



MWRA Pipeline Contract No. 7448

Contractor: RJV Construction Corporation

Contract Value: \$11,235,500

Schedule: November 2014 – May 2017

February 11, 2015



Abundant Reservoirs

Quabbin Reservoir

Storage: 412 billion gallons

Depth: 150 feet

Length: 17.9 miles

Width: 3 miles



Wachusett Reservoir

Storage: 65 billion gallons

Depth: 129 feet

Length: 8.5 miles

Width: 1 mile





John J. Carroll Water Treatment Plant



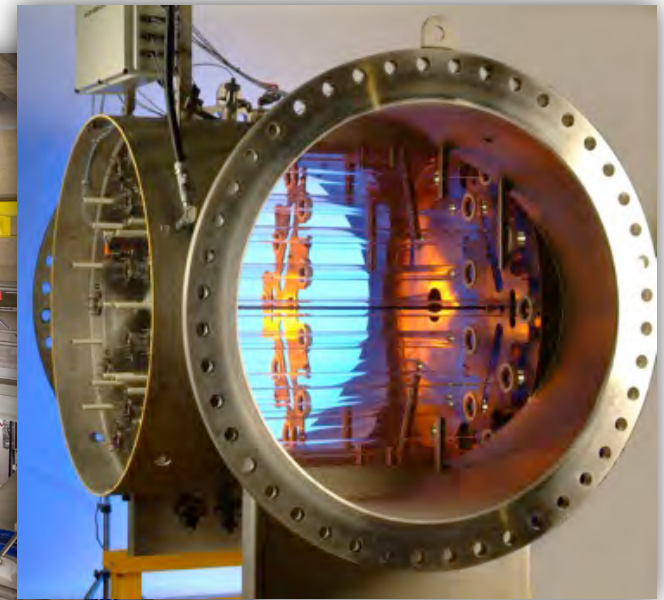
- Complete in July 2005
- Treatment Processes:
 - Ozone and UV for primary disinfection
 - Corrosion control
 - Chloramination for secondary disinfection
 - Fluoridation





Addition of UV Disinfection At Carroll Treatment Plant

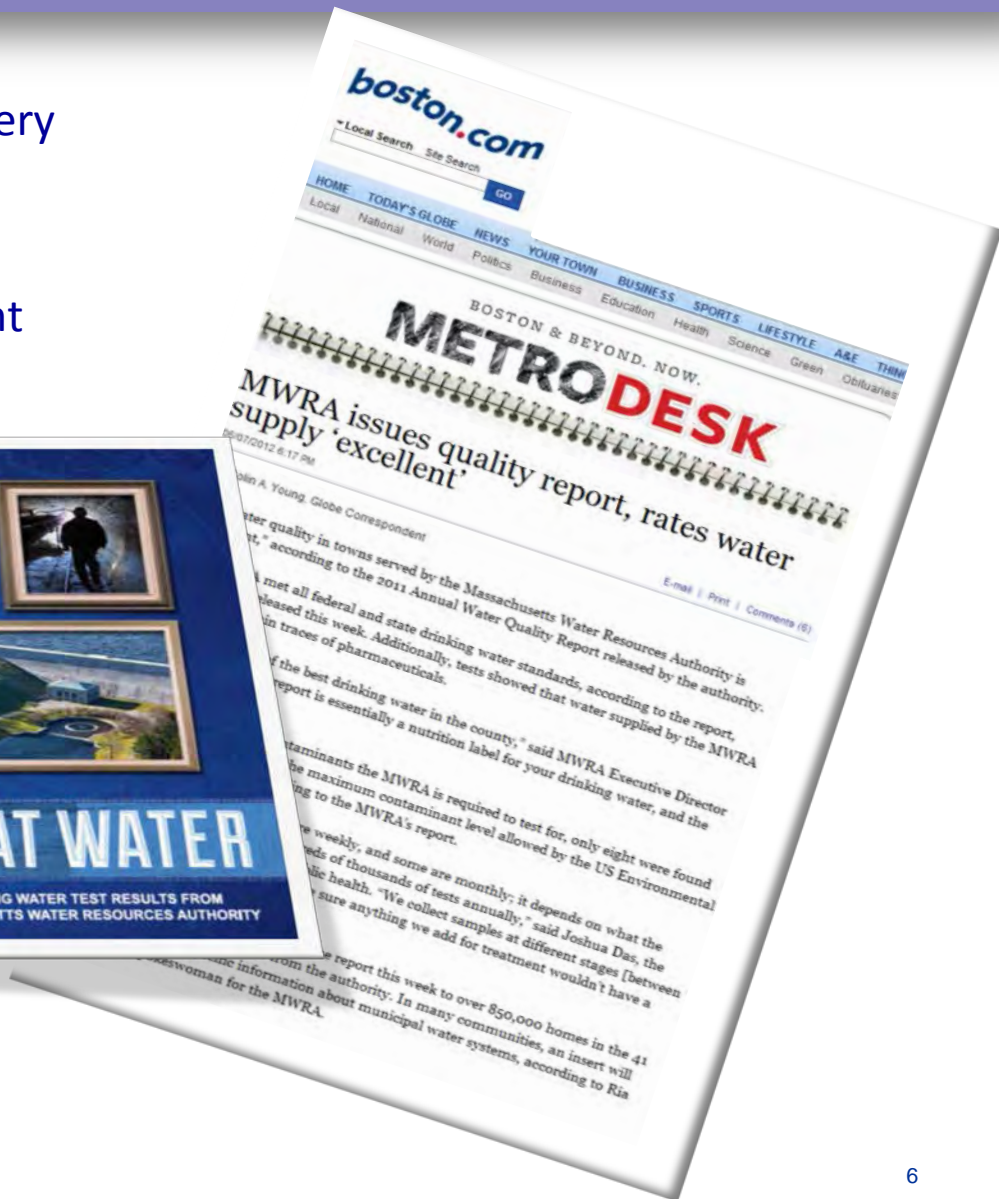
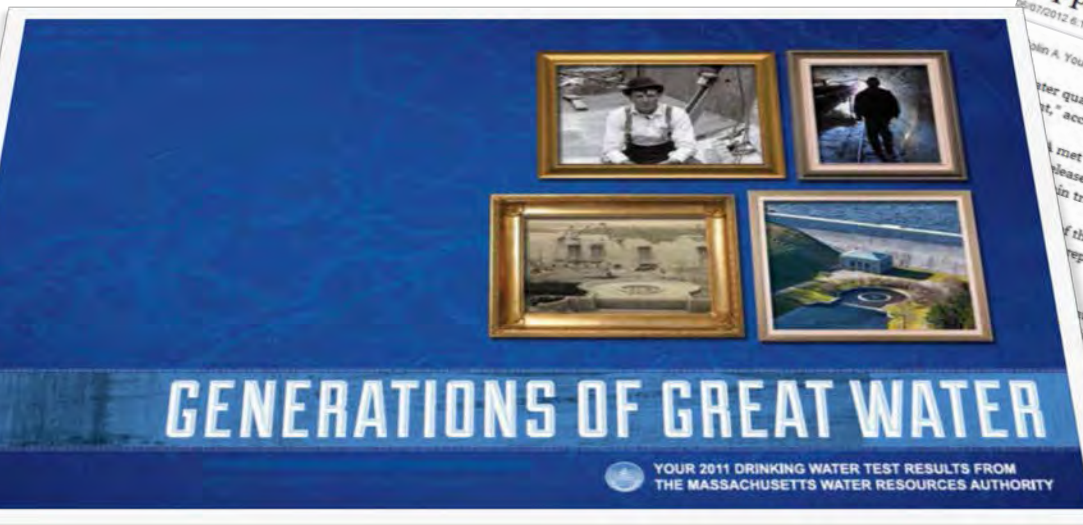
- Construction of UV facilities at the Carroll Treatment Plant completed last Spring





Drinking Water Quality Is Excellent

- MWRA sends an annual report to every household in the service area
- Water quality is consistently excellent





Renewable Energy At MWRA



Deer Island Methane: Provides all heat and hot water for plant; used to generate electricity



Deer Island Solar 2: 180 kW roof-mounted solar array - November 2009



Carroll Water Treatment Plant, Marlborough: 496 kW solar array - February 2011



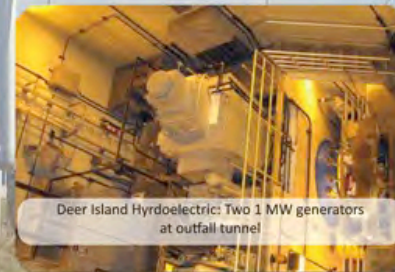
Cosgrove and Oakdale Hydroelectric, Wachusett Reservoir: Three turbines combined = 6.9 MW



Deer Island Wind: Two 600 kW turbines - November 2009



Deer Island Wind: 100 kW FloDesign experimental turbine - May 2011



Deer Island Hydroelectric: Two 1 MW generators at outfall tunnel



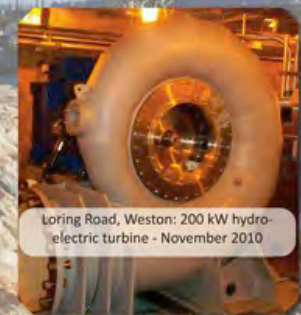
Charlestown Wind: 1.5 MW turbine - September 2011



Deer Island Solar 1: 100 kW roof-mounted solar array - April 2008



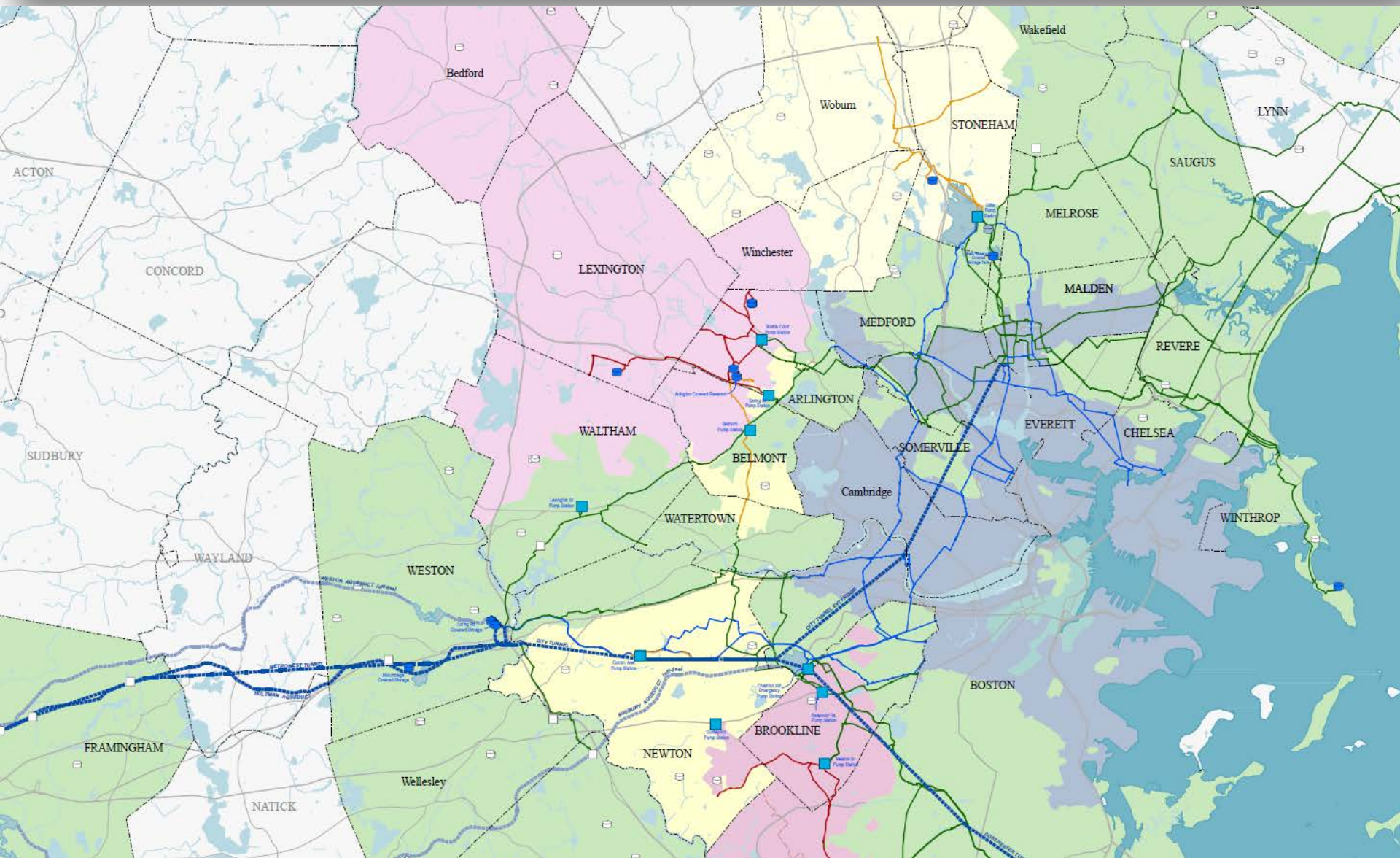
Deer Island Solar 3: 450 kW roof-mounted and ground solar array - April 2011



Loring Road, Weston: 200 kW hydroelectric turbine - November 2010



MWRA Metropolitan Water System





N. EX. H. S. P. L. SEC. 36, TRENCH FOR 16" MAIN COR. HAWTHORNE AVE. & ROBBINS RD. 8560
ARLINGTON. JUNE 26, 1910.



N. EX. H. S. P. L. SEC. 36, LAYING 16" MAIN, ROBBINS RD. NEAR
HAWTHORNE AVE. ARLINGTON. JUNE 25, 1910. 6561



W. EX. H. S. P. L. SEC. 36, LAYING 16" MAIN IN ROCK TRENCH, ROBBINS RD. ARLINGTON. JUNE 25, 1910. 6582



M. EX. H. S. P. L. SEC. 36, LAYING 16" MAIN, ROBBINS RD. NEAR
HAWTHORNE AVE. ARLINGTON. JUNE 25, 1910. 6563



N. EX. H. S. P. L. SEC. 36, REFILLING 16" PIPE TRENCH, ROBBINS RD. NEAR HAWTHORNE 6564
AVE. ARLINGTON. JUNE 25, 1910.



NO. EX. H. S. P. L. SEC. 36, ROBBINS RD. AFTER LAYING 16" MAIN ARLINGTON. JUNE 25, 1910. 6565



N. EX. H. S. P. L. SEC. 45 PARK AVE. ARLINGTON LOOKING SOUTH FROM STA. 5+50. NOV. 21, 1919.



12 IN. N. EX. H. S. PIPE LINE PARK AVE, ARLINGTON. SEPT. 1, '09



N. EX. H. S. P. L. SEC. 45 ARLINGTON. 16 IN. PIPE TRENCH COR. OF PARK AV. & PAUL REVERE RD.
OCT. 16, 1919. 7604



N. EX. H. 8. P. L. SEC. 45 ARLINGTON. 16 IN. PIPE TRENCH COR. OF MASS. AV. & PAUL REVERE RD.
SEPT. 15, 1919. 7585



N. EX. H. S. P. L. SEC. 45 ARLINGTON. MASS. AV. NEAR DUNDEE RD. NOV. 4, 1919.



N. H. S. PIPE LINES SEC. 33, ARLINGTON ST. FROM FERRY ST. EVERETT. CONDITION OF STREET
NOV. 27, 1909. DURING CONSTRUCTION OF 24" WATER MAIN. 6442



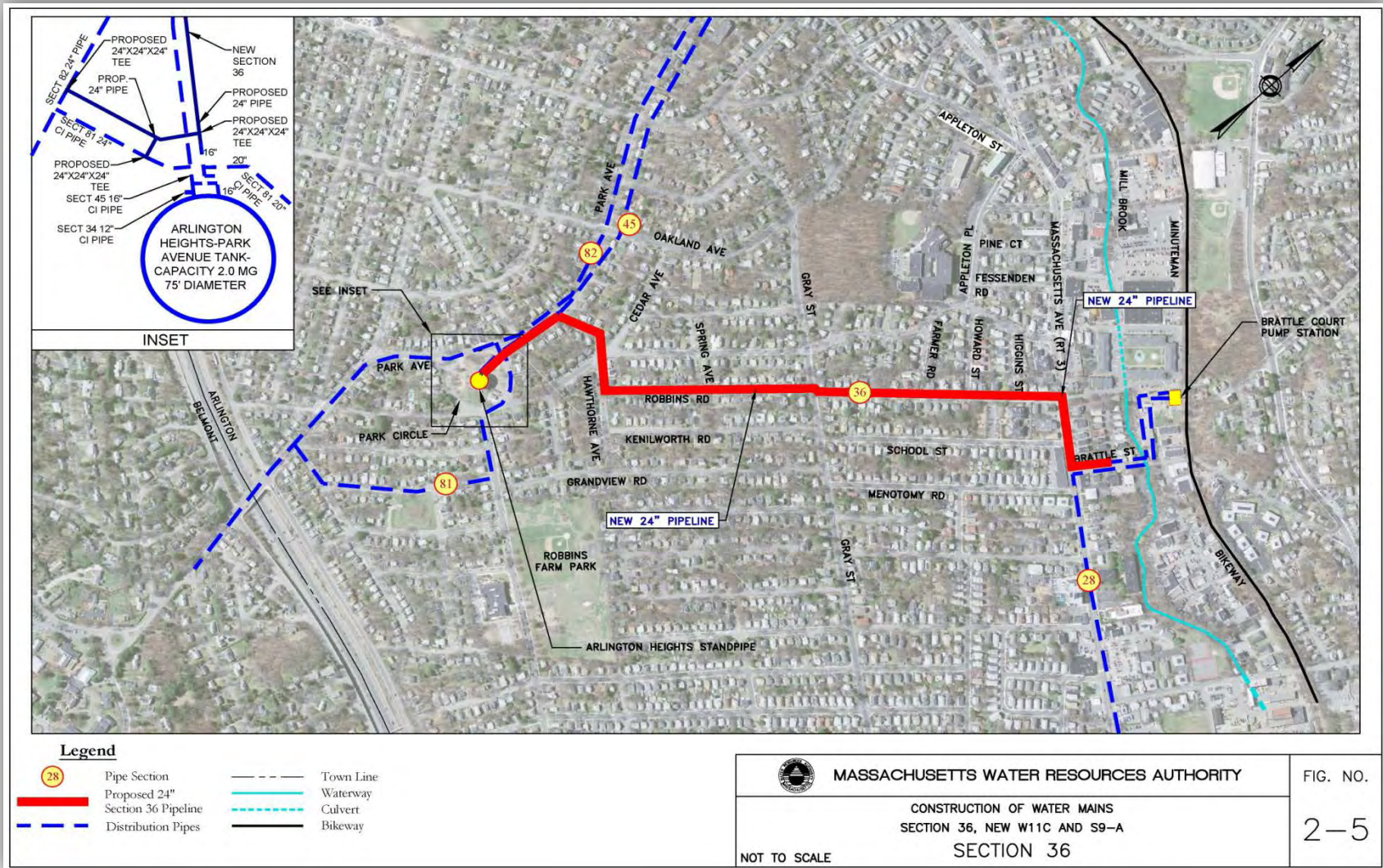
N. H. S. PIPE LINES SEC. 33. ARLINGTON ST. NEAR FOSTER STREET, EVERETT. 24" WATER PIPE IN TRENCH. NOV. 27, 1909. 6443



N. EX. H. S. P. L. SEC. 45 ARLINGTON. LAYING 16 IN. PIPE MASS AV, NEAR DUNDIE RD. OCT, 16, 1919. 7605



MWRA Section 36 Replacement



MASSACHUSETTS WATER RESOURCES AUTHORITY

FIG. NO.

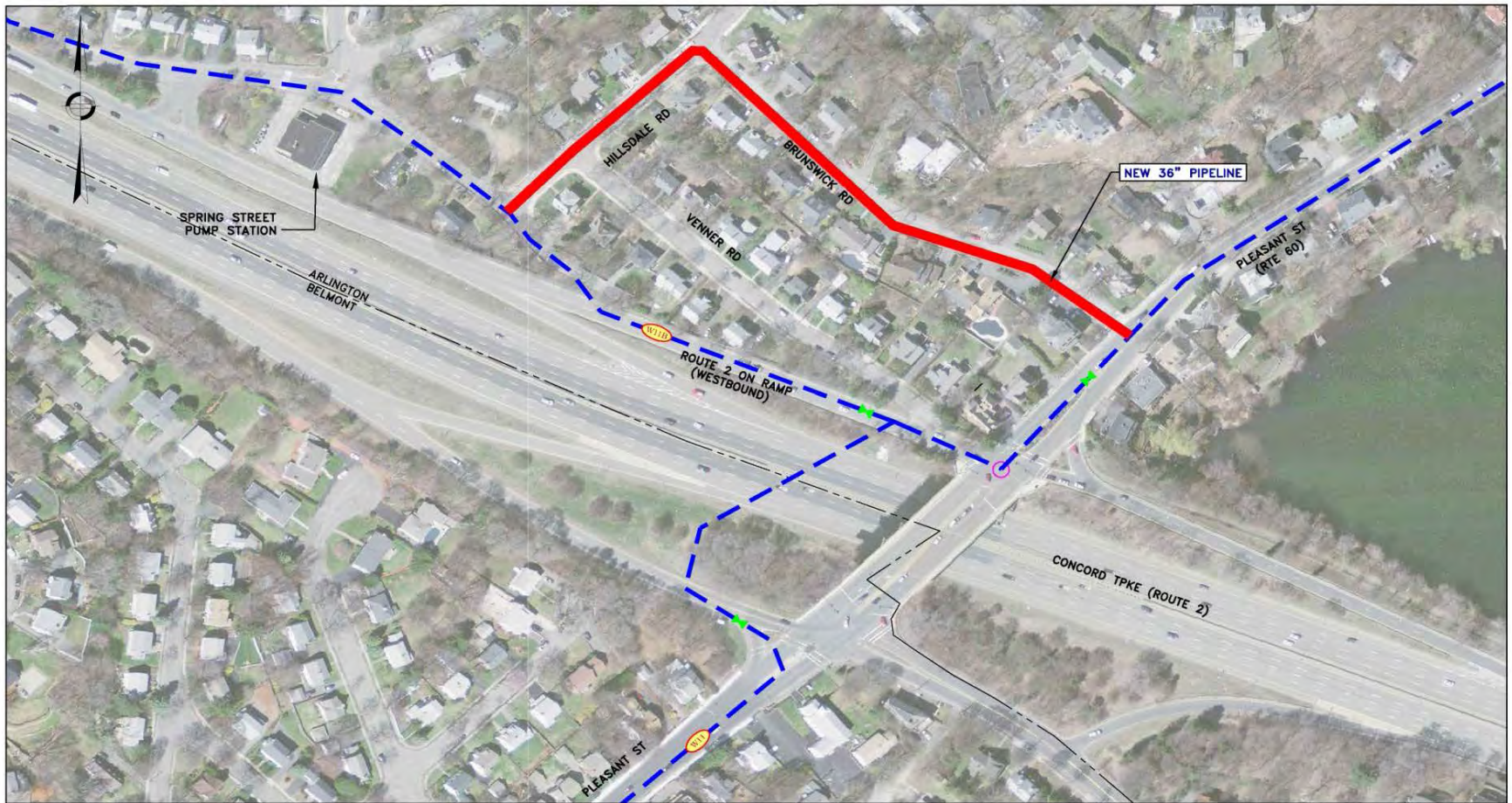
CONSTRUCTION OF WATER MAINS
SECTION 36, NEW W11C AND S9-A
SECTION 36

2-5








NOT TO SCALE



New MWRA Pipeline – Brunswick Ave and Hillsdale Road



Legend

-  Pipe Section
-  Proposed 36" W11C Pipeline
-  Distribution Pipes
-  Town Line
-  New Meter
-  Existing Meter
-  Existing Valve



MASSACHUSETTS WATER RESOURCES AUTHORITY

CONSTRUCTION OF WATER MAINS
SECTION 36, W11C AND S9-A
NEW W11C

FIG. NO.

2-6



MWRA Section 36 Replacement - Project Goals

- To improve the condition of the existing water main
 - Hydraulic Capacity
 - Reliability
- To provide redundancy and flexibility
- Avoid potential service disruption (breaks, leaks)





MWRA Section 36 - Robbins Road



**Replace old 16-inch water main with
new 24-inch water main**



Hawthorne Avenue



**Replace old 16-inch water main with
new 24-inch water main**



MWRA Section 36 Replacement – Project Elements

- Replacement of an existing 16-inch water main with a new 24-inch water main, valves and appurtenances
- Installation of a new 36-inch water main, valves and appurtenances
- Relocation and replacement of utilities including water, sewer and drain lines
- Pavement restoration



Project Coordination

- Department of Public Works
- Police Department - Traffic Unit
- Fire Department
- Private Utility Companies
- Community Residents
- Conservation Commission



Construction Measures

1. Sewer line inspection and cleaning
2. Conduct pre-construction videos
 - a. Streetscape
 - b. Residences
3. Rodent Survey
 - a. Develop baseline
 - b. Determine application



Construction Measures (continued)

4. Tree Inspection
 - a. Trimming/pruning
 - b. Fertilizing
 - c. Removal
5. Pre-drilling on Brunswick (March 2015)
6. Paving
 - a. Temporary paving for 1 construction season
 - b. Permanent paving approximately 1 season later
7. Post construction survey



8. Temporary water bypass installation with service interruptions (100 houses)

- Advance notice to residents
- Hours 9:00AM – 4:00PM



Tentative Construction Schedule continued

STREET	SCHEDULE
Brattle St to Massachusetts Ave Installing 24" MWRA water main	March – May 2015
Massachusetts Ave Installing 24" MWRA water main	May – June 2015
Robbins Rd from Mass Ave to Gray St Installing 24" MWRA water main, 8" sewer and portions of 8" water and 15" drain	June – September 2015
Robbins Rd from Gray St to Hawthorne Ave Installing 24" MWRA water main	August – November 2015
Hawthorne Ave from Robbins Rd to Park St Installing 24" MWRA water main	November - December 2015
Park Ave Installing 24" MWRA water main and 12" drain	March 2016 – August 2016



Tentative Construction Schedule

STREET	SCHEDULE
Brunswick Rd Installing 36" MWRA water main, 8" sewer and 8" water	March 2015 – July 2015
Hillsdale Rd Installing 36" MWRA water main, 8" sewer and 8" water	July 2015 – September 2015
Pleasant St at Brunswick Rd Installing 54" MWRA water main, 8" sewer and 8" water	September 2015 – November 2015
Spring St at Hillsdale Rd Installing 36" MWRA water main, 8" water and 12" drain	October 2016 – December 2016



Similar Construction





Similar Construction





MWRA Contact Information

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