

INVEST - Sustainable Highways Self-Evaluation Tool

All Project Development Scoring Questions - Version 1.2

PD-01 **Economic Analyses** (5 points)

Using the principles of benefit-cost analysis (BCA) or economic impact analysis (EIA), provide evidence that the benefits, including environmental, economic, and social benefits, justify the full life-cycle costs.

PD-01.1a Was a benefit-cost analysis (BCA) for the project completed using minimum acceptable industry practices? - 2 points

- Yes (2 points)
- No (0 points)

PD-01.1b Was an Economic Impact Analysis (EIA) completed that meets all the listed requirements? - 3 points

- Yes (3 points)
 - No (0 points)
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PD-02 **Lifecycle Cost Analyses** (3 points)

Reduce life-cycle costs and resource consumption through the informed use of life-cycle cost analyses of key project features during the decision-making process for the project.

PD-02.1a Was an LCCA performed for all pavement structure alternatives in accordance with the method described in the FHWA's Technical Bulletin for Life-Cycle Cost Analysis? - 1 point

- Yes (1 point)
- No (0 points)

PD-02.1b Was an LCCA performed for all stormwater infrastructure alternatives considered? - 1 point

- Yes (1 point)
- No (0 points)

PD-02.1c Was an LCCA performed for the project's major feature (bridges, tunnels, retaining walls, or other items not listed in the preceding options) for each of the alternatives considered? - 1 point

- Yes (1 point)
 - No (0 points)
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PD-03 **Context Sensitive Project Development** (10 points)

Deliver projects that harmonize transportation requirements and community values through effective decision-making and thoughtful design.

PD-03.1 Did the project development process generally follow the six-step CSS framework described in NCHRP report 480 and NCHRP report 642, or an equivalent process? - 2 points

- Yes (2 points)
- No (0 points)

PD-03.2 Did the project development process feature a "cradle-to-grave" project team that included planners, traffic engineers, public involvement specialists, design engineers, environmental experts, safety specialists, landscape architects, right-of-way staff, freight experts, construction engineers, and others to work on projects who worked together to achieve the desired CSS-based vision for the project? - 1 point

- Yes (1 point)
- No (0 points)

PD-03.3 As a result of CSS-influenced project development process, were external "champions" for the project created in the affected community who were engaged and proactive in supporting it? - 1 point

- Yes (1 point)
- No (0 points)

PD-03.4 Was acceptance achieved among project stakeholders on the problems, opportunities, and needs that the project should address and the resulting vision or goals for addressing them? - 1 point

- Yes (1 point)
- No (0 points)

PD-03.5 Do project features consider the appropriate scale of the project? - 1 point

- Yes (1 point)
- No (0 points)

PD-03.6 Did the project remove objectionable or distracting views? - 2 points

- Yes, during construction only (1 point)
- Yes, permanently (2 points)
- No (0 points)

PD-03.7 Did the project integrate context sensitive aesthetic treatments? - 1 point

- Yes (1 point)
- No (0 points)

PD-03.8 Were aesthetics for structural items incorporated into the design of the project? - 1 point

- Yes (1 point)
- No (0 points)

PD-04 Highway and Traffic Safety (10 points)

Safeguard human health by incorporating science-based quantitative safety analysis processes within project development that will reduce serious injuries and fatalities within the project footprint.

PD-04.1 Were human factors considerations incorporated? - 2 points

- The project relied solely on published design and operational performance standards during the project development process. (0 points)
- Interactions between road users and the roadway using fundamentals captured in Chapter 2 of the Highway Safety Manual and the Human Factors Guideline for Road Systems (NCHRP Report 600 series) were evaluated, documented, and incorporated. (2 points)

PD-04.2 Was awareness built among the public regarding contributing factors to crashes? - 1 point

- Yes (1 point)
- No (0 points)

PD-04.3 Does the agency conduct explicit consideration of safety using quantitative, scientifically proven methods? - 0 points

- Yes (0 points)

PD-04.3a Was the project type established during scoping of project alternatives through a quantitative and statistically reliable process? - 1 point

- Yes (1 point)
- No (0 points)

PD-04.3b Were project design and/or operational alternatives developed and evaluated using explicit consideration of substantive safety through quantitative, statistically reliable methods? - 2 points

- Yes (2 points)
- No (0 points)

PD-04.3c Were quantitative and statistically reliable methods and knowledge used to assess substantive safety performance in the development of preliminary and final design details? - 3 points

- Yes (3 points)
- No (0 points)

- No (0 points)

PD-04.4 Was a statistically reliable, science-based method used to evaluate the safety effectiveness of the implemented project? - 1 point

- Yes (1 point)
 - No (0 points)
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PD-05 Educational Outreach (2 points)

Increase public, agency, and stakeholder awareness of the integration of the principles of sustainability into roadway planning, design, and construction.

PD-05.1 Did this project incorporate public educational outreach that promotes and educates the public about sustainability by installing or performing a minimum of two different elements from Table PD-05.1.A?

- 2 points

- Yes (2 points)
 - No (0 points)
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PD-06 Tracking Environmental Commitments (5 points)

Ensure that environmental commitments made by the project are completed and documented in accordance with all applicable laws, regulations, and issued permits.

PD-06.1a Was a comprehensive environmental compliance tracking system used for the project and related facilities? - 2 points

- Yes (2 points)

PD-06.1b Does the environmental tracking system have a formal mechanism to communicate commitments from transportation planning through design, construction and maintenance? - 1 point

- Yes (1 point)
- No (0 points)

- No (0 points)

PD-06.2 Has the principal project constructor assigned an independent environmental compliance monitor who will provide quality assurance services and report directly to and make recommendations to the

regulatory and Lead Agencies? - 2 points

- Yes (2 points)
 - No (0 points)
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PD-07 Habitat Restoration (7 points)

Avoid, minimize, rectify, reduce, and compensate the loss and alteration of natural (stream and terrestrial) habitat caused by project construction and/or restore, preserve, and protect natural habitat beyond regulatory requirements.

PD-07.1 Was project-specific mitigation or mitigation banking used on this project? Use Table PD-07.1.A to determine the points earned. - 3 points

- 1 Point (1 point)
- 2 Points (2 points)
- 3 Points (3 points)
- None (0 points)

PD-07.2 Were high quality aquatic resources (HQAR) avoided or were the impacts minimized on this project Use Table PD-07.2.A to determine the points earned. - 2 points

- 1 Point (1 point)
- 2 Points (2 points)
- None (0 points)

PD-07.3 Were high quality environmental resources avoided or were the impacts minimized on this project? Use Table PD-07.3.A to determine the points earned. - 2 points

- 1 Point (1 point)
 - 2 Points (2 points)
 - None (0 points)
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PD-08 Stormwater Quality and Flow Control (6 points)

Improve stormwater quality from the impacts of the project and control flow to minimize their erosive effects on receiving water bodies and related water resources, using management methods and practices that reduce the impacts associated with development and redevelopment.

PD-08.1 Did the project treat at least 80% of the total runoff volume? Use Tables PD-08.1.A and PD-08.1.B to determine points. - 3 points

- No (0 points)
- 1 Point (1 point)
- 2 Points (2 points)
- 3 Points (3 points)

PD-08.2 Did the project manage the flow from at least 80 percent of the total runoff volume, and is flow control based on controlling peak flows or durations from the project site? Use Tables PD-08.2.A and PD-08.1.B to determine points. - 3 points

- No (0 points)
 - 1 Point (1 point)
 - 2 Points (2 points)
 - 3 Points (3 points)
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PD-09 Ecological Connectivity (4 points)

Avoid, minimize, or enhance wildlife, amphibian, and aquatic species passage access, and mobility, and reduce vehicle-wildlife collisions and related accidents.

PD-09.1P Was a site-specific ecological assessment of the roadway project using GIS data or regional expertise conducted? - 0 points

- Yes (0 points)

PD-09.1 Were methods used to minimize impacts to ecological connectivity? Use Table PD-09.1.A to determine points. - 3 points

- No (0 points)
- 1 (1 point)
- 2 (2 points)
- 3 (3 points)

PD-09.2 Did the project team engage natural resource and regulatory agencies throughout the planning process and ensure consistency with broader planning goals and objectives? - 1 point

- No (0 points)
- Yes (1 point)

- No (0 points)
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PD-10 Pedestrian Facilities (3 points)

Provide safe, comfortable, convenient, and connected pedestrian facilities for people of all ages and abilities within the project footprint.

PD-10.1P Were all facilities upgraded to meet ADA standards and do responses below exclude any projects to upgrade facilities to ADA standards? - 0 points

- Yes (0 points)

PD-10.1 Were missing pedestrian connections installed per master plan or other relevant documents? - 1 point

- Yes (1 point)
- No (0 points)

PD-10.2 Were pedestrian features installed that are safe, comfortable, convenient and connected? - 2 points

- PD-10.2a Yes, existing pedestrian features were enhanced. (1 point)
- PD-10.2b Yes, new pedestrian facilities were developed. (2 points)
- No (0 points)

- No (0 points)
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PD-11 Bicycle Facilities (3 points)

Provide safe, comfortable, convenient, and connected bicycling facilities within the project footprint.

PD-11.1 Were missing bicycle connections installed per master plan or other relevant documents? - 1 point

- Yes (1 point)
- No (0 points)

PD-11.2 Were bicycle features installed that are safe, comfortable, convenient and connected? - 2 points

- PD-11.2a Yes, existing bicycle features were enhanced. (1 point)
 - PD-11.2b Yes, new bicycle facilities were developed. (2 points)
 - No (0 points)
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PD-12 Transit and HOV Facilities (5 points)

Promote use of public transit and carpools in communities by providing new transit and high occupancy vehicle (HOV) facilities, or by upgrading existing facilities within the project footprint.

PD-12.1 Were Transit and HOV facilities installed on this project that are consistent with the need, purpose, and appropriateness for transit and HOV access within the project footprint? Use Table PD-12.1.A to determine points. - 5 points

- No (0 points)
 - 1 Point (1 point)
 - 2 Points (2 points)
 - 3 Points (3 points)
 - 4 Points (4 points)
 - 5 Points (5 points)
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PD-13 Freight Mobility (7 points)

Enhance mobility of freight movements, decrease fuel consumption and emissions impacts, and reduce freight-related noise.

PD-13.1 Were freight facilities installed on this project consistent with the need, purpose, and appropriateness for freight mobility within the project footprint? Use Table PD-13.1.A to determine points. - 7 points

- No (0 points)
 - 1 Point (1 point)
 - 2 Points (2 points)
 - 3 Points (3 points)
 - 4 Points (4 points)
 - 5 Points (5 points)
 - 6 Points (6 points)
 - 7 Points (7 points)
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PD-14 ITS for System Operations (5 points)

Improve the efficiency of transportation systems through deployment of technology and without adding infrastructure capacity in order to reduce emissions and energy use, and improve economic and social needs.

PD-14.1 Were one or more allowable ITS applications installed? Use Table PD-14.1.A to determine points. - 5 points

- No (0 points)
 - At least 1 application in any category (1 point)
 - At least 1 application in 2 separate categories (2 points)
 - At least 1 application in 3 separate categories (3 points)
 - At least 1 application in 4 separate categories (4 points)
 - At least 1 application in 5 separate categories (5 points)
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PD-15 Historic, Archaeological, and Cultural Preservation (3 points)

Preserve, protect, or enhance cultural and historic assets, and/or feature National Scenic Byways Program (NSBP) historic, archaeological, or cultural intrinsic qualities in a roadway.

PD-15.1P Is any part of the project or resource listed in the NRHP or been determined eligible for the NHRP by a State, Local, or Tribal Historic Preservation Officer? - 0 points

- Yes (0 points)

PD-15.1 Has an effort been made to minimize impacts, avoid impacts, or enhance features? - 3 points

- PD-15.1a An effort has been made to minimize the "adverse effects" to the features from PD-15.1P. (1 point)

- PD-15.1b Measures have been taken to specifically avoid impacts to the features from PD-15.1P. (2 points)
- PD-15.1c Actions have been taken to enhance features through the protection, preservation, and/or enhancement of historic, archaeological, or cultural resources. (3 points)
- No (0 points)

- No (0 points)

PD-15.2P Is a portion of the project along one of Americas Byways, a State Scenic Byway, an Indian Tribe Scenic Byway, or other route designated or officially recognized as significantly historical, cultural, or archaeological? - 0 points

- Yes (0 points)

PD-15.1 Has An Effort Been Made To Minimize Impacts, Avoid Impacts, Or Enhance Features? - 3 points

- PD-15.1a An effort has been made to minimize the "adverse effects" to the features from PD-15.1P. (1 point)
- PD-15.1b Measures have been taken to specifically avoid impacts to the features from PD-15.1P. (2 points)
- PD-15.1c Actions have been taken to enhance features through the protection, preservation, and/or enhancement of historic, archaeological, or cultural resources. (3 points)
- No (0 points)

- No (0 points)

PD-15.3P Is any part of the project or resource recognized by the community as having historic, cultural, and/or archeological significance to the community? - 0 points

- Yes (0 points)

PD-15.1d Were measures taken to specifically avoid impacts to these features? - 1 point

- Yes (1 point)
- No (0 points)

- No (0 points)

PD-16 Scenic, Natural, or Recreational Qualities (3 points)

Preserve, protect, and/or enhance routes designated with significant scenic, natural, and/or recreational qualities in order to enhance the public enjoyment of facilities.

PD-16.1P Is any portion of the project along one of America's Byways®, a State Scenic Byway, an Indian Tribe Scenic Byway, or other route that was designated or officially recognized as such? - 0 points

- Yes (0 points)

PD-16.2P Was existing access to scenic, natural, or recreational qualities not removed (i.e., maintained) as a part of this project unless it was specifically removed to protect the scenic, natural, and/or recreational qualities themselves? - 0 points

- Yes (0 points)

PD-16.1 Were efforts made to avoid or minimize impacts, or enhance features, of the scenic, natural, and/or recreational qualities? - 3 points

- PD-16.1a An effort has been made to minimize "adverse effects" to the scenic, natural, or recreational qualities to the features from PD-16.1P. (1 point)
- PD-16.1b At least one access was provided from the project to a designated area for vehicles to exit traffic and experience the scenic, natural, or recreational quality. (1 point)

- PD-16.1c Measures were taken to specifically avoid impacts to the scenic, natural, or recreational qualities to the features from PD-16.1P. (2 points)
- PD-16.1d Efforts were made to protect, preserve, or enhance scenic, natural, or recreational qualities along the roadway. (3 points)

- No (0 points)

- No (0 points)
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PD-17 **Energy Efficiency** (8 points)

Reduce energy consumption of lighting systems through the installation of efficient fixtures and the creation and use of renewable energy.

PD-17.1 Were energy needs evaluated for the project? - 0 points

- Yes (0 points)

PD-17.1 Were alternatives implemented to reduce power consumption while still meeting lighting and safety standards? - 1 point

- Yes (1 point)
- No (0 points)

- No (0 points)

PD-17.2 Was the energy consumption on the project reduced through the installation of energy efficient lighting and signal fixtures and through the installation of autonomous, on-site, renewable power sources? - 0 points

- Yes (0 points)

PD-17.2 Points are awarded based on the percentage of reduced power use. Based on Table PD-17.2.A, how many points did the project earn? - 6 points

- 1 Point (1 point)
- 2 Points (2 points)
- 3 Points (3 points)
- 4 Points (4 points)
- 5 Points (5 points)
- 6 Points (6 points)
- None (0 points)

- No (0 points)

PD-17.3 Was a plan established for auditing energy use after project completion as part of operations and maintenance? - 1 point

- Yes (1 point)
 - No (0 points)
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PD-18 **Site Vegetation, Maintenance and Irrigation** (6 points)

Promote sustainable site vegetation within the project footprint by selecting plants and maintenance methods that benefit the ecosystem.

PD-18.1P Does all site vegetation use non-invasive species only, use non-noxious species only, use seeding that does not require consistent mowing for a viable stand of grass, and minimize disturbance of native species? - 0 points

- Yes (0 points)

PD-18.1 Based on Table PD-18.1.A, how many points did the project earn? Points for features are additive, however this criterion shall not exceed a total of 3 points. - 3 points

- 1 Point (1 point)
- 2 Points (2 points)
- 3 Points (3 points)
- None (0 points)

PD-18.2 Based on Table PD-18.2.A, how many points did the project earn for vegetative maintenance? Points for features are cumulative, however this scoring requirement shall not exceed a total of 3 points. - 0 points

- No (0 points)
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PD-19 Reduce, Reuse and Repurpose Materials (12 points)

Reduce lifecycle impacts from extraction and production of virgin materials by recycling materials.

PD-19 Points for different methods are cumulative; however, this criterion shall not exceed a total of twelve points. Points exceeding twelve will not contribute to overall score. - 0 points

- I understand. (0 points)

PD-19.1 Was remaining service life increased through pavement preservation activities? Points are awarded per Table PD-19.1.A. - 4 points

- No (0 points)
- 1 (1 point)
- 2 (2 points)
- 3 (3 points)
- 4 (4 points)

PD-19.2 Was the amount of new pavement materials needed reduced? Points are awarded per Table PD-19.2.A. - 3 points

- No (0 points)
- 1 (1 point)
- 2 (2 points)
- 3 (3 points)

PD-19.3 Was remaining service life increased through bridge preservation activities? Points are awarded per Table PD-19.3.A. - 4 points

- No (0 points)
- 2 (2 points)
- 3 (3 points)
- 4 (4 points)

PD-19.4 Was remaining service life increased through retrofitting existing bridge structures? Points are awarded per Table PD-19.3.A. - 3 points

- No (0 points)
- 1 (1 point)
- 2 (2 points)
- 3 (3 points)

PD-19.5 Were existing pavements, structures, or structural elements reused for a new use? Points are awarded per Table PD-19.5.A. - 3 points

- No (0 points)
- 1 (1 point)

- 2 (2 points)
- 3 (3 points)

PD-19.6b Were industrial by-products reused in pavement materials, ancillary structures, and other roadway elements? - 2 points

- Yes (2 points)

PD-19.6a Were foundry sand or other industrial by-products used in pipe bedding and backfill? - 1 point

- Yes (1 point)
- No (0 points)

- No (0 points)

PD-19.7 Was a project-specific plan for the recycling and reuse plan developed as described? - 1 point

- Yes (1 point)
 - No (0 points)
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PD-20 Recycle Materials (10 points)

Reduce lifecycle impacts from extraction, production, and transportation of virgin materials by recycling materials.

PD-20 Points for different methods are cumulative; however, this criterion shall not exceed a total of ten points. Points exceeding ten will not contribute to overall score. - 0 points

- I understand. (0 points)

PD-20.1 Was RAP or RCA used in new pavement lifts, granular base course, or embankments? Points are awarded per Tables PD-20.1.A or PD-20.1.B. - 5 points

- No (0 points)
- 1 (1 point)
- 2 (2 points)
- 3 (3 points)
- 4 (4 points)
- 5 (5 points)

PD-20.2 Were pavement materials recycled in place using cold-in-place recycling, hot-in-place recycling, and full depth reclamation methods? Points are awarded per Table PD-20.2.A. - 6 points

- No (0 points)
- 2 points (2 points)
- 3 points (3 points)
- 4 points (4 points)
- 5 points (5 points)
- 6 points (6 points)

PD-20.3 Did the project reuse subbase granular material as subgrade embankment or as part of the new subbase? Points are awarded per Table PD-20.3.A. - 2 points

- No (0 points)
- 1 (1 point)
- 2 (2 points)

PD-20.4 Did the project relocate and reuse at least 90 percent of the minor structural elements, including existing luminaires, signal poles, and sign structures that are required to be removed and/or relocated onsite? - 1 point

- Yes (1 point)
- No (0 points)

PD-20.5 Did the project salvage or relocate existing buildings? - 2 points

- Yes (2 points)
 - No (0 points)
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PD-21 Earthwork Balance (5 points)

Reduce the need for transport of earthen materials by balancing cut and fill quantities.

PD-21.1a Are the design cut and fill volumes or the actual construction cut and fill volumes balanced to within 10%? - 3 points

- Yes (3 points)
- No (0 points)

PD-21.1b Are the design cut and fill volumes or the actual construction cut and fill volumes balanced to within 10% if construction banking is used? - 1 point

- Yes (1 point)
- No (0 points)

PD-21.2 Has an earthwork management plan been established, implemented and actively managed on this project? - 1 point

- Yes (1 point)
- No (0 points)

PD-21.3 Has topsoil been preserved or reused on this project? - 1 point

- Yes (1 point)
 - No (0 points)
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PD-22 Long-Life Pavement (7 points)

Minimize life-cycle costs by designing long-lasting pavement structures.

PD-22 Points for different methods are cumulative; however, this criterion shall not exceed a total of seven points. Points exceeding seven will not contribute to overall score. - 0 points

- I understand. (0 points)

PD-22.1 Which of the following describes how long-life pavement was used on this project? - 5 points

- No long-life pavement was used or it was and did not meet the minimum requirements of the options below. (0 points)
- Long-life pavement was used for at least 95 percent of the surface area of bus pullouts. (1 point)
- Long-life pavement was used for at least 75 percent of the surface area of dedicated or primary bus lanes. (2 points)
- Long-life pavement was used for at least 75 percent of the surface area of regularly trafficked lanes. (5 points)

PD-22.2 Was the asphalt density of 100 percent of the total new or reconstructed pavement increased to a minimum of 94 percent? - 5 points

- Yes (5 points)
- No (0 points)

PD-22.3 Was a performance-based pay incentive for pavement smoothness used on this project? - 2 points

- Yes (2 points)
 - No (0 points)
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PD-23 Reduced Energy and Emissions in Pavement Materials (3 points)

Reduce energy use in the production of pavement materials.

PD-23 Points for different methods are cumulative; however, this criterion shall not exceed a total of three points. Points exceeding three will not contribute to overall score. - 0 points

- I understand. (0 points)

PD-23.1 Was at least 50 percent of the total project pavement material (by weight) a low-energy material from asphalt production? - 3 points

- PD-23.1a Yes, it was warm mix asphalt. (0 points)

PD-23.1a Was the warm mix asphalt mixing temperature reduced by one of the following: - 3 points

- Less than 30 degrees from that recommended by the binder supplier. (0 points)
- A minimum of 30 degrees from that recommended by the binder supplier. (1 point)
- A minimum of 40 degrees from that recommended by the binder supplier. (2 points)
- A minimum of 50 degrees from that recommended by the binder supplier. (3 points)

- PD-23.1b Yes, it was asphalt from a plant utilizing the energy and fuel savings described. (3 points)
- No (0 points)

PD-23.2 Was at least 50 percent of the total project pavement material (by weight) a low-energy material from cement production? - 3 points

- PD-23.2a Yes, cement production using an ENERGY STAR® certified plant was used. (3 points)
- PD-23.2b Yes, cement production using fuel saving technologies was used. (3 points)
- PD-23.2c Yes, cement production using a minimum 3 percent limestone additive was used. (3 points)
- No, or it did not meet the minimum requirements in the options above. (0 points)

PD-23.3 Was at least 50 percent of the total project pavement material (by weight) a low-energy material from concrete production? - 3 points

- PD-23.3a Yes, concrete production in a plant with demonstrated reduction in energy and carbon footprint was used. (3 points)
- PD-23.3b Yes, concrete production occurred in an NRMCA Sustainable concrete plant. (3 points)
- No, or it did not meet the minimum requirements in the options above. (0 points)

PD-24 Permeable Pavement (2 points)

Improve flow control and quality of stormwater runoff through use of permeable pavement technologies.

PD-24.1and2P Does the project include a maintenance plan for permeable pavements and are permeable pavements placed in areas where no sand will be used for snow and ice control or pavement sealing? - 0 points

- Yes (0 points)

PD-24.1 Is permeable pavement used on the project? - 2 points

- Yes, for at least 50 percent of the secondary pavement areas on the project. (1 point)
- Yes, for at least 75 percent of the secondary pavement areas on the project. (2 points)
- No, or it did not meet the minimum requirements in the options above. (0 points)

- No (0 points)

PD-25 Construction Environmental Training (1 point)

Provide construction personnel with the knowledge to identify environmental issues and best practice methods to minimize impacts to the human and natural environment.

PD-25.1 Did the owner require the Contractor to plan and implement a formal environmental awareness training program during construction to ensure the project stay in compliance with environmental laws, regulations, and policies? - 1 point

- Yes (1 point)
 - No (0 points)
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PD-26 Construction Equipment Emission Reduction (2 points)

Reduce air emissions from non-road construction equipment.

PD-26.1 Were one or more methods implemented to reduce non-road emissions? Points are awarded per Table PD-26.1.A. - 2 points

- 1 (1 point)
 - 2 (2 points)
 - No (0 points)
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PD-27 Construction Noise Mitigation (2 points)

Reduce annoyance or disturbance to surrounding neighborhoods and environments from road construction noise.

PD-27.1 Is the contractor required to establish, implement, and maintain a formal Noise Mitigation Plan (NMP) during roadway construction? - 1 point

- Yes (1 point)
- No (0 points)

PD-27.2 Has the contractor monitored noise and the effectiveness of mitigation measures at the receptors throughout construction to ensure compliance with the NMP? - 1 point

- Yes (1 point)
 - No (0 points)
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PD-28 Construction Quality Control Plan (5 points)

Improve quality by requiring the contractor to have a formal Quality Control Plan (QCP).

PD-28.1 Is the Contractor required to plan and implement quality control measures throughout construction with care and for materials above and beyond what is typically required by specifications and regulations? - 3 points

- Yes (3 points)
- No (0 points)

PD-28.2 Does the contract leverage the use of Quality Price Adjustment Clauses to link payment and performance of the constructed products? - 2 points

- Yes (2 points)
 - No (0 points)
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PD-29 Construction Waste Management (4 points)

Utilize a management plan for road construction waste materials to minimize the amount of construction-related waste destined for landfill.

PD-29.1 Is the contractor required to establish, implement, and maintain a formal Construction and Demolition Waste Management Plan (CWMP) during roadway construction, or its functional equivalent? - 1 point

- Yes (1 point)
- No (0 points)

PD-29.2 Can the owner demonstrate that a percentage of the construction waste has been diverted from landfills? - 2 points

- No, or diverted less than 50 percent of the construction waste from landfills (0 points)
- Diverted at least 50 percent of the construction waste from landfills (1 point)
- Diverted at least 75 percent of the construction waste from landfills (2 points)

PD-29.3 Were excess materials hauled directly to other project sites for recycling on those projects? - 1 point

- Yes (1 point)
 - No (0 points)
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PD-30 Low Impact Development (3 points)

Use low impact development stormwater management methods that reduce the impacts associated with development and redevelopment and that mimic natural hydrology.

PD-30.1 Did the project use effective BMPs or stormwater management techniques that mimic natural hydrology to treat pollutants? Use Tables PD-30.1.A and PD-30.1.B and PD-30.1.C to determine points. - 3 points

- No (0 points)
 - 1 Point (1 point)
 - 2 Points (2 points)
 - 3 Points (3 points)
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PD-31 Infrastructure Resiliency Planning and Design (12 points)

Respond to vulnerabilities and risks associated with current and future hazards (including those associated with climate change) to ensure transportation system reliability and resiliency.

PD-31.1 Did the project incorporate consideration of climate change at a project-specific level in project development and environmental reviews? - 2 points

- Yes (2 points)
- No (0 points)

PD-31.2 Did the project incorporate future consideration of climate change effects in the design process? - 6 points

- PD-31.2a Yes, in the design process. (0 points)

PD-31.2a Which of the following options applies? Choose quantitatively if both apply. - 3 points

- Climate change effects are qualitatively considered. (1 point)
- Climate change effects are quantitatively considered. (3 points)

- PD-31.2b Yes, in the design of the project. (0 points)

PD-31.2b Which of the following options applies? - 6 points

- Design changes are incorporated in only one design discipline. (4 points)
- Design changes are incorporated in two or more design disciplines. (6 points)

- No (0 points)

PD-31.3 Did the project mitigate the effects of GHG emissions through design efforts above and beyond requirements and regulations? - 4 points

- Yes (4 points)
 - No (0 points)
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PD-32 Light Pollution (3 points)

To safely illuminate roadways while minimizing unnecessary and potentially harmful illumination of the surrounding

sky, communities, and habitat.

PD-32.1 Were the uplighting ratings met on this project per Table PD-32.1.A? - 1 point

- Yes (1 point)
- No (0 points)

PD-32.2 Were the backlighting ratings met on this project per Table PD-32.2.A? - 1 point

- Yes (1 point)
- No (0 points)

PD-32.3 Were the glare ratings met on this project per Table PD-32.3.A? - 1 point

- Yes (1 point)
 - No (0 points)
-

PD-33 Noise Abatement (5 points)

Reduce traffic noise impacts to surrounding communities and environments.

PD-33 Points for different noise abatement methods are cumulative; however, this criterion shall not exceed a total of five points. Points exceeding five will not contribute to overall score. - 0 points

- I understand. (0 points)

PD-33.1 Was a specialized noise barrier used on this project? - 2 points

- Yes (2 points)
- No (0 points)

PD-33.2 Were traffic system management techniques used to reduce existing noise levels? - 2 points

- Yes (2 points)
- No (0 points)

PD-33.3 Were buffer zones provided for adjacent noise sensitive receptors? - 2 points

- Yes (2 points)
- No (0 points)

PD-33.4 Were quiet pavements used on the project? Use Table PD-33.4.A to determine the points earned. - 3 points

- Yes, 1 point. (1 point)
- Yes, 2 points. (2 points)
- Yes, 3 points. (3 points)
- No (0 points)

PD-33.5 Were plantings used as a sight screen to separate noise receptors from the project? - 1 point

- Yes (1 point)
 - No (0 points)
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