Resilience 2050
Adapting to the Challenges of Tomorrow

Updates to Project Scoring Methodology
September 14, 2021
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

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<thead>
<tr>
<th>Goal</th>
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<th>Resilience2050</th>
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<tbody>
<tr>
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<td>0</td>
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## Highway Technical Scoring Overview

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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 ½ = 2 points; Bottom ½ = 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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