



Community Meeting January 13, 2010

Presented by:

CITY OF BOSTON

Boston Transportation Department

Tetra Tech Rizzo

The Cecil Group

Brown Richardson & Rowe

Jacobs Engineering Group



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www.cityofboston.gov/transportation/rutherford/

Meeting Agenda

- Sullivan Square Refined Alternatives
 - At Grade
 - Underpass
- Comparison of Alternatives
- Community Discussion



Project Development Process

- Transportation Study
- Preliminary Design ← Current Step
- 25% Design
- Final Design (100%) and Bid Drawings
- Phased Construction
- Long Term Maintenance



Scope and Work Products

STEP 1: Existing Conditions / Project Goals

- Inventory Transportation, Development and Open Space Projects
- Identify Design Objectives

STEP 2: Alternatives Evaluation

- Develop and Evaluate Conceptual Alternatives
- Identify Potential Development and Open Space Parcels
- Select Preferred Conceptual Design

STEP 3: Preliminary Design

- Develop Preliminary Roadway & Parcel Design
- Parking and Access Guidelines Relative to Parcel Use
- Develop Cost Estimates and Phasing Strategies



Project Schedule

	Fall 2008	Spring 2009	Summer/ Fall 2009
Establish Design Principles & Identify Conceptual Alternatives			
Analyze, Review & Select Conceptual Design			
Review of Preliminary Design			



Project Funding

- \$600,000 in City of Boston funding for design to leverage federal dollars
- Initial earmarks for design and early phase construction (\$13 million)
- Accepted as Major Infrastructure Project in State's long range plan (potential \$100 million)
- Potential for public/private partnerships with developers



Project Goals

- Improve pedestrian connections between community and Sullivan Square Station
- Create public/open space
- Provide opportunities for appropriate development
- Decrease congestion by distributing traffic
- Provide bicycle connections
- Increase on-street parking
- Protect Main Street from cut-through traffic

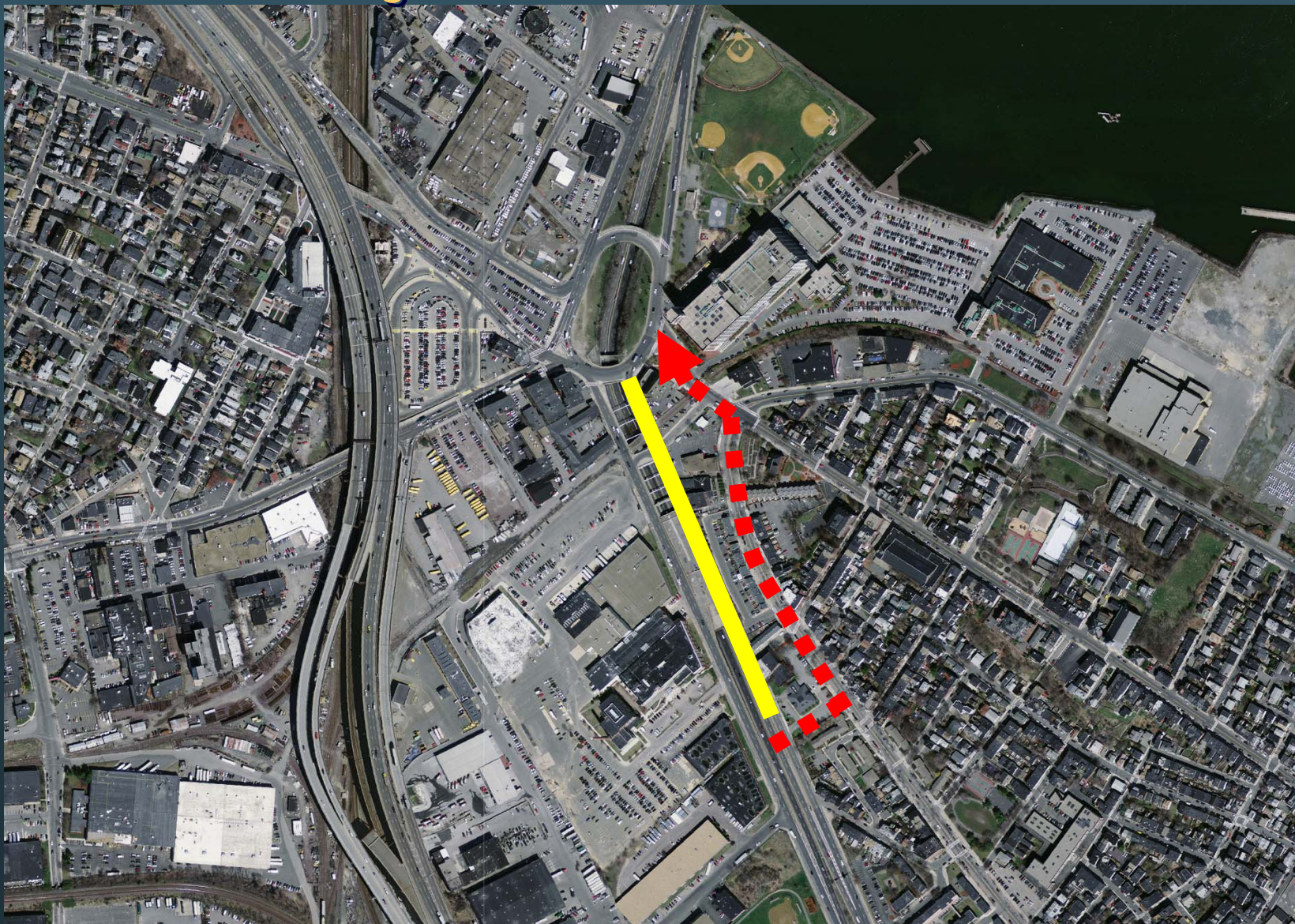


Issues and Responses

- Team has developed two options for Sullivan Square area - both options will function well from a traffic operations perspective.
- Goal of the project is to provide the community with a Boulevard not a Highway.
- City understands the neighborhood's traffic concerns because of the underpass closure last summer.
- Recent Sullivan Sq. Underpass closure is not analogous to proposed Surface Option



Sullivan Square Underpass Repairs – Cut-Throughs onto Main Street



Sullivan Square Underpass Repairs – Cut-Throughs onto Main Street



Sullivan Square Surface Option

Layout and Circulation



Sullivan Square Underpass Option

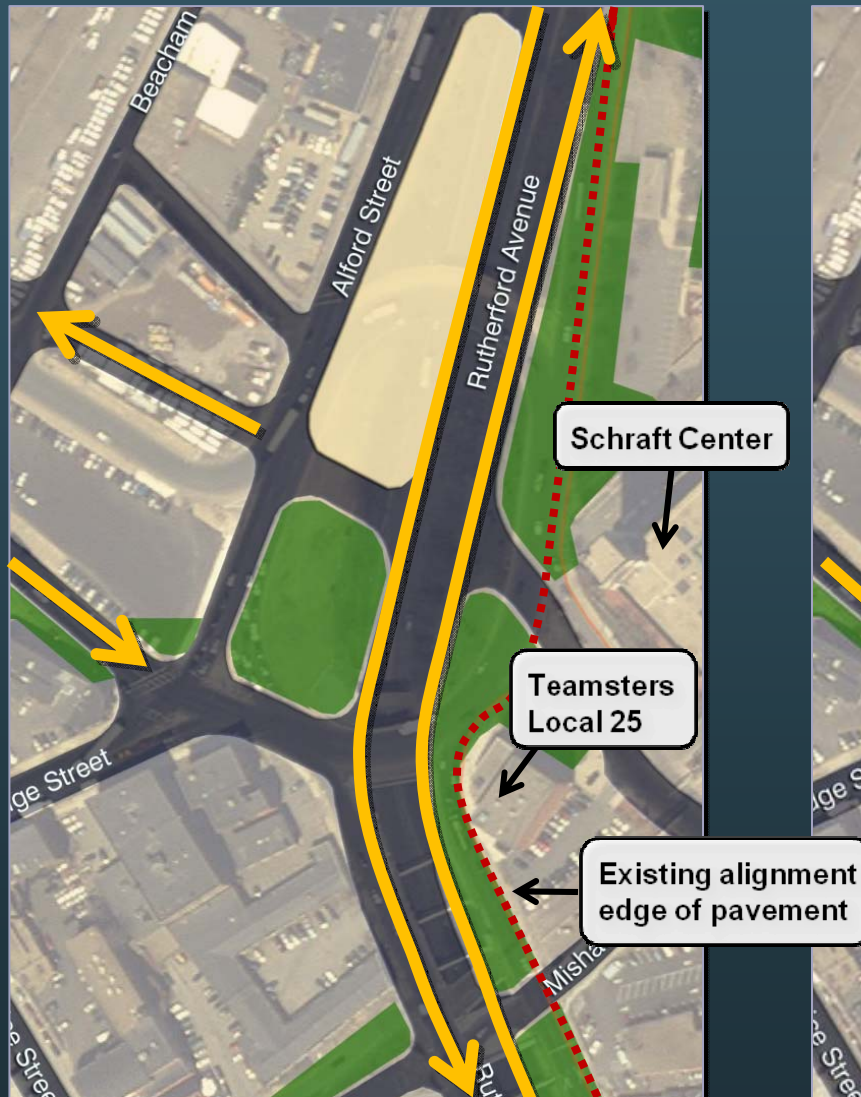
Layout and Circulation



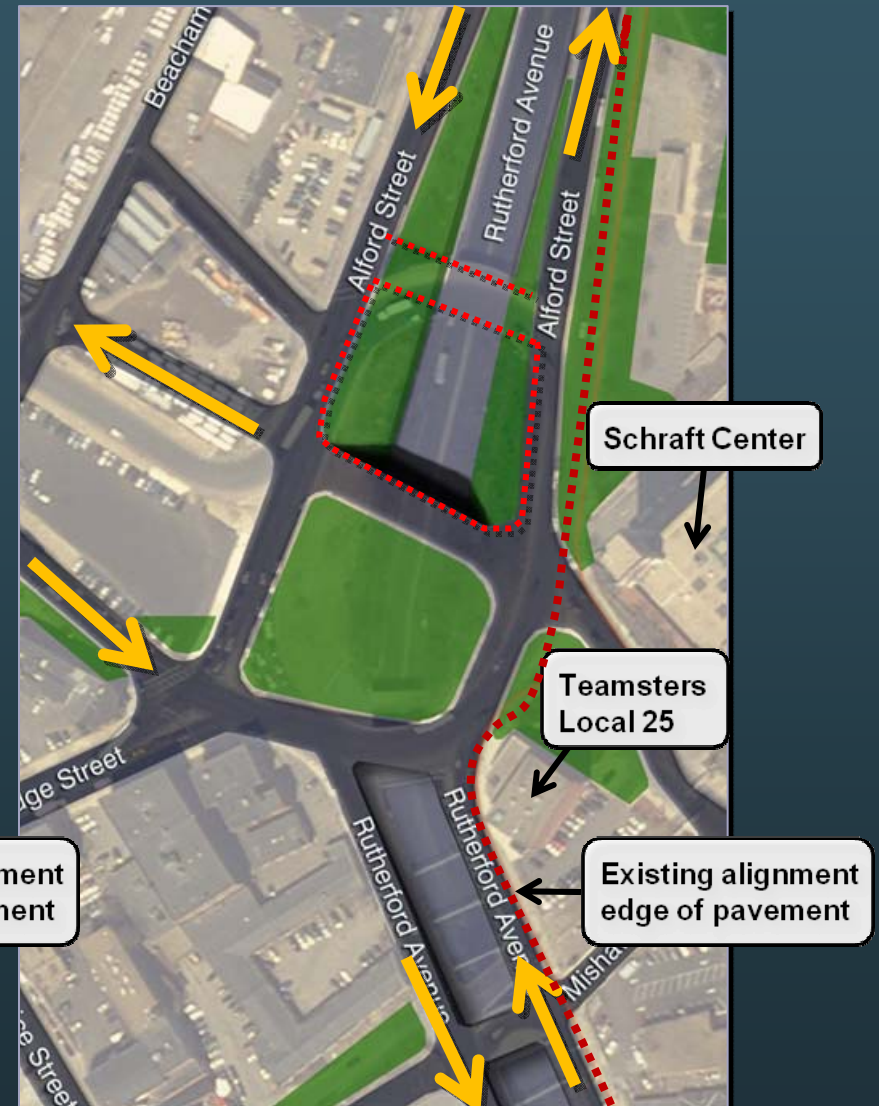
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Sullivan Square: Layout and Circulation



Surface Option



Underpass Option



Summer 2009 Sullivan Sq. Underpass Repairs vs. Proposed Surface Option

Underpass Repairs

- NB Rutherford Ave underpass closed – capacity lost
- NB Traffic detoured into Sullivan Square – increased conflicts in rotary
- Cut-through traffic onto Main Street in PM peak.

Proposed Surface Option

- Sullivan Square Underpass capacity replaced with 4 lane boulevard
- Traffic will connect to new Sullivan Square circulation plan – grid system with many route options
- Measures will be built into design to protect and serve the neighborhood (roadway and signals).
- New roadways in Sullivan Sq. will be constructed prior to filling-in the Underpass



Sullivan Square Surface Option

Rendered Site Plan



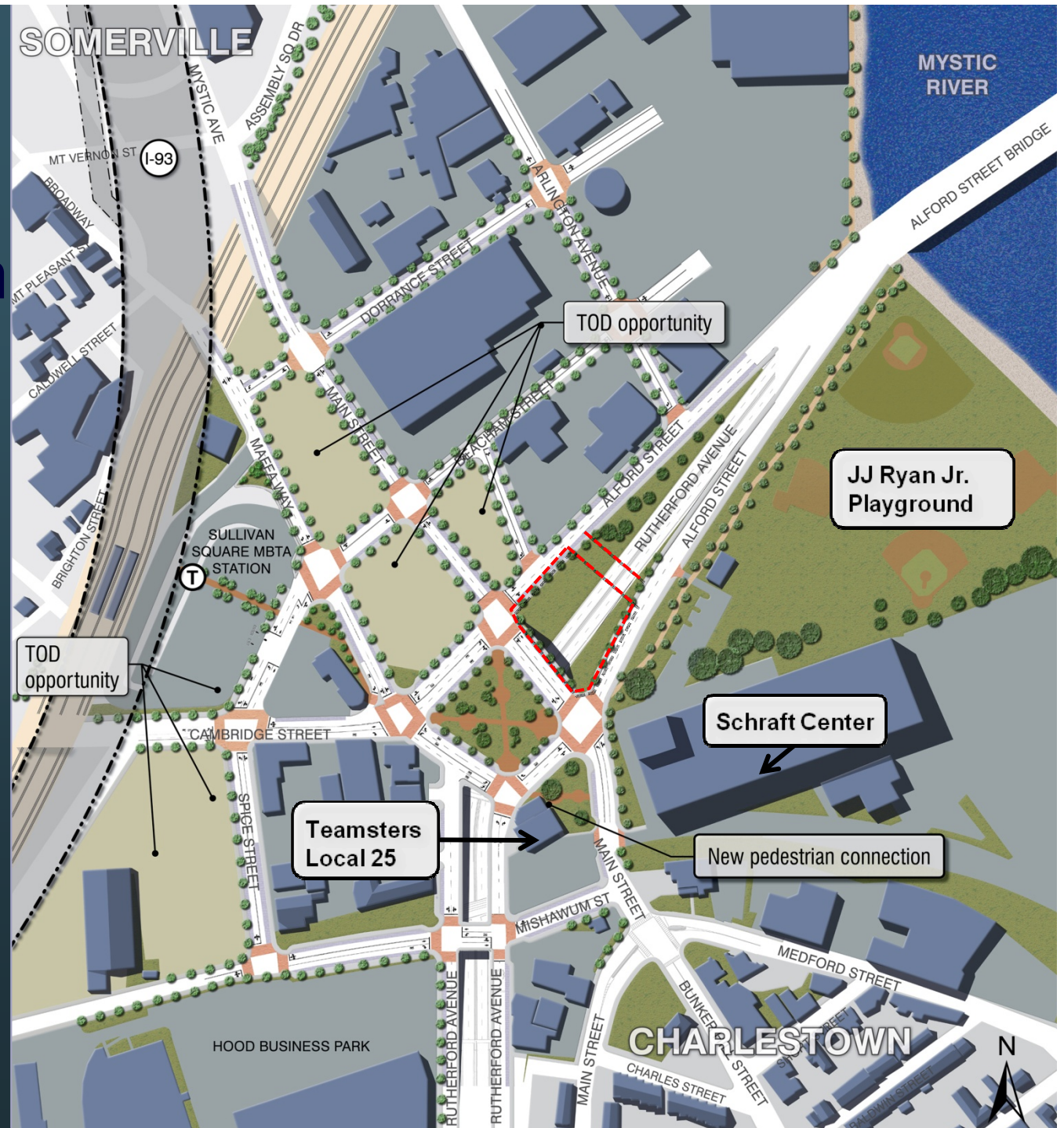
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Rendered Site Plan



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Sullivan Square Surface Option

Urban Design Elements



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Sullivan Square Underpass Option

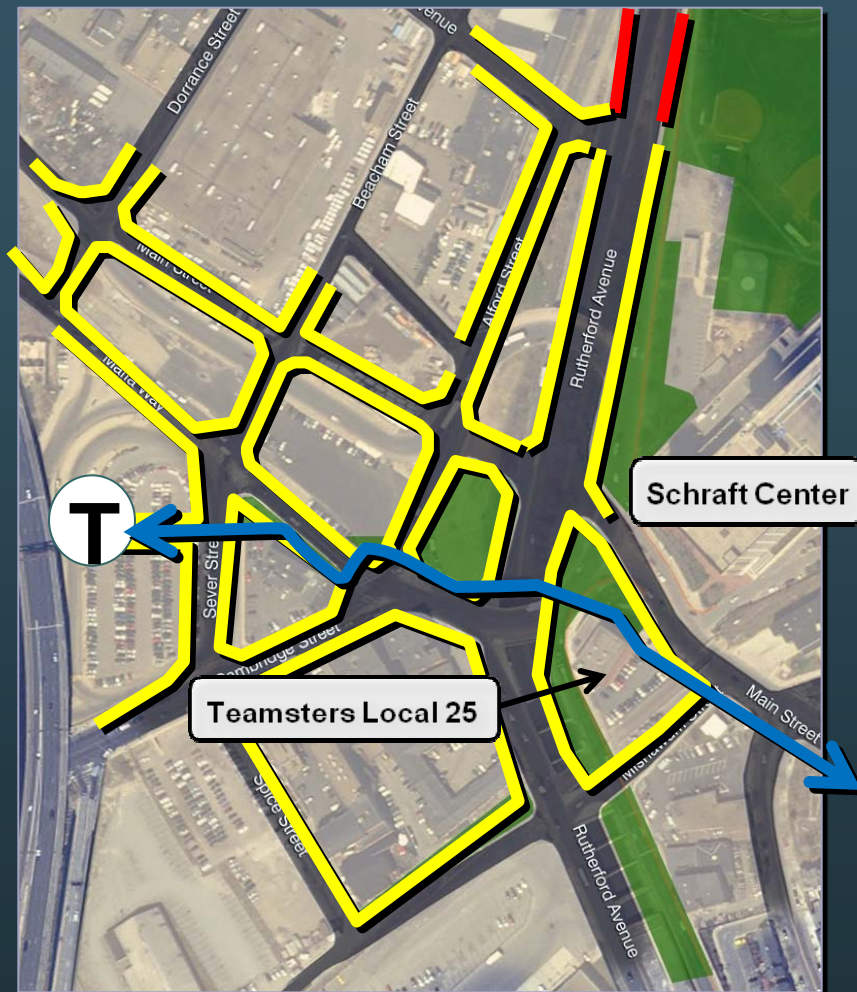
Urban Design Elements



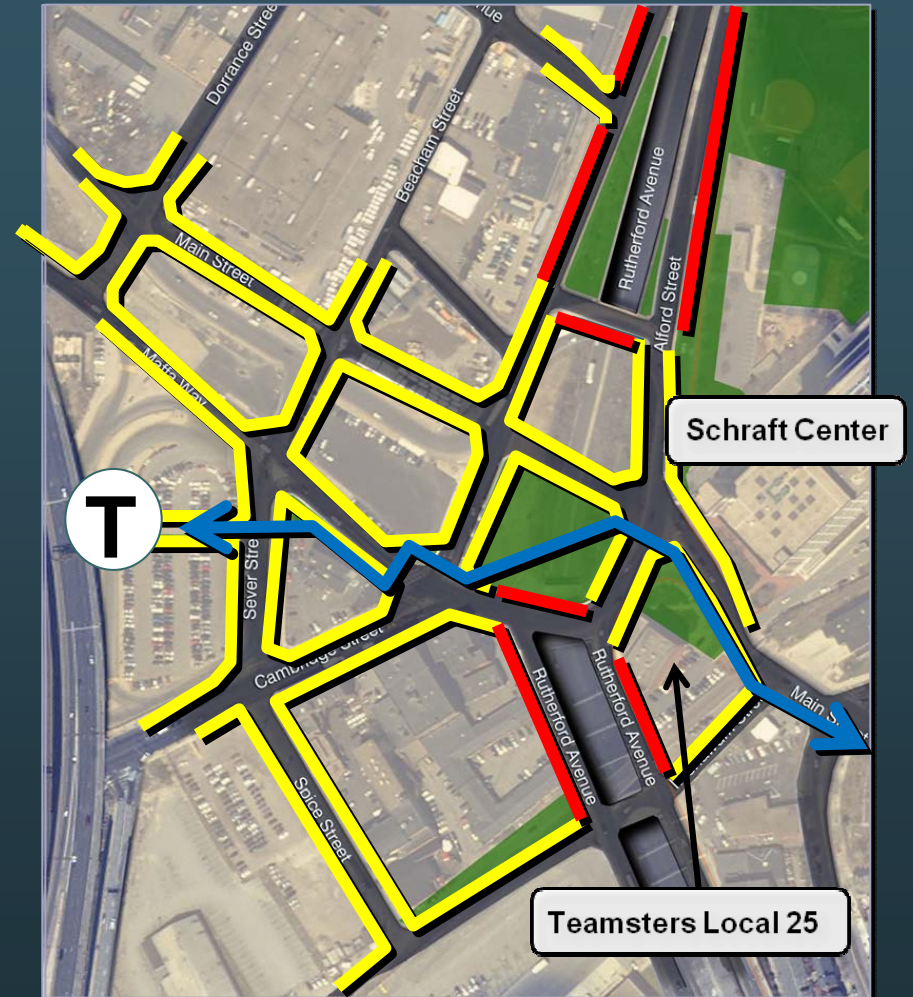
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Sullivan Square: Urban Design Elements



Surface Option



Underpass Option



Intersection Character

4-way
intersection,
4 lanes

Newbury at
Exeter St,
Boston



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Intersection Character

Boat Section,
9 lanes

Huntington Ave
at Mass Ave



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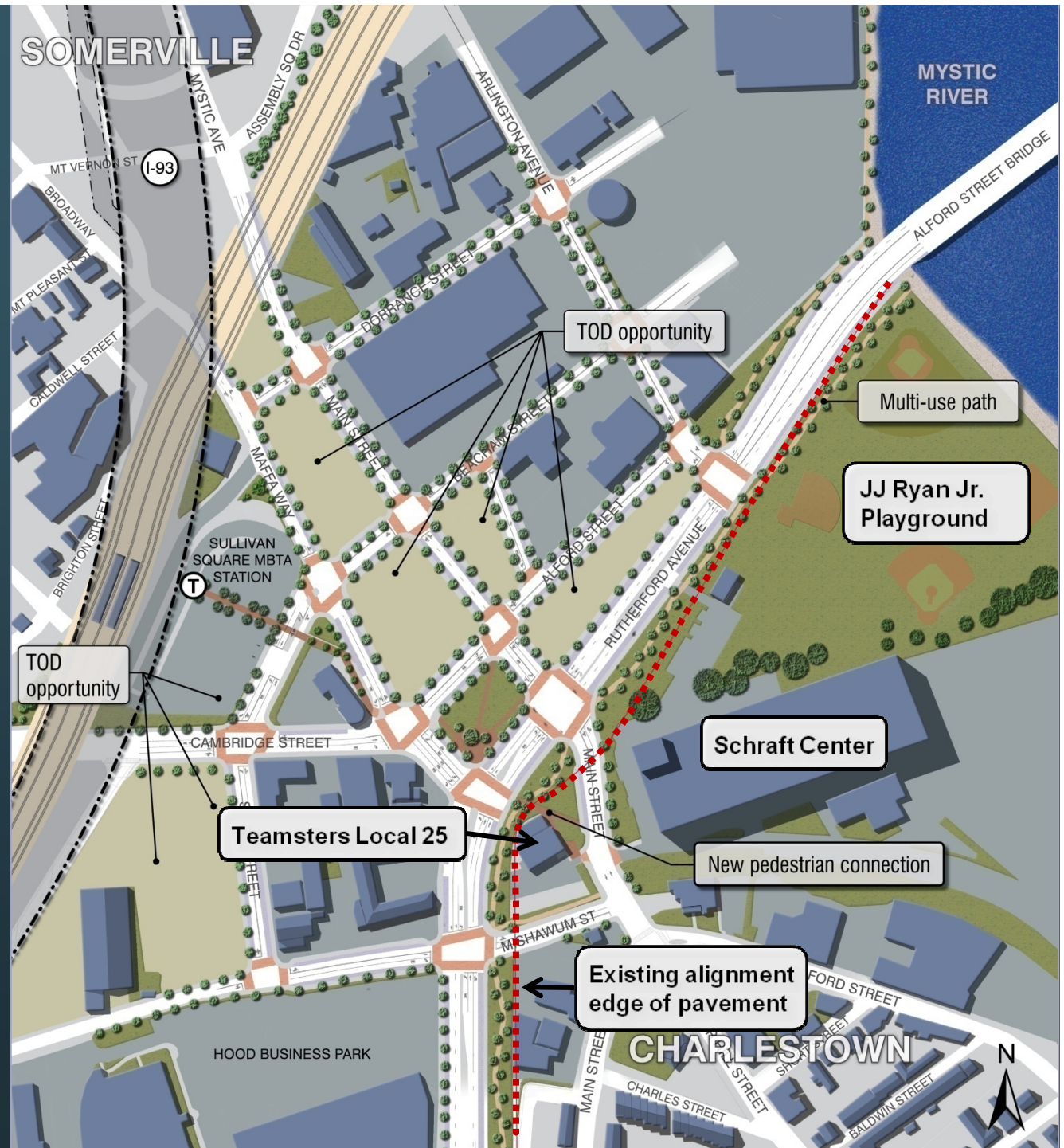


Sullivan Square Surface Option

Open Space Opportunities



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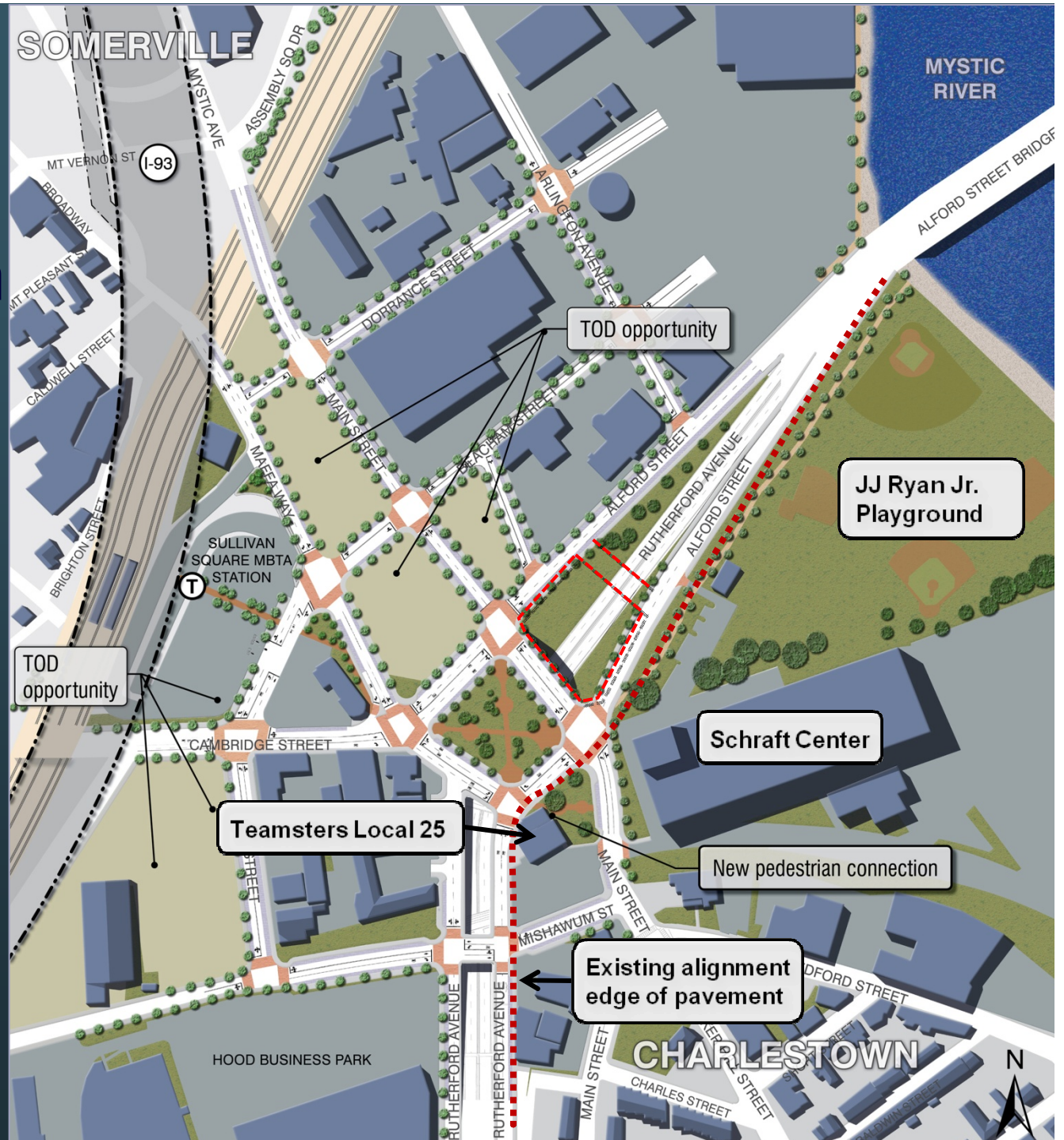


Sullivan Square Underpass Option

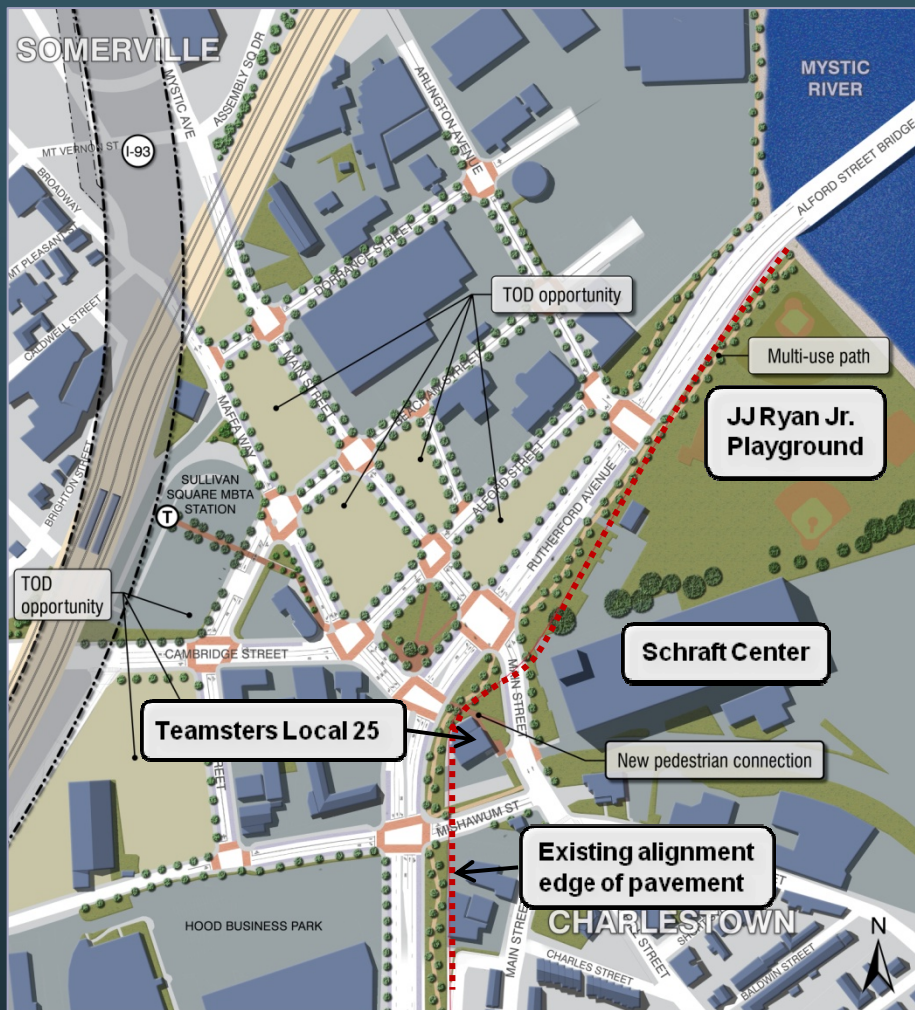
Open Space Opportunities



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24 Sullivan Square: Open Space Opportunities



Surface Option



Underpass Option



Entire Corridor Relationship

Potential bikeway connections

Multi-use path

Pedestrian connections

Surface option adds
 ± 275 on-street
parking spaces

Surface Option

Pedestrian connections

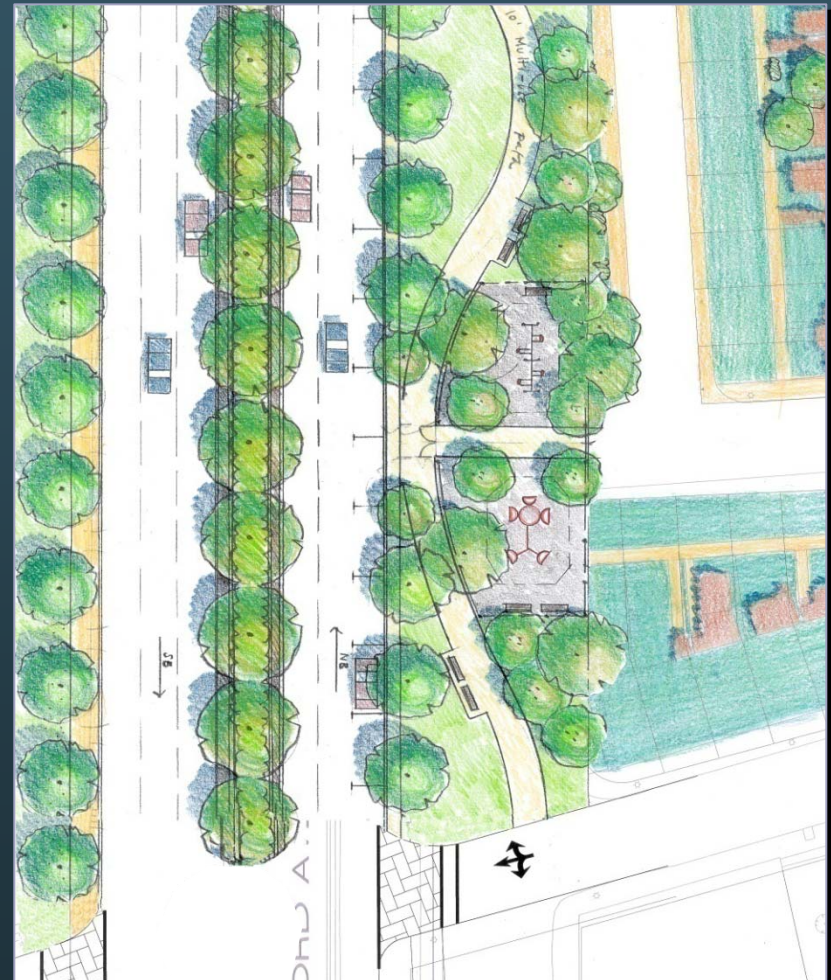
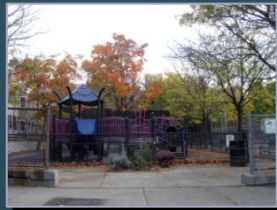
Potential bikeway connections

Underpass Option



Open Space Opportunities

Tot lots, community gardens,
public art, seating areas,
multiuse path



Open Space Opportunities

Pedestrian and bicycle paths



(Example: Southwest Corridor)



Open Space Opportunities

Bicycle connections to other streets



(Example: Portland, Oregon)



2030 Traffic Projections

- 2008 Traffic Counts
- Increase by 5% to account for regional growth and redevelopment in the Rutherford Avenue corridor
- Add in traffic from proposed Assembly Square Project in Somerville (including IKEA)
- Re-assign traffic based on likely travel paths through new roadway network



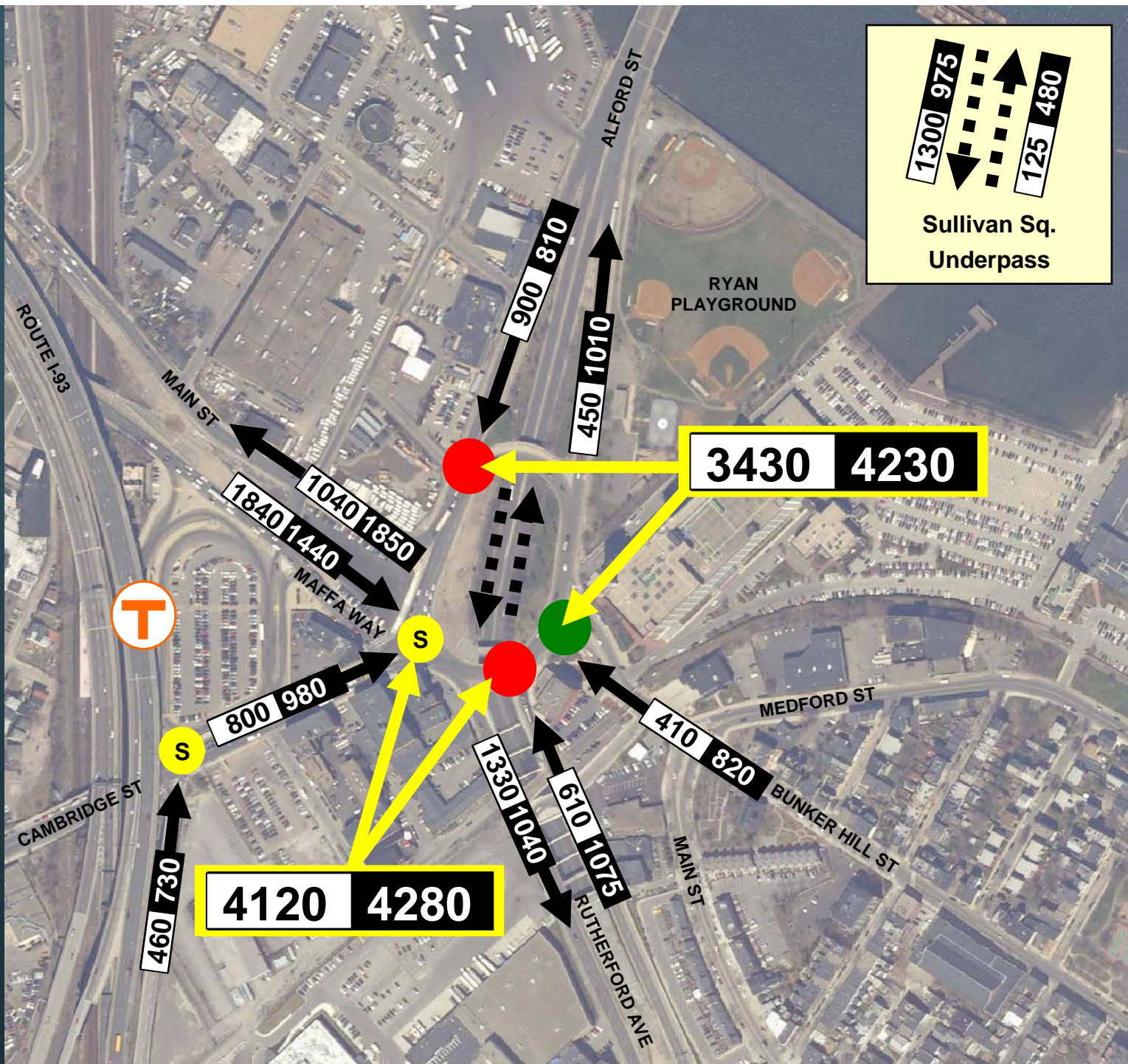
Existing Traffic Volumes / Operations

- LOS A-D
- LOS E
- LOS F
- **S** Signal

AM **PM**



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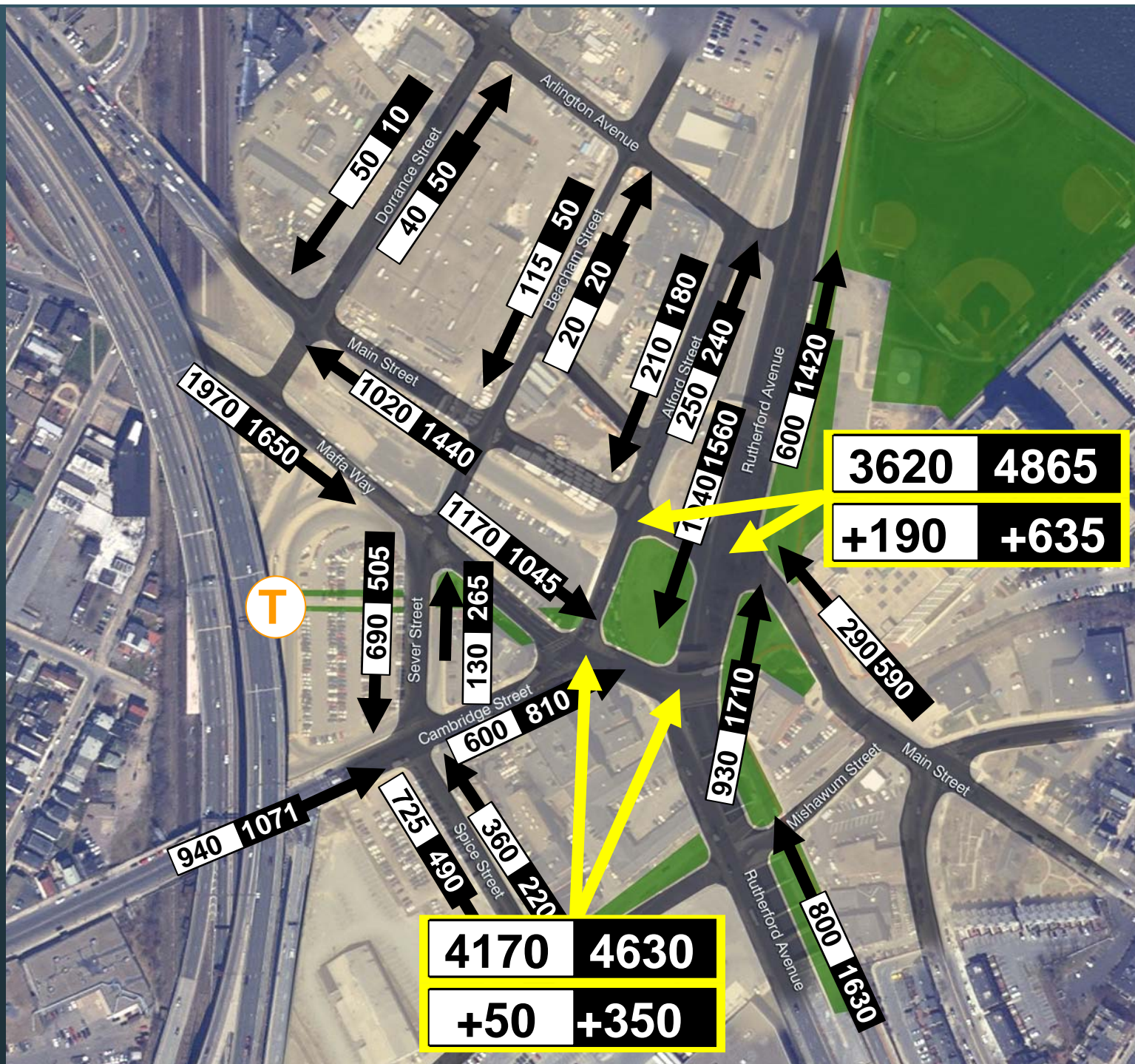
2030 Traffic Volumes

LEGEND

AM PM



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Sullivan Square Underpass Option

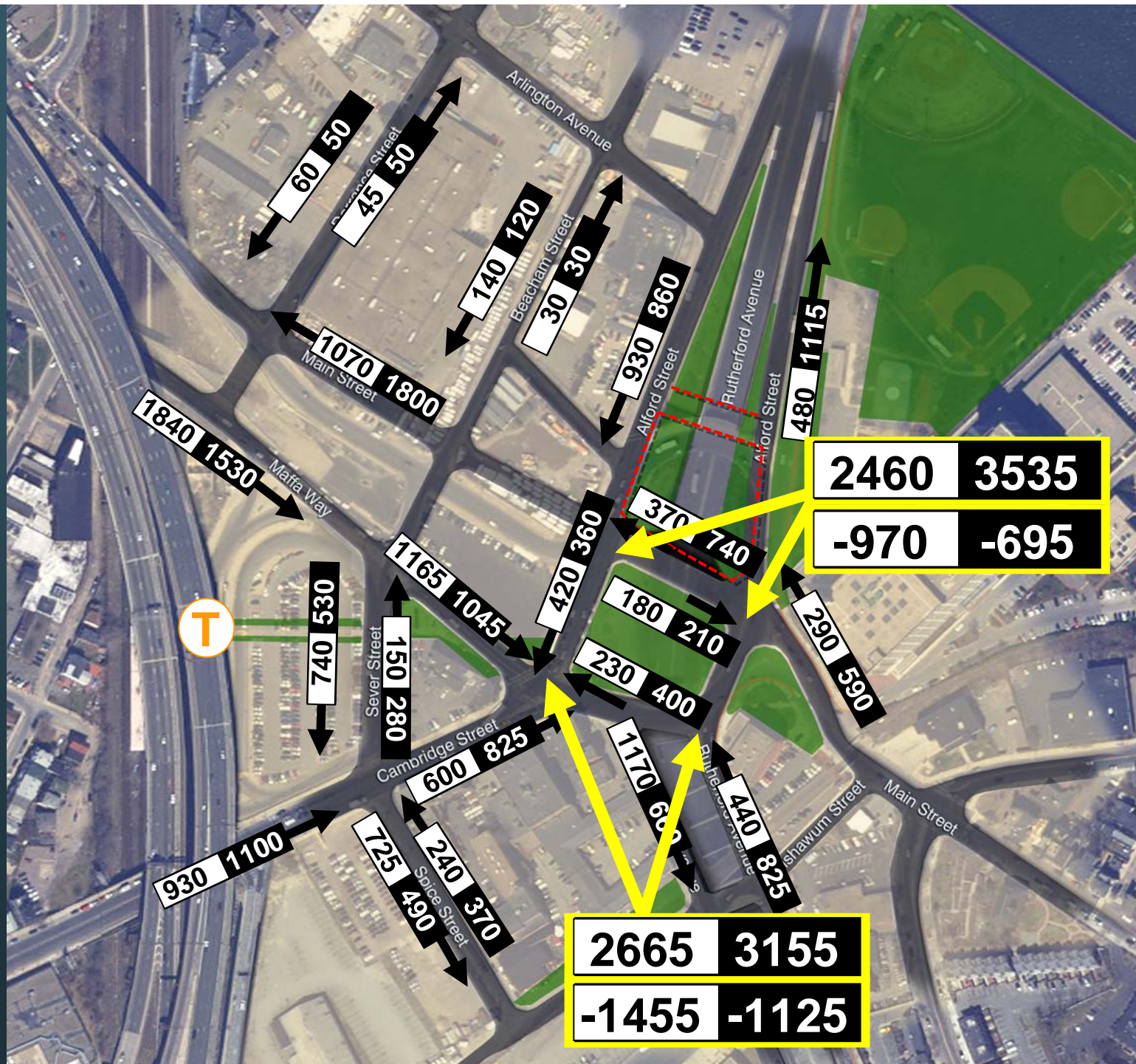
2030
Traffic
Volumes

LEGEND

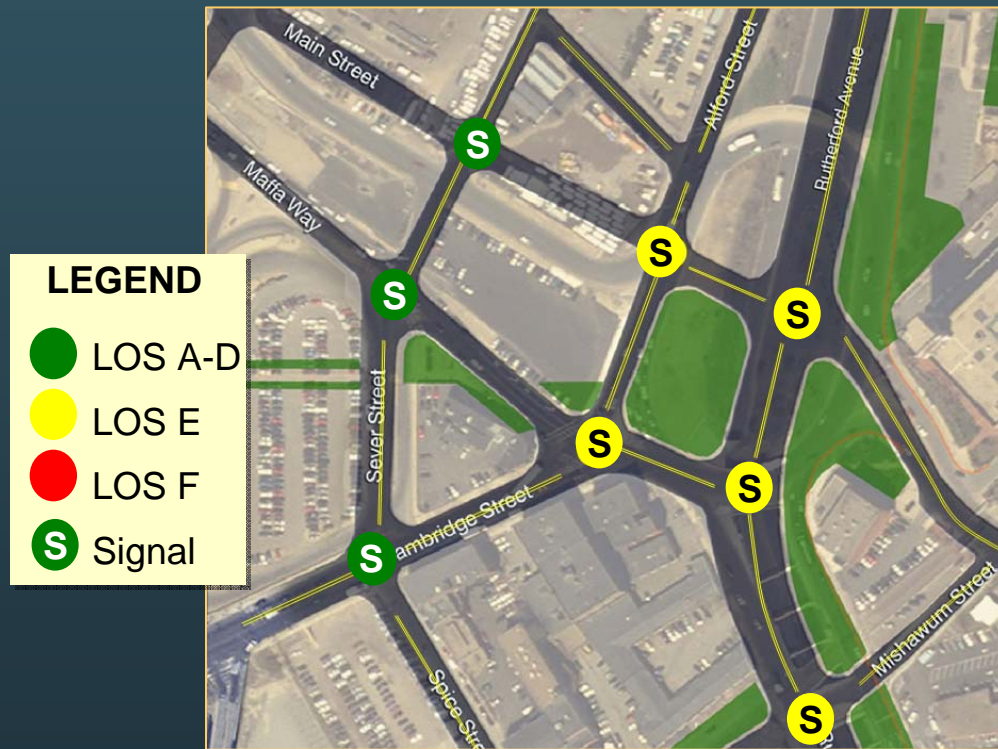
AM PM



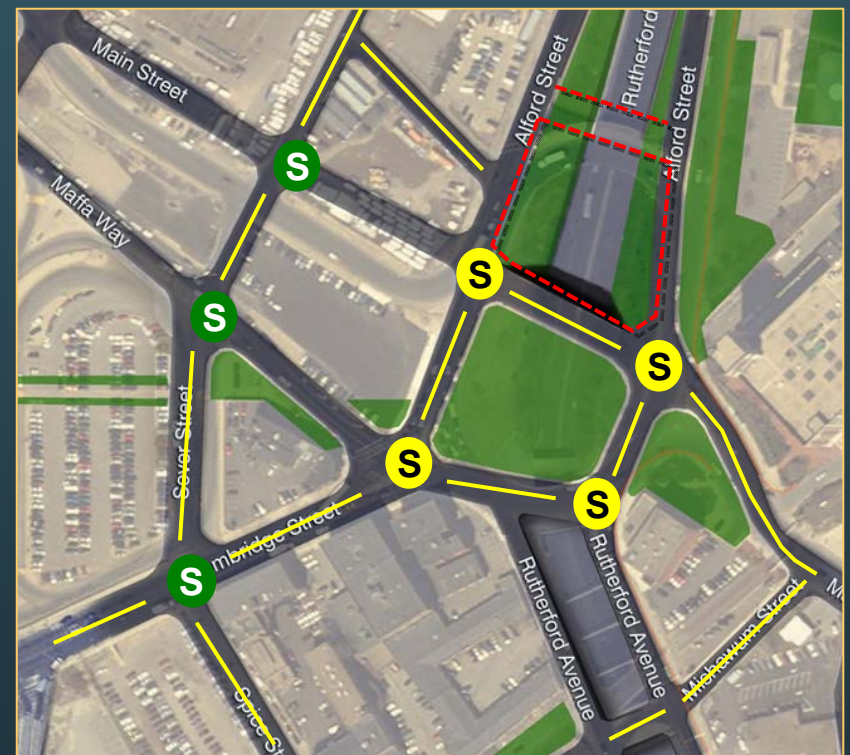
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Sullivan Square: 2030 PM Peak Hour Traffic Operations



Surface Option



Underpass Option



Traffic Signal Systems



- Queue detection and video monitoring at signals
- All signals in corridor coordinated in a system linked to BTDC control center
- Traffic Progression along boulevard – maximizes “through-put”; discourages diversions
- Real-time signal timing adjustments to respond to changes in demand (e.g., traffic related to events at TD Bank Garden)



Sullivan Square Surface Option Cost Summary

Construction Period -
Approx: 4 ½ years



Sullivan Square Area	At-Grade Option
Project Elements	Estimated Cost
<u>Construction Items</u>	
Roadway Pavement	\$9,090,000
Sidewalks	\$4,060,000
Curbing	\$1,140,000
Demolition (bridges, structures)	\$3,480,000
Embankment	\$4,770,000
Decking	\$0
Drainage	\$5,770,000
Structures (walls)	\$1,420,000
Traffic Signals	\$3,300,000
Landscaping (Parks, Multi-Use Path, Lighting)	\$7,060,000
Utility Relocations	\$6,550,000
Construction Staging	\$4,650,000
Maintenance of Traffic / Police	\$5,130,000
<i>Subtotal</i>	\$56,420,000
Contingency (25%)	\$14,110,000
<i>TOTAL CONSTRUCTION COST</i>	\$70,530,000
say	\$71,000,000

Sullivan Square Underpass Option Cost Summary

Construction Period -
Approx: 5 years



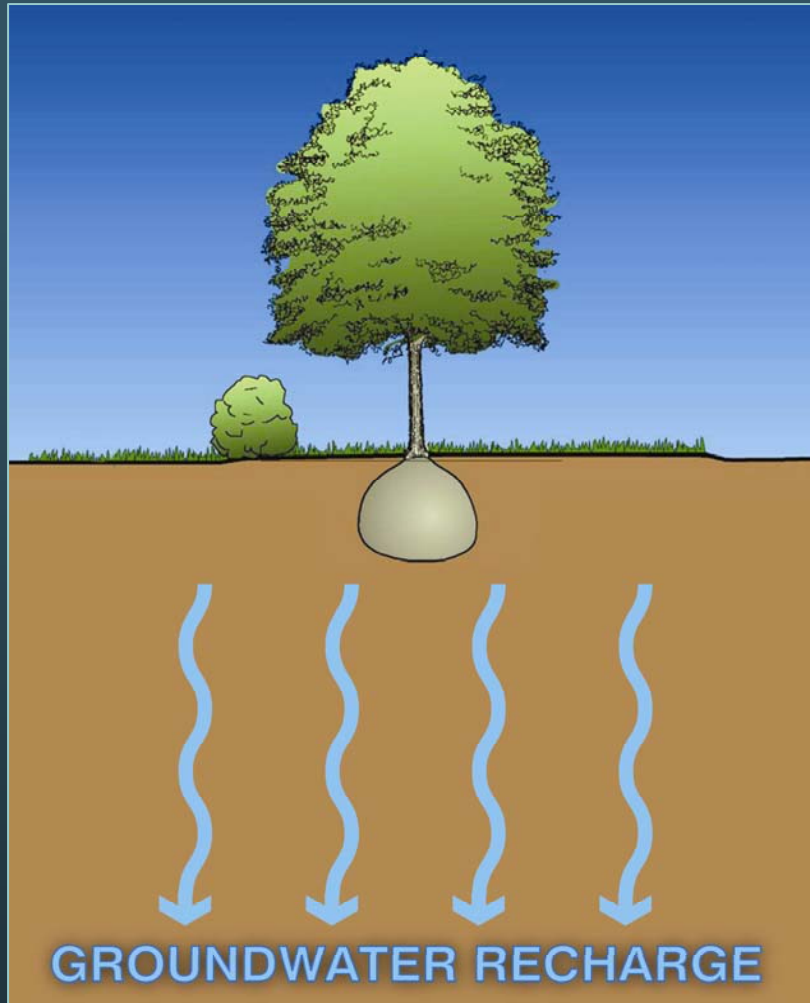
Sullivan Square Area	Underpass Option
Project Elements	Estimated Cost
<u>Construction Items</u>	
Roadway Pavement	\$7,470,000
Sidewalks	\$4,200,000
Curbing	\$970,000
Demolition (bridges, structures)	\$2,450,000
Embankment	\$0
Decking	\$17,000,000
Drainage	\$6,030,000
Structures (walls)	\$2,170,000
Traffic Signals	\$2,700,000
Landscaping (Parks, Multi-Use Path, Lighting)	\$5,640,000
Utility Relocations	\$6,750,000
Construction Staging	\$4,980,000
Maintenance of Traffic / Police	\$6,040,000
<i>Subtotal</i>	\$66,400,000
Contingency (25%)	\$16,600,000
<i>TOTAL CONSTRUCTION COST</i>	\$83,000,000
say	\$83,000,000

Cost Summary Comparison

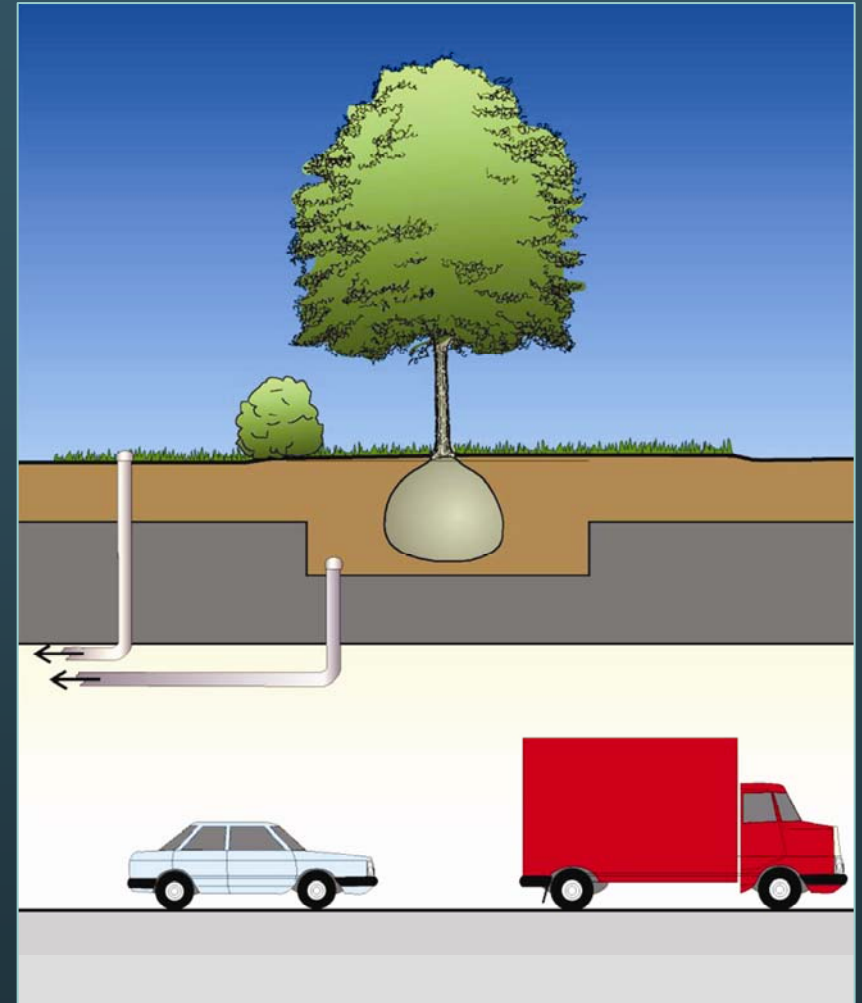
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Project Elements	Estimated Cost	Estimated Cost
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Roadway Pavement	\$9,090,000	\$7,470,000
Sidewalks	\$4,060,000	\$4,200,000
Curbing	\$1,140,000	\$970,000
Demolition (bridges, structures)	\$3,480,000	\$2,450,000
Embankment	\$4,770,000	\$0
Decking	\$0	\$17,000,000
Drainage	\$5,770,000	\$6,030,000
Structures (walls)	\$1,420,000	\$2,170,000
Traffic Signals	\$3,300,000	\$2,700,000
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Construction Staging	\$4,650,000	\$4,980,000
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<i>Subtotal</i>	<i>\$56,420,000</i>	<i>\$66,400,000</i>
Contingency (25%)	\$14,110,000	\$16,600,000
<i>TOTAL CONSTRUCTION COST</i>	<i>\$70,530,000</i>	<i>\$83,000,000</i>
say	\$71,000,000	\$83,000,000



Cross Section Implications



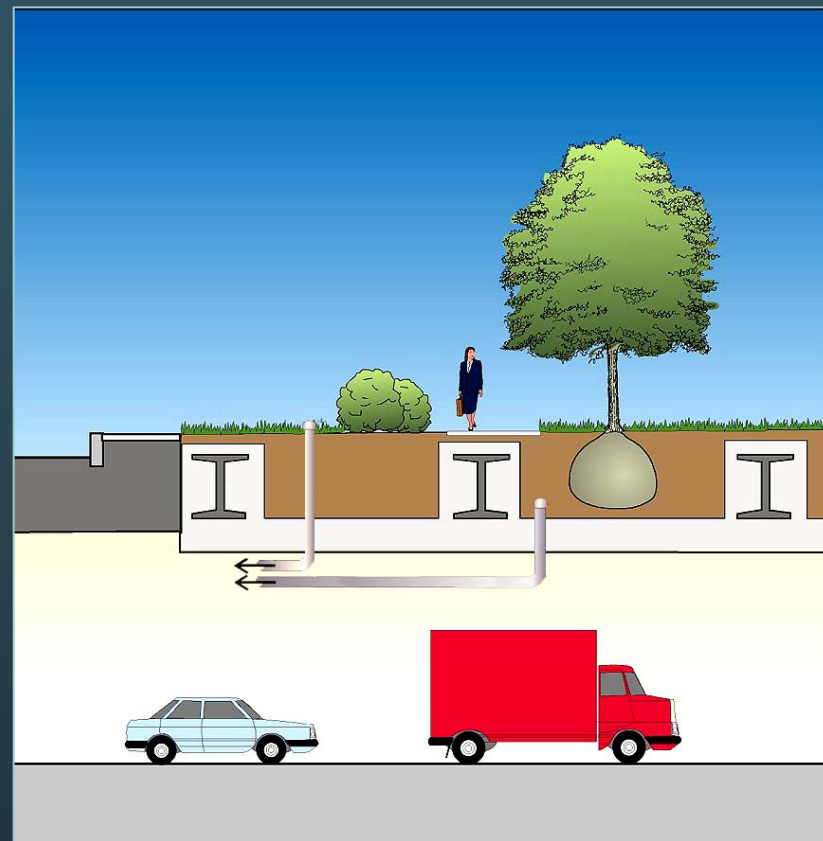
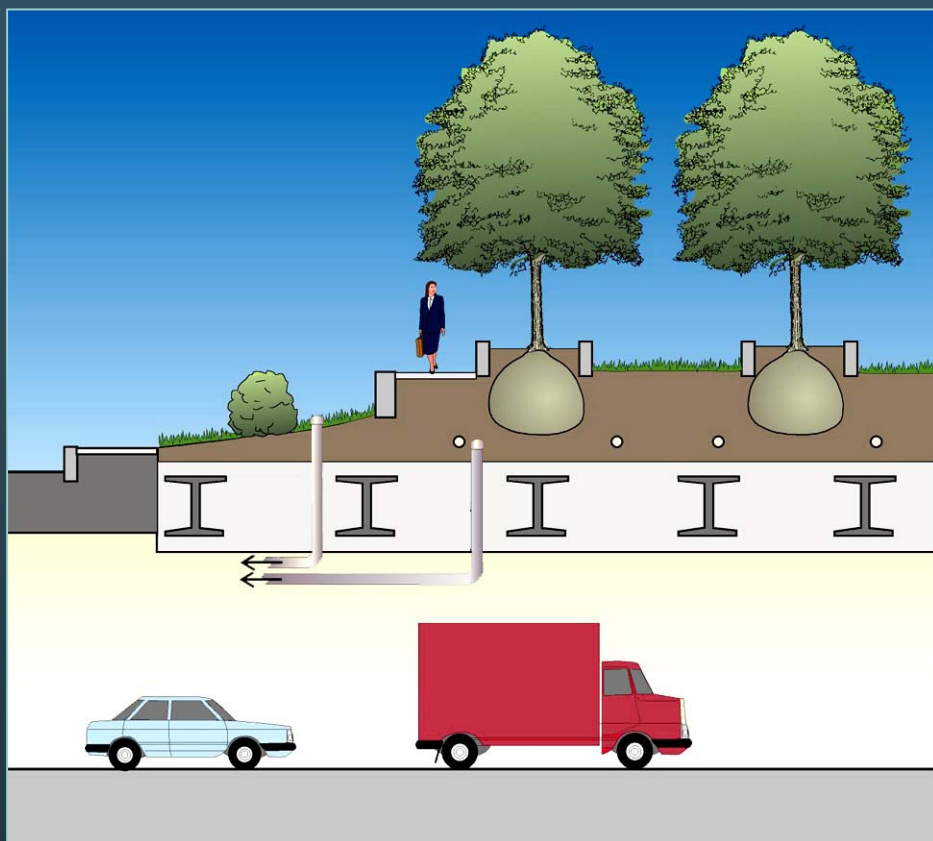
Planting at grade



Planting on a deck



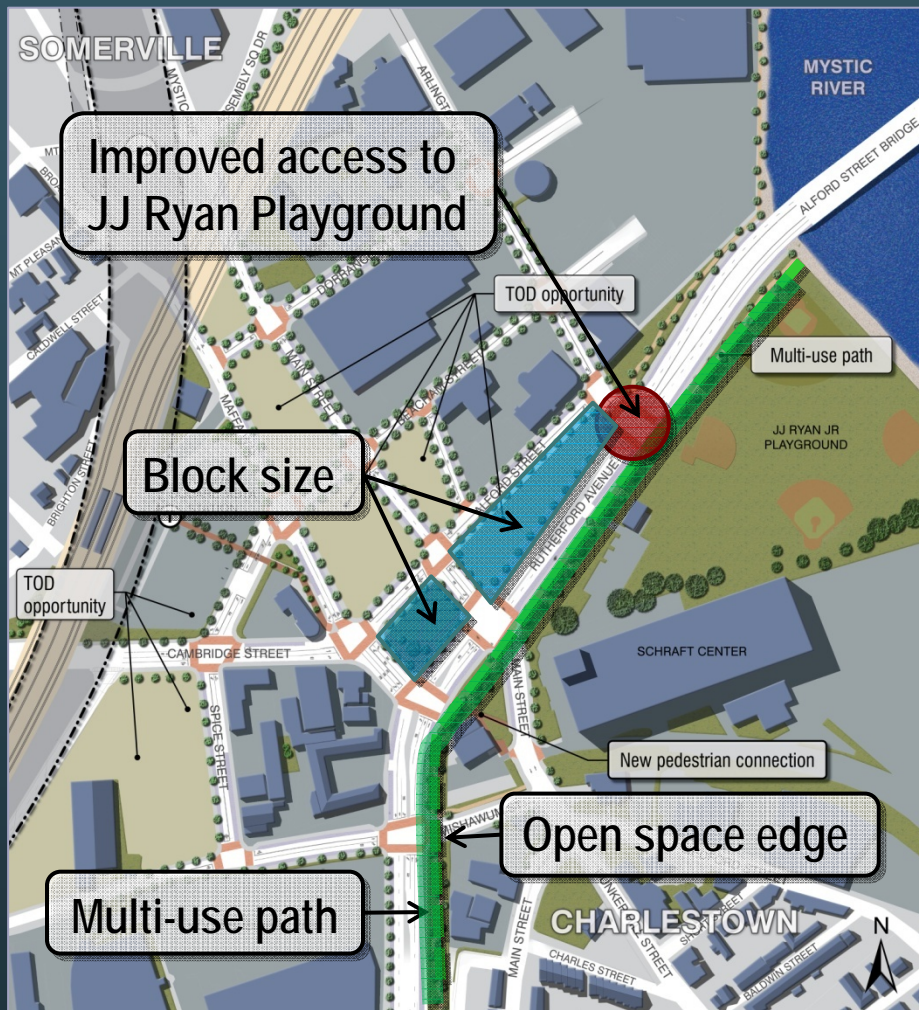
39 Cross Section Implications



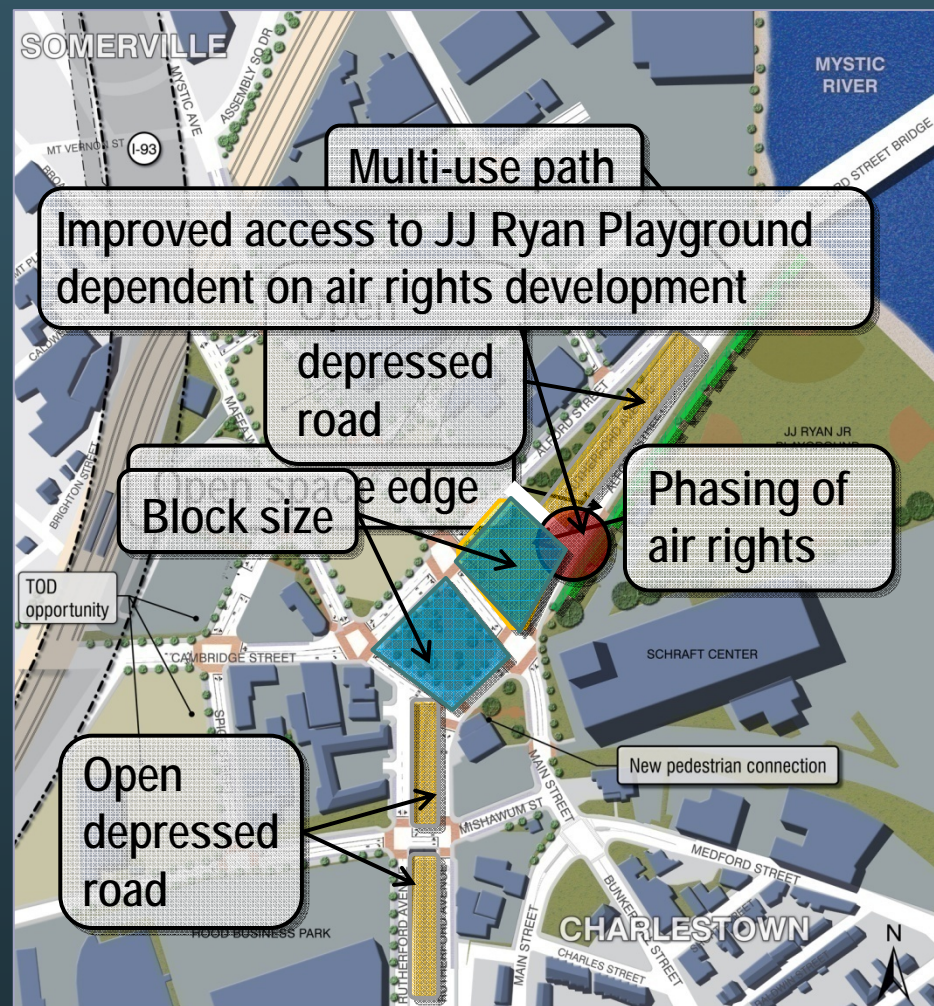
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Structural concept alternatives

40 Sullivan Square: Rendered Site Plan



Surface Option



Underpass Option



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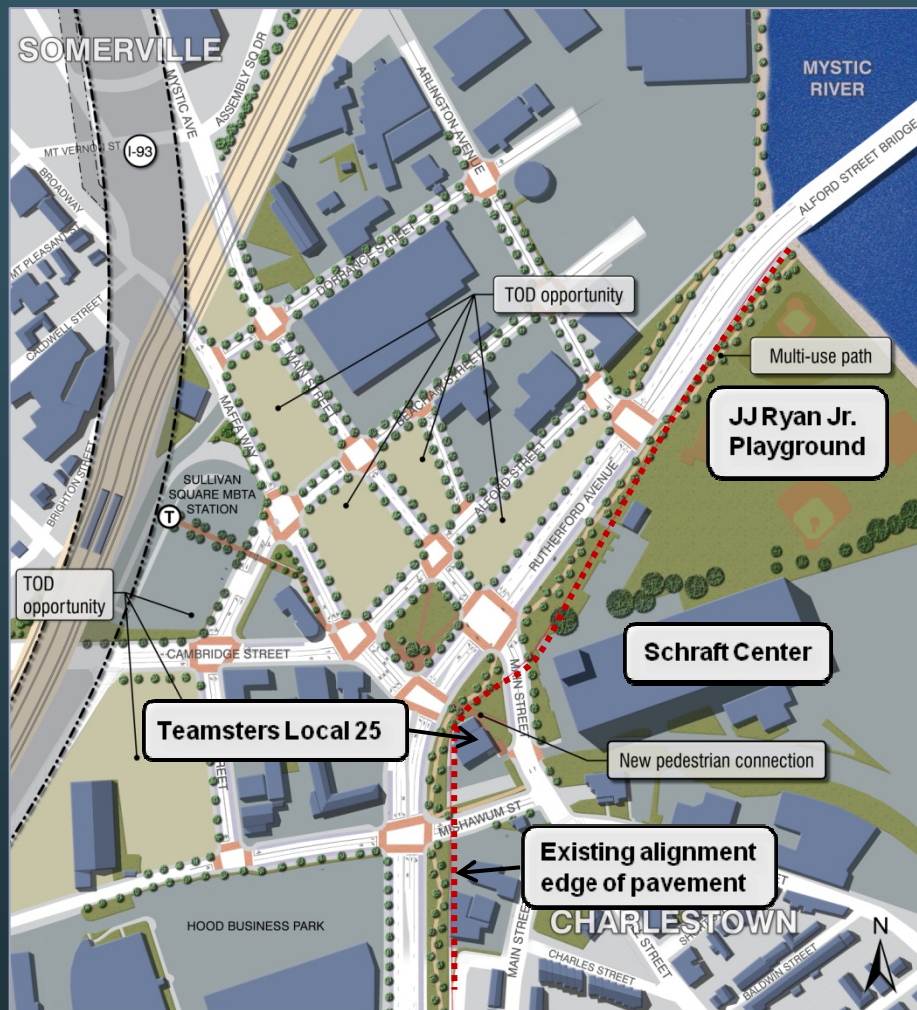


Option Comparison Based on Response to Goals

GOALS	SURFACE OPTION	UNDERPASS OPTION
Pedestrian Connections	<ul style="list-style-type: none"> • Good pedestrian connections • Enhanced access to Ryan playground 	<ul style="list-style-type: none"> • Some constrained pedestrian connections • Improved Ryan playground access depends on air rights development
Open Space	<ul style="list-style-type: none"> • Continuous and wide open space corridor for community use 	<ul style="list-style-type: none"> • Underpass does not allow for a wide and continuous open space corridor
Development Opportunities	<ul style="list-style-type: none"> • Good opportunities for appropriate development parcels • Easier to build and plant on terra-firma 	<ul style="list-style-type: none"> • Good opportunities for appropriate development parcels • Air rights more costly (deck premium)
Traffic Distribution	<ul style="list-style-type: none"> • Circulation disperses traffic • Effectively calming speed down 	<ul style="list-style-type: none"> • Circulation disperses traffic • Encourages regional through traffic
Main Street	<ul style="list-style-type: none"> • Alignment and signals timing to prevent cut-through traffic 	<ul style="list-style-type: none"> • Alignment and signals timing to prevent cut-through traffic
On-Street Parking	<ul style="list-style-type: none"> • Sullivan Square: 450 • Rutherford Ave corridor : 675 	<ul style="list-style-type: none"> • Sullivan Square: 330 • Rutherford Ave corridor : 400
Construction Cost/Time	<ul style="list-style-type: none"> • \$ 71m • approx. 4 ½ years to construct 	<ul style="list-style-type: none"> • \$ 83m • approx. 5 years to construct



43 Sullivan Square: Community Discussion



Surface Option



Underpass Option



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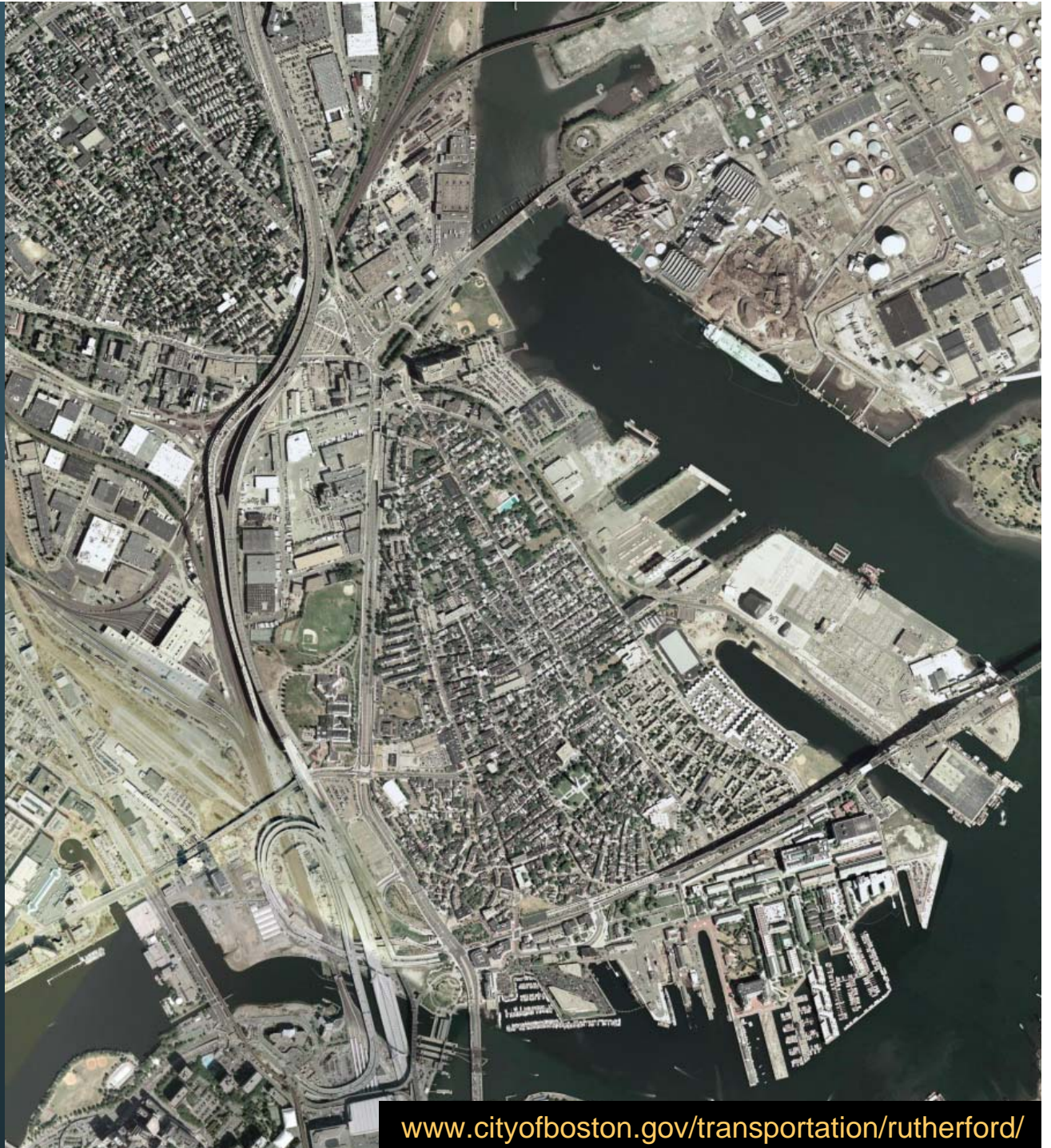
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