marcy St.

- Flagger (7AM-6PM)
- Reset Signs
- No Parking Midnight–8AM Monday -Friday
Downtown Locations – Marcy St.

Close Sidewalk 7AM-6PM

Pedestrian Detour

Construct Brick Sidewalk
Downtown Locations – Marcy St. & Mechanic St.

- Outgoing WB-50

Intersection to be temporarily modified to accommodate truck traffic.
Downtown Locations – Marcy St. & Mechanic St.

- Realign Curb.
- Relocate Utilities As Needed
- No Parking Any Time
- Crosswalk to Cemetery
- Remove Stones & Install Curb Cut with 2 Inch Reveal
Downtown Locations – Strawberry Banke

- Cordon Off No Parking Area In Advance
- Temporary Curb Cut
- Oversize Vehicle Route (Midnight-10AM)
- No Parking Any Time
Downtown Locations – Hancock St. & Pleasant St.

Reset Signs
Summary of Potential Mitigation Measures

- Add Bid Alternates for Barging
- Possible Relocation of Snow Dump
- Add Additional Parking at Four Tree Island Lot
- Add Additional Parking Adjacent to the Boat Ramp Lot
- Relocate the Pool Entrance
- Investigate Options for Dog Walking Area
- Look at Pool House Options
- Contractor Cannot Work During Specific Events
- Continue to Adjust as Needed During Construction
Questions and Answers