MBTA Green Initiative

**SOLAR CANOPIES**

Parking Lots & Garages
– Solar canopies will be installed on parking lots and garages at 37 MBTA Stations by MAP Energy/Omni.
– 20-year lease after implementation.
– Full implementation of all 37 sites expected by December, 2018.
- Project contributes to Commonwealth’s goal to reduce carbon emissions.
- MBTA commuters will be provided with covered parking spaces which will prevent snow in the winter and keep cars cooler in the summer.
- LED lights will be installed on the bottom of each canopy, providing better lighting for MBTA commuters.
- Snow removal maintenance and costs are anticipated to decrease.
- The entire project will reduce carbon emissions by 28,825 metric tons annually.
- That reduction is equivalent to the following:
  • 69,083,598 miles driven by an average passenger vehicle.
  • 9,148 tons of waste recycled instead of landfilled.
  • 30,759,016 pounds of coal burned.
  • 66,736 barrels of oil consumed.

*Source: United States Environmental Protection Agency*
NANTASKET JUNCTION – TOP VIEW
7-Panel Design – Side View
7-Panel Design — Front View
CANOPY ELEVATIONS

7-Panel Side View
West Hingham Design – Top View
Canopy Elevations

Long-Span Side View
- Solar canopy size is 684kWac and will generate approximately 840,000 kWh annually.
- This will power about 84 homes*.
- Entire power generated will be purchased by Hingham Light Department.

*Source: United States Environmental Protection Agency
- Solar canopy size is 360 kWac and will generate approximately 440,000 kWh annually.
- This will power 44 homes*.
- Entire power generated will be purchased by Hingham Light Department.

*Source: United States Environmental Protection Agency
- Power Purchase and Interconnection Agreements signed with Hingham Municipal Light Department.

- Site implementation to begin late-March until early September 2018
  - Construction to happen in a phased manner to ensure minimum disturbance to the commuters

- Phased construction approach will ensure that enough parking will be available for MBTA commuters during construction.
  - Nantasket Junction parking spots – 495
  - W. Hingham parking spots – 214

- Nantasket parking lot utilization below 35% to absorb any temporary closing of parking spots at W. Hingham

- No permanent loss of parking.
- The project will reduce ~1,280 metric tons of carbon dioxide equivalence annually.
- Power Purchase price is competitive with other renewable options
- Long term price hedges HMLD’s cost of power procurement
- Commuters get covered parking lot without any loss of parking spots

*Source: HMLD 2016 Annual Report