



Report to the Ranking Member,
Committee on Environment and Public
Works, U.S. Senate

September 2014

SURFACE TRANSPORTATION

Department of Transportation Should Measure the Overall Performance and Outcomes of the TIGER Discretionary Grant Program

GAO Highlights

Highlights of [GAO-14-766](#), a report to the Ranking Member, Committee on Environment and Public Works, U.S. Senate

Why GAO Did This Study

Since 2009, Congress has appropriated \$4.2 billion to DOT to award TIGER grants for transportation investments intended to have a significant impact on the nation, a region, or a metropolitan area. GAO was asked to review the TIGER program. During the review, GAO noted a number of concerns with DOT's process for evaluating TIGER applications and selecting projects during the 2013 funding round. Consequently, in May 2014, GAO recommended that DOT establish additional accountability measures for the 2014 and subsequent TIGER funding rounds.

In this report, GAO assesses (1) DOT's progress in addressing the May 2014 recommendations; (2) the extent to which DOT has leveraged non-federal funds in selected TIGER grants awarded from 2009 through 2012, and met other selected program objectives; and (3) steps DOT has taken to measure the performance of the overall TIGER program. GAO reviewed DOT guidelines and grant agreements for 20 TIGER projects selected by region, type, and other factors.

What GAO Recommends

GAO recommends that DOT develop clear linkages between project performance measures and program goals to better measure the performance of the TIGER program and its funded projects in meeting the program's long-term outcomes. DOT agreed to improve performance measurement for the program.

View [GAO-14-766](#). For more information, contact Susan Fleming at (202) 512-2834 or flemings@gao.gov.

September 2014

SURFACE TRANSPORTATION

Department of Transportation Should Measure the Overall Performance and Outcomes of the TIGER Discretionary Grant Program

What GAO Found

In response to GAO's May 2014 recommendations on the Department of Transportation's (DOT) management of the Transportation Investment Generating Economic Recovery (TIGER) grant program, DOT revised its procedures to improve documentation of key decisions. In May 2014, GAO found, among other things, that DOT did not document its rationale for advancing 43 projects with lower technical evaluation ratings instead of 22 more highly-rated projects in the 2013 funding round. GAO recommended that DOT provide more complete documentation of decisions to advance projects with lower technical evaluation ratings. In response, DOT revised its application evaluation guidelines for the 2014 funding round to require additional documentation, but the revised guidelines lack sufficient detail for GAO to determine whether some concerns will be addressed. For example, the revised guidelines do not specify who may request the advancement of a lower-rated project and at what point in the process those decisions can occur. DOT was in the process of evaluating TIGER applications for the 2014 funding round during our review and recently announced its award decisions. GAO will review DOT's application evaluation and project selection decisions for the most recent funding round to determine if the May 2014 recommendations are fully addressed.

DOT has leveraged investments from state and local agencies through selected TIGER grants and taken steps to address the program's statutory requirements. In GAO's review of 20 selected projects from the 2009 through 2012 funding rounds, about one-half of the total construction costs were funded by non-federal sources, with 34 percent of funds coming from counties, cities, and other local agencies. DOT has also taken steps to address other program objectives, including statutory requirements for an equitable geographic distribution of funds, to award specified funding amounts to rural projects, and to invest in a variety of transportation modes through rail, road, transit, port, and other projects.

DOT has taken steps to measure the performance of individual TIGER projects, but cannot assess overall program performance because many project performance measures do not clearly link to the overall program's long-term outcomes. DOT requires grantees to measure the performance and results of their individual projects through periodic reporting of key performance measures developed in coordination with DOT. However, selected TIGER projects' performance measures from the first four funding rounds did not satisfy two key attributes—linkage to overall program goals and measurable targets—that GAO has identified for successful performance measures. For example, many of the project measures do not clearly link to the TIGER program's five long-term outcomes, such as improving the state-of-good repair and the safety of transportation systems. These outcomes serve as DOT's goals for the program and mirror DOT's overall strategic goals. As a result, DOT lacks a framework to assess the performance of the overall TIGER program in achieving its long-term outcomes, and Congress lacks information on whether the amounts invested in the program have had their intended impact on the nation's transportation infrastructure—information that could be useful when making future funding decisions.

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Abbreviations

BCA	benefit-cost analysis
DOT	Department of Transportation
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GPRA	Government Performance and Results Act
MARAD	Maritime Administration
MAP-21	Moving Ahead for Progress in the 21st Century Act
NOFA	notice of funding availability
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Investment Generating Economic Recovery

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September 23, 2014

The Honorable David Vitter
Ranking Member
Committee on Environment and Public Works
United States Senate

Dear Mr. Vitter:

Since 2009, Congress has appropriated \$4.2 billion to the Department of Transportation (DOT) to award competitive grants to states, local governments, transit agencies, and other entities to build infrastructure through the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program. Congress first authorized and appropriated funding to the TIGER program through the American Recovery and Reinvestment Act of 2009 (Recovery Act) to fund highway, transit, rail, port, and other surface transportation projects expected to have a significant impact on the nation, a metropolitan area, or a region.¹ Since the Recovery Act, DOT has received appropriations for the program in each of the last 5 fiscal years. At the time of our review, DOT had awarded \$3.6 billion to 271 projects through five annual funding rounds.²

Discretionary grant programs represent a significant departure from the formula-based approach regularly used to fund the nation's surface transportation program, in which funds are delivered according to prescribed formulas and not based on projects' anticipated outcomes. Through the Recovery Act, Congress directed DOT to (a) establish a competitive process for awarding \$1.5 billion in discretionary grants and (b) publish selection criteria on which to base the competition. The Recovery Act and subsequent appropriations to fund TIGER awards in later funding rounds required DOT to meet several requirements in making award decisions, including that DOT prioritize projects that require

¹American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115, 203 (2009).

²During our review, DOT was in the process of evaluating applications for a sixth TIGER funding round (2014) and announced those awards on September 12, 2014. Due to the timing of those awards, they are not included in this report.

a contribution of federal funds in order to complete an overall financing package—a provision that could encourage grantees to leverage or obtain funds from other sources through TIGER awards.³

You asked that we examine DOT's TIGER discretionary grant program. During the course of our review, we identified a number of issues with DOT's process for evaluating TIGER applications and selecting projects for awards. As a result, in May 2014, we issued a letter to the Secretary of Transportation concerning DOT's application evaluation process for the fiscal year 2013 funding round—referred to as TIGER V in this report.⁴ In that letter we noted that, during the TIGER V funding round, DOT did not document key decisions made in evaluating applications and selecting projects for funding and deviated from DOT's established procedures and from recognized internal control standards.⁵ We concluded that an absence of documentation of such decisions can give rise to challenges to the integrity of the evaluation process and the rationale for the decisions made. We recommended that DOT establish additional accountability measures to manage the TIGER program, including clear procedures for addressing late-arriving applications and for documenting and approving major decisions in the application evaluation and project selection process. In responding to our May 2014 letter, DOT generally agreed with our recommendations and reported that it was planning to make changes to clarify procedures and better document key decisions in the TIGER VI (2014) funding round.

³The statutory requirements are in DOT's appropriations providing funding for the TIGER program from fiscal year 2009 through 2014: Pub. L. No. 111-5, 123 Stat. at 203-04 (2009) (TIGER I, 2009); Consolidated Appropriations Act, 2010, Pub. L. No. 111-117, 123 Stat. 3034, 3036 (2009) (TIGER II, 2010); Department of Defense and Full-Year Continuing Appropriations Act, 2011, Pub. L. No. 112-10, 125 Stat. 191 (2011) (TIGER III, 2011); Consolidated and Further Continuing Appropriations Act, 2012, Pub. L. No. 112-55, 125 Stat. 552, 641(2011) (TIGER IV, 2012); Consolidated and Further Continuing Appropriations Act, 2013, Pub. L. No. 113-6, 127 Stat. 198 (2013) (TIGER V, 2013). Consolidated Appropriations Act, 2014, Pub. L. No. 113-76, 128 Stat. 5, 574 (2014) (TIGER VI, 2014).

⁴GAO, *Surface Transportation: Actions Needed to Improve Documentation of Key Decisions in the TIGER Discretionary Grant Program*, [GAO-14-628R](#) (Washington, D.C.: May 28, 2014).

⁵GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: November 1999).

For this report, we examined (1) DOT's progress in addressing the recommendations made in our May 2014 letter, (2) the extent to which DOT has leveraged non-federal funds in selected TIGER grants awarded in the 2009 through 2012 funding rounds, and met selected other TIGER program objectives, and (3) steps DOT has taken to measure the performance of the overall TIGER program.

To assess changes made by DOT to its TIGER application evaluation procedures, we compared DOT's written procedures for the TIGER VI (2014) funding round with the recommendations from our May 2014 letter.⁶ Because DOT was in the process of evaluating TIGER VI applications at the time of our review, we did not assess the results of the TIGER VI evaluations or the extent to which DOT applied its revised procedures in the TIGER VI funding round. To assess non-federal investments leveraged through TIGER, we reviewed the funding sources in the grant agreements of a non-generalizable sample of 20 TIGER projects funded in the first four funding rounds. We selected these projects using criteria including project type, geographic region, and whether the project was located in an urban or rural area. To assess the extent to which DOT has met other selected program objectives, we reviewed the statutory requirements for the awarding of TIGER grants in the first five funding rounds—TIGER I (2009) through TIGER V (2013). We selected three key statutory requirements that provide descriptions of how TIGER funding has been awarded in the first five rounds, including requirements for (1) an equitable geographic distribution of funds; (2) minimum amounts awarded to projects in rural areas; and (3) investing in a variety of transportation modes.

To evaluate the steps DOT has taken to measure performance of the overall TIGER program, we conducted interviews with DOT officials and reviewed TIGER program documents and grant agreements, and we determined that DOT measures performance on a project-by-project basis. To assess whether this approach would measure the performance of the overall TIGER program, we assessed this approach against federal internal-control standards⁷ and evaluated the performance measures in required "pre-project reports" as submitted by the 20 selected projects as

⁶[GAO-14-628R](#).

⁷GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: November 1999).

of March 2014.⁸ In total, we reviewed the performance measures for 15 grantees that had submitted pre-project reports at the time of our review. We assessed the extent to which the required performance measures for these grantees adhered to three key attributes of successful performance measures—linkage to program goals, clarity, and measurable targets.⁹ We selected these three attributes because, due to the early stage of the projects in our sample, the pre-project reports did not provide sufficient information to evaluate all of the other attributes. A detailed discussion of our objectives, scope, and methodology is provided in appendix I.

We conducted this performance audit from August 2013 to September 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Traditionally, federal surface transportation funding has primarily been delivered through formula grant programs. Discretionary grant programs, such as TIGER, represent an alternative approach for directing federal funding toward national priorities. Through a discretionary grant program, Congress or federal agencies establish desired goals or outcomes—such as improving the condition of critical infrastructure, enhancing economic competitiveness, or reducing fatalities. Generally, federal agencies review grant applications against published selection criteria and legislative and regulatory requirements before selecting projects to receive awards. This approach can help assure accountability for federal investment by more clearly linking program funds to desired outcomes and providing an

⁸DOT requires TIGER grantees to submit a pre-project performance report which is to provide baseline data on the performance of projects for key measures, prior to construction.

⁹Prior GAO work has identified nine attributes of successful performance measures, including linkage, clarity, measurable target, reliability, objectivity, governmentwide priorities, core program activities, balance, and limited overlap. GAO, *Tax Administration: IRS Needs to Further Refine Its Tax Filing Season Performance Measures*, [GAO-03-143](#) (Washington, D.C.: Nov. 22, 2002). A detailed discussion of the 9 attributes of successful performance measures and our methodology to assess the selected TIGER project performance measures by the three attributes of linkage, clarity, and measurable targets is provided in appendix I.

opportunity for the grantees and the federal government to measure progress in achieving those outcomes. In prior work, we have recommended that a merit-based competitive approach—like TIGER—be used to direct a portion of federal funds to transportation projects of national and regional significance.¹⁰ Congress has established two discretionary grant programs designed to fund transportation projects intended to have significant impact at the national and regional level; only one of which—the TIGER discretionary grant program—has been appropriated funding.¹¹

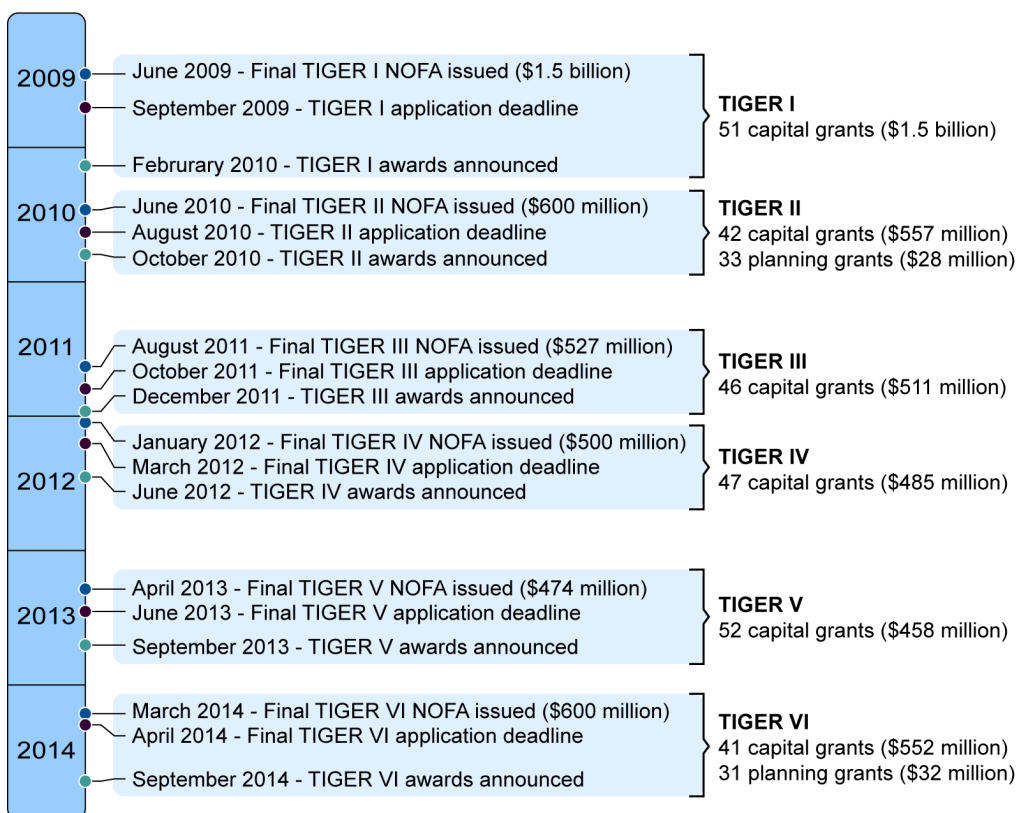
From fiscal year 2009 through 2013, DOT awarded \$3.6 billion in funding in the form of 271 TIGER grants across five funding rounds.¹² On September 12, 2014, DOT awarded an additional \$584 million to 72 projects for its fiscal year 2014 (TIGER VI) funding round. At the onset of each funding round, DOT announces the amount of funding available along with other information for applicants in notice of funding availability (NOFA) published in the *Federal Register*. After evaluating applications and making project selections, DOT announces its awards on its website. The 271 TIGER projects awarded to date include 238 capital grants, which represent 99 percent of the total funding awarded, and 33 planning grants awarded as part of TIGER II (2010) round (see fig. 1).

¹⁰GAO, *Surface Transportation: Clear Federal Role and Criteria-Based Selection Process Could Improve Three National and Regional Infrastructure Programs*, [GAO-09-219](#) (Washington, D.C.: Feb. 6, 2009).

¹¹Through the Moving Ahead for Progress in the 21st Century Act (MAP-21), Congress authorized \$500 million for fiscal year 2013 to the Projects of National and Regional Significance program to fund surface transportation capital projects that will accomplish national goals, such as generating national economic benefits and improving safety. At the time of this review, no funds authorized under MAP-21 have been appropriated for this program.

¹²Although DOT awarded grants to a total of 271 projects from fiscal year 2009 through 2013, DOT did not obligate any funding to one of those projects (San Bernardino Airport Access Project) after learning that two of the project sponsors were under federal investigation. DOT reallocated the \$10 million award amount among four other projects that were awarded grants in 2010.

Figure 1: Timeline of TIGER Discretionary Grant Program, 2009 to Present



Source: GAO analysis of DOT information. | GAO-14-766

Notes: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

NOFA refers to: notice of funding availability.

Differences in the amounts appropriated and awarded within TIGER funding rounds represent funding set aside for DOT's administration and oversight of the program.

Through appropriations for the TIGER program in the past 6 years, Congress has established several statutory requirements for DOT in awarding TIGER grants. Since the Recovery Act, Congress required that DOT take measures to ensure (1) an equitable geographic distribution of funds and (2) an appropriate balance in addressing the needs of urban and rural communities, among other requirements.¹³ Additional statutory requirements have been enacted for subsequent funding rounds. For

¹³See e.g. Pub. L. No. 111-5, 123 Stat. 204.

example, since fiscal year 2010 (TIGER II), legislation has required that DOT invest in a variety of transportation modes and set aside funds for projects located in rural areas. Since fiscal year 2010, legislation has also established the federal share for TIGER grants awarded to projects in urbanized areas be up to 80 percent of the total project costs, while rural projects may receive 100 percent federal funding. Congress has also required DOT to give priority to projects that require a contribution of federal funds in order to complete an overall financing package, and other requirements.¹⁴ Congress has also established deadlines within each appropriation for DOT to obligate funds to projects, generally within 2 to 3 years of the appropriation of funds.¹⁵

DOT established criteria for evaluating TIGER applications and selecting projects, which were published prior to each funding round in a NOFA in the *Federal Register*. The five primary selection criteria are desired long-term outcomes for the nation's transportation system, based on the five strategic goals in DOT's current *Strategic Plan*. Those long-term outcomes are state-of good repair, economic competitiveness, livability, environmental sustainability, and safety. Through its NOFAs, DOT defines and provides direction to applicants for addressing each outcome in their grant applications.¹⁶ For example, DOT defines "livability" as "increasing transportation choices and access to transportation services

¹⁴For example, since fiscal year 2010 (TIGER II), Congress required that not more than 25 percent of TIGER funds were to be awarded to projects in a single state and that a portion of TIGER funds may be used to pay the subsidy and administrative costs of projects funded under DOT's Transportation Infrastructure Finance and Innovation Act (TIFIA) program, which provides federal credit assistance to finance surface transportation projects of national and regional significance. Pub. L. No. 111-117, 123 Stat. 3036.

¹⁵DOT has a time frame of 2 years and 8 months to obligate fiscal year 2014 (TIGER VI) funds, which are available for obligation until the statutory deadline of September 30, 2016.

¹⁶The TIGER V (2013) NOFA descriptions of the five long-term TIGER outcomes include: (1) State of Good Repair: Improving the condition of existing transportation facilities and systems, with particular emphasis on projects that minimize lifecycle costs and improve resiliency; (2) Economic Competitiveness: Contributing to the economic competitiveness of the United States over the medium- to long-term by improving the national transportation system while creating and preserving jobs; (3) Livability: Increasing transportation choices and access to transportation services for people in communities across the United States; (4) Environmental Sustainability: Improving energy efficiency, reducing dependence on oil, reducing greenhouse gas emissions and benefitting the environment; (5) Safety: Improving the safety of U.S. transportation facilities and systems. See 78 Fed. Reg. 24786 (Apr. 26, 2013).

for people in communities across the United States,” with particular consideration given to projects that provide “affordable and convenient transportation choices.” In TIGER V (2013) DOT included a sixth primary selection criterion, project readiness, to encourage projects sufficiently advanced to complete all environmental reviews, before the 18-month, September 30, 2014, obligation deadline—the shortest obligation period of availability of all TIGER rounds. Since TIGER I (2009), DOT has also included secondary selection criteria to encourage innovation and partnerships among project participants. DOT’s NOFA for the TIGER V funding round, for example, states that DOT will award funds to projects that are well aligned with one or more of the selection criteria. DOT gives more weight to the primary selection criteria than to the two secondary selection criteria; and that it does not consider any of the five long-term outcomes to be more important than the others.

To fulfill the legislative requirement to award funds on a competitive basis, DOT has established a process in its NOFAs and internal guidance to evaluate and rate TIGER applications against the department’s selection criteria and the statutory requirements. The process is led by DOT’s Office of the Under Secretary of Transportation for Policy—referred to in this report as the Policy Office—and includes several teams, generally reviewing applications in the sequence below. After award decisions are made, DOT modal administrations work with grantees to execute agreements detailing the scope of the project based on the amount awarded, the sources of funding, and reporting requirements. Appendix II provides the results of the TIGER V application evaluation process and funding decisions.

- *Technical evaluation teams:* Technical evaluation teams are led by Policy Office officials and staffed with subject matter experts from the four surface transportation modal administrations that administer TIGER grants: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), and the Maritime Administration (MARAD). The technical evaluation leader assigns each TIGER project’s application an overall rating of “highly recommended,” “recommended,” “acceptable,” or “not recommended” and records a narrative of how each project addressed the selection criteria into a TIGER grant application evaluation database managed by the Policy Team. Technical evaluation teams are to assign ratings based on the selection criteria in the NOFA and not consider the statutory requirements. Projects that received an overall rating of “highly recommended” are to be advanced for further review and funding consideration (see table 1).

Table 1: DOT's Technical Evaluation Ratings for TIGER V (2013) Funding Round

Technical evaluation rating	Definition
Highly recommended	The project aligns extremely well with the objectives of the selection criterion under consideration.
Recommended	The project aligns well with the objectives of the selection criterion under consideration.
Acceptable	The project provides limited value with respect to the selection criterion under consideration, or the project's alignment with the criterion was not addressed in the application.
Not recommended	The project would adversely impact DOT's efforts to promote the outcomes described for the criterion under consideration.

Source: DOT's TIGER V (2013) Guidelines for Evaluation of Applications. | GAO-14-766

Note: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

- **Project readiness and economic analysis teams:** After the technical evaluation teams complete their reviews, highly recommended projects are to be advanced to a project readiness team, which assesses a project's level of risk (high, moderate, or low) for being able to complete any federal environmental and other requirements before expiration of statutory deadlines to incur obligations.¹⁷ At the same time, an *economic analysis team* reviews the required benefit-cost analysis (BCA) for each advanced application to assess (1) the "usefulness" of the BCA in estimating project benefits and costs, and (2) whether the total estimated benefits are reasonably likely to outweigh project costs. The results of these teams' reviews are to be recorded in DOT's TIGER application evaluation database and presented to the senior review team, along with the results of the technical evaluations.¹⁸
- **Senior Review Team:** After the economic analysis and project readiness reviews, highly recommended projects are then advanced to a senior review team comprised of senior officials charged with making recommendations to the Secretary of Transportation on which

¹⁷For example, the fiscal year 2013 appropriation for TIGER required DOT to obligate funding within 18 months, that is, by September 30, 2014. Pub. L. No. 113-6.

¹⁸See appendix II for the results of the TIGER V project readiness and economic analysis reviews.

projects to fund.¹⁹ As noted in our prior work, the senior review team may make award recommendations from the highly recommended projects advanced or request to see additional projects that were not advanced.²⁰ The senior review team documents its recommendations in a memorandum provided to the Secretary of Transportation that explains how each recommended projects aligns with the long-term outcome selection criteria. The Secretary makes the final selections.

- *Control and Calibration Team:* A team of Policy Office officials is charged with ensuring the quality, integrity, and consistency of the evaluation process and, according to DOT TIGER guidelines, is to use statistical analysis and random selection to choose applications from each evaluation team for review. According to the TIGER guidelines, the control and calibration team or the senior review team may, if necessary, recommend possible adjustments to the list of projects advanced by the technical evaluation teams to help satisfy the statutory requirements while remaining as consistent as possible with the competitive ratings. The control and calibration team's review occurs throughout the application evaluation process and not as a discrete step in the process.

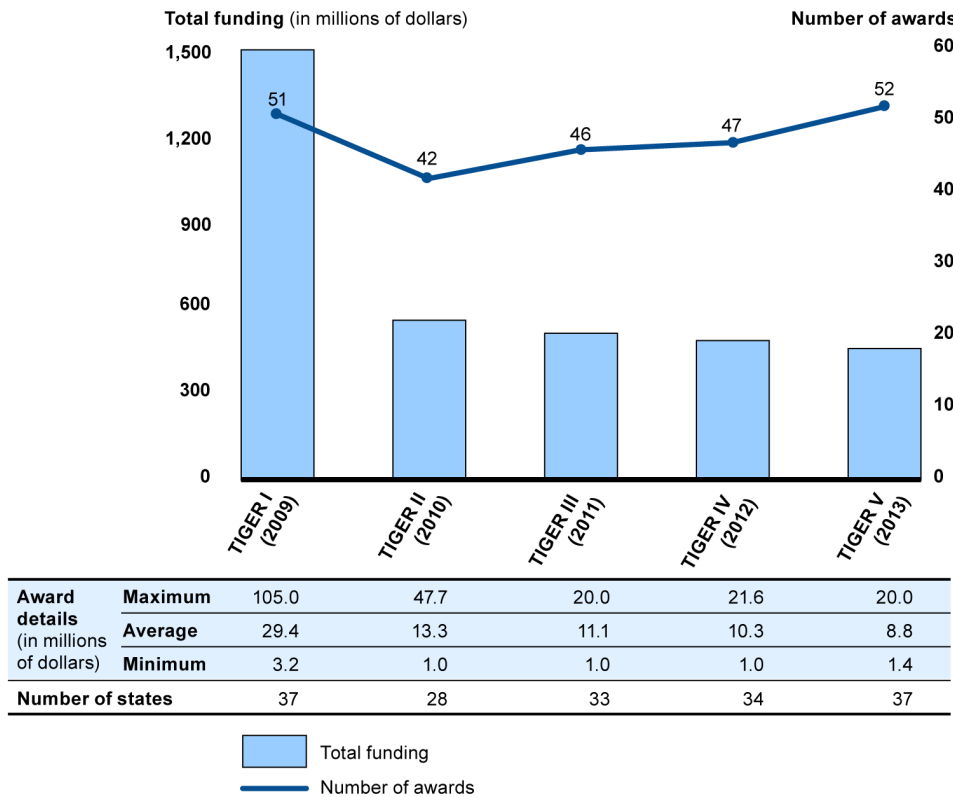
In recent funding rounds, DOT has awarded smaller TIGER grant awards to a larger number of applicants in comparison with earlier funding rounds. The Recovery Act appropriated \$1.5 billion for discretionary grants for capital investments in surface transportation infrastructure, which became the TIGER program. In TIGER I (2009), DOT funded substantially larger projects, \$29 million on average, than the subsequent funding rounds. From TIGER II (2010) through TIGER V (2013), the average award has been less than \$11 million, and the number of grants

¹⁹The senior review team consists of the Deputy Secretary of Transportation, the Administrators of FHWA, FTA, FRA, and MARAD, and the Research and Innovative Technology Administration, the Under Secretary of Transportation for Policy, the Assistant Secretary of Transportation for Policy, the Assistant Secretary for Governmental Affairs, the General Counsel, the Chief Financial Officer, and the Assistant Secretary for Aviation and International Affairs.

²⁰In our March 2011 report, we found that in TIGER I (2009) 50 recommended applications and 1 not recommended application were advanced to the senior review team, of which 25 recommended applications were selected for funding; 26 highly recommended applications were also funded that round. GAO, *Surface Transportation: Competitive Grant Programs Could Benefit from Increased Performance Focus and Better Documentation of Key Decisions*, [GAO-11-234](#) (Washington, D.C.: Mar. 30, 2011).

awarded in each round and the states in which those projects are located has increased (see fig. 2).

Figure 2: Amount of TIGER Funding and Number of TIGER Capital Grants Awarded, TIGER I (2009) through TIGER V (2013)



Source: GAO analysis of DOT information. | GAO-14-766

Notes: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

This figure does not include the 33 planning grants worth \$27.6 million that DOT awarded in TIGER II (2010).

The award amounts have not been adjusted for inflation.

In prior work, we recommended refocusing surface transportation programs to make grantees more accountable by establishing more performance-based links between surface transportation funding and

program outcomes.²¹ Since the initial TIGER funding round (2009), DOT has made efforts to measure the performance of funded projects by working with grantees to develop key performance measures of project results and report performance information to DOT before and after the projects are completed. In addition, Congress has included provisions in the most recent surface transportation authorization to move toward a more performance-based surface transportation program.²² The Moving Ahead for Progress in the 21st Century Act (MAP-21) (1) identifies seven national performance goals for infrastructure, including reducing serious injuries and fatalities, traffic congestion, and other areas; (2) requires the Secretary of Transportation, in consultation with states and others, to establish performance measures for these goals; and (3) requires states and other grantees to establish performance targets for those measures and to report the progress in achieving these targets.²³ DOT is currently in the process of implementing MAP-21 performance-measurement requirements.

In our March 2011 report on DOT's first TIGER funding round, we found that DOT developed comprehensive selection criteria and a competitive process for evaluating applications, but it did not document key decisions including its rationale for selecting projects with lower technical evaluation ratings for half the awards over more highly-rated ones.²⁴ We noted that the absence of such documentation can give rise to challenges to the integrity of DOT's selection decisions and subject it to criticism that it selected projects for reasons other than merit. We reported that it is critical that DOT gain the confidence of Congress and the public and show that it can fairly and expertly administer a multi-modal, multi-billion dollar discretionary program. Similarly, as previously discussed, in May 2014, we reported that DOT did not document key decisions made during the TIGER V (2013) grant application evaluation and selection process

²¹GAO, *Surface Transportation: Restructured Federal Approach Needed for More Focused, Performance-Based, and Sustainable Programs*, [GAO-08-400](#) (Washington, D.C.: Mar. 6, 2008).

²²Pub. L. No. 112-141, 126 Stat. 405 (2012).

²³Pub. L. No. 112-141, § 1203, 126 Stat. at 524-526.

²⁴[GAO-11-234](#).

and deviated from its established procedures.²⁵ We recommended that DOT establish additional accountability measures for the TIGER program.

DOT's Revised TIGER Application Evaluation Guidance Requires Additional Documentation of Key Decisions, but Some Requirements Lack Specificity

In response to our May 2014 recommendation, DOT revised its application evaluation guidelines for the TIGER VI funding round. Due to the timing of DOT's TIGER VI application evaluation and selection process, we did not assess the extent to which DOT applied its revised procedures. However, if consistently applied, we believe that these changes to DOT's procedures could improve the TIGER application evaluation and project selection process in several areas:

Late-arriving applications: In May 2014, we found that DOT did not document or publicly communicate its decision to accept 146 TIGER V applications received after the published deadline of June 3, 2013. DOT officials told us that the grants.gov web site experienced technical issues on the deadline that caused many applications to be submitted late. However, DOT did not follow its procedures and validate that all late-arriving applications had experienced technical issues and subsequently accepted applications for an additional 30 days without notifying the public of this decision. We recommended that DOT establish clear procedures for addressing late-arriving applications and communicate its decisions to either accept or reject these applications to the public. In response, DOT revised its guidance and public notice information to state that late-arriving applications will not be accepted without documentation of a technical issue that does not stem from user error. In May 2014, DOT reported that it received 54 late-arriving TIGER VI applications and rejected all but 1 of these for not providing required documentation of a valid technical problem.

Changing technical ratings: In May 2014, we found that after DOT finalized TIGER V award selections, DOT changed the technical ratings of the 19 lower-rated funded projects (17 recommended; 2 acceptable) to highly recommended without adequate documentation. In response to our recommendation that DOT document and provide a clear rationale for changes to an application's technical evaluation rating, DOT revised its TIGER VI guidance to state that DOT will not change the original technical evaluation ratings for a project throughout the entire review

²⁵[GAO-14-628R](#).

process, even if lower-rated projects are advanced to the senior review team or selected for funding.

Advancing and funding lower-rated projects: In May 2014, we found that DOT did not document its rationale for advancing 43 projects with lower technical ratings instead of 22 more highly-rated projects. We recommended that DOT document and approve, either through a decision memorandum or similar mechanism, decisions to (1) not advance applications rated as highly recommended, and (2) advance applications other than those rated as highly recommended. In response, DOT revised its TIGER VI guidance to state that any reasons for advancing projects with recommended or acceptable technical ratings will be “fully documented” in DOT’s internal application evaluation database.

These revisions could improve DOT’s documentation of application evaluation decisions, but the revised TIGER VI application evaluation guidelines lack sufficient detail for us to determine whether some concerns we raised in May 2014 will be adequately addressed. Specifically, although DOT’s revised guidelines state that it will “fully document” reasons for advancing lower-rated applications, the guidelines do not:

- Address whether all highly recommended projects will be advanced to the senior review team, or whether and how decisions not to advance such projects will be documented.
- Describe the specific information or level of detail that is to be included in the documentation to advance lower-rated projects. For example, the revised guidelines do not require that a project-specific reason be given, such as whether a project is advanced to meet a specific statutory requirement.
- Specify by whom a request to advance a lower-rated project is to be made and documented and at what point in the process those decisions are to occur. In May 2014, we found that in advancing 43 lower-rated projects for funding consideration, DOT (1) convened several meetings of senior DOT officials in the Policy Office and (2) shared preliminary lists of applications to be advanced with DOT modal administrations to determine which projects to advance. We reported that this was inconsistent with DOT’s TIGER application evaluation guidelines, which did not describe procedures through which the Policy Office and modal administrations are to be given an opportunity to identify projects to be advanced to the senior review

team. The revised TIGER guidelines state that the senior review team, which includes senior leadership in the Office of the Secretary and the heads of each of the modal administrations, may request that the control and calibration team review and advance a recommended or acceptable project. However, the guidelines do not describe whether such requests may be made by individual members at any point in the process, or by the senior review team as a whole once it convenes to review applications. Furthermore, the guidelines do not provide specific procedures for when and how the senior review team is to submit these requests, for documenting the rationale for the request, and for making the final decisions.

In response to our concerns regarding a lack of specificity in its revised guidance, DOT officials told us that additional measures were being taken in the TIGER VI (2014) funding round. DOT officials said that all highly recommended projects will be advanced to the senior review team. The officials also stated that senior review team members must justify any requests to advance a lower-rated project based on the selection criteria, and those requests are reviewed by the control and calibration team. Such requests can come at any time in the process—including during senior review team meetings—and each step in this process is to be documented in the TIGER application evaluation database. However, these procedures are not described as part of the formal process in DOT's revised application evaluation guidelines, and the extent to which they have been applied has not yet been evaluated. DOT announced its TIGER VI funding decisions on September 12, 2014. We will review DOT's TIGER VI application evaluation and project selection process to assess whether DOT has adequately addressed the May 2014 recommendations.

DOT Has Leveraged Non-Federal Investment through Selected TIGER Projects and Taken Steps to Address Other Program Objectives

Our review of 20 selected TIGER projects from the first four funding rounds found that DOT has leveraged investments from state and local government agencies for almost one-half of the total costs of the projects reviewed.²⁶ Local funding—including investments from county, city governments, or transit agencies—comprised the largest share of non-federal contributions committed by grantees to these 20 projects (see appendix III). However, DOT is not required to aggregate and report non-federal investment leveraged by TIGER and the total amount leveraged is unknown. DOT has also taken measures to address other TIGER program objectives, including statutory requirements to (1) ensure an equitable geographic distribution of funds, (2) meet minimum funding requirements for projects in rural areas, and (3) invest in a variety of transportation modes.

Selected TIGER Projects Have Leveraged Investments from State and Local Governments, but Total Non-Federal Amounts Leveraged Are Not Known

For the 20 projects we reviewed, non-federal investments accounted for about half of the total project costs. In each TIGER appropriation, Congress directed DOT to prioritize projects that required federal funds to complete an overall financing package—a provision that could encourage non-federal investments in transportation infrastructure. Based on our analysis of grant agreements for the 20 TIGER projects we reviewed, 48 percent of the total project costs (almost \$1.5 billion) was funded by state, local, and other funding sources and the remainder was funded by a combination of TIGER grants and other federal funding sources, see table 2. In comparison, generally, the matching-share requirement for many highway and transit formula-grant programs is 80 percent in federal funding and 20 percent in state or local funds.²⁷ For example, as we have previously reported, FTA's New Starts capital program may provide up to 80 percent of a project's total funding; however, the actual federal share is typically much lower because FTA encourages applicants to seek less than 60 percent federal funding.²⁸

²⁶For purposes of this report, we define leveraging to broadly mean the combining of multiple sources of funds, including other federal, state, local, and private funds to finance a project. As such, TIGER grants may serve as the impetus for additional non-federal investment or as a complementary funding source for a project.

²⁷However, for projects on the Interstate System, the federal share can be up to 95 percent. 23 U.S.C. § 120.

²⁸GAO, *Public Transit: Funding for New Starts and Small Starts Projects, October 2004 through June 2012*, [GAO-13-40](#) (Washington, D.C.: November 2012).

Table 2: Federal, State, Local, and Other Funding Sources for 20 Selected TIGER Grant Agreements, TIGER I (2009) through TIGER IV (2012)

	Funding sources	Total funds in grant agreement (in millions)	Percentage of total estimated project costs
Federal	TIGER Amount	\$438	30
	Other Federal	334	23
State		162	11
Local		496	34
Other non-federal^a		40	3
Total		\$1,470	100

Source: GAO analysis of 20 selected TIGER grant agreements. | GAO-14-766

Notes: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program. Percentage totals may not add to 100 percent due to rounding.

^aThe source of the other non-federal funding includes private sector contributions and bond revenues.

Local funding, including investments from county or city governments or local transit authorities, comprised a substantial share (34 percent) of the total project cost for the 20 projects we reviewed. For example, DOT awarded the Puget Sound Regional Transit Authority (Sound Transit) \$10 million in the TIGER III (2011) funding round to extend its light rail line from the Seattle-Tacoma International Airport to an economically disadvantaged area south of Seattle. Through its grant agreement, Sound Transit committed to provide \$219 million in local funding for the project, which is estimated to cost \$238 million to complete. The project's local funding was raised through local sales and motor-vehicle excise taxes and Sound Transit bond revenues. With an additional \$4.3 million in other federal funding applied to the project, the federal share is 6 percent of the project's total estimated cost.²⁹

Both urban and rural projects we reviewed contributed more non-federal investment to their projects than the TIGER program required. Since fiscal year 2010 (TIGER II), Congress has required that projects in urban areas contribute at least 20 percent of the total project's funding from

²⁹Although the grant to Sound Transit accounts for 44 percent of the \$496 million of local funding committed to the 20 projects, excluding this project, local funding would be 23 percent of the total project cost and still represent the largest portion of non-federal funding committed by the remaining 19 projects.

non-federal sources.³⁰ The costs of the 14 urban projects in our review range from \$16 million to \$243 million, with a total cost of \$1.35 billion—of which state, local, or private sources funded 49 percent; federal sources, including TIGER, funded 51 percent. TIGER projects in rural areas may receive up to 100 percent federal funding, but 5 of the 6 rural projects we reviewed contributed state, local, or other non-federal funds, including private revenues. The 6 rural projects are expected to cost \$117 million according to their grant agreements, of which 33 percent is funded by non-federal sources, and 67 percent is from federal sources. Table 3 provides information on the 20 selected projects and the shares provided by the various funding sources.

Table 3: TIGER Funding for 20 Selected Projects, by Urban and Rural Projects and Type, TIGER I (2009) through TIGER IV (2012)

Project type	Urban TIGER awards		Rural TIGER awards		All 20 TIGER awards	
	#	(in millions)	#	(in millions)	#	(in millions)
Road	5	\$131	3	\$47	8	\$178
Rail	3	76	1	15	4	91
Transit	5	144	—	—	5	144
Port	—	—	1	\$12	1	12
Bicycle & pedestrian	1	10	1	\$3	2	13
TIGER awards totals	14	\$362	6	\$76	20	\$438
Total project costs		\$1,354		\$117		\$1,471
Total % federal share		51%		67%		52%

Source: GAO analysis of 20 selected TIGER Grant agreements | GAO-14-766

Notes: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

Award amounts for project types may not add to total due to rounding.

The rural projects we examined contributed less non-federal funding than urban projects, but contributions from rural localities can represent substantial investments for these grantees. For example, DOT awarded a \$5 million TIGER IV (2012) grant to the West Virginia Division of Highways to reconstruct the main street of the rural City of Ranson to encourage economic development in the town center and connect it with

³⁰The Recovery Act allowed applicants to receive up to 100 percent federal funding. Pub. L. No. 111-5.

new development outside of the town. The budget for the project, as of December 2013, was \$9.9 million, with West Virginia Department of Transportation contributing \$2.5 million and the City of Ranson contributing \$2.2 million to the project. According to city officials, this contribution represents almost half of the city's general fund budget for 2013.³¹

Although DOT has leveraged non-federal investments in the TIGER projects we reviewed, DOT is not required to and does not aggregate and report the amount of non-federal investment leveraged by the TIGER program. As such, the total amount leveraged through the program is unknown. DOT reported in its TIGER V (2013) award announcement that the \$474 million awarded that round supported approximately \$1.8 billion in overall project investment. However, that figure is based on information in the projects' applications and does not account for additional federal funds used by projects that would need to be considered to assess the total non-federal investment leveraged by TIGER. Furthermore, using information in project applications to calculate the funding leveraged through TIGER is not reliable because project scope and funding sources can change in the time between announcing an award and finalizing the grant agreement. For example, the total cost of the Chicago Transit Authority's TIGER IV (2012) project to expand a subway station and adjacent bus terminal south of Chicago increased from \$140 million—when the application was submitted in March 2012—to \$240 million in September 2013, when the grant agreement was finalized.³² DOT officials told us that the amount of state, local, or private funding to be contributed in an application is a factor in its selection decisions, and that it monitors these sources of funding in individual grant agreements to ensure funds are being used for their intended purposes. However, DOT does not aggregate and report the funding amounts leveraged through the TIGER program, in part because of the difficulties in accounting for changes in individual project scope and funding that may occur over project life-cycles.

³¹City of Ranson officials told us that the neighboring City of Charles Town, West Virginia, is also contributing \$200,000 to the project.

³²CTA officials reported that the cost increase was due to a design change in the location of the terminal, as building on the original planned location was found to be infeasible.

DOT Has Taken Steps to Equitably Distribute Funds According to Geography and Meet Other Program Objectives

Equitable Geographic Distribution of Funds

Since the initial TIGER funding round (2009), legislation has required that DOT take measures to ensure an equitable geographic distribution of funds.³³ In accordance with the requirement, DOT has used the same approach since the first round by (1) dividing the United States into 4 geographic regions (Central, East, South, and West) and (2) setting funding targets based on each region's share of the overall U.S. population. In DOT's system, the South is the largest region with 33 percent of the population, the West and Central each have 23 percent, and the East region has 20 percent. DOT officials told us that, to provide some flexibility in allocating funding according to region, DOT also sets a goal of awarding funds to each region within 25 percent of each region's target funding amount.

Because of this goal, the share of TIGER funding awarded to each region does not necessarily reflect each region's share of the U.S. population. For example, in the TIGER III funding round, DOT established that as a proportion of its population, the South region's target award amount would be \$170 million, or 33 percent of the \$511 million available that round. To remain within 25 percent of the South region's target, DOT determined that it could award as little as \$128 million or as much as \$213 million. Ultimately, DOT awarded \$142 million to 12 projects in the South, an amount that was within the 25 percent range but almost \$30 million less than the region's funding target. Due to such variations in funding over the first 5 funding rounds, the South region has received a smaller share of the total TIGER funding (27 percent) than its relative share of U.S. population (33 percent). Overall, DOT has awarded between 22 and 27 percent of program funds to each of the four regions, with the South region receiving the most awards and the largest amount of program funds and the East region receiving the fewest awards and the smallest share of funds (see table 4).

³³Pub. L. No. 111-5, 123 Stat. 204.

Minimum Funding Requirements for Projects in Rural Areas

Table 4: TIGER Grant Award Amounts, by Region and Population Share, TIGER I (2009) through TIGER V (2013)

Region	Number of awardees	Amount of funds awarded (in millions)	Percentage of funds awarded	Percentage share of U.S. population
South	72	\$942	27	33
Central	67	908	26	23
West	71 ^a	898	25	23
East	61	789	22	20
Total	271	\$3,537	100	100

Source: GAO analysis of DOT TIGER data. | GAO-14-766

Notes: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

Percentage totals may not add to 100 due to rounding.

^aAlthough DOT awarded 71 projects to the West region from fiscal years 2009 through 2013, it did not obligate \$10 million in 2010 funding to one of those projects (San Bernardino Airport Access Project) after learning that two of the project sponsors were under federal investigation. DOT reallocated the \$10 million award amount among four other projects that were awarded grants in 2010.

DOT has also taken steps to address the statutory requirements included in each appropriation since fiscal year 2010 to award at least minimum amounts to projects in rural areas—defined by DOT as any area not in an urbanized area.³⁴ The Recovery Act did not establish minimum amounts for projects in rural areas for the 2009 funding round; DOT awarded the smallest percentage of funding to rural projects in that round (about 7 percent of the \$1.5 billion appropriated) compared with later rounds which included minimum funding requirements for rural areas. For example, in fiscal year 2012 (TIGER IV), DOT was required to ensure that at least \$120 million of the \$500 million appropriated was awarded to projects located in rural areas.³⁵ DOT funded 19 rural projects that year worth \$128 million. Cumulatively across the first five TIGER rounds, DOT has awarded grants to 100 rural projects totaling \$649 million, or 18 percent of the total of more than \$3.5 billion awarded to date. See Table 5.

³⁴DOT's TIGER V NOFA defines a rural area as any area not in an urbanized area (50,000 or more people), as defined by the U.S. Census Bureau for 2010. DOT also considers "urban clusters," or areas with at least 2,500 and less than 50,000 people, to be rural areas for purposes of the TIGER Discretionary Grant program. DOT considers a project to be in a rural area if all or the majority of project funding is spent in a rural area.

³⁵Pub. L. No. 112-55, 125 Stat. 641.

Table 5: Statutory Requirements for Funding Projects in Rural Areas and Grants Awarded, TIGER I (2009) through TIGER V (2013)

TIGER round (fiscal year)	Statutory requirement for rural projects	Amount awarded to rural projects (in millions)	Number of rural projects	Percentage of TIGER funds awarded to rural projects
TIGER I (2009)	None	\$104	8	7
TIGER II (2010)	Not less than \$140 million	143	28 ^a	25
TIGER III (2011)	Not less than \$140 million	150	20	29
TIGER IV (2012)	Not less than \$120 million	128	19	26
TIGER V (2013)	Not less than \$120 million	123	25	27
TOTAL	N/A	\$649	100	18

Source: GAO analysis of DOT TIGER data. | GAO-14-766

Notes: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

^aIncludes 11 planning grants for rural areas with a total value of \$6.1 million.

Investing in a Variety of Transportation Modes

DOT has taken steps to address the statutory requirement included in its TIGER appropriations since fiscal year 2010 to invest TIGER funding in a variety of transportation modes by funding a diverse portfolio of road, rail, transit, port, and bicycle and pedestrian projects over the first five funding rounds. According to DOT data, one-third of TIGER funding in the first 5 rounds has been awarded to road projects, which include improvements, repairs or new construction for bridges, highways, or other roads. Transit—including bus, light rail, street car, and multi-modal transit station projects—has received more than one-fourth of the funding, and those projects received on average the largest awards. Rail projects, including freight and passenger rail projects, have received less than a quarter of total funding. Port and bicycle and pedestrian projects have received about 11 and 4 percent of the total funding, respectively. See Table 6.

Table 6: Amounts Awarded to Different Project Types, TIGER I (2009) to TIGER V (2013)

Project Type	Amount Awarded (in millions)	Number of Projects	Average Award Amount (in millions)	Percentage of Total Funding Awarded
Road	\$1,149	98	\$11.7	33
Transit	987	48	20.6	28
Rail	809	48	16.8	23
Port	401	31	12.9	11
Bicycle and Pedestrian	154	12	12.8	4
Total	\$3,500^a	237	\$14.8	100

Source: GAO analysis of DOT data. | GAO-14-766

Notes: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

Percentage totals may not add to 100 percent due to rounding.

^aThis amount does not include the 33 planning grants for \$27.6 million awarded in TIGER II.

Although road projects comprise the largest share of funded projects, many projects are multi-modal and may provide benefits for several transportation modes. For example, in TIGER V, 15 of the 52 projects awarded involved 2 transportation modes, and 6 described benefits for users of 3 different modes. Eleven of the 20 road projects awarded grants in TIGER V also described specific improvements for bicyclists and pedestrians. For example, 7 of the road projects are described as “complete street” improvements, which are generally designed to be used for driving, bicycling, walking, and public transportation, and intended to enhance economic development opportunities for communities.

At Congress’s direction, DOT has prioritized certain project types in some funding rounds, and DOT has also applied its own discretion for how it distributes TIGER funding among the various transportation modes. For example, in the conference report accompanying the fiscal year 2010 DOT appropriation, Congress urged DOT to consider innovative projects that support investment in inland ports and freight rail projects.³⁶ During that round, DOT awarded \$181 million to 13 projects with port or freight rail components, including projects in inland locations in Kansas, Nebraska, Oklahoma, Pennsylvania, and South Dakota. DOT has also

³⁶H.R. Rep. No. 111–366, at 380 (2009).

established priorities for funding certain types of projects. In the TIGER IV NOFA, DOT set aside up to \$100 million of that round's \$500 million available for high-speed and intercity passenger-rail projects, and DOT officials told us that DOT awarded at total of \$61 million to 4 projects aimed at improving future access to high speed rail.³⁷

DOT Has Taken Steps to Measure TIGER Project Performance, but Does Not Assess Overall Program Performance

Performance Reports Provide Information on Individual Projects, but Measures Often Do Not Link to TIGER Long-term Outcomes

DOT has taken steps to measure the performance of individual projects by establishing key measures and periodic reporting requirements for each grantee. During the grant agreement development process, Policy Office and modal administration officials work with the grantee to develop several (generally 3 to 5) performance measures intended to be indicators of a project's success. According to DOT officials and several grantees we interviewed, DOT works with grantees to identify appropriate performance measures for individual projects using a standardized list of measures devised by the Policy Office. These measures are based on industry standard measures for road, rail, and other transportation projects, according to DOT. DOT officials told us that the performance measures are intended to measure project results—such as the usage, or level-of-service achieved by a transportation asset—and not intended to assess progress made in constructing or completing the project, which is seen to through the modal administrations' grant oversight procedures. DOT requires grantees to report periodically on their measures before

³⁷According to DOT officials, those projects were Raleigh Union Station Phase I (\$21 million), the Sacramento Valley Station (\$15 million), the Rochester Intermodal Transportation Center (\$15 million), and the Newark Regional Transportation Center (\$10 million). DOT officials said that other multimodal projects funded that round might feature limited intercity passenger-rail benefits as well.

constructing the project to establish baseline measures of performance in “pre-project reports,” and must report the results of those measures for a period of 3 to 5 years after completing projects in “project performance reports.” Finally, at the end of the TIGER grant period, grantees must submit a “project outcome report” to describe project outcomes in relation to baselines in the pre-project report.

Many projects have begun submitting their required reports to DOT. As of February 2014—the most recent data available during our review—114 of the 186 TIGER capital project grantees awarded funds from TIGER I (2009) through TIGER IV (2012) had submitted their pre-project reports.³⁸ During the course of our review, none of the 186 projects awarded TIGER capital grants from the first four rounds had reached a state of completion where the final reporting requirement, a project outcome report, is due. Table 7 describes the required TIGER performance reports and the grantees’ progress in submitting them.

³⁸The submission deadlines for the pre-project and other performance reports vary according to each grant agreement and, therefore, the reports for many grantees—particularly for later funding rounds—may not yet be due. One grantee included in our sample of 20 projects submitted its pre-project report in March 2014, and that report is included in our review of the performance measures in this report.

Table 7: Status of Grantees Awarded Capital Projects in TIGER I (2009) through TIGER IV (2012) in Submitting Required Performance Reports to DOT, as of February 2014

Performance report type	Report description	Status
Pre-project reports	Prior to construction, grantees must provide baseline data on the current levels of performance to provide measures to assess project outcomes. The pre-project report is to include a detailed description of data sources, assumptions, variability, and the estimated level of precision for each measure.	114 of the 186 capital grantees from TIGER rounds I through IV had submitted pre-projects reports. ^a
Project performance reports	When construction is complete and the project is operable, DOT requires TIGER grantees to report on the results of the performance measures in their grant agreements for a period of 3 to 5 years.	43 of the 186 TIGER capital projects had substantially completed their construction. ^a Of these, 13 projects had begun submitting their project performance measurement reports.
Project outcome reports	When the 3-to-5 year performance reporting requirement for the project is completed, DOT requires grantees to submit a project outcome report, which is intended to assess project outcomes in relation to baselines established in the pre-project report.	None of the TIGER capital projects had reached the point where they are required to submit a project outcomes report. ^a

Source: GAO analyses of DOT grant agreements and DOT data. | GAO-14-766

^aThe submission deadlines for the pre-project, project performance, and project outcome reports vary according to each grant agreement, and therefore, the reports for many grantees—particularly for later funding rounds—may not yet be due.

Of the 20 projects selected in our review, 15 had submitted pre-project reports to DOT at the time of our review. In this sample of 15 reports, project performance measures generally satisfied one of the three selected key attributes of successful performance measures—clarity—but not the remaining two—linkage to program goals, and measurable targets.³⁹

- **Clarity.** Overall, we found that 67 of the 95 (71 percent) project performance measures included in the 15 pre-project reports that we reviewed satisfied the clarity attribute. Prior GAO work notes that a

³⁹In prior work ([GAO-03-143](#)), GAO identified nine attributes of successful performance measures—linkage, clarity, measurable target, reliability, objectivity, governmentwide priorities, core program activities, balance, and limited overlap—which are discussed in appendix I. Our analysis focuses on the extent to which project performance measures satisfy three of these attributes—linkage, clarity, and measurable targets—which we determined were most applicable to our objective of assessing steps taken by DOT to assess overall TIGER program performance. See appendix I for a full discussion of our methodology.

performance measure achieves clarity when it is clearly stated and the name and definition are consistent with the methodology used for calculating the measure.⁴⁰ If measures are not clear, the collected data could be confusing and misleading to users. Through its grant agreements, DOT requires TIGER grantees to submit with their pre-project report a detailed description of data sources, assumptions, and the estimated level of precision for each measure—a requirement that helps ensure that measures are clearly stated. For example, The Maine Department of Transportation, which received a \$10.8 million TIGER III (2011) grant to replace a structurally deficient bridge over the Kennebec River, must report the annual maintenance and operations costs of the bridge before its reconstruction and annually for 5 years after its construction, among other measures. The grantee's pre-project report includes a discussion of its data sources and assumptions for calculating the actual annual maintenance costs to the bridge in the past 10-years, as well as an estimate of the variability in costs from year to year, and the confidence interval for its averaged annual costs. Such a performance measure, when compared with post-construction maintenance costs, can provide useful data to the grantee and to DOT on the project's lifecycle costs and the cost effectiveness of the bridge replacement compared with the estimated annual maintenance costs of continuing repairs to the old bridge.

- *Linkage to long-term outcomes:* We found that the majority of the performance measures in the 15 pre-project reports did not clearly link to one of the five TIGER programs' long-term outcomes of state-of good repair, economic competitiveness, livability, environmental sustainability, and safety. Consequently, those measures are not particularly useful in assessing a project's effectiveness in achieving overall TIGER program outcomes. According to prior GAO work, a performance measure exhibits linkage when it is aligned with division and agencywide goals and mission and clearly communicated throughout the organization.⁴¹ When performance measures do not link to agency goals, behaviors and incentives created by measures may not support achieving division or agencywide goals or mission. Of the 95 performance measures included in the 15 pre-project reports that we reviewed, 16 (17 percent) clearly linked to a TIGER

⁴⁰ [GAO-03-143](#).

⁴¹ [GAO-03-143](#).

program long-term outcome and could reasonably be used to indicate progress toward meeting one of the outcomes. Five of the 15 pre-project reports we reviewed did not have any performance measures that clearly linked to one of the five long-term outcomes. Of these outcomes, we found that performance measures most commonly linked to safety and livability outcomes, including safety measures such as reductions in collisions or crashes, or livability measures such as increasing access to bicycle or pedestrian facilities. State-of-good repair and economic competitiveness were the outcomes that least frequently linked to the performance measures included in the pre-project reports we reviewed. Specifically, we identified only 2 measures that clearly linked to state-of-good repair by measuring an asset's physical condition or maintenance costs, and only 1 measure that clearly linked to the economic competitiveness outcome by measuring the economic costs of lost capacity due to needed repairs.

Policy Office officials told us that most of the project performance measures are designed to gather information on the usage, operations, safety, or state-of-good repair of the transportation asset, but not intended to specifically reflect each of the TIGER long-term outcomes or to demonstrate progress in achieving these outcomes. DOT officials also stated that measuring progress toward a long-term outcome such as economic competitiveness would require additional analysis that would need to consider other factors, such as population and national trends. However, without clear linkage between an individual project's performance measures and the TIGER program's long-term outcomes, DOT lacks information to assess whether projects are achieving the TIGER program's goals and to assess which projects represent the best investment toward those goals. Furthermore, in 2012, the DOT Inspector General found that DOT has not established a process for evaluating the TIGER program's performance based on project outcomes. The Inspector General recommended that DOT establish a methodology to identify program outcomes from grantee performance data and to assess the overall impact of the TIGER program.⁴² DOT reported in its *Strategic Plan for Fiscal Years 2012–2016* that it would report on the feasibility of using TIGER project performance measures to assess program outcomes by December 2013, but had yet to make this information available as

⁴²U.S. DOT, Office of the Inspector General, *DOT Established Timely Controls for the TIGER Discretionary Grants Program, But Opportunities Exist to Strengthen Oversight*, MH-2012-188 (Washington, D.C., Sept. 20, 2012).

of July 2014. DOT officials told us that they are still working to refine their methodology in response to the Inspector General's recommendation.

- *Measurable targets:* Only 1 of the 95 performance measures we reviewed in the 15 pre-project reports included a measurable target by which to assess project performance—another important attribute of successful performance measures.⁴³ Leading practices in federal agency performance management previously identified by GAO state that where appropriate, performance measures should have quantifiable, numerical targets and that agencies could use baselines to set realistic but challenging targets.⁴⁴ Numerical targets facilitate future assessments of whether overall goals and objectives were achieved because comparisons can be easily made between projected performance and actual results. DOT officials told us that DOT has not established measurable performance targets for TIGER grantees because the success of a transportation project depends on many external factors, and setting targets for all projects is neither feasible nor beneficial for the program because it would not encourage grantees to submit useful and reliable data. Nonetheless, two TIGER project grantees told us that their performance-reporting requirements were not onerous because they already collected similar information either for internal performance-measurement purposes or to meet reporting requirements for other federal grants. Grantees' existing performance data may be of use in establishing reasonable numerical targets that, if appropriately set, could create motivation for improving program performance. Without such targets, as well as related data and analysis, DOT has no basis to judge whether the reported performance meets expectations or achieves intended project goals.

DOT Does Not Assess the Performance of the Overall TIGER Program

Although DOT has established performance measures for individual projects, it does not assess the performance of the overall TIGER program in achieving the program's goals. The five TIGER program long-term outcomes—state-of-good repair, economic competitiveness,

⁴³The pre-project report submitted for the Port of Brownsville project, which was awarded funds in TIGER IV (2012), includes a measure of the number of vessels waiting for berthing each month, with a target of zero.

⁴⁴[GAO-03-143](#), also see GAO, *Managing for Results: Strengthening Regulatory Agencies' Performance Management Practices*, [GGD-00-10](#) (Washington, D.C.: Oct. 28, 1999).

livability, environmental sustainability, and safety—represent general goals for the program and reflect the five strategic goals published in DOT's *Strategic Plan for Fiscal Years 2012–2016*. DOT has established performance measures at the departmental level for its five strategic goals and published its progress in meeting those goals in its annual performance plans, as required by the Government Performance and Results Act (GPRA) of 1993, as amended.⁴⁵ For example, DOT has departmental performance goals and measures (1) for safety (including targets for reducing road, rail, and transit fatalities); (2) for economic competitiveness (such as maintaining or improving travel time reliability on significant freight corridors and in urban areas); and (3) for DOT's three other strategic goals that serve as long-term TIGER outcomes.⁴⁶ However, because DOT's performance measures for individual projects do not clearly link to the five long-term outcomes that serve as TIGER program goals and DOT's overall strategic goals, DOT has no mechanism to assess the TIGER program's progress in achieving these goals. In prior work on federal agencies' use of performance measures, we found that an agency should cascade its goals and objectives throughout the organization and align performance measures to the objectives from the executive level down to the operational levels.⁴⁷ This alignment increases the usefulness of the performance information collected to decision makers at each level, and reinforces the connection between strategic goals and the day-to-day activities of managers and staff.

⁴⁵GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866 (2011). Since 1993, Congress has required federal agencies through GPRA to develop strategic plans with long-term, outcome-oriented goals and objectives, annual goals linked to achieving the long-term goals, and annual reports on the results achieved. GAO, *Results-Oriented Government: GPRA Has Established a Solid Foundation for Achieving Greater Results*, [GAO-04-38](#) (Washington, D.C.: Mar. 10, 2004) The GPRA Modernization Act of 2010 amended GPRA to, among other things, create a governmentwide planning and reporting framework, including federal government priority goals, performance plans, quarterly priority progress reviews, and a governmentwide performance website. GAO, *Managing for Results: Opportunities for Congress to Address Government Performance Issues*, [GAO-12-215R](#) (Washington, D.C.: Dec. 9, 2011).

⁴⁶U.S. DOT, *Annual Performance Plan, Fiscal Year 2014* (Washington, D.C., January 2013).

⁴⁷GAO, *Managing for Results: Enhancing Agency Use of Performance Information for Management Decision Making*, [GAO-05-927](#) (Washington, D.C.: Sept. 9, 2005).

DOT officials told us that given the wide range of projects funded by TIGER and the unique nature of the individual projects, it might not be possible to assess the impact of the overall TIGER program. However, DOT has established performance measures for the department's five strategic goals—which mirror the five TIGER long-term outcomes—and has reported those measures in DOT's annual performance plan. In addition, federal highway and transit programs are generally becoming more performance focused as DOT and its grantees implement the performance-based approach contained in MAP-21. For example, for highways, DOT is establishing performance measures around seven identified national performance goals, and states and grantees will be required in the years ahead to establish performance targets for those measures and report their progress in achieving these targets. The DOT appropriations acts that provide funding for the TIGER program do not include a specific requirement that DOT report on performance of the overall TIGER program. However, DOT officials told us that when additional project-performance data are available across multiple rounds, DOT will be in a better position to aggregate and analyze the data across multiple projects. Although performance reporting is not required for the program, setting performance goals and measuring progress in achieving program goals are leading management practices and important internal controls for government programs.⁴⁸ Without such performance information, DOT cannot assess whether the TIGER program is achieving its intended results or the effectiveness of DOT's funded projects in meeting TIGER program long-term outcomes. As our past work has shown, such performance information can also be valuable to inform congressional decisions for funding and oversight of federal programs. For example, prior GAO work shows that performance information can be used by Congress to inform decisions about authorizing or reauthorizing federal programs, to set clear expectations for agency performance, and to provide consistent oversight over a sustained period of time, such as by requiring agencies to routinely report progress in achieving goals.⁴⁹

⁴⁸According to GAO's *Standards for Internal Control in the Federal Government*, in a performance-based management system, management establishes program objectives and performance measures and monitors and compares actual performance to planned or expected results. [GAO/AIMD-00-21.3.1](#).

⁴⁹GAO, *Managing for Results: A Guide for Using the GPRA Modernization Act to Help Inform Congressional Decision Making*, [GAO-12-621SP](#) (Washington, D.C.: June 15, 2012). Also see [GAO-12-215R](#).

Conclusions

Since 2009, Congress has appropriated over \$4 billion to DOT to competitively award TIGER grants for surface transportation projects intended to have a significant impact on the nation, a region, or a metropolitan area. In 2011, we concluded that it was critical that DOT gain the confidence of Congress and the public and demonstrate it can fairly and expertly administer a multi-modal, multi-billion dollar discretionary program. However, a continued lack of documentation of key decisions, as we found in the first and the fifth funding rounds, can give rise to challenges to the integrity of the evaluation process and leave DOT vulnerable to criticism concerning the rationale for the decisions made. Although DOT is taking efforts to establish additional accountability measures for the TIGER program in response to recommendations we made in May 2014, it is too early to tell whether those actions will fully address the concerns we raised. We will continue to monitor DOT's efforts to address our recommendations by reviewing DOT's recently announced TIGER VI funding decisions. Establishing additional accountability measures could create a strong foundation on which to ensure public and congressional trust in the program and transparency for its funding decisions.

DOT deserves credit for taking the initiative to measure the performance of individual TIGER projects. However, many TIGER project performance measures do not clearly link with the TIGER program's long-term outcomes or include measurable targets. As result, DOT does not have a framework in place to assess the performance of the overall TIGER program in achieving the program's long-term outcomes, or a basis to judge whether TIGER projects meet performance expectations and deliver sufficient results for the federal investment. The TIGER program represents an important opportunity for DOT to establish performance-based links between surface transportation funding and program outcomes, similar to MAP-21's emphasis on performance measurement. However, because DOT does not assess the overall performance of the TIGER program, Congress lacks information on whether the amounts invested in the program have had their intended impact on the nation's transportation infrastructure—information that could be useful when making future funding decisions.

Recommendation for Executive Action

To help inform future funding decisions for the TIGER program, we recommend that the Secretary of Transportation develop clear linkages between project performance measures and the program's goals, and include measurable targets, so that DOT can better measure and report

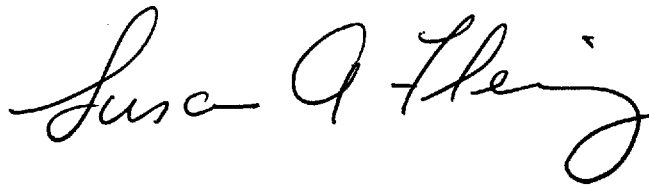
on the performance of the program and its funded projects in meeting its established long-term outcomes.

Agency Comments

We provided DOT with a draft of this report for its review and comment. DOT provided a technical comment via e-mail, which we incorporated. DOT also provided written comments, reproduced in appendix IV, in which the Department reiterated its written comments to our May 2014 letter. DOT stated that during the 2014 funding round it required better documentation of project selection decisions and established procedures for advancing projects other than those rated as highly recommended, among other actions. We will continue to monitor DOT's implementation of our May 2014 recommendations to determine whether they have been addressed. In response to our recommendation in this report, DOT agreed to improve performance measurement for the TIGER program. Specifically, DOT stated it will work to improve reporting of TIGER long-term outcomes to demonstrate whether the program is meeting its goals.

We are sending copies of this report to appropriate congressional committees. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>. If you or your staff have any questions about this report, please contact me at (202) 512-2834 or flemings@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who contributed to this report are listed in appendix V.

Sincerely yours,

A handwritten signature in black ink, reading "Susan Fleming". The signature is written in a cursive, flowing style.

Susan Fleming
Director, Physical Infrastructure Issues

Appendix I: Objectives, Scope, and Methodology

Our three objectives were to assess: (1) changes made by the Department of Transportation (DOT) to its procedures for evaluating applications and selecting projects for grants in the Transportation Investment Generating Economic Recovery (TIGER) program, in response to our May 2014 letter;¹ (2) the extent to which DOT has leveraged non-federal transportation investment through TIGER and met other selected program objectives, and (3) steps DOT has taken to measure the performance of the overall TIGER program.

To assess the changes made by DOT to its TIGER application evaluation and project selection procedures, we compared the written procedures in DOT's *Fiscal Year 2014 TIGER Discretionary Grant Program: Guidelines for Evaluation of Applications* to the recommendations from our May 2014 letter. In that letter, we recommended that the Secretary of Transportation establish additional accountability measures for management of the TIGER program to establish clear procedures for addressing late-arriving applications and communicate management's decisions to either accept or reject these applications to the public. We also recommended that DOT document and approve major decisions in the application evaluation and project selection process through a decision memorandum or similar mechanism that provides a clear rationale for decisions to: (a) advance for senior review applications other than those rated as highly recommended; (b) not advance applications rated as highly recommended; and (c) change the technical evaluation rating of an application.² At the time of our review, DOT was in the process of evaluating applications for its fiscal year 2014 (TIGER VI) funding round. As such, we did not assess the results of the TIGER VI application evaluation process, or the extent to which DOT applied its revised procedures in the TIGER VI funding round.

To assess the extent to which DOT has leveraged non-federal investments through TIGER, we reviewed the funding sources stipulated in the grant agreements of a non-generalizable sample of 20 TIGER projects funded in the first four funding rounds. We selected these projects using criteria including project type and geographic region, and

¹GAO, *Surface Transportation: Actions Needed to Improve Documentation of Key Decisions in the TIGER Discretionary Grant Program*, [GAO-14-628R](#) (Washington, D.C.: May 28, 2014).

²[GAO-14-628R](#).

whether the project was located in an urban or rural area. We used the funding-source information in the 20 grant agreements to calculate the amount of federal, state, local, private, and any other funds committed for the completion of each project. For purposes of this report, we define leveraging to broadly mean the combining of multiple sources of funds—including other federal, state, local, and private funds—to finance a project. As such, TIGER grants may serve as the impetus for additional non-federal investment or as a complementary funding source for a project. To estimate the extent to which TIGER funds leveraged non-federal investments, we compared the total amount of TIGER funding applied to the 20 projects with the total amount of other state, local, or private funds committed in the grant agreements. This approach compares the share of TIGER funds with the share of funds from other sources, but does not assess the extent to which TIGER funds attracted or were the impetus for additional non-federal investments. We did not include projects in our sample that were only awarded TIGER funds in order to pay the subsidy and administrative costs of projects funded under DOT's Transportation Infrastructure Finance and Innovation Act (TIFIA) program. The TIFIA program provides federal credit assistance to finance surface transportation projects of national and regional significance. To gather information on the funding sources committed for the projects, we conducted interviews and site visits with 5 of the 20 selected TIGER grantees. We selected the five projects for site visits to reflect a range of project types including road (1), transit (2); bicycle (1); and a combined port/rail project. We also interviewed DOT officials in the Office of the Secretary of Transportation, which leads the TIGER program, and officials in the four modal administrations that administer TIGER grants: Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Railroad Administration (FRA), and the Maritime Administration (MARAD).

To assess the extent to which DOT has met other selected TIGER program objectives, we reviewed the statutory requirements for the awarding of TIGER grants in the first five funding rounds—TIGER I (2009)

through TIGER V (2013).³ Our review focused on statutory requirements that DOT (1) take measures to ensure an equitable geographic distribution of funds; (2) award at least certain minimum amounts to projects in rural areas in the various funding rounds; and (3) invest TIGER funding in a variety of transportation modes. We selected these requirements to provide descriptive information on how TIGER funding has been awarded in the first five rounds. To assess the steps taken by DOT to meet these requirements, we compared DOT's grant awards for the TIGER I (2009) through TIGER V (2013) funding rounds with the specific statutory requirements in the DOT's appropriations for those funding rounds.

To evaluate the steps DOT has taken to measure performance of the overall TIGER program, we reviewed TIGER program documents and grant agreements and conducted interviews with DOT officials and the five grantees with whom we met on site visits. Through these efforts, we learned that DOT measures performance on a project-by-project basis. To assess whether this approach would be useful in assessing the performance of the overall TIGER program, we reviewed recognized internal control practices for federal agencies,⁴ and evaluated the performance measures in required "pre-project performance reports" as submitted by the 20 selected projects as of March 2014. At the time of our review, 15 of the 20 selected grantees had submitted a pre-project performance report which is to provide baseline reporting of the performance measures in a grant agreement before a project is constructed. Four of the pre-project performance reports for the remaining 5 grantees in our sample were not yet due to be submitted to DOT, and the fifth report was due but had yet to be finalized, according to the grantee. We reviewed the 95 performance measures and the

³The statutory requirements are in DOT's appropriations providing funding for the TIGER program from fiscal year 2009 through 2014: Pub. L. No. 111-5, 123 Stat. at 203-04 (2009) (TIGER I, 2009); Consolidated Appropriations Act, 2010, Pub. L. No. 111-117, 123 Stat. 3034, 3036 (2009) (TIGER II, 2010); Department of Defense and Full-Year Continuing Appropriations Act, 2011, Pub. L. No. 112-10, 125 Stat. 191 (2011) (TIGER III, 2011); Consolidated and Further Continuing Appropriations Act, 2012, Pub. L. No. 112-55, 125 Stat. 552, 641(2011) (TIGER IV, 2012); Consolidated and Further Continuing Appropriations Act, 2013, Pub. L. No. 113-6, 127 Stat. 198 (2013) (TIGER V, 2013). Consolidated Appropriations Act, 2014, Pub. L. No. 113-76, 128 Stat. 5, 574 (2014) (TIGER VI, 2014).

⁴GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: Nov. 1999).

accompanying data available in the 15 pre-project performance reports. Where applicable and feasible, we assessed the extent to which the performance measures adhered to key attributes of successful performance measures, as defined by GAO.⁵ Specifically, prior GAO work has identified nine attributes of successful performance measures. Based on the availability of the data provided in the pre-project performance reports, as discussed below, we selected three of the nine attributes for our review—linkage, clarity, and measurable targets. Table 8 shows the nine attributes, their definitions, and the potentially adverse consequences of performance measures not having the attributes.

Table 8: GAO’s Key Attributes of Successful Performance Measures

Attribute	Definition	Potentially adverse consequences of not meeting attribute
Key attributes evaluated by reviewing performance measures individually		
Linkage	Measure is aligned with division and agency-wide goals and mission and clearly communicated throughout the organization.	Behaviors and incentives created by measures do not support achieving division or agency-wide goals or mission.
Clarity	Measure is clearly stated, and the name and definition are consistent with the methodology used to calculate it.	Data could be confusing and misleading to users.
Measurable target	Measure has a numerical goal.	Cannot tell whether performance is meeting expectations.
Reliability	Measure produces the same result under similar conditions.	Reported performance data is inconsistent and adds uncertainty.
Objectivity	Measure is reasonably free from significant bias or manipulation.	Performance assessments may be systematically over- or understated.
Government-wide priorities	Each measure should cover a priority, such as quality, timeliness, and cost of service.	A program’s overall success is at risk if all priorities are not addressed.
Key attributes evaluated by reviewing performance measures as a set		
Core program activities	Measures cover the activities that an entity is expected to perform to support the intent of the program.	Not enough information available in core program areas to managers and stakeholders.
Balance	Balance exists when a suite of measures ensures that an organization’s various priorities are covered.	Lack of balance could create skewed incentives when measures overemphasize some goals.
Limited overlap	Measure should provide new information beyond that provided by other measures.	Managers may have to sort through redundant, costly information that does not add value.

Source: GAO-03-143, GAO-10-835. | GAO-14-766

⁵GAO, *Tax Administration: IRS Needs to Further Refine Its Tax Filing Season Performance Measures*, GAO-03-143 (Washington, D.C.: Nov. 22, 2002).

We selected the attributes of linkage, clarity, and measurable targets based on their relevance to our research objective and based on feasibility of assessing the performance measures by these attributes with the data available in the pre-project performance reports. Specifically, we determined that the linkage attribute was particularly relevant in assessing whether the TIGER project performance measures linked to any of the five TIGER long-term program outcomes—state-of good repair, economic competitiveness, livability, environmental sustainability, and safety—as defined in DOT’s TIGER V (2013) notice of funding availability.⁶ Linkage to any of these outcomes would indicate whether the project’s performance measures could be useful in assessing the performance of the overall TIGER program in achieving its long-term outcomes. In reviewing the performance measures and available data in the pre-project performance reports, we determined that we would have sufficient data to assess the performance measures according to two other attributes—clarity, and measurable targets.

We also determined that, due to the early stage of many of the projects in our sample, and for other reasons, we did not have sufficient information from the pre-project performance reports to assess the performance measures according to the remaining 6 attributes of successful performance measures—reliability, objectivity, government-wide priorities, core program activities, balance, and limited overlap. Specifically, we determined that the baseline data in the pre-project reports did not provide sufficient detail to assess (1) reliability, or whether a measure would produce the same result under similar conditions, and (2) objectivity, or whether a measure is reasonably free from significant bias or manipulation. The “government-wide priorities” attribute—which covers issues such as quality, timeliness, or cost of service—would be particularly relevant to assessing the overall performance of the TIGER program. However, because the measures we reviewed were specific to

⁶The TIGER V (2013) NOFA descriptions of the five long-term TIGER outcomes include: (1) State of Good Repair: improving the condition of existing transportation facilities and systems, with particular emphasis on projects that minimize lifecycle costs and improve resiliency; (2) Economic Competitiveness: contributing to the economic competitiveness of the United States over the medium- to long-term by improving the national transportation system while creating and preserving jobs; (3) Livability: increasing transportation choices and access to transportation services for people in communities across the United States; (4) Environmental Sustainability: improving energy efficiency, reducing dependence on oil, reducing greenhouse gas emissions and benefitting the environment; and (5) Safety: improving the safety of U.S. transportation facilities and systems. See 78 Fed. Reg. 24786, 24792 (Apr. 26, 2013).

individual TIGER projects and focused on specific transportation outcomes for those projects—such as the average daily truck traffic on a bridge—we decided not to assess individual project measures by this broader, government-wide attribute. In addition, the remaining three attributes—“core program activities,” “balance,” and “limited overlap”—are to be evaluated by reviewing performance measures as a set.⁷ We determined that the specific methodology we employed to assess the linkage of each performance measure to the five TIGER long-term attributes (described below) would be sufficient to assess whether the performance measures reflected the core TIGER program activities. We also determined that because each pre-project report contained a limited set of performance measures (generally 3 to 5), there were insufficient numbers of performance measures for an individual project to fully assess whether they provided sufficient balance or limited overlap. As a result of selecting the three key attributes of linkage, clarity, and measurable targets, our analysis is limited to those attributes.

To assess whether the 95 performance measures in the 15 pre-project performance reports satisfied the linkage, clarity, and measureable target attributes, two analysts assessed each performance measure against the definition of those attributes in table 8 and coded whether the measure clearly satisfied, partially satisfied, did not satisfy, or was not applicable to the attribute. To help ensure reliability and consistency, in instances where the analysts arrived at different codes, those codes were discussed and compared with the codes provided for similar measures in order to come to a consensus decision. To assess whether the performance measure satisfied the attribute of linkage, the team assessed each performance measure against DOT’s definitions of the long-term outcomes, as published in DOT’s TIGER V (2013) NOFA.⁸ In total, we evaluated the extent to which each of the 95 performance measures satisfied the linkage attribute for each of the five TIGER long-term outcomes.

To assess the results of the TIGER V (2013) application evaluation and project selection process (as provided in app. II), we used data from

⁷GAO, *Drug Control: DOD Needs to Improve Its Performance Measurement System to Better Manage and Oversee Its Counternarcotics Activities*, [GAO-10-835](#) (Washington, D.C.: July 21, 2010).

⁸78 Fed. Reg. 24786, 24792 (Apr. 26, 2013).

DOT's TIGER application evaluation database, provided by DOT in November 2013. We assembled descriptive statistics of the results of the technical evaluations, project readiness, and economic analysis reviews for the universe of applications reviewed and awarded funds by DOT according to the respective ratings, and key variables including region, project type, and whether a project was considered to be located in an urban or rural area. We assessed the reliability of this data by interviewing DOT officials familiar with the procedures for data input and maintenance, and by reviewing DOT documentation on the structure of the database and the procedures for accessing and using this data. We determined that the data were sufficiently reliable for our objectives.

We conducted this performance audit from August 2013 to September 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Results of TIGER V (2013)

Application Evaluation and Project Selection Process

In response to the legislative requirement to award Transportation Investment Generating Economic Recovery (TIGER) program funds on a competitive basis, DOT has an established process to evaluate and rate TIGER applications against selection criteria, as was described in the TIGER V (2013) notice of funding availability (NOFA) as well as in internal DOT guidance. The process is led by DOT’s Office of the Under Secretary of Transportation for Policy and includes multiple technical evaluation teams, a project readiness team, and an economic analysis team. While the technical evaluation teams are responsible for reviewing all applications under consideration for TIGER funds—585 applications in TIGER V (2013)—the project-readiness and economic-analysis teams only review a subset of those, which are advanced for their review. DOT officials told us that these technical evaluation ratings are used along with statutory requirements—including ensuring an equitable geographic distribution of funds, an appropriate balance in addressing the needs of urban and rural communities and investing in a variety of transportation modes—in making final award selection decisions.

Technical Evaluation Team Rating Results

In the 2013 funding round (TIGER V), technical evaluation teams reviewed each of the 585 TIGER applications submitted according to the published selection criteria. The technical evaluation teams rated 136 of the 585 applications (23 percent) as highly recommended and 33 of these were ultimately awarded funding. While 17 recommended and 2 acceptable projects were funded in TIGER V, 103 applications rated highly recommended were not selected for award. Table 9 shows how all TIGER V applications were rated by the technical evaluation teams.

Table 9: TIGER V (2013) Technical Evaluation Team Ratings, by Region

Technical evaluation rating	West	East	Central	South	Total	Percentage of applications	Number of funded projects	Percentage of funded projects
Highly recommended	46	22	36	32	136	23	33	63
Recommended	77	39	55	66	237	41	17	33
Acceptable	54	23	36	43	156	27	2	4
Not recommended	21	7	14	14	56	10	0	0
Total	198	91	141	155	585	100	52	100

Source: GAO analysis of DOT data. | GAO-14-766

Notes: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.
Percentages may not sum to 100 percent due to rounding.

More than half (55 percent) of the 585 applications reviewed by the TIGER technical evaluation teams in 2013 were submitted for urban projects—of which 58 percent were rated as highly recommended. Ultimately, 27 grants were awarded to urban projects and 25 were awarded to rural projects in TIGER V; 73 percent of TIGER V funds were awarded to urban projects, as rural applications generally requested lower grant amounts.¹ Table 10 shows the technical evaluation ratings assigned to all urban and rural TIGER V applications.

Table 10: TIGER V (2013) Application Technical Evaluation Ratings, Urban versus Rural Projects

Technical evaluation rating	Applications submitted		Projects funded			
	Urban	Rural	Urban	Urban	Rural	Rural
Highly recommended	79	57	17	\$227,665,452	16	\$88,921,129
Recommended	140	97	8	\$82,735,109	9	\$34,525,310
Acceptable	73	83	2	\$24,000,000	0	\$0
Not recommended	27	29	0	\$0	0	\$0
Total	319	266	27	\$334,400,561	25	\$123,446,439

Source: GAO analysis of DOT data. | GAO-14-766

Note: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

The applications submitted in TIGER V spanned an array of transportation project types. More than half (54 percent) were road projects, nearly one-fifth (18 percent) were transit, 13 percent were rail projects, and 10 percent were port projects. Table 11 shows the technical evaluation ratings of all TIGER V applications submitted, by project type.

¹In TIGER V (2013), the average request among urban projects was \$20.4 million, and the average request among rural projects was \$9.7 million. Overall, the average TIGER grant request was \$15.6 million, as the 585 applications submitted requested a total of \$9.1 billion.

Table 11: TIGER V (2013) Technical Evaluation Team Ratings for All Projects Reviewed, by Project Type

Technical evaluation rating	Road	Rail	Transit	Port	Bicycle & pedestrian	Other ^a
Highly recommended	54	23	29	17	13	0
Recommended	120	35	46	22	13	1
Acceptable	110	9	26	9	2	0
Not recommended	29	7	7	8	1	4
Total	313	74	108	56	29	5

Source: GAO analysis of DOT data. | GAO-14-766

Notes: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

^aOther includes applications related to airports and transportation-department building construction; no applications in this category were selected for award in TIGER V.

Of the 52 grants awarded in TIGER V, more than half (34) were for road (18) or rail (16) projects. DOT awarded 8 grants to transit projects, 7 to port projects and 3 to bicycle and pedestrian projects. Table 12 shows the technical evaluation ratings of the 52 projects, by type, which were awarded TIGER funds in 2013.

Table 12: TIGER V (2013) Technical Evaluation Team Ratings for Projects Awarded Funds, by Project Type

Technical evaluation rating	Road	Rail	Transit	Port	Bicycle & pedestrian
Highly recommended	15	7	3	5	3
Recommended	3	7	5	2	0
Acceptable	0	2	0	0	0
Not recommended	0	0	0	0	0
Total	18	16	8	7	3

Source: GAO analysis of DOT data. | GAO-14-766

Note: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

Project Readiness Team Rating Results

After the TIGER V technical evaluation teams reached consensus on their ratings, 189 projects were advanced to the project readiness team, including nearly all projects rated as highly recommended and many rated as recommended or acceptable. The project readiness team rated 171 of the 189 projects (90 percent) as either moderate or low risk; none of the 18 projects rated as high risk were awarded TIGER funds. Table 13

shows the project readiness team's ratings, by region, for all of the TIGER V applications it reviewed.

Table 13: TIGER V (2013) Project Readiness Team Ratings, by Region

Project readiness rating	West	East	Central	South	Total	Percentage of applications receiving this rating	Number of funded projects receiving this rating	Percentage of funded projects receiving this rating
High Risk	5	3	9	1	18	10	0	0
Moderate Risk	18	15	14	32	79	42	22	42
Low Risk	33	19	21	19	92	49	30	58
Total	56	37	44	52	189	100	52	100

Source: GAO analysis of DOT data. | GAO-14-766

Note: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program. Percentages may not sum to 100 percent due to rounding.

Economic Analysis Team Rating Results

In addition to the project readiness team's review, most TIGER V projects rated as highly recommended by the technical evaluation teams—as well as many recommended and acceptable projects—were also advanced to the economic analysis team. The economic analysis team was led by the DOT's Chief Economist and staffed with economists from across the four modal administrations. Each TIGER applicant must submit a benefit-cost analysis (BCA) which, according to DOT's TIGER V NOFA, is to provide estimates of the monetary value of the benefits and costs for each project and the data used to support the BCA. This team evaluated and assigned ratings for (1) the usefulness of each application's BCA in assessing a project's benefits and costs and (2) whether the project's benefits are reasonably likely to outweigh its costs.

In its reviews of the usefulness of each application's BCA, the economic analysis team rated only 69 of 171 BCAs (40 percent) as very useful or useful. Similarly, 21 of the 52 projects selected for award (40 percent) had either very useful or useful BCAs. However, 31 of the 52 projects (60 percent) funded in TIGER V had BCAs that were rated as marginally useful (22) or not useful (9) while 48 projects with very useful or useful BCAs were not selected for award. Table 14 shows the economic analysis team's BCA usefulness ratings, by region of the BCAs provided in the TIGER V applications it reviewed.

Table 14: TIGER V (2013) Economic Analysis Team’s Ratings of the Usefulness of Benefit Cost-Analyses, by Region

Benefit-cost analysis usefulness rating	West	East	Central	South	Total	Percentage of applications receiving this rating	Number of funded project receiving this rating	Percentage of funded projects receiving this rating
Very Useful	3	5	3	3	14	8	6	12
Useful	17	7	12	19	55	32	15	29
Marginally Useful	21	12	18	17	68	40	22	42
Not Useful	6	9	7	12	34	20	9	17
Total	47	33	40	51	171	100	52	100

Source: GAO analysis of DOT data. | GAO-14-766

Note: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

In conducting reviews of whether project benefits are reasonably likely to outweigh costs, the economic analysis team found that 94 of 171 BCAs (55 percent) demonstrated either that project benefits would exceed costs or that while their results were uncertain, benefits appeared likelier to outweigh costs. DOT awarded TIGER grants to 29 of these 94 projects. DOT also awarded grants to 18 projects with BCAs rated as having uncertain results, 4 projects for which the costs appeared likelier to outweigh the benefits, and one project for which the costs exceeded the benefits. Table 15 shows the economic analysis team’s ratings by region.

Table 15: TIGER V (2013) Economic Analysis Team’s Ratings of the Results of Applicants’ Benefit-Cost Analyses, by Region

Benefit-cost analysis demonstrates that...	West	East	Central	South	Total	Percentage of applications receiving this rating	Number of funded projects receiving this rating	Percentage of funded projects receiving this rating
Benefits of the project exceed the costs	5	9	5	13	32	19	14	27
Results are uncertain, but benefits appear likelier to outweigh costs	19	8	23	12	62	36	15	29
Results are uncertain	20	14	8	14	56	33	18	35
Results are uncertain, but costs appear likelier to exceed benefits	3	2	4	8	17	10	4	8
Costs of the project exceed the benefits	0	0	0	4	4	2	1	2
Total	47	33	40	51	171	100	52	100

Source: GAO analysis of DOT data. | GAO-14-766

Notes: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

Percentages may not sum to 100 percent due to rounding.

Appendix III: Selected Projects Reviewed by GAO

Table 16: 20 Selected TIGER Projects Reviewed by GAO, Fiscal Years 2009 (TIGER I) through 2012 (TIGER IV)

Project name	Funding round	Region	Urban/rural	Project type	Award amount
Saint Paul Union Depot Multi-Modal Transit and Transportation Hub	TIGER I (2009)	Central	Urban	Transit	\$35,000,000
Priority Bus Transit in the National Capital Region	TIGER I	East	Urban	Transit	\$58,838,000
I-244 Multimodal Bridge Replacement	TIGER I	South	Urban	Road	\$49,480,000
US-491 Safety Improvements	TIGER I	West	Rural	Road	\$31,000,000
Great Plains Freight Rail	TIGER II (2010)	Central	Rural	Rail	\$10,230,597
Memorial Bridge Replacement	TIGER II	East	Urban	Road	\$20,000,000
Parramore Bus Rapid Transit	TIGER II	South	Urban	Road	\$10,000,000
Sugar House Streetcar	TIGERII	West	Urban	Rail	\$26,000,000
South Park Bridge Replacement	TIGER II	West	Urban	Road	\$34,000,000
Chicago Blue Line Renewal & City Bike Share	TIGER III (2011)	Central	Urban	Transit	\$20,000,000
South Jersey Port Rail Improvements	TIGER III	East	Urban	Rail	\$18,500,000
Kennebec Bridge Replacement	TIGER III	East	Rural	Road	\$10,810,000
South Link: Sea-Tac Airport to South 200th Street	TIGER III	West	Urban	Transit	\$10,000,000
US 101 Smith River Safety Corridor	TIGER III	West	Rural	Bicycle and Pedestrian	\$ 2,500,000
95th Street Terminal Expansion	TIGER IV (2012)	Central	Urban	Transit	\$20,000,000
Anacostia Bicycle and Pedestrian Project	TIGER IV	East	Urban	Bicycle and Pedestrian	\$10,000,000
Raleigh Union Station Phase I	TIGER IV	South	Urban	Rail	\$21,000,000
Gulf Marine Highway Intermodal Project	TIGER IV	South	Rural	Port	\$12,000,000
Ranson-Charles Town Green Corridor Revitalization	TIGER IV	South	Rural	Road	\$ 5,000,000
I-25 North Managed Lanes Extension and Express Bus Project	TIGER IV	West	Urban	Road	\$15,000,000

Source: DOT data. | GAO-14-766

Note: TIGER refers to the Transportation Investment Generating Economic Recovery (TIGER) discretionary grant program.

Appendix IV: Comments from the Department of Transportation



AUG 25 2014

U.S. Department of
Transportation
Office of the Secretary
of Transportation

Assistant Secretary for Administration

1200 New Jersey Ave., SE
Washington, DC 20590

Susan Fleming
Director, Physical Infrastructure Issues
U.S. Government Accountability Office
441 G Street NW
Washington, DC 20548

Dear Ms. Fleming:

To date, the Department of Transportation (DOT) Transportation Investments Generating Economic Recovery (TIGER) discretionary grant program has provided \$4.1 billion to 270 projects to provide the Nation with useful transportation benefits, in accordance with statutory requirements. As we work to complete our efforts on TIGER VI, the Department continues to take the necessary steps to ensure that projects receiving funding are fairly and competitively evaluated, and selected.

As we stated in our May 28, 2014, response to GAO's management letter, the Department sought opportunities to examine its processes and implement programmatic improvements to the latest round, TIGER VI. These include:

- **Process Clarified for Early Modal Input** – Measures have been implemented: to obtain early input from the Operating Administrations and to provide the Control and Calibration and Senior Review teams with revised and more precise guidelines.
- **Modal Focus on Project Review** – The TIGER technical evaluation process has been changed to focus reviewers on identifying the best projects by mode, and not by region, to eliminate the difficult comparison of projects across all modes.
- **Late Applications Not Accepted Without Meeting Specific Conditions** – DOT received a total of 895 applications for TIGER VI. Of these, 53 applications were rejected because they missed the deadline. Only one application that was submitted late was accepted because it provided documentation meeting the conditions identified in the late application guidance. In this case, a technical issue with Grants.gov.
- **Technical Team Ratings Have Not Changed** – Previous guidelines relating to technical evaluation team ratings caused considerable confusion and have been changed to ensure that technical ratings do not change throughout the review process.
- **Documentation Improvements Implemented** – The revised program guidelines include greater specificity for documenting project selection to provide transparency over project selections.

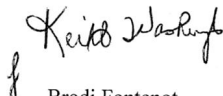
- **All Highly Rated Projects will be Considered** – As described in the NOFA, the recommendations to the Secretary will include all ‘highly rated’ projects, which include projects rated ‘highly recommended,’ along with those rated ‘recommended’ and ‘acceptable.’ A recommended or acceptable project will only be considered highly rated if the senior review team asks the control and calibration team to review it and the control and calibration team advances it, consistent with the NOFA criteria.

These actions demonstrate concrete measures the Department has put into place to clarify procedures and better document key decisions. At the same time, we value the input and expertise of the Department’s senior experts and preserve the Secretary’s discretion to select among highly rated projects consistent with the statutory requirements and the NOFA evaluation criteria.

Upon preliminary review of GAO’s recommendation, the Department agrees with the goal of improving performance measurement for the TIGER program. As stated in your report, while Congress did not require such measurement, the Department took the initiative to require TIGER grantees to report periodically on their progress in meeting the project goals. Because none of the TIGER capital projects have reached the point where they may submit project outcome reports, it is too early to begin evaluating the long-term impact of the TIGER program. However, we will continue to work to streamline and improve outcomes reporting in order to demonstrate whether and how the TIGER program is meeting its program goals.

We appreciate this opportunity to comment on the GAO draft report. Please contact Martin Gertel, Director of Audit Relations, at (202) 366-5145 with any questions or if GAO would like to obtain additional details of these comments.

Sincerely,



Brodi Fontenot
Assistant Secretary for Administration

Appendix V: GAO Contact and Staff Acknowledgments

Contact

Susan Fleming, (202) 512-2834, or flemings@gao.gov

Acknowledgments

In addition to the contact above, Steve Cohen, Assistant Director; Matt Barranca; Elizabeth Curda; Stephanie Emerson; Colin Fallon; Dave Hooper; Terence Lam; Grant Mallie; Amanda Miller; John Mingus; Sara Ann Moessbauer, Crystal Wesco; and Chad Williams made key contributions to this report.

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