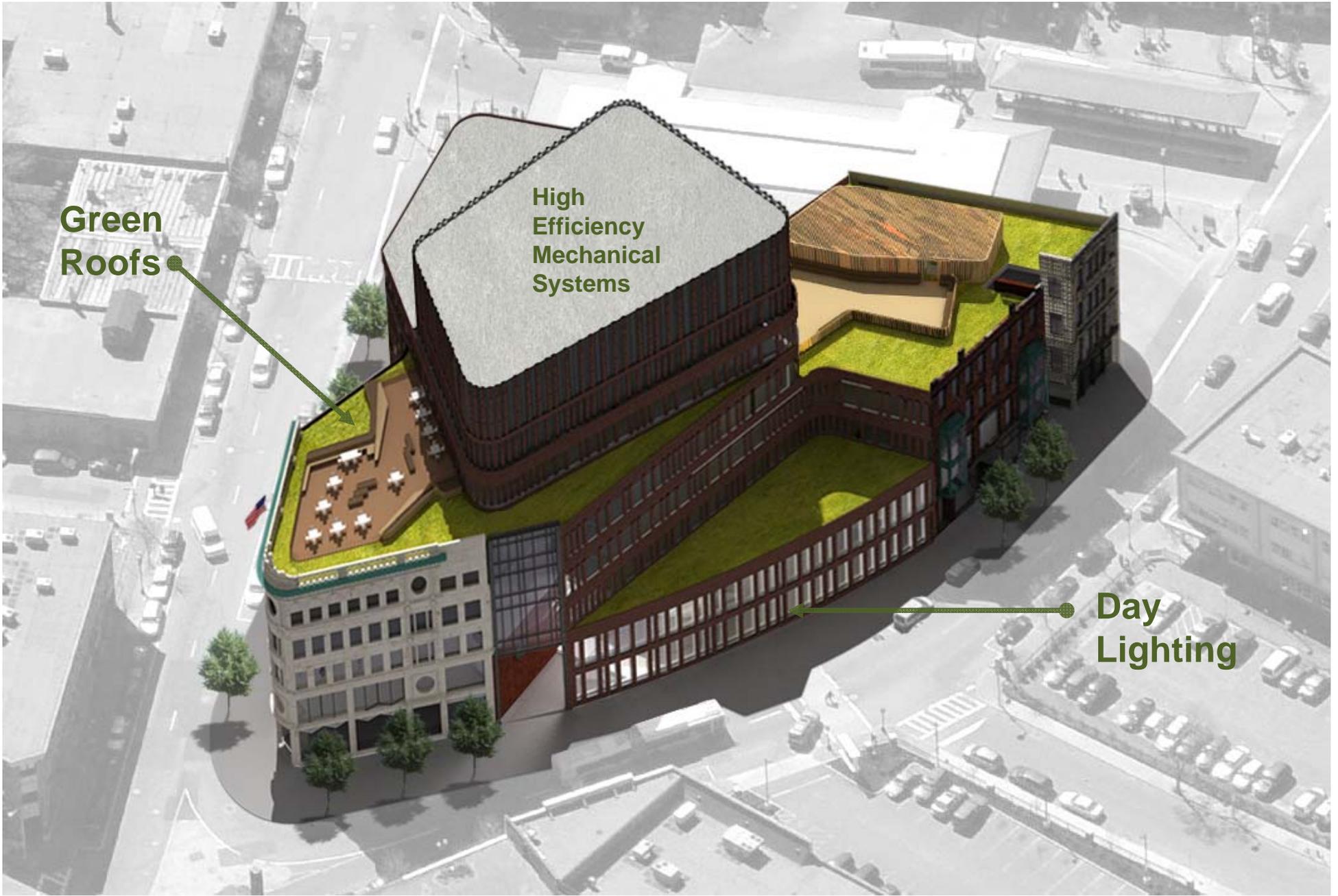


PHOTO VOLTAIC REVIEW for DUDLEY MUNICIPAL FACILITY



EXISTING SUSTAINABLE BUILDING TECHNOLOGIES

- **Green Roofs** – Reduce heat island, removes need for water retention tanks, improved insulation values and have longer life than standard roofs
- **High Efficiency Mechanical Systems** – Advanced systems designed to provide 20% more energy saving than required by the National Energy Code.
- **Day Lighting** – Windows optimized to provide maximum amount of day lighting and light sensors installed to control electric lighting.
- **Low Flow Water Fixtures** – Reduction of water use for the project
- **LEED Silver Certified** - Project includes other sustainable features and focuses on energy conservation



Arial perspective at Washington Street

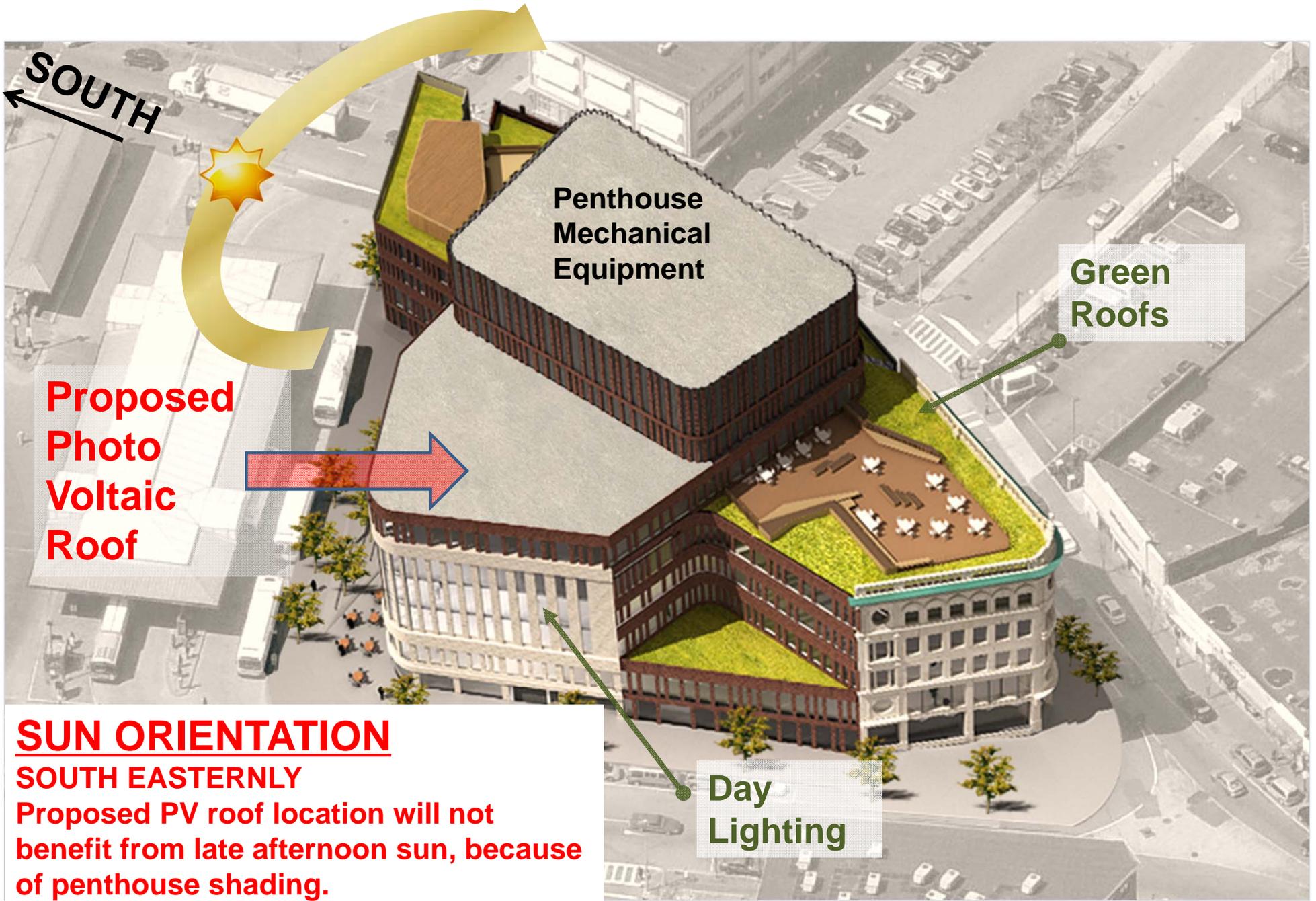
PHOTO VOLTAIC REVIEW

Panels that convert sunlight into electricity. Surplus electricity is stored by the facility or sold back to utilities



PROPOSAL:

- Add Photo Voltaic panels to Warren Street 5th Floor roof.
- City will purchase panels and install as part of project. Proposal does not include any federal incentives.
- Available 5,000 square feet of roofing
- South East sun orientation



SOUTH

**Penthouse
Mechanical
Equipment**

**Green
Roofs**

**Proposed
Photo
Voltaic
Roof**

**Day
Lighting**

SUN ORIENTATION

SOUTH EASTERNLY

Proposed PV roof location will not benefit from late afternoon sun, because of penthouse shading.

Arial perspective from the Warren Street

PV ENGINEERING REVIEW – ARUP ENGINEERING

Please note – the cost of electricity and PV panels fluctuate. ARUPs calculations below represent the current 2012 pricing.

☐ QUANTITY of PHOTOVOLTAIC

5,000SF roof area @ 50% PV = 2,500SF PV or 232m²

☐ ENERGY GENERATION

On an annual basis 300kWh/ m²/yr x 232 m² = 69,600kWh/yr
Adjustment for de-rating of 20% (.8 x 69,600) = 55,680kWh/yr

☐ SYSTEM PURCHASE & INSTALATION COST

System sizing, the rule of thumb is 100 W/m².

Therefore, using total roof area = 46,400W or 46.4kW system

\$6/W = \$278,400 purchase & installed cost

☐ ENERGY PRODUCTION

Generating 55,680kWh X \$0.14/kWh (current rate) = \$7,795 avg. yearly savings

☐ SIMPLE PAYBACK

Initial Cost \$278,400 by yearly saving \$7,795 = 35.71 years

CONCLUSION

\$278,000 PHOTOVOLTAIC INSTALLATION IS NOT FEASIBLE FOR THE PROJECT AT THIS TIME.

The City will revisit PV when:

- Incentives become available**
- Technology improves (efficiency increases and/or price comes down)**
- Improved cost benefit analysis**





Dudley Square Municipal Office Facility Parking Management Plan

Vanasse Hangen Brustlin Inc.

Dudley Vision Advisory Task Force
Thursday December 13, 2012

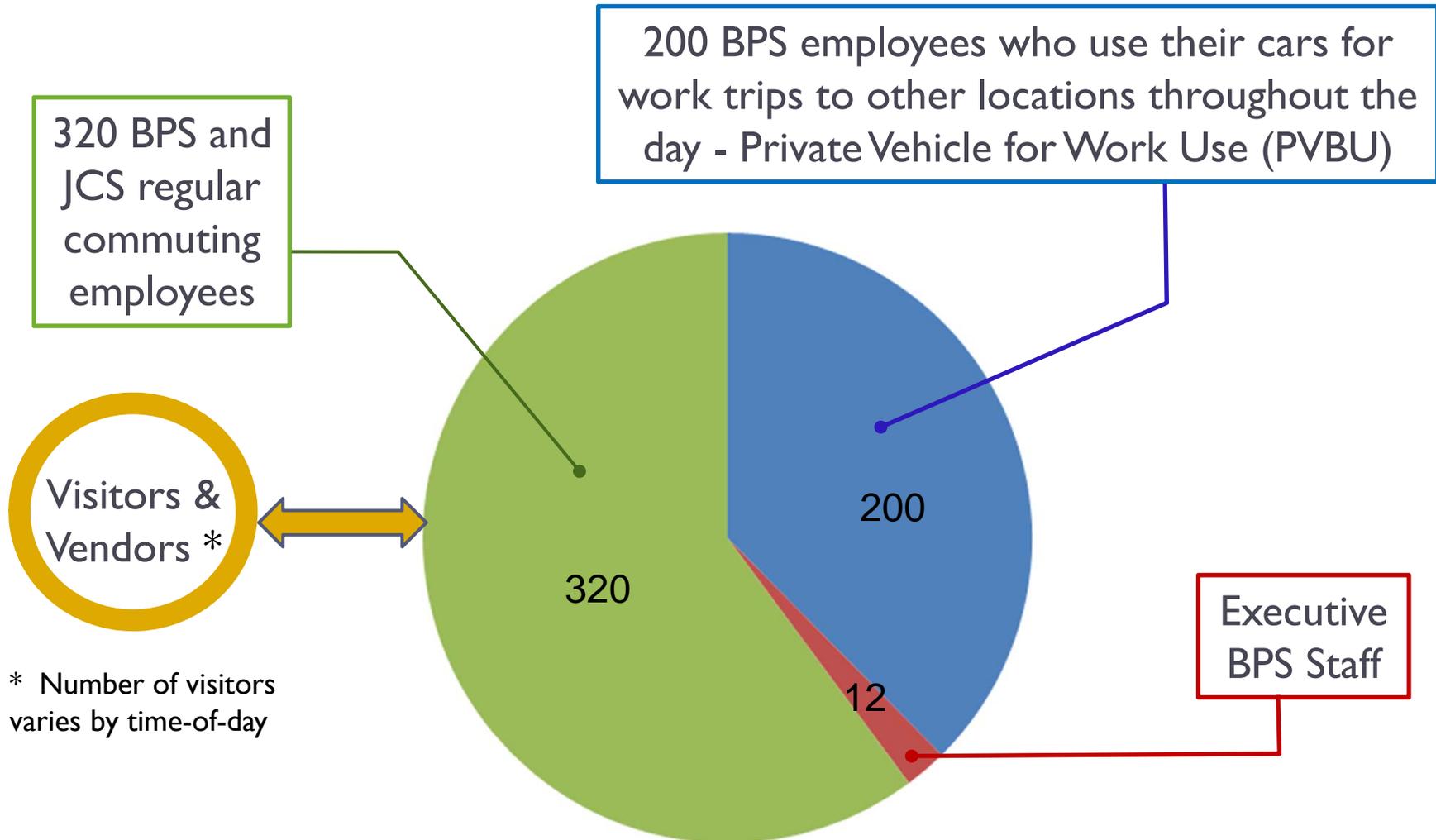


Parking Management Plan Development

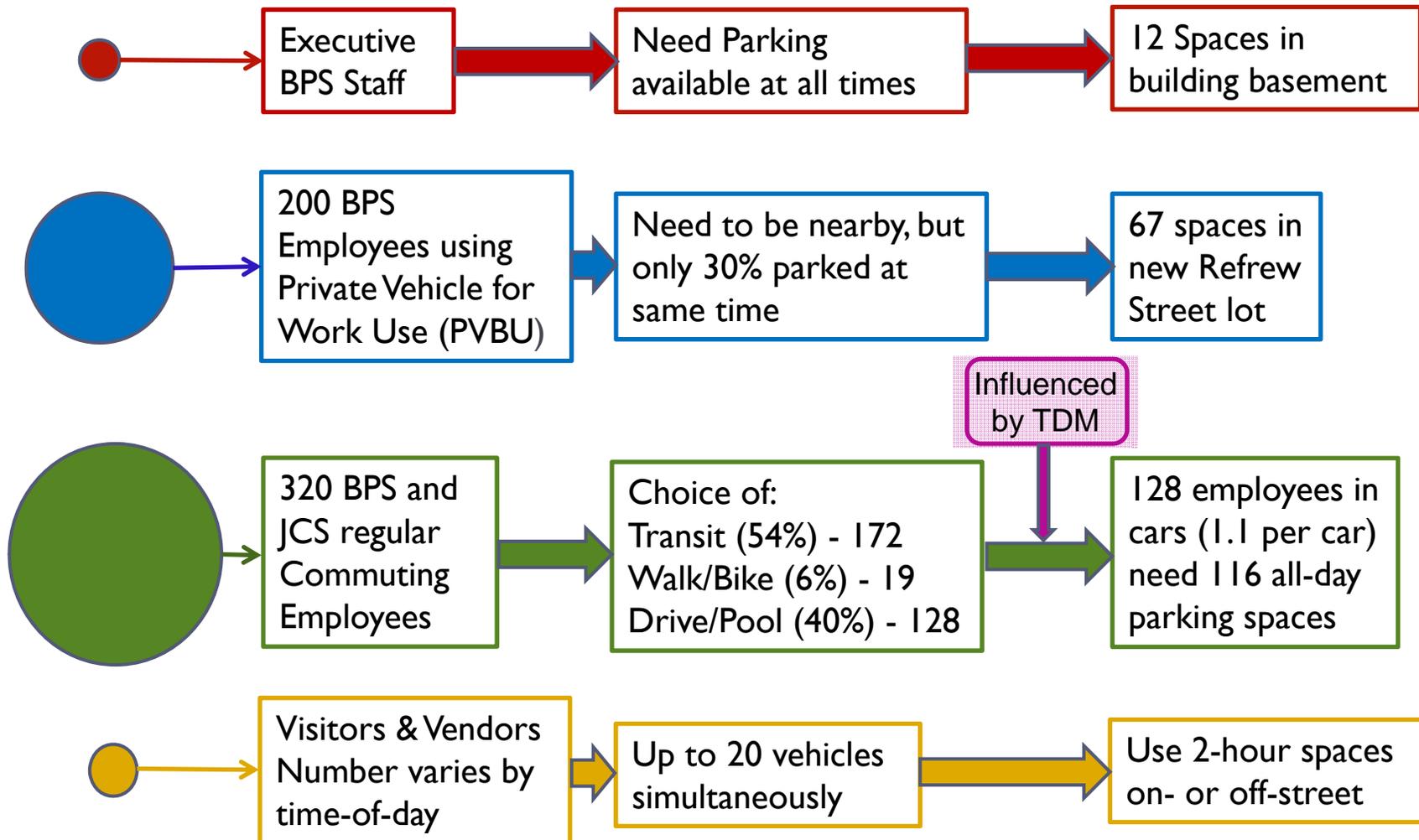
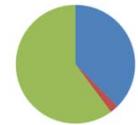
- ▶ Data Collection
 - ❑ Survey Boston Public Schools (BPS) Staff and other building functions
- ▶ Dudley Square Transportation & Parking Review
 - ❑ Coordinate with Boston Transportation Department (BTD), Transportation Action Plan information and on-going design work in Dudley Square
- ▶ Determine Parking Needs
 - ❑ Identify different user groups that will need parking
- ▶ Discuss Findings with Community at DVATF meeting May 10, 2012
- ▶ Develop Draft Parking Management Plan
 - ❑ Transportation Demand Management (TDM)
 - ❑ Parking demand and supply for all user groups
 - ❑ On-street parking regulation and enforcement
- ▶ Present Draft Parking Management Plan to DVATF - **Tonight**
- ▶ Ongoing Refinement of Parking Plan, Coordination with Community & Monitoring before-and-after Municipal Office Building opens

Data Collection

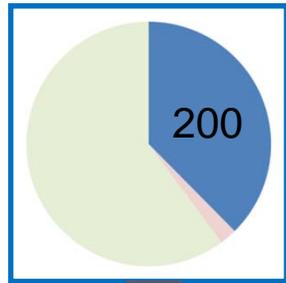
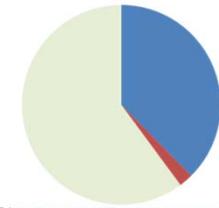
Building Population: Approx. 520 Employees



How people will get to Dudley Square

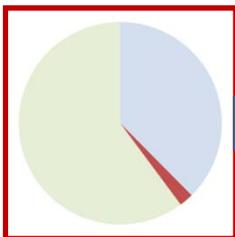


Proposed Parking for BPS Executive Staff & Fleet Cars & PVBU Employees



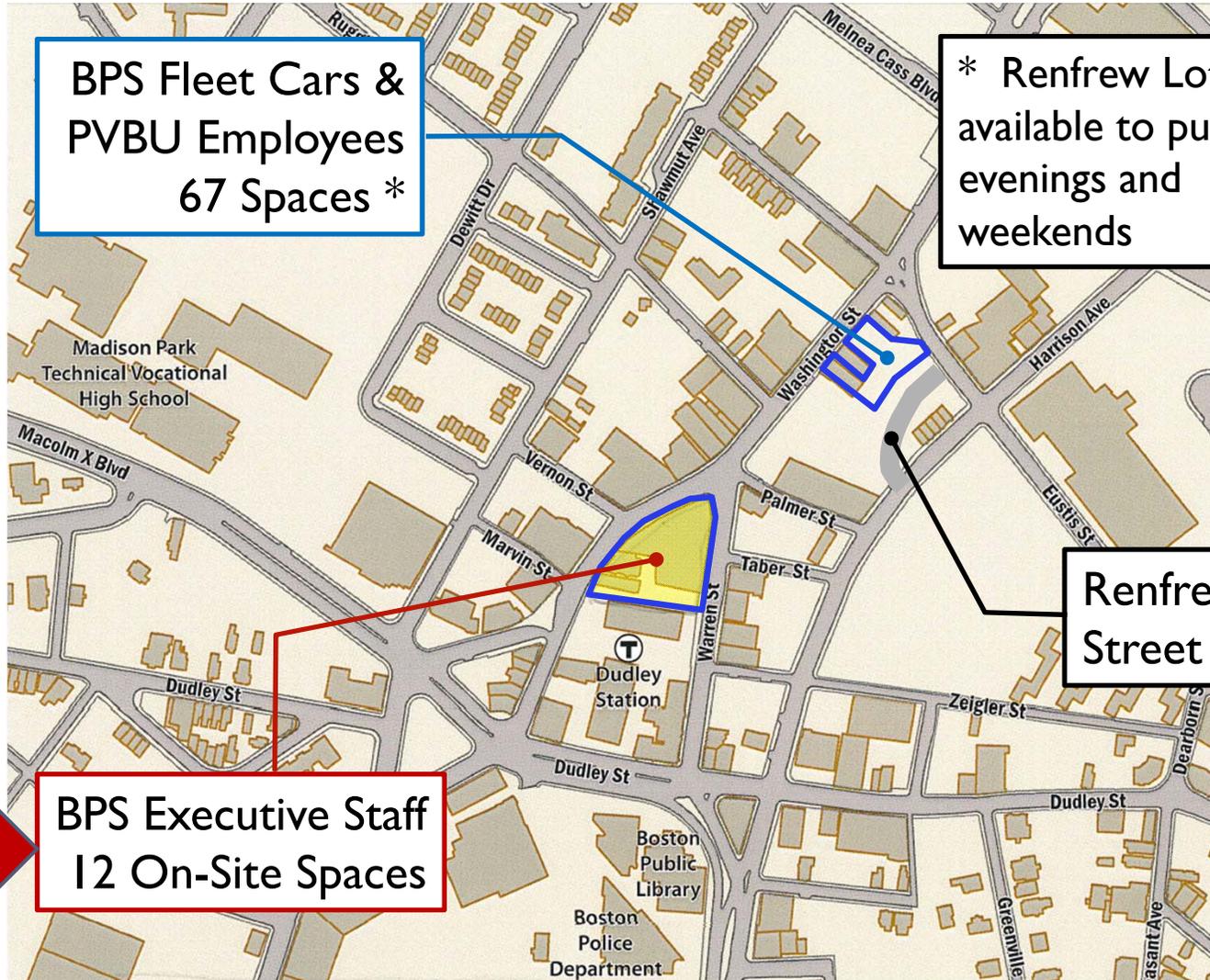
Only 30%
on-site at
same time

60 Spaces



BPS Fleet Cars &
PVBU Employees
67 Spaces *

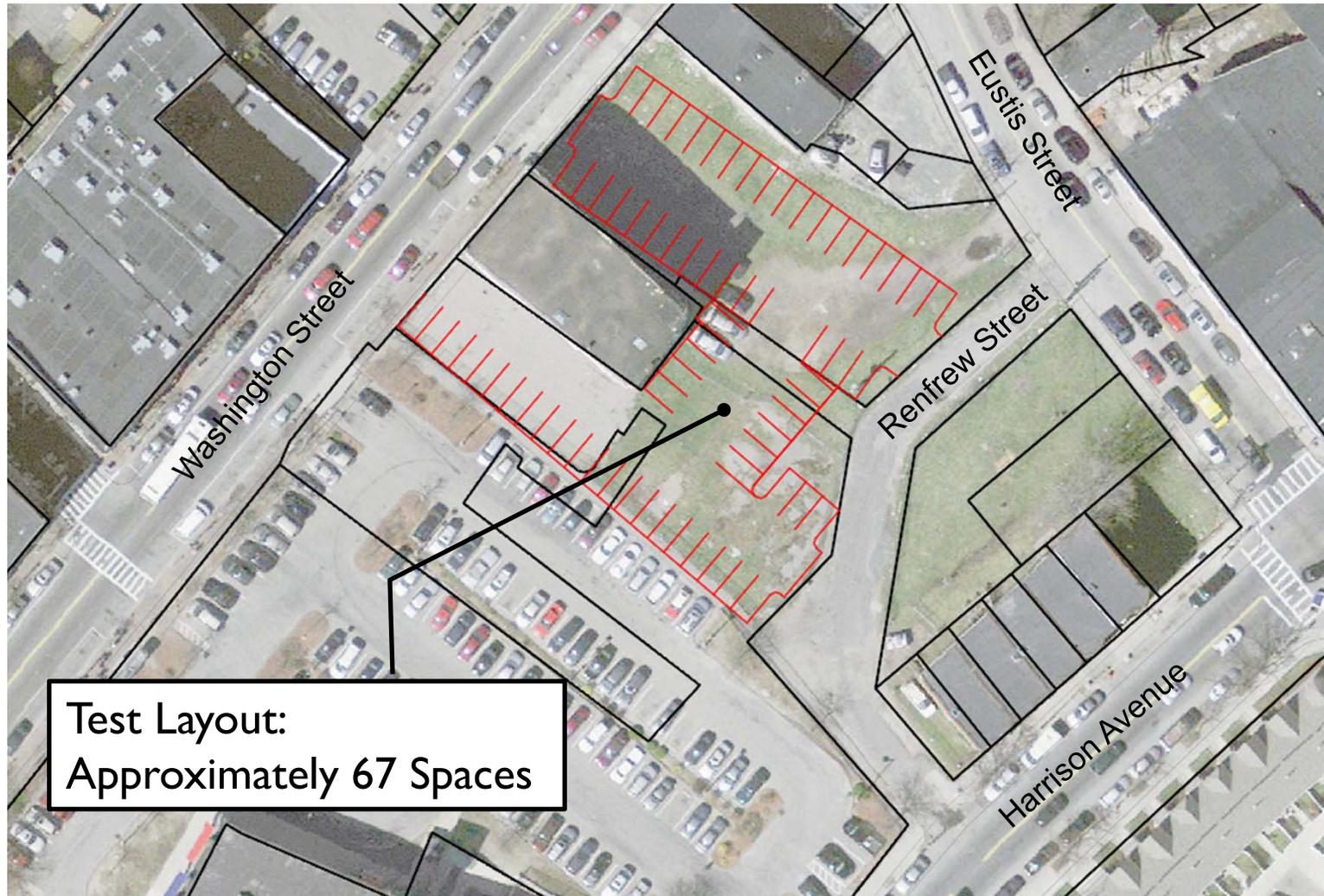
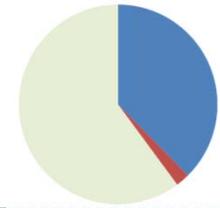
* Renfrew Lot
available to public
evenings and
weekends



BPS Executive Staff
12 On-Site Spaces

Renfrew
Street

Proposed Refrew Street Parking Lot BPS Fleet Cars & PVBU Employees

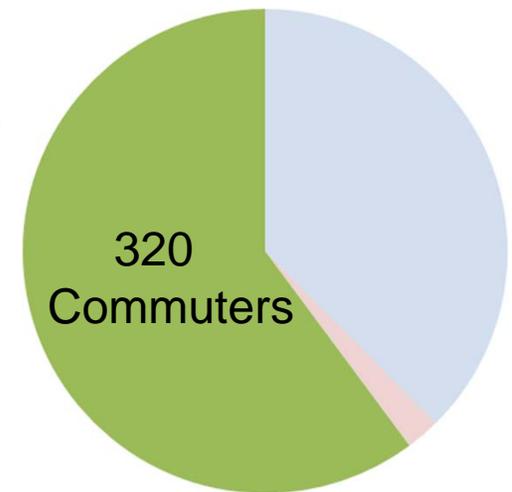


TDM

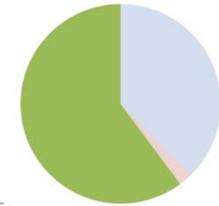
Transportation Demand Management



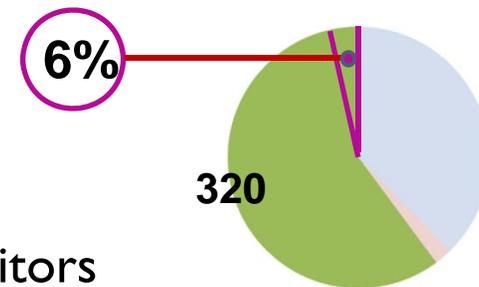
- ▶ Discourage commuting by car and encourage other modes
- ▶ BPS Staff currently is a heavy user of the MBTA
- ▶ BPS, in coordination with BTD, will develop a TDM Plan that could include, but not be limited to, the following:
 - ❑ Pre-Tax MBTA CharlieCard Purchase
 - ❑ Designation of a member of staff as a TDM Coordinator
 - ❑ Dissemination of information on commuting options
 - ❑ Posting of transit services and schedules
 - ❑ Hosting an annual “commuter fair”
 - ❑ Establishing a car-pooling network
 - ❑ Opportunities for car-sharing (e.g. Zipcar)
 - ❑ Collaborating with the MBTA and local businesses on TDM initiatives
 - ❑ Participate in the establishment of a Dudley Square or Roxbury Transportation Management Association (TMA)



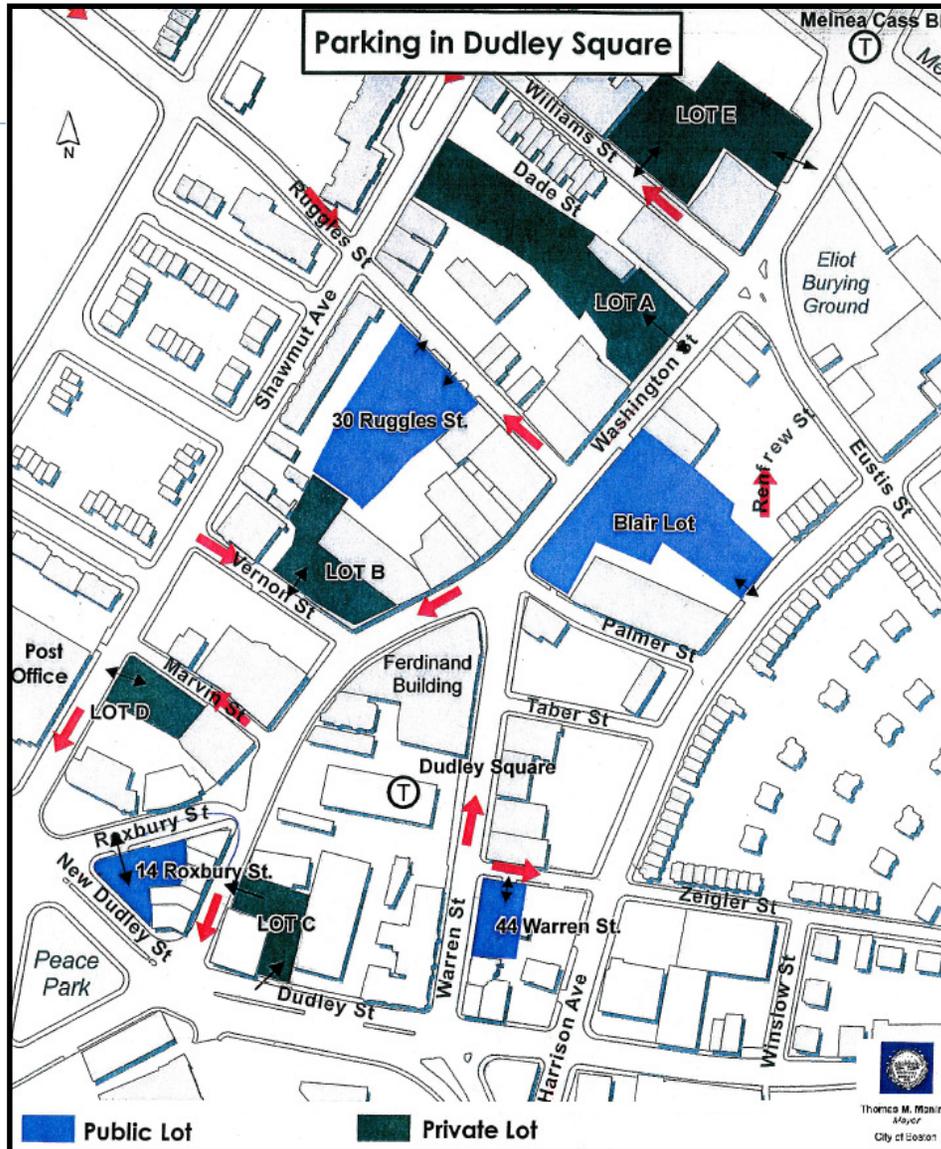
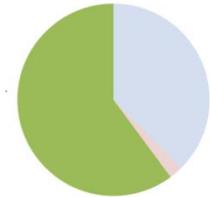
Walking & Bicycle Commuting



- ▶ TDM Plan will encourage non-vehicular commuting
- ▶ At a minimum, **20** or more (**6%**) of commuters will walk or bike to the new building modes
- ▶ Supporting physical elements are incorporated in the building design:
 - Ample bicycle parking for commuters and visitors
 - Shower and locker facilities
 - Careful design of pedestrian access and the pedestrian environment around the building
 - Strong connections to MBTA station
 - Hubway Bike-share program already in Dudley square
- ▶ Building will be LEED certified, which strengthens its role in supporting sustainable transportation

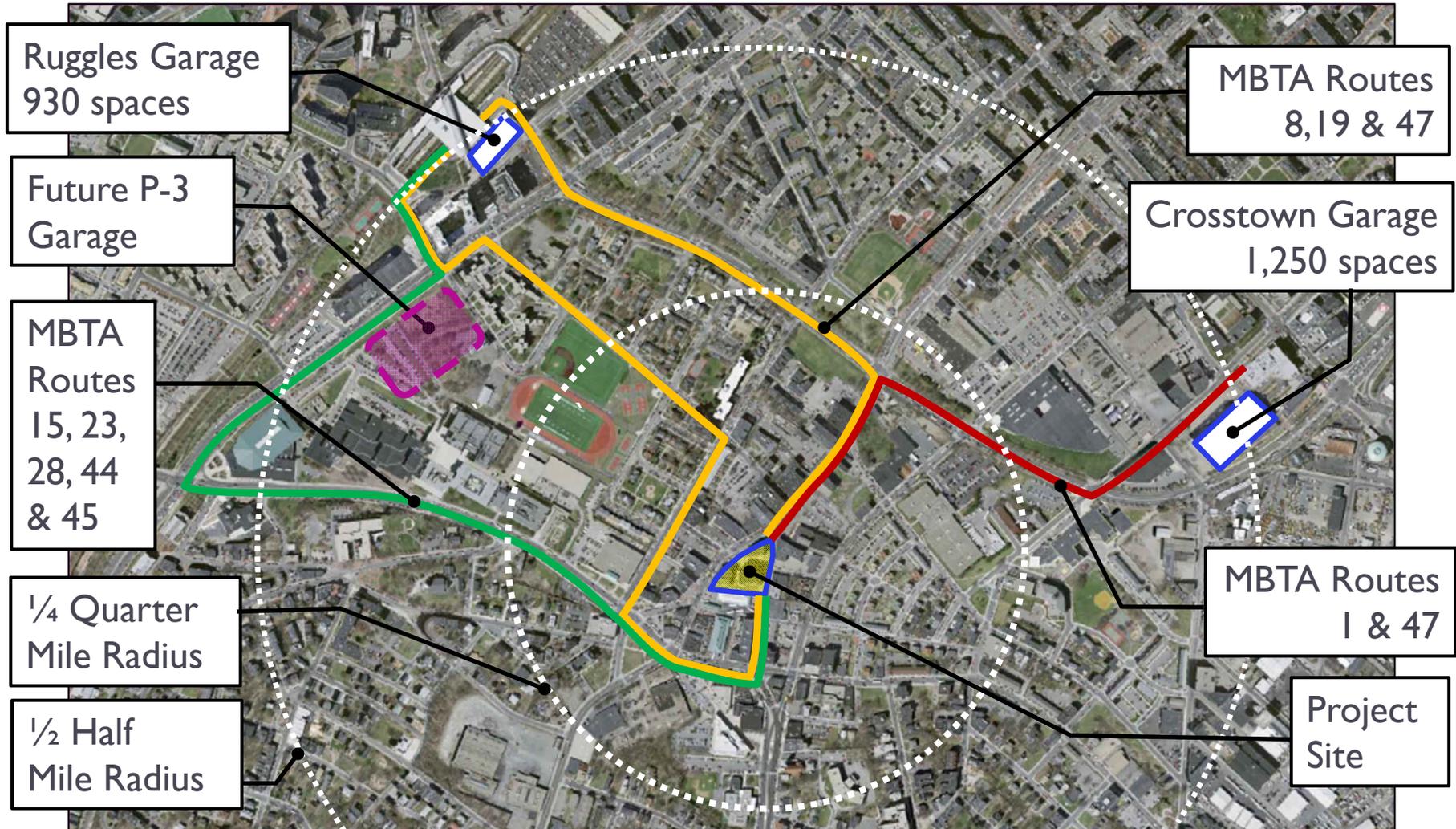
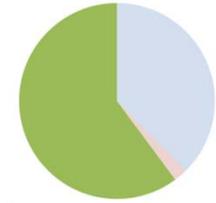


All-Day Commuter Parking



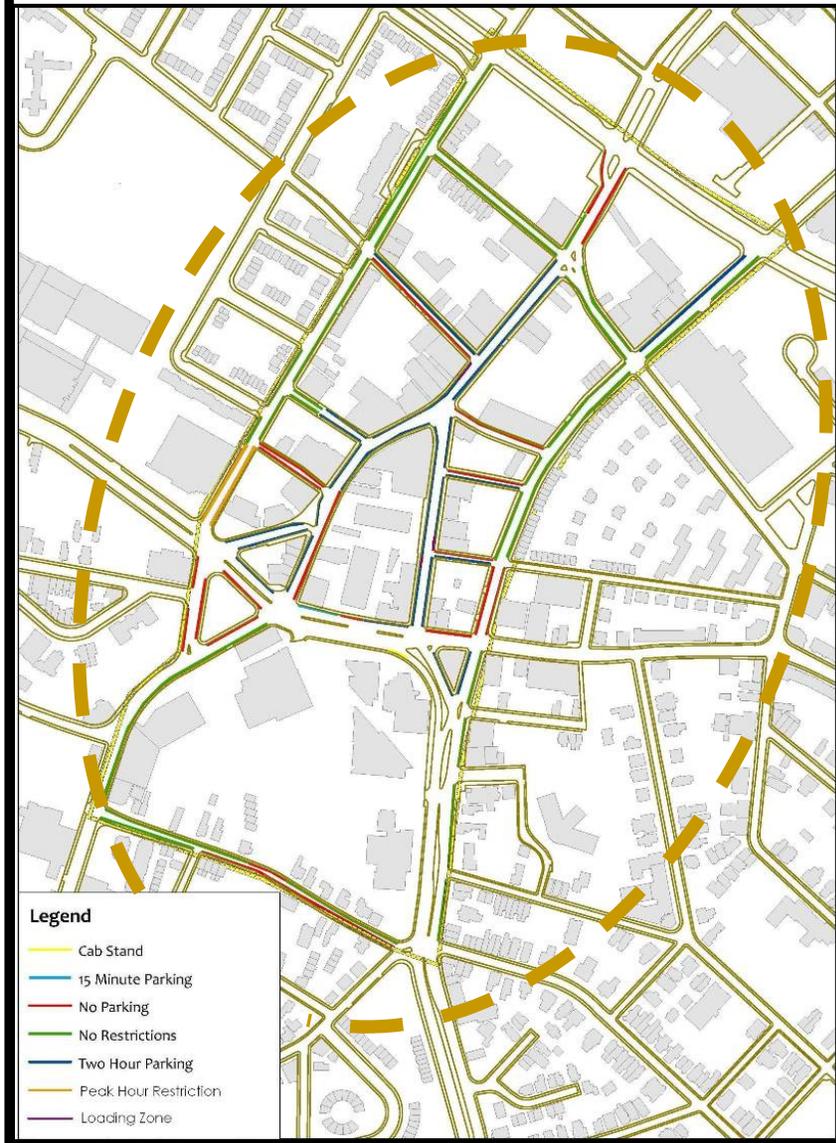
- ▶ Robust Enforcement Plan
- ▶ All Public on-street and off-street parking is short-term – Limited to 2 hours
- ▶ Commuters need long-term (all-day) parking
- ▶ All-day parking in private lots
- ▶ 200 Private Off-Street Parking Spaces
- ▶ As development occurs in Dudley Square, private off-street parking lot owners may make lots available to Public at a charge

Remote All-Day Parking Locations for Commuters



Current On-Street Parking Regulations

Source: Dudley Square Initiative Transportation Action Plan Study

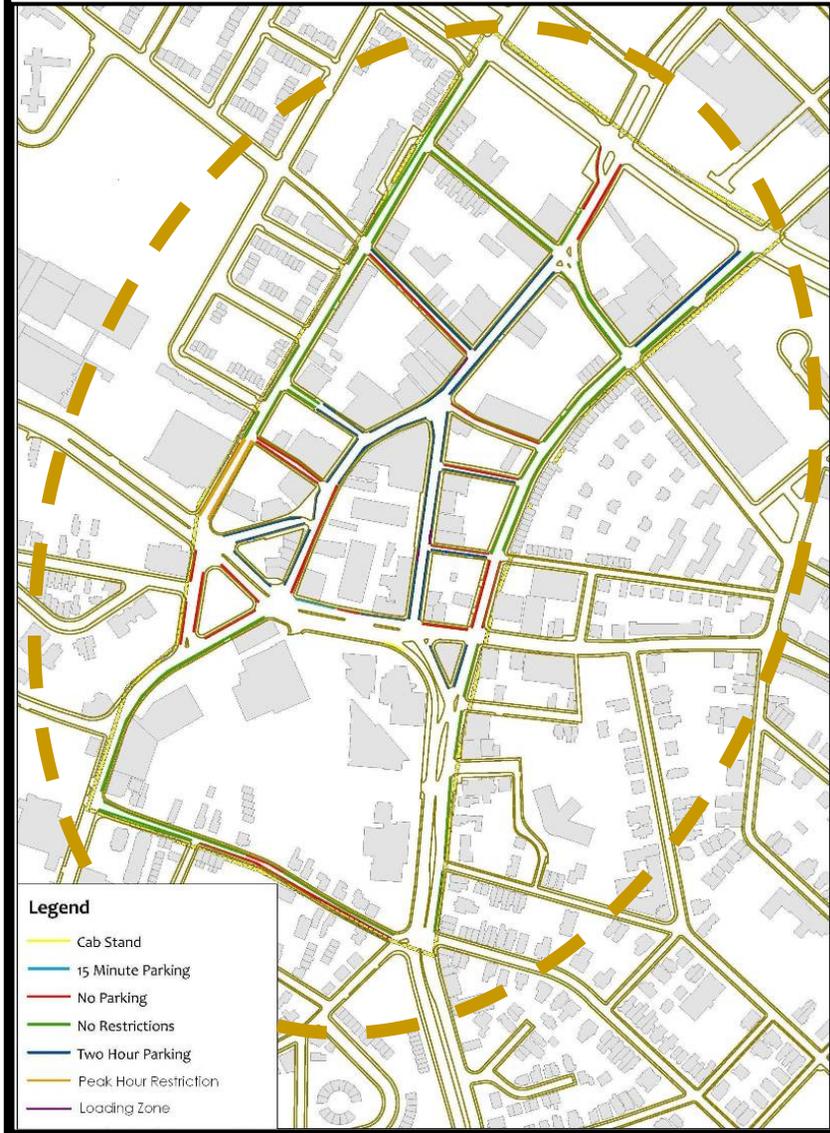


Visitors, Vendors & Dudley Square Users

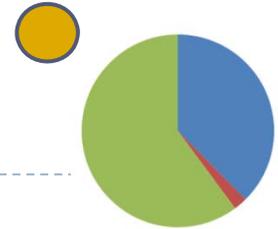
- ▶ Visitors, Vendors and other Dudley Square shoppers etc. need short-term parking
- ▶ Numbers vary by time-of-day
- ▶ Municipal Office visitors may need parking for up to 20 vehicles simultaneously
- ▶ Approximately 750 on- and off-street Public parking spaces in Transportation Action Plan study area
- ▶ All Public spaces are 2-hour limited
- ▶ There have been several changes since the study was done:
 - ❑ Many unrestricted on-street spaces have been eliminated
 - ❑ More 2-hour limited parking on-street spaces have been added
 - ❑ BTD continues to convert any remaining unrestricted spaces to 2-hour limit

Current On-Street Parking Regulations

Source: Dudley Square Initiative Transportation Action Plan Study

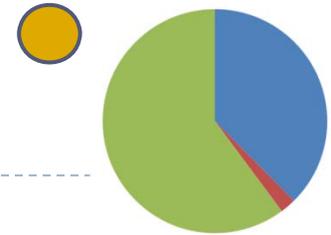


Parking Enforcement



- ▶ Enforcement is important to prevent commuter parking in and around Dudley Square
- ▶ Enforcement is important to maintain on- and off-street parking for Dudley Square retail and commercial patrons
- ▶ Orchard Gardens Resident Parking Sticker zone already initiated
- ▶ Expand Resident Parking Sticker zones to protect surrounding neighborhoods
- ▶ Robust enforcement – effective ticketing

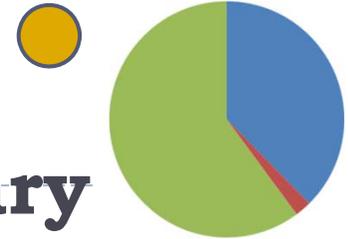
Commuter Parking Management Plan



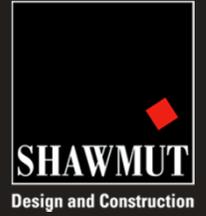
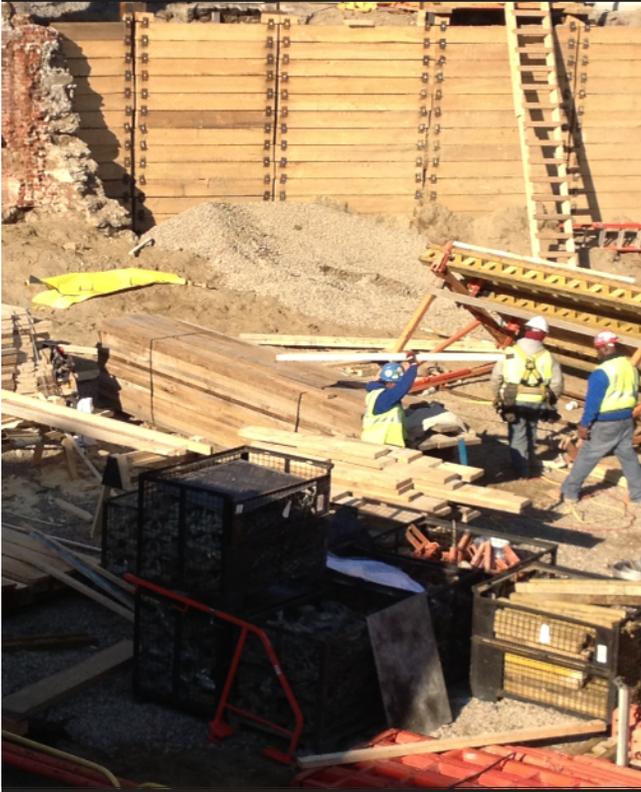
- ▶ BPS will explore commuter parking management strategies to minimize the amount of daily parking needed for BPS employees, including:
 - ❑ Fleet Vehicles - Provide additional fleet vehicles to reduce the number of individual private cars needed to be driven to Dudley square by PVBU employees
 - ❑ Car-Pooling - Investigate potential sharing or car-pooling of PVBU cars
 - ❑ Parking Space Sharing - Identify ways in which the parking spaces reserved for School Committee members could be used by others during the majority of the time they are not required
 - ❑ Long-term Public Parking - Identify existing public long-term parking that is located within walking distance of Dudley Square or is connected by existing MBTA service

- ▶ BTD will implement robust Enforcement Strategies:
 - ❑ Time-limited parking
 - ❑ Resident permit parking zones
 - ❑ Effective/random ticketing

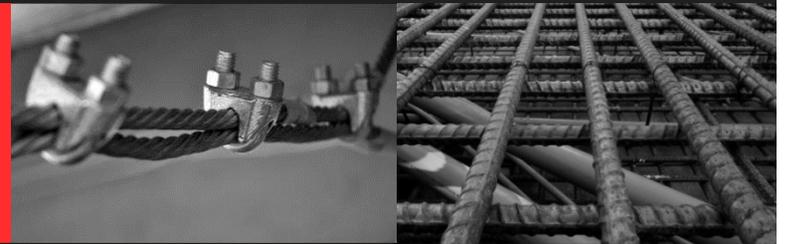
Dudley Municipal Facility Parking Management Plan Summary



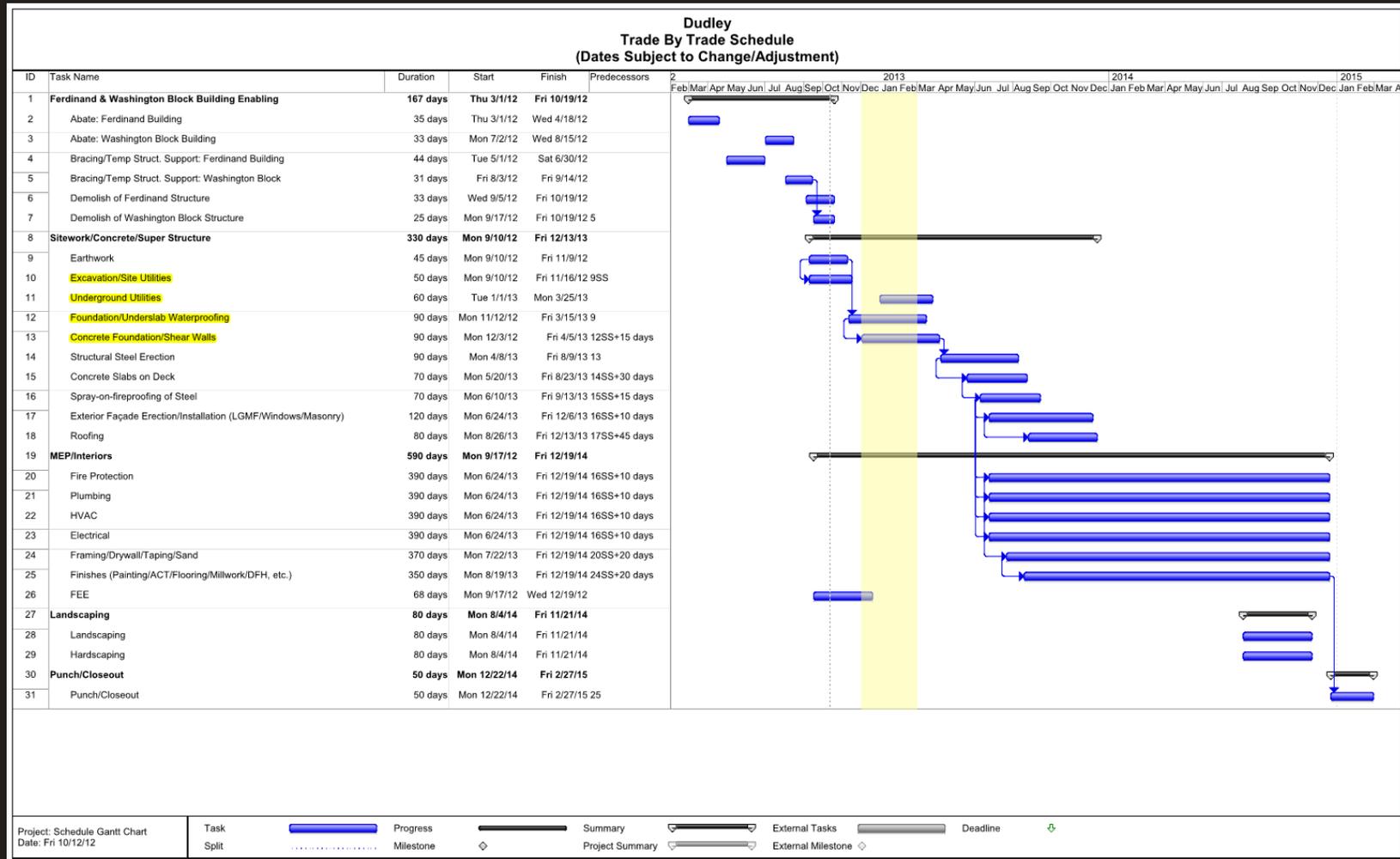
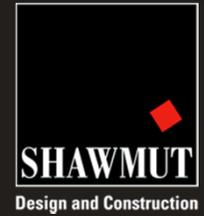
- ❑ 60 parking spaces for PVBU employees (essential users) in new lot to be constructed on Renfrew Street. This parking would be available to the public after 5 PM on weekdays and throughout weekend
- ❑ 12 on-site BPS executive parking spaces
- ❑ Employees wishing to commute by car will be strongly encouraged and incentivized by the TDM Plan to use transit, bicycle, walking or car-pooling
- ❑ Keep Public parking available for Dudley Square retail and commercial visitors
- ❑ All on-street parking will be limited to 2-hours – suitable for short-term parking by visitors and vendors, but not for commuters. Supported by:
 - Effective Transportation Demand Management Plan
 - BPS Parking Management Plan
 - Robust parking enforcement
 - Neighborhood protection by expanding Resident Permit Parking zones
- ❑ Those who choose to commute by car will use existing or future private lots in vicinity or available long-term parking spaces in existing Public parking garages at Crosstown or Ruggles

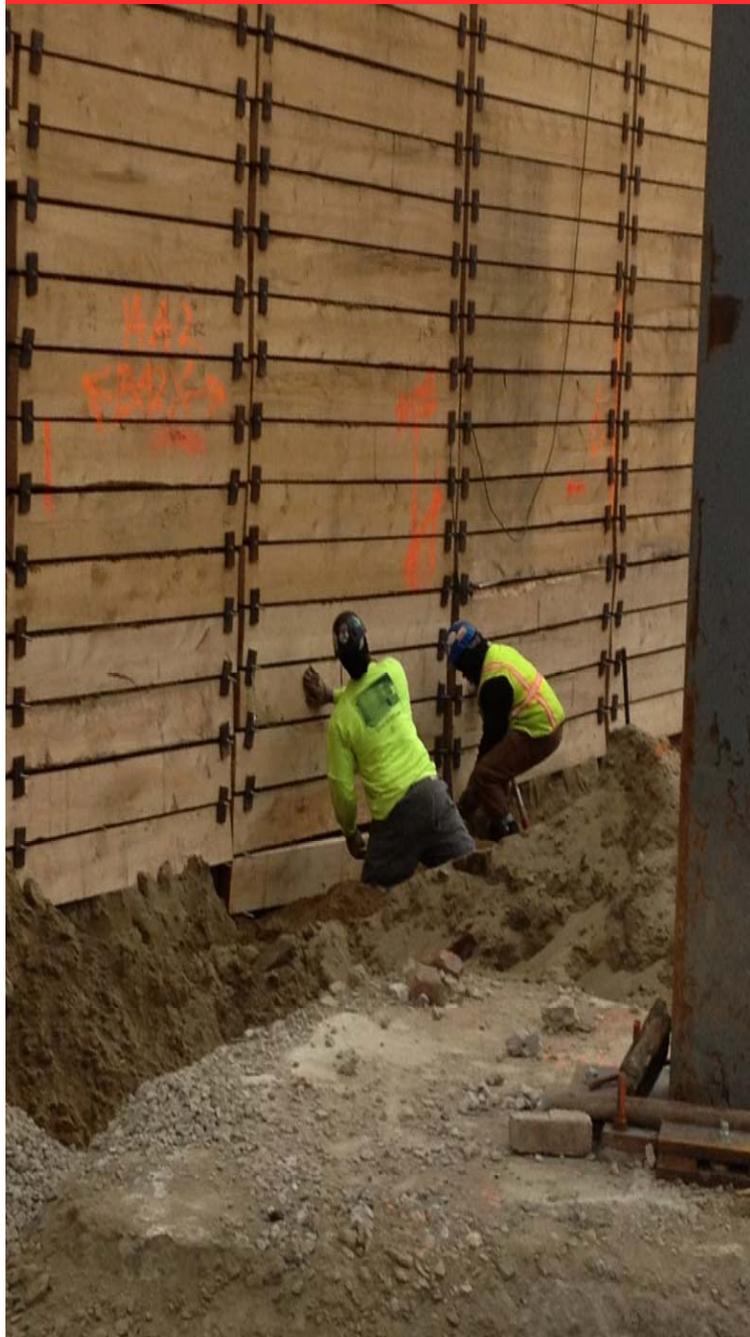


Dudley Municipal Center

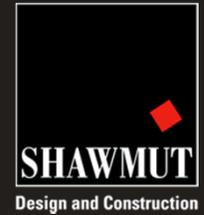


Schedule





Schedule: Next 3-months



Complete earth support /mass excavation

Install earth support and excavation in front of Ferdinand foundation

Install concrete foundations and perimeter walls of basement/garage

Install North and South concrete core tower for elevators and stairs

Install underslab plumbing and electrical

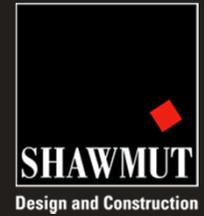
Install foundation waterproofing

Install new grease trap and limited utilities on Warren St.

Workforce – Certified

October

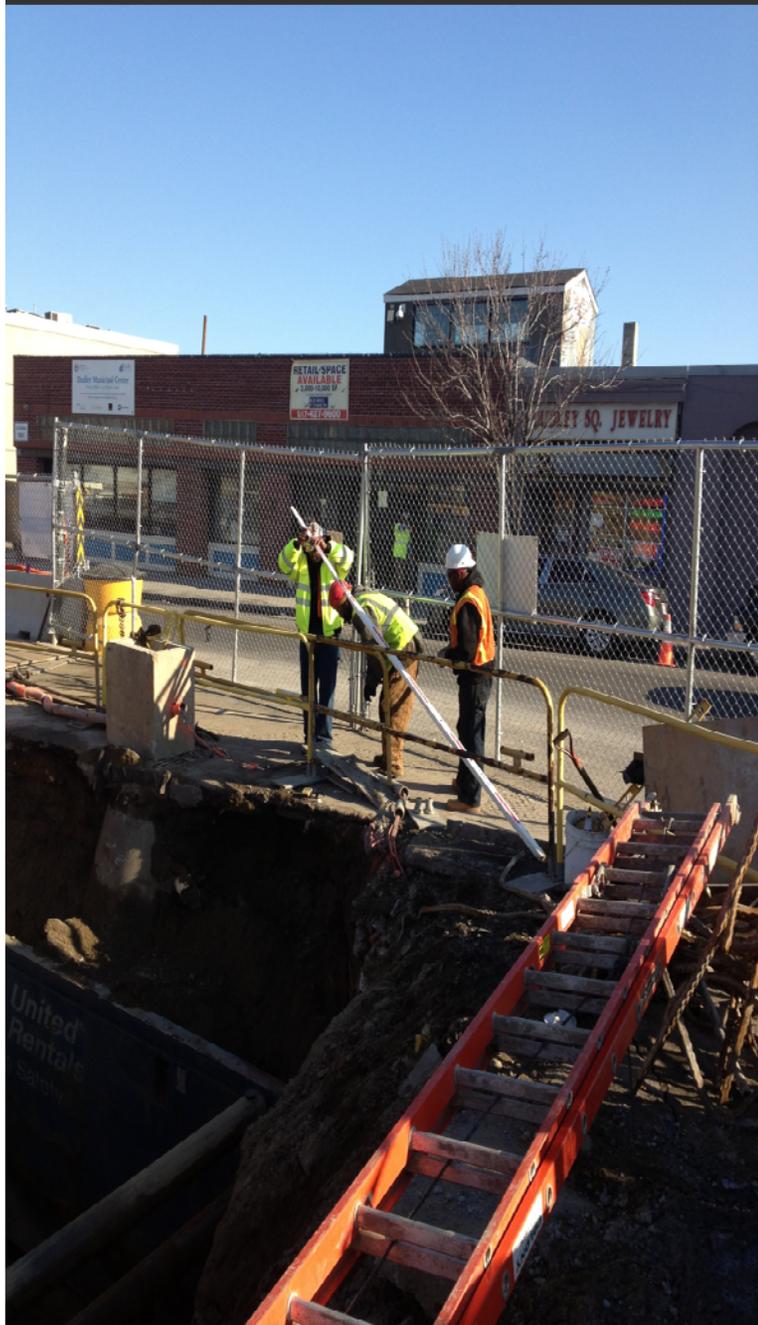
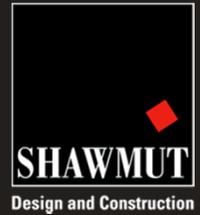
November



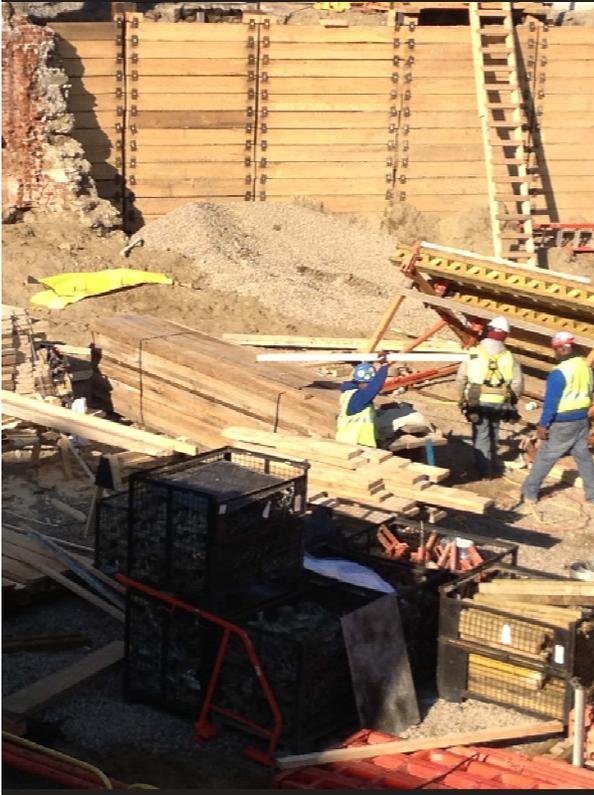
	BRJP Goal	October 2012		November 2012		Month to Month
		Actual	Variance	Actual	Variance	Variance
Resident	50%	50%	0%	57%	+7%	+7%
Minority	25%	53%	+28%	53%	+28%	+0%
Women	10%	9%	-1%	12%	+3%	+4%



Workforce – UnCertified December



		December 13, 2012		
	# of Workers	Goal	Actual	Variance From Goal
Resident	27	50%	60%	+10%
Minority	28	25%	57%	+32%
Women	5	10%	11%	+1%
TOTAL	47			



Questions & Answers

