



Resilience 2050

Adapting to the Challenges of Tomorrow

Updates to Project Scoring Methodology
September 14, 2021



»BRTB

Project Scoring Criteria

- Project scoring composed of two elements:
 - Policy Score (up to 40 points)
 - Priority Score:
 - High Priority (up to 5 projects): 30 points
 - Medium Priority (up to 4 projects): 20 points
 - Low Priority (unlimited): 10 Points
 - Demonstrated Financial Support: 10 points
 - Technical Score (up to 50 points) for transit and highway:
 - Safety
 - Accessibility
 - Mobility
 - Environmental Conservation
 - Security
 - Economic Prosperity

Project Scoring Criteria

- BMC staff reviewed existing criteria this spring and developed recommended updates this summer
- In general, recommended updates:
 - Slightly shift the amount of points devoted to goals
 - Add transit scoring where previously absent
 - Clarify definitions and make scores less subjective
 - Transition to outcomes based scoring – how does the project contribute to creating a complete system?
 - Clarify/Integrate impacts to EJ populations into scoring
- Finalize in October, Resolution in November

Transit Technical Scoring Overview

Maximize2045		Resilience2050	
Goal	Points	Goal	Points
Safety: NA	0	Safety	10
Accessibility – Complete Streets	0	Accessibility – Complete Streets	5
Accessibility – Access to Jobs	10	Accessibility – Access to jobs	10
Accessibility – Transit stations/stops	10	Accessibility – Transit stations/stops	0
Mobility	10	Mobility	10
Environmental – Effects on lands/historical properties	5	Environmental – Effects on lands/historical properties	5
Environmental – GHG Emissions	5	Environmental – GHG Emissions	5
Security: NA	0	Security	5
Economic Prosperity	10	Economic Prosperity	5
Total	50	Total	55

Highway Technical Scoring Overview

Maximize2045		Resilience2050	
Goal	Points	Goal	Points
Safety	5	Safety	10
Accessibility – Complete Streets	5	Accessibility – Complete Streets	5
Accessibility – Access to Jobs	5	Accessibility – Access to jobs	5
Mobility	10	Mobility	10
Environmental – Effects on lands/historical properties	5	Environmental – Effects on lands/historical properties	5
Environmental – GHG Emissions	5	Environmental – GHG Emissions	5
Security	5	Security	5
Economic Prosperity	10	Economic Prosperity	5
Total	50	Total	50

Goal: Safety

Mode: Highway

Max points: 10

- Prior criteria and justification for updates:
 - 3-year crash trends weighted by crash severity
 - Projects in areas with higher crash severity awarded more points
 - Cons to this approach:
 - LRTP projects are often completed years or decades in the future
 - Fails to account for safety countermeasures built into the project
 - Doesn't align with local or state Strategic Highway Safety Plan (SHSP) emphasis areas
- New Criteria:
 - Emphasizes regional focus areas/State SHSP emphasis areas
 - Incorporates impacts to EJ areas
 - Increases max points from 5 to 10

Goal: Safety

Mode: Highway

Max points: 10

- Highway Safety Scoring: 10 points max
 - Identifies SHSP emphasis area(s)/strategy(s) addressed = 2 points
 - Project includes countermeasures anticipated to benefit EJ areas = 2 points
 - Project identifies countermeasures addressing the following SHSP emphasis areas (max of 6 points):
 - Non-motorist safety = 6 points
 - Speeding = 4 points
 - Lane Departure for Impaired or Distracted Drivers = 2 points

Goal: Safety

Mode: Transit

Max points: 10

- Prior criteria and justification for updates: NA
- New Criteria added for transit providing same max points as highway:
 - Degree to which the project improves Transit Safety (5 points max), with features such as:
 - Rehabilitation of facilities, infrastructure, and vehicles to improve safety (eliminating at grade pedestrian crossings; installation of flashing light signals, etc.)
 - Adding ADA accessible stations and stops
 - Promoting safe pedestrian and bicycle transit access to bus stops, transit hubs, etc.
 - Degree to which the project improves Transit Security (5 points max), with features such as:
 - Installation of CCTV at stations and on vehicles
 - Application of Crime Prevention through Environmental Design
 - Lighting improvements

Goal: Safety

Mode: Transit

Max points: 10

- **Transit Safety Scoring: 5 points max**
 - Project designed to specifically improve system safety for all users and/or addresses an existing safety deficiency, and occurs within an EJ area = 5 points
 - Project designed to specifically improve system safety for all users and/or addresses an existing safety deficiency = 4 points
 - Project will generally result in a safety improvement for users, and occurs within an EJ area = 3 points
 - Project will generally result in a safety improvement for users = 2 points
 - Project will have no discernible positive effect on system safety = 0 points
- **Transit Security Scoring: 5 points max**
 - Project designed specifically to deter crime and/or enhance system security for all users and/or staff = 5 points
 - Project will generally result in a security improvement for users and/or staff = 3 points
 - Project will have no discernible positive effect on system security = 0 points

Goal: Accessibility – Complete Streets

Mode: Highway & Transit

Max points: 5

- Updates focus on defining & clarifying prior criteria
 - Adds FHWA-sourced examples of features to criteria
 - Traffic Safety: controlled intersections, reduced turn radii, traffic calming, etc.
 - Bicycle Facilities: cycle tracks, shared use paths, etc.
 - Pedestrian Facilities: New or improved sidewalks, median treatments, etc.
 - Transit Facilities: Bus rapid transit, bus pull out areas, TSP, dedicated lanes, etc.
 - Defines how impacts to EJ areas will be scored (prior criteria mentioned EJ but did not define points)
 - Clarifies how points are assigned to remove some subjectivity in scoring (significant vs moderate features)
 - Adds score for transit projects (highway only previously; now 5 points each)

Goal: Accessibility – Complete Streets

Mode: Highway & Transit

Max points: 5

- Accessibility – Complete Streets Scoring: 5 points max
 - Degree to which project supports complete streets (delivers safety/accessibility benefits for all modes) (4 points max):
 - Significant features = 4 points. Over half of project includes features
 - Moderate features = 2 points. Up to half of project includes features
 - No features = 0 points
 - Proximity to EJ areas as determined by ½ mile buffer (1 point):
 - Over half of project in EJ area = 1 point
 - Up to half of project in EJ area = ½ points
 - Not in EJ area = 0 points

Goal: Accessibility – Access to Jobs

Mode: Highway & Transit

- **Prior criteria:**
 - Evaluated access using GIS buffer analysis and staff judgement
 - Proximity to jobs rather than network-level outcomes
- **New Criteria:**
 - Reduces subjectivity and is outcome oriented
 - Quantifies anticipated impacts of project by comparing the candidate project network to the E&C network
 - Improved measure: Change in the average number of jobs accessible per worker within 30 minutes (highway) or 45 minutes (transit)
 - Normalizes across large and small projects by dividing by project cost
 - Clarifies scoring for total population and EJ population
- **Removed Criteria: Transit Stations/Stops**
 - Scored based on adding new stations, improving stations, or operations
 - Removal yields more equal weighting for highway and transit accessibility
 - Opportunity to add transit scores for other criteria

Goal: Accessibility – Access to Jobs

Mode: Highway

Max points: 5

- Highway Accessibility – Access to Jobs Scoring: 5 points max
 - Degree to which the project improves access to jobs for workers within a 30 minute travel time (4 points):
 - Top 1/3 = 4 points
 - Middle 1/3 = 2 points
 - Bottom 1/3 = 0 points
 - Degree to which the project improves access to jobs for EJ workers within a 30 minute travel time (1 point):
 - Top 1/2 = 1 point
 - Bottom 1/2 = 0 points

Goal: Accessibility – Access to Jobs

Mode: Transit

Max points: 10

- **Transit Accessibility – Access to Jobs Scoring: 10 points max**
 - Degree to which the project improves access to jobs for workers within a 45 minute travel time (8 points):
 - Top 1/3 = 8 points
 - Middle 1/3 = 4 points
 - Bottom 1/3 = 0 points
 - Degree to which the project improves access to jobs for EJ workers within a 45 minute travel time (2 points):
 - Top 1/2 = 2 points
 - Bottom 1/2 = 0 points

Goal: Mobility

Mode: Highway

Max Points: 10

- **Prior criteria:**
 - Evaluated mobility with the 2025 and 2045 E&C networks
 - Projects with a worse LOS were given more points
- **New Criteria:**
 - Scores based on 2050 E&C network congestion as measured by Vehicle Hours of Delay (VHOD) per Vehicle Miles Traveled (VMT)
 - Includes 3 vehicle classes capturing both goods and service movement

Goal: Mobility

Mode: Highway

Max Points: 10

- Highway Mobility Scoring: 10 points max
 - Passenger VHOD at AM/PM peak hours (4 points max)
 - Top 1/3 = 4 points
 - Middle 1/3 = 3 points
 - Bottom 1/3 = 2 points
 - Commercial VHOD Mid-Day (3 points max)
 - Top 1/3 = 3 points
 - Middle 1/3 = 2 points
 - Bottom 1/3 = 1 point
 - Truck VHOD at Overnight Peak (3 points max)
 - Top 1/3 = 3 points
 - Middle 1/3 = 2 points
 - Bottom 1/3 = 1 point

Goal: Mobility

Mode: Transit

Max Points: 10

- **Prior criteria:**
 - Transit Options: Scored by project transit mode (MARC/Commuter received most; local bus received least)
 - Transit Ridership: Average daily number of riders
- **New Criteria focuses on how each candidate project contributes to creating a complete system**
 - Transit Options: Number of workers with high quality transit options based on their usual place of work (comparing candidate project to E&C network)
 - Transit Ridership: Measures ridership via both walk and drive access.
 - Transit Connectivity: Additional measure accounting for the degree to which a project reduces the number of transfers for a transit trip

Goal: Mobility

Mode: Transit

Max Points: 10

- **Transit Mobility – Options Scoring: 3 points max**
 - Degree to which the project increases the number of workers with high quality (<45 minutes) transit options based on their usual place of work
 - Top 1/3 = 3 points
 - Middle 1/3 = 2 points
 - Bottom 1/3 = 1 points
- **Transit Mobility – Ridership Scoring: 5 points max**
 - Degree to which the project supports transit ridership via walk access and drive access
 - Walk Access: Top 1/3 = 3 points; Middle 1/3 = 2 points; Bottom 1/3 = 1 point
 - Drive Access: Top 1/2 = 2 points; Bottom 1/2 = 1 point
- **Transit Mobility – Connectivity Scoring: 2 points max**
 - Degree to which the project contributes to transit connectivity as measured by the reduction in the average number of transfers required for transit trips
 - Top half of reductions = 2 points
 - Bottom half of reductions = 1 point

Goal: Environmental Conservation – Effects on ecologically sensitive lands and culturally significant resources

Mode: Highway & Transit

Max points: 5

- **Minor updates:**
 - Adds GIS layers that should be accounted for including: Wetlands, Sensitive Species, Critical Area Towns & Counties, and various Maryland Protected Lands layers
 - Reduces subjectivity by clarifying how scores will be assigned (significant vs moderate)
 - Incorporates potential impacts to EJ areas into project scoring

Goal: Environmental Conservation – Effects on ecologically sensitive lands and culturally significant resources

Mode: Highway & Transit

Max points: 5

- Scoring: 5 points max
 - Degree to which project is located near ecologically significant lands and culturally significant properties and resources via GIS buffer analysis:
 - Project neither intersects nor is adjacent to any data = 5 points
 - Project is only adjacent to any data = 3 points
 - Project intersects data = 1 point
 - Anticipated impacts to nearby EJ populations (buffer of 200 feet: distance derived from approximated distances used in NEPA analysis)
 - Project anticipated to benefit EJ area = +1 point*
 - Neutral or unclear anticipated EJ impacts = 0 points
 - Project has anticipated negative EJ impacts = -1 point

**5 points max. Projects already receiving 5 points from the criteria above are not eligible for an additional EJ point*

Goal: Environmental Conservation – Potential for Greenhouse Gas Emissions Reductions

Mode: Highway & Transit

Max points: 5

- Minor updates:
 - Reduces subjectivity by clarifying how scores will be assigned
 - Lists additional Greenhouse Gas Emissions (GHG) reducing components: new sidewalk construction, trail construction with connections, new bike lanes, traffic signal systemization, etc...

Goal: Environmental Conservation – Potential for Greenhouse Gas Emissions Reductions

Mode: Highway & Transit

Max points: 5

- Environmental Conservation – Potential for GHG Emissions Reductions: 5 points max
 - Degree to which the project includes components that reduce GHG emissions:
 - Only emissions reducing components = 5 points
 - A majority of emission reducing components but also includes emissions inducing components = 4 points
 - Neutral mix = 3 points
 - A majority of emissions inducing components but also involves bike/ped/transit improvements improving connectivity to existing facilities = 2 points
 - A majority of emissions inducing components = 1 point
 - No emissions reducing components = 0 points

Goal: Security

Mode: Highway & Transit

Max points: 5

- Prior Criteria:
 - Included only highway evacuation routes or parallel routes
- Updated Criteria:
 - Incorporates a score for transit projects
 - Focuses on evacuation from vulnerable communities based on BMC's Vulnerable Populations Index (VPI)
 - Improvements in evacuation routes would help all; incorporating the VPI helps to prioritize improvements where there are higher concentrations of vulnerable populations

Goal: Security

Mode: Highway & Transit

Max points: 5

- **Security Scoring: 5 points max**
 - Degree to which a project enhances the multi-modal evacuation mobility of vulnerable populations. Evacuation routes are defined in the Evacuation Traffic Management Support document:
 - Project falls on existing evacuation route or improves a critical link to an existing evacuation route in an area with a Vulnerable Populations Index (VPI) of 6 or higher = 5 points
 - Project falls on existing evacuation route or improves a critical link to an existing evacuation route in an area with a VPI of 4 or 5 = 3 points
 - Project falls on existing evacuation route or improves a critical link to an existing evacuation route in an area with a VPI of 2 or 3 = 1 point

Goal: Economic Prosperity

Mode: Highway & Transit

Max points: 5

- **Prior Criteria:**
 - Included separate scores for location in Sustainable Communities (5 points) and Priority Funding Areas (5 points) for a max of 10 points
- **Updated Criteria:**
 - Recognizes the new Opportunity Zone designation
 - Recognizes Sustainable Communities as being part of PFA's
 - Reduces the point total from 10 to 5, creating the opportunity to redistribute points to other criteria

Goal: Economic Prosperity

Mode: Highway & Transit

Max points: 5

- Economic Prosperity Scoring: 5 points max
 - The project leverages or otherwise supports:
 - An Opportunity Zone that is within a Sustainable Community and PFA = 5 points
 - A Sustainable Community or PFA = 3 points
 - Outside these areas/zones = 0 points

Thanks!



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