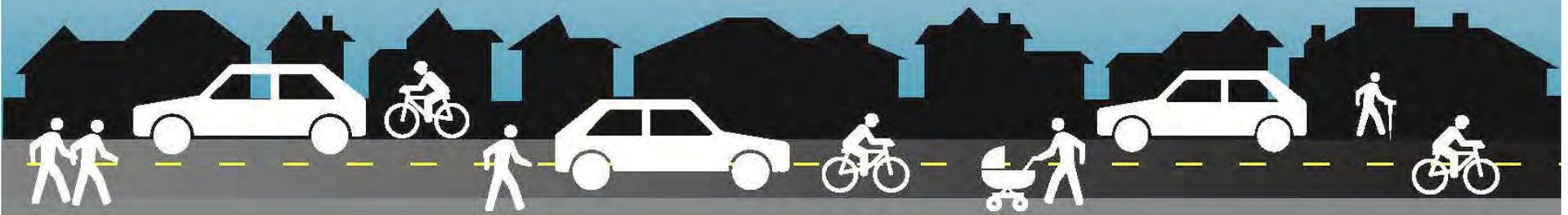


Hull Redevelopment Authority (HRA)

PUBLIC MEETING

NANTASKET BEACH REVITALIZATION

2 WAY ROAD STUDY



- Welcome, Introductions
- Project Goals
- The Two-Way Concept
- Project Benefits
- Operations
- Next Steps

Team Organization Chart



Ralph DeNisco
Principal-In-Charge

Ralph DeNisco
Nelson\Nygaard
Principal-in-Charge

Jason Schrieber
Nelson\Nygaard
Project Manager

Jason Schrieber, AICP
Project Manager



Kevin Dandrade, PE, PTOE
Lead Engineer



Rebecca Brown, PE, PTOE
Lead Engineer



Samuel Gregorio, PE
Lead Engineer



Liza Cohen
Planner



MOBILITY

ACCESS/PLACE

PLANNING

Developing networks that link people to places

Integrating land use and placemaking with the transportation network

Transportation Planning

Urban Planning



Balancing Mobility and Place

DESIGN

Ensuring efficient movement of pedestrians, cyclists, transit, and motor vehicles through network and facility design

Designing for access and making human-scaled destinations for people

Traffic Engineering

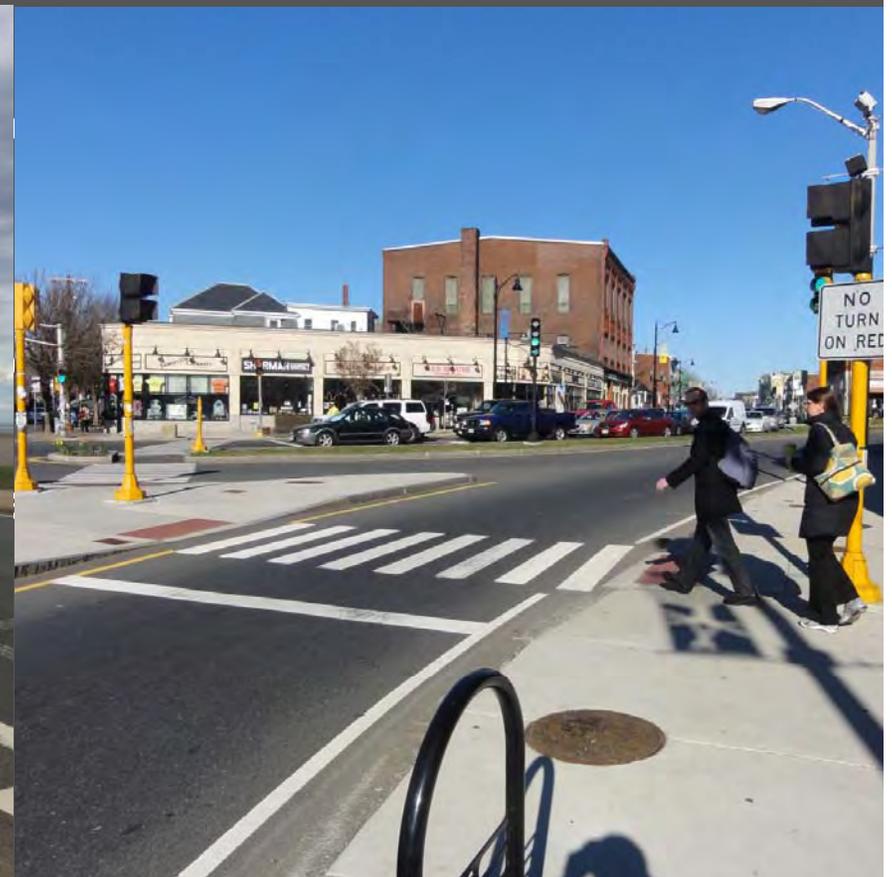
Urban Design

Agenda

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Two-Way Study Goals

- Improve pedestrian safety and access between beach and businesses
 - Safer, more comfortable crossings will encourage residents and beach visitors to patronize local businesses



Two-Way Study Goals

- **Improve pedestrian safety and access** between beach and businesses
 - Safer, more comfortable crossings will encourage residents and beach visitors to patronize local businesses
- **Eliminate traffic bottlenecks**
 - Improve access to business, parking, and Hull itself



Two-Way Study Goals

- **Improve pedestrian safety and access** between beach and businesses
 - Safer, more comfortable crossings will encourage residents and beach visitors to patronize local businesses
- **Eliminate traffic bottlenecks**
 - Improve access to business, parking, and Hull itself
- **Improve emergency access**
 - One-way system has no alternative route around traffic
 - Two-way system ensures better emergency vehicular access



Two-Way Study Goals

- Realize Nantasket Beach potential
 - Develop year-round economic activity

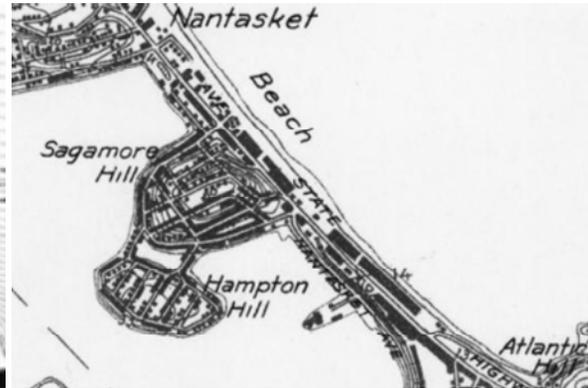


Two-Way Study Goals

- Realize Nantasket Beach potential
 - Develop year-round economic activity
- Enhance existing businesses and create jobs
 - Capitalize on Nantasket's history as a regional destination

1892

1936



Surfside features a train and several hotels

Surfside's Heyday



Two-Way Study Goals

- Realize Nantasket Beach potential
 - Develop year-round economic activity
- Enhance existing businesses and create jobs
 - Capitalize on Nantasket's history as a regional destination
- Respond to Town's changing demographics
 - Retirees and new residents seeking more walkable environment and “car-lite” living



Recent Planning Studies for Nantasket

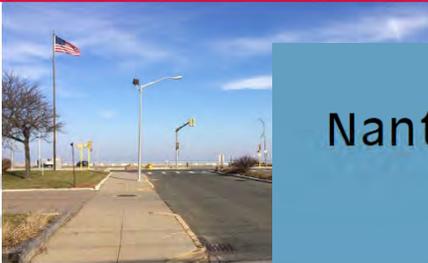
Submitted to:

Massachusetts Department of Conservation and Recreation



Nantasket Beach Reservation Traffic Analysis Report

Hull, MA



Nantasket Beach Reservation Master Plan

Hull, MA

Submitted by:



THE Louis Berger Group

April 2014



Nantasket Beach Revitalization Plan Draft Redevelopment Scenario

September 22, 2014

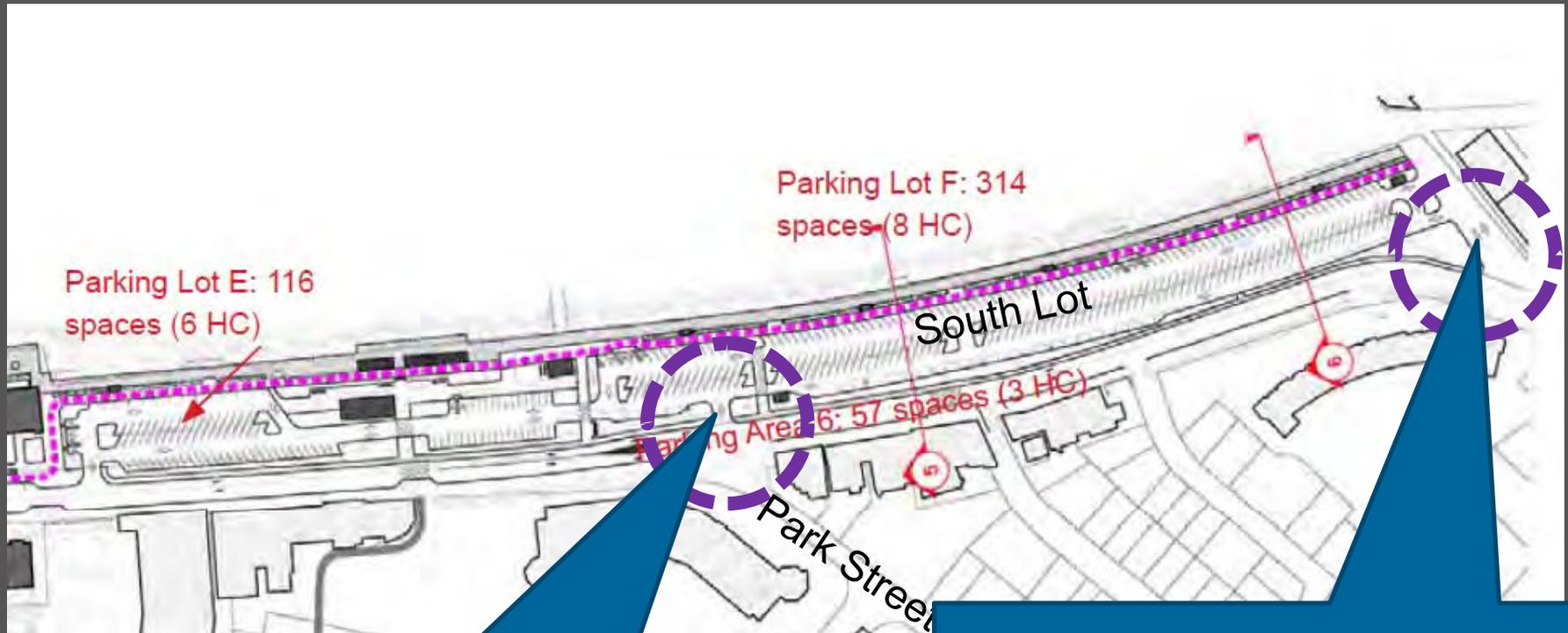
Recent Planning Studies for Nantasket

- **2011** – Town’s DCR Re-Use Committee Workshops define revitalization goal and planning area.
- **2012-2013 – Zoning** After 23 public meetings the Community creates the Nantasket Beach Overlay Zoning District, “Healthy by Design”.
- **2012 – 2016 – Infrastructure** HRA secures \$1.95 M MassWorks Grant to rebuild Nan Avenue at “Surfside”
- **2013-2015 Revitalization Plan** Town/HRA/MassDev work with community

- **2014-2015 – Study of a 2 way road system** To relieve congestion at bottlenecks while supporting economic development, Town/HRA/DCR committed funds.



DCR Planned Improvements



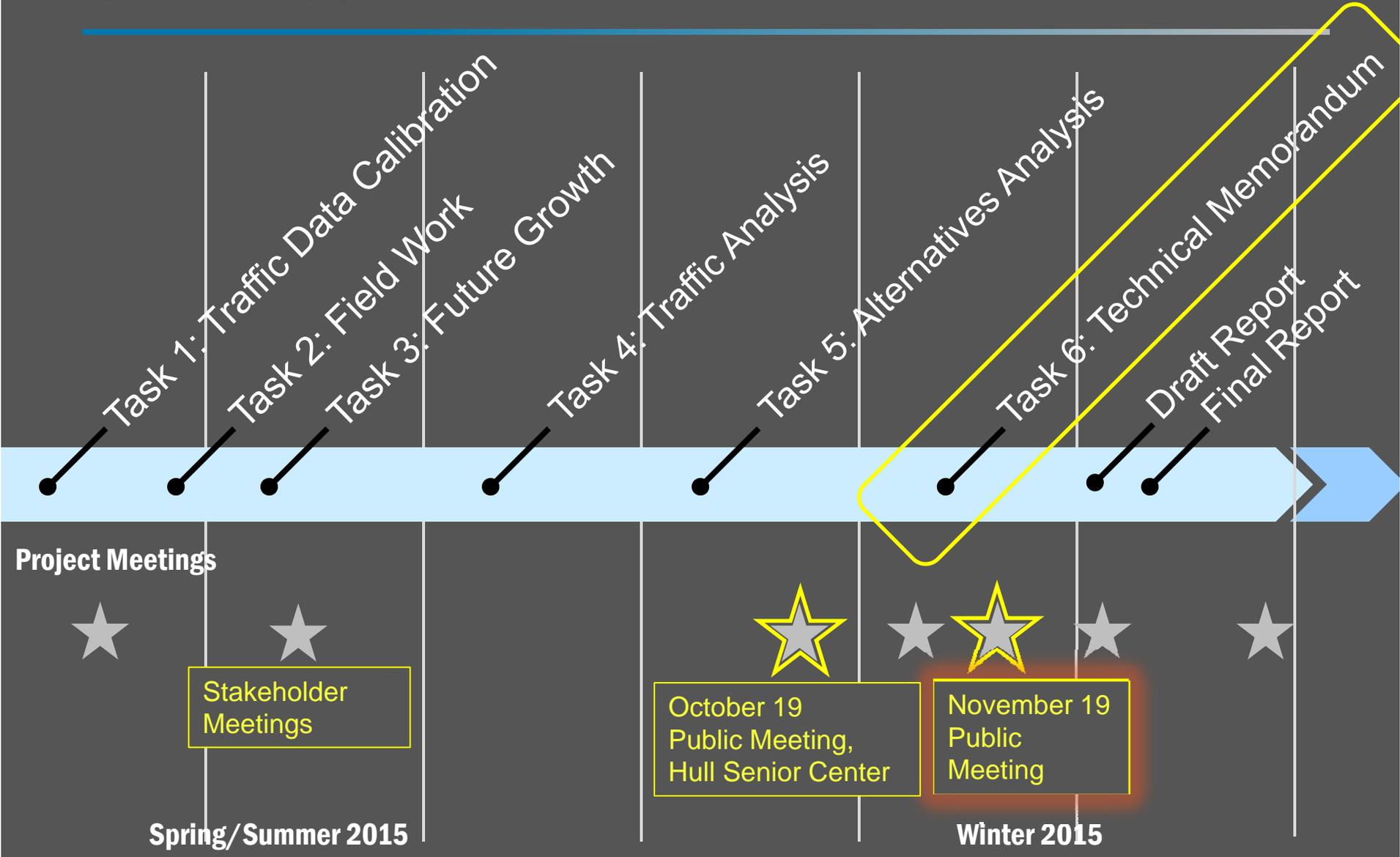
New lot entrance

- Improve usage of this lot
- Intercept cars before they reach areas of higher pedestrian activity

New left out

- Improve usage of this lot
- Provide better traffic dispersion

Outreach/Schedule



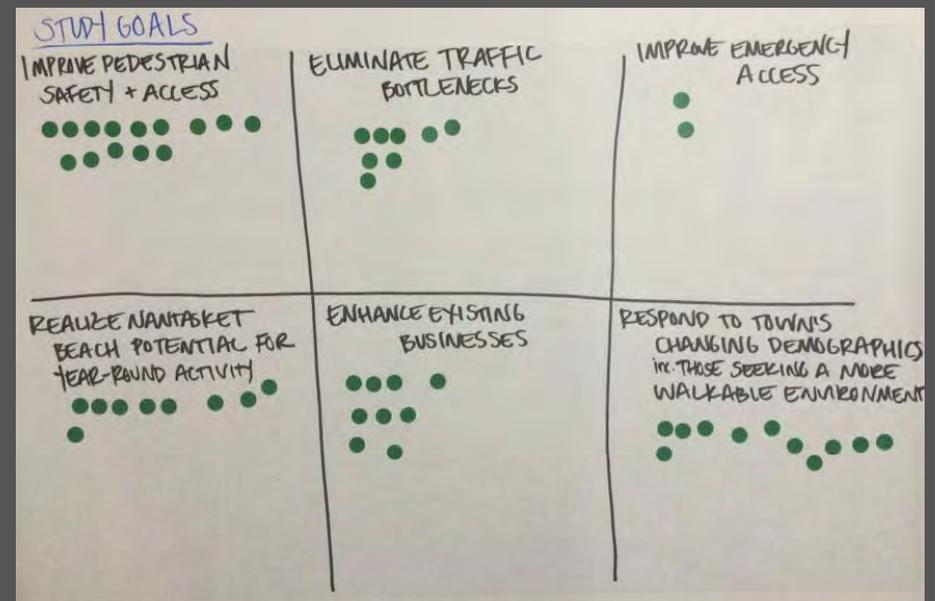
10/19 Public Meeting



Public Meeting

Goals, in order of preference:

1. Improve Pedestrian Safety and Access
2. Respond to Town's Changing Demographics, Including Those Seeking a More Walkable Environment
3. Realize Nantasket Beach for Year-Round Activity
4. Enhance Existing Businesses
5. Eliminate Traffic Bottlenecks
6. Improve Emergency Access



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What is transportation for?

- Transportation is not an end in itself
- It is merely a means by which we support individual and collective goals and objectives



What Are Streets For?

Movement

- Moving people
- Moving vehicles

Social Interaction

- A place to meet
- A place for kids to play
- A place to eat, drink, shop
- A place to express

Storage

- Parking

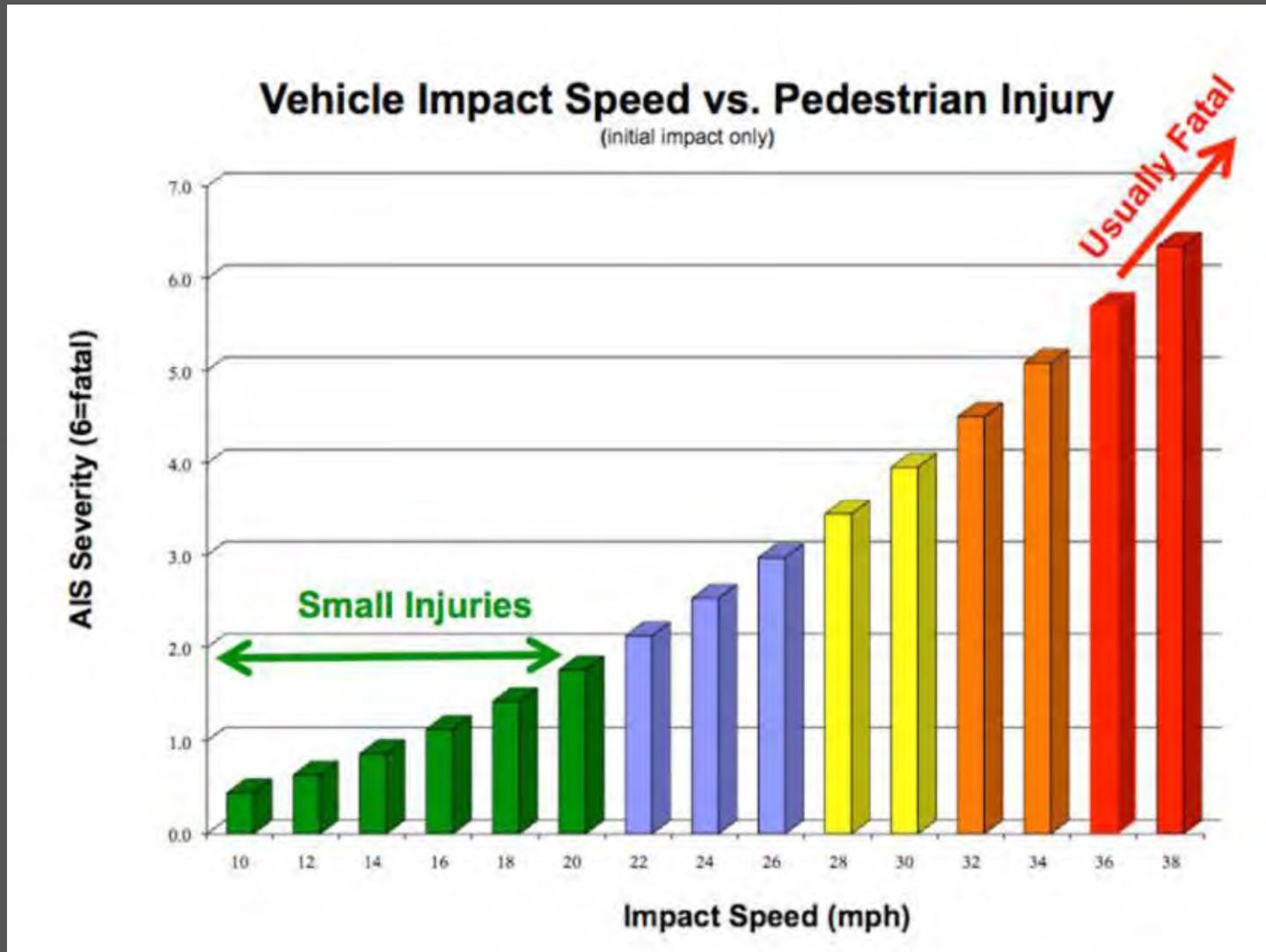


Why 2-Way Conversions?

1. Economic Development
2. Pedestrian Enhancement
3. Public Safety



Safety Improvements of Reducing Speed

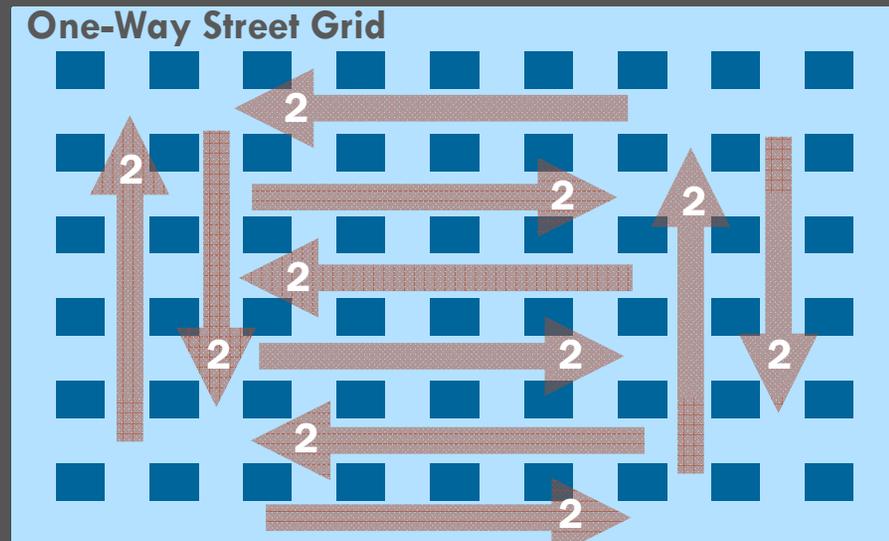


Why 2-Way Conversions?

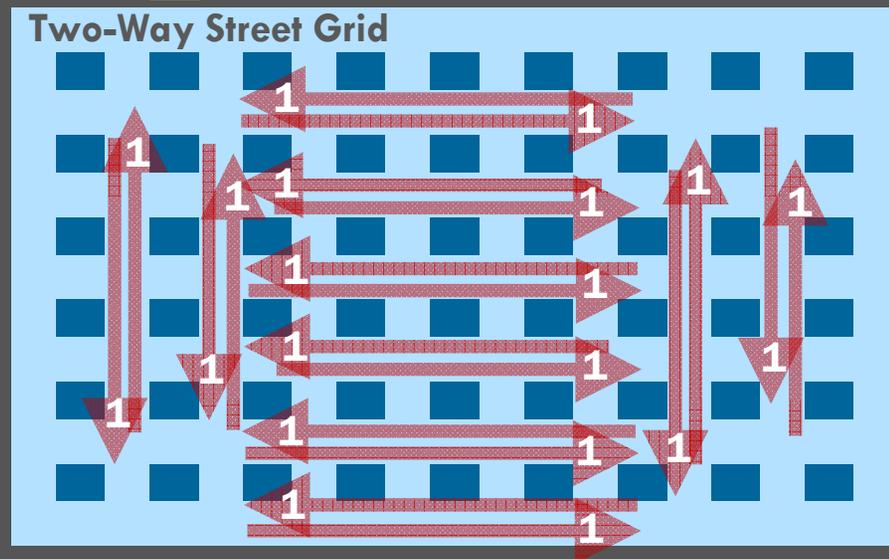
1. Economic Development
2. Pedestrian Enhancement
3. Public Safety
4. Convenient Access
 - Greater access and visibility
5. Traffic Reduction
 - Reduce unnecessary vehicular circulation

Overall Capacity Maintained

- Equal vehicular capacity to one-way network
 - Speed can be slower, but just as many cars get through



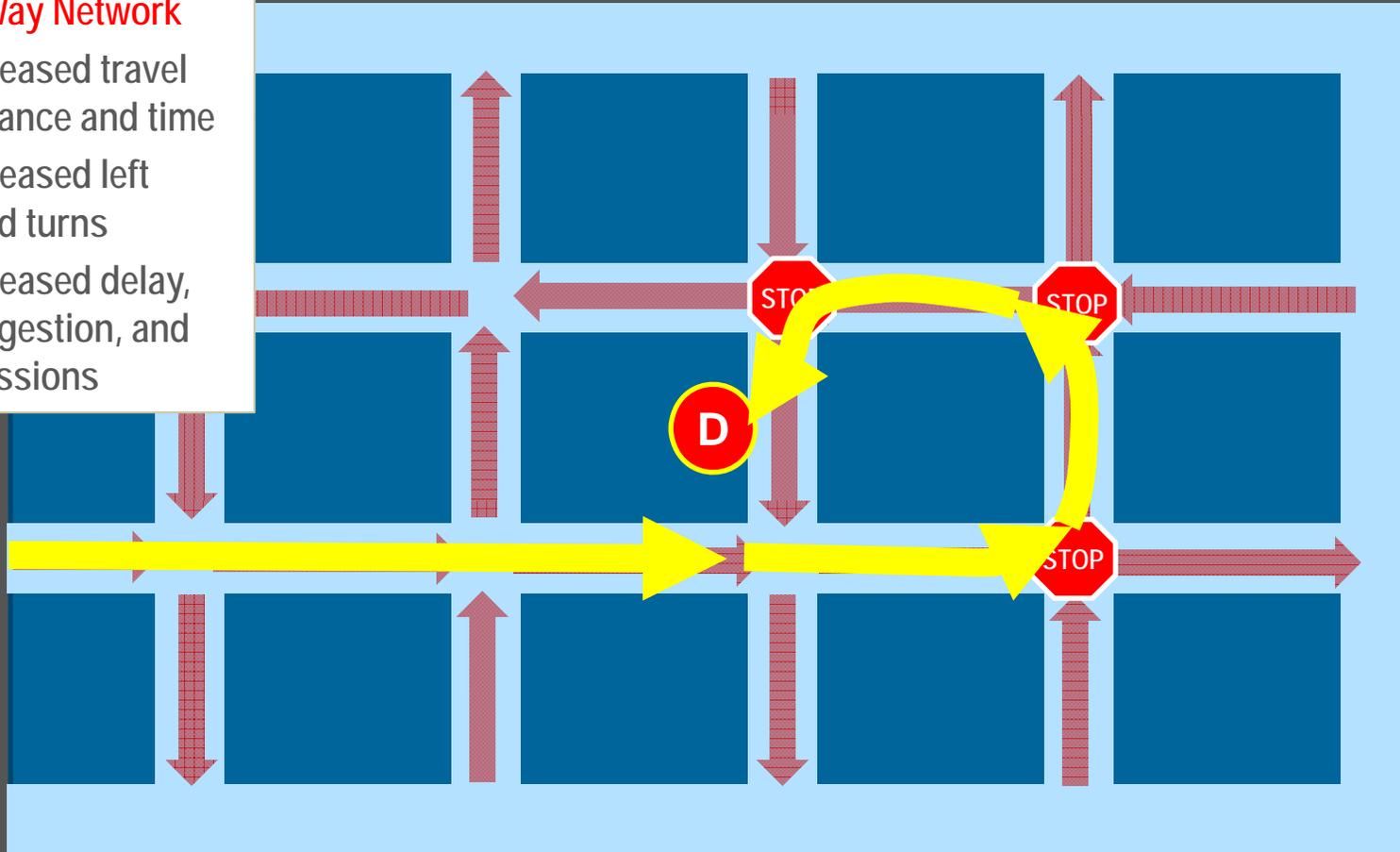
↑ **6 lanes westbound** ↓



One Way vs Two Way Street Grid- Origin and Destinations

One-Way Network

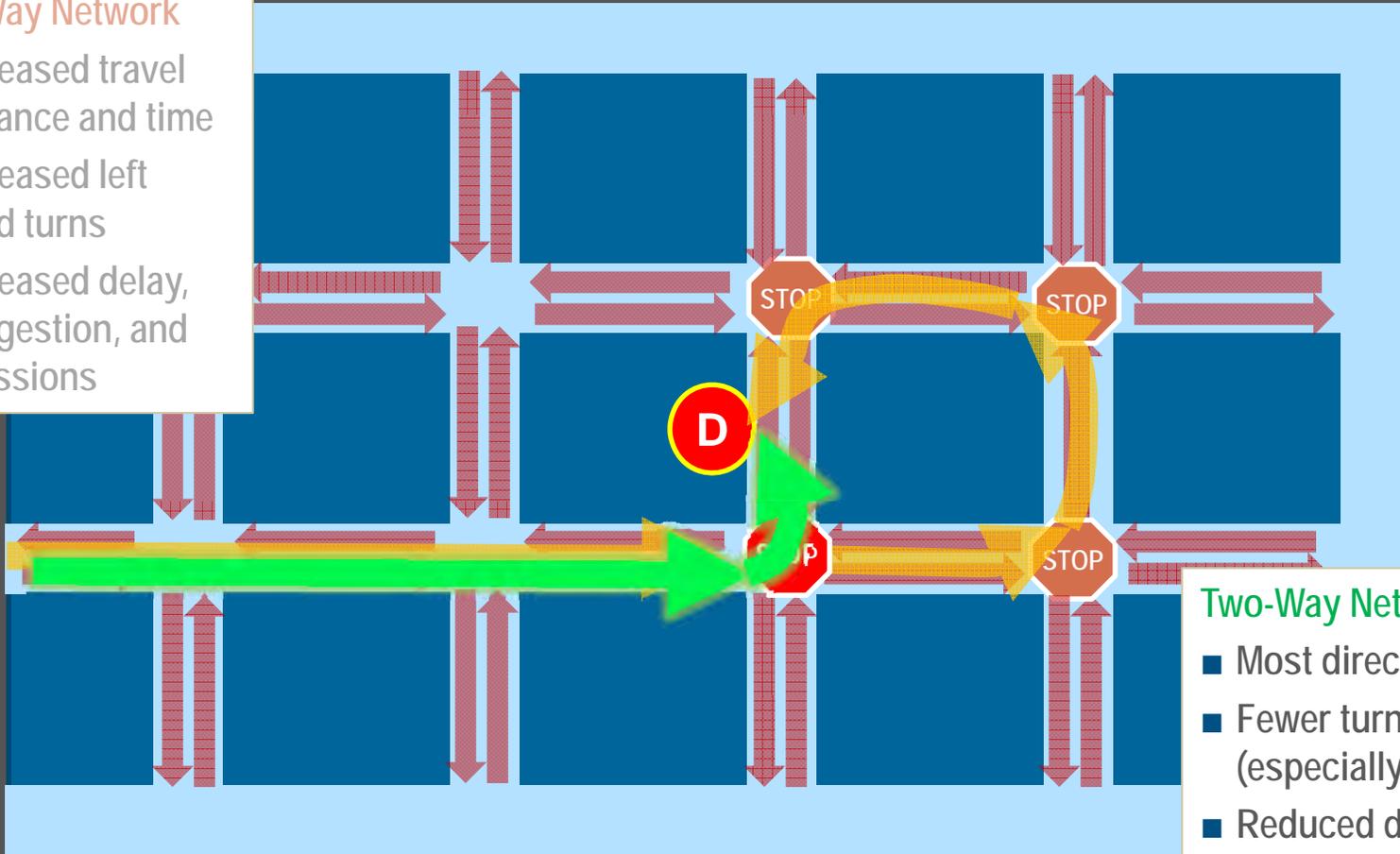
- Increased travel distance and time
- Increased left hand turns
- Increased delay, congestion, and emissions



One Way vs Two Way Street Grid- Origin and Destinations

One-Way Network

- Increased travel distance and time
- Increased left hand turns
- Increased delay, congestion, and emissions



Two-Way Network

- Most direct route
- Fewer turns (especially lefts)
- Reduced delay
- Reduced congestion and emissions

Convenient Access = Economic Development

- Customer friendly
 - Most direct routes from origin to destination
- Overall access improved
 - Improved and increased connectivity on street grid

Case Studies: West Palm Beach, FL

Clematis Street Conversion



Case Studies: West Palm Beach, FL

Clematis Street Conversion



Case Studies: West Palm Beach, FL

Clematis Street Conversion

Before

- Years of decline and loss of business
- 70% building spaces were vacant

After

- \$300 million in private investment after converting to and improving the streetscape
- 80% of commercial properties were occupied and rented



Case Studies: Lowell, MA Market Street Before



Case Studies: Lowell, MA

Market Street Two-Way Concept



Case Studies: Lowell, MA Market Street Two-Way Today



Case Studies: Lowell, MA Merrimack Street Two-Way Before

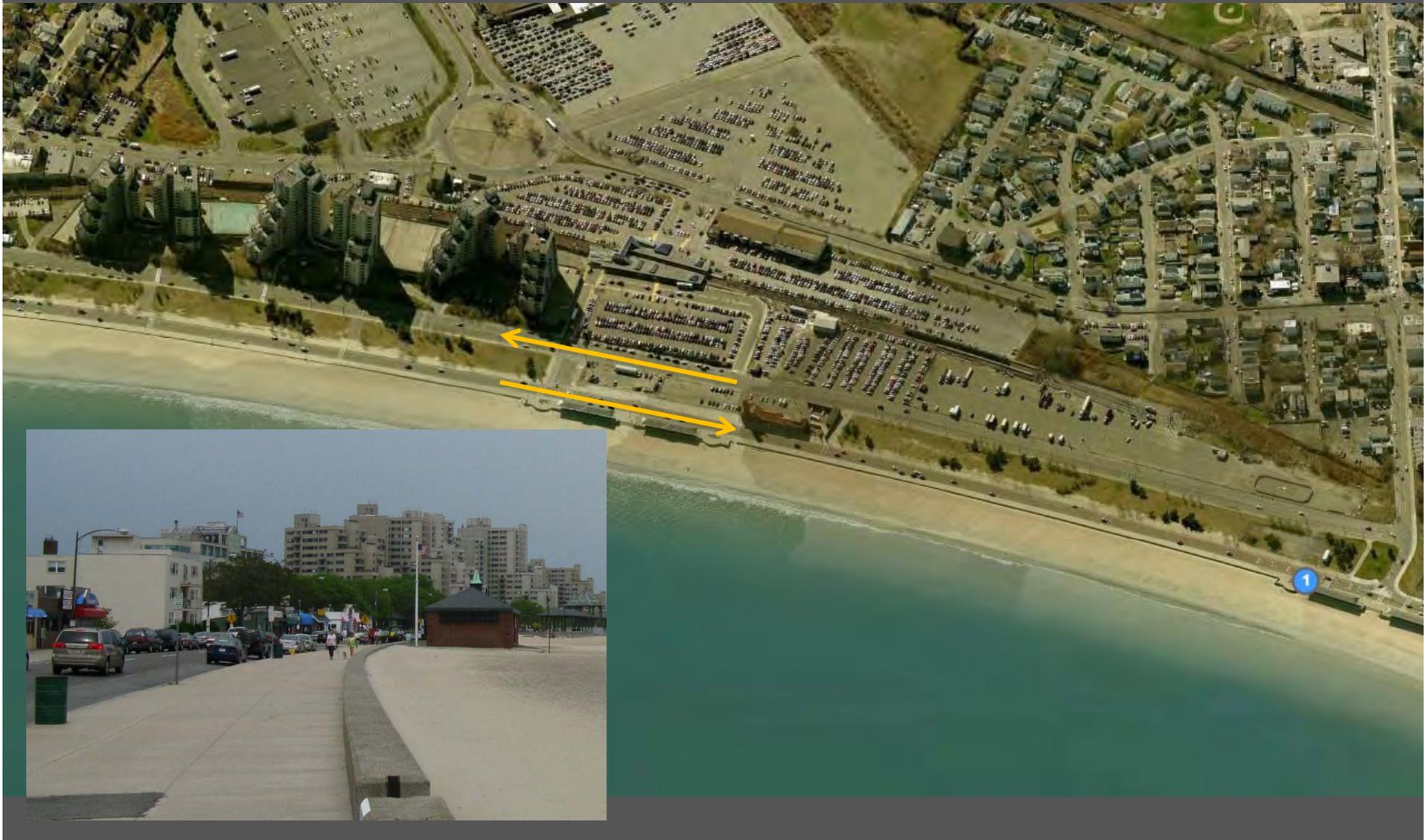


Case Studies: Lowell, MA Merrimack Street Two-Way Today



Case Studies: Revere Beach

One Way Pair – Auto-Oriented



Case Studies: Revere Beach

Two-Way Section – More Activity & Foot Traffic



Bianchi's

Renzo's

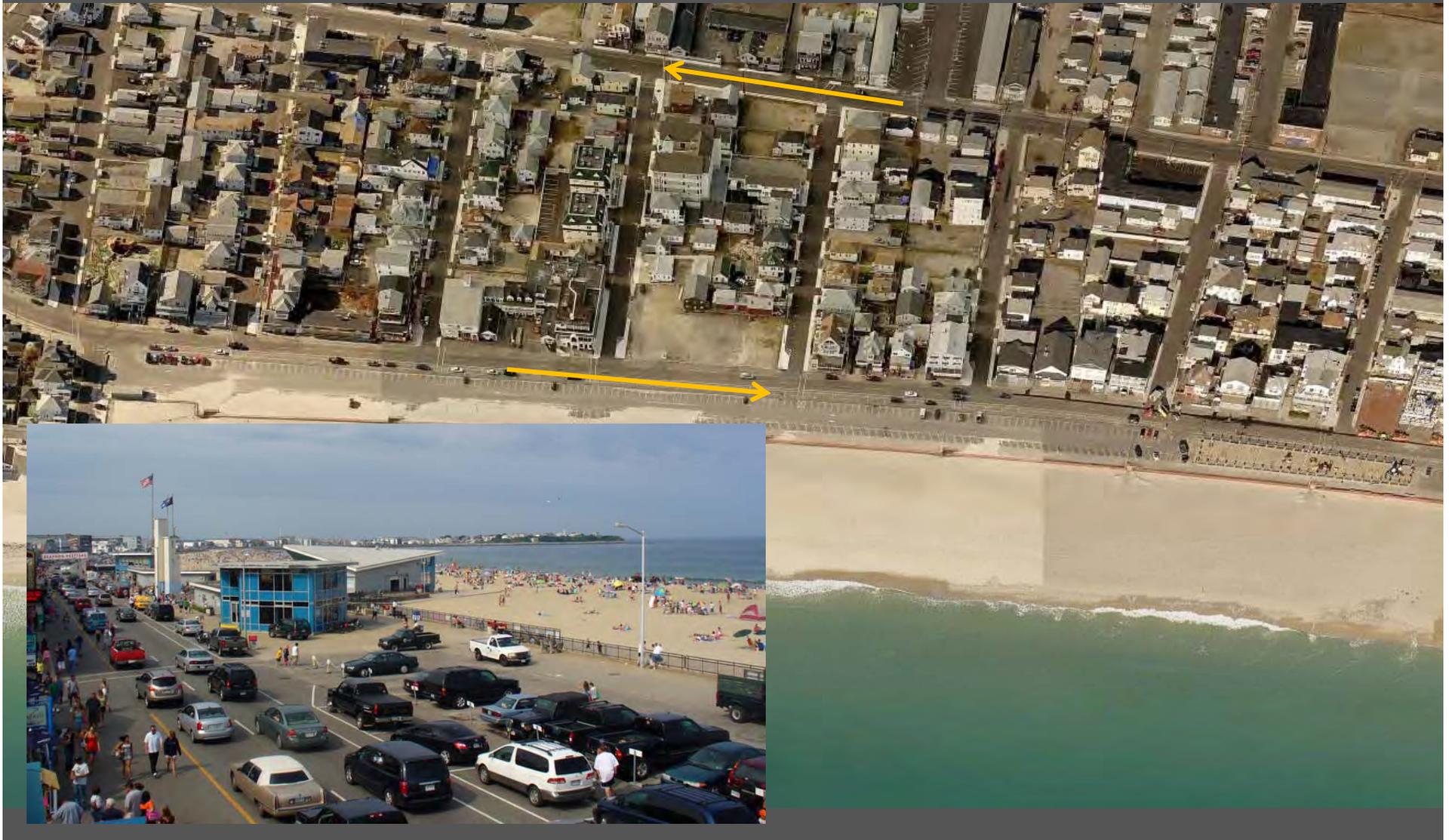
Santorini

Kelly's



Case Studies: Hampton Beach, NH

Lots of driving



Case Studies: Old Orchard Beach, ME

More pedestrian-oriented



Transportation Vision for Nantasket Beach

Timing	Immediate	Short-Term	Long-term
Strategies	<ul style="list-style-type: none"> • Information/Signage • Demand-based parking pricing • New bike lanes • 2-way circulation on Hull Shore • Pedicab Pilot 	<ul style="list-style-type: none"> • Restripe remote lot • Beach shuttle pilot • Extend Edgewater Road • Boardwalk/Multi-Use Path • Continue 2-way conversion 	<ul style="list-style-type: none"> • Wharf ferry service • Reconfigured transit improvements • “Ladder” streets • Structured parking evaluation
 <p data-bbox="514 1339 758 1385">Immediate</p>	 <p data-bbox="1115 1339 1367 1385">Short-Term</p>	 <p data-bbox="1623 1339 1875 1385">Long-Term</p>	

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Current Street Flow



Proposed Street Flow



- Existing Two-way
- Existing One-way
- Future Two-Way, Existing Street
- Future Two-Way, Proposed New Street

Current Street Flow



Proposed Street Flow



- Existing Two-way
- Existing One-way
- Future Two-Way, Existing Street
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Current Street Flow



Proposed Street Flow



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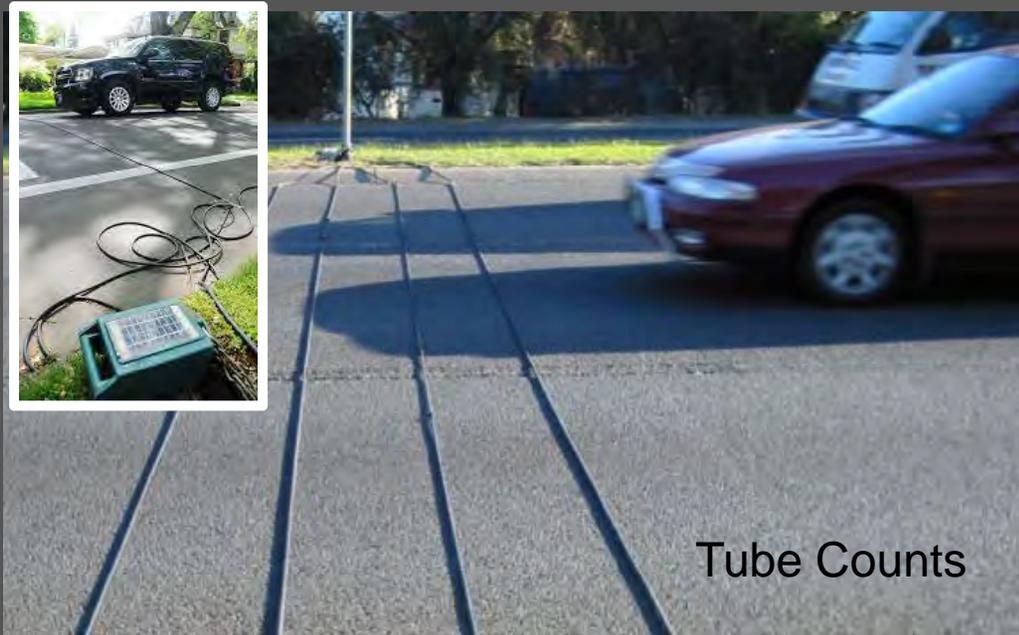
- Welcome, Introductions
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How and When Traffic Was Counted

- 2015 new summer counts conducted
(x 9 locations)

Note: **Counts conducted on the hottest day in August at High Tide**

- 2006 Louis Berger Study
(x 8 locations)
- Past data allows network to be balanced



Traffic Volumes

Residents
Weekday Evening
- Current



Residents
Weekday Evening
- Proposed



Traffic Volumes

Residents
Saturday Midday
- Current



Residents
Saturday Midday
- Proposed



Level of Service (LOS) Explained

A = Free flow

B = Reasonably free flow

C = Stable flow

D = Approaching unstable flow

E = Unstable flow

F = Forced or breakdown flow

Level of Service	Signalized Intersection	Unsignalized Intersection
A	≤10 sec	≤10 sec
B	10-20 sec	10-15 sec
C	20-35 sec	25-25 sec
D	35-55 sec	25-35 sec
E	55-80 sec	35-50 sec
F	≥80 sec	≥50 sec

Source: *The Highway Capacity Manual and AASHTO –Geometric Design of Highways and Streets*
("Green Book")

Level of Service Analysis

Level of Service
Weekday PM
Existing



Level of Service
Weekday PM
Proposed



Level of Service Analysis

Level of Service
Saturday Midday
Existing

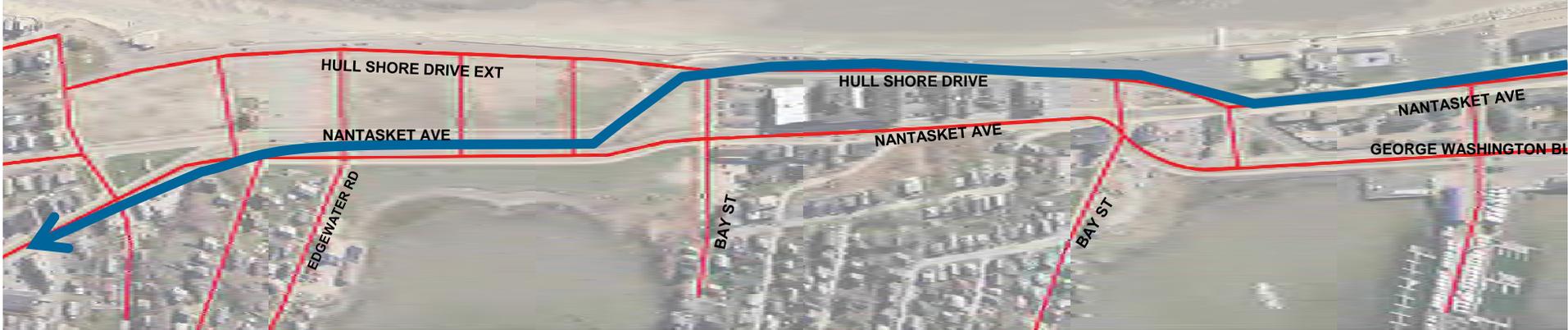


Level of Service
Saturday Midday
Proposed



Travel Times
Saturday Midday
**Existing
Residential**

3.2 minutes



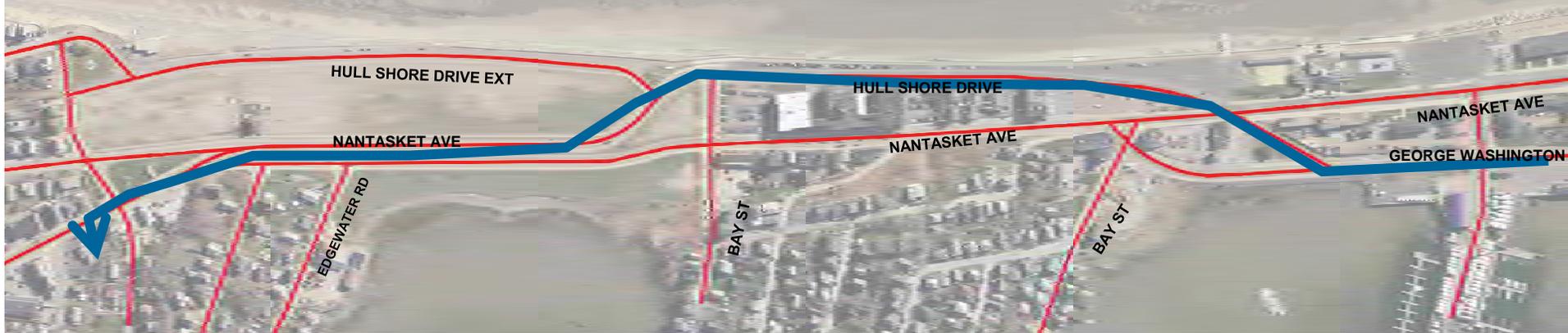
Travel Times
Saturday Midday
**Proposed
Residential**

3.0 minutes



Travel Times –
Saturday Midday
– Existing
Residential

2.8 minutes



Travel Times –
Saturday Midday –
Proposed
Residential

2.8 minutes



Travel Times
Saturday Midday
**Existing
Beachgoer**

10.6 minutes



Travel Times
Saturday Midday
**Proposed
Beachgoer**

2.0 minutes



Queue Lengths
Saturday Midday
Existing

 = Queues



Queue Lengths
Saturday Midday
Proposed



01 Traffic Simulation – Existing Sat - Phipps



Turning left

Turning right

Entering/Through

Leaving

02 Traffic Simulation – Future Sat - Phipps

Turning left

Turning right

Entering/Through

Leaving



03 Traffic Simulation – Existing Sat – Rain Event



Turning left

Turning right

Entering/Through

Leaving

04 Traffic Simulation – Future Sat – Rain Event



Turning left

Turning right

Entering/Through

Leaving

05 Traffic Simulation – Existing Sat – Rain Event



06 Traffic Simulation – Future Sat - Anastos



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Implementation Options

1. Construct Edgewater Extension only – requires signal
2. Edgewater and additional extension – no signal
3. Hull Shore Drive Extension 2-way
– Relieves Phipps
4. Allow left turns out of Phipps – lower volumes with cross streets

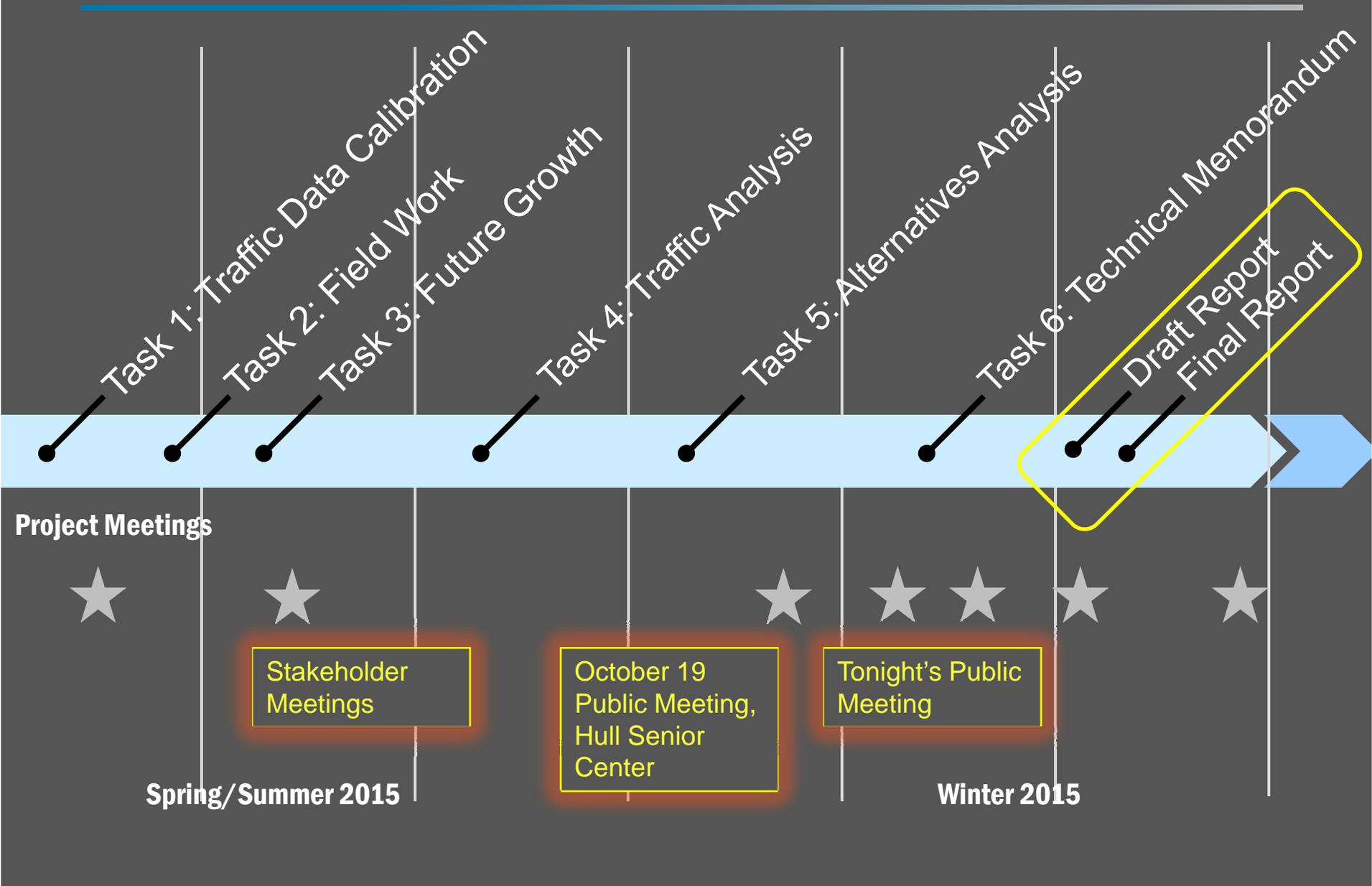


Interim & Long-Term Parking Strategies



$93 + 101 + 71 - 164 + 130 = \sim 191$ space increase

Outreach/Schedule



Thank You!