



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

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DISPARATE IMPACT AND DISPROPORTIONATE BURDEN POLICY FOR THE BOSTON REGION METROPOLITAN PLANNING ORGANIZATION

Note: This policy was originally endorsed on November 5, 2020. Key changes made in this update include the following:

- A new section has been added that describes the MPO's approach to mitigating disparate impacts and disproportionate burdens.
- Revisions have been made to reflect changes to MPO processes and policies since the policy was first endorsed.
- Text has been reorganized and edits have been made to improve clarity.

Purpose of the Policy

The Boston Region Metropolitan Planning Organization's (MPO) Disparate Impact and Disproportionate Burden (DI/DB) Policy ensures the MPO complies with Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) Title VI and environmental justice (EJ) requirements. This policy guides the MPO in identifying potential regionwide disparate impacts and disproportionate burdens in the Boston region that may result from the projects in its Long-Range Transportation Plan (LRTP). Disparate impacts and disproportionate burdens are defined as follows:

- **Disparate Impact:** A facially neutral policy or practice that disproportionately affects members of a group identified by race, color, or national origin, where the policy or practice lacks a substantial legitimate justification and where there exists one or more alternative policies or practices that would serve the same legitimate objectives but with less disproportionate effect on the basis of race, color, or national origin. (Federal regulation defines the term "national origin" as encompassing people with limited English proficiency.)
- **Disproportionate Burden:** A neutral policy or practice that disproportionately affects low-income populations more than non-low-income populations. A finding of a disproportionate burden requires the evaluation of alternatives and mitigation

of burdens where practicable. (Although EJ guidance covers minority populations as well, disproportionate burdens only refer to those impacts to low-income populations as minority populations are covered by the more stringent definition of a disparate impact.)

The MPO has developed this DI/DB Policy to make disparate impact and disproportionate burden determinations in a transparent and consistent manner that clearly conveys the findings to the public and MPO board members.

Federal Requirement

FTA, under the authority of Title VI of the Civil Rights Act of 1964, directs MPOs to analyze the impacts of the distribution of state and federal funds in the aggregate and to identify any disparate impacts on the basis of race, color, or national origin. Under the authority of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, FTA and FHWA further direct MPOs to identify and address disproportionately high and adverse effects of their activities on minority populations and low-income populations.

Scope

This policy applies to all projects listed in the Boston Region MPO's LRTP. The LRTP is not a funding document—project funding decisions are made through the MPO's capital program, the Transportation Improvement Program (TIP). Rather, the LRTP lists major infrastructure projects that will be built in the Boston region in the next twenty years, as per federal regulations. The MPO defines major infrastructure projects as those costing \$50 million or more, or those that meet one of these criteria:

- Highway projects that improve facilities that are important to regional travel, which include those classified as Interstate Highways, Principal Arterial Freeways and Expressways, or all sections of roadways classified as Principal Arterial "Other" that have fully or partially controlled access, or
- Public transit projects that add new connections to or extend the rail or fixed-guideway transit network or extend the bus rapid transit network

Major infrastructure projects may also be projects that the MPO determines are important, regional priorities.

These projects are analyzed as one group; individual projects are not analyzed for disparate impacts or disproportionate burdens under this policy, as directed by FTA and FHWA. Projects are individually evaluated for their broader equity implications through a separate effort when they are submitted for funding consideration in the TIP.

Identifying Disparate Impacts and Disproportionate Burdens

To identify disparate impacts and disproportionate burdens, the MPO staff analyze the LRTP projects to determine their impacts, as a group, on people who live in the Boston region. Then the DI/DB Policy is applied to the results to determine if the impacts are disparate impacts or disproportionate burdens.

Comparison Populations

Under this policy, impacts are identified for minority populations, low-income populations, and people with limited English proficiency (referred to as protected populations) and compared to their counterparts, non-protected populations. Protected populations are defined as follows:

- **Minority population:** People who identify as Black or African American, Asian, American Indian or Alaska Native, or Native Hawaiian or other Pacific Islander, and/or Hispanic or Latino/a/x, or as multi-racial
- **Nonminority population:** People who identify as White and not Hispanic
- **Low-income population:** People whose family income is 200 percent or less of the national poverty level, based on their family size
- **Non-low-income population:** People whose family income is greater than 200 percent of the national poverty level, based on their family size
- **People with limited English proficiency:** People who speak English less than “very well”
- **People who speak English:** People who speak English “very well”¹

Conducting a DI/DB Analysis

Staff use a travel demand model (TDM) to analyze several metrics for potential disparate impacts and disproportionate burdens. Prior to the development of each LRTP, metrics are reviewed and updated to reflect evolving priorities of the Boston region residents and the MPO board, and the staff’s development of new analysis tools. Staff discuss with the MPO board any changes prior to conducting the DI/DB analysis.

Each metric is analyzed in two scenarios—one in which the LRTP projects are not built (existing and committed [E+C] scenario) and one in which they are built (recommended plan [RP] scenario). The difference between the two scenarios is calculated to determine the expected impact of the LRTP projects. The DI/DB Policy determines if the impact on each protected population is disproportionately more adverse compared to

¹ These definitions and demographic data are from US Census Bureau datasets.

the non-protected population. Table 1 shows a hypothetical example—the LRTP projects would increase the minority population’s access to jobs by 15 jobs and the non-minority population’s access to jobs by 10 jobs. The DI/DB Policy then determines whether this difference is equitable.

Table 1
Hypothetical Example of an LRTP Scenario Comparison

	Access for Minority Populations	Access for Non-Minority Populations
E+C Scenario	100 jobs	90 jobs
RP Scenario	115 jobs	100 jobs
Difference (or impact)	+15 jobs	+10 jobs

E+C = Existing and Committed. LRTP = Long-Range Transportation Plan. RP = Recommended Plan.

Applying the DI/DB Policy

Based on federal guidance, a disparate impact or disproportionate burden occurs when

1. the impact is *caused* by projects funded by the MPO,
2. the impact is *adverse*, and
3. the impact *disproportionately* affects the protected population.

To make this determination, staff compare the scenario results to three thresholds, each of which establishes one of the conditions stated above. If the scenario does not pass any one of the thresholds, the analysis stops and there is a finding of no disparate impact or disproportionate burden.

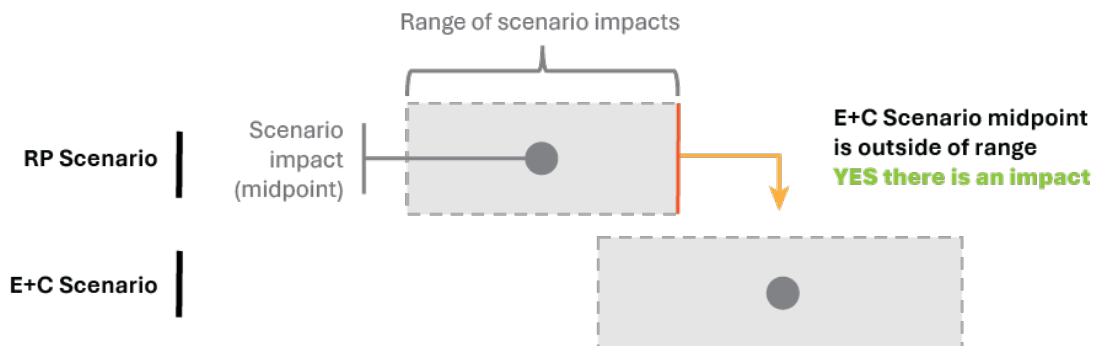
1. Causation Threshold: Recalculated for each LRTP

This threshold determines whether any difference between the E+C and RP scenarios is likely caused by the LRTP projects and not due instead to uncertainty in the analysis process. Forecasting travel demand is uncertain, since assumptions must be made about what the transportation system will look like in the Boston region 20 years into the future. To accommodate this uncertainty, staff produce a **range of scenario impacts** that indicate where the impact is likely to fall. The midpoint of this range is called the **scenario impact**—what staff consider the most likely impact of the LRTP projects. Due to the variable nature of the analytical process and changes to TDM inputs, the uncertainty is reassessed for each LRTP.

In this step, staff determine if the **scenario impact** of the RP scenario is outside of (either greater or less than) the **range of scenario impacts** in the E+C scenario. If the expected impacts are outside of the E+C scenario, staff can be

confident that LRTP projects would be the cause of the impact. Figure 1 shows a hypothetical example of how the Causation Threshold is applied to the access to jobs metric.

Figure 1
Hypothetical Example of Applying the Uncertainty Threshold: Access to Jobs

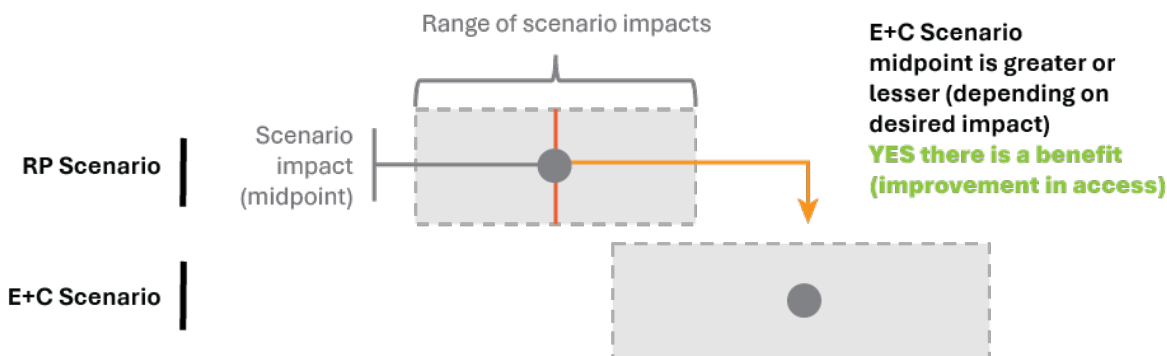


E+C = Existing and Committed. RP = Recommended Plan.

2. Adverse Impact Threshold: Set to 0 percent

In this step, staff compare the results of the E+C and RP scenarios for each population group to determine if the impact is adverse—since the threshold is set to 0 percent, any measurable amount is considered an impact. If the **scenario impact** of the RP scenario is different (either greater or less than) than the **scenario impact** of the E+C scenario, then there is either a benefit or a burden. For some metrics, an increase is a benefit (such as an increase in access to jobs); in other cases, it is a burden (such as an increase in pollution). Figure 2 illustrates a hypothetical example of applying the Adverse Impact Threshold to the access to jobs metric.

Figure 2
Hypothetical Example of Applying the Adverse Impact Threshold: Access to Jobs

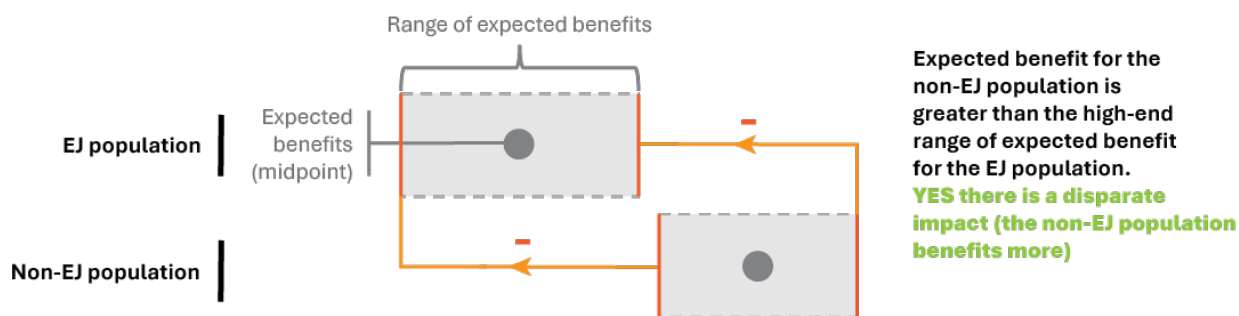


E+C = Existing and Committed. RP = Recommended Plan.

3. Disproportionality Threshold: Set to 0 percent

This threshold determines whether the LRTP projects would disproportionately affect the protected population compared to their non-protected population counterpart. In this step, staff compare the **expected impacts** from the LRTP projects *between* population groups. If the protected population would benefit less or would experience a greater harm than the non-protected population, there would be a disparate impact or disproportionate burden. Since the threshold is set to 0 percent, any situation where the protected population would benefit less or would experience greater harm than the non-protected population would be a disparate impact or disproportionate burden. Figure 3 illustrates a hypothetical of how the Disproportionality Threshold is applied to the access to jobs metric.

Figure 3
Hypothetical Example of Applying the Disproportionality Threshold: Access to Jobs



Lowest likely benefit = Subtract lowest range of the expected benefits for each population
Highest likely benefit = Subtract highest range of the expected benefits for each population

E+C = Existing and Committed. RP = Recommended Plan.

Addressing Disparate Impacts and Disproportionate Burdens

If the DI/DB analysis results in a finding of a disparate impact or disproportionate burden for at least one metric, staff will determine whether there is a substantial, legitimate justification—based on the regulatory standard for addressing disparate impacts—for including the projects in the LRTP as proposed, as required by federal regulations, and present the conclusion to the MPO board. (A substantial, legitimate justification is one that demonstrates that the LRTP projects, as proposed, are necessary for meeting a goal that is legitimate, important, and integral to the MPO’s mission.) If there is no justification, staff will develop alternatives that meet the same goals of the original projects but that would have fewer disparate impacts or disproportionate burdens and present the alternatives to the board. If there is a legitimate justification or if there are no alternatives that would have fewer disparate impacts or disproportionate burdens, staff will recommend steps for the MPO to take to minimize or mitigate these impacts.

Because the LRTP is a long-term planning document and the impacts are projected to occur 20 years in the future, mitigation will involve programming projects in Transportation Improvement Programs to provide benefits that counteract the disparate impacts or disproportionate burdens. The TIP contains projects of various types that provide a range of benefits:

- Complete Streets
- Bicycle and pedestrian connections
- Intersection improvements
- Small-scale first- and last-mile connections projects, such as community shuttles and bicycle racks
- Bikeshare support
- Major infrastructure, such as transit expansion

Mitigation takes place during the four years that the LRTP is active. Staff will analyze the aggregate impacts of the projects funded in each of the four TIPs produced during the four-year term of the LRTP, using the metrics for which there were disparate impacts or disproportionate burdens, and determine the extent to which those impacts have been mitigated. If, after the fourth TIP in the cycle, the cumulative impact across all four TIPs on the protected population(s) would provide benefits that outweigh the disparate impact or disproportionate burden, the disparity will be considered mitigated. If the disparate impact or disproportionate burden is not mitigated at the end of the four-year LRTP cycle, the MPO will reanalyze that metric in the next LRTP and continue to address the impact through the next four-year LRTP cycle.

During the development of the MPO's LRTPs, members of the public will have the opportunity to review and comment on the results of the application of the DI/DB Policy to any analysis to which it is applied. The MPO will also provide a meaningful opportunity for public comment on any proposed alternatives recommended by the MPO staff and to the mitigation process itself.

Developing and Updating the DI/DB Policy

Developing the Policy

MPO staff worked with the MPO board, a stakeholder working group, and members of the public from 2017 to 2020 to develop this policy. Staff convened four meetings of the stakeholder working group to help guide the direction of the policy. Stakeholders represented a variety of interests, including advocacy groups, human service transportation agencies, municipal planners, and MPO board members. They provided valuable feedback at critical decision-making points, helped staff prioritize metrics that were analyzed for disparate impacts and disproportionate burdens in the subsequent

LRTP, and provided suggestions on the content of the policy, many of which were ultimately included.

The work to develop the policy was divided into two phases. With the guidance of the stakeholder working group, the first phase resulted in an [interim draft DI/DB Policy](#) for use in the 2019 LRTP *Destination 2040*—see a summary of phase one [here](#). The second phase consisted of a study conducted by the MPO to further develop the thresholds ultimately used in the policy, as per the request of the working group—see the study memo [here](#). At the conclusion of phase two, staff, in consultation with the working group, developed a [final DI/DB Policy](#), which the MPO approved in November of 2020 and which replaces the draft policy.

Updating the Policy and Public Review

Updates to the policy will generally be made prior to the development of each LRTP when staff review the policy and revise it to reflect changes in how the MPO approaches identifying and addressing disparate impacts and disproportionate burdens, such as analyzing new metrics or using new analysis tools. Should new federal guidance be released, staff will also update the policy at that time. With each substantive update, the policy will be presented to board for review and comments and will be subject to a 30-day public review period.

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Boston Region MPO Title VI Specialist

10 Park Plaza, Suite 2150

Boston, MA 02116

Phone: 857.702.3700

Email: civilrights@ctps.org

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