STRATEGIES FOR COLLABORATIVE FUNDING OF INTERMODAL AIRPORT GROUND ACCESS PROJECTS

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ABSTRACT

This paper presents the findings and conclusions from a recently completed research study that examined the challenges of funding airport ground access projects and the role of collaborative funding strategies between the different agencies that typically become involved in such projects. The paper reviews the recent literature on funding airport ground access projects as well as some of the wider literature on funding transportation projects in general that is indirectly relevant to airport ground access projects. This is followed by a review of current federal transportation funding programs relevant to airport ground access projects, as well as a discussion of state and local funding programs and potential opportunities for private sector funding. The paper then briefly describes the scope of several case studies of airport ground access project funding that were undertaken as part of the research and are documented in more detail elsewhere.

Based on the literature review, the review of current funding programs, and the case study findings, the paper discusses potential funding strategies for intermodal airport ground access projects, requirements for effective implementation of these strategies, and a recommended approach to facilitate successful project development and implementation. The paper also presents recommended changes to transportation funding program rules and regulations that could facilitate and simplify the development of intermodal solutions to future airport ground access needs.
INTRODUCTION

Airports are the principal interchange nodes in the passenger transportation system where local and regional transportation systems interface with those for national and international travel. At the same time, airports also facilitate the transfer of air cargo between the surface transportation system and the air transportation system, as well as sometimes serving as major sorting and distribution centers for freight that moves entirely by surface transportation.

However, projects to improve the connectivity between the surface transportation system and the airport circulation and terminal facilities are often hampered by the fact that program regulations limit the type and location of projects eligible for funding from the various federal and state transportation funding programs. Policies regarding the allocation and use of these funds are often so restrictive that projects are difficult to implement or are rendered much less effective at improving intermodal connectivity. These limitations and restrictions constrain the ability of both airport authorities and state and regional transportation agencies to plan and implement effective intermodal solutions to airport ground access needs.

This paper presents the principal findings of a recently completed research study for the Mineta Transportation Institute (MTI) at San José State University that examined the potential for the development of collaborative funding strategies to facilitate the implementation of airport ground access projects (1). The objectives of the research were: 1) identify and document existing sources of funding for airport ground access projects, together with the associated constraints on how they can be used; 2) examine past experience on the use of different funding sources for intermodal airport ground access projects; and 3) develop guidance material on how to implement collaborative funding arrangements for such projects within the constraints of the different funding sources.

The remainder of this paper consists of six sections. The next section summarizes the findings of a literature review that examined the literature on funding airport ground access and intermodal projects, as well as the limitations and restrictions imposed by the regulations and eligibility requirements of the relevant funding programs. The third section provides a brief review of the various funding programs, together with their limitations and restrictions and applicable regulatory and guidance material. The fourth section provides an overview of seven case studies of intermodal airport ground access projects that were selected to explore the variety of different funding programs and sources that have been used to finance such projects, and are described in more detail in a companion paper (2). The fifth section presents guidance on the development of collaborative funding strategies for intermodal airport ground access projects that was developed in the course of the research. This guidance addresses identification of potential funding sources, institutional considerations in generating a regional consensus on the need for improved airport ground access, and inter-agency agreement on project selection and priorities. The following section presents a set of recommended changes to applicable funding program rules and regulations, as well as associated legislative requirements, in order to better facilitate collaborative funding of airport ground access projects. The seventh and final section presents the principal conclusions of the research regarding opportunities for innovative and collaborative funding of intermodal airport ground access projects.

LITERATURE REVIEW

There is a fairly limited literature that specifically addresses funding airport ground access projects, with a somewhat larger literature on airport ground access planning, some of which addresses funding issues. The latter includes guidance documents on planning airport ground
access facilities and services prepared for the Federal Aviation Administration (FAA) and Federal Highway Administration (FHWA), and recent studies by the U.S. Government Accountability Office (GAO) and the Airport Cooperative Research Program of the Transportation Research Board.

In 1994 the FAA sponsored a workshop to define a research agenda to support a national program of airport ground access development (3). Workshop presentations identified some 15 studies or programs that are needed to ensure that both policy makers and planners have appropriate information and tools, including information on funding strategies. Although earlier descriptions of specific airport ground access projects sometimes addressed funding considerations, a presentation by Matthew Coogan (4) and a paper by Annalynn Lacombe (5) prepared for the workshop were some of the earliest work that specifically addressed airport ground access funding issues. Subsequently, the FHWA and the FAA sponsored the preparation of a planning guide (6), which provided a brief discussion of funding sources, and the Transit Cooperative Research Program (TCRP) sponsored a two-phase study to examine strategies for improving public transportation access to large airports (7, 8). The 2000 TCRP report includes a chapter discussing institutional considerations and funding options for airport ground access projects. A study in 2001 for the California Department of Transportation on ground access to California airports (9) addressed a wide range of issues and problems at some 47 airports in the state as well as one in Mexico adjacent to the California border, including project selection and funding. The study developed a set of policy recommendations, four of which specifically addressed project funding issues, including the need for improved coordination of different funding sources.

More recently, a 2005 study of airport intermodal transportation capabilities by the GAO (10) undertook a survey of existing and planned bus and rail connections at 72 U.S. airports, and presented the results of 14 case studies of intermodal projects at selected airports. The GAO report includes an appendix that provides a review of federal, state and local funding programs applicable to airport intermodal ground access projects as well as potential private sector funding opportunities, with some discussion of airport intermodal projects that have used particular sources of funding. At about the same time, a 2008 Airport Cooperative Research Program report on ground access to major airports by public transportation (11) examined a broad range of issues involved in planning for enhanced public transportation access to airports, including attributes of successful systems, application of market research, management of the airport landside system, considerations in attracting airport employees to public transportation, and effective ways to get ground access information to travelers. The report contains a discussion of factors governing airport financial operations and sources of funding for ground access projects, although this largely repeats the discussion in the 2000 TCRP report on improving public transportation access to large airports, in somewhat less detail.

In addition to literature specifically addressing airport ground access funding, there is an extensive literature on transportation funding in general, some of which is indirectly relevant to airport ground access funding. An October 2006 report (12) published by the Mineta Transportation Institute examined transportation financing opportunities for California. In February 2009, the National Surface Transportation Infrastructure Financing Commission released its Final Report Paying Our Way: A New Framework for Transportation Finance (13) that includes an extensive bibliography and provides a good overview of the issues being faced in surface transportation funding and potential solutions.
Two aspects that have received considerable attention in recent literature are the equity implications of changing the way in which transportation projects are financed and funded, and issues involved in forming public-private partnerships. An article in the TR News issue of March/April 2009 (14) summarized the discussions on this topic at a Transportation Research Board (TRB) Executive Committee policy session in January 2008. A subsequent TRB Special Report (15, 16) explored these issues in more detail and developed a set of recommendations for public policy makers, researchers and analysts, federal agencies, and states.

The growing interest in public-private partnerships (PPPs) as a way to finance transportation infrastructure has also led to a growing body of literature addressing this topic. A series of articles in the May/June 2011 issue of TR News examines a number of aspects of the potential use of PPPs for transportation projects (17), including U.S. and international experience (18, 19), obtaining value from PPPs (20), public-sector decision-making in selecting PPPs (21), and protecting the public interest (22). These articles summarize current experience and concerns and build on research on PPPs undertaken by the National Highway Cooperative Research Program (NCHRP) over the past 20 years (23-25). While the NCHRP reports naturally focus on the application of PPPs for highway projects, many of the findings are equally appropriate to transit or airport projects. In December 2007 the Federal Transit Administration (FTA) submitted a Report to Congress on the costs, benefits and efficiencies of PPPs for fixed guideway transit capital projects (26). In June 2008, a team sponsored by the FHWA International Technology Scanning Program undertook a program of visits to Portugal, Spain, the United Kingdom, and Australia to gather information on experience with PPPs for highway infrastructure in those countries (27). A subsequent report by the accounting firm PricewaterhouseCoopers in June 2010 (28) provides a summary of U.S. experience with PPPs, compares enabling legislation in the 25 states that had passed such legislation at the time of the report, and provides a discussion of why PPPs are attractive, when they make sense, and hurdles that need to be overcome. In December 2010 the National Conference of State Legislatures (NCSL) released a report that provides a toolkit for legislators (29). The report discusses key characteristics of PPPs, related benefits, concerns and controversies, federal and state government roles in the PPP process, and principles for state legislation. The NCSL website page discussing the report also provides an extensive bibliography on PPPs with links to each of the reports.

FUNDING PROGRAMS AND SOURCES FOR AIRPORT GROUND ACCESS PROJECTS

There is a very wide range of federal, state and local transportation funding programs that could potentially be used to fund intermodal airport ground access projects (1). However, airport ground access projects usually need to compete with other projects for funding from these programs and they do not get any special consideration, notwithstanding their importance in the national transportation network. Federal programs include both airport development and surface transportation programs, although the airport development programs are generally limited to funding projects, or parts of projects, located within the airport perimeter. This section summarizes those programs that were in place at the time the research was undertaken and briefly mentions some of the changes to those programs by the recent federal surface transportation authorizing legislation, Moving Ahead for Progress in the 21st Century Act (MAP-21). More details on each program are given in the final report of the research project (1). Most of these programs have been in place for many years and appear likely to remain in effect for the
foreseeable future, although some changes have been made by MAP-21 and it is recognized that they might of course be further changed by future legislation or rulemaking.

The federal Airport Improvement Program (AIP) provides grants for eligible projects, which include a broad range of airport ground access projects. The program includes both entitlement funds, distributed to airports according to a formula defined in the authorizing legislation, and discretionary funds. However, airport ground access is not a high priority for use of discretionary funds. The second major federal airport funding program is the Passenger Facility Charge (PFC) program. This program allows airport sponsors to impose a fixed charge on all passengers using the airport, with a few exceptions. The charge is collected by the airlines through the air ticket and is currently limited to a maximum of $4.50 each time a passenger uses an airport that is imposing a PFC. Project eligibility for PFC revenue is similar to that for AIP grants, although PFC revenue can be used for some purposes that are not eligible for AIP grants. Airport sponsors must apply to the FAA for approval to impose a PFC and specify the project or projects that revenue will be used for and the total amount to be collected. The PFC remains in effect until the approved amount has been collected.

The FAA guidance bulletin on Best Practices-Surface Access to Airports (30) provides an overview of the general eligibility criteria for airport ground access projects, including references to the relevant sections of the AIP Handbook and a Federal Register notice of February 10, 2004 (31) addressing eligibility of airport ground access projects for funding under the PFC program. Although the Federal Register notice addresses the PFC program, the Best Practices bulletin notes that AIP eligibility of such projects conforms to that for PFC projects, except for those provisions that are exclusive to the PFC program.

In addition to these two programs, airport ground access projects will generally also be eligible for funding from a range of federal surface transportation funding programs, primarily administered by the FHWA and the FTA. Many of these programs provide funds directly to states on a formula basis for projects meeting the eligibility requirements of each program. FHWA programs that could be used to fund intermodal airport ground access projects or components of such projects, depending on the nature of the project, include the Surface Transportation Program, the former National Highway System Program (made part of a new National Highway Performance Program by MAP-21), and the Congestion Mitigation and Air Quality Improvement Program. The FHWA also administers a revolving loan program under the Transportation Infrastructure Finance and Innovation Act (TIFIA) (32) that has been used for a number of intermodal airport ground access projects and has been significantly expanded by MAP-21. To qualify for a TIFIA loan, a project has to be able to generate sufficient revenue to cover the loan interest and eventual debt repayment (32).

The FTA administers a number of programs that provide Formula Grants to states and local jurisdictions and agencies that can be used to fund capital projects that could include public transit elements of intermodal airport ground access projects. In addition, the FTA administers a Major Capital Investments Program, more commonly called New Starts or Small Starts (depending on the level of funding involved), which provides discretionary grants on a project basis. This program has partially funded a number of intermodal airport ground access projects.

This project planning and development process for the New Starts program prior to a number of changes introduced by MAP-21 is illustrated in Figure 1. Applications for New Starts funding were evaluated against two criteria: project justification and local financial commitment. Project justification assessed whether the anticipated benefits of a project justified the costs involved, irrespective of the level of federal funding of the project, while local financial
commitment addressed the proposed share of total project costs from sources other than the New
Starts program, the strength of the proposed capital financing plan, and the ability of the
sponsoring agency to fund the operations and maintenance of the entire transit system, including
both the existing service and the planned project, once the project was built. This evaluation was
used not only to determine whether a planned project qualifies for federal funding from the New
Starts program, but also to prioritize and select projects to fund. This evaluation was not a one-
time decision, but continued during the planning and project development process as more
detailed analysis results became available and the project sponsor addressed FTA concerns.

FIGURE 1 New Starts planning and project development process (33)

In addition to distributing federal funds, states also have their own transportation funding
programs supported by a range of state taxes and fees, commonly including state motor fuel
taxes and vehicle registration or license fees. Naturally the details of these programs vary from
state to state. To illustrate the potential range of state programs, the final report of the research
project (1) describes the various transportation funding programs in California. These include
funds distributed through the State Highway Account, the Public Transportation Account, the
State Transportation Improvement Program, the Aeronautics Account, the San Francisco Bay
Area Bridge Toll Account, and a number of programs financed by voter-approved general
o obligation bonds, such as the Proposition 116 Rail Bond Account established in 1990, the Traffic Congestion Relief Fund created in 2000, the Proposition 1B Bond Funds established in 2006, and the Proposition 1A Bond Funds established in 2008. Project funding decisions for some of these programs are managed at the state level while other funds are allocated to Metropolitan Planning Organizations or other local jurisdictions to program how they are used.

Local funding for transportation capital projects includes funds provided by a wide range of different agencies, including cities and counties, transit and other transportation agencies, and special purpose agencies such as port or airport authorities, toll road authorities, or congestion management agencies. An analysis of revenue sources for transportation funding at a national level by the Center for Excellence in Project Finance of the American Association of State Highway and Transportation Officials (AASHTO) (34) indicates that local funding for transportation, including both capital and operating expenditures, accounts for about 36 percent of total surface transportation funding and exceeds the federal share by a wide margin. Increasingly important sources of local funding for transportation projects are ballot measures that dedicate revenues from a voter-approved retail sales tax increment to a specific set of projects or specific purposes. A number of intermodal airport ground access projects have been funded in part by such measures, including several which are included in the case studies undertaken as part of the research, as discussed below.

There is a growing interest in exploring opportunities to take advantage of private sector funding for transportation projects, including airport ground access projects. This generally takes one of two forms: issuing bonds or creating public-private partnerships (PPPs) with private-sector firms that invest equity or other private capital. Both approaches require a revenue stream that can pay the interest on the debt or provide a return on the investment and eventually retire the debt. PPPs have been used in a number of intermodal airport ground access projects, several of which are included in the case studies described in the next section.

CASE STUDIES OF AIRPORT GROUND ACCESS PROJECT FUNDING

In order to examine how different funding sources have been used in practice for intermodal airport ground access projects, the research examined past experience with collaborative funding through a series of case studies of selected projects. We first developed a list of twenty three projects based on the following criteria: 1) extent of collaborative funding, 2) type of the project, 3) nature of the ground access problem being addressed, 4) size of airport and urban environment, 5) number and type of agencies involved in the project, and 6) whether the project had been completed or was still in progress. Due to the limitations of the project funding, it was recognized that it was not possible to undertake a large enough number of the case studies covering all possible combinations of the above criteria. Therefore, seven projects were selected for the case studies, which represent a wide range of airport ground access projects and were financed through an equally wide range of funding programs and sources. They are located in five different states on both the U.S. East and West Coasts, and include a major intermodal center located adjacent to and serving a large international airport, two automated people mover links to airports from nearby rail stations, two airport highway projects, and two extensions of regional rail systems to airports, one a light rail system and one a heavy rail system. The selection of the case study projects is described in more detail in (1) and the principal findings are summarized in (2). In addition, each case study is documented in more detail in a series of case study reports (35-41) that are available on the Mineta Transportation Institute website (at transweb.sjsu.edu/project/2503.html). Specifically, the seven projects comprise: 1) Miami
International Airport Intermodal Center, 2) New York John F. Kennedy International Airport (JFK) AirTrain people mover, 3) Oakland International Airport people mover connector from the Bay Area Rapid Transit (BART) system, 4) Oakland International Airport Roadway Project, 5) Richmond Airport Connector roadway link between the Pocahontas Parkway toll road and Richmond International Airport, Virginia, 6) Portland Metropolitan Area Express (MAX) light rail extension to Portland International Airport, Oregon, and 7) BART extension to San Francisco International Airport. The Miami Intermodal Center represents not only the largest airport intermodal facility in the country, but perhaps the largest intermodal center of any type. When completed, the facility will serve intercity and regional rail systems, intercity and local buses, and airport rental cars in a single integrated complex linked to the airport passenger terminals with an automated people mover. Three of the seven projects, the Miami Intermodal Center, the JFK AirTrain, and the San Francisco International Airport BART extension, can be considered mega-projects by any standard, with total costs for each project exceeding $1 billion.

FUNDING STRATEGIES FOR INTERMODAL AIRPORT GROUND ACCESS PROJECTS

Because intermodal airport ground access projects are typically too large and complex to be funded from a single transportation funding program, planning such projects generally requires the development of a funding strategy that involves multiple agencies and funding sources. While the relevant airport authority will typically play a major role in a multi-agency partnership to plan and sponsor the project, restrictions on the use of both federal AIP funds and local airport revenues, including PFCs, will generally require these funds to form one part of a more complex funding strategy that involves federal, state and local transportation funding programs, and possibly private sector involvement as well.

While the exact mix of funding sources and the proportion of the total cost of the project derived from each source will vary with the nature and scale of the project, the implementation of a multi-agency, multi-program funding strategy will require the development of a broad regional consensus on the importance of the project. The development of such a consensus forms a critical component of the planning for any large-scale intermodal airport access project. This will be facilitated by the establishment of a multi-agency airport ground access task force, consisting of senior staff from the relevant agencies. In many situations it would be appropriate for the Metropolitan Planning Organization (MPO) to take a leading role in establishing this task force and soliciting support for recommended airport ground access projects from elected local, state and federal government officials. MPO leadership in the task force can play a critical role in addressing projects that span across jurisdictional boundaries. This task force should have a wider scope than just pursuing a particular intermodal access project, but should take a broad perspective on airport ground access issues and needs, and address intermodal airport access facilities and services within a broader context that includes land use planning in the area adjacent to the airport, opportunities for synergistic development that takes advantage of the proximity to the airport, and the transportation needs of the surrounding area. In order to effectively address the complex issues involved in airport ground access planning, the task force will need to have adequate resources to assemble a broad range of relevant data and retain consultants with the specialized experience required to undertake airport ground access modeling and planning, as discussed in more detail in (1).

The second key element in developing a regional consensus on the importance of a proposed intermodal airport access project in addressing airport ground access needs is a
balanced and thorough documentation of the expected benefits of the project. This should draw on the data and analytical capabilities assembled by the airport ground access task force. These will need to include an airport access mode choice model that is capable of predicting the shifts in airport access trips between the different modes as a result of the proposed project, which in turn will allow estimates of the effect of the project on airport access travel times and costs. Currently, the treatment of airport access mode choice in most regional travel demand models is cursory at best or completely ignored (42) and therefore the task force may need to develop a special-purpose modeling capability for these trips.

In developing funding strategies for intermodal airport ground access projects, consideration should be given to opportunities for public-private partnerships that can provide access to private sector funding. The private-sector partners will need to be able to obtain a return on their investment and since intermodal facilities do not typically operate at a profit, other ways will need to be found to provide sufficient return on the investment. These could include the award of development rights linked to the intermodal project, as was done with the Airport MAX light rail extension to Portland International Airport, or co-location of revenue generating functions such as parking or a consolidated rental car facility, as has been done at the Miami Intermodal Center. However, care is needed in structuring such partnerships to make sure that the public interest is best served by this approach.

RECOMMENDATIONS FOR CHANGES TO PROGRAM RULES AND REGULATIONS

The complexity of developing funding strategies for intermodal airport ground access projects and the current restrictions on the use of funds from many applicable funding programs suggest that some changes to existing program rules and regulations could facilitate developing more effective intermodal solutions to meet future airport ground access needs.

Perhaps the most significant restrictions from the perspective of intermodal airport ground access projects are the limitations on the use of federal AIP and PFC funds for ground access projects located off the airport and the so-called revenue diversion rules that restrict the ability of airport authorities to use airport revenue to fund projects located off the airport. While the FAA has shown greater flexibility in recent years in allowing the use of AIP and PFC funds for airport ground access projects, the current provisions in the authorizing legislation and associated regulations are unnecessarily restrictive, particularly in the distinction between on-airport and off-airport components of airport access projects. The ability to develop effective intermodal solutions to future airport access needs would be enhanced if the FAA were to work with Congress to ensure that future reauthorization of these programs provides greater flexibility in the use of these funds. For example, two obvious changes to the regulations governing the use of funds from the AIP and PFC programs would be: 1) to allow funds from the AIP and PFC programs to be used for airport ground access projects located off airport property without requiring the airport sponsor to own or operate the facility, and 2) to allow funds from the AIP and PFC programs to be used for airport ground access projects in proportion to the use of those facilities by airport travelers where their use is shared by both airport and non-airport travelers. More detailed discussion on potential changes to the limitations on the use of AIP and PFC for ground access projects can be found in (1).

Similarly, current revenue diversion rules unduly limit the ability of airports to use airport revenues to finance improvements to airport ground access, particularly intermodal access projects. The U.S. Department of Transportation should consider amending its rules on airport
revenue diversion to allow airport revenues other than those derived from AIP grants or PFC revenue to be used to support airport ground access projects and services in locations off the airport, with appropriate limitations to restrict the use of airport revenues to projects that benefit the airport or its users. Clearly, travel to and from the airport by air passengers and airport employees, as well as the surface movement of air cargo to and from the airport, is essential to the functioning of the airport and the air transport operations it serves, so it makes no sense to preclude the airport authority from using airport revenue to improve the accessibility of the airport. Furthermore, a significant component of airport revenues derives directly from airport ground access and egress travel, so it makes even less sense to prevent the airport authority from using part of those revenues to improving the airport ground access system that supports those trips.

Since state transportation funding programs that can be used to fund airport intermodal connections and services vary from state to state, any recommendations for changes to the rules and procedures for those programs would need to be tailored to the specific circumstances of a given state. To the extent that these programs mirror the federal surface transportation funding programs, similar recommendations would apply. Many states have taken a strong policy position on developing improved intermodal connections within the state’s transportation system, as illustrated by the Florida DOT leadership in developing the Miami Intermodal Center and efforts within California to fund the development and operation of improved intercity passenger rail systems. However, the majority of these programs still operate within a funding structure that is organized on a modal basis. It may be helpful to create a funding program specifically structured to support the development of intermodal connections and improved intermodal coordination.

Not surprisingly, local programs are even more diverse than state programs, both in terms of their scope, management, and funding levels. Commonly these programs are funded from an increment in the local sales tax, since this is commonly a revenue source that can be modified by the local electorate, both in terms of the tax rate and the uses to which the tax revenues can be put. To the extent that these programs reflect local priorities and willingness to invest in improved transportation facilities serving the affected communities, differences in the programs from jurisdiction to jurisdiction are more likely to result from differences in local needs and opportunities than a failure to take advantage of opportunities represented by other programs. Even so, when designing such programs, or selecting projects to fund through such programs, it is important to ensure that opportunities for improved intermodal connections are given appropriate consideration. These will not necessarily be projects that will have a lot of local political visibility or voter support, since their value is often only apparent after the fact or perhaps not obvious at all, since those who would benefit from the improved connectivity provided by the project are often by necessity currently using other routes or modes. Therefore local transportation planners should work to identify needed improvements in intermodal connectivity in the region and define proposed projects to address these needs, so that those developing or supporting proposed local funding programs, or selecting projects to receive funding from such programs, are aware of the opportunities to fund improvements in intermodal connectivity. In terms of projects to improve intermodal airport ground access, it is important that airport planners work closely with regional transportation officials and those involved in developing local funding programs to ensure that these projects are considered. This is where a regional airport ground access task force, as discussed in the previous section, can prove particularly helpful. Although the majority of local transportation funding programs are based on
revenue from sales taxes, there is a growing interest in new and innovative sources of revenue to finance transportation programs, such as automated tolling and mileage-based fees.

More detailed discussion on the recommendations for changes to program rules and regulations can be found in (1).

CONCLUSIONS

The results of the research described in this paper suggest that the challenges of funding airport ground access projects will generally require the development of collaborative funding strategies between the different agencies that typically become involved in such projects.

Although many airport ground access projects have been funded using the existing framework of transportation funding programs and other funding arrangements, including those projects studied in the course of this research, this is not to say that the current programs and procedures are well structured to finance improvements to airport ground access, particularly intermodal connections to local and regional transit systems. There are a number of potential changes to the rules and regulations governing the eligibility of projects for various funding programs that could significantly facilitate the development of improved intermodal connections at major airports. In particular, the current restrictions preventing the use of funds from the federal AIP and PFC programs for airport ground access projects located off airport property make little sense. It is understandable that aviation interests, including the airlines and airport sponsors, do not want to see airport development funds used to pay for transportation projects that are serving trips unrelated to the airport. However, existing procedures for sharing cost responsibilities where on-airport projects serve both airport and non-airport trips can be easily extended to handing off-airport components of projects that serve both airport access trips and non-airport travel. Similarly, current revenue diversion rules unduly limit the ability of airports to use airport revenues to finance improvements to airport ground access, particularly intermodal access projects. Revisions to the rules to provide greater flexibility, which may require Congressional action, could help facilitate such projects.

Intermodal airport ground access projects not only present some of the greatest opportunities to improve intermodal coordination in the transportation system, directly addressing the interface between the surface and air transportation systems, but are also likely to become a critical solution to meeting future ground access needs at many airports. At the same time, these are some of the most challenging transportation projects to plan and fund due to the large number of different agencies that can become involved in such projects and the restrictions imposed in current funding programs. As a result, collaborative approaches to funding such projects are often essential to their successful implementation. These approaches can draw on a wide range of federal, state, and local funding sources, as well as opportunities for private sector involvement.

While future changes to federal legislation and regulations could greatly facilitate funding such projects, there are already many existing funding programs that can be used, as illustrated by the case studies undertaken in the research described in this paper. The development of an appropriate funding strategy for a given airport ground access project will depend on the nature of the project and the local institutional and transportation funding situation, including the potential availability of funding from state and local programs. However, in order to take full advantage of these opportunities, it is necessary to develop a regional consensus on the importance of a given project to the regional transportation system. This can be greatly facilitated by establishing a regional airport ground access task force to work on an ongoing
basis to identify and plan needed facilities to enhance airport ground access and develop collaborative funding strategies. This task force should comprise senior staff from the major airports, the MPO, the state Department of Transportation, transit agencies, local jurisdictions in the immediate vicinity of the airports, and other relevant stakeholders. It should have adequate resources to assemble required data, undertake studies, and retain consultants for specialized studies or analysis. One important objective of establishing a regional airport ground access task force is to ensure that airport ground access issues get appropriate consideration when agencies are formulating their long-range capital improvement plans and funding priorities.

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