



JOURNEY to 2030 REGIONAL TRANSPORTATION PLAN: ENVIRONMENTAL JUSTICE ASSESSMENT

Regional Equity in the Boston Region MPO

MPO Open House
March 21, 2006



JOURNEY to 2030 REGIONAL TRANSPORTATION PLAN: ENVIRONMENTAL JUSTICE ASSESSMENT

- Guidance on the Environmental Justice (EJ) Process
 - Public Participation Process
 - Understanding Concerns and Developing Policy
- Status of Current Plan
- EJ Analysis Work
 - Quantitative Assessment Methodology
 - Preliminary Results & Future Work
- Feedback & Comments



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GUIDANCE ON THE ENVIRONMENTAL JUSTICE PROCESS

- Federal Guidance
 - Establish a Definition of EJ
 - Develop Measures to Test the Achievement of EJ Projects
 - Assess Highway and Transit Investments
 - Undertake Outreach Activities to Low Income & Minority Communities
 - Incorporate EJ findings into an Updated Regional Plan
 - Disseminate the Updated Transportation Plan to Low Income and Minority Communities



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GUIDANCE ON THE ENVIRONMENTAL JUSTICE PROCESS

- EJ Scope of Work
 - Basic Tasks:
 - Define communities of concern, benefits & burdens
 - Develop and apply measures to assess benefits & burdens
 - Develop a system-wide multi-modal Accessibility & Mobility Analysis measuring access to higher education, health care, and jobs
 - Incorporate the results into the Transportation Plan



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GUIDANCE ON THE ENVIRONMENTAL JUSTICE PROCESS

- EJ Scope of Work
 - Objectives:
 - Assess the relative mobility of low income and minority communities
 - Look at present conditions and planned future scenarios
 - Determine if communities are being equitably served by the regional transportation system
 - Develop proposed remedies for any identified inequality
 - Work with Environmental Justice groups



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PUBLIC PARTICIPATION PROCESS

- Past Process
 - Convened a EJ Ad Hoc Committee, Fall 2000
 - Consulted on the definition and measures of EJ
 - Considered the Committees views in the development of the 2000-2025 Regional Transportation Plan Update
 - Created a Standing Committee on EJ with expanded membership to provide for ongoing participation in 2002
 - Considered the Committee's views in the development of the 2004-2025 Regional Transportation Plan Update



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PUBLIC PARTICIPATION PROCESS

- Current Process
 - Continued consultation with identified communities on the analysis and certification process
 - Discuss method and findings with the public at MPO workshops
 - Review and refine approach to communicate with communities of concern
 - Journey to 2030 Regional Equity Forum



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UNDERSTANDING CONCERNS AND DEVELOPING POLICY

- Who are the target populations of concern?
Used tract level data to identify traffic analysis zones (TAZ)
 - Minority Populations (used to identify target areas)
 - The 2000 Census identified 21.4% of the MPO's population as minority.
 - Any traffic analysis zone (TAZ) whose minority population (non-white & Hispanic) exceeded 21.4% was defined as a target population.
 - Low Income Households (used to identify target areas)
 - The 2000 census identified the median household income of the MPO's population as \$55,800.
 - Any TAZ whose median income is at or below 75% of this level (\$41,850) was defined as a target population.



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UNDERSTANDING CONCERNS AND DEVELOPING POLICY

- Who are the target populations of concern? (continued)
 - High Percent with Zero-Vehicle Households
 - Approximately 15.4% of the MPO's households did not have a vehicle available to them to drive.
 - Any TAZ that exceeded 15.4% was included in the target population.
 - Non-English Speaking
 - Approximately 4.1% of MPO residents age 5+ were unable to speak English.
 - Any TAZ that exceeded the 4.1% was included in the target population.



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UNDERSTANDING CONCERNS AND DEVELOPING POLICY

- What are the concerns of target populations?
 - Mobility dependence on transit is important
 - Language & cultural diversity help define an EJ community
 - Air quality concerns due to vehicle emissions
 - Concerns about possible gentrification
 - Identify benefits and burdens



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UNDERSTANDING CONCERNS AND DEVELOPING POLICY

- What are the needs of the target populations?
 - Service improvements for existing transit
 - Transportation to decentralized locations
 - Reduction in traffic impacts



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UNDERSTANDING CONCERNS AND DEVELOPING POLICY

- Development of Target Neighborhoods
 - Minority & low income criteria were used to choose 17 target areas for the system-wide analysis
 - Target areas can be made up of one or several TAZ's
 - Allston/Brighton
 - Chinatown
 - Dorchester
 - East Boston
 - JP/Mission Hill
 - Mattapan
 - Roxbury
 - South End
 - South Boston
 - Cambridge
 - Chelsea
 - Framingham
 - Lynn
 - Quincy
 - Revere
 - Salem
 - Somerville



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UNDERSTANDING CONCERNS AND DEVELOPING POLICY

- Benefits and Burdens
 - Examples of benefits
 - Reduction in travel time
 - Improve access to school, health care, and jobs
 - Decrease in air pollution
 - Examples of burdens
 - Increases in travel time
 - Increase in costs
 - Increase in air pollution



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UNDERSTANDING CONCERNS AND DEVELOPING POLICY

Examples of Public Feedback

- Transit dependency is a greater concern for low income and minority communities
- Comparisons of results by region, non-target populations, and urban/suburban geography should be considered
- Apply travel-time savings measures to mobility in build scenarios
- Consider health care clinics in addition to hospitals
- Two-year colleges, technical schools, and English language centers are considered important by the EJ populations
- Average wages should be used to help identify sectors of employment for analysis



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UNDERSTANDING CONCERNS AND DEVELOPING POLICY

THE MPO'S REGIONAL EQUITY PROGRAM:

- Comply with Federal guidance
- Provide for the consideration of the transportation needs of low-income and minority populations and of residents that may be underserved by the region's transportation system
- Designed to encourage and facilitate public involvement in the MPO planning and decision-making of projects in low-income and minority areas



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FOCUS OF THE MPO'S REGIONAL EQUITY PROGRAM:

- Conduct one-on-one public outreach with communities of concern regarding transportation issues
- Gather input
- Create a needs assessment of issues and concerns
- Create an ongoing, open dialogue and create partnerships
- Evaluate the process
- Respond in a documented and visible manner
- Incorporate information gathered into the planning process



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THE MPO'S REGIONAL EQUITY PROGRAM:

Steps Accomplished:

- Outreach to many non-profit organizations throughout the region located in communities of concern
- Gathering of information regarding transportation issues and concerns
- Forwarding of information gathered to the MPO for its decision-making process



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THE MPO'S REGIONAL EQUITY PROGRAM:

Ongoing Efforts/Information Dissemination

- Continued outreach to community organizations for input gathering
- Updates posted on the MPO's website (www.bostonmpo.org) including surveys and news. Feedback forms also available for comments



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How Does the MPO Examine the EJ Question?

- Goal: To see if changes to the transportation system are equitable for all populations living in the Boston MPO in the future.
- Overview of the Model
- Topics Being Examined in the Analysis



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The Regional Travel Model is a set of equations that attempt to replicate travel behavior in Eastern Massachusetts.

Four Basic Steps

- Trip Generation
- Trip Distribution
- Mode Choice
- Assignment
 - Highway
 - Transit



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ENVIRONMENTAL JUSTICE WORK

Assumptions

- Geography (Eastern Massachusetts)
- Traffic Analysis Zones
- Time periods considered
 - Four Time Periods
 - Daily Summations
- Supply Side = Transportation Networks
- Demand Side = Trips by purpose and time period
- Years of Analysis
 - Base Year is 2000
 - Forecast Year is 2030



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ENVIRONMENTAL JUSTICE WORK

- **Levels of Geography Used in the Analysis**
 - Eastern MA Region made up of 164 communities (modeled area)
 - MPO made up of 101 cities and towns
 - Inner core and suburbs
 - Target populations: low income, minority, zero vehicle households, and non-English speaking communities
 - Target areas
 - Target zone within the neighborhood



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ENVIRONMENTAL JUSTICE WORK

- Methodology
 - Demographic Analysis
 - Service Assessment
 - Mobility Analysis
 - Accessibility Analysis
 - Environmental Analysis



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ENVIRONMENTAL JUSTICE WORK

- Demographic Analysis
 - Minority
 - Low income
 - Zero-Vehicle Households
 - Non-English speaking (ESL)



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ENVIRONMENTAL JUSTICE WORK

- Service Assessment (Base Year)
 - Schedule adherence
 - Load factors
 - Shelter location
 - Age of vehicles
 - Level of service peak vs. off-peak



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ENVIRONMENTAL JUSTICE WORK

- Mobility Analysis (Within Scenario) for the Base & Forecast Year
 - Transit Mode
 - In-vehicle time
 - Out-of-vehicle time
 - Transit availability
 - Transit Mode Share
 - Auto Mode
 - Travel time
 - Vehicle Miles of Travel on arterials / auto trip generated by TAZ
 - Vehicle Miles of Travel made on roadways with a V/C greater than 0.75 during peak periods



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ENVIRONMENTAL JUSTICE WORK

- Mobility Analysis (Between Scenarios)
 - Transit Mode
 - Differences in In-vehicle time
 - Differences in Out-of-vehicle time
 - Differences in Transit Availability
 - Auto Mode
 - Differences in Travel time
 - Differences in VMT on arterials per auto trip generated by the TAZ
 - Differences in VMT made on roadways with a V/C $0.75 <$



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ENVIRONMENTAL JUSTICE WORK

Accessibility Analysis (Opportunities within 40 minutes by transit and 20 minutes by auto) for the Base & Forecast Year

- Higher Education Enrollment Opportunities
 - 2 yr Opportunities & 4 yr Opportunities
- Health Care by Beds & Clinic Visitation
 - Extended Care Facilities (Hospitals & Rehab Facilities)
- Jobs by Sector of the Economy
 - Retail
 - Service
 - Manufacturing
 - Transportation & Public Utilities



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ENVIRONMENTAL JUSTICE WORK

- Environmental Analysis
 - Air Quality - examine the impact of CO on different levels of geography within a scenario and between scenarios for the different geographies.



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QUESTIONS & COMMENTS

