GROUND ACCESS TO AIRPORT STUDY

Executive Summary

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Prepared for:
California Department of Transportation

Caltrans

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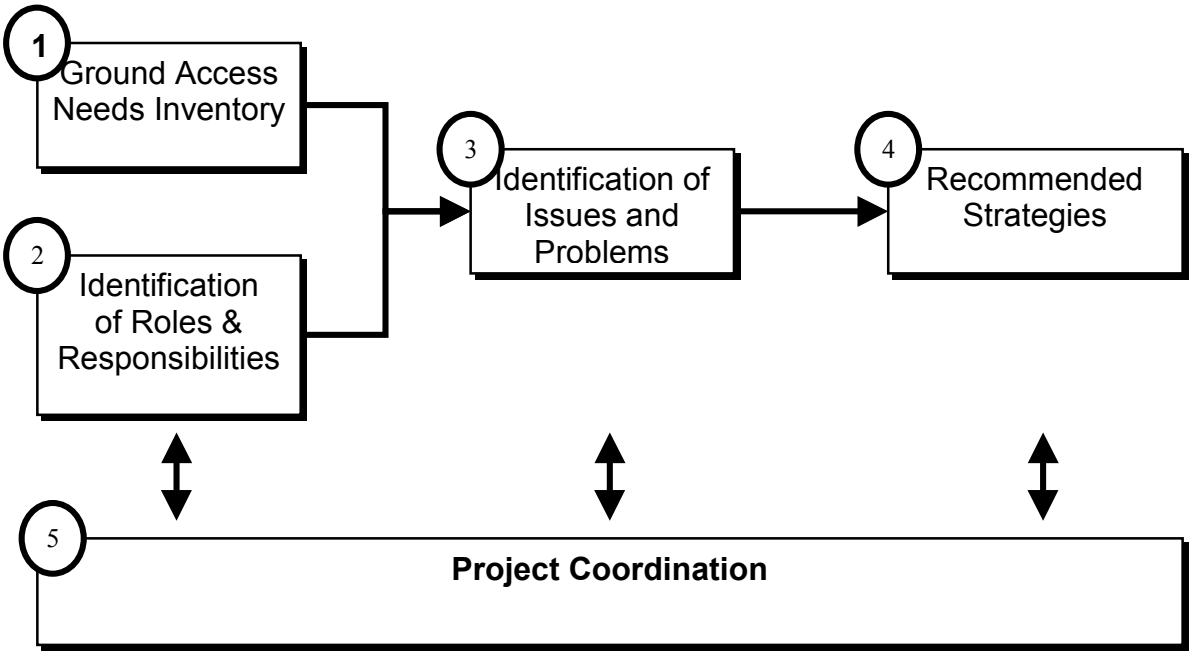
Submitted to:
California Department of Transportation
Division of Aeronautics

Submitted by:
Landrum & Brown Team

Introduction

The Ground Access to Airport Study for the California Department of Transportation (Department), hereinafter referred to as Caltrans, began in July 2000. The Study's primary purpose was to assist Caltrans in identifying needs and provide tools to improve the planning, programming and implementing of ground access to airport projects in California. Five general tasks were involved, as shown in **Figure 1**, Task Structure of Caltrans Ground Access to Airport Study.

Figure 1
Task Structure of Caltrans Ground Access to Airport Study



The study focused on 47 airports throughout the State of California and one in Mexico, Aeropuerto de Tijuana S.A. de C.V.-Rodriguez, for a total of 48. Much of the project's coordination effort came through advice and guidance from the project's Steering Committee and the California Transportation Commission (CTC) Technical Advisory Committee on Aeronautics (TACA). The airports were classified into five categories:

- Large and Medium Commercial,
- Small and Non-Hub Commercial,
- General Aviation,
- Cargo, and
- Military.

The 48 airports and a summary of their activity statistics are shown in **Table 1**, Airport Classification by Type and Airport Activity Data.

Table 1
Airport Classification by Type and Airport Operations Data

Airport Type	Summary of Operations Data		
	Enplanements (1999)	Operations (1998)	Cargo Tons (1999)
Large and Medium Commercial Airports			
Burbank-Glendale-Pasadena	2,370,785	179,703	20,356
John Wayne	3,707,746	418,211	22,025
Los Angeles International	30,059,485	773,569	2,165,855
Metropolitan Oakland International	4,497,481	519,386	337,039
Ontario International	3,018,951	145,004	249,972
Sacramento International	3,609,616	167,650	37,586
San Diego International	7,392,570	224,629	63,846
San Francisco International	19,079,664	418,577	285,299
San Jose International	5,158,793	318,133	65,580
Small and Non Hub Commercial Airports			
Arcata	95,164	87,660	117
Aeropuerto de Tijuana S.A. de C.V.-Rodriguez	N/A	N/A	N/A
Chico Municipal	23,181	63,188	448
Fresno-Yosemite	492,306	162,171	4,801
Imperial County	26,895	73,050	604
Inyokern	9,615	41,273	326
Long Beach-Daugherty Field	341,040	471,538	19,475
McClellan-Palomar	58,251	244,352	N/A
Meadows Field	N/A	N/A	N/A
Modesto City-County	21,159	91,678	N/A
Monterey Peninsula	240,173	172,398	371
Oxnard	35,754	100,079	0
Palm Springs International	622,435	123,455	48
Redding Municipal	65,135	112,862	507
Santa Barbara	406,199	164,728	1,091
San Luis Obispo County– McChesney Field	137,247	103,731	386
Santa Maria Public	42,663	62,458	628
Sonoma County	18,411	138,430	356
General Aviation / Business Airport			
Buchanan Field	290	280,512	N/A
Castle	N/A	N/A	N/A
Jack McNamara Field	7,561	8,766	45
Lake Tahoe	308	24,472	0
Mammoth Yosemite	40	12,784	N/A
Merced Municipal	4,208	28,124	N/A
Mojave	N/A	N/A	N/A
Palmdale	2,329	65,745	0
Paso Robles Municipal	22	31,777	4
Shafter-Minter	N/A	N/A	N/A
Riverside Municipal	1	100,079	N/A
San Bernardino International	2,330	12,784	92
Visalia Municipal	14,187	37,986	474
Cargo Airports			
Brown Field (San Diego)	183	94,965	N/A
Sacramento Mather	34	27,759	32,106
Southern California Logistics	N/A	N/A	N/A
Stockton Metropolitan	640	83,642	0
Military Airports			
Edwards AFB	1,099	N/A	N/A
El Toro MCAS	528	N/A	0
March ARB / Inland Port	7,684	N/A	193
Vandenberg AFB	348	N/A	0

Source for Airport Type: Caltrans Division of Aeronautics California Aviation System Plan (CASP),
Source for Total enplanements: FAA website – www.faa.gov/arp/A&D-stat.htm – (Report Date 11/24/99),
Source for Total Annual Operations: Average daily operations multiplied by 365; AirNav website – www.airnav.com,
Source for Total Enplaned Cargo Tons: *T3 Onboard Statistics (10/1/98 – 9/31/99),* produced by Database Products (www.airlinedata.com), data collected by the USDOT – (10/1/98 – 9/31/99).
N/A = Not Available
Note: The summary of operations data included in this table represents the most current and final data set available.

A summary of the results of each task follows.

Task 1: Ground Access Needs Inventory

The primary goal of the ground access needs inventory was to identify and define the high-priority ground access projects that are expected to reduce congestion over the next 10 and 20 years. This task included:

- Developing a survey instrument
- Collecting survey data and populating the database, and
- Developing a Geographic Information System (GIS) for the data.

The airports listed in **Table 1** were the focus of the detailed survey effort that defined the current ground access system (including mobility, roadway access, curbside, goods movement, and parking) and identified each airport's current and future (anticipated) operating characteristics. The survey, comprised of 15 questions, was mailed to the 48 airports. A total of 45 airports responded to the surveys resulting in a 94% return rate.

The final product for this task was a GIS interface comprised of the results from the airport surveys.

Task 2: Roles and Responsibilities

The primary emphasis of Task 2 was on defining the process that airports in the state must navigate to get their ground access projects approved, programmed, and implemented. This task identified the roles and responsibilities of the people involved in the process through interviews with specific officials of state and local agencies, regional transportation agencies, and airport operators. This task also included a scan of existing documentation to help define roles and responsibilities. The end product was a definition of the current role that each agency plays in the process, and their responsibilities.

It was found that in recent years, California's leadership has recognized the importance of a good airport ground access system in maintaining the state's strong economic base. In fact, a number of legislative actions such as Senate Bill 45, Senate Concurrent Resolution No. 96, Senate Resolution 8, and the "2000 Annual Report to California Legislature" have been launched to promote recognition of airport ground access and to support ground access projects.

There is growing recognition of the correlation between an efficient ground access system in and around airports for both passengers and cargo and the state's economy. There is increasing movement at all levels of government to take more active roles in funding and implementing ground access programs.

General Interview Conclusions

Funding most airport ground access programs, whether on or off the airport, is a complex and expensive enterprise. State, regional and local agency officials and staff,

transportation and transit agencies, airport operators, and air cargo industry officials were interviewed to ascertain their perceptions of funding and implementing airport ground access improvements.

Through the interview process, it was found that a number of agencies play a role in planning, funding, and implementing airport ground access projects. Typically, on-airport projects are initiated by airport owners and operators and are often funded through airport revenues and Federal Aviation Administration programs such the Airport Improvement Program (AIP) and Passenger Facilities Charges (PFC). Off-airport projects may directly involve airport owners and operators, but they tend to be more regional in scope, and therefore involve regional transportation agencies, municipalities, and Caltrans District offices. Funding sources for off-airport projects can include a myriad of federal, state, local, and private sector funds.

The current perception as to how airport ground access needs are addressed is that there is no process for funding airport ground access projects. Furthermore, there is the perception that there are funding programs such as the RTIP and STIP, but there is no way to break the barrier to those funds in order to implement a project. Even though funding mechanisms do exist, there first needs to be the realization that airport ground access projects are a priority and should be treated as such.

Given the perceptions expressed in the interviews coupled with the information gathered from the institutional setting, the general conclusions are:

- Projected airport ground access needs for the next ten years (estimated to be at least $3 billion) still pale in comparison to the overall statewide surface transportation infrastructure needs (estimated to be at least $117 billion). Without new funding categories and/or modified existing funding source treatment, airport ground access projects will not keep pace with California's aviation passenger and cargo needs.

- To address the funding shortage issue, a clear, simple and cohesive statewide airport ground access funding and implementation policy and process must be quickly developed. This must allow airport operators, local governments, regional transportation agencies, MPOs, and state transportation programming officials to formulate policies and integrate airport ground access project funding and implementation into their transportation infrastructure plans, programs and priorities.

- Not unlike the specific funding policies and processes emanating from SB 45 and the recently approved *Traffic Congestion Relief Program* (TCRP), a specific process that includes airport ground access projects and programs in overall statewide and regional transportation funding opportunities should be developed and implemented.

- In parallel with the development of a *statewide airport ground access funding and implementation policy*, the state should be the catalyst for the

development of a coordinated local, regional and state approach to focus federal policy-makers and transportation agencies on the national significance and need to address airport ground access needs.

- Not all issues identified can be addressed immediately; therefore, incremental steps to address the above items should be developed. For example, federal reauthorization of TEA-21 is another year away and the reauthorization of AIR-21 will be in 2003. Thus, establishing a statewide policy and instigating dialogue with regional agencies to develop a coordinated approach precedent to federal reauthorization can begin now. Actual modification of federal categorical source allocation for airport ground access would be sought over the next few years.

For specific details on this task, see Working Paper One, Roles and Responsibilities.

Task 3: Issues and Problems

Task 3, the Identification of Issues and Problems task, had two separate but related components: 1) identifying specific airport ground access project needs, and 2) identifying issues and problems surrounding the existing planning, programming, and implementation processes. The first part concentrated on the physical surface transportation issues and problems that exist at the state's airports surveyed. The information collected in Task 1 was used extensively in this process, along with other information collected from telephone conversations with airport officials and related businesses and from the study's Steering Committee. The second part of this task focused on the issues and problems associated with planning, programming, and implementing airport ground access projects. This included identifying gaps in the current process and areas that could be improved.

Airport Project Needs

The airport access project needs were identified through three different methods: 1) those identified from Senate Resolution 8 (SR 8, Burton, 1999), 2) those directly identified by the respondent to the airport survey conducted in Task 1, and 3) those resulting from a performance-based analysis of the survey results in Task 1. These different methods generally provided similar results, although several key issues differed. The results are:

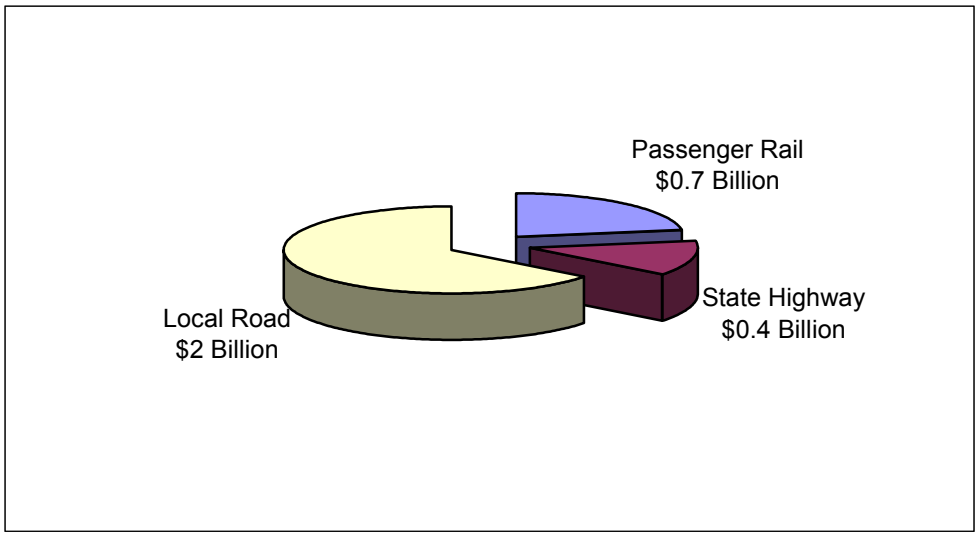
Senate Resolution 8 (SR 8)

The focus of SR 8 was to identify the unfunded needs of 41 California airports. The gaps identified for SR 8 excluded funded projects that have not yet been completed.

The 41 airports included in SR 8 reported 103 unfunded needs with a total estimated cost of $3.1 billion. As shown in **Figure 2**, SR 8 Ground Access Needs by Cost and Mode, the reported projects include 13 state highway improvements for $0.4 billion, 88 local road projects for $2 billion, and 2 passenger rail projects for $0.7 billion.

Most of the access needs are at the 17 large commercial airports, which accounted for about 90 percent (or over $2.7 billion) of all the access gaps. The greatest need is at Los Angeles International (LAX), which represented 78 percent (or about $2.35 billion) of all access needs.[1]

Figure 2
SR 8 Ground Access Needs by Cost and Mode



Eight (8) other large commercial airports accounted for ground access needs of nearly $600 million, while the 24 general aviation airports account for $300 million in needs. The majority of these projects are unfunded, the main exception being those that are regional or inter-regional components of the State Transportation Improvement Program (STIP).

Airport-Identified Needs

The predominant issues identified by the survey respondents were regional access and mobility. Secondarily, localized or site-specific issues were identified. In most instances, the individual airport's size and function drives the types of issues they are confronting and their relative severity.

The primary needs and concerns expressed by the respondents are:

- **Large and medium sized commercial airports** are primarily concerned with major regional mobility issues.
- **Small and non-hub commercial airports** tend to have more localized problems associated with roadway geometrics, and immediate terminal area requirements of curbside and parking.

1The Southern California Association of Governments (SCAG) has since adopted a passenger and cargo demand forecast recommending that LAX be constrained at 78 million annual passengers. Ultimately, the final master plan adopted will define the magnitude of ground access improvement investments in LAX. If this occurs, needs listed for LAX would continue to exist, but may be transferred to other airports in the area.

- **General aviation / business airports** issues and needs are also more localized in nature, generally related to parking, roadway geometrics and roadway condition.
- **Cargo airports** tend to use a roadway infrastructure comprised of local roads that are inadequately constructed to meet the truck traffic demands of cargo transfer facilities.
- **Military airports**, being non-public airports with a specific military purpose, tend to work under different rules regarding funding of ground access improvements. Nonetheless, respondents from the four military airports included in the survey indicated general satisfaction with current access and mobility provisions.

Performance-Based Needs

By evaluating the performance-based data, it was found that across all airports, there are significant current and future needs. These include access roads, neighboring local roads and highways and high intensity regional facilities. **Table 2**, Most Significant Ground Access System Deficiencies, represents a compilation of the most severe airport-identified service level problems today (2000) and in the future (2020). The list consolidates all the deficiencies identified in the survey across the many dimensions of the ground access system – adequacy of alternative modes, auto access, curbside, goods movement, and parking. This table identifies only those airport needs for which the existing or future conditions are deemed to be *moderately* to *severely* inadequate.

Table 2
Most Significant Ground Access System Deficiencies
(Alternative Mode Mobility, Access, Curbside, Goods Movement Access, or Parking Related[1] Year 2000 and 2020)

	Ground Access System Deficiencies							
	Goods Movement	Alternative Modes	Auto Access		Terminal/ Curbside		Parking	
Airport	2000	2000	2000	2020	2000	2020	2000	2020
Large and Medium Commercial								
Burbank-Glendale-Pasadena			X					
John Wayne				X	X	X	X	X
Los Angeles International		X	X	X	X	X	X	X
Metropolitan Oakland International	X	X		X	X		X	X
Ontario International	X		X	X			X	X
Sacramento					X		X	
San Diego International			X	X			X	
San Francisco International	X			X	X		X	X
San Jose International	X		X				X	
Small and Non-Hub Commercial								
Aeropuerto de Tijuana S.A. de C.V.-Rodriguez		X	X	X	X	X	X	X
Chico Municipal	X		X	X		X		X
Fresno Yosemite		X	X		X		X	
Imperial County		X				X		
Long Beach-Daugherty Field			X				X	
McClellan-Palomar			X				X	
Meadows Field	X		X					
Monterey Peninsula			X					
Oxnard			X				X	X
Palm Springs International			X		X			
Redding Municipal	X		X	X		X	X	X
San Luis Obispo County-McChesney Field			X	X	X	X	X	X
Santa Barbara					X		X	
Sonoma County			X	X	X		X	
General Aviation / Business								
Buchanan Field		X	X	X		X	X	X
Castle				X			X	X
Jack McNamara Field			X	X	X		X	
Lake Tahoe				X		X		X
Merced Municipal		X					X	X
Mojave		X	X	X				
Palmdale			X					
Paso Robles				X		X	X	X
Riverside Municipal			X					
Shafter-Minter		X		X				X
San Bernardino			X	X				
Visalia Municipal	X		X	X		X		X
Cargo								
Brown Field (San Diego)	X						X	
Sacramento Mather	X						X	
Southern California Logistics	X		X					
Military								
March ARB/Inland Port	X		X	X				

[1] The data does not support 2020 deficiencies evaluation for adequacy of alternative modes or for goods movement.
Source: 2001 Caltrans Ground Access to Airport Study Survey

Institutional Issues, Problems and Opportunities

Also included in Task 3 was an identification of institutional issues, problems and opportunities within state agencies. This was primarily done through a series of interviews held with people who play vital roles in the three phases of a ground access program: project planning, project selection and funding, and project implementation. The responses were closely reviewed to determine those that are critical to resolving the issues and problems facing the state. The key issues follow:

Project Planning

- As airports play a key role in the competitiveness of the United States in global trade, there is a need for a greater federal role in airport ground access.

- There is a perception that the FAA does not view ground access planning as a primary function of their organization.

- Air cargo is a key element of U.S. trade in the international marketplace. As cargo volumes continue to grow significantly each year, no federal focus has been placed on the fact that the nation's airport ground access system is primarily designed for passenger traffic. More attention needs to be paid to the goods movement component of airports.

- Concerns about the rapid growth in aviation tend to be directed at traffic in the air rather than congested airport ground access systems. As a consequence, Federal planning and funding, particularly at the FAA, is lacking at the ground level.

- There is little coordination and cooperation among transportation modes at the federal level. FAA, FTA, and FHWA often act independently of each other on intermodal issues. Furthermore, congressional committees treat aviation and surface transportation separately in both policy and budget matters which further exacerbates the disconnect.

- There is no coordinated process between the state and other agencies to address ground access planning.

- Current state views rank ground access at airports more as an emerging issue and not an existing problem. As a result, not enough attention has been paid to address existing problems.

- It is difficult for regional agencies to focus on a specific problem area such as ground access to airports in light of sometimes huge regional congestion and mobility needs far in excess of airport ground access problems and needs.

- Many regional transportation agencies have not included aviation in their regional transportation planning programs. Regional agencies tend to view aviation as a Federal or local issue.

- Developing new transit lines to airports is often a low priority in some regions because the passenger base is viewed as "occasional" rather than "regular." As a result, transit links to airports are not developed and roadways continue to be more congested.

- With the increasing demand on airports, operators and managers have many operational and growth issues to address and projects to fund. Ground access may be a lower immediate-term priority than improving terminals,

runways, and parking due to the long lead times necessary to plan, fund, program and implement airport ground access improvements.

- Airport operators and managers often do not participate in MPO and RTPA planning programs and therefore, miss opportunities to develop policy and programs related to airport ground access.

- Local communities sometimes view airport ground access projects as airport growth initiatives. As a result, airports and the local jurisdiction may find themselves at odds with the community if they pursue the ground access project.

Project Selection and Funding

- There is a need for more flexibility in funding airport ground access improvements outside airport boundaries.

- There is a general lack of communication regarding the importance of ground access funding and programming to national interests of trade and commerce.

- Airport ground access projects are often viewed as "local projects", relevant only to the city where the airport is located. Airports are regional traffic generators that greatly impact state transportation facilities. Passengers often come from many cities and counties and cargo is distributed over large areas. Airport ground access projects should be recognized in state funding programs as regional as well as inter-regional projects.

- Airport ground access improvements sometimes are viewed as a further drain on scant regional resources, are therefore not fully considered or processed for funding.

Project Implementation

- Strict Federal regulations--particularly related to security--can discourage implementation or use of innovative transportation programs with broad regional and local support (e.g., satellite terminals, etc.).

- There is a perception that transportation agencies have no specific strategic approach to funding and implementing ground access projects.

- There could be improved coordination between Caltrans divisions (i.e., Aeronautics and Local Programs, Aeronautics and Mass Transportation, and Aeronautics and Capital Programming), particularly with regard to the Interregional Improvement Program.

- Airports as key regional centers are not always taken into account by regional transportation agencies in implementation programs for regional transportation needs.

For specific details on this task, see Working Paper Two, Issues and Problems.

Task 4: Recommendations

Task 4, Recommended Strategies, synthesized the information from the previous tasks into a series of recommendations to improve ground access to California's airports. As in Task 3, this task was separated into two parts. The first part listed trends in the state's priority projects by type according to the survey results. This effort revealed the most important physical needs of the airports' ground access systems. This part also laid out a method and criteria for agencies to use for project selection. The second part of this task provided recommendations for improving the planning, programming, and implementation process for these projects. As a result, this task provided a "big picture" view of how to improve ground access to the state's airports.

The types of projects that airports identified for future ground access needs are very complex. These projects will ultimately require extensive and detailed project-specific studies to determine their impacts (environmental, operational, etc.) and their feasibility. It would have been impossible to definitively determine which of these projects should and should not be implemented within this Ground Access to Airports Study. However, identifying criteria that should be used to ultimately select projects was deemed appropriate.

To determine these criteria, strategic plans and strategic goals from a sample of the airports in the ground access study were collected as well as current statewide ground access priorities. The results were not surprising:

- The primary goals are to balance demand with capacity, ensure safety of its users, generate both direct and indirect benefits, and support cost effective projects.

- The goal statements are usually general, meaning they are blanket goals providing overall, long term strategic direction for the airport. The goals do not typically contain measurable objectives.

- Many involved maintaining or improving passenger and cargo ground accessibility to airports.

- Others involved maintaining or improving passenger accessibility to local, regional, intra-state, or international air service.

Study Recommendation Criteria

The recommended criteria for determining the ground access projects that should be considered for implementation must represent the interests of both the airports and the state. These criteria are summarized in **Table 3** for each type of airport.

These criteria are illustrative of those necessary for the type of airport shown. They are not intended to replicate current individual airport goals; rather, they are intended to serve as a model against which to weigh project benefits.

TABLE 3
Recommended Criteria for Selecting Ground Access Projects

Criteria	Large / Medium Commercial	Small Commercial	General Aviation	Cargo	Military
Maintain or improve passenger ground accessibility to airports	X	X	X		
Maintain or improve cargo ground accessibility to airports	X	X		X	
Maintain or improve passenger accessibility to local, regional, intra-state, or international air service	X	X			
Maximize use of transit network	X	X			
Mitigate neighborhood traffic impact	X	X	X	X	
Improve regional highway ground access	X			X	X
Minimize delays at curbside	X	X			
Improve local highway ground access		X	X	X	
Improve main access road quality			X	X	X
Improve main access road signage			X		
Provide adequate curbside space			X		
Widen all access roads to state standards				X	X
Pursue cost effective projects	X	X	X	X	X
Promote Safety	X	X	X	X	X

In addition, two other criteria are critical for selecting specific projects for implementation:

- Airport management should ensure that strategic goals contain, or are linked to, performance-based objectives. The objectives would help determine how and to which degree specific projects help achieve the goals.

- Performance-based objectives should contain quantifiable indicators or metrics, which enable airport management to rationally evaluate the proposed ground access projects.

Airport ground access involves all levels of government: federal, state, regional, and local. To develop a truly effective statewide approach to planning, funding, and programming airport ground access, each level should play an active role. **Table 4** summarizes the institutional recommendations for each level of government and

identifies the level with the primary responsibility. Tools and suggestions for the other levels are also provided to illustrate how the recommendation can be enhanced and strengthened. Finally, **Table 5** summarizes the existing and proposed responsibilities of each agency. In general, most of these recommendations advocate significantly increased communication among all levels of government and California's airports. Caltrans should be proactive in taking the lead in these efforts.

For specific details on this task, see Working Paper Three, Recommended Strategies.

Conclusion

The next step to improving the various planning, programming, and implementation processes in California is for Caltrans to develop a specific improvement plan. This plan would take the results of this study to the next level. The general steps for preparing this plan are:

- The recommendations outlined in this study should be fully reviewed by Caltrans and all agencies that would be affected by their implementation. At a minimum, this should include various divisions at Caltrans headquarters, Caltrans District Offices, the California Transportation Commission (CTC), the state's Metropolitan Planning Organizations and its regional transportation agencies.
- Airlines and industry groups such as transit providers and cargo operators should also be apprised of the results of the study and its recommendations.
- After a thorough review, Caltrans should prioritize the recommendations and assign a timeframe for completion of each. The views of airlines and industry should be obtained and viewed as advisory to the prioritization process.
- A specific person should then be assigned the responsibility of successfully implementing each recommendation. That person should review the issues and constraints surrounding each recommendation and prepare a specific action plan for its implementation. This action plan should conform to the timeframe assigned by Caltrans. Caltrans Aeronautics should then oversee all managers in the successful implementation of these improvements.

The Ground Access to Airport Study resulted in a significant database of airport-specific information that can assist Caltrans and the state's airports plan, program, and implement ground access projects throughout California. This process is critical given that California's economy depends on the free flow of passengers and goods through its ports. Also, it has been shown that once a state's economy begins to suffer as a result of an inadequate transportation infrastructure, it can take many years to regain the loss, even if rebuilding the infrastructure begins immediately.

Many airport managers are frustrated by the lack of guidance from local, regional, state and federal agencies to help them implement their ground access projects. However, there are many things that airport managers can do to help themselves in this process. They must understand their power and they must get involved in their local planning agencies and funding processes. They must also understand how their ground access projects would further the overall goals of their airport as well as the local, regional, and

state transportation infrastructure goals. Airports should select projects that would benefit the largest number of people and, wherever possible, they should search for ways to target projects that would alleviate both airport traffic (passengers, employees, cargo and ancillary) and non-airport traffic.

Unfortunately, airport managers are often hindered in their efforts by requirements mandated by various local, state, and federal agencies. These agencies and their policy makers ultimately hold the key, for they are responsible for providing an efficient programming and implementation process that airports can easily navigate. While the state's policy makers are currently providing various avenues for airports to use in implementing their projects, there are clearly many things that could be done to further improve the process. It is critical for agencies and policy makers to look closely at themselves and identify specific improvements. Only then can the full benefit of California's exceptional airport infrastructure be attained.

Table 4 (1 of 6)
Policy Recommendation Summary

Recommendation	ROLE			
	Federal	**State**	**Regional**	**Local – Airport**
3.2.1.1. The State Of California Should Take A Leadership Role In Advocating Greater Federal Involvement In Funding Airport Ground Access, Through The Re-authorization Of The Transportation Equity Act For The 21st Century (TEA-21) In 2002.	Consider airport ground access as a priority.	*Primary Responsibility:* Prepare an approach to advocating a federal role in authorizing and funding airport ground access. (CTC, BTH, Caltrans Headquarters) Work with key airports, regional and local agencies in developing policy parameters. Raise policy options with other states through related associations.	Participate in the advocacy process. Work with State and local agencies in developing policy parameters.	Work with State and regional agencies in developing policy parameters.
3.2.1.2 The State Should Develop Policy Recommendations to Enable More Federal Finance Opportunities for Airport Ground Access Projects of "National Significance," and Advocate More Flexibility in the Use of PFC's and Airport Revenues.	Expand flexibility in FAA programs for ground access programs. Explore additional avenues for airport ground access and goods movement funding opportunities.	*Primary Responsibility:* Develop and advocate policy recommendations to the federal government with respect to enabling more federal finance opportunities for airport ground access projects of "national significance." Develop specific guidelines for future STIP consideration relating to parameters for considering airport ground access projects as part of the interregional program (Planning and Modal Programs). (Planning and Modal Programs)	Work in partnership with State on advocacy policies. Become familiar with FAA funding opportunities and understand their value as matching funding sources.	Work in partnership with State on advocacy policies.

Table 4 (2 of 6)
Policy Recommendation Summary

Recommendation	ROLE			
	Federal	**State**	**Regional**	**Local – Airport**
3.2.1.3 The State Should Develop a Policy Approach that Provides Funding and Financing Mechanisms for Airborne Cargo Distribution Improvements for the Air-to-Land Program.	FAA regional offices should participate more actively in ground access projects – develop methods to assist airports through the process.	*Primary Responsibility:* Quantify statewide value of the air cargo industry. (Planning and Modal Programs) Aeronautics Division should consult with major airport operators and air cargo industry representatives in developing a policy approach. Form cargo-related task force or ensure existing freight-related groups are well represented by the aviation industry. (Planning and Modal Programs) Aeronautics Division should participate in goods movement efforts at all levels.	Participate in Caltrans-initiated airport ground access planning and implementation teams. Explore creative methods to finance projects – pooling of resources from all stakeholders. Participate in quantification of the region's goods movement industry. Recognize value of goods movement projects – both air and rail – and include in long range plans.	Participate in Caltrans-initiated airport ground access planning and implementation teams. Engage cargo industry in planning and funding goods movement-related ground access projects. Recognize special needs.
3.2.1.4 Caltrans Should Encourage and Help Regions and Airports Develop and Implement Innovative Solutions to Ground Access Problems, e.g., Satellite and Remote Terminals.		*Primary Responsibility* Establish method to communicate innovative project ideas and programs to MPO's, RTPA's, and Airport Operators. Establish steering committees and task forces to share ideas. (Trasportation Planning and Aeronautics)	Explore alternative modes as airport connections. Work with rail and transit authorities to pursue station opportunities at airports. Encourage remote terminals and transit connections. Determine likely candidates for innovative programs. Develop additional funding opportunities.	Pursue innovative solutions. Study programs at other airports: remote terminals, consolidated shuttle systems, centralized rental car programs, high-tech computerized parking management systems, etc.

Table 4 (3 of 6)
Policy Recommendation Summary

Recommendation	ROLE			
	Federal	State	Regional	Local – Airport
Also 3.2.3.2 Airport Ground Access Transit, Highway, or Satellite Terminal Programs Should be Used to Help Regional Transportation Agencies.		Caltrans Aeronautics should work with FAA to further satellite terminals and other innovative ideas. Establish designated areas for a national pilot program. Pursue through TEA-21 re-authorization.		
3.2.2.1 Caltrans Should Develop Specific Guidelines for Future STIP Consideration to Consider Airport Ground Access Projects as Part of the Inter-Regional Program.		*Primary Responsibility* Promote airport ground access programs in Caltrans planning, e.g., ITIP and goods movement goals. Develop specific guidelines for STIP. (Transportation Planning		
3.2.2.2 The Next Iteration of the State Transportation Plan (Currently in Preparation) Should Include Airport Ground Access Priorities.		*Primary Responsibility:* Include airport priorities identified in planning efforts (e.g., SCR 96, SR 8) in State Transportation Plans. (Aeronautics) Develop interactive computerized system to maintain the State's airports' layout and master plans. (Aeronautics) Explore demonstration project concepts. (Transportation Planning)	Include and prioritize airport ground access in regional plans.	Recognize ground access as an important component in airport master plans.

Table 4 (4 of 6)
Policy Recommendation Summary

Recommendation	ROLE			
	Federal	**State**	**Regional**	**Local – Airport**
3.2.2.3 Caltrans Should Produce Guidelines on how District Offices Can and Should Approach Regional Funding Programs to include airport ground access improvements where they are deemed beneficial to the State and Regional Transportation System.		*Primary Responsibility* Assign key personnel in each District office with the purpose of coordinating airport ground access activities. Encourage District directors to actively engage airport operators. (Planning and Modal Programs and Project Delivery) Include Aeronautics staff in planning with surface transportation staff. Work with MPOs and RTPAs to demonstrate airport's role in the regional system. (Transportation Planning and Aeronautics)	Advise State on funding sources, requirements and methodology as well as success stories.	
3.2.2.4 Caltrans' Economic Impact Report of the Aviation Industry Should Quantify the Role of Ground Access. *Also:* 3.2.3.1 Caltrans Airport Economic Impact Study Should Demonstrate to Regional Agencies the Value of the Airport(s) Within Their Jurisdictions.	Federal legislators should recognize State's aviation and goods movement impacts within the national system.	*Primary Responsibility:* Report should be viewed as springboard to communicating the State's national and international economic significance. Establish task force for the purpose of developing policy recommendations related to maintaining/enhancing/ increasing the goods movement in California. (Planning and Modal Programs)	Utilize Study to promote regional airport systems and further aviation goods movement public policy.	Review and understand airport's role in statewide economic system. Utilize to further airport programs.

Table 4 (5 of 6)
Policy Recommendation Summary

Recommendation	ROLE			
	Federal	**State**	**Regional**	**Local – Airport**
3.2.2.5 Caltrans Should Develop a Specific Task Force to Review and Integrate the Various Documents and Studies Regarding Airports, Ground Access, and the Cargo Industry.		*Primary Responsibility:* Assemble documents and recommendations to formulate State's integrated position on ground access and goods movement. (Planning and Modal Programs)	Advise State on existing ground access needs and proposed plans.	Review and understand what other airports are doing and what role the State and region can assist in developing individual programs.
3.2.2.6 A Coordinated Effort Should be Developed Within the State, including an Interactive Computerized System to Maintain the State's Airport's Layouts and Master Plans.	*Primary Responsibility:* A well maintained integrated system could assist *all* divisions within Caltrans to better plan multi-modal programs. Aeronautics Division should be included in RIP and ITIP project selections. Each district's aviation representative should coordinate with other divisions.		Review and actively assist in development of information for the regional system. Ensure all relevant transportation projects are included. Use as an effective interactive planning tool to make regional decisions. Include Caltrans Aeronautics in discussions regarding airport ground access projects.	Use system to plan and implement airport-related projects, e.g., determine if rail could connect to airport or if highway interchange may affect planning programs. Engage Caltrans district aviation representative and Aeronautics in ground access planning.
3.2.2.7 The Aeronautics Division Should Develop a Case Management System to Oversee All Stages of Ground Access Project Development.	Expand AIP and PFC flexibility to allow use of fees for multi-modal regional solutions.	*Primary Responsibility* Use statewide planning system to identify key major projects. Assign task force comprised of key Caltrans staff (a Case Manager), and stakeholders (RTPA/MPO, airport, FAA, etc.). Assign specific responsibilities for all phases of project: design, funding, implementation.	Participate in task force. Assign key staff to participate. Investigate alternative, supplementary and complementary funding sources.	Recognize airport's importance in the regional system and understand its impact on the transit and highway networks. Look for opportunities to "bundle" with a larger improvement program such as an HOV, interchange, or transit project. Participate in task force. Engage Caltrans, transit agencies, regional agencies.

Table 4 (6 of 6)
Policy Recommendation Summary

Recommendation	ROLE			
	Federal	State	Regional	Local – Airport
3.2.2.8 Caltrans Should Assign a Specific Case Manager to Airports Developing a Ground Access Program.		*Primary Responsibility* Assist in finding funding opportunities: leveraging PFC and AIP funds, bundling with federal, State, and regional funds. (Planning and Modal Programs) Expand Aeronautics airport funding handbook to include *all* funding sources at all levels as well as discussions on how to pursue, leverage, and match funds.	Work with Caltrans staff in developing funding handbook. Participate in taskforce and funding endeavors for major regional projects.	Engage Caltrans staff – Headquarters and District in planning and implementation. Develop strong partnerships. When possible, expand project to attract additional funding sources and solve regional mobility problems.
3.2.3.3 Caltrans Should Make Information Available to Regional Planners on Creative Approaches to Pursuing Innovative Projects.		*Primary Responsibility* Coordinate with New Technologies group to pursue innovative programs. Develop potential partners and joint ventures with the high technology, transportation and cargo industries.	Determine likely candidates for innovative programs. Develop additional funding opportunities.	Monitor programs and opportunities. Take advantage of worthwhile efforts.
3.2.4.1 Caltrans Should Encourage Airport Operators and Managers to Get Involved in Their MPO and RTPA.		Aeronautics Division should communicate to airport operators the role MPO and RTPA's can play in developing ground access programs: Educate and Communicate	Reach out to airport operators and managers. Include on boards, committees, subcommittees and tasks forces.	*Primary Responsibility* Participate in MPO and RTPA activities related to planning, transportation, and aviation. Understand planning process and become familiarized with funding programs
3.2.4.2 Caltrans Should Encourage Airport Operators and Managers to Recognize Their Airport's Importance in the Regional System.		Develop a program and forum to demonstrate the economic power and impact of California Airports at the Federal Level. Quantify economic information for each airport.	Participate in economic impact studies with State and coordinate information.	*Primary Responsibility* Develop airport's impact or position in the regional and statewide system in terms of passenger air travel (business and tourism) and cargo.

Table 5 (1 of 4)
Agency Responsibility Summary

Agency	Current Responsibilities	Recommended, Expanded, or Additional Responsibilities
Federal Government (Policy Makers: Administration and Congress)	Has the primary interest in supporting transportation systems to enhance interstate commerce and economic competitiveness in international trade.	Prioritize funding transportation systems that significantly impact interstate commerce through the movements of passengers and freight. Provide funding for transportation programs that specifically provide connectivity and access to international markets.
USDOT	Has primary role in ground access programming and implementation – both on the surface transportation and aviation sides. Responsible for regulating U.S. transportation systems including highways, transit, and civil aviation. Assists airport management in complying with State and Federal laws and regulations. Provides grants and loans for aviation and surface capital improvement projects. Responsible for developing policy and procedures associated with the implementation of the AIP and PFC programs.	Support aviation ground access needs in re-authorization of TEA-21. Recognize and place higher priority on ground access needs in AIR-21 programs. Move toward greater flexibility in AIP and PFC grants, allowing users the opportunity to negotiate unique solutions and greater leverage of resources. Grant more flexibility and authority to states in managing federal funds. Assist states to develop and deploy intelligent transportation technologies to gain more operational efficiency out of existing transportation systems.
California Transportation Commission (CTC)	Programs and allocates funds for highway, passenger rail and transit improvements. Advise and assists Business, Transportation and Housing Agency and the Legislature in formulating and evaluating state policies and plans for California's transit programs. Participates in the initiation and development of State and Federal legislation transportation needs.	Support transportation programs that promote aviation and goods movement programs. Encourage and facilitate the preparation of the Statewide Airport Economic Impact Study and develop with Caltrans a systematic and effective approach to its use. In developing the STIP, explicitly involve the Airports in soliciting ground access projects as potential candidate projects.

Table 5 (2 of 4)
Agency Responsibility Summary

Agency	Current Responsibilities	Recommended, Expanded, or Additional Responsibilities
Caltrans	Responsible for administering Federal transportation programs and analyzing Federal legislation. Selects projects for improvement on the Interstate, National Highway System, non-interstate, and for the rest of the Federal-aid roadways outside of urban boundaries. Determines how and in what amounts State and Federal funds are sub-allocated through IIP. Assists airport management in complying with State and Federal laws and regulations. Provides grants and loans to airports for capital improvement projects. Analyzes impact of aviation on State's economy. Serves as a liaison with CTC staff and commissioners.	Provide more of a leadership role in statewide, multi-modal planning, specifically understanding the impacts of airport ground access. (Transportation Planning) Provide a process for coordinating metropolitan with statewide planning. (Transportation Planning) Establish a consultative process with local agencies for transportation planning that is reflective of the State's goals and objectives. Provide more opportunities for involvement (Transportation Planning) Take greater responsibility to cooperate with MPO's and RTPA's in developing plans and programs for which the MPO's and RTPA's have lead responsibility. (Planning and Modal Programs) Integrate statewide ground access goals into IIP where such improvements benefit the State Highway and Interstate system. (Transportation Planning) Engage the private sector, specifically the aviation and freight and cargo industries in developing a coordinated state-wide approach to goods movement planning and programming. (Planning and Modal Programs: Aeronautics, Rail) Take an active role in regional airport ground access projects. Assist lead agencies in working through funding and FAA regulatory issues. (Aeronautics) In developing Route Concept Reports and participating in highway corridor studies, incorporate airport ground access as a study parameter. (Transportation Planning)

Table 5 (3 of 4)
Agency Responsibility Summary

Agency	Current Responsibilities	Recommended, Expanded, or Additional Responsibilities
RTPA/MPO	Provides a forum for cooperative state and local decision-making within certain areas and regions. Sets the policy and direction for the area or region. Responsible for long-range transportation planning that is coordinated with regional planning goals such as mobility, land-use, economic development, environmental protection, etc. Provides a source of technical expertise in transportation matters. Responsible for preparing the RTP and the Federal and Regional TIP. Administers state funds, and other tasks. Plays a role in developing project listings though the California Aid to Airports Program.	Proactively engage the aviation sector – passenger and cargo – in developing airport and transportation improvements. Partner more aggressively with Caltrans in conducting multimodal project and corridor studies of major transportation facilities, including airports. Proactively coordinate airport planning activities that could be enhanced or that will be implemented by State and local governments. Provide a forum to produce a program of projects based upon its analysis, planning activities, and view of the aviation ground access needs for the region. Integrate airport ground access and goods movement programs into regional transportation solutions. In preparing the RTP, emphasize major airports as regional attractors and plan for their multi-modal connections. In developing the Federal and Regional TIP, explicitly involve the airports in soliciting ground access projects as potential candidate TIP projects. Broaden planning partnerships when developing airport ground access projects and utilize and leverage funding sources at all levels to ultimately deliver a truly regional transportation program. Integrated consideration of ITS tools into regional transportation solutions.

Table 5 (4 of 4)
Agency Responsibility Summary

Agency	Current Responsibilities	Recommended, Expanded, or Additional Responsibilities
Local Agency	Often the owners and operators of airports. Responsible for establishing policy, funding, managing, maintaining, and operating airport facilities and services under their jurisdiction. Has the authority to make decisions for aviation facilities under their jurisdiction planning, project selection, design, construction and management.	Participate more in the planning, programming, and funding of federal, state, and regional transportation processes. Work more closely with the State and MPOs/RTPAs in developing airport ground access activities.
Airport Operator/Manager	Plans and seeks funding for ground access projects within the airport boundaries.	Think outside the fence. If possible, bundle projects with local and regional projects. Get engaged in the regional planning and programming processes. Include airlines and air cargo industries in planning and funding programs. Explore multimodal solutions and then engage the appropriate planning and funding agencies. Multi-jurisdictional projects are more competitive. When possible, engage multiple agencies, cities, and levels of government. Effectively convey the value of project in order to enlist support from partnering and funding agencies.