



# Comparing Large-Scale Transportation Mitigation Programs

January 9, 2019

Bill Kuttner

Regional Transportation Advisory Council

# Background

Presented to MPO  
in 2017

Much crowding  
Analysis

Some discussion  
of mitigation



## CORE CAPACITY CONSTRAINTS

Accommodating Growth on Greater Boston's  
Congested Roads and Crowded Transit Systems

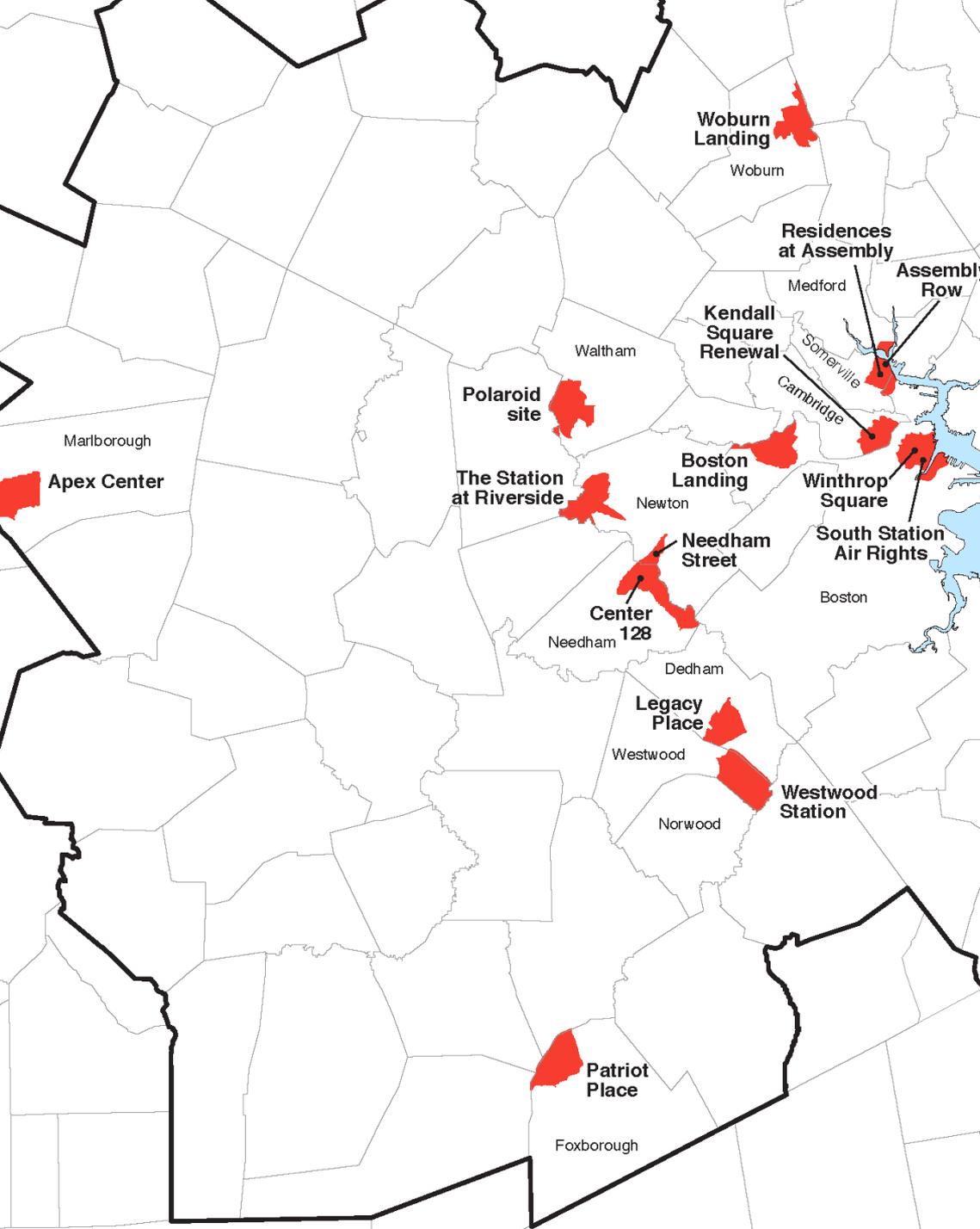


# Focusing on Mitigation

- **Mitigation programs invite debate**
- **Projects vary greatly in scale and context**
- **Analytical framework helps make comparisons**
- **Case studies illustrate common themes**
- **Much analysis here is qualitative**

# Analytical Framework

- **Select a sample of diverse large developments**
- **Define local areas around each development**
- **Calculate demographic profile of each local area**
- **Use development impacts published by MEPA**
- **Relate development impacts to demographic profiles**
- **Describe mandated mitigation programs**



# The 16 Sample Developments

# Local Area Demographic Profiles

- **Local Areas are assembled from TAZs**
- **Typically land within 0.7 mile of the development**
- **Local area population and employment are calculated**
- **Population and employment densities are calculated**
- **“Combined density” is used for comparisons**

# Local Area Combined Density: Population + Employment per Square Mile

	Combined Density
South Station air rights	137,200
Westwood Station	2,700

# Downloading MEPA Documents: Table 1 Excerpt

<b>115 Winthrop Square</b>	<b>Boston</b>	<b>15610</b>	<a href="http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=15610">http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=15610</a>
<b>South Station Air Rights</b>	<b>Boston</b>	<b>9131</b>	<a href="http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=9131">http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=9131</a>
<b>Boston Landing</b>	<b>Boston</b>	<b>14909</b>	<a href="http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=14909">http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=14909</a>
<b>Assembly Square Mixed Use (Assembly Row)</b>	<b>Somerville</b>	<b>13989</b>	<a href="http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=13989">http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=13989</a>
<b>1265 Main Street (Polaroid site)</b>	<b>Waltham</b>	<b>14681</b>	<a href="http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=14681">http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=14681</a>
<b>Center 128</b>	<b>Needham</b>	<b>15233</b>	<a href="http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=15233">http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=15233</a>
<b>Westwood Station</b>	<b>Westwood</b>	<b>13826</b>	<a href="http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=13826">http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=13826</a>
<b>The Station at Riverside</b>	<b>Newton</b>	<b>14590</b>	<a href="http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=14590">http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=14590</a>
<b>Apex Center</b>	<b>Marlborough</b>	<b>13755</b>	<a href="http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=13755">http://eeaonline.eea.state.ma.us/EEA/emepa/meparproj.aspx?eoea_num=13755</a>

# Projected Increases in Population and Employment

	Population	Employment
South Station air rights	1,590	4,100
Westwood Station	1,820	3,583

# Projected Percent Increases in Population and Employment

	Population	Employment
South Station air rights	9%	2%
Westwood Station	84%	150%

# Aspects of Mitigation Programs

- **Traffic Systems Management (TSM)**
- **Transportation Demand Management (TDM)**
- **Provision of transportation services**
- **Building new transportation infrastructure**

# Limitations of TSM

- **Traffic growth has made it more difficult to achieve roadway level-of-service targets**
- **Switching drivers to transit stresses the transit system**
- **Locally mitigated projects add congestion at distant locations**

# Conclusions and Common Themes

- All projects are different
- There are distinct geographical realms of mitigation
- Larger developments present more diverse mitigation opportunities
- Transit mitigation builds upon viable opportunities
- Implications for the future of transportation mitigation and investment

# All Projects are Different

- **Activities and trip generation rates vary**
- **Proposed at different points in business cycle**
- **Local areas have different characteristics**
- **Existing and potential transit services vary**
- **Roadways, pedestrian, and bicycle facilities vary**
- **“Large” projects range widely in size**

# Geographical Realms

Mitigation measures might be implemented:

- within a development
- at the edge of a development
- at some distance from a development

# Larger Developments Present More Opportunities

- **Assembly Row, Somerville**
- **Polaroid site, Waltham**
- **Westwood Station, Westwood**
- **South Station air rights, Boston**
- **Center 128, Needham**
- **Boston Landing, Boston**

# **Transit Mitigation Builds upon Viable Opportunities**

- **Increasing transit use depends on travel demand patterns and existing services and infrastructure**
- **Regional mitigation practices recognize this and major transit investments are mandated where viable opportunities exist**
- **New stations at Assembly and Boston Landing have attracted substantial ridership even as the new developments draw workers from throughout the region.**

# Process Case Study: Westwood

- Many mitigation themes illustrated in Westwood
- How are priorities set and consensus achieved?
- Top concern: increased traffic
- 4 million square-foot development approved in 2007
- Extensive mitigation was mandated
- Mitigation was deemed adequate despite strong opposition in neighboring communities

# Development Proposals Change

- Original developer backed away during recession
- New owners proposed a 2 million SF development
- Already approved mitigation package stayed in force
- New proposal included affordable housing
- Several off-site road improvements are in other towns
- Westwood Town Meeting overwhelmingly approved plan
- Neighboring communities not actively opposing

# Implications for Transportation Mitigation

- **Economic growth increases transportation demand**
- **Accommodating new demand is increasingly difficult**
- **Even the most expansive mitigation programs are small when compared with regional investment needs**

# Implications for Transportation Investment

- **Users of new developments pay user charges such as fares, tolls, and gasoline taxes**
- **Users and developers also pay broad-based taxes on income and property**
- **User charges and broad-based taxes more closely align with transportation investment needs than mitigation programs**

**Thank You**

**Questions?**

