

INVEST Memorandum
State Route 30: Use of INVEST for Sustainable Project Development During the
Design Concept Report and Environmental Assessment Phase
Arizona Department of Transportation



SEPTEMBER 2019

INVEST Score: SILVER (57 points)

State Route (SR) 30 Freeway:

SR 202L (South Mountain Freeway) to SR 303L (Loop 303)

NH-801-B(ARG)

801 MA 000 H6876 01L

Maricopa County, Arizona

Ultimate Freeway Proposed Cost: \$1.7b



Background

Since 2005, the Arizona Department of Transportation (ADOT) has been studying State Route 30, a proposed new freeway corridor that would serve as an alternate route to Interstate 10. The study area extends from Sarival Avenue on the west to 59th Avenue on the east, and Lower Buckeye Road on the north to the Gila and Salt rivers on the south. The project spans about 13-miles and passes through the cities of Goodyear, Avondale, Phoenix and portions of unincorporated Maricopa County.

In early 2015, after several years of study, the ADOT presented the public with four build alternatives (North, Center, Hybrid, and South). All four (4) alternatives were evaluated with a comprehensive screening process using twenty-four (24) technical (environmental and engineering) criteria, eight (8) cost and right-of-way criteria, and seven (7) agency and public support criteria. Also considered was a No-Build Alternative, which explored the impacts of not building a transportation corridor in the study area.

In November 2017, the ADOT held a public meeting that provided information on the four build alternatives and the No-Build Alternative, concluding with an announcement that only the No-Build Alternative and the Hybrid Alternative were being carried forward for detailed analysis and additional public input. The Hybrid Alternative would now be referred to as the Recommended Build Alternative (or RBA).

In early 2019, after carefully considering the findings from the multi-year screening process that evaluated twenty-four (24) environmental and engineering criteria, eight (8) cost and right of way criteria, and the public and agency feedback received during the Spring 2019 Public Hearing, the ADOT is recommending the RBA as the Recommended Alternative. A finding of no significant impact (FONSI) is anticipated upon air quality conformity in 2019.

What is INVEST?

The Federal Highway Administration (FHWA) INVEST program is a self-evaluation tool that measures the use of voluntary sustainability best practices that cover the full life cycle of transportation services, including system planning, project planning, design, construction, operation, and maintenance. The FHWA developed INVEST for voluntary use by transportation agencies to assess and enhance the sustainability of their projects and programs.

The INVEST program features sustainability criteria that are divided into four independent modules that are evaluated separately:

- **System Planning for States (SPS)** – This module is geared toward states, toll road agencies, and other local agencies that perform landscape-scale and corridor-wide planning and that typically own infrastructure.
- **System Planning for Regions (SPR)** – This module is geared toward metropolitan planning organizations, councils of governments, and other planning organizations that perform landscape-scale planning for a metropolitan area but typically do not own transportation infrastructure.
- **Project Development (PD)** – This module spans the entire project development process. It includes early project planning, alternatives analysis, environmental documentation, preliminary and final design, and construction. Although the criteria span all phases of project development, including construction activities, the project owner typically has control over the decisions and actions necessary to meet all of the criteria.
- **Operations and Maintenance (OM)** – This module evaluates the system-level operation and maintenance activities to determine how they contribute to the overall sustainability of the transportation infrastructure. The OM criteria score an agency's internal and system operations as well as any asset management and maintenance activities performed on the agency's infrastructure.

The system planning modules (SPS and SPR) focus on performing system-level analyses to assess the overall sustainability of the network and the individual projects programmed in a certain phase of the life cycle. The system planning criteria are primarily intended to score an agency's fiscally constrained long-range transportation plan, which is expected to include the agency's transportation planning process, project selection criteria, the transportation improvement program/state transportation improvement plan, and project programming. The PD and OM modules analyze individual projects, groups of similar projects, or programs specific to operating a system and are, therefore, more specific.

Although many agency and project efforts and practices can be considered sustainable, INVEST focuses on practices that go above and beyond those that are currently used. Overall, INVEST is a tool to use when attempting to capture current best management practices and document new sustainable objectives - visit: <https://www.sustainablehighways.org/>.

INVEST Goals

The FHWA built INVEST using input and advice from transportation professionals, with the specific needs of the aforementioned agencies in mind. ADOT was a 2010 INVEST beta-tester and has incorporated the tool through three subsequent FHWA grants. As a result, the information in INVEST is practical and tangible, and relates to the everyday activities of transportation organizations. It translates broad sustainability principles into specific actions, and provides transportation professionals a way to measure sustainability. INVEST helps transportation agencies go above and beyond minimum requirements to promote responsible stewardship.

Since INVEST became available, transportation agencies from around the country have used it to evaluate and improve their projects and programs and to accomplish agency-wide sustainability goals. As illustrated in Table 1, INVEST offers multiple approaches and applications to help transportation agencies achieve specific sustainability goals.

Table 1. Approaches to Achieving Sustainability Goals Using INVEST

Goal	Approach
Advance better business practices	Make a business case for sustainability
	Monitor performance and benchmark with INVEST
Integrate sustainability into projects and programs	Improve the sustainability of specific transportation projects
	Keep projects on track to meet your sustainability goals
	Provide contractors with incentives for maximizing sustainability
	Improve the planning process
	Conduct programmatic evaluations and modify agency guidelines to address sustainability
	Maximize sustainability of operation and maintenance programs
Improve education and understanding of sustainability	Change the perception of sustainability
	Provide a consistent reference for sustainable practices
	Motivate and encourage innovations
	Emphasize outcomes over score
	Build intellectual capacity
Facilitate internal and external communication and outreach	Encourage internal communication
	Facilitate external communication
	Demonstrate a commitment to sustainability and self-improvement

INVEST Version 1.3 Scoring Criteria

The current version of INVEST is Version 1.3, which is the result of extensive user input and collaboration that began in 2017. FHWA launched INVEST Version 1.0 in October 2012 with a national webcast. Upon the release of INVEST Version 1.0, FHWA solicited partnerships with transportation departments, metropolitan planning organizations, federal land managers, and local governments that chose to use INVEST Version 1.0 to assess and enhance the sustainability of their projects and programs. INVEST Versions 1.1 (released in January 2015) and 1.2 (released in September 2015) included revisions to INVEST based on extensive feedback received from these partnerships. Version 1.3 was launched in April 2018.

The basis for INVEST's sustainability scoring is its criteria. An INVEST criterion is a collection of results-based sustainable solutions or best practices, combined based on similarity in discipline or timing and including a goal, description, and requirements.

ADOT Sustainability Program and INVEST

Arizona's transportation infrastructure is spread over 114,000 square miles, operates from sea level to 8,000 feet, and withstands temperatures that range from below 0°F to over 120°F. Maintaining optimum health and performance of this infrastructure is critical to Arizona's economic vitality, quality of life, and natural and built environments. The ADOT recognizes the critical need to plan and prioritize resources more efficiently in order to maintain and operate a robust, economically beneficial transportation network. ADOT also recognizes the importance of delivering transportation solutions in a more sustainable manner to achieve economic, social, and environmental goals. ADOT has moved from the early stages of identifying sustainable strategies in 2010 to implementing a sustainable transportation program that encompasses core administrative, planning, design, construction, operation, and maintenance activities.

The three primary principles of sustainability focus on achieving an efficient, well-balanced use of economic, social, and environmental resources—commonly known as the triple bottom line (Figure 1). In theory, this will allow for proper use of funding while attaining all potential project needs and objectives. A sustainable highway, for example, will not only incorporate mobility and transportation alternatives but also consider safety, accessibility, livability, asset management, and environmental stewardship. As stated in the *Guidebook for Sustainability Performance Measurement for Transportation Agencies*;

Often, a goal will support more than one principle. Yet no one goal in itself is sufficient to achieve sustainability - it takes multiple goals, pursued in concert, to promote sustainability. When a final set of goals is defined, it's important to crosscheck the package of goals to ensure that all of the principles are well addressed. In doing so, take care not to force-fit the goals to make them map to the principles. A balanced goal set, however, achieves comprehensive coverage of the basic principles of sustainability... (NCHRP Report 708, 2011, p. 20, p. 47).

Figure 1. Sustainable development across all disciplines



To support its sustainability program, the ADOT has made optimal use of the INVEST program. The ADOT initially became interested in using INVEST in 2010 while in the midst of updating two of its long-term planning documents, *Building a Quality Arizona (bqAZ)* and *What Moves You Arizona?* Arizona was—and is continuing to—go through a period of rapid demographic change and population growth. Simultaneously, many members of the public have become more informed about the transportation planning process and demand that transportation projects address more than just mobility and accessibility needs to also include environmental, social, and economic components. The ADOT began discussing sustainability principles as FHWA first sent out a call to state transportation departments to pilot the tool. INVEST provided the opportunity to connect the sustainability principles already under discussion at the ADOT with actual activities. Key outcomes of the ADOT’s initial work with INVEST included:

- Scoring over 50 individual transportation projects using the PD module and developing recommendations for improvements to agency sustainability practices based on the evaluation;
- Integrating recommendations and sustainability concepts into ADOT manuals and guidance, including the ADOT *Complete Transportation Guidebook* completed in February 2016;
- Conducting sustainability training with internal ADOT departments and external stakeholders and partners; and
- Developing a sustainability award program to recognize ADOT projects and projects managers that go above and beyond, as measured by the INVEST score, best management practices, and collaboration.

ADOT continues to use, expand, and improve INVEST as one of the cornerstones of its Sustainable Transportation Program.

Purpose of the Memorandum

This memorandum describes the use of the INVEST PD module to analyze and score the ADOT State Route (SR) 30 project—an approximately 13-mile section of new freeway in the Phoenix metropolitan area. The new freeway would be built five (5) miles south of Interstate 10 and would run from Sarival Road in Goodyear east to Loop 202 (South Mountain Freeway) in the western section of Phoenix in Maricopa County, Arizona (Figure 2). SR 30 is a proposed new freeway managed by the ADOT that would eventually link with the proposed ADOT Interstate 11 project in western Maricopa County near Tonopah at its western terminus and with the existing Interstate 17 at the Durango Curve in Phoenix at its eastern terminus. The section of SR 30 analyzed and scored using INVEST is currently in the preliminary design and environmental assessment evaluation phase pursuant to the National Environmental Policy Act.

Using INVEST for the SR 30 project will add to the ADOT’s body of knowledge of projects analyzed and scored with the PD module. As noted above, the ADOT has scored over 50 projects in the agency’s 5-year construction program using the PD module—initially with a specific focus on statewide roundabout projects. The ADOT then expanded the scoring to projects ranging from pavement preservation, to bridge deck rehabilitation, to the addition of new lane miles. The ADOT was particularly interested in how INVEST could supplement the agency goals of furthering efforts surrounding sustainable infrastructure.

Connecting sustainability and NEPA

In addition to the extensive INVEST scoring effort and sustainability review, ADOT initiated an effort early in the Design Concept Report (DCR) and Environmental Assessment (EA) contract negotiations to have hours included for this effort but also to explore how sustainability and NEPA integrate. As such, step one was to designate this 13-mile regional transportation corridor project as ADOT’s first ever sustainable transportation corridor of interest. Step two was to incorporate sustainable transportation language into the October 2017 public meeting.



State Route 30 (SR 30) Study – SR 303L to SR 202L
Public Information Meeting

ADOT’S SUSTAINABLE TRANSPORTATION PROGRAM

- ADOT recognizes the critical need to plan and prioritize resources more efficiently to maintain and operate a robust, economically beneficial transportation network.
- ADOT has moved from the early stages of identifying sustainable strategies to executing a sustainable transportation program into core administrative, planning, design, construction, operations and maintenance activities.
- ADOT has identified the SR 30 Project as a transportation facility to be considered within the guidelines of sustainable transportation program practices.

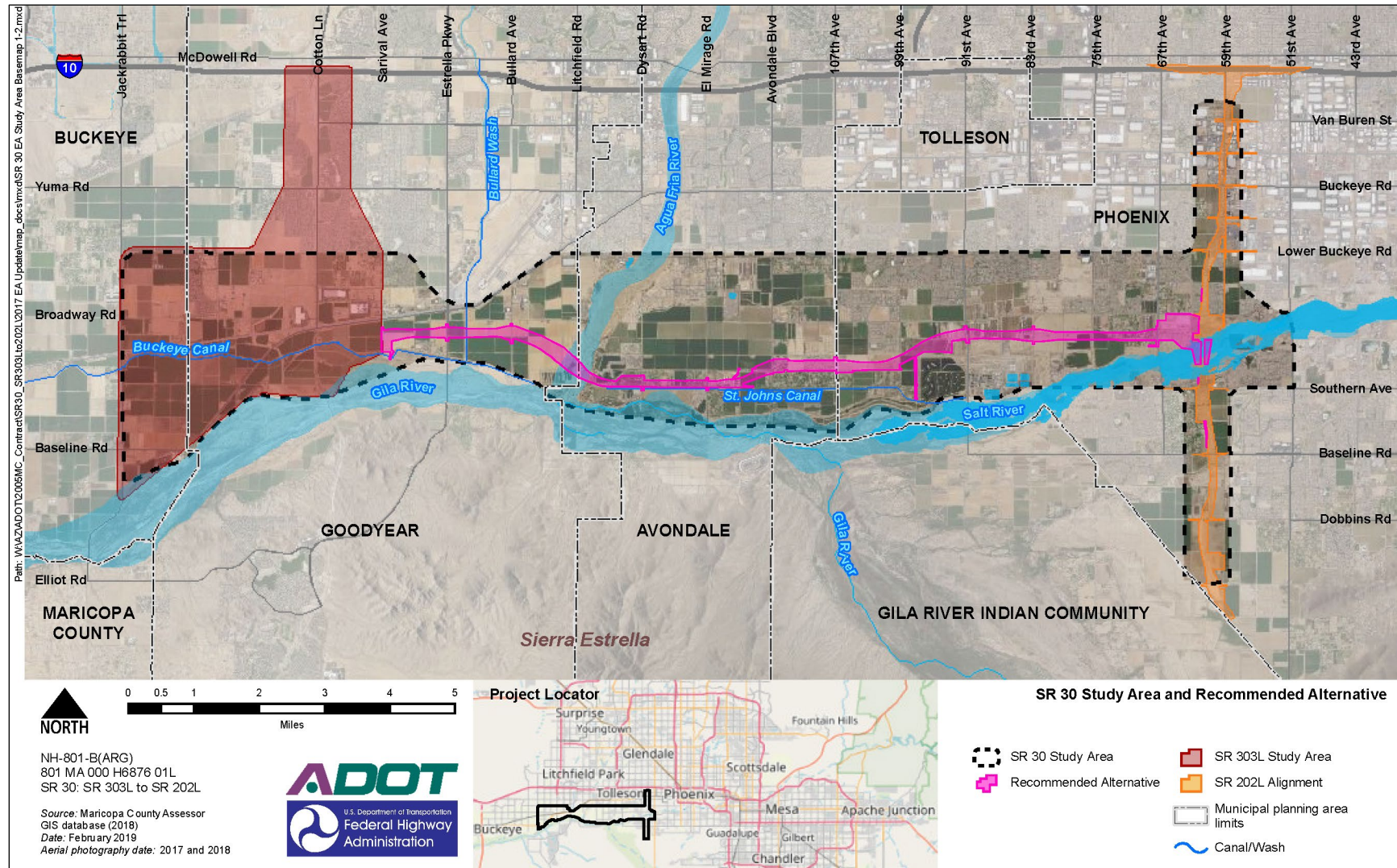


DRAFT 10/05/17

State Route 30, SR 303L to SR 202L - Final EA 10/05/17

Step 3 was to utilize the 100 INVEST hours incorporated into the DCR/EA scope of work to conduct the independent scoring and memorandum development. Step 4 was to conclude the scoring and create a baseline for considering sustainability in design. This baseline was especially important to establish a starting point once final design was started in this \$1.7b freeway.

Figure 2. State Route 30, Sarival Avenue to Loop 202



Project Development Module Criteria

For SR 30, the INVEST PD module was used to score its current level of sustainability because it is an individual project. The PD module includes criteria that span the entire project development process from early planning, alternatives analysis, environmental documentation, preliminary and final design, to construction.

The PD module has 33 criteria organized into 6 fixed and 1 custom scorecard, as discussed below:

<p>PD-01 <u>Economic Analyses</u> 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.</p>
<p>PD-02 <u>Lifecycle Cost Analyses</u> 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.</p>
<p>PD-03 <u>Context Sensitive Project Development</u> Deliver projects that harmonize transportation requirements and community values through effective decision-making and thoughtful design.</p>
<p>PD-04 <u>Highway and Traffic Safety</u> 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.</p>
<p>PD-05 <u>Educational Outreach</u> Increase public, agency, and stakeholder awareness of the integration of the principles of sustainability into roadway planning, design, and construction.</p>
<p>PD-06 <u>Tracking Environmental Commitments</u> Ensure that environmental commitments made by the project are completed and documented in accordance with all applicable laws, regulations, and issued permits.</p>
<p>PD-07 <u>Habitat Restoration</u> 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.</p>
<p>PD-08 <u>Stormwater Quality and Flow Control</u> 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.</p>
<p>PD-09 <u>Ecological Connectivity</u> Avoid, minimize, or enhance wildlife, amphibian, and aquatic species passage access, and mobility, and</p>

reduce vehicle-wildlife collisions and related accidents.

PD-10 Pedestrian Facilities

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

PD-11 Bicycle Facilities

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

PD-12 Transit and HOV Facilities

Promote the use of public transit and carpools in communities by dedicating existing facilities to those uses, upgrading existing lanes, or providing new transit and high occupancy vehicle (HOV) facilities.

PD-13 Freight Mobility

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

PD-14 ITS for System Operations

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-15 Historic, Archaeological, and Cultural Preservation

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-16 Scenic, Natural, or Recreational Qualities

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-17 Energy Efficiency

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

PD-18 Site Vegetation, Maintenance and Irrigation

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

PD-19 Reduce, Reuse and Repurpose Materials

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

PD-20 Recycle Materials

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

PD-21 Earthwork Balance

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

PD-22 Long-Life Pavement

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

PD-23 Reduced Energy and Emissions in Pavement Materials

Reduce energy use in the production of pavement materials.

PD-24 Permeable Pavement

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

PD-25 Construction Environmental Training

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

PD-26 Construction Equipment Emission Reduction

Reduce air emissions from non-road construction equipment.

PD-27 Construction Noise Mitigation

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

PD-28 Construction Quality Control Plan

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

PD-29 Construction Waste Management

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

PD-30 Low Impact Development

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

PD-31 Infrastructure Resiliency Planning and Design

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-32 Light Pollution

To safely illuminate roadways while minimizing unnecessary and potentially harmful illumination of the surrounding sky, communities, and habitat.

PD-33 Noise Abatement

Reduce traffic noise impacts to surrounding communities and environments.

These criteria focus on project development, FHWA recognizes that not all criteria are applicable to all projects, so different combinations of these criteria were used to create seven scorecards for different types of projects in both rural and urban settings. The INVEST website is designed to enable selection of the project type and location, which identifies applicable criteria for consideration (see <https://www.sustainablehighways.org/900/about-the-project-development-module.html> to learn how the criteria are used for each type of project). Each PD scorecard includes a different combination of the thirty-three (33) PD criteria based on the project type. For projects that do not fit well into these categories, a custom scorecard option is available. The following describes each of the seven (7) scorecards:

- Paving – This scorecard is for projects that are devoted exclusively to pavement preservation, restoration projects that extend the service life of existing facilities and enhance safety, or pavement restoration projects that restore pavement structure, ride quality, and spot safety. The scorecard is used for paving projects in both rural and urban locations.
- Basic Rural – This scorecard is for small, rural reconstruction or rural bridge replacement projects that do not expand the capacity of the roadway.
- Basic Urban – This scorecard is for small urban reconstruction or urban bridge replacement projects that do not expand the capacity of the roadway.
- Extended Rural – This scorecard is for rural projects for a new roadway facility, structure projects where nothing of its type currently exists, and major reconstruction projects that add travel lanes to an existing roadway or bridge.
- Extended Urban – This scorecard is for urban projects for a new roadway facility, structure projects where nothing of its type currently exists, and major reconstruction projects that add travel lanes to an existing roadway or bridge.
- Recreational and Scenic – This scorecard is for projects on recreational and scenic roads, such as those on federal lands.
- Custom – This scorecard is for projects that do not fit any of the predefined scorecard options. It allows the user to develop a unique set of criteria that is most appropriate for the project being evaluated.

SR 30 INVEST PD Module Criteria Scoring Results and Basis for Scores

The first step in the ADOT SR 30 PD process was to determine the type of project, based on the scorecards described above. The SR 30 study area is located in a rapidly growing and urbanizing area in the western part of Phoenix and the adjacent towns of Avondale and Goodyear. Agricultural land currently exists within the SR 30 study area, but it is rapidly transitioning to residential subdivision and commercial land uses. By the proposed SR 30 design year in 2040, the general plans for Phoenix, Avondale, and Goodyear anticipate that much of the existing agricultural land will have been developed into urban land uses.

The scorecard that best meets the needs of the SR 30 project is Urban Extended. The Urban Extended scorecard requires that all thirty-three (33) criteria of the PD module be evaluated and scored. The

evaluation and scoring of the PD module for the SR 30 project was conducted by a consultant design engineering firm retained by the ADOT to conduct preliminary design, engineering, National Environmental Policy Act compliance, and public involvement for the project. The personnel involved with the design, engineering, and environmental assessment of SR 30 conducted the evaluation and scoring to ensure all aspects of the project's sustainability were considered for each PD module criterion.

The PD module scorecard for the SR 30 project—which includes how each criterion was scored, scoring notes, and next actions—can be reviewed in the appendix. The score for the SR 30 project was 57 points, which was Silver on the INVEST Achievement Level. The INVEST scoring levels are, in ascending order, Bronze, Silver, Gold, and Platinum.

Key findings of the independent PD module evaluation and scoring for the SR 30 project, regarding the ADOT's sustainability practice areas of strength, are discussed below:

PD-03 Context Sensitive Project Development (Points available: 10, Points awarded: 7) – Context-sensitive solution principles were incorporated into the SR 30 design to address identified constraints to the extent possible. The ADOT typically adds landscaping and artistic treatments to structures on every freeway project, so credit is taken for that normal course of project development.

PD-07 Habitat Restoration (Points available: 7, Points awarded: 5) – The Salt, Gila, and Agua Fria Rivers are within the SR 30 study area but have only intermittent annual flow. Much of the natural riparian habitat has been disturbed by other uses, such as quarry operations. The Tres Rios Flow Regulated Wetlands Complex is a High Quality Aquatic Resource located between 99th and 91st Avenues and adjacent to the City of Phoenix 91st Avenue Wastewater Treatment Plant. The SR 30 Recommended Alternative was aligned to avoid impacts on this complex and is located within 100 feet of its boundary, which is worth 4 points. Additionally, the Recommended Alternative includes a drainage facility to drain stormwater away from the complex on its western boundary, thus preventing potential freeway runoff from affecting the complex.

PD-08 Stormwater Quality and Flow Control (Points available: 6, Points awarded: 3) – Given the location of SR 30 in relation to the Salt, Gila, and Agua Fria Rivers and other resources that include the Tres Rios wetlands and levee in the SR 30 study area, drainage was an important consideration in the development of the stormwater management system. The flow control was developed using a peak flow basis, using a worst-case scenario of a 100-year flood, although the ADOT standard is a 50-year flood. For water quality, the on-site stormwater collection system was developed based on ADOT Best Management Practices. Runoff collected in the catch basins would be conveyed in storm drains. First flush volumes would be treated for both sedimentation and petroleum products within the basins, but the volume of water treated would not exceed 80 percent of the total runoff volume, so no credit is applicable. With regard to managing the runoff volume, this project is managing 100 percent of the flows from the project site and, in addition, is collecting and managing the off-site flows that cross the

corridor. This provides flood control protection for all property from the project corridor south to the Salt and Gila Rivers. This constitutes a far greater managed flow protection than 124 percent, thus the 3-point score.

PD-09 Ecological Connectivity (Points available: 4, Points awarded: 2) – The Recommended Alternative was selected over the Southern Alternative, which would have been located in close proximity to the Salt River. Also, ADOT is in the process of preparing a Biological Evaluation to both minimize and avoid biological impacts from the SR 30 project. Wildlife connectivity was evaluated in the Biological Evaluation and Draft Environmental Assessment. The U.S. Fish and Wildlife Service and Arizona Department of Environmental Quality have been and will continue to be involved throughout the SR 30 planning, design, engineering, and environmental process.

PD-12 Transit and HOV Facilities (Points available: 2, Points awarded: 2) – The third phase of the SR 30 project implementation, which is not yet programmed, would widen the 3+0 section (three general purpose lanes in each direction) constructed in the second phase to a 4+1 section (four general purpose lanes and one HOV lane in each direction) in the median of SR 30 when travel demand warrants it, and when funding is available. The fourth and final phase would involve a high-capacity transit corridor, the space for which is being preserved inside the SR 30 right-of-way footprint for some future date and future mode.

PD-13 Freight Mobility (Points available: 7, Points awarded: 3) – SR 30 satisfies PD-13.1g – *Increase transportation efficiencies for moving freight*, because this is a new limited-access freeway with grade-separated crossings and interchanges with arterial streets and a crossing of the Agua Fria River. This new facility would reduce truck traffic on the local arterial street system and would provide an alternative route to Interstate 10, which currently accommodates a high percentage of trucks with a poor level of service during peak travel times.

PD-14 ITS for System Operations (Points available: 5, Points awarded: 3) – This score is based on the ITS applications typically used on the Phoenix freeway system that are constructed, operated, and maintained by ADOT. Specifically, items PD-14.1d – *Information Dissemination*, g – *Ramp Control*, and i – *Surveillance*.

PD-18 Site Vegetation, Maintenance and Irrigation (Points available: 6, Points awarded: 6) – ADOT has a native plant-only seeding policy within right-of-way areas. ADOT requires contract specifications for the control of noxious and invasive plant species. The specification requires the contractor to identify and remove any designated invasive or noxious plant species prior to any earthwork activities. Additionally, these requirements have been diversified from just grass seeding for erosion control to now include annual and perennial wildflowers, forbs, and shrubs to more closely resemble Arizona's diversified native roadside vegetation.

PD-22 Long Life Pavement (Points available: 12, Points awarded: 7) – The Design Elements section of the SR 30 Design Concept Report states that the entire ultimate SR 30 roadway typical section would be paved with long-lasting Portland cement concrete pavement (PCCP) and overlaid with a rubber asphalt friction course. The friction course may have to be replaced every 10 to 15 years, but the PCCP materials traditionally last at least 40 years in the Phoenix area. ADOT standard specifications include a pay incentive for pavement smoothness for both the PCCP and the asphalt friction course.

PD-28 Construction Quality Control Plan (Points available: 5, Points awarded: 5) – ADOT construction contracts pay for a contractor quality control item to ensure quality compliance beyond field inspection. ADOT will also pay premiums for material quality that far exceeds the minimum.

SR 30 is currently in the preliminary design and environmental assessment phase of the project. ADOT will have the ability to review and reassess the sustainability aspects of SR 30 through the use of the INVEST PD Scoring Module as it progresses through the various stages of design and public involvement through final design and construction. It is possible that the SR 30 project may achieve a higher sustainability score through the use of current INVEST PD best practices that ADOT may choose to adopt or new ones that may be added to the PD Scoring Module in newer INVEST versions that FHWA develops in the future.

Appendix: SR 30 PD Module Scorecard