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State Arterial Highway System Peer City Study

Allison L. C. de Cerreño, Ph.D.

Elliot G. Sander, Director
Allison L. C. de Cerreño, Co-Director

August 2006

Rudin Center for Transportation Policy & Management
NYU Robert F. Wagner Graduate School of Public Service
295 Lafayette Street, 2nd Floor New York, NY 10012
www.wagner.nyu.edu/rudincenter

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Task Assignment #C-04-03

Final Report
August 2006

By
Allison L. C. de Cerreño, Ph.D.
Co-Director, NYU Wagner Rudin Center
for Transportation Policy & Management

295 Lafayette Street, 2nd floor
New York, NY 10012

DISCLAIMER

The contents of this report reflect the views of the author who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the New York State Department of Transportation, the United States Department of Transportation, or the Federal Highway Administration. This report does not constitute a standard, specification, regulation, product endorsement, or an endorsement of manufacturers.

ACKNOWLEDGEMENTS

A report as detailed as this requires the help of a number of individuals. The author wishes to thank the following individuals from the New York State Department of Transportation (NYSDOT) for helping provide an understanding of the key questions and concerns related to state arterials in New York City and Buffalo and for providing feedback on interim documents: Tim Gilchrist, Sajjad Ahmed, Joe Buffamonte, Chris Church, Geoff Gross, Refat Habashy, Peter King, Al Maiwald, Larry Malsam. The author also thanks Susan Kugler and Mike Soscia from NYSDOT who provided last minute information related to New York State Transportation funding. A special thanks is extended to Deborah Mooney, the NYSDOT Project Manager, for her patience and guidance during this project as well as for the excellent foundational research she provided through her earlier study on the New York City State Arterial Highway System.

Beyond New York State, a number of individuals were instrumental in gathering data and describing the situations in their own cities and states. Without their willingness to candidly provide information, share their thoughts and interpretations, and review the case summaries, this peer city study could not have been completed. The author thanks: Mark Demidovich, Georgia Department of Transportation; Robert Kochevar, Matthew Wager, and Dan Roberts, Denver Department of Public Works; Robert Wright, City of Philadelphia; Pamela Hutton, Colorado Department of Transportation; Lainie Smith, Fred Eberle, Karla Keller, and Michelle Smith, Oregon Department of Transportation; Richard Gray, Portland Office of Transportation; Beryl Yasinosky, Temecula Department of Public Works; Karen Fong, Bill Reagan, Monica Moreno, and Jeanne Bonfilio, Caltrans; David Grovdahl, Metroplan Orlando; Charles Ramdatt, City of Orlando; Deanna Venker, City of St. Louis; Marjorie Melton, Board of Public Service, City of St. Louis; David McCormick, Washington State Department of Transportation; Katherine Casseday, James Dare, and Richard Miller, City of Seattle Department of Transportation; Stuart Corder and Jack Whaley, Texas Department of Transportation; Howard Hilliard and Tracey Wingate, City of Houston Department of Public Works and Engineering; Mike Rice and Kevin Kelly, Baltimore Department of Transportation; David Seglin, Chicago Department of Transportation; and those who preferred to remain unnamed, but you know who you are.

Though they are not cited directly in the document, a number of calls were made to state highway patrols and city police departments for the section on enforcement and incident management. The author acknowledges the officers, sergeants, and lieutenants who gladly provided the necessary information.

Finally, the author wishes to thank NYSDOT and the Federal Highway Administration (FHWA) for supporting this effort through the State Planning and Research Funds (SPR) Grant Program.

EXECUTIVE SUMMARY

The New York State Arterial Highway System (SAHS) within New York City is fragmented in terms of ownership, programming and planning, maintenance, and operational responsibilities. While not as complex perhaps, this disjointed system is repeated in other cities throughout the state, including Buffalo.

A 2002 New York State Department of Transportation report, "New York City State Arterial Highway System," describes several issues arising from the fragmentation of the New York City system. Among them:

- Lack of clear and formal mechanisms for programming, planning, and funding of the system;
- Lack of clear priorities for the system;
- Concerns regarding maintenance processes, policies, and lack of accountability;
- Lack of and need for an updated highway system plan that rationalizes the city and state urban roadway systems based on current system function/usage and service; and,
- Legal concerns related to unclear liability (this has since been resolved, and is not treated in this study.[*]

Wanting to more effectively coordinate with local transportation agencies, authorities, and other organizations in the management of the SAHS, and to potentially rationalize the current system, the New York State Department of Transportation (NYSDOT) funded a year-long study to compare the experiences in New York City and Buffalo with selected peer cities throughout the United States. This report is the culmination of that study, the goal of which was to review and assess, and compare and contrast how other cities deal with several issues related to state arterial highways running through their urban areas. Issues explored included, but were not limited to: how such systems are funded; how ownership is determined and manifested; how maintenance responsibilities are differentiated; who is responsible for designing, planning, construction and reconstruction; and when, how, and why transfers of roadways (either full ownership transfers or changes in maintenance responsibilities) occurred.

The study used a case study comparative approach, reviewing twelve city/state pairs: Atlanta/Georgia, Baltimore/Maryland, Chicago/Illinois, Denver/Colorado, Detroit/Michigan, Houston/Texas, Orlando/Florida, Philadelphia/Pennsylvania, Portland/Oregon, Seattle/Washington, St. Louis/Missouri, and Temecula/California. Additional relevant information was collected from Los Angeles, CA and the Town of Castle Rock, CO. Data and information about these city/state pairs was gathered through a combination of literature and legal reviews and direct conversations and interviews with representatives from city, state, and county departments of transportation and departments of public works. Additional information on enforcement and incident management was also obtained from various city police departments and state highway patrols.

The New York State Arterial Highway System in New York City and Buffalo

Some of the challenges faced by NYSDOT when dealing with the SAHS in New York City and Buffalo relate directly to the legacy left by the 1944 Highway Law definition of the SAHS and the lack of clarity surrounding responsibilities. As defined in the Law of 1944 and current with today's definition, the SAHS in New York City consists of 41 routes or route-segments (235 centerline miles); the SAHS of the City of Buffalo currently consists of 10 routes or route-segments (34 centerline miles) [NY CLS High § 349-f (2005) and NY CLS § High 349-e (2005), respectively]. Of the 235 centerline miles of designated state arterial roadways in New York City and the 34 centerline miles in Buffalo, NYSDOT owns and is ultimately responsible for maintenance and repair of 141 centerline miles and 20 centerline miles, respectively. The remainder of the designated SAHS is owned by the cities or by other state authorities.

[*] Albanese v. City of New York, 5 N.Y.3d 217; 833 N.E. 2d 1204, N.Y.S. 2d 538; (N.Y. 2005), holds that liability is a function of the amount of control over the aspect in question that the city or state had over the highway at that time. See also, City of New York v The State of New York, 98 N.Y.2d 740; 780 N.E.2d 504; 750 N.Y.S.2d 819 (NY 2002), which held that the State does not have to indemnify NYC (unlike all other cities in the State) for claims for personal injury or property damage claims arising out of NYC's maintenance agreement responsibilities for the arterial highways in their boundaries. There is, however, proposed legislation, which if passed, would shift this large liability for such claims relating to maintenance and repair from NYC to the State, Senate Bill 3170, (March 2005).

The reason for the difference between the designated mileage and the current NYSDOT-owned mileage of the SAHS dates back to this original designation that distinguished between state-owned or "built" sections of the state arterial highway system and city-owned or "unbuilt" sections and the maintenance and repair responsibilities that would be accorded to each. Specifically, NY CLS High § 349-d (2005), stipulates that:

> no public street, main route or thoroughfare or any portion thereof, that is designated in this article, shall be deemed to be part of the system of highways of the state of New York for purposes of maintenance and repair, until (1) such public street, main route or thoroughfare or any portion thereof shall have been constructed, reconstructed or improved as provided in this article, and (2) such commissioner shall have issued an official order declaring such public street, main route or thoroughfare or any portion thereof, exclusive of service roads and intersection street bridges, to be a part of such system of highways for such purposes of maintenance and repair.

In routine use, "constructed, reconstructed or improved" has come to be termed "built." This distinction between built and unbuilt sections of the SAHS has had important implications in terms of maintenance and repair, programming, design, construction and reconstruction. On the unbuilt sections of the system – which are not owned by the state and have not yet been brought up to current state and federal standards – New York City and Buffalo remain responsible for maintenance and repair of the roadways. On the state-owned built sections of the system within the geographic boundaries of a city, NYSDOT ultimately has a non-delegable duty to ensure that all state highways are maintained properly. NYSDOT can and usually does enter into maintenance agreements with the city for the city to undertake responsibility for maintenance and repair of state highways that run through that city, (including the built sections of the SAHS). In cases where such agreements exist, NYSDOT is authorized to pay the city an annual amount determined by a legislated rate applied to the square yardage of roadway surfaces and elevated roadway (i.e., bridge) surfaces to provide that maintenance [NY CLS High § 349-c (2006)].

An additional complication arises from the legacy of the distinction between the built and unbuilt portions of the arterial system. Today's transportation needs and patterns are vastly different than those characterized in the mid-1940s. While still legally required to address the built and unbuilt sections of the SAHS, it is no longer clear that all of the unbuilt roadways should eventually be brought up to current standards so they can formally become part of the state-owned system. Further, some built sections now function more as local roadways than as state arterials so the rationale for including them as part of the initial SAHS no longer exists. In essence, the original designation of the SAHS, even if all sections were to be fully built and brought under the state's jurisdiction, no longer meets today's needs and realities.

Other Cities' and States' Experiences Compared to New York City and Buffalo

While the other cities surveyed in this effort do not have the same problem in terms of the "built-unbuilt" system, they do face similar challenges to New York City and Buffalo with respect to the original state highway designations no longer meeting today's needs and in terms of multiple jurisdictions and responsibilities within the cities' borders. The city/state pairs also face similar challenges to New York City and Buffalo with respect to liability, unclear division of maintenance responsibilities, and disagreements related to programming, planning, and design, as well as funding.

While the challenges are similar, the ways they have been addressed in each city vary widely.

Maintenance Responsibilities. With respect to maintenance responsibilities, on interstate and limited access roadways, states are responsible for all maintenance (with the exception of lighting in some cases) except in Baltimore and New York City (via an agreement). The differentiation of maintenance responsibilities on non-interstate roadways varies more. In this case, Buffalo and New York have the widest range of responsibilities (again, via agreement in both cases) compared to any of the peer cities (Baltimore does not have state highways running through the city). Among the remainder of the cities, the specific areas of responsibilities vary as does how or if they receive any funding or financial reimbursement for these services, and whether that funding is provided through legislation or via a maintenance agreement.

Planning and Programming, Design and (Re)Construction. In most cases, on state highways, the state has the primary responsibility for planning and programming, design and (re)construction. However, in Baltimore, the city is responsible for all these facets on all roadways within its borders. For the other cities, while the state takes the lead there are varying degrees of coordination with their respective cities. Among the states surveyed, only California has legislative language requiring a degree of coordination with the city or county, but it also provides legislation that allows Caltrans to avoid this if certain criteria are met. Many of the others practice some degree of coordination even if they are not mandated to do so. Colorado, in particular, coordinates closely with Denver and even accepts the higher design standards of the city at times. In New York State, Highway Law requires that for New York City the designs, plans, specifications, and cost estimates be approved by the city and the state commissioner of transportation. This joint responsibility requires that for all work done on state highways within New York City, NYSDOT must request a permit from the city, which is a complicated process that can have significant financial consequences if projects are delayed or modified as a result. As noted earlier, however, the language is vague in places, especially for cities other than New York City and, in fact, the cities can also program and/or provide funding for state highways with state approval.

Funding. Generally, the cities rely on either direct legislated apportionments or maintenance contracts or some combination of both for funding of state highways. Of the city/state pairs included in the study, seven receive direct allocations from the state for state highways (and sometimes local roadways as well). The remaining five were more similar to New York City and Buffalo in terms of having no legislated allocation directly to municipalities for state arterials.

Eight of the cities have maintenance agreements with their respective states, through which they provide some scope of services on the state highways. Of these, only six receive some form of payment or reimbursement in exchange. Two – Houston and Seattle – have maintenance agreements which only stipulate the division of responsibilities and penalties if those services are not provided; they provide no additional monies to the cities. (One additional city – Detroit – can bid competitively for maintenance agreements on roadways within its geographic boundaries.) New York City and Buffalo have maintenance agreements as well, but have the widest range of responsibilities stipulated, particularly New York City which is also responsible for interstates within the city's boundaries.

Across the maintenance contracts, there is variation in terms of how fees are determined, the amount specified per unit or measure (if any), the frequency with which they are renegotiated, and whether or not there is annual reporting or some type of invoicing. In fact, the only thing that is more common across some of them is the existence of language that allows the state to correct deficiencies and charge or bill the city if the city fails to address them within some specified period of time, something that does not exist in New York State's agreements.

Transfers of Jurisdiction. Jurisdictional transfers in this study tend to be related to one or more of three issues: funding, flexibility in design, and the desire to rationalize the state system for the purpose of streamlining management and operations. Five states (California, Florida, Michigan, Pennsylvania, and Washington) have at one time or another sought to institute broad programs for modifying their state highway systems. While California, Florida, and Pennsylvania all sought to reduce costs for the state as part of their reviews, there was also some recognition that the roads they were looking to vacate/abandon/relinquish were no longer functioning as state highways so much as local roadways. Michigan's and Washington's efforts were more directly aimed at formally reviewing and rationalizing the state system, with Michigan aiming to take more roadways into the state system and Washington exploring how to make sure both local and state roadways were functioning as they should be.

In addition to these broader reviews, specific transfers, the mechanisms by which they occur (legislation, contract, or both), and the terms of such transfers were also explored. Again, there is broad array represented by the city/state pairs in the study, with five states having examples of jurisdictional transfers from the state to the municipality, two cities having examples of a jurisdictional transfer from the city to the state, and one city and state (Seattle, Washington) and one town and state (Castle Rock, Colorado) having done both. Additionally, Atlanta/Georgia and St. Louis/Missouri have made use of temporary transfers to allow the states to use its funding to make improvements on roadways within the respective cities using state funding that would not otherwise have been allowed. Finally, three city/state pairs (Orlando/Florida, Portland/Oregon, St. Louis/Missouri) have been involved in changes in maintenance responsibilities (maintenance jurisdiction in New York's legal terminology), and the City of Chicago

recently was involved in shifting maintenance and operations to a private entity via a lease agreement

Notable Practices and Themes for Consideration
In terms of overall findings, there is a great deal of variation, even among a relatively small number (12 formally, 14 including Los Angeles and the Town of Castle Rock) of city/state pairs surveyed in this study. Thus, best practices cannot be easily identified. However, there are several notable practices (and potentially precedent) with relevance for the cities within New York as well as broader themes for consideration.

Among the notable practices are the following, identified by issue area:

Maintenance

- **Existence of language that aids in ensuring accountability.** Such language occurs in Chicago's lease agreement for the Skyway, a city arterial recently leased to a private entity which will now be responsible for all maintenance and operations on the roadway. Similar language also occurs in Denver's maintenance agreements with Colorado Department of Transportation, with Houston's maintenance agreements with Texas Department of Transportation, and in Washington State's legislation. In Chicago, Denver, and Seattle, the language typically identifies specific time allowances within which a deficiency, once brought to the attention of the city, must be addressed. (In Texas there is no specific time allowance.) In each case, specific financial penalties are denoted if the state (or in the case of Chicago, the city) decides to address the problem itself.

  In New York State, such language does not exist in the basic maintenance agreements with New York City and Buffalo. There is language for New York City that says the "state may bring to the attention of the city any unsatisfactory work," but it provides no time allowances or penalties if the city fails to address the issue. Beyond this, there is some language in the February 1977 agreement with New York City that suggests the city may be disqualified from future federal-aid projects if it fails to complete required actions within an agreed upon time limit. Again, however, the language lacks the clarity of the language used in the agreements and legislation mentioned above. As a result, the only real recourse the state has in many cases is to terminate the agreement, which is generally not the preferred course of action.

- **Washington State's approach to clarifying maintenance responsibilities.** The division of responsibilities between the state and the cities in Washington State dates back to a document over 50 years old that assigns responsibilities based on whether the work is classified as construction, routine maintenance (e.g., pothole repair), or extraordinary maintenance (e.g., repaving). Over the years, however, there was a great deal of debate over the precise definitions and extent of responsibilities so in 1997, Washington State Department of Transportation and the Association of Washington Cities worked together to develop a set of guidelines for interpreting the meaning of the original document and provide clarity for understanding. Given the complexities of New York State's Highway Law, the multiple meanings sometimes ascribed to the word "jurisdiction" (i.e., title/ownership v maintenance obligation), and the built-unbuilt distinction, such an exercise might prove worthwhile in New York as well.

"Rationalizing" the System and Transfers of Jurisdiction

- **Washington State's experience in reviewing its entire state highway system.** Of all the states that sought a broad review of their arterial highway systems, Washington is the only one that actively sought to both transfer then designated state highways to the municipalities and take over local roadways that were not functioning as state arterials. During the early 1990s, the state conducted an in-depth review of the state highway system to determine how to best update it to meet new traffic and travel patterns. A number of roadways around the state were exchanged at that time, with those functioning as local roadways being abandoned to the relevant county or municipality and those functioning more as state highways being taken into the state highway system. Since 1991, the Transportation Improvement Board (which was established in 1988) has been authorized by the state legislature to accept petitions on from cities, counties, and the state for additions and deletions to the system and make recommendations to the legislature on an annual basis.

A broad review of the New York State system in Buffalo and, particularly in New York City, might be warranted and has been done elsewhere. Such a review could greatly simplify the system by potentially helping to do away with the built-unbuilt issue and, more importantly, determine what roads truly belong on today's modern State Arterial Highway System.

- **Criteria for determining when roads should be transferred, either in legislation or in policy handbooks.** Aiding Washington State in its ongoing highway review process is legislation that defines the criteria that determine when an urban highway route should be designated as part of the state highway system, including when it is: "a principal arterial that is a connecting link between two state highways and serves regionally oriented through traffic in urbanized areas with a population of fifty thousand or greater, or is a spur that serves regionally oriented traffic in urbanized areas [Rev. Code Washington (ARCW) § 47.17.001 (2005)]. Portland and Oregon have a similar approach to Washington, but rather than legislation, rely on formal policy handbooks to provide guidance for when roadways should be transferred either from the state to the municipality or vice versa.
  In New York, the routes included in the State Arterial Highway System are designated through legislation, but there is no wording similar to that in Washington State that provides criteria for determining *when* an urban arterial should be taken into the system. Such language could be helpful, particularly in New York City, where the state is fractured jurisdictionally and in ways that do not always coincide with the function the road is performing (i.e., local jurisdiction on road functioning locally and state jurisdiction on road functioning as state highway).

- **Swapping of Roadways between the Town of Castle Rock and the State of Colorado.** The experience in the Town of Castle Rock, Colorado is also relevant for New York City's urban arterials because it involved a formal swapping of roadways through an agreement. A 2-lane state highway that was functioning as a local roadway was turned over to the state in exchange for a 4-lane city-built and owned roadway that was functioning as a major arterial. If a broader review of the entire system is difficult in New York State, an approach similar to that used in Castle Rock could be used on key roadways within New York City where both the state and city might find benefit through the transfer.

Funding

- **Varying rates across the state in Colorado.** While New York State, like Illinois, has one set of stipulated rates for all municipalities throughout the state ($0.85/yd^2 for roadways and $0.95/yd^2 for elevated surfaces), Colorado's DOT Region's each negotiate their own rates for maintenance agreements so they vary across the state.

- **Annual rate adjustments to keep pace with inflation in Illinois.** New York State might consider allowing more flexibility by adjusting its rate, like Illinois, to keep pace with inflation. Currently the rates are legislated and it can be many years before they are adjusted.

Themes for Consideration

Beyond the notable practices, there were several themes that were repeated by either the cities or the states that bear mentioning since they present both challenges and potential opportunities when thinking about how to advance improved coordination and/or cooperation on state arterials in urban areas.

- ***Financial Cost of Transfers.*** When abandoning a state roadway to the local municipality, the trend among the city/state pairs is for the state to first bring the local roadway to a state of good repair. In California and Pennsylvania, meeting the costs associated with this policy has been difficult and has delayed the transfers under their programs. In Washington State, cost of transfers was also noted, but in a slightly different way since in this case, the state has taken the local roadways into its state highway system but must now bear the costs associated with bringing them up to state standards.

- ***Lack of Desire by Municipalities to Take More Roadways under Their Jurisdiction.*** Several city/state pairs noted a tension in terms of who wants to transfer what to whom. In the case of Pennsylvania and Florida, for example, where it was clear that the state was trying to save

money, the municipalities viewed abandonments of state highways more negatively. Representatives from Philadelphia made a point of noting that there are roadways within the city that would make more sense on the state highway system, but that the Commonwealth is not as interested in doing this. In Portland, a key reason for the city developing its own handbook for jurisdictional transfers was the existence of the state policy and the lack of a statutory requirement for cities to agree to such transfers. It is quite possible that New York City and possibly Buffalo would view such transfers similarly. Thus, it is worth exploring the approach taken by those locations (especially Washington State and Town of Castle Rock/Colorado) which sought to create benefit for both the state and the municipalities involved.

- ***Need for Creativity and Flexibility.*** When reviewing transfer agreements, several of the particularly successful cases involved flexibility and creativity in terms. For example, when the state abandoned a portion of SH 33 in Denver, it paid less than the full cost in terms of bringing the roadway to a state of good repair, but the monies that were provided were directed to the Denver DPW instead of the General Fund as would normally have occurred. Further, the city and state negotiated an arrangement that allowed the state to retain jurisdiction over the bridge "until it becomes structurally deficient and eligible for funding." At that time the state will replace or repair the bridge "to the satisfaction of the city" and then abandon it at no extra cost.

Given the institutional complexities, especially in New York City, coupled with the legacy left by the initial description of the SAHS in New York's Highway Law and the existence of the current maintenance agreements, creativity and flexibility are important if the state and the cities determine that there is a need to address the SAHS in New York City and Buffalo in light of today's changing needs and traffic patterns. The city/state pairs explored in this study provide several examples as well as precedent that could prove useful in New York as well.

STATEMENT ON IMPLEMENTATION

This report provides a survey of practice and potential precedent related to the treatment of state arterial highways in urban areas. Several notable practices highlighted in the findings could prove beneficial in New York State in enabling enhanced coordination as the New York State Department of Transportation (NYSDOT) implements the corridor management concept. There are several legal, political, and financial issues that would need to be addressed in order to institute several of the practices outlined in the report within New York State.

Thus, to aid in implementation, the research results shall be provided to the Policy & Strategy Division at the New York State Department of Transportation for use in discussions furthering the concept of corridor management within urban areas.

1. Report No. **C-04-03**	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle **State Arterial Highway System Peer City Study**		5. Report Date **August 2006** 6. Performing Organization Code	
7. Author(s) **Allison L. C. de Cerreño, Ph.D.**		8. Performing Organization Report No.	
9. Performing Organization Name and Address **NYU Wagner Rudin Center for Transportation Policy & Management** **295 Lafayette St, 2nd floor New York, NY 10012**		10. Work Unit No. 11. Contract or Grant No.	
12. Sponsoring Agency Name and Address **NYS Department of Transportation** **50 Wolf Road** **Albany, NY 12232**		13. Type of Report and Period Covered **Final Report** 14. Sponsoring Agency Code	
15. Supplementary Notes **Project funded in part with funds from the Federal Highway Administration**			
16. Abstract **Addressing state highways within urban areas is a challenge for New York State, New York City and Buffalo. Drawing upon experiences from around the United States, this report explores how specific issue areas – maintenance responsibilities, planning & programming, design & construction, traffic signals, funding, enforcement, and transfers of title & ownership – are addressed in other cities and states. A great deal of variation exists among these city/state pairs. However, there are several notable practices (and potentially precedent) identified that are relevant for New York State and the cities of New York and Buffalo should the cities and state seek to better coordinate their efforts or state highways and/or rationalize the existing state arterial highway system.** **To aid in implementation of the findings, the research results shall be provided to the Policy & Strategy Division at the New York State Department of Transportation for use in discussions furthering the concept of corridor management within urban areas.**			
17. Key Words **highway law, highway maintenance, highway policy, state arterials, state highways, state roadways, funding, design, construction, enforcement, maintenance, planning, programming, traffic signals, transfers of jurisdiction, arterial management, highway management, corridor management, urban arterials, urban roadways**	18. Distribution Statement **No restrictions**		
19. Security Classif. (of this report) **Unclassified**	20. Security Classif. (of this page) **Unclassified**	21. No. of Pages **110**	22. Price

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1. INTRODUCTION

To the average driver traveling within New York City, the arterial roadway system appears to offer an integrated, continuous, and well-connected (if not always well-maintained) set of streets and highways. However, upon closer examination, the system is fragmented in terms of ownership, programming and planning, maintenance, and operational responsibilities. The disjointed nature of the arterial roadway system in New York City is repeated in other cities throughout the state, though not to the same degree.

In a 2002 New York State Department of Transportation's report, "New York City State Arterial Highway System," Deborah Mooney describes several issues that have arisen from the fragmentation of the New York City system. Among them:

- Lack of clear and formal mechanisms for programming, planning, and funding of the system;
- Lack of clear priorities for the system;
- Concerns regarding maintenance processes, policies, and lack of accountability;
- Lack of and need for an updated "final system plan that reflects the different roles of city and state DOT in terms of local service and connectivity to adjacent regions, and which establishes a priority as to the most important actions to take in this regard…."[1]; and,
- Legal concerns related to unclear liability (this has since been resolved and is not treated in this study).[2]

Wanting to more effectively coordinate with local transportation agencies, authorities, and other organizations in the management of the State Arterial Highway System (SAHS), and to potentially rationalize the current system, the New York State Department of Transportation (NYSDOT) funded a year-long study to compare the experiences in New York City and Buffalo with selected peer cities throughout the United States.

This report is the culmination of that study, the goal of which was to review and assess, and compare and contrast how other cities deal with several issues related to state arterial highways running through their urban areas. Issues explored included, but were not limited to: how such systems are funded; how ownership is determined and manifested; how maintenance responsibilities are differentiated; who is responsible for designing, planning, construction and reconstruction; and when, how, and why transfers of roadways (either full ownership transfers or changes in maintenance responsibilities) occurred.

1.1 The Roots of the Fragmented System and the "Built-Unbuilt" Dilemma

Some of the challenges faced by NYSDOT when dealing with the SAHS in New York City and Buffalo relate directly to the legacy left by the original definition of the SAHS and the lack of clarity surrounding responsibilities. Thus, it is helpful to spend a few moments providing some background on New York State Highway Law and the "built-unbuilt" dilemma.

Wanting to foster economic recovery and development after World War II, the New York State legislature adopted a Declaration of Policy as part of the New York State Highway Law of 1944, stipulating that,

> The modernization and the construction of arterial highways which are to pass through cities, will contribute greatly to post-war reemployment and to the stimulation of industrial recovery. The resources and the technical skills that are available to the state for these purposes, should be used for the benefit of the cities upon the principle that the

[1] Deborah L. Mooney, "New York City State Arterial Highway System," Unpublished Study (July 16, 2002), pp. 5-6.
[2] Albanese v. City of New York, 5 N.Y.3d 217; 833 N.E. 2d 1204, N.Y.S. 2d 538; (N.Y. 2005), holds that liability is a function of the amount of control over the aspect in question that the city or state had over the highway at that time. See also, City of New York v The State of New York, 98 N.Y.2d 740; 780 N.E.2d 504; 750 N.Y.S.2d 819 (NY 2002), which held that the State does not have to indemnify NYC (unlike all other cities in the State) for claims for personal injury or property damage claims arising out of NYC's maintenance agreement responsibilities for the arterial highways in their boundaries. There is, however, proposed legislation, which if passed, would shift this large liability for such claims relating to maintenance and repair from NYC to the State, Senate Bill 3170, (March 2005).

> construction of such arterial highways is a matter of state concern [NY CLS High § 349-b (2005)].

As defined in the Law of 1944 and current with today's definition, the SAHS in New York City consists of 41 routes or route-segments (235 centerline miles); the SAHS of the City of Buffalo currently consists of 10 routes or route-segments (34 centerline miles) [NY CLS High § 349-f (2005) and NY CLS § High 349-e (2005), respectively].[3] Of the 235 centerline miles of designated state arterial roadways in New York City and the 34 centerline miles in Buffalo, NYSDOT owns and is ultimately responsible for maintenance and repair of 141 centerline miles and 20 centerline miles, respectively.[4] The remainder of the designated SAHS is owned by the cities or by other state authorities, such as the Metropolitan Transportation Authority and Port Authority of NY & NJ in the case of New York City, and the New York State Thruway Authority in the case of Buffalo.

The reason for the difference between the designated mileage and the current NYSDOT-owned mileage of the SAHS dates back to this original designation that distinguished between state-owned or "built" sections of the state arterial highway system and city-owned or "unbuilt" sections and the maintenance and repair responsibilities that would be accorded to each. Specifically, NY CLS High § 349-d (2005), stipulates that:

> no public street, main route or thoroughfare or any portion thereof, that is designated in this article, shall be deemed to be part of the system of highways of the state of New York for purposes of maintenance and repair, until (1) such public street, main route or thoroughfare or any portion thereof shall have been constructed, reconstructed or improved as provided in this article, and (2) such commissioner shall have issued an official order declaring such public street, main route or thoroughfare or any portion thereof, exclusive of service roads and intersection street bridges, to be a part of such system of highways for such purposes of maintenance and repair.

In routine use, "constructed, reconstructed or improved" has come to be termed "built." Thus, "unbuilt" does not necessarily mean a road is not in existence, but only that it has not been brought up to current state and federal standards and has, thus, not been formally accepted into the state-owned SAHS.

This distinction between built and unbuilt sections of the SAHS has had important implications in terms of maintenance and repair, programming, design, construction and reconstruction. On the unbuilt sections of the system – which are not owned by the state and have not yet been brought up to current state and federal standards – New York City and Buffalo remain responsible for maintenance and repair of the roadways. On the state-owned built sections of the system within the geographic boundaries of a city, NYSDOT ultimately has a non-delegable duty to ensure that all state highways are maintained properly. NYSDOT can and usually does enter into maintenance agreements with the city for the city to undertake responsibility for maintenance and repair of state highways that run through that city, (including the built sections of the SAHS). In cases where such agreements exist, NYSDOT is authorized to pay the city an annual amount determined by a legislated rate applied to the square yardage of roadway surfaces and elevated roadway (i.e., bridge) surfaces to provide that maintenance [NY CLS High § 349-c (2006)].

Responsibilities for programming, planning, design, and funding are open to interpretation. Further, since the city owns the unbuilt sections, with the state assuming capital responsibility as they are built to current standards and formally accepted into the SAHS, questions remain unanswered regarding who should take the initiative to program the work and who should pay to bring the roads up to current standards.[5]

On the one hand, the Commissioner of Transportation is authorized to prepare "designs, plans, specifications, and estimates for the construction, reconstruction or improvement" of SAHS designated roadways [NY CLS High § 349-c (2005)]. However, the same section of the Highway Law also stipulates that for cities other than New York City:

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[3] For the New York City designated total, see New York State Department of Transportation (NYSDOT), "NYSDOT Region 11 at a Glance," http://www.dot.state.ny.us/reg/r11/r11glance/r11glance.html (accessed 5/4/06).
[4] NYSDOT, *2004 Highway Mileage Summary*, http://www.dot.state.ny.us/tech-serv/high/highwaym.html and http://www.dot.state.ny.us/tech-serv/high/files/erie.pdf (accessed 5/1/06).
[5] Mooney, "New York City State Arterial Highway System," p. 3.

> Such designs, plans, specifications and estimates may be prepared (a) by the department of transportation; (b) by any city herein named, if the preparation of such designs…are authorized in advance by the commissioner of transportation and then upon such terms and conditions as may be agreed by and between such city and the commissioner of transportation; (c) subject to the approval of the director of the budget, by the employment of private engineers…; or (d) by a combination of such methods [NY CLS High § 349-c (2005)].

For New York City, Highway Law notes that:

> The state shall proceed with the construction of a section or sections of said system after designs, plans, specifications and estimates of cost thereof have been completed and approved by the city and the commissioner of transportation….The city may, however, elect to construct such section or sections at its own expense in the manner provided by the city charter or otherwise [NY CLS High § 349-c (2005)].

In the case of New York City (which, it should be noted, is at times treated separately from other cities and at other times treated the same as other cities throughout New York State Highway Law[6]), the language used to deal with jurisdictional responsibilities related to the built and unbuilt sections is also confusing. The result has been different interpretations and questions on how to apply the Law. For example, NY CLS High § 349-c (2005) mandates that "upon the completion by the state of a section or sections of parkways constructed by the state in the city of New York, the commissioner of transportation shall by official order transfer jurisdiction over the central express artery and adjacent landscape areas and over adjacent service roads to the city of New York."

According to Mooney's report, confusion may arise when interpreting this section since jurisdiction in this case does not mean transfer of legal title or ownership, but only maintenance and repair jurisdiction – meaning the legal obligation to maintain and repair the roadways. Thus, once the roadway is "built" and becomes part of the SAHS, it comes under the jurisdiction of the state, but the commissioner is mandated to transfer maintenance jurisdiction to the city.

An additional complication arises from the legacy of the distinction between the built and unbuilt portions of the arterial system. Today's transportation needs and patterns are vastly different than those characterized in the mid-1940s. While still legally required to address the built and unbuilt sections of the SAHS, it is no longer clear that all of the unbuilt roadways should eventually be brought up to current standards so they can formally become part of the state-owned system. Further, some built sections now function more as local roadways than as state arterials so the rationale for including them as part of the initial SAHS no longer exists. In essence, the original designation of the SAHS, even if all sections were to be fully built and brought under the state's jurisdiction, no longer meets today's realities.

1.1.1 Other Cities' and States' Experiences. For the most part, the other cities surveyed in this effort do not have the same problem in terms of the "built-unbuilt" system. In some cases, as in Florida, when the state highway system was designated, no distinction was made between built and unbuilt sections. Everything designated for the highway system was brought under state jurisdiction at that time. In other cases, as in Texas, the state owns, operates, and maintains all of these roadways. However, some of the cities and states do face similar challenges to New York City and Buffalo with respect to the original state highway designations no longer meeting today's needs and in terms of multiple jurisdictions and responsibilities within the cities' borders.

Several states, including California, Florida, Michigan, Pennsylvania, and Washington have tried to address these issues with varying degrees of success. The most recent of the programs is in California. The 2004 *California Performance Review* identified close to 6,500 lane-miles of state-owned and state-maintained highways, suggesting that they should be relinquished to local jurisdictions. However, as a result of local priorities, fiscal issues, and policy conflicts, few of these roadways have been relinquished to date. California's program is the only one in this group which explicitly notes that the impetus for the program is to save money for the state, as opposed to trying to rationalize the system or do both.

[6] In fact, there are sections where New York City is treated separately from other cities, and then the same as other cities, within the same paragraph.

Similar to California, but two decades prior, the Commonwealth of Pennsylvania began its attempt at addressing some of the discrepancies related to ownership and functionality of the roadways in 1983. At that time, legislation was enacted to formally establish the Road Turnback program, now called the Highway Transfer Program, which aimed at transferring to local jurisdictions roughly 12,000 miles of functionally-local roadways that were part of the state highway system at the time [75 Pa. C.S. § 9201 thru § 9208 (2005)]. To date 4,537 miles have been transferred. It should be noted that according to representatives from the City of Philadelphia, the state has not been as interested in taking over any local roadways.

Florida has tried twice to modify the state highway system – the first more successful than the second. In the late 1970s, Florida like California was in the midst of a period of fiscal constraint. At that time, the legislature entered into an elaborate process to review the state highway system and ultimately transferred several hundred miles of roadways to local jurisdictions, primarily in rural areas of the state. Almost two decades later, in the 1990s, another attempt was made to launch a similar review but this time it proved difficult politically. A decision was made, instead, to "lock" the functional classifications and jurisdictions in place as of June 10, 1995 [Fla. Stat. § 335.0415 (2005)].

Unlike California, Pennsylvania, and Florida, Michigan's attempt clearly aimed at rationalizing the state highway system, with the goal of extending rather than reducing state ownership. Plans to modify and rationalize the state highway system were first voiced in 2000 when Governor John Engler outlined Build Michigan III, part of a larger vision for improving Michigan's transportation system that had begun in 1992. Looking to where Michigan ranked with respect to the proportion of roadways owned by the state versus local municipalities (48th), the governor argued for taking over those roadways most heavily traveled since they formed the commercial backbone of the highway system. Specifically, 9,000 miles of roadways were identified to be brought under the jurisdiction of the Michigan Department of Transportation (MDOT). However, the Rationalization Process was not adopted by the legislature and did not progress further.

In the 1990s, Washington pursued an in-depth review of the state highway system, with the goal of determining the best way to update its state highway system to meet current demand and travel patterns. The review resulted in exchanges of roadways that were either fractured jurisdictionally, on the state system but functioning as local roadways, or were local roadways that now had state functions. Since that time there have been some "tweaks" to the system. In all cases, changes are made through Committee, with both sides needing to approve the transfer, with formal approval by the Washington State legislature.[7]

Several other city/state pairs also face similar challenges with respect to liability, unclear division of maintenance responsibilities, and disagreements related to programming, planning, and design, as well as funding. For example, though not a focus of the current research, in Philadelphia when there is liability involved related to a roadway, the city and state can both be sued. Further complicating matters is that Southeastern Pennsylvania Transportation Authority (SEPTA), the area's transit system, maintains paving in the trolley track areas. If an accident happens in a location situated near the trolley tracks, three different agencies can be found to bear responsibility.

1.2 Definitions and Methodology

When reviewing state arterials in urban areas around the United States, it quickly becomes clear that different locations use different terminology in describing their roadway systems. What constitutes a freeway on the west coast is referred to as an expressway in the east; in Texas, the terminology includes Farm-to-Market and Ranch-to-Market roads, while in Detroit, key arterials are referred to as trunklines.

To try to bring some consistency to the discussion, the current Functional Classifications identified by the Federal Highway Administration (FHWA) were used to the extent possible in determining whether a given roadway in a particular urban area corresponded to what is referred to as an arterial in New York State. Table 1 provides a description of the current FHWA Functional Classifications for urban areas.

The study focused primarily on those roadways that function either as principal or minor arterials, though in some cases, examples were derived from Collectors as well when relevant to the broader discussion.

[7] David McCormick, Assistant Regional Administrator, Maintenance and Traffic, Washington State Department of Transportation (WsDOT), Personal Communication, 12/21/05.

With respect to methodology, this effort utilized a case study comparative approach. An initial literature review was conducted to identify potential peer cities for New York City and Buffalo. Recognizing that the two New York State cities differ greatly in terms of geographic size, population size and density, and extent of the roadway system, care was taken to identify a broad range of cities with respect to each of these factors. Since no other U.S. city fully compares to New York City under these measures, "peer" cities were eventually identified based on whether they were facing similar issues or might be able to provide information relevant to the situation in either New York City or Buffalo. Table 2 provides the listing of potential peer cities that were identified in the literature search, along with the areas in which it appeared they were facing or had addressed certain challenges experienced in New York City and Buffalo. Those cities deemed of most interest based on the initial findings were prioritized (as denoted by the *) for additional study.

Table 1. Federal Functional Classification of Urban Roadways

Functional Classification			Description
Principal Arterial	11 12 14	Interstate Other Freeway/Expressway Other Street	Highest traffic volume and longest trip corridors, serves urban centers, primarily limited access (14 has more access)
Minor Arterial	16		Augments principal arterial system, lower mobility and higher land access than principal arterials
Collector	17		Channels and distributes traffic, focuses more on land access than mobility
Local Roadway	19		All roadways not included above

From: USDOT, FHWA, FHWA Functional Classification Guidelines, Section 2, http://www.fhwa.dot.gov/planning/fcsec2_1.htm#fsiua

Beyond the issue areas, the cities provide an excellent cross-section in several ways. Geographically, cities in the east, southeast, Midwest, southwest, northwest, and west are all represented. Second, system size varies greatly, ranging from Houston's 9,598 centerline miles down to Temecula's roughly 207 centerline miles, though most are in the range of 1,000 to 2,000 centerline miles. Finally, government structures are also different across the various cities, with some like the City of Baltimore and St. Louis functioning as separate municipalities from the counties and townships, others like Denver and Philadelphia which are co-terminus with their respective counties, some like Atlanta and Chicago which cross counties, and finally those like Temecula and Houston which are situated within a county.

Each city and related state (and county where appropriate) was then approached for formal interviews. Simultaneously, cities in Michigan and Florida were identified (Detroit and Orlando, respectively), and a much more rigorous review of state codes and legislation was conducted for each city/state pair. Table 3 shows the final list of peer cities and identifies the set of issue areas of interest to New York that the cities and their respective states have either addressed or that remain a challenge for them.

Once the information was collected, case summaries were drafted for each city based on the literature review, legal review, and interviews. The case summaries are provided in the Technical Appendix of this report. Each case summary describes the following information:

- ***Extent of the Roadway System.*** To the extent possible (and this was not always possible), statistical information on the extent of the entire roadway system in the cities is provided, along with the breakdown according to ownership and operation, and federal-aid classification. Again, this information is not provided as a means for determining the "peer" status of the cities, so much as for providing some general background on the size of the system under discussion.
- ***Description of Responsibilities.*** For each city, a general description of responsibilities is provided, touching primarily on ownership, maintenance and operations of state arterials.
- ***Funding Mechanisms.*** In this section is information related to the ways in which cities receive funding either for maintenance and operations or capital projects on state highways. Information regarding maintenance contracts and formal legislative apportionments and allocations is included here.
- ***Planning/Programming.*** A separate section denoting planning and programming responsibilities, along with construction and design responsibilities is provided in this section.

- ***Transfers of Responsibility and/or Jurisdiction.*** For each city, a section is devoted to transfers of jurisdiction and/or responsibility. To the extent possible, the discussion in this section includes the background on why the transfer took place, how it took place, the specific contractual provisions, and any difficulties or concerns during the post-transfer period.
- ***Special Considerations*.** Recognizing that, in a sense every city has special considerations, this section is used as a means for highlighting, via bullets, key information that could be overlooked in the other sections.

The information derived from the case summaries was then assessed and compared with each of the other peer cities, as well as with New York City and Buffalo.

Since each city and state pair deals with their state arterials in urban areas differently, best practices are difficult to formally identify. However, the report does provide notable practices and potential precedents that could be applicable to New York City and Buffalo when addressing state arterials in these urban areas.

1.3 Framework for the Report

Many of the issue areas overlap. Funding for state arterials relates to maintenance as well as capital construction and reconstruction. Similarly, maintenance is sometimes described as part of operations, while in other cases it is separated out. Thus, the framework for this report is meant as a guide and allows for some continuity to the discussion as well as clarity when looking for similarities and differences among the various cities and states. The report narrative synthesizes the information gathered during the study. Additional and more detailed information on each city can be found in the Technical Appendix.

Section 2 addresses the differentiation of responsibilities between the cities and the states, describing maintenance responsibilities, planning and programming, design and construction and reconstruction responsibilities. It also addresses enforcement and incident management as well as operations, with a focus on traffic signals.

Section 3 focuses on funding, looking at the role of legislative apportionments in different states, as well as the funding terms related to maintenance agreements between the cities and states.

Section 4, explores specific examples of transfers of maintenance responsibility and/or jurisdiction (in this case, ownership or title) of state arterials in urban areas.

The concluding Section provides themes for consideration and notable practices that are relevant for and potentially applicable to state arterials in New York City and Buffalo.

Table 2. Initial Listing of Potential Peer Cities

Issue Areas/Cities	Population 2000 Census	Population Density, 2000 Census (persons/mile²)	Funding	Policy & Legislation	Operations/ Maintenance	Ownership/ ROW	Planning/ Capital Programming	(Re)construction and Design
Cities with populations over 500,000 (NYC: 8,008,278)								
Baltimore, MD	651,154	8,058	X		X			
Chicago, IL*	2,896,016	12,750	X		X	X		X
Dallas, TX	1,188,580	3,469	X		X		X	X
Denver, CO*	554,636	3,617	X		X	X	X	X
Houston, TX	1,953,631	3,372	X		X		X	X
Philadelphia, PA*	1,517,550	11,234		X	X			X
Portland, OR*	529,121	3,939			X	X		
Seattle, WA*	563,374	6,717	X		X	X	X	X
Cities with populations over 300,000 but less than 500,000								
Atlanta, GA*	416,474	3,161	X			X		
Las Vegas, NV*	478,434	4,223		X	X	X	X	
St. Louis, MO*	348,189	5,263	X	X	X	X		X
Cities with populations of 100,000 to 300,000 (Buffalo: 292,648)								
Richmond, VA*	197,790	3,293	X			X	X	X
Salt Lake City	181,743	1,666				X		
Cities with populations below 100,000								
Las Cruces, NM	74,267	1,426	X			X	X	
Temecula, CA*	57,716	2,198	X		X	X		
States for which cities should be identified and reviewed								
State of Michigan			X	X	X	X		
State of Florida			X	X	X	X		

*prioritized city/state pairs

Table 3. Final List of Peer Cities, with Areas of Relevance for New York Identified*

Issue Areas/ Cities	Population 2000 Census	Population Density, 2000 Census (persons/ mile²)	Total Roadway Mileage within the City (centerline miles)	Maintenance	Operations, including Traffic Signals	Planning/ Programming and Design/ (Re)Construction	Funding	Transfers of Maintenance Responsibility and/or Ownership of Roadways
Atlanta, GA	416,474	3,161	1,531				X	X
Baltimore, MD	651,154	8,058	1,947			X	X	X
Chicago, IL	2,896,016	12,750	3,816	X	X	X	X	X
Denver, CO	554,636	3,617	1,823	X	X	X	X	X
Detroit, MI	951,270	6,855	unavailable		X	X	X	X
Houston, TX	1,953,631	3,372	9,598	X			X	X
Orlando, FL	185,951	1,989	unavailable		X		X	X
Philadelphia, PA	1,517,550	11,234	2,420	X			X	X
Portland, OR	529,121	3,939	2,059				X	X
Seattle, WA	563,374	6,717	1,720	X				X
St. Louis, MO	348,189	5,623	1,217				X	X
Temecula, CA	57,716	2,198	207	X		X	X	X
Buffalo	292,648	7,206	676					
New York City	8,008,278	26,403	6,074					

*Additional information on specific issue areas was gathered for Los Angeles, CA and for the Town of Castle Rock in Colorado. Because the full complement of questions was not explored with these two jurisdictions, they do not appear in the table above, but information about them is presented throughout the narrative where relevant.

2. DIFFERENTIATION OF RESPONSIBILITIES

The division of responsibilities between states and cities is quite different across the spectrum of cities assessed. The following paragraphs compare how the city/state pairs in the study differentiate responsibilities for maintenance, planning and programming, design and (re)construction, enforcement and incident management, and operations and traffic signals. While some cities have funding associated with maintenance responsibilities, others do not. Thus, the discussion of maintenance responsibilities is limited solely to the description of how those responsibilities are shared between the cities and the states. Issues related to cost and funding of maintenance are dealt with in Section 3.

2.1 Maintenance

Several sections of New York's Highway Law discuss maintenance of state arterials in cities throughout the state, though the primary section referred to when interpreting responsibilities and when developing maintenance agreements is NY CLS High 349-c (2005). According to this section, for cities other than New York City, the commissioner of transportation is authorized to enter into a written agreement for the maintenance and repair of Interstate and non-interstate highways or segments thereof [NY CLS High § 340-b (2006) and NY CLS High § 349-c (2005)]. In some cases, such agreements are developed; in others, they are not. In the case of Buffalo, there is no agreement for the interstates, and several arterials or portions of them (Routes 5, 33, and 198) are not identified in the current maintenance agreement. In the case of New York City, the current maintenance agreement covers all state-owned arterials within the City of New York.

NY CLS High 349-c (2005) describes the way maintenance will be carried out ("either by the forces of such city and with its equipment, or by its contractor, or by a combination of these two methods") and what types of maintenance shall be performed under these agreements. On SAHS roadways within cities, the types of maintenance for which cities are responsible once the authorized agreements are in place include the following:

- Procedure and method for regulation of street openings;
- Protection and patching of the pavement and curbs;
- Care and protection of drainage facilities and structures;
- Maintenance of adjacent roadside and landscaped areas, including the care of trees, shrubs, and groundcovers, and cutting of grass at specified locations;
- Control of snow and ice
- Operation and care of traffic lights, directional guides and controls, and parking controls [NY CLS High § 349-c (2005)].

For all of these services, cities are reimbursed by the state using a legislated rate per square yard (see Section 3). Cities are also responsible for "lighting, cleaning, sweeping and sprinkling," as well as "any work on or in connection with subsurface installations and structures that are owned and operated by any city" (e.g., sewers, gas mains, water lines). However, these maintenance services are not reimbursable by the state in most cases since they are deemed to be part of normal maintenance of streets performed by the city in which these roadways are located [NY CLS High § 349-c (2005)].

For other cities, the differentiation of responsibilities varies, and for the most part is quite different than in New York City though more similar to Buffalo. Before describing the division of responsibilities more fully, it is helpful to provide a sense of the extent of those responsibilities in terms of the entire roadway system within each city. Table 4 identifies the total roadway centerline mileage within each city and provides the breakdown by which each entity owns and operates/maintains these miles. Note that in some cases, these figures were provided directly by the cities themselves and could not be substantiated through a second source. Thus, some figures may have been subject to interpretation at times. For example, while Seattle maintains some designated state highways, it owns the underlying easements so these miles were included under city-owned even though for most cities, city-owned generally refers to local roadways.

Table 4. Division of Ownership and Maintenance Responsibilities by Number of Centerline Miles

City	Total Roadway Mileage within the City	City-owned and operated/ maintained	State-owned and operated/ maintained	State-owned, City operated/ maintained	City-owned, State operated/ maintained	Other-owned or operated/ maintained (see notes)	Notes
Atlanta	1,531	1,314	161	0	0	56	County-owned
Baltimore	1,947	1,891	0	32	0	24	Maryland Transportation Authority
Chicago	3,816	3,432	117	255	0	12	5 county-owned/operated; 7 city-owned, privately operated
Denver	1,823	1,739	54	30	0	0	
Detroit							
Houston	9,598	6,500	3,098	0	0	0	
Orlando	not available						
Philadelphia	2,420	2,044	42	318	0	11	
Portland	2,059	1,936	50	50	0	23	
Seattle*	1,720	1,667	53	0	0	0	For some roads designated as part of the state highway system, Seattle has the underlying easement
St. Louis	1,217	1,162	24	0	31	0	
Temecula	207	124	not available			0	
Buffalo*	676	637	19	0.25	0	19	New York State Thruway
New York City*	6,074	5,808	0	141	0	125	Metropolitan Transportation Authority Port Authority of NY & NJ

*Seattle owns the underlying easement on a number of the designated state highways. Thus, while agreements exist for determining the city's responsibilities on these roadways, representatives from Seattle and Washington Departments of Transportation included these roadways under city-owned and operated.
**Buffalo and NYC figures from NYSDOT, *2004 Highway Mileage Summary*, http://www.dot.state.ny.us/tech-serv/high/highwaym.html; http://www.dot.state.ny.us/tech-serv/high/files/erie.pdf

In several cities, the state retains responsibility for state arterials. In California, Caltrans maintains full responsibility for all interstates and state highways, including but not limited to paving, snow removal, shoulders, lighting, signage, striping, and medians. Similarly, in Texas, the Texas Department of Transportation (TxDOT) owns, operates, and maintains everything except lighting (which the state installs, but the city maintains) on interstates and freeways, and lighting and signals on other state-owned roads [Tex. Transp. Code § 203.003 (2005)]. Atlanta and Detroit are similar. Georgia Department of Transportation (GDOT) fully owns, operates, and maintains everything related to state highways regardless of location, except for traffic signals which it permits but which the city then installs, maintains, and operates. In Michigan, MDOT is responsible for all maintenance on all interstates and state highways, with the exception of cross-walks and sidewalks on non-interstates [MCL § 691.1402 (2006)].

Baltimore is at the other end of the spectrum. There are no state designated routes in Baltimore, but there are several interstates. The city is responsible for all maintenance and operations on these roadways, as

well as for any (re)construction and design. Of interest, and unlike any of the other cities in this study, Baltimore does not even fall within one of Maryland State Highway Administration's Engineering Districts.

Other cities tend to fall somewhere along this spectrum, with responsibilities divided between cities and states. In St. Louis, for the most part, Missouri Department of Transportation (MoDOT) is responsible for curb-to-curb maintenance, including sweeping, pothole repair, signals, signage, striping, and intelligent transportation systems, while the city is responsible for lighting, snow removal, permitting, landscaping, and any parking meters on the state highways running through their jurisdiction. In Orlando, the state is responsible for all maintenance, construction and reconstruction, programming and planning on state highways, with the exception of lights and traffic signals for which it has annual maintenance agreements which provide a cost-share while the city provides service. In Orlando, there are also roadways operated and maintained by the Orlando-Orange County Expressway Authority and the Florida Turnpike Enterprise (FTE). Both entities are responsible for maintenance and operations on their respective roadways, though the City of Orlando maintains traffic signals for the FTE via contract.)

In Portland, Oregon Department of Transportation (ODOT) is generally fully responsible for the interstates, but there are site-specific agreements in place that allow for cost sharing of the lighting on these roadways. On non-interstate state highways, Portland is also responsible for sidewalks, and as with the interstates, there are some site-specific agreements in place regarding lighting and traffic signals.

In Pennsylvania, responsibilities are broken down by type of roadway and the size of the city, with Philadelphia having more roadway responsibilities than some of its smaller neighbors. While Pennsylvania Department of Transportation (PennDOT) fully maintains the interstates and (with the exception of signals) some limited access highways, it is only responsible for road surfacing on other state-owned arterials [53 P.S. § 101 (2005)]. When determining highway responsibilities, Washington State also makes a distinction based on city size, with Seattle falling into the category of cities with populations over 22,500 [Rev. Code Washington (ARCW) § 47.24.020]. In the case of Seattle, the state maintains responsibility for roadway surfacing, shoulders, curbs, and directional signals and route markers, but the city is responsible for all other maintenance. Washington State also clearly distinguishes responsibilities for bridges that convey non-limited access state highways that are also city streets.[8]

Chicago, Denver, and to some degree Los Angeles are, in some ways, most like New York City in that while the state is technically responsible for all maintenance responsibilities on state highways, there are formal maintenance agreements in place between the cities and their respective states, which allow the cities to undertake maintenance (at least on non-interstate arterials). In these cases, roadways and/or roadway segments are identified in the contracts and there is funding attached to these agreements. However, the lists of responsibilities in Chicago and Denver are more extensive than those in Los Angeles, with the latter including primarily drainage, sweeping, traffic lights, and safety lights. In the case of Chicago, representatives from Chicago DOT suggest that the fees provided are significantly less than actual costs.

It is worth mentioning here that in Chicago, there is one city-owned arterial (the Skyway) which was recently leased to a private enterprise, the Skyway Concession Company, LLC (SCC). The SCC is now responsible for all maintenance on the Skyway though the city maintains the right to enter the Skyway for the purposes of inspection and to make repairs should SCC be in default with respect to its obligations under the lease agreement.[9] Additional information on the specific responsibilities identified under the contract between the City of Chicago and the SCC can be found in the Technical Appendix attached to this report.

Table 5 provides a breakdown of selected maintenance responsibilities on interstates and other limited access roadways and for other state highways in the cities surveyed in this study.

[8] "City Streets as Part of State Highways: Guidelines Reached by the Washington State Department of Transportation and the Association of Washington Cities of the Interpretation of Selected Topics of RCW 47.24 and Figures of WAC 468-18-050 for the Construction, Operations and Maintenance Responsibilities of WSDOT and Cities for Such Streets" (April 30, 1997), pp. 3-4, Table 1, http://www.wsdot.wa.gov/TA/Operations/LAG/citystreets.html (accessed 12/14/05).

[9] Chicago Skyway Concession and Lease Agreement By and Between the City of Chicago and Skyway Concession Company, LLC (October 27, 2004), p. 35, Sec. 3.7(a).

Table 5. Selected Maintenance Responsibilities, by City and State

Interstates/Limited Access Highways	Paving/Resurfacing		Shoulders		Curbs		Pothole Repair		Snow Plowing		Striping		Signs		Lighting		Traffic Signals		Cross-walks		Sidewalks	
	City	State	City	State	City	State	City	State	City	State	City	State	City	State	City	State	City	State	City	State	City	State
Atlanta, GA		x		x		x		x		x		x		x		x						
Baltimore, MD	x		x		x		x		x		x		x		x							
Chicago, IL		x		x		x		x		x		x		x		x						
Denver, CO		x		x		x		x		x		x		x	x							
Detroit, MI		x		x		x		x		x		x		x		x						
Houston, TX		x		x		x		x		x		x		x	x							
Orlando, FL		x		x		x		x		x		x		x	x							
Philadelphia, PA		x		x		x		x		x		x		x								
Portland, OR		x		x		x		x		x		x		x	x							
Seattle, WA		x		x		x		x		x		x		x		x						
St. Louis, MO		x		x		x		x		x		x		x		x						
Temecula, CA		x		x		x		x		x		x		x		x						
Buffalo, NY		x		x		x		x		x		x		x		x						
New York City, NY	x		x		x		x		x		x		x		x							

Other State Highways	Paving/Resurfacing		Shoulders		Curbs		Pothole Repair		Snow Plowing		Striping		Signs		Lighting		Traffic Signals		Cross-walks		Sidewalks	
	City	State	City	State	City	State	City	State	City	State	City	State	City	State	City	State	City	State	City	State	City	State
Atlanta, GA		x		x		x		x		x		x		x		x	x			x		x
Baltimore, MD																						
Chicago, IL*		x	x		x		x		x		x		x		x		x		x		x	
Denver, CO*		x	x		x		x		x		x		x		x		x		x		x	
Detroit, MI		x		x		x		x		x		x		x		x		x	x		x	
Houston, TX**		x		x		x		x		x		x		x	x		x			x		x
Orlando, FL		x		x		x		x		x		x		x	x		x			x		x
Philadelphia, PA		x		x	x			x	x		x		x		x		x		x		x	
Portland, OR***		x		x		x		x		x		x		x		x		x		x	x	
Seattle, WA		x		x		x		x	x		x		x		x		x		x		x	
St. Louis, MO		x		x		x		x	x			x		x	x			x		x		x
Temecula, CA		x		x		x		x		x		x		x		x		x		x		x
Buffalo, NY†	x		x		x		x		x		x		x		x		x		x		x	
New York City, NY	x		x		x		x		x		x		x		x		x		x		x	

*Responsibilities technically fall under State, but maintenance contracts are in place to allow the city to provide such service.

**On several roads, under separate agreements, Houston is also repsonsible for pothole repair.

***While lighting and signals are the responsibility of the State, there are several contracts with the city for these services.

†The city is responsible for these items when the roadways fall under a maintenance agreement. Some arterials do not fall under such agreements so the responsibilities fall to the State.

2.1.1 Assessment and Comparison. Of the twelve city/state pairs explored, only Baltimore demonstrates the same levels of responsibility for maintenance of the Interstate arterials as New York City (i.e., the city is responsible for all maintenance on state arterials with the exception of those roadways owned and operated/maintained by other authorities or commissions). However, in the case of Baltimore there is no reimbursement from the state for this maintenance. For non-interstate state arterials (of which there are none in Baltimore), there is a bit more diversity but none of the cities have responsibility for paving and resurfacing of the travel roadway as do Buffalo and New York City (though for Buffalo this responsibility does not extend to all of the state arterials). On non-interstate state arterials, Chicago and Denver come closest to Buffalo and New York City in the types of responsibilities borne by the cities.

Like Buffalo and New York City, eight of the city/state pairs have some form of maintenance agreement in place between the city and the state. Additionally, Los Angeles has a maintenance agreement in place with the State of California. These agreements take several different forms. Chicago, Denver, and Los Angeles are party to broad agreements identifying multiple roadways similar to Buffalo and New York City, though Denver's agreements are split between roadways and traffic signals.

Detroit, Orlando, Philadelphia, and Portland are party to multiple separate agreements based on location or facility. Within these different types of maintenance agreements, some stipulate certain fee structures while others are solely designed to designate formal responsibilities with no related fees. Table 6 provides a pictorial of the types of agreements found in the other cities. (Los Angeles is included here as well.)

Table 6. Types of Maintenance Agreements, by City

	Broad Agreement Identifying Multiple Roadways and/or Segments		Broad Agreement on Roadways Only		Broad Agreement on Signals Only		Multiple Separate Agreements Based on Location		None
	w/$$	wo/$$	w/$$	wo/$$	w/$$	wo/$$	w/$$	wo/$$	
Atlanta, GA									x
Baltimore, MD									x
Chicago, IL	x								
Denver, CO			x		x				
Detroit, MI*							(x)		
Houston, TX								x	
Orlando, FL							x	x	
Philadelphia, PA							x	x	
Portland, OR							x		
Seattle, WA**		x							
St. Louis, MO									x
Los Angeles, CA	x								
Temecula, CA									x
Buffalo, NY	x								
New York City, NY	x								

*The state may contract out maintenance on its roadways and Detroit can bid as can other cities within the state.
**Seattle's maintenance responsibilities are based on a document dating back to 1954 which assigns responsibilities based on the size of a city's population and whether the work in question is classified as construction, routine maintenance, or extraordinary maintenance.

At least three of the states ensure accountability on the part of the city by including either legislation or contractual language that allows the state to intervene to perform designated maintenance if the city fails to do so. In these cases, the costs for such maintenance can either be deducted from future payments or directly billed to the city. The City of Chicago has included similar language in its contract with the SCC for the Skyway. According to representatives from Los Angeles, similar language exists in California, but in the contract with Los Angeles, there is no language to this effect. (Indeed, a follow up conversation suggested that lack of response on the part of the city to a noted deficiency is dealt with on a case by

case basis with the outcome negotiated between the city and state.) Table 7 identifies the states which have such language along with some notes on the form it takes.

Table 7. Existence of Language Regarding Non-Compliance Related to Maintenance Responsibilities*

City	Where Language Occurs	Description of Language	Time Allowances	Penalty
Chicago, IL**	Concession/ Lease Agreement	Identification of time duration within which work must be performed; city maintains the right to perform the maintenance if necessary	Range from hours to months according to type of work	Costs and expenses incurred to "cure" the default, plus 15%
Denver, CO	Maintenance Agreement	State must notify city of a deficiency; if the city does not or cannot correct it, the state may do so	Within 24 hours of notification by the state	Actual costs, which are billed directly to the city or deducted from future payments
Houston, TX	Maintenance Agreement	If the city fails to assume the responsibilities assigned in a manner satisfactory to the state, the state may assume them	None specified	Actual costs incurred in advertising for bids and letting construction contracts, which are billed to the city
Seattle, WA	Legislation	State must notify city of a deficiency; if the city does not correct it, the state may do so	Within 30 days of notification by the state	Associated costs, which are deducted from any sums credited or to be credited to the city
Buffalo, NY	No such language exists			
New York City, NY	Maintenance Agreement	The state may bring to the attention of the city any unsatisfactory work	None specified	None specified

*For the other cities which have maintenance agreements, there may be similar language, but the contracts were not available so no judgment can be made here. Representatives from Los Angeles suggested that such language is included in their maintenance agreements with the state, but again, this could not be confirmed.
**It is unknown whether Illinois has this type of language for the responsibilities to be carried out by the City of Chicago. The information shown here is related to the contract between the City of Chicago and the SCC.

One quickly sees that where the other four entities have some formal recourse built into their contracts (or legislation in the case of Seattle) to ensure accountability, the agreements between the State of New York and New York City and Buffalo are lacking in this respect. Buffalo's maintenance agreement with the state includes no language related to non-compliance.[10] New York City's original maintenance agreement with the state (adopted January 1952) and an update to the agreement in June 1980 include the language related to non-compliance that is noted in Table 7.[11] Later additions and renewals to the agreement rarely stipulate anything related to non-compliance, though the February 1977 "Agreement for Maintenance Improvements of State Arterial System FAUS [Federal-Aid Urban System], TOPICS [Traffic Operations Program to Increase Capacity and Safety], Title II Programs," between the state and the city of New York, includes some additional language as follows:

> Failure of the city to complete actions required by the city within the agreed upon time limit may disqualify the city from future federal-aid projects for which the city has maintenance responsibility until such time as such FAUS highway improvements are restored to a level and condition of maintenance required by this Agreement."[12]

[10] State of New York, Department of Public Works, "Agreement for Maintenance and Repair of State Arterial Highways Passing through the City of Buffalo," June 20, 1955.
[11] "Agreement for Maintenance and Repair of Certain Parkways and Expressways on State Arterial System in New York City" (July 1951, adopted January 1952), p. 3; and, "Agreement for Maintenance of Structures in the State Arterial Highway System in the City of New York" (June 1980), Article 3.
[12] "Agreement for Maintenance Improvements of State Arterial System FAUS, TOPICS, Title II Programs" (February 1977), p. 5.

However, this language only applies to the roadways on which FAUS monies have been utilized, and not all of which are state arterials. Further, since the language suggests this "may" disqualify the city, it is unclear exactly when this might occur, and who would make the decision.

Thus, for the most part, based on the agreements currently in place, there is little formal recourse on the part of the state beyond terminating the maintenance agreements, if either Buffalo or New York City fails to correct or address any deficiencies on the state arterials for which they are responsible. (Of note, informally in practice, and usually related to traffic signals, the state has at times performed necessary maintenance that Buffalo was unable or did not provide, and then deducted the costs from future payments, similar to Denver and Colorado.[13])

2.2. Planning/Programming and Design/(Re)Construction

As with maintenance, responsibilities differ from city to city on planning and programming of roadway projects, as does the degree to which the states and cities coordinate with each other. At one end of the spectrum is the City of Baltimore, where the city is fully responsible for planning and programming, as well as for design and construction of all roadways within its geographic borders (not including the roughly 24 miles of roadway operated and maintained by the Maryland Transportation Authority). It is worth pointing out that historically, when finishing the Interstate system, this was somewhat different. In 1967, the Interstate Division of Baltimore City was established under the Maryland State Highway Administration and functioned as a joint city-state agency. Its main functions were to "administer the planning, design, right-of-way acquisition, and construction of Interstate highways within the City of Baltimore."[14] The IDBC remained in place until the final piece of the Baltimore Interstate system (the Fort McHenry I-395 link-up to I-95) was completed, at which time the Interstate Division was terminated.

In most other cities, the state takes the lead on planning and programming as well as on design, construction, and reconstruction. However, the degree to which the states coordinate with the local entities and/or the regional metropolitan transportation organization (MPO) varies. In Atlanta, for example, GDOT programs and plans all construction and reconstruction on state arterials within the city, though it coordinates with Atlanta on related utility issues.

Seattle is similar, with Washington State Department of Transportation (WSDOT) taking the lead in programming and planning, but coordinating with the city when local roadways are affected by traffic diversions or through construction materials and equipment movements. For state arterials in Detroit, MDOT is tasked with planning and programming. It has a five-year capital plan, closely linked to its budget for programming priorities on an annual basis. The decision on priorities is made using its Ride Quality Forecasting System (RQFS), which predicts future network conditions at different levels of investment.[15] Though local municipalities are brought into the discussion, this usually occurs after the initial scoping process.

The situation in Chicago is somewhat more complex with multiple jurisdictions over roadways within the city's boundaries. Each jurisdictional entity takes the lead in programming and planning related to its segments, which can create difficulties when one roadway involves multiple segments under different ownership, like Wacker Drive and Milwaukee Avenue. Though the city may take the lead and has the responsibility for planning, programming, and (re)construction and design on its own roadways, it must still comply with state requirements, which are often more stringent than the federal requirements. As a result, multiple variances are often necessary. Also, on the state roadways maintained by Illinois Department of Transportation (IDOT), the state prioritizes its "numbered" route system first. With limited funding, the result can be significant delays for repairs and/or reconstruction on the non-numbered routes. When this occurs, the city often seeks federal funding to help address the deficiencies.

In St. Louis, the state is responsible for planning and programming reconstruction and replacement not already programmed by the city before 2004. Coordination between St. Louis and MoDOT is done via the regional metropolitan planning organization (MPO). In Houston, the regional MPO, the Houston-Galveston Area Council, also plays an important role in planning and programming for the City of Houston

[13] Geoff Gross, NYSDOT Region 5, Personal Communication 7/27/06.
[14] Roads to the Future, "Fort McHenry Tunnel," http://www.roadstothefuture.com/Fort_McHenry_Tunnel.html (accessed 4/12/06).
[15] Larry Galehouse, "Strategic Planning for Pavement Preventive Maintenance: Michigan Department of Transportation's "Mix of Fixes" Program," *TR News* 219 (March/April 2002): 6.

and the surrounding area – but only when federal funds are used. When state funds are used on state highways within the City of Houston, Texas Department of Transportation (TxDOT) maintains responsibility for planning and programming, design and (re)construction and there is very little coordination with the city.

In California, there is legislation requiring Caltrans to coordinate with local agencies when building freeways. However, in certain cases within Los Angeles County, Cal Sts & Hy Code § 100.4 stipulates that Caltrans may construct a freeway without an agreement with the county or city, if all of the following conditions are met:

(a) The freeway is included within the California freeway and expressway system and a route has been adopted.
(b) Construction has commenced, but has not been completed, leaving an existing gap between the constructed portions of the freeway.
(c) In addition to the adopted route, there is at least one feasible alternative route as determined by the department.
(d) A draft environmental impact report or statement has been prepared on the un-constructed portion of the freeway.
(e) The affected freeway segment is within the jurisdiction of the Los Angeles County Metropolitan Transportation Authority.
(f) An agreement with one or more counties and cities … is not possible because an impasse, as evidenced by the lack of freeway agreements by all affected jurisdictions, has existed for 10 or more years after an initial route was adopted.
(g) Under the conditions set forth in subdivisions (a) to (f), inclusive, the commission shall hold public hearings as it may deem necessary, review the draft or final environmental impact report or statement, and consider the recommendation and records of the authority and other documents as it may deem advisable. The commission shall take into consideration all the traditional factors of route selection by the state, including the question of least adverse economic and physical impact on the communities involved, but any previous selection by the commission or its predecessor shall not be considered binding.
(h) The environmental impact report or statement shall examine the potential impacts of alternative route alignments on the communities involved. The definition and scope of these communities shall reflect the sense of community of residents within and immediately adjacent to the adopted route and alternate route location.
(i) The department shall prepare a draft environmental impact report or statement. The commission may hold public hearings on the draft environmental impact report or statement as it deems necessary. The department shall prepare a final environmental impact report or statement after the completion of the public review period of the draft environmental impact report or statement. The commission shall select a route after the completion of the environmental impact report or statement.
(j) If the route selected by the commission differs from a prior route adopted by the commission or a prior recommendation by the authority, the commission shall set forth, as a part of its decision statement, the reasons for the route selected.
(k) For any freeway constructed pursuant to this section, the department shall establish an outreach program to maximize the participation of businesses and professionals from within the county in which the freeway segment is located in the construction of the freeway segment [Cal Sts & Hy Code § 100.4].

In Portland, though the state generally takes the lead on planning and programming of capital projects, there are times where there is a local benefit and the city may become involved as well, even providing funding and overseeing the resulting construction. In Philadelphia there is also some coordination, with the state doing its own planning and programming roughly half the time and accepting the city's ideas and designs the other half.

Denver and Colorado appear to have the highest degree of coordination with respect to planning and programming among the city/state pairs surveyed. The state is responsible for planning and programming for state highways, but it usually sends the plans to the city in advance for input and coordination. In cases where the city's standards exceed those of the state (e.g., mounting posts for signs – the state

uses wood posts, the city uses posts), the state will sometimes accede to building to the city's standards. There are times when the City of Denver undertakes capital programming and construction on state highways, but it usually involves non-roadway components such as medians, sidewalks, and curbs. In such cases, construction plans still require state approval and designs must comply with federal and state requirements. The state tends to be amenable to such changes as long as the city can demonstrate minimal negative effects on traffic flows.

Finally, in the case of Orlando, again the state has the primary role in planning and programming and, while there does not appear to be much dispute over this point, there is great concern among the municipalities regarding the investment policy that drives planning and programming decisions. Since the mid-1980s, Florida DOT policy has been to ensure safety and preservation of the system first and then look to expansion. Roughly a decade ago, this shifted somewhat as a result of a legislative-directed initiative that designated priorities for system expansion. The Florida Intrastate Highway System (FIHS), composed of approximately 4,500 miles of the total 12,000 miles State Highway System, was deemed most important, and "at least" half of any new discretionary highway capacity funding was directed toward the FIHS, with the remaining funding left for other portions of the system.

During the development of the *2000 Florida Transportation Plan*, however, there was a growing concern that other modes were not incorporated into this system or into the funding structures. In 2002, various stakeholders were brought together to recommend criteria for designating the Strategic Intermodal System (SIS). In 2003, the Legislature identified the SIS as consisting of "transportation facilities that meet a strategic and essential state interest" and adopted the stakeholders' designation criteria. They further legislated "that limited resources available for the implementation of statewide and interregional transportation priorities be focused on that system [Fla. Stat. § 339.61 (2005)]."

In 2004, the legislature directed that "at least" half of any new discretionary highway capacity funding be allocated to the SIS, which consists primarily of the 4,500 miles of roadways designated in the FIHS, along with airports, seaports, bus stations, rail, and roadway connecting to these facilities. FDOT has adopted a policy to gradually move toward a funding split that will utilize 75% of the capacity budget for the SIS and the remainder for other roadways throughout the state by 2015. Indeed, this split was endorsed by the legislature in 2005 (effective 7/1/05) as part of state growth management reforms and funding increases when it allocated 75 percent of the new funding increase to the SIS after allocations to a New Starts Transit Program and the Small County Outreach Program [Fla. Stat. § 201.15 (2005)].

For local governments, the result is mixed. Roadway connectors often fall under the jurisdiction of local governments which can now apply for state funding for roadways previously ineligible since, by law, the State does not fund local roads unless deemed part of the SIS or a connector. However, local governments and regional metropolitan planning organizations are concerned with the State's intention to raise the SIS proportion of the budget to 75%, believing that 25% is insufficient to maintain the remainder of the highway system for which the state is responsible.

2.2.1. Assessment and Comparison. As was noted earlier, in the case of New York City and Buffalo, responsibilities for programming, planning, design, and funding are somewhat open to interpretation, but generally the state takes the lead responsibility here. The Commissioner of Transportation is authorized to prepare "designs, plans, specifications, and estimates for the construction, reconstruction or improvement" of SAHS designated roadways [NY CLS High § 349-c (2005)]. For cities other than New York City:

> Such designs, plans, specifications and estimates may be prepared (a) by the department of transportation; (b) by any city herein named, if the preparation of such designs…are authorized in advance by the commissioner of transportation and then upon such terms and conditions as may be agreed by and between such city and the commissioner of transportation; (c) subject to the approval of the director of the budget, by the employment of private engineers…; or (d) by a combination of such methods [NY CLS High § 349-c (2005)].

For New York City, Highway Law notes that:

> The state shall proceed with the construction of a section or sections of said system after designs, plans, specifications and estimates of cost thereof have been completed and

> approved by the city and the commissioner of transportation….The city may, however, elect to construct such section or sections at its own expense in the manner provided by the city charter or otherwise [NY CLS High § 349-c (2005)].

With respect to this last point, New York City's treatment is somewhat similar to what is found in the cities in California in the sense that legislation exists specifying the need for both the municipality and the state to approve the designs, plans, and specifications. In practice, though not in legislation, Denver and Colorado also apply this degree of coordination in this area.

Like New York City and Buffalo, Chicago, Denver, and Seattle can also play a role in designing, programming, planning, and funding projects on state arterials. In the case of Denver, this usually occurs on the non-roadway portions of the highway (e.g., sidewalks, medians); in the case of Seattle, funding may be provided if there is a local benefit to a state highway project within the city.

Of all the city/state pairs, only the representatives from Houston/Texas, St. Louis/Missouri, and Portland/Oregon mentioned the regional MPO as an important player in the coordination between city and state in this area. Table 8 provides a pictorial of the findings.

Table 8. Programming, Planning, Design, and (Re)Construction Practices and Mandates Related to State Highways

	Coordination with Municipalities	Acceptance by the State of City Standards, Designs, or Priorities	City Can Program and/or Fund with State Approval
Atlanta, GA	In practice, but only for utilities		
Baltimore, MD	Baltimore responsible for all roadways within its borders		
Chicago, IL	In practice		Yes, must apply state standards
Denver, CO	In practice, high degree	State sometimes accepts higher design standards of city	Yes, usually on non-roadway components
Detroit, MI	In practice, only after initial decisions		
Houston, TX	In practice, via the MPO		
Orlando, FL	Insufficient information related to these aspects		
Philadelphia, PA	In practice	State sometimes accedes to designs or plans of city	
Portland, OR	In practice		Yes, funding when there is a local benefit
Seattle, WA	In practice, when local traffic is affected		
St. Louis, MO	In practice, via the MPO		
Los Angeles, CA **Temecula, CA**	Legislated, but language exists to allow the state to move ahead without it		
Buffalo, NY	Legislated		Yes
New York City, NY	Legislated		Yes

2.3 Other Operations

Several other areas of operations were touched upon in the legal and literature reviews and during discussions with each city, notably enforcement (i.e., ticketing) and incident management (i.e., responding to accidents) as well as responsibilities over traffic signals.

2.3.1 Enforcement and Incident Management. As in New York City, city police are responsible for enforcement on all roadways within city boundaries in Baltimore, Denver, Philadelphia, Portland, and St. Louis. In Chicago, the city police deal with enforcement on state highways, but not on expressways, which are patrolled by the state police. (In the case of Chicago's newly-leased Skyway, the SCC will rely on city police, but will have to reimburse the city for these services.) Atlanta, Detroit, Houston, Orlando, Seattle, Los Angeles, and Temecula, are more similar to Buffalo, with enforcement of state highways and interstates within city boundaries the responsibility of the state police (Table 9).

Incident management follows the same pattern as enforcement, but with several interesting nuances. In Orlando, the city's policy is that while the state is responsible for incidents, the city responds to all incidents on any roadway within its geographic boundaries. In Seattle, the demarcation is particularly clear, with the state patrol enforcing and responding to incidents on all state highways and freeways and the on-ramps to them. However, the City of Seattle is responsible for traffic enforcement and incident management on the off-ramps from these roadways.

Table 9. Primary Responsibility for Enforcement and Incident Management

	Enforcement	Incident Management
Atlanta, GA	state	state
Baltimore, MD	city	city
Chicago, IL	state on expressways city on other arterials	state on expressways city on other arterials
Denver, CO	city	city
Detroit, MI	state	state
Houston, TX	state	state
Orlando, FL	state	state
Philadelphia, PA	city	city
Portland, OR	city	city
Seattle, WA	state	state
St. Louis, MO	city	city
Los Angeles, CA	state	state
Temecula, CA	state	state
Buffalo, NY	state	state
New York City, NY	city	city

Note: The information in this table was derived both from DOT sources and from the various police departments and state highway patrols in the respective cities and states.

2.3.2 Traffic Signals. While traffic signals are not an issue on the interstates, expressways, and freeways, they often become an issue on other state highways within the urban area. Differentiating operating and maintenance responsibilities and fee structures for covering the costs involved were cited as important issues. However, more important was how to balance the different needs of the states and cities regarding timing of the signals and resulting traffic speeds and flows. Generally, the states prefer to maintain traffic flow, but many local municipalities prefer to slow traffic down on the roadways within their geographic boundaries, both to foster a community environment and to encourage drivers to visit local businesses.

Like New York City, Baltimore, Chicago, and Philadelphia are responsible for installation, operations, and maintenance of signals. In Denver, the city generally installs new traffic signals. However, there are occasions when Colorado Department of Transportation (CDOT) will install a signal as part of a larger project, like a new or realigned freeway off-ramp that intersects with an arterial. Also, if a new signal is to be installed, the city (or a developer) needs to get a permit prior to installing the signal.[16]

In Atlanta and Seattle, the state approves signal placement while the local municipality installs, operates, and maintains traffic signals. In Seattle, representatives from Seattle Department of Transportation (SDOT) and Washington State Department of Transportation (WSDOT) noted that there have been cases

[16] Robert Kochevar, City Traffic Engineer, Denver Department of Public Works (DPW), Electronic communication, 5/19/06.

where the city has installed traffic signals without following the formal state approval and review process for both signal type and placement. This situation is rare and is usually resolved through negotiations, but it is a sensitive one once the signal is placed and the funds have been committed. In Orlando, the city also installs traffic signals within the city's boundaries, but under contract. In the remainder of the cities, including Buffalo, the state is responsible for installation of traffic signals (Table 10).

When one looks to operations and maintenance, the differentiation of responsibilities is slightly different. While the state installs traffic signals on state arterial highways in Buffalo, Houston, and Los Angeles, the cities are responsible for operations and maintenance. In Houston, the state is responsible for operations and maintenance of traffic signals at ramps and on the frontage roads of controlled access highways, but on other state arterials, the city is responsible for operations and maintenance. Of note, in 1994 the City of Houston entered into a 2-year contract with TxDOT for upgrading signalized intersections to comply with the Americans with Disabilities Act. The agreement stipulated that the city furnish and install the traffic signal equipment, but that it be reimbursed for these expenses by the state.

Table 10. Primary Responsibility for Traffic Signals

	Installation	Operations	Maintenance	Cost-Share
Atlanta, GA	city, w/state permit	city	city	
Baltimore, MD	city	city	city	
Chicago, IL	city	city	city	
Denver, CO	city*	city	city, by contract	
Detroit, MI	state	state	state	
Houston, TX	state	city**	city**	
Orlando, FL	city, by contract	city	city, by contract	yes
Philadelphia, PA	city	city	city	
Portland, OR	state	state	state***	sometimes
Seattle, WA	city, w/state permit	city	city	
St. Louis, MO	state	state	state	
Los Angeles, CA	state	city, by contract	city, by contract	yes
Temecula, CA	state	state	state	n/a
Buffalo, NY	state	city	city	
New York City, NY	city	city	city	

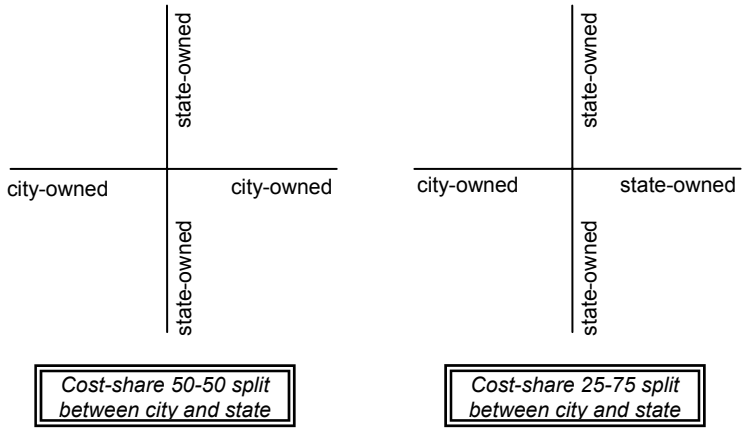
*While the city is primarily responsible for this, the state will sometimes install traffic signals or require permitting before they are placed on state arterials.
**The state is responsible for traffic signals at ramps and on the frontage roads of controlled access highways. On other state arterials, the city is responsible.
***There are several contracts in place that are facility specific, which assign responsibility for maintenance to the city and provide for some reimbursement.

Altogether, nine of the thirteen peer cities surveyed operate and maintain the traffic signals on state arterials within the geographic boundaries of their respective cities. In the case of the other four cities – Detroit, Portland, St. Louis, and Temecula – the state is responsible for traffic signal operations and maintenance.

In Denver, while Colorado DOT is responsible for "installing, operating, maintaining, and controlling all traffic control signals, signs, and devices…" on state arterials [C.R.S. 43-2-135 (2005)], within the City of Denver, Denver Department of Public Works operates and maintains the signals. Generally, Denver DPW prefers this since, while more costly, it allows them to maintain a higher level of service than the state could provide. For example, if a traffic signal malfunctions, CDOT expects to be on the scene within 4 hours; Denver DPW expects to respond to the scene within 45 minutes (and it is usually there within 15 minutes).

In three of the cities – Orlando, Portland (on certain specified facilities), and Los Angeles (on specified roadways) – there are cost sharing arrangements in place for traffic signals. In the case of Florida, this cost-share is based on the proportional ownership of the legs at the intersection (Figure 1). An established annual rate is then applied to this proportion for the cost share and Orlando performs the maintenance.

Figure 1. Examples of Cost-Sharing of Intersection Signals



In the case of Los Angeles, the cost share is similarly determined and, as with Orlando, can be shared with the county as well if a county roadway constitutes one or more legs at the intersection. Several other cities receive reimbursement for the maintenance of traffic signals. The amounts and the structures of their agreements are discussed in Section 3 of this report.

2.4 Summary of Responsibilities

There is a great deal of variation among the city/state pairs in all the areas discussed in this section – maintenance, planning and programming, design and (re)construction, enforcement and incident management, and traffic signaling. However, looking across the broad group of issues explored, it quickly becomes clear that on state arterials, Baltimore and New York City share responsibility over the greatest number of areas. In terms of maintenance, Chicago and Denver are the next most similar both in terms of the types of which entity is responsible for which type of maintenance, and with respect to the types of contracts in place (i.e., broader contracts with monetary sums attached).

In terms of maintenance agreements, New York and Buffalo stand out along with Los Angeles as having agreements that do not provide formal mechanisms for ensuring compliance beyond rescinding the agreements. In contrast, Chicago, Denver, Houston, and Seattle all have language included either in their respective contracts or in legislation (Seattle) that addresses compliance, providing both time lines and penalties.

For planning and programming, design and (re)construction on state arterials, the broad trend is for the state to take the lead here. However, the degree to which these actions are coordinated with the municipalities differs as does whether or not such coordination is mandated, and the degree to which the regional MPO is involved. In New York and California, legislative language exists that requires coordination and approvals by the city, though in the case of California there is also legislation aimed at circumventing this. In Colorado, Georgia, Illinois, Michigan, Pennsylvania, and Washington, such coordination between the city and state is practiced if not mandated. Again, there are variations on the theme, with Colorado working closely with Denver on a regular basis and deferring to the city's standards and designs at times while in Washington, the state only coordinates with the city if local traffic flow may be affected.

Finally, with respect to other operations, Baltimore, Denver, Philadelphia, Portland, and St. Louis mirror New York City in terms of the city taking the lead in patrolling and enforcing traffic and responding to incidents on state arterials. Atlanta, Detroit, Houston, Orlando, Seattle, Los Angeles, and Temecula are more similar to Buffalo, where the state takes the lead. Chicago falls between, distinguishing between the expressways, where the state enforces and responds to incidents, and other state arterials, where the city is responsible for these functions.

For traffic signals, Baltimore, Chicago, Philadelphia, and for the most part Denver, are the cities most similar to New York City, with the city responsible for installation, operations, and maintenance. Atlanta,

Orlando, and Seattle are also similar in terms of the city taking responsibility, but in these cases they either require a state permit for installation (Atlanta, Seattle) or perform these functions via contract (Orlando). Houston is more similar to Buffalo, with the state installing signals, but the city maintaining and operating them. The remaining cities are different from both New York City and Buffalo, with the state also retaining responsibility for operations and maintenance of the traffic signals.

3. FUNDING FOR STATE HIGHWAYS

Funding for state highways in urban areas is provided primarily through legislated apportionments and/or formulas and through specific maintenance agreements. Trying to distinguish between federal and state funding allocations is not easy: in many cases, including California, Texas, and Michigan, for example, revenues from both sources are placed together in one fund that is then allocated to different parts of the state. In other cases, like Denver and Illinois, state and federal monies are treated separately. In several cities – notably, Atlanta, Baltimore, and Chicago – there is an underlying tension between the urban and rural areas with respect to whether the overall funding allocations are equitable with both rural and urban areas suggesting that the other receives more than its fair share.

3.1 Legislated Apportionments

In some cases, funding for state arterials in urban areas is apportioned only to the state DOT regional offices. Many states, however, have legislation that apportions funding for roadways (including state highways) directly to the cities, either through a formula or through some fixed amount or proportional share (Table 11).

Table 11. Legislated Apportionments for Cities

	Legislated, Formula	Legislated, Fixed Amount or Fixed Percentage	No Legislated Apportionment for Cities
Atlanta, GA			x
Baltimore, MD		x	
Chicago, IL		x	
Denver, CO	x		
Detroit, MI		x	
Houston, TX			x
Orlando, FL			x
Philadelphia, PA	x		
Portland, OR		x	
Seattle, WA			x
St. Louis, MO		x	
Los Angeles, CA Temecula, CA			x
Buffalo, NY*			x
New York City, NY*			x

*While there is no legislated formula or fixed amount or percentage given to cities for use on state highways, the Consolidated Local Street & Highway Improvement Program (CHIPS) provides capital funding for local roads and bridges in the municipalities [NY CLS High § 10-c (2006)].

Two states, Colorado and Pennsylvania, divide their state highway funds between the state, counties, and cities or townships using a formula that is legislated. In Colorado, 9% of the Highways User Tax Fund monies is directed to cities and incorporated towns. Of that amount, 80% is allocated in proportion to the adjusted urban motor vehicle registration within the municipality and 20% is allocated in proportion to the mileage of "open, used, and maintained streets within the municipality, excluding the mileage of state highways."[17] These funds, which are derived from fuel taxes, sales tax, and property taxes, may be utilized for construction, reconstruction, maintenance, repair, engineering, equipment, improvements, or administration of the system of streets within the municipalities, including state highways.

Funds for maintenance of state highways in Pennsylvania are determined according to county and distributed among the PennDOT districts for allocation among the counties. (Philadelphia is treated as a county in this apportionment.) Legislation provides for a base allocation and formula allocation (Additional

[17] Urban motor vehicle registration includes passenger, truck, truck-tractor, and motorcycle registrations. The adjusted registration is calculated by applying a factor to the actual number of registrations. This is intended to "reflect the increased standards and costs of construction resulting from the concentration of vehicles in cities and incorporated places" [C.R.S. 43-4-208 (2005)].

State Highway Maintenance Appropriations – ASHMA), where the formula includes factors related to pavement quality, bridge decks, lane miles, and vehicle miles traveled.

Specifically, the base allocation is defined as the "annual expenditure for routine maintenance operations by a county maintenance district averaged over the immediately preceding five years" and the current distribution is as follows:

- An amount equal to the county's Base allocation; plus
- An amount based on the following formula:

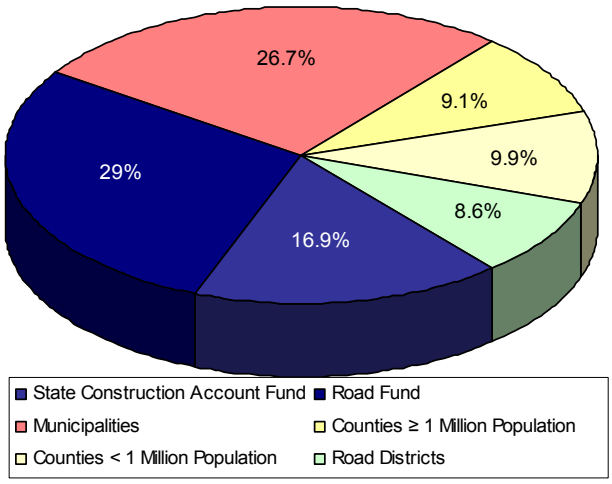
ASHMA = 40% RPQc + 15% BMDc + 30% LMc + 15% VMc [75 Pa.C.S. § 9102 (2005)]

Where:
RPQ, LM, VM are the same as defined above
BMD is the Bridge Maintenance Deficiency index and is based upon bridge safety inspections evaluating the condition of all state highway bridges greater than or equal to eight feet in length on a periodic basis.
c refers to county

Five of the states also divide their highway funds between the state and local municipalities via legislation, but utilize some type of proportion or fixed amount rather than a formula approach. Of these, Baltimore is the most straightforward. The city receives its funding for roadways directly from the state. Each year, the city receives 11.5% of total highway user revenues or $157.5 million, whichever is greater [Md. Transportation Code Ann. § 8-403].

In Illinois, after a specified portion is taken out of the Motor Fuel Tax Fund for the State Construction Account, State Boating Act, and Grade Crossing Protection Funds, as well as costs related to the administration of the Motor Fuel Tax Fund [§ 35 ILCS 505/8 (2005)], the remaining apportionment provides 45.6% to the state and 54.4% to the counties, municipalities, and road districts. Within the state funds, 37% are apportioned to the State Construction Account Fund and the remainder to the Road Fund [§ 35 ILCS 505/8 (2005)]. In years when there is bond indebtedness, the Road Fund must first be used to pay the principal and interest. Any surplus can then be used for various IDOT roadway activities [§30 ILCS 105/8.3 (2005)]. Of the 54.4% directed toward local governments, 49.10% is directed to municipalities, 16.74% to counties with populations of 1 million or more, 18.27% to counties with fewer than 1 million in population, and the remainder to the road districts [§ 35 ILCS 505/8 (2005)] (Figure 2 – blue shaded areas are directed to the state).

Figure 2. Distribution of Motor Fuel Tax Funds Received by IDOT and Local Governing Entities after Initial Allocations



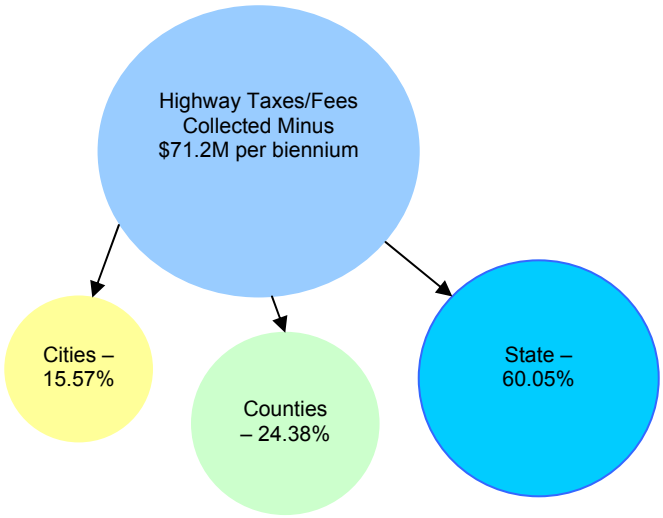
Chicago DOT also receives $40 million per year in capital funding from the May 1999 Illinois FIRST (Fund for Infrastructure, Roads, Schools, and Transit), a $12.5 billion five-year state-wide capital program. Though the program expired, the funds continue to be provided and are used primarily for road resurfacing on both city and state roadways.

Of note, most capital funding for Chicago is derived from the federal government and passes through the state to the city. While the state has historically provided the local match for these funds, it has recently informed representatives from the City of Chicago that this will no longer be the case. Also, during the past year, the state has not directed to the city the monies provided in federal earmarks. While Chicago

will eventually be given the funding, planning and programming are difficult since the timing for the release of these funds is unknown.

Several states have legislation that provides special additional funding based on increases in certain taxes. Missouri, for example, divides its state highway funds between the state, counties, and cities, with the state receiving three-quarters, cities receiving 15%, and the counties receiving 10%.[18] Among the cities, monies are proportioned out according to the ratio of each city's population to the population of all cities within the state. Counties also receive 5% of any increase in motor vehicle taxes over 11 cents, while the City of St. Louis receives 5% of this additional 5%.[19]

Figure 3. State, County, and City Share of Regular Highway Taxes and Fees in Oregon



Oregon uses a similar method for allocating its state transportation revenues, first taking out $71.2M per biennium, and then distributing the remaining state highway taxes and fees to the state (60.05%), counties (24.38%), and cities (15.57%). Additional monies derived from specific increases in title and registration and truck fees are distributed according to a different breakdown (Figure 3).

The regional MPO also receives federal transportation monies, which it disperses to local jurisdictions via a competitive process. According to representatives from Oregon Department of Transportation (ODOT), though no written rules exist, several unwritten traditions guide this process: (1) of the monies received by Region 1 (in which Portland is situated), roughly 80% are used within the Portland metropolitan area; and, (2) ODOT typically spends most of its federal allocation on projects that benefit the Interstate and statewide highway system, while the MPO tends to focus its federal monies on local routes and other state arterial highways.

Every two years, the monies left after deducting the total debt service payments from the $71.2 million in state transportation revenues are also distributed between the state, counties, and cities as follows: 50% ODOT; 30% counties; 20% cities [ORS § 366.742 (2003)].

Additional monies are collected on an annual basis from specified increases in the title and registration fees, and truck fees. These are divided as follows:

- 57.3% to ODOT;
- 25.48% to ODOT to pay the principal and interest on bonds for replacement or repair of bridges on county highways; and,
- 16.99% to ODOT to pay the principal and interest on bonds for replacement or repair of bridges on city highways.

Any monies left over after expenses are distributed equitably to either the counties or cities, respectively [ORS § 366.744 (2003)].

Finally, once monies are allocated for cities, each city receives its share based on the population of the city in proportion to the total population of all cities. For counties, the share is based on the number of vehicles, trailers, semi-trailers, pole trailers, and pole & pipe trailers in the county in proportion to the total number of all these vehicles in the entire state [ORS § 366.805 (2003) and ORS § 366.764 (2003), respectively].

[18] MoDOT, "City/County Share of State Highway User Revenue," provided by MoDOT.
[19] Ibid; Marjorie Melton, President of the Board of Public Service, City of St. Louis, Personal Communication, 2/16/06.

According to ORS § 366.790 (2003), funds may be used for administration, bicycle paths (on the roadways), construction/expansion, operations/maintenance, repair/preservation, and payments to other governments. (Enforcement is not included.) Since all distributed monies are to be utilized specifically for bridges and/or highways, this funding is carefully tracked and reported on, and must be kept in an account separate from other city funds [ORS § 366.790 (2003)].

Transportation funding in Michigan is also complex. Public Act 51 of 1951, which became effective on June 1, 1951, governs Michigan's appropriations for transportation programs. State revenues, which make up the bulk of total transportation funding (68.7% in FY 2003), are derived primarily from motor fuel taxes (50.3% in FY 2003) and vehicle registration fees (39.6% in FY 2003). Other state revenue sources for transportation include sales taxes on motor vehicles, license fees, and interest.[20] Federal funds accounted for 31.2% of total transportation revenues in FY 2003, and 0.2% was locally derived.[21]

All transportation directed funding is placed in the Michigan Transportation Fund (MTF). Deductions and allocations from this fund are guided by Act 51 and subsequent amendments to it. From the MTF, grants and administrative costs for overseeing Act 51 are taken for the following: Recreation Fund, Economic Development Fund, the General Fund, and the state Trunkline Fund (which also includes statutory grants for the Local Road Program and the Critical Bridge Fund). Once these deductions are taken, the remainder of the monies under the MTF is distributed among the following:

- The state Trunkline Fund (STF) – for construction and maintenance of the trunkline roadways and bridges and for MDOT administration expenses;
- Comprehensive Transportation Fund (CTF) – for public transportation, including capital and operating assistance; and,
- Local Road Agencies – for funding of local roadways in the counties and local municipalities.

With respect to the proportional share of these distributions, Public Act 308 of 1998 amended Act 51 to require that, on average, 25% of all federal MTF funds are distributed to local jurisdictions.[22] Specifically, the statute notes that between 23% and 27% of DOT-FHWA highway research, planning, and construction monies appropriated to the state shall be allocated to programs administered by local jurisdictions, after appropriate deductions are taken (including, for example, specific earmarks) [MCL § 247.660o]. Act 51 also provides that once the deductions are taken from the MTF, the balance of the total funds (i.e., state and federal) that are distributed to the STF, CTF, and local road agencies, must be allocated in the following proportions: state (39.1%), county road commissions (39.1%) and incorporated cities and villages (21.8%).[23]

Capital funding for roadways in Michigan has been a source of debate for some time now and derives in some ways from the rationale behind Act 51 itself. When it was initially written, the thought was that because public funds would be used for the public good, local governments would benefit and should thus be required to contribute to the extent that they could. MCL § 247.651c (2005) thus stipulates that while MDOT is responsible for costs of "opening, widening, and improving, including construction and reconstruction…all state trunkline highways…," incorporated cities shall participate in the cost of such efforts. The amount of participation is based on population:

- Cities with 50,000 or more in population (like Detroit) contribute 12.5% of the state contribution;
- Cities with populations of between 40,000 and 49,999 contribute 11.25% of the state contribution;
- Cities with populations between 25,000 and 39,999 contribute 8.75% of the state contribution; and,
- Cities with populations beneath 25,000 need not provide a matching contribution [MCL § 247.651c (2005)].

[20] William E. Hamilton, *Act 51 Primer: A Guide to 1951 Public Act 51 and Michigan Transportation Funding*, House Fiscal Agency (May 2003), p. 6, http://house.michigan.gov/hfa/PDFs/act51.pdf (accessed 4/27/06).
[21] Ibid.
[22] Ibid., p. 28.
[23] Ibid., p. 10.

In 1951, however, many of the local communities did not have the means for generating the funds needed for the local match. Thus, Act 51 created the local distributions with the idea that these monies would be set aside, collecting interest, and then used to help cover the costs when the state began constructing or reconstructing roadways to become part of the trunkline system. Over the years, as the number of roadways grew and the operating and maintenance needs increased, these funds have been used instead for covering operating and maintenance costs in many local jurisdictions. In recent years, the state has suggested that these funds should perhaps no longer be provided. The municipalities, on the other hand, would like to see a discontinuation of the policy related to matching.

California, Florida, Georgia, Texas, and Washington do not apportion monies directly to the cities, but instead allocate funds to their DOT regional offices. How the allocations are determined varies greatly, even among these five. Georgia, for example, subscribes to a "balanced" approach to funding, with transportation funding allocated equally across the states' 13 congressional districts, with no variation for roadway mileage, vehicle miles traveled, or other such factors [O.C.G.A. § 32-5-30 (2005)]. California apportions funds based on types of improvements. Thus, of the total transportation funds available to the state, 75% are directed to regional improvements and the remainder to interregional improvements. Of the quarter used for interregional improvements, 15% are to be directed to intercity rail improvements, 60% for improvements on specified state highways, and 25% for other types of projects [Cal Sts & Hy Code § 164 (2005)]. (See the Technical Appendix for a graphic of California's allocations.)

Similarly, as was discussed in Section 2.2, Florida has an investment policy that emphasizes safety and system preservation and then expansion, with priority given to facilities that are part of the designated Strategic Intermodal System (SIS). Monies are proportioned according to these priorities, with a goal of utilizing 75% of the budget for the SIS and the remainder for other roadways throughout the state [Fla. Stat. § 201.15 (2005)].

In Texas, the annual maintenance budget is determined in Austin and then monies are allocated among the 26 TxDOT districts, and further among the various area offices within each district. To understand the allocations in Texas, one needs to understand the revenue streams since different formulas apply to different revenue sources.

Revenues for the State Highway Fund are derived from state fees and taxes (46% in FY 2005), federal reimbursements (47%), Texas Mobility Fund reimbursements (5%), and local participation (2%).[24] (The state created the Texas Mobility Fund as a revolving fund specifically to finance the construction, reconstruction, acquisition, and expansion of the state highways within Texas [Tex. Const. Art III § 49-k (2005)].) Unlike several other states in which fuel taxes are dedicated to transportation, in Texas fuel taxes are not utilized solely for roadways or even transportation. With respect to the revenues collected via the state gasoline tax, one-quarter (¼) is directed to the available school fund, and one-half (½) is directed to the State Highway Fund for the construction and maintenance of the state highway system. Of the remaining quarter, all revenues are directed to the County and Road District Highway Fund until $7.3 million is credited in a given fiscal year; once that requirement is met, the remainder of the revenues are placed into the State Highway Fund specifically for farm to market roads on the state highway system [Tex. Tax Code § 162.503 (2005)]. Similar provisions exist for other fuel taxes though the distributions are somewhat different. In the case of diesel fuel, for example, 25% is directed to the available school fund, but the remaining 75% is directed to the State Highway Fund. In FY 2005, of the total motor fuel taxes collected, 24% were directed to public schools, 72% to the State Highway Fund, and 4% for other expenses.[25]

With respect to vehicle registration fees, all receipts are directed to the County and Bridge Fund until the amount credited for the calendar year equals:

- $60,000; PLUS
- $350/mile of roadway maintained by the county, not to exceed 500 miles; PLUS
- an additional amount of fees equal to several calculations including, for example, a fee on collected taxes and penalties by the county and sales tax.

[24] TxDOT, "Distribution of Total Highway Fund Receipts," http://www.dot.state.tx.us/moneymatters/moneymatters.htm?pg=receipts (accessed 2/28/06).
[25] TxDOT, "Distribution of Texas Motor Fuel Taxes," http://www.dot.state.tx.us/moneymatters/moneymatters.htm?pg=motorfuel (accessed 2/28/06).

Once this total is met, then 50% of the vehicle registration fees are directed to the County and Bridge Fund and the remaining 50% is directed to TxDOT until the total amount credited for the calendar year equals $125,000. After this total is met, all funds are directed to TxDOT [Tex. Transp. Code § 502.102 (2005) and Tex. Transp. Code § 502.1025 (2005)]. In FY 2005, the result of this legislation was that roughly one-third was designated for counties, and the remainder for the State Highway Fund.[26]

3.1.1 Assessment and Comparison. Given that in California, Florida, Georgia, and Texas the state is responsible for all (or most) maintenance on state highways, and takes the lead in planning and programming and design and (re)construction, it is not surprising that there is no legislation directing apportionments for state highways to the cities. Perhaps more unusual among the states reviewed is Washington, where Seattle is responsible for several maintenance functions (e.g., snow plowing, striping, signs, lighting, traffic signals, cross-walks) on the non-interstate and limited access highways, but still receives no direct legislative apportionment. Indeed, as will be seen in Section 3.2, Seattle also receives no monies through maintenance agreements. Instead, it is understood that the city covers the costs for these expenses from its own revenue streams.

New York is similar to these five states in that it does not provide legislation for a formula-related or fixed apportionment of state highway funding directly to the cities (though it does provide formula-related monies for local roadways under CHIPS). However, unlike California and Texas, New York distinguishes between its Federal-Aid funding sources and its state dedicated fund when making allocations across the state, and applies different formulas for each of them. For the New York City and Buffalo areas, federal-aid funds are allocated to NYSDOT's regional offices based on the following formula:

National Highway System (NHS) – 10% capacity needs + 15% bridge needs + 75% pavement needs
Highway Bridge Replacement & Rehabilitation Program (HBRR) – 20% population + 20% # of deficient state and local bridges + 60% deck area of deficient state and local bridges
Interstate Maintenance (IM) – 75% [55% Interstate lane miles + 45% Interstate vehicle miles traveled] + 25% [55% Interstate bridge needs + 45% Interstate pavement needs]
Congestion Management/Air Quality (CMAQ) – % population in non-attainment and maintenance area, weighted by non-attainment severity and number of pollutants which exceed national ambient air quality standards
Surface Transportation Program (STP)/Flex – 20% population + 80% STP lane miles
STP/Large Urban – % urbanized population
STP/Safety – 1/3 population + 1/3 STP centerline miles + 1/3 the number of accidents[27]

State dedicated funds are distributed differently than all the other states in the sense that specific regions are first identified and then remaining funds are apportioned by formula to four broad regions. Once monies are taken for statewide purposes, 23% of the remaining monies are directed to New York City, 23% to Long Island, and 14% to the Hudson Valley. The remaining 40% is directed to upstate areas and a formula is applied to further allocate among the upstate regions. Thus, for the Buffalo region, the formula is:

40% bridge needs (25% total number of state-owned bridges + 75% deck area deficient state-owned bridges) + 40% pavement needs (condition-factored state highway lane miles) + 20% capacity needs (vehicle hours of delay).[28]

3.2 Maintenance Agreements and Contracts

Not including Baltimore, of the cities situated in states with direct legislative funding for municipalities (Chicago, Denver, Detroit, Philadelphia, Portland, and St. Louis), all but St. Louis and Portland also have maintenance agreements (or can bid on them, in the case of Detroit) in place with the state that contract some fee for specified maintenance services provided on state arterials. Several of the cities within states that do no provide direct legislation (Houston, Orlando, Seattle, and Los Angeles) also have maintenance

[26] TxDOT, "Distribution of Texas Motor Vehicle Registration Fees," http://www.dot.state.tx.us/moneymatters/moneymatters.htm?pg=vehreg (accessed 2/28/06).
[27] "Federal-Aid Allocation Formula," provided by NYSDOT Program Management, 5/10/06. Note that this formula distribution is currently under discussion as part of a regular program update and reassessment of goals and objectives.
[28] "State Dedicated Fund Allocation Formula," provided by NYSDOT Program Management, 5/10/06.

agreements with their respective states. However, in the case of Houston and Seattle, with occasional exceptions, these maintenance agreements generally differentiate responsibilities with no state reimbursements attached.

The differentiation of responsibilities and the contractual language that aids in ensuring accountability under these maintenance agreements was described in Section 2.1. Thus, the following paragraphs will focus on the financial aspects of those agreements associated with monetary reimbursements.

In addition to its portion of the allocation of the state motor fuel tax funds, Chicago also receives monies for maintenance of state highways through the State Maintenance Agreement with IDOT. The agreement is renewed on an annual basis and designates maintenance responsibilities and compensation on specific state-owned roadways or segments thereof. Responsibilities have remained largely unchanged since the agreement was first signed and covers primarily pothole repair, patching, snow removal, and street cleaning. The annual payment is based upon a rate per lane mile which is consistent throughout the state, and which is readjusted each year to keep pace with inflation. Because it takes into account average daily traffic, the rate in the City of Chicago varies from $165/lane mile to $5,931/lane mile. The monies received through this agreement may only be used for thru-lanes, so the city must cover costs associated with parking and bike lanes as well as anything else beyond the curb.

Denver has two separate maintenance contracts – one for roadways and one for traffic control devices. Interestingly, the specified facilities for these two contracts are not entirely the same (e.g., some traffic signals under the traffic control devices agreement are located on roadways that do not fall under the roadway maintenance agreement). While the roadway maintenance contract is a five-year contract between the city and the state, the traffic control devices agreement is a one-year contract.[29] Monies from both agreements are directed to the city's General Fund. (While the state used to require detailed reporting on the funds spent under the maintenance agreements, this is no longer the case.) The current roadway contract was last negotiated in 2002, and the current traffic control devices agreement was last negotiated in 1992. The latter is automatically renewable unless one of the parties requests a review.

Each Colorado DOT Region negotiates its own rates for maintenance agreements and they vary across the state. This is different than in Illinois and New York where the same rates are used throughout the state. In negotiating such agreements, Colorado DOT tends to begin with a baseline of what it would cost the state to maintain the roadway at a level of service consistent with state requirements. This information is calculated through a software program that tracks maintenance costs on every section of state-owned roadways. Then, the scope of services (e.g., paving or potholes only, trash collection) is factored in.

The roadway maintenance agreement with Denver stipulates an annual payment of $5,500/center line mile.[30] Maintenance responsibilities under the agreement include the following:

- Removal of snow and application of anti-icing/de-icing materials;
- Routine pavement maintenance, including patching, spot reconditioning, spot stabilization, spot seal coating;
- Covering/removing graffiti from bridges and or highway appurtenances; and,
- Warning the State Transportation Maintenance Superintendent representative, verbally and in written format, of any dangerous condition.[31]

As was mentioned in section 2.1, if work is not performed adequately under this agreement, the state notifies the city which has 24 hours to correct the noted deficiency. If the city "does not or cannot" correct the deficiency within that period, the state can do so and either deduct the cost from subsequent payments or bill the city directly.

Under the traffic control devices agreement, the state makes monthly payments of $170/signal and $250/mile for signing and striping.[32] Among the responsibilities required under the contract are:

[29] "Highway Maintenance Contract made between the State of Colorado and the City and County of Denver," 6 February 2002, Contract Control No. RC-10019, provided by Denver DPW; "Maintenance Contract made between the State of Colorado and the City and County of Denver," 23 April 1992 (Senate Bill 8), Contract Control No. RC-IX004, provided by Denver DPW.
[30] RC-10019, p. 4.
[31] RC-10019, p. 3.
[32] RC-IX004, Exhibit C.

- For traffic signals, at minimum, semiannual preventative checks of all equipment and materials, all routine maintenance, all emergency breakdowns or knockdown repairs, and installation and maintenance of all cross walks and stop bars;
- For signs and pavement markings, maintenance and replacement.[33]

As with the roadway maintenance agreement, the state reserves the right to conduct periodic inspections. If the city is deemed to be deficient in its responsibilities, it must take action within 24 hours of notice by the state. If this does not happen, the state can correct the deficiency and can either deduct the actual cost of the work from subsequent payments or bill the city directly for the work.

Los Angeles' maintenance agreement with the state, effective January 2005, is similar to Chicago and Denver in specifying various roadways and maintenance functions under one broad agreement. However, unlike Denver, Los Angeles' agreement covers roadways and traffic signals under the same agreement. The scope of services provided by the city under the agreement includes drainage, sweeping, traffic signals, and safety lights, with the city responsible for all these services on some roadways and only selected services on other roadways. For each roadway, the scope of services is specified and a maximum annual authorized expenditure is provided.

The City of Los Angeles submits invoices on a quarterly basis for reimbursement under the maintenance agreement and costs include both direct and indirect costs as well as a city handling charge. According to representatives from District 7, if the city does not adequately provide the contracted service, Caltrans can perform the work and either send a bill directly or refuse to pay a city invoice, though such language as noted earlier does not appear in the contract shared during this research. Traffic signals included under the maintenance agreement are paid through a cost-share between the city and the state, between the county and state, or between the city, county and state. The exact proportional share for each specific signal is identified in the agreement. Regardless of the proportional cost share, the city maintains all traffic signals in Los Angeles.[34]

The City of Orlando also has maintenance agreements for certain roadways, both with the state and with Orange County. Such agreements are more common between the city and state than between the city and county. Generally, it is felt that because the county offices are located in Orlando, the county better understands what is needed for maintenance and operations and is better able to predict and respond to those needs than is the state. When city-county agreements are developed, additional funding is unusual; instead, they tend to clarify responsibilities, much like the agreement between Seattle and Washington.

Unlike Chicago and Denver, with the exception of the agreements pertaining to lighting and signals, city-state roadway maintenance agreements with Orlando are developed on a case by case basis, rather than covering numerous facilities in one agreement. Some of these agreements are developed when the city wishes to maintain a roadway at a higher level of service than is done so by the state. Under these agreements, FDOT usually provides the funds the state would have utilized anyway for the particular roadway or section thereof under the agreement and the city supplements these as needed.

There are also other maintenance contracts, not associated with the city wanting a higher level of service. For these contracts, fees range and are sometimes based on lane mileage, but may also be based on the type of maintenance (e.g. paving only, trash collection, or both), and on the type of facility involved (e.g. gateway). As described in Section 2.3.2, for traffic signals on the state highways, an annual agreement is in place based on a cost-share system that covers traffic signals on all state highways. The share is proportional to ownership of the legs at the intersection with an established annual rate then applied to this proportion for the cost share.

Philadelphia's roadway maintenance agreement covers more than one facility at a time like Chicago and Denver, but is limited in scope to snow removal. A five-year agreement, payment is based on the number of lane miles multiplied by a cost/lane mile for snow removal, amounting to roughly $2 million annually.

[33] RC-IX004, p. 3.
[34] "Agreement for Maintenance of State Highways in the City of Los Angeles," January 1, 2005. Also, Fong and Ragan, Personal Communication, 1/27/06.

The city is required to perform snow removal on the state highways regardless of the level of snow fall and related costs. Thus, in some years, costs can exceed payments for service.

There are other maintenance agreements between the state and Philadelphia, but most of these are for bridges on state highways and clarify the division of responsibility for maintenance of the substructure (usually the state) and the superstructure (usually the city). Each of these agreements represents a separate facility or portion and each is negotiated separately from the rest.

3.2.1 Assessment and Comparison. When one looks to the differentiation of maintenance responsibilities described in Section 2.1, and compares them to whether and how funding is provided by the state for this maintenance, wide variations can be seen (Table 12). Cases like Atlanta and Baltimore are quickly clear: in the former, the state is responsible for everything but traffic signals so no funds are provided to the city through legislation, nor through maintenance agreements; in Baltimore, where the city is entirely responsible for all roadways within its borders, the city is allocated monies directly through legislation.

Table 12. Maintenance Responsibilities on Non-interstate State Arterials and Existence of Direct Legislated Funding and/or Maintenance Agreements, by City*

	Maintenance Responsibilities	Direct Legislated Monies for Cities	Maintenance Agreements
Atlanta, GA	State – all but traffic signals		
Baltimore, MD	City – fully responsible	x	
Chicago, IL	City – all but paving/resurfacing	x	x
Denver, CO	City – all but paving/resurfacing	x	x
Detroit, MI	State – all but crosswalks, sidewalks	x	can bid on them
Houston, TX	State – all but lighting, traffic signals		x, no $
Orlando, FL	State – all but lighting, traffic signals		x
Philadelphia, PA	Mixed State – paving/resurfacing, shoulders, potholes City – all other maintenance (see Table 5)	x	x
Portland, OR	State – all but sidewalks	x	x
Seattle, WA	Mixed State – paving/resurfacing, shoulders, curbs, potholes City – all other maintenance (see Table 5)		x, no $
St. Louis, MO	Mixed City – snow plowing, lighting State – all other maintenance (see Table 5)	x	
Los Angeles, CA **Temecula, CA**	State – fully responsible		x
Buffalo, NY	City – fully responsible (where contract in place)		x
New York City, NY	City – fully responsible		x

*With the exception of Baltimore and New York City, the states in this study are responsible for all maintenance responsibilities (except lighting in some cases) on Interstate and limited access state arterials. Thus, the table focuses on other state highways.

Beyond Atlanta, Houston and Seattle are the only cities that do not receive a direct apportionment and do not have maintenance agreements in place with some form of monetary compensation (though they do have contracts that differentiate responsibilities among city and state). Seattle is particularly interesting given the wider range of its responsibilities on state arterials – snow plowing, striping, signs, lighting, traffic signals, crosswalks, sidewalks.

Compared to the rest of the cities, New York City and Buffalo have the widest range of responsibilities beyond Baltimore (especially New York City which is also responsible for the interstates and limited access roadways within the city boundaries), but receive no direct legislated allocation from the state. Instead, they rely on formal maintenance agreements with the state. New York State legislation does provide the authorization for these maintenance agreements as well as the means for determining

reimbursement and the upper limit for that reimbursement. NY CLS High § 349-c (2006) authorizes agreements with the cities and provides the amount of reimbursement – "not more than" $0.85/yd^2 for roadways and $0.95/yd^2 for bridges. (These amounts are the same for all the cities throughout the state.) NY CLS High § 340-b does the same for interstates within New York City.

Recognizing the serious roadway needs within New York City and the concerns that the legislated amounts were significantly lower than actual maintenance costs of the state arterials within the city, New York State established the City/State Roadside Maintenance Agreement in March 1994 to provide additional funding.[35] Under the State Arterial Maintenance Program (SAMP), this agreement currently provides an additional $5.5 million (originally, it was $7 million) to New York City and is much more detailed in specifying types of tasks and frequency (e.g., graffiti removal, 17 times/year; tractor grass cutting, 4 times/year).[36] Together, the maintenance funding for New York City totals roughly $12.5 million.[37]

The measure used for determining fees under the maintenance agreements varies among the city/state pairs. New York is the only state within the study to utilize a fee based on square yards (i.e., area, as one would calculate for a piece of property). The other states in the study use lane miles or centerline miles (i.e., length) for roadway maintenance and a cost per signal for traffic signals (i.e., unit cost). Denver also uses cost per mile for signing and striping. The maintenance agreement with Los Angeles identifies maximum authorized expenditures for the scope of work on the roadways specified, based upon a specified cost per curb mile.

Because the means for determining payments range, with some based on area and others based on length of the roadway, it is difficult to compare the relative levels of those payments. By way of a broad comparison, when New York City's $0.85/yd^2 is translated into $1,623/centerline mile, it appears low when compared to Denver's $5,500/centerline mile. If it is translated into $4,987/lane mile (assuming a 10-foot wide lane) then it also appears low compared to Chicago's $5,931/lane mile, particularly when one takes into account the much larger scope of responsibilities of New York City. (A 12-foot wide lane would result in a figure of $5,984/lane mile, which is a touch higher than Chicago, but again, the responsibilities in New York City are much larger). However, these figures do not include the monies from the SAMP.

The frequency of renegotiation of the agreements also varies. Broadly speaking, as is the case in New York, many of the primary agreements have been in place for at least a decade (New York City's original agreement dates back to 1952). Renewals are often made automatically until one or both of the parties request a revision. Chicago has the only maintenance agreement that is automatically adjusted for inflation each year.

3.3 Public-Private Partnerships and Other Initiatives to Fund State Arterials

Among the city/state pairs included in this study, several have pursued legislation in recent years to allow for public-private partnerships. Others have pursued new types of funding mechanisms. In this latter category, for example, is Texas, which in addition to changing legislation to allow for public-private partnerships has also instituted several new funding mechanisms in an effort to accelerate projects.

New alternatives in Texas include tolling by the state, development of toll authorities, and pass-through tolls. This last type of tolling does not involve actual tolls, but a per vehicle fee or per vehicle mile fee determined by the number of vehicles using a particular roadway. For example, a local government or private entity might use its own funds to "design, develop, finance, construct, maintain, and/or operate a toll or nontoll facility on the state highway system…." The state would then reimburse the entity over time based on the payment of these pass-through tolls, which are at least in part dependent upon the increased traffic on the facility and the related maintenance expenses accrued [Tex. Transp. Code § 222.104 (2005)].[38]

[35] Elliot G. Sander, Director, NYU Wagner Rudin Center for Transportation Policy & Management, and former Commissioner, New York City Department of Transportation, Personal Communication, 8/4/06.
[36] "Agreement, New York State Department of Transportation and City of New York," March 30, 1994
[37] Mooney, "NYC State Arterial Highway System," p. 1; also NYSDOT Technical Working Group meeting, 12/16/04 and Sajjad Ahmed, Personal Communication, 5/22/06.
[38] Also based on Stuart C. Corder, District Traffic Engineer, Traffic Operations, TxDOT, Personal Communication, 2/2406.

Other states and cities that are pursuing public-private partnerships include Georgia and Chicago. As was noted in Section 2.1, Chicago recently entered into a lease agreement with a private entity, Skyway Concession Company, LLC (SCC). The terms of the agreement include a $1.83 billion one-time payment by the Concessionaire to the City of Chicago. In exchange, SCC has been granted a 99-year lease for the Skyway, a city-owned roadway, under which the SCC will now be responsible for all operations and maintenance (for enforcement, they will rely on city police, but will have to reimburse the city for these services) and related costs. The benefit for SCC is that they will have the rights to all toll and revenue collections.

With respect to Georgia, legislation was recently passed to allow public-private partnerships for roadways as another means for funding. Referred to as the Public-Private Initiative, the legislation allows the state to consider solicited or unsolicited proposals, describes the factors that should be involved in GDOT's decision on moving forward to accept such proposals, and describes the process through which such proposals are vetted [O.C.G.A. § 32-2-79 (2005)]. If a proposal has successfully completed the process and is selected (which has not occurred to date), the funding mechanisms may "include tolls, fares, or other user fees and tax increments for use of the transportation facility that is the subject of the proposal." GDOT can also seek to obtain federal funding or may "agree to make grants or loans to the operator from time to time from amounts received from the federal, state, or local government or any agency or instrumentality, including, but not limited to, the state Road and Tollway Authority and the Georgia Highway Authority" [O.C.G.A. § 32-2-80 (2005)].

In terms of process, GDOT can consider unsolicited proposals only if they meet the following qualifications:

- They are "unique and innovative" and "not substantially similar" to other transportation projects already in the state Transportation Improvement Program (STIP). If similar projects already exist, then they must not have full funding at the time the unsolicited proposal is submitted.
- They are independently originated and developed by the proposer.
- They include details and information relating to how the project benefits the public, the costs associated with its development, and any fees required for submission [O.C.G.A. § 32-2-79 (2005)].

Once the proposal is submitted and found to meet these qualifications, GDOT needs to provide public notice and provide a period of time for competing proposals. If any other proposals are submitted, GDOT determines whether any additional proposals warrant further evaluation and then proceeds to evaluate all the proposals based on the following criteria:

- Degree to which the proposal is unique and uses innovative methods, approaches, or concepts;
- Scientific, technical, or socioeconomic merits;
- Potential contribution to the department's mission;
- Capabilities, related experience, facilities, or techniques described;
- Qualifications, capabilities, and experience of key personnel; and,
- Any other appropriate factors [O.C.G.A. § 32-2-79 (2005)].

After GDOT has finished its evaluation, it is supposed to transmit the findings to the Evaluation Committee for further review. Only after the Evaluation Committee has finished its review and makes a recommendation can GDOT enter into an agreement. Also, as stipulated in the legislation, at least two weeks prior to approval of any project, GDOT must present a report to the Governor and the House and Senate transportation committees noting their intent to negotiate. This report and its accompanying letter of intent must be approved by the state Transportation Board.

3.4 Summary of Funding Mechanisms

Funding for capital projects and maintenance of state highways varies from city to city. Atlanta receives no direct legislated funding for state highways nor does it have any maintenance agreements in place with GDOT. Baltimore only receives directly legislated funding and takes care of all capital

planning/programming, designing, and maintenance on all the roadways within the city (with the exception of 24 miles owned, operated, and maintained by the Maryland Transportation Authority). Three cities – Chicago, Denver, and Philadelphia – have both directly legislated funding (for capital improvements and maintenance) and maintenance agreements in place, while Detroit has some directly legislated funding and can bid competitively on maintenance contracts with the state. Of the remaining cities, Houston, Los Angeles, Orlando, Portland, and Seattle have maintenance contracts, but no direct legislated apportionment for state roadways within their jurisdictions. However, in Houston and Seattle, there generally is no financial component to the contracts – they only clarify responsibilities.

Across the maintenance contracts, there is variation in terms of how fees are determined, the amount specified per unit or measure (if any), and the frequency with which they are renegotiated. In fact, as was described in Section 2.1, the only thing that is more common across some of them is the existence of language that allows the state to correct deficiencies and charge or bill the city if the city fails to address them within some specified period of time. (Chicago uses this same type of language in its contract with the SCC.)

Finally, there is also some variation in terms of tracking the funds that are provided to the cities. Information was not provided for all the cities studied in this effort. Of those that did provide information, several track maintenance monies very closely, and several others direct such fund to the city's General Fund. In Baltimore, the city must provide an annual report to the Governor and the State Highway Administration showing actual costs of the preceding fiscal year and the expenditure budget of the current fiscal year [Md. Transportation Code Ann. § 8-412 (2005)]. In Portland, the city must maintain separate accounts for the state highway and bridge monies and report on them on a regular basis [ORS § 366.790 (2003)].

In Denver, the state used to require detailed reporting on the funds spent under the maintenance agreements, but this is no longer the case. Currently, monies under the maintenance agreement are directed to the city's General Fund. Orlando is similar, directing most maintenance monies to the city's General Fund, though decisions are made from time to time to attach them to a specific project. The original maintenance agreements between the State of New York and New York City and Buffalo stipulate that the monies under the maintenance agreements be kept in a separate account and shall not be mixed or submixed with other moneys or used for other purposes.[39] However, there do not appear to be any reporting requirements, and discussions with NYSDOT representatives have suggested that it is difficult to know where and how these funds are used by the cities. New York City's SAMP funds, in contrast, are easier to track since the city must invoice for work performed on a monthly basis.[40]

[39] "Agreement for Maintenance and Repair of Parkways and Expressways on State Arterial System in New York City," adopted January 1952, p. 3; "Agreement for Maintenance and Repair of State Arterial Highways Passing through the City of Buffalo," June 20, 1955, p. 2.
[40] "Agreement New York State Department of Transportation and City of New York [D007634]," March 1994, provided by NYSDOT; "City/State Roadside Maintenance Agreement (D007634) Appropriation of Additional Funds into Contract Supplemental Agreement, No. 7," September 29, 2003, provided by NYSDOT.

4. TRANSFERS OF RESPONSIBILITY AND/OR JURISDICTION

Transfers can be made in jurisdiction (ownership), and/or maintenance responsibilities. New York refers to the transfer of maintenance responsibilities as a transfer in "Maintenance Jurisdiction." As discussed in Section 1.1, this usage can be confusing so to provide clarity throughout the following discussion, "jurisdictional transfer" is defined as a transfer in ownership or title. When discussing a shift in the obligation to operate and/or maintain a roadway, the phrase "transfer of responsibilities" is used.

Broadly speaking, the cities that participated in this study do not have the same type of challenge regarding the "built-unbuilt" portions of the state highway system in New York City. In most cases, when the state highway systems were developed, there was no distinction made along these lines; in other cases, as in Florida, only "built" roadways (in other words, those roadways already built up to current standards) were formally designated as part of the state highway system.

Nevertheless, a number of the cities and states face similar difficulties in terms of having outdated state highway systems that no longer match the patterns of usage and needs. In some cases, local roadways are now functioning more as state highways in terms of traffic volumes and flows; in other cases, state highways are now functioning primarily as local main streets in municipalities which would like to slow and decrease traffic flow. Section 1.1.1 briefly described efforts in California, Florida, Michigan, and Pennsylvania that were aimed at addressing this issue and met with different levels of success. The following sections will further explore more fully the issues related to transfers of jurisdiction and maintenance responsibilities, describing the types of mechanisms in place for such transfers as well as specific examples.

4.1 Why Transfers of Jurisdiction or Maintenance Responsibilities are Sought.

The perception of benefits of transfers is somewhat mixed and different states and cities pursue them for different reasons. However, there are a few broad commonalities. Among the city/state pairs in this study, jurisdictional transfers tend to be integrally tied to one of more of three issues: flexibility in design, funding, and the desire to rationalize the state highway system for management and operations purposes. Local jurisdictions often seek to take over state highways that are functioning as local roadways to allow for more flexibility in design to foster local development goals, to shorten the length of time for programming, planning, and construction, and to have more control over operations and other aspects of the roadway deemed of interest to the local jurisdiction. Though more costly for the city in terms of ongoing maintenance, and more risky in terms of assuming liability for the roadway, in many cases, the local municipality feels the benefits far outweigh the costs.

For states, turning over roadways to municipalities can save money in the long-term (though in the short-term this can be expensive if fees for reconstruction are tied to the transfer. This was at least part of the rationale in seeking modifications to the state highway systems in California and Pennsylvania. Changing roadway jurisdiction can also aid in streamlining operations and management of complex systems – Michigan's goal in its failed effort to rationalize its highway system. Changing responsibilities can have a similar effect, as is seen in St. Louis where the city continues to own the ROW for all roadways within city limits, but MoDOT now maintains 31 miles of arterials. From the city's perspective, this saved them money; from MoDOT's perspective, the agreement helps them to coordinate their entire system on a regional basis. This last point is important since some state representatives have noted that in turning over roadways to local jurisdiction, it sometimes makes it more difficult because now they must deal with multiple jurisdictions as roadways cross into and out of municipalities. Finally, just as cities may seek a transfer to allow for more flexibility in design, states may benefit by allowing this to occur. In Florida, transfers have been used to allow a municipality to have flexibility in design while limiting the setting of precedent for new designs that the state would prefer not to have on the state highway system.

4.2 The Mechanisms for Transfers

This section will explore the mechanisms that enable transfers of jurisdiction and transfers of maintenance responsibilities. Sections 2 and 3 described maintenance responsibilities and financing arrangements for maintenance agreements. Technically, the agreements transfer the responsibilities for maintenance from the state to the city (or in the case of Chicago, from the city to a private entity). Thus,

for transfers or maintenance responsibilities, only those changes which involved more than a simple maintenance agreement will be described here.

Generally, the primary mechanism in place to guide transfers of jurisdiction is legislation, with some states then formalizing specific transfers through contracts. Florida relies on legislation but, as a result of the earlier attempts to rationalize the state highway system in Florida, as described in Section 1.1.1, Florida has legislated that its state highway system be "locked" in place as of June 10, 1995 [Fla. Stat. § 335.0415]. Thus, the transfers that continue to occur are characterized more as minor "housekeeping" moves. For other types of transfers that focus more on responsibilities, Florida relies on contracts.

To provide a sense of the legislated language found in the different states, following are some samples:

> ***Georgia.*** Legislation allows the state to acquire in "fee simple or in any lesser interest, including scenic easements, airspace, and rights of access….for present or future public roads or other transportation purposes" [O.C.G.A. § 32-3-1]. Conversely, when "deemed in the public interest," GDOT, counties, or municipalities may "substitute for, relocate, or abandon any public road that is under its respective jurisdiction, provided that a county or municipality shall first obtain the approval of the department if any expenditure of federal or state funds is required" [O.C.G.A. § 32-7-1 (2005)]. However, permanent abandonments are rare.
>
> ***Illinois.*** According to 605 ILCS 5/4-203 (2005), IDOT may:
>
> > add additional highways to the state highway system by laying out new highways or taking over highways from the county highway system, the township and district road system or the municipal street system; but such highways so taken over into the state highway system shall be highways which form a logical part of the state highway system for traffic purposes.
>
> The Code formally stipulates that IDOT must notify the appropriate public officials, in writing, that it intends to take over a particular roadway or segment. It further notes that once such a roadway is taken over IDOT will have "exclusive jurisdiction and control over only that part of such highway which the Department has constructed, or which the local authority has constructed and which has been taken over by the Department, and for the maintenance of which the Department is responsible, including the hard-surfaced slab, shoulders and drainage ditches."
>
> According to 605 ILCS 5/9-127 (2005), except in certain specified cases, "whenever any highway or any part thereof is vacated under or by virtue of any Act of this state or by the highway authority authorized to vacate the highway, the title to the land included within the highway or part thereof so vacated, vests in the then owners of the land abutting thereon…." The Code further specifies the conditions under which the highway authority can vacate (i.e., abandon or relinquish) a highway under its jurisdiction and convey its interest to other organizations or third parties.
>
> ***Washington.*** Legislation exists to allow for transfer of state highways to city jurisdiction if "no longer required as part of the state highway system" [Rev. Code Washington (ARCW) § 47.24.010 (2005)]. Similarly, there is legislation that describes when a local roadway should become part of the state highway system:
>
> > An urban highway route that meets any of the following criteria should be designated as part of the state highway system:
> > a. Is designated as part of the interstate system;
> > b. Is designated as part of the system of numbered United states routes;
> > c. Is an urban extension of a rural state highway into or through an urban area and is necessary to form an integrated system of state highways;
> > d. Is a principal arterial that is a connecting link between two state highways and serves regionally oriented through traffic in urbanized areas with a population of fifty thousand or greater, or is a spur that serves regionally oriented traffic in urbanized areas [Rev. Code Washington (ARCW) § 47.17.001 (2005)].

> Beginning September 1, 1991, the Transportation Improvement Board, which was created in 1988 to guide state investment in local transportation projects, was authorized by the legislature to begin accepting petitions from the cities, counties, and state for additions or deletions to the state highway system. The Board assesses these requests based on the criteria laid out in [Rev. Code Washington (ARCW) § 47.17.001 (2005)], and submits recommendations to the legislature for review by November 15 of each year [Rev. Code Wash. (ARCW) § 47.26.167 (2005)].[41]
>
> ***California.*** Cal Sts & Hy Code § 73 (2005) states: "The commission [of transportation] shall relinquish to any county or city any portion of any state highway within the county or city that has been deleted from the state highway system by legislative enactment." Relinquishments are made by resolutions and cannot be carried out until "the department has placed the highway, as defined in Section 23, in a State of good repair," which requires maintenance, including "litter removal, weed control, and tree and shrub trimming to the time of relinquishment."
>
> If the relinquishment is not legislated, then written notice must be given by the state to the County Board of Supervisors or city Council 90 days prior to the relinquishment. Counties or cities may protest, in which case public hearings are then held [Cal Sts & Hy Code § 73 (2005)].

New York State has similar language legislated in its Highway Code. With respect to designating state highways, several sections specifically identify those portions of the roadways throughout the state that are designated as state highways, but the language regarding when and why to designate new portions of the system appears more vague than is the case in Washington. More along the lines of California, NY CLS High § 341 notes that the state highway system:

> …shall consist of the highways designated and set forth in this section together with the highways, streets or roads, or portions thereof, designated or authorized to be a part of the state highway system pursuant to other sections of this chapter or by special legislative acts heretofore or hereafter enacted. The state highway system may be modified by abandonments, realignments and additions as provided by law.

For interstates within the City of New York, there is somewhat stronger language. NY CLS High § 340-b states that, "any property in the city of New York which is deemed by the commissioner of transportation to be necessary for the construction, reconstruction and maintenance of interstate highways shall be acquired and may be disposed of by him pursuant to applicable provisions of section thirty of this chapter."

Finally, NY CLS High § 10 does identify some rationale for abandoning portions of the state highway system. It states that the commissioner of transportation shall:

> Have power, upon the request of a county, city, town or village, whenever such commissioner deems an existing state highway or portion thereof lying within such municipality to be no longer needed or useful to the state highway systems, to enter into an agreement with the appropriate authorities of such municipality to abandon by an official order to such municipality such highway or portion thereof. Upon the filing of certified copies of such official order with the county clerk, the county board of supervisors or county legislative body and the county finance officer of the county in which such municipality lies, the clerk of such municipality, the appropriate officer of such municipality having general direction and supervision of the public highways thereof and the state comptroller, the state shall cease to maintain such highway or portion thereof and all the rights and obligations of the state therein shall be turned over and surrendered to such municipality and such highway or portion thereof shall thereafter be maintained as a part of the highway or road system of such municipality.

[41] The Transportation Improvement Board is composed of 21 members: 6 county representatives; 6 city representatives; 1 representative from the governor; 2 representatives each from WSDOT and public transit; 1 representative from the private sector; 1 representative of the ports; 1 individual representing non-motorized transportation and 1 individual representing special needs transportation [Rev. Code Washington (ARCW) § 47.26.121 (2005)] and Washington State Transportation Improvement Board Home Page, http://www.tib.wa.gov/ (accessed 1/5/06).

NY CLS High § 345-a further stipulates that, "the abandonment or transfer of any state highway to a county, town, city or village shall be deemed a transfer of all right, title and interest of the state of New York to and in such highway to such county, town, city or village respectively unless expressly provided to the contrary."

While New York may enter into a formal agreement pursuant to the legislation to abandon roadways on the state highway system, several city/state pairs – Baltimore/Maryland, Denver/Colorado, Houston/Texas, Philadelphia/Pennsylvania – rely primarily on contracts for jurisdictional transfers. Pennsylvania's approach to these contracts, via its Road Turnback Program, is outlined as a twenty-six step process in its *Transfer of State Highways (Road Turnback Program) Policies and Procedures Manual* that involves negotiating with the municipalities at several points, including the scope of work for rehabilitation of the roadways prior to the transfer and the related costs.[42]

Portland and Oregon take a similar approach to Pennsylvania, with formal policy documents that help guide contracts for transfers and enable more flexibility in addressing the system on a regular basis. In its *Handbook for Making Jurisdictional Transfers*, ODOT notes that:

> It is the policy of the State of Oregon to consider, in cooperation with local jurisdictions, interjurisdictional transfers that:
>
> - Rationalize and simplify the management responsibilities along a particular roadway segment or corridor;
> - Reflect the appropriate functional classification of a particular roadway segment or corridor; and/or
> - Lead to increased efficiencies in the operation and maintenance of a particular roadway segment or corridor.[43]

Of importance, while the policy states that such transfers happen in cooperation with local jurisdictions, there is no statutory requirement that a city must agree to a transfer. In part, because of this, PDOT recently developed its own policy reasons for jurisdictional transfers, which stresses two key reasons why the city would seek such transfers: (1) to "increase the efficiency of operation and maintenance of the PDOT system;" and/or (2) to "further a PDOT policy."[44]

In responding to requests from the state, PDOT notes that it is not in the city's interest to assume maintenance and/or repair responsibilities without sufficient accompanying funds or sufficient operational/development reasons to outweigh the incremental costs associated with the transfer. Thus, PDOT's policy notes its goal "that no transfer be made for any facility that is not rated at least "good" standard" in the following areas: paving, electrical, structures, signage and striping, drainage.[45]

Recognizing that the state can press a transfer, the expectation is that the state would bring these items up to "good" or better standard prior to a transfer. Among the factors that might outweigh this consideration are: the possibility that taking over the roadway could increase efficiencies in operations and maintenance or could simplify management responsibilities; PDOT wants to make improvements, permit accesses, or maintain the roadway in a way that does not comply with state policies or wants to apply a higher level of standard than the state; or the roadway is needed for system connectivity within Portland.[46] PDOT identifies several issues for negotiation during any transfer. These are detailed in the Technical Appendix of this report.

4.3 Examples of Transfers

Several cities have been involved with recent jurisdictional transfers, either taking over roadways formerly on the state highway system through formal relinquishments or abandonments, or giving up formerly local

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[42] Commonwealth of Pennsylvania, Department of Transportation, *Transfer of State Highways (Road Turnback Program): Policies and Procedures Manual*, Publication 310, p. 2-2, ftp://ftp.dot.state.pa.us/public/bureaus/MunicipalServices/Pubs/PUB_310.pdf (accessed 1/14/06).
[43] Portland Office of Transportation, *Jurisdictional Transfers Policy and Handbook* (October 7, 2004), cited in Appendix A.
[44] Ibid., p. 2.
[45] Ibid., pp. 2 and 13.
[46] Ibid., p. 3.

roadways to become part of the state highway system. Others have had responsibilities shift without ownership or title changes. Table 13 provides a tabulation of the types of transfers that have occurred in the various cities examined. In this case, the Town of Castle Rock in Colorado is also included since it provides a transfer that could be particularly relevant for New York City since it involved a swapping of roads between the state and town. More detail on these transfers and additional examples are provided in the Technical Appendix, but the following paragraphs provide highlights of several of them.

Town of Castle Rock, CO. The transfer in the Town of Castle Rock (est. pop. 35,000) highlights how an agreement can be made to rationalize a system so that jurisdiction over different roads is transferred simultaneously – one from the town to the state and the other from the state to the town after a broad review of the system and needs was conducted and agreement was reached by both jurisdictional entities. As a result, the two-lane State Highway (SH) 86, which was owned by the state but functioning as a local main street became part of the municipal system, and a four-lane arterial (Founders Parkway) owned by the town but functioning as a key commercial arterial became part of the state system.

Table 13. Types of Transfers That Have Occurred in the Cities Examined

	Jurisdictional Transfer - State to Municipality	Jurisdictional Transfer - Municipality to State	Jurisdictional Transfer - Swapping of Roads	Changes in Responsibilities Not Including Jurisdiction	Temporary Transfers	Transfer to Private Facility
Atlanta, GA					x	
Baltimore, MD		x				x
Chicago, IL	x					
Denver, CO	x					
Detroit, MI						
Houston, TX		x				
Orlando, FL				x		
Philadelphia, PA	x					
Portland, OR	x			x		
Seattle, WA	x	x				
St. Louis, MO				x	x	
Temecula, CA	x					
Castle Rock, CO*			x			

Both the Town of Castle Rock and CDOT agreed that changing ownership on these two roads was a logical decision based on the following:

- Founders Parkway (the four-lane arterial) provided a logical link on the state highway system;
- SH 86 (the two-lane highway) had developed into a more local, community-based roadway along the section under discussion; and,
- Directing traffic onto Founders Parkway to reach I-25 would reduce "intrusive traffic – especially trucks – currently entering the downtown retail area to reach I-25." It was believed that this step would also increase safety in the downtown area.[47]

The following points were additionally noted: the volume of traffic on Founders Parkway was expected to be two to three times greater than on SH 86 by the year 2030, and the Founders' alignment was more direct for traffic traveling along the nearby interstate and US Highway.[48]

[47] Wilson & Company, "SH 83-86 Corridor Optimization Plan – Appendix C: Right-of-Way Exchange, Founders Parkway and State Highway 86," p. 1, http://cdot.info/Commission/Documents/AppendixCExchange.pdf (accessed 1/6/05).
[48] Ibid.

At the time of the decision to transfer the jurisdictions on both roadways, neither had been brought up to state standards. The agreement, which resulted in a roughly 50-50 split in terms of costs, called for improvements by the state on the four-lane highway while any improvements on the two-lane highway would be dealt with by the town. In other words, both accepted their roadways "as is." The town did acquire the ROW for the four-lane parkway so the state was able to include room for shoulders and other design enhancements. The ROW was transferred when the roadways were exchanged. Notably, during the four to five years of work until the roadways were exchanged, the town agreed to an access management plan on the four-lane highway that instituted a high level of access management even though a great deal of development had been planned along the corridor.

Temecula, CA. As noted earlier, California has a state level program to turn over state highways no longer functioning as such to local jurisdictions. In February 2005, the state relinquished 6.25 miles of SH 79 "as is" to the City of Temecula via a Cooperative Agreement.

Prior to the transfer, the State of California was fully responsible for maintenance, operations, planning/programming and design, construction and reconstruction on the roadway. Riverside County had an established assessment district to collect fees from property owners to allow for improvements to the roadway and was responsible for making the actual improvements. However, the process was overseen by Caltrans, and often involved a lengthy review and approval process even for basic enhancements.

As a matter of policy, the City of Temecula determined that it would be able to better serve its residents and motorists if state highways that functioned as local roadways within city limits were owned by the city itself. During discussions with Caltrans, the state also believed the transfer to be in its best interest. In 2002, a Resolution of Intention was signed, beginning the relinquishment process. At the request of the city and on its behalf, Senator Dennis Hollingsworth (R, 2002-) introduced Senate Bill 87 on January 27, 2003. The bill was briefly withdrawn in September 2003 when a nearby commercial property owner expressed concern about the possibility of the removal of a traffic signal located at one of the intersections as a result of the transfer. This issue was eventually resolved to everyone's satisfaction and the bill was reintroduced in early 2004 with an urgency clause added in August 2004 to allow for a more rapid decision. It was approved by the Governor and Chaptered on September 9, 2004.

The terms of transfer of the final Relinquishment Agreement provided that Caltrans pay a one-time lump sum of $750,000 to the city upon the relinquishment.[49] The funds were used primarily to bring the roadway into a state of good repair and install medians. Otherwise, the city accepted the facility "as is" and now spends roughly $160,000/year to maintain it. Because Caltrans did not have the monies to immediately provide the agreed upon cost, the City of Temecula agreed to accept the deed transfer and relinquishment of the physical facility prior to the disbursement of the funds. The payment was eventually made on December 16, 2005.

Portland. There have been several jurisdictional transfers from the state to the municipality in Portland: NE/SE Martin Luther King, Jr. Blvd; NE/SE Grand Avenue Pacific Highway East; Highway 26, SW Clay and SW Market Streets in Downtown Portland; Highway 30 (Sandy Blvd.) and Highway 99W (Interstate Avenue from Argyle to the Steel Bridge), and a portion of the Swift Highway (State Highway 120). ODOT's preference is to either have all jurisdictional responsibilities or none of them, but specific arrangements are different among cases. The agreement for NE/SE Martin Luther King, Jr. Blvd. included a full jurisdictional transfer, including right of way and title.[50] In contrast,

[49] District Agreement 8-1258, "Cooperative Agreement Between the City of Temecula and the State of California: Relinquishment of Portions of Route 79 in the City of Temecula," 9 November 2004.
[50] "Abandonment and Retention Agreement No. 708, NE/SE Martin Luther King, Jr. Boulevard and NE/SE Grand Avenue Pacific Highway East, Highway 1E – City of Portland," between the State of Oregon and the City of Portland, 6/24/02.

in the case of Swift Highway, an agreement on maintenance and operations was signed, but not the actual jurisdictional transfer document. The terms of agreement include the following:

- The state retains the portion of the right of way and access control of the former Swift Highway, as well as the real property acquired by the state for the highway right of way and other public purposes.
- The state conveys the operating right of way, including a bikeway along N. Portland Road, traffic signals and illumination, all slope, utility, wetland, water quality and similar easements to the city.
- The state relinquishes all maintenance and repair responsibilities as well as all liability.
- If the right of way involved is no longer used for public street purposes, it will revert to the state.
- The city agrees to accept ownership of the entire Slough Bridge once the state repairs or replaces the bridge "to acceptable city standards." This will be done through a separate agreement.
- The city agrees to maintain access control and management in certain locations and at the I-5 interchange "in an effort to preserve the integrity of the interchange."[51]

Of note, the freight community has voiced concern about the completion of this transfer, which would also include additional length of highway, as it affects Marine Drive near I-5. Some years ago, after a similar transfer occurred, plans were announced to reduce a 4-lane facility running parallel to I-5 to 2 lanes with light rail in the middle. The resulting widths were substandard and it became difficult for trucks which used the original facility to make turns. Recognizing the concerns of the trucking community regarding the current transfer, new language has been developed for such circumstances:

> *Because Unit X is either on the National Highway System (NHS) or was part of the federal aid primary system in existence on June 1, 1991, it continues to be subject to the requirements of 23 USC 131 and the Oregon Motorist Information Act, ORS 377.700 to 377.840 and 377.992, after transfer, and State retains authority to enforce those laws. State maintains a state Route system and a U. S. Route System and certain roads may be part of the Federal National Network Highway System. Routes designated as part of the Federal National Network Highway System under Code of Federal Regulations Title 23 Part 658.19 require the State of Oregon to adopt provisions for Reasonable Access to terminals. Jurisdictional Transfers of sections of highway that have previously been designated as part of the National Network Highway System must retain the Reasonable Access to terminals as defined in the above Federal Regulation without restriction, unless the specific procedures for restriction as laid out, are followed, and then only for reasons of safety and engineering analysis of the route. In order to maintain viable freight routes, all allowable oversize and overweight movements will be grandfathered in with the existing escort vehicle requirements. The movement of freight will not be further restricted beyond the limits set by the state prior to transfer.*[52]

Other Cities' Experiences. Houston has not participated in any transfers from the state to the city in recent years. However, they recently were involved in a transfer from the city to the state. The transfer was related to a much larger project that is turning I-10 (the Katy Freeway) from a 6-lane freeway with frontage roads into a 10-lane freeway with frontage roads, with 4 toll lanes in the middle that will be run by the Harris County Toll Road Authority, a county government entity. The state bought a 100-foot wide railroad corridor adjacent to the freeway and also took over jurisdiction of a city street (Old Katy Road) that ran adjacent to the railroad corridor with the intent to turn the roadway into the

[51] "Jurisdictional Transfer Agreement No. 770 - DRAFT," between the State of Oregon and the City of Portland, 1/24/04.
[52] Language provided by Michelle Smith, Sr. Contract Specialist, Region 1 - Contracts and Agreements Unit, ODOT, Electronic Communication, 1/26/06.

new westbound frontage road. A contract was used as the mechanism to allow this roadway transfer to take place.

In 1991/1992, Philadelphia "took-back" roughly 21.5 miles of roadway under the Commonwealth of Pennsylvania's state-wide program described in Section 1.1.1. Under the terms of the agreement, jurisdiction for the section of roadway was transferred to Philadelphia. Since it had already been responsible for all the maintenance, the only new maintenance responsibilities related to the roadway surface. As part of the agreement, and in recognition of the new costs that Philadelphia would incur on the roadway, the state agreed to take over maintaining lighting on several other access highways within the city: I-76 Schuylkill Expressway, I-676 Vine Street Expressway, I-95 Delaware Expressway, US-1 Roosevelt Boulevard, and PA-63 Woodhaven Expressway). Built in the 1950s, these highways were part of the state system, but the state had never placed lighting. For safety reasons, the city had placed lighting and continued to maintain it in subsequent years at a significant cost to the city. For the City of Philadelphia, the overall result of this transfer was beneficial – the costs associated with the responsibility for the new roadway miles shifted minimally but the city was able to eliminate the lighting costs which were significantly higher.

Finally, it is worth noting that both Georgia and Missouri sometimes make use of temporary transfers of jurisdiction to aid a municipality in a particular project for a particular purpose. In Atlanta, for example, the city requested assistance from GDOT for improvements on streets surrounding a new aquarium. A temporary state route designation was provided, allowing the state to design and build the facility up to current standards. The roadway was then turned back over to the city.

4.4 Summary of Findings

As with other issue areas explored in this study, the examples in this section vary in several ways: in degree of transfer (jurisdictional or responsibilities only); methods of transfer (contractual, legislated, or both); and terms of agreement. While some similarities exist in terms of the reasons for the transfers, the benefits that are thought to accrue from them on both sides, and a tendency of the state to bring roadways up to standard before turning them over, the differences reveal a great deal of creativity related to the negotiation of the actual terms of the agreements.

In Denver, for example, a portion of SH 33 was abandoned under a contract made on 29 August 2001 between the State of Colorado and the City and County of Denver.[53] Though designated a part of the state highway system many years ago, SH 33 functions as a local roadway. In May 2001, State Transportation Commission adopted Resolution TC-954, authorizing abandonment of the section by the state. The transfer agreement was then negotiated after determining the cost to bring the roadway up to current standards. While the state paid less than the full cost, the monies that were provided ($4.12 million) were directed to Denver DPW (rather than the General Fund) for improvements on the roadway. In addition, the city and state negotiated an arrangement for a bridge that formed a portion of the abandoned highway. They agreed that CDOT would retain jurisdiction over the bridge "until it becomes structurally deficient and eligible for funding, at which time the bridge will be replaced or repaired to the satisfaction of the city, by the state and then abandoned to the city at no additional cost to CDOT."[54]

Bridges on roadways being considered for jurisdictional transfers have been dealt with in similar ways elsewhere, notably in Pennsylvania. Initially, Pennsylvania's road turn-back program assumed that bridges would be transferred with the roadways, but after meeting resistance from municipalities concerned over additional associated costs, the Commonwealth changed its stance and now allows jurisdiction over the bridge portion to remain with the state if the municipality so desires.

Temecula offers yet another example of flexibility and creativity in negotiating a transfer. Cal Sts & Hy Code § 73 (2005) states that relinquishments cannot be carried out until "the department has placed the highway…in a state of good repair…." However, the city wanted to move quickly on this transfer,

[53] The information in the following paragraphs is derived from the contract made between the State of Colorado and the City and County of Denver, 29 August 2001, Contract Control No. RC-10018, provided by Denver DPW.
[54] RC-10018, p. 3.

especially after repeated delays. Temecula and Caltrans negotiated an arrangement that allowed the city to take the roadway “as is” in exchange for a lump sum of $750,000 payable upon the relinquishment. Given the state’s financial situation, the city eventually agreed to take the deed prior to the payment.

5. CONCLUSION and FINAL ASSESSMENT

State arterials in urban areas present a complex set of issues for both cities and states. New York State's situation is made even more challenging by the legacy of the 1944 Highway Law which designated both built and unbuilt portions of the State Arterial Highway System. The purpose of this study was to review and assess how other cities deal with similar issues and then to compare and contrast their experiences with New York State, Buffalo, and New York City.

In terms of overall findings, there is a great deal of variation, even among a relatively small number (12 formally, 14 including Los Angeles and the Town of Castle Rock) of city/state pairs surveyed in this study. Thus, best practices cannot be easily drawn out. However, there are several notable practices (and potentially precedent) with relevance for the cities within New York as well as broader themes for consideration.

5.1. Notable Practices

There were several notable practices identified during the literature and legal review and through the discussions with state and city representatives. They are identified in the following paragraphs, by issue area:

5.1.1 Maintenance Responsibilities. As was described in Section 2, on interstate and limited access roadways, the states were responsible for all maintenance (with the exception of lighting in some cases) except in Baltimore and New York City (via an agreement). The differentiation of maintenance responsibilities on non-interstate roadways varies more. In this case, Buffalo and New York have the widest range of responsibilities (again, via agreement in both cases) compared to any of the peer cities (Baltimore does not have state highways running through the city). Among the remainder of the cities, the specific areas of responsibilities vary as does how or if they receive any funding or financial reimbursement for these services, and whether that funding is provided through legislation or via a maintenance agreement.

Among the notable practices when dealing with maintenance, two points stand out:

- Existence of language that aids in ensuring accountability;
- Washington State's approach to clarifying maintenance responsibilities.

First is the existence of language that aids in ensuring accountability. Such language occurs in Chicago's lease agreement with the SCC, in Denver's maintenance agreements with CDOT, with Houston's maintenance agreements with TxDOT, and in Washington State's legislation. In Chicago, Denver, and Seattle, the language typically identifies specific time allowances within which a deficiency, once brought to the attention of the city, must be addressed. (In Texas there is no specific time allowance.) In each case, specific financial penalties are denoted if the state (or in the case of Chicago, the city) decides to address the problem itself.

In New York State, such language does not exist in the basic maintenance agreements with New York City and Buffalo. There is language for New York City that says the "state may bring to the attention of the city any unsatisfactory work," but it provides no time allowances or penalties if the city fails to address the issue. Beyond this, there is some language in the February 1977 agreement with New York City that suggests the city may be disqualified from future federal-aid projects if it fails to complete required actions within an agreed upon time limit. Again, however, the language lacks the clarity of the language used in the agreements and legislation mentioned above. As a result, the only real recourse the state has in many cases is to terminate the agreement, which is generally not the preferred course of action.

The second point that stands out under maintenance responsibilities is Washington State's approach to clarifying maintenance responsibilities. The division of responsibilities between the state and the cities in Washington State dates back to a document over 50 years old that assigns responsibilities based on whether the work is classified as construction, routine maintenance (e.g., pothole repair), or extraordinary maintenance (e.g., repaving). Over the years, however, there was a great deal of debate over the precise definitions and extent of responsibilities so in 1997, WSDOT and the Association of Washington Cities

worked together to develop a set of guidelines for interpreting the meaning of the original document and provide clarity for understanding. Given the complexities of New York State's Highway Law, the multiple meanings sometimes ascribed to the word "jurisdiction" (i.e., title/ownership v maintenance obligation), and the built-unbuilt distinction, such an exercise might prove worthwhile in New York as well.

5.1.2 "Rationalizing" the System and Transfers of Jurisdiction. As was discussed briefly in Section 1 and then in more detail in Section 4, jurisdictional transfers in this study tend to be related to one or more of three issues: funding, flexibility in design, and the desire to rationalize the state system for the purpose of streamlining management and operations. Five states (California, Florida, Michigan, Pennsylvania, and Washington) have at one time or another sought to institute broad programs for modifying their state highway systems. While California, Florida, and Pennsylvania all sought to reduce costs for the state as part of their reviews, there was also some recognition that the roads they were looking to vacate/abandon/relinquish were no longer functioning as state highways so much as local roadways. Michigan's and Washington's efforts were more directly aimed at formally reviewing and rationalizing the state system, with Michigan aiming to take more roadways into the state system and Washington exploring how to make sure both local and state roadways were functioning as they should be.

In addition to these broader reviews, specific transfers, the mechanisms by which they occur (legislation, contract, or both), and the terms of such transfers were also explored. Again, there is broad array represented by the city/state pairs in the study, with five states having examples of jurisdictional transfers from the state to the municipality, two cities having examples of a jurisdictional transfer from the city to the state, and one city and state (Seattle, Washington) and one town and state (Castle Rock, Colorado) having done both. Additionally, Atlanta/Georgia and St. Louis/Missouri have made use of temporary transfers to allow the states to use its funding to make improvements on roadways within the respective cities using state funding that would not otherwise have been allowed. Finally, three city/state pairs (Orlando/Florida, Portland/Oregon, St. Louis/Missouri) have been involved in changes in maintenance responsibilities (maintenance jurisdiction in New York's legal terminology), and the City of Chicago recently was involved in shifting maintenance and operations to a private entity via a lease agreement.

In this area, three notable practices are evident:

- Washington State's experience in reviewing its entire state highway system
- Criteria for determining when roads should be transferred, either in legislation or in policy handbooks
- Town of Castle Rock's swapping of jurisdictions with the State of Colorado

Washington State's experience in reviewing its entire state highway system and some of the language it has incorporated into its legislation may be particularly relevant for New York. Of all the states that sought a broad review of their systems, Washington is the only one that actively sought to both transfer then-designated state highways to the municipalities and take over local roadways that were functioning as state arterials. During the early 1990s, the state conducted an in-depth review of the state highway system to determine how to best update it to meet new traffic and travel patterns. A number of roadways around the state were exchanged at that time, with those functioning as local roadways being abandoned to the relevant county or municipality and those functioning more as state highways being taken into the state highway system.

Since 1991, the Transportation Improvement Board (which was established in 1988) has been authorized by the state legislature to accept petitions from cities, counties, and the state for additions and deletions to the system and make recommendations to the legislature on an annual basis. Aiding this process is legislation that defines the criteria that determine when an urban highway route should be designated as part of the state highway system, including when it is: "a principal arterial that is a connecting link between two state highways and serves regionally oriented through traffic in urbanized areas with a population of fifty thousand or greater, or is a spur that serves regionally oriented traffic in urbanized areas [Rev. Code Washington (ARCW) § 47.17.001 (2005)].

In New York, the routes included in the State Arterial Highway System are designated through legislation, but there is no wording similar to that in Washington State that provides criteria for determining *when* an urban arterial should be taken into the system. Such language could be helpful, particularly in New York City, where the urban arterial system is fractured jurisdictionally and in ways that do not always coincide

with the function the road is performing (i.e., local jurisdiction on a road functioning as a state highway and state jurisdiction on a road functioning as a local road).

More importantly perhaps, Washington's entire approach involved an initial review to in effect re-designate the state highway system to meet today's needs. The state then instituted a more flexible approach to continuously adapt. Portland and Oregon have a similar approach, but rather than legislation, rely on formal policy handbooks to provide guidance for when roadways should be transferred either from the state to the municipality or vice versa. Again, a broad review of the New York State system in Buffalo and, particularly in New York City, might be warranted and has been done elsewhere. Such a review could greatly simplify the system by potentially helping to do away with the built-unbuilt issue and, more importantly, determine what roads truly belong on today's modern State Arterial Highway System.

Finally, the experience in the Town of Castle Rock, Colorado is also relevant for New York City's urban arterials because it involved a formal swapping of roadways through an agreement. If a broader review of the entire system is difficult in New York State, an approach similar to that used in Castle Rock could be used on key roadways within New York City where both the state and city might find benefit through the transfer.

5.1.3 Funding. Funding for state arterials is generally provided either through legislation allocating monies directly to municipalities, through maintenance agreements or some combination of the two. Of the city/state pairs included in the study, seven receive direct allocations from the state for state highways (and sometimes local roadways as well). The remaining five were more similar to New York City and Buffalo in terms of having no legislated allocation directly to municipalities for state arterials.

Eight of the cities have maintenance agreements with their respective states, through which they provide some scope of services on the state highways. Of these, only six receive some form of payment or reimbursement in exchange. Two – Houston and Seattle – have maintenance agreements which only stipulate the division of responsibilities and penalties if those services are not provided; they provide no additional monies to the cities. (One additional city – Detroit – can bid competitively for maintenance agreements on roadways within its geographic boundaries.) New York City and Buffalo have maintenance agreements as well, but have the widest range of responsibilities stipulated, particularly New York City which is also responsible for interstates within the city's boundaries.

Two items are notable here, specifically with respect to maintenance agreements:

- Varying rates across the state in Colorado
- Annual rate adjustments to keep pace with inflation in Illinois.

While New York State, like Illinois, has one set of stipulated rates for all municipalities throughout the state ($0.85/yd^2 for roadways and $0.95/yd^2 for elevated surfaces), each of Colorado's DOT Regions negotiates its own rates for maintenance agreements so the rates vary across the state. On the second point, New York State might consider allowing more flexibility by adjusting its rate, like Illinois, to keep pace with inflation. Currently the rates are legislated and it can be many years before they are adjusted.

5.2 Themes for Consideration

Beyond the notable practices, there were several themes that were repeated by either the cities or the states that bear mentioning since they present both challenges and potential opportunities when thinking about how to advance improved coordination and/or cooperation on state arterials in urban areas.

5.2.1 Financial Cost of Transfers. When abandoning a state roadway to the local municipality, the trend among the city/state pairs is for the state to first bring the local roadway to a state of good repair. In California and Pennsylvania, meeting the costs associated with this policy has been difficult and has delayed the transfers under their programs. In Washington State, cost of transfers was also noted, but in a slightly different way since in this case, the state has taken the local roadways into its state highway system but must now bear the costs associated with bringing them up to state standards.

5.2.2 Lack of Desire by Municipalities to Take More Roadways under Their Jurisdiction. Several city/state pairs noted a tension in terms of who wants to transfer what to whom. In the case of

Pennsylvania and Florida, for example, where it was clear that the state was trying to save money, the municipalities viewed abandonments of state highways more negatively. Representatives from Philadelphia made a point of noting that there are roadways within the city that would make more sense on the state highway system, but that the Commonwealth is not as interested in doing this. In Portland, a key reason for the city developing its own handbook for jurisdictional transfers was the existence of the state policy and the lack of a statutory requirement for cities to agree to such transfers. It is quite possible that New York City and possibly Buffalo would view such transfers similarly. Thus, it is worth exploring the approach taken by those locations (especially Washington State and Town of Castle Rock/Colorado) which sought to create benefit for both the state and the municipalities involved.

5.2.3 Need for Creativity and Flexibility. When reviewing transfer agreements, several of the particularly successful cases involved flexibility and creativity in terms. For example, when the state abandoned a portion of SH 33 in Denver, it paid less than the full cost in terms of bringing the roadway to a state of good repair, but the monies that were provided were directed to the Denver DPW instead of the General Fund as would normally have occurred. Further, the city and state negotiated an arrangement that allowed the state to retain jurisdiction over the bridge "until it becomes structurally deficient and eligible for funding." At that time the state will replace or repair the bridge "to the satisfaction of the city" and then abandon it at no extra cost.

Temecula's agreement with Caltrans was also flexible in accepting payment for the roadway after taking the deed since the city wanted the roadway as soon as possible and recognized the inability of the state to pay at that time. Similarly, the Town of Castle Rock and Colorado exhibited some creativity in the terms of the agreement when the city agreed to institute an access management plan during the period prior to the formal exchange of the deeds.

In a broader sense, Chicago's agreement to lease the Skyway also falls in this area as do efforts in Georgia and Texas aimed at identifying new sources of funding and new partnerships for roadways. The lease agreement between the City of Chicago and the SCC may, indeed, be a notable practice, but since it was only recently signed, the full success of this transaction for both parties remains to be seen.

Given the institutional complexities, especially in New York City, coupled with the legacy left by the initial description of the SAHS in New York's Highway Law and the existence of the current maintenance agreements, creativity and flexibility are important if the state and the cities determine that there is a need to address the SAHS in New York City and Buffalo in light of today's changing needs and traffic patterns. The city/state pairs explored in this study provide several examples as well as precedent that could prove useful in New York as well.

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TECHNICAL APPENDIX

Following are the case summaries for each of the cities reviewed for this study.

Atlanta, Georgia[1]

Georgia DOT District 7

Extent of the Roadway System (linear/centerline miles)[2]

Total roadway mileage within city	1,531	
City-owned and operated/maintained	1,314	
State-owned and operated/maintained	161	
State-owned; city operated/maintained	0	
Other-owned (commissions/authorities)	56	(county road; not sure who operates)
Federal-aid		
Interstate (11)		unavailable for the city alone
Arterials (12, 14, 16)		unavailable for the city alone
Collectors (17)		unavailable for the city alone

Background and Description of Responsibilities

The City of Atlanta straddles two counties: Fulton and DeKalb. Its Bureau of Traffic and Transportation is situated within the Department of Public Works. With one exception (traffic signals), state highways throughout the state are completely owned, operated, and maintained by the Georgia Department of Transportation (GDOT). However, the county or municipality through which a state highway passes is responsible for assisting GDOT in procuring the ROW for roads that are approved as part of the State Highway System, though costs will be reimbursed if the ROW is procured in GDOT's name [O.C.G.A. § 32-5-25 (2005) and O.C.G.A. § 32-3-3 (2005)].

With respect to traffic signals, GDOT permits local jurisdictions to place signals, but the municipality generally installs them, maintains, and operates them. There have been difficulties associated with this since the state needs are sometimes at odds with the city needs regarding signal timing on the state highway system. Enforcement on state highways within city boundaries is the responsibility of the city police; however, the Georgia State Patrol can also issue tickets on any and every public roadway throughout the state. Incident management on the freeway system, however, falls mainly under the state's lead.

Funding Mechanisms

In terms of funding for current state roadways, as per the Georgia Constitution, proceeds from motor fuel taxes may only be utilized for roadways and bridges. Georgia subscribes to what is termed a "balanced" approach for distributing both state and federal funding. Transportation funding is allocated equally among the state's thirteen congressional districts [O.C.G.A. § 32-5-30 (2005)]. However, this has been a source of some contention since this system does not take into account the extent of the system, vehicle miles traveled, and other such factors. The result is that the more urbanized areas of the state believe they are not allotted an equitable proportion of the funding.

In recent years, there has been legislation to allow public-private partnerships for roadways as another means for funding. Referred to as the Public-Private Initiative, the legislation allows the state to consider solicited or unsolicited proposals, describes the factors that should be involved in GDOT's decision on moving forward to accept such proposals, and describes the process through which such proposals are vetted [O.C.G.A. § 32-2-79 (2005)]. If a proposal has successfully completed the process and is selected (which has not occurred to date), the funding mechanisms may "include tolls, fares, or other user fees and tax increments for use of the transportation facility that is the subject of the proposal." GDOT can also seek to obtain federal funding or may "agree to make grants or loans to the operator from time to time from amounts received from the federal, state, or local government or any agency or instrumentality, including, but not limited to, the state Road and Tollway Authority and the Georgia Highway Authority" [O.C.G.A. § 32-2-80 (2005)].

In terms of process, GDOT can consider unsolicited proposals only if they meet the following qualifications:

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[1] Except where otherwise noted, the information on Atlanta, GA is derived from Mark Demidovich, Assistant state Traffic Operations Engineer, Georgia Department of Transportation (GDOT), Personal Communication, 12/9/05.

[2] GDOT, Office of Transportation Data, *City Mileage Report as of 12/31/2003*, Report 1DPP449-PDS, http://www.dot.state.ga.us/dot/plan-prog/transportation_data/400reports/2003/dpp449_2003.pdf) (accessed 12/1/05).

- They are "unique and innovative" and "not substantially similar" to other transportation projects already in the state Transportation Improvement Program (STIP). If similar projects already exist, then they must not have full funding at the time the unsolicited proposal is submitted.
- They are independently originated and developed by the proposer.
- They include details and information relating to how the project benefits the public, the costs associated with its development, and any fees required for submission [O.C.G.A. § 32-2-79 (2005)].

Once the proposal is submitted and found to meet these qualifications, GDOT needs to provide public notice and provide a period of time for competing proposals. Once any other proposals are submitted, GDOT determines whether any additional proposals warrant further evaluation and then proceeds to evaluate all the proposals based on the following criteria:

- Degree to which the proposal is unique and uses innovative methods, approaches, or concepts;
- Scientific, technical, or socioeconomic merits;
- Potential contribution to the department's mission;
- Capabilities, related experience, facilities, or techniques described;
- Qualifications, capabilities, and experience of key personnel; and,
- Any other appropriate factors [O.C.G.A. § 32-2-79 (2005)].

After GDOT has finished its evaluation, it is supposed to transmit the findings to the Evaluation Committee for further review. Only after the Evaluation Committee has finished its review and makes a recommendation can GDOT enter into an agreement. Also, as stipulated in the legislation, at least two weeks prior to approval of any project, GDOT must present a report to the Governor and the House and Senate transportation committees noting their intent to negotiate. This report and its accompanying letter of intent must be approved by the state Transportation Board.

Planning/Programming
Construction and reconstruction performed on state arterials within the City of Atlanta are the responsibility of GDOT, though it will coordinate with Atlanta on utility and signal issues. Because GDOT is responsible for the roadways, in terms of legal mandates and liability, municipalities are "relieved of any and all liability resulting from or occasioned by defective construction on those portions of the state highway system or county road system lying within its corporate limits or resulting from the failure of the department or county to maintain such roads…unless the municipality constructed or agreed to perform the necessary maintenance of such road" [O.C.G.A. § 32-4-93 (2005)].

Transfers of Responsibility
There is legislation that allows the state to acquire in "fee simple or in any lesser interest, including scenic easements, airspace, and rights of access….for present or future public roads or other transportation purposes" [O.C.G.A. § 32-3-1]. Conversely, when "deemed in the public interest," GDOT, counties, or municipalities may "substitute for, relocate, or abandon any public road that is under its respective jurisdiction, provided that a county or municipality shall first obtain the approval of the department if any expenditure of federal or state funds is required" [O.C.G.A. § 32-7-1 (2005)]. However, permanent abandonments are rare.

More often, one sees temporary transfers of jurisdiction to allow the state to aid in reconstruction of a particular roadway for a particular purpose. Such temporary transfers are designated with a 700 series state highway number. One such example is provided by the temporary transfer that occurred when the new aquarium was being built inside the Atlanta city limits. The surrounding streets were not capable of handling the increased tourist traffic. The city requested state assistance since the Atlanta Bureau of Traffic and Transportation (within the Department of Public Works) does not generally perform road improvement projects. To do this, a temporary state route designation was provided, allowing the state to design and build the facility up to current standards. The roadway was then turned back over to the city.

Special Considerations
- Primary responsibility for state highways remains with the GDOT
- Public-Private Initiative

Baltimore, Maryland[3]

Extent of the Roadway System (linear/centerline miles)[4]

Total roadway mileage within city	1,947
City-owned and operated/maintained	1,891
State-owned and operated/maintained	0
State-owned; city operated/maintained	32
Other-owned (commissions/authorities)	24
Federal-aid	
Interstate (11)	50
Arterials (12, 14, 16)	341
Collectors (17)	157

Background

Baltimore city is a separate municipality in Maryland from Baltimore County. With the exception of 24 centerline miles of toll facilities located on interstates, the City of Baltimore is responsible for all roadways within its boundaries. Indeed, Maryland's State Highway Administration does not include Baltimore city in any of its engineering districts. There are no designated state routes running through Baltimore city.

One piece of history that bears mentioning is the background related to the development of the Interstate system within the City of Baltimore. The city began considering a system of expressways as early as the mid-1940s, but for two decades nothing moved beyond debates and arguments. This was partly the result from significant community opposition and partly from two provisions in Baltimore's home-rule Charter that made it difficult to move beyond this situation in an increasingly politicized environment:

1. The city Council had the sole authority to initiate condemnation proceedings for public works and/or highway projects;
2. The city Planning Commission had the power to reject any state highway plans that did not conform to the city's master plan.[5]

By the 1960s, the U.S. Bureau of Public Roads, which had been overseeing the building of interstates around the country, was increasingly frustrated in its dealings with Baltimore, having seen several proposals rejected at that point. In 1967, as a means for moving ahead, the Bureau of Public Roads helped create the Interstate Division for Baltimore city (IDBC) under the Maryland State Highway Administration. Funded by the Bureau of Public Roads (which was became the Federal Highway Administration under the newly created USDOT this same year), the IDBC functioned as a joint city-state agency. Its main functions were to "administer the planning, design, right-of-way acquisition, and construction of Interstate highways within the City of Baltimore."[6] The IDBC remained in place until the final piece of the Baltimore Interstate system (the Fort McHenry I-395 link-up to I-95) was completed, at which time it was terminated.

Description of Responsibilities

With respect to the interstates, the Maryland Transportation Authority, a state agency, is responsible for operations and maintenance, including lighting, on the following segments: 12 miles on I-95 and 1 mile on I-395, including the Fort McHenry Tunnel and approaches; 8 miles of I-895, including the Baltimore Harbor Tunnel and approaches; and 3 miles of I-695 including the Francis Scott Key Bridge and approaches. Beyond these sections, the city is responsible for all maintenance and operations on the remainder of the interstates running through Baltimore, including but not limited to paving, medians, striping, (re)construction, and design.

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[3] Except where otherwise noted, the information on Baltimore is derived from Mike Rice, Deputy Director, and Kevin Kelly, Legislative Officer, Baltimore City Department of Transportation , Personal Communication, 11/28/05.

[4] These figures were compiled from the following sources: State Highway Administration of Maryland, Office of Planning & Preliminary Engineering, Highway Information Services Division, "Form SHA-HISD-4: Highway Mileage on State, state Toll, County & Municipal Systems," and "Form HISD-FCMI-ALL: Highway Mileage by Functional Classification – State, State Toll, County, and Municipal Systems," http://www.sha.state.md.us/shaservices/trafficreports/2004_HISD_REPORTS.pdf (accessed 11/29/05).

[5] Raymond Mohl, *The Interstates and the Cities: Highways, Housing, and the Freeway Revolt* (2002), p. 85, http://www.prrac.org/pdf/mohl/.pdf (accessed 4/12/06).

[6] http://www.roadstothefuture.com/Fort_McHenry_Tunnel.html (accessed 4/12/06).

There are some concerns relating to coordination in operations and maintenance at the city border for roadways that are owned and maintained by the city within Baltimore, but by the county or state beyond the city limits. ITS and signal technologies are of particular concern since they are often deployed only on the portion of the roadway within the city or just outside it. However, the key issue related to arterials within the City of Baltimore, however, is funding.

Funding
There are no financial maintenance agreements between Baltimore and the county or state. (Of note, there is at least one example of a maintenance agreement between the city and the neighboring county that denotes divided responsibilities for a Park-and-Ride facility located at the end of I-70, partly within the city and partly within the neighboring jurisdiction. However, this reflects a division of responsibility without attached funding.)

Currently, the financial distribution to Baltimore during each fiscal year is 11.5% of total highway user revenues (HUR) or $157.5 million, whichever is greater [Md. Transportation Code Ann. § 8-403]. Disbursements are made in monthly installments. Thirty percent of HUR minus the portion for Baltimore city is then allocated out to other counties and municipalities. Other counties in Maryland receive their distribution based on a combination of county roadway mileage and motor vehicle registration [Md. Transportation Code Ann. § 8-404]. This proportion has diminished over the years (Table A-1).

Table A-1. Historical Change in Proportion of Total Highway User Revenues Directed to Baltimore city

Year	% of Total HUR
1947	30.0
1969	20.0
1977	17.5
1987	15.0
1996	11.5

According to Md. Transportation Code Ann. § 8-408 (2005), HUR may be used to pay for or finance the following:

- Costs incurred in construction, reconstruction, or maintenance of highways and streets;
- Costs incurred by its police department for carrying out traffic functions and enforcing laws;
- Costs incurred in other highway-related activities, including:
    - Lighting, stormwater drainage, street cleaning (not including the cost of collection of garbage, trash, and refuse);
- Payment of debt service on bonds or other evidences of obligation for:
    - Construction, reconstruction, or maintenance of highways and streets;
    - Any other highway activities, including lighting, and stormwater drainage;
- Cost of transportation facilities (defined as airports, highways, ports, railroad, and transit facilities [Md. Transportation Code Ann. § 3-101]); and,
- Students' costs of discounted Maryland Transit Administration fares for eligible public school students (through FY 2006)

On an annual basis, the City of Baltimore must provide a report to the Governor and State Highway Administration showing actual costs of the preceding fiscal year and the expenditure budget of the current fiscal year, identified by allowable costs [Md. Transportation Code Ann. § 8-412 (2005)].

Transfers of Responsibility
The current system of roadway responsibilities has been in place since 1947. In 1992, a transfer of ownership occurred as the Fort McHenry Tunnel and I-395 link-up, the final portion of the Interstate highway network, was being completed. The project involved an $800 million capital improvement overseen at the time by Maryland State Highway Administration's Interstate Division for Baltimore city.

The transfer involved turning over to the state (specifically, the Maryland Transportation Authority) the city-owned portion of the roadway as it became part of the Interstate. The transfer was done through an agreement under which the city paid the state $5 million/year for up to 15 years while the roadway was being upgraded to become part of the Interstate system. The last payment was made in 2003.

Special Considerations

- Maryland DOT does not have an engineering district that includes the City of Baltimore
- Creation of the IDBC as a means for reconciling disputes between the city, the state, and the federal government on the building of the interstates

Chicago, Illinois[7]

Illinois DOT Region 1, District 1

Extent of the Roadway System (linear/centerline miles)[8]

Total roadway mileage within city	3,816	
City-owned and operated/maintained	3,432	
State-owned and operated/maintained	117	
State-owned; city operated/maintained	255	
Other-owned:	5	County-owned and operated
	7	City-owned, privately operated (Skyway)
Federal-aid		
Interstate (11)	64	
Arterials (12, 14, 16)	487	
Collectors (17)	501	

Background and Description of Responsibilities

The City of Chicago is situated primarily within Cook County, though a small section of the city is located in DuPage County. As per the Illinois Const., Art. VII, § 6 (2005), Chicago is a home rule unit. Roadways within the municipality fall under the jurisdiction of the city, county, and state.

The city maintains responsibility for all facets of the roadways under their jurisdiction, including programming and planning, designing and construction, operations and maintenance, and enforcement (except on limited access expressways owned by the state). The state and county have similar responsibilities for the roadways under their jurisdiction within the city's borders. Several routes within the city have been formally identified as "intermodal connectors," that is relatively short roadways or segments that bear heavy truck volumes between freight terminals and the National Highway System. These roadways tend to be minor collectors and include, for example, a section of 47th Street between I-94 and Western Avenue, and a section of Pulaski Road between I-55 and 47th Street. In practice, these fall under the same responsibilities as other roadways, depending upon who has jurisdiction over them.

Recently, the Skyway, a city-constructed toll roadway that was owned, operated, and maintained by the city, was leased to a private entity, Skyway Concession Company, LLC (SCC). The terms of the agreement include a $1.83 billion one-time payment by the Concessionaire to the City of Chicago. In exchange, SCC has been granted a 99-year lease under which they will now be responsible for all operations and maintenance (for enforcement, they will rely on city Police, but will have to reimburse the city for these services) and related costs. The benefit for SCC is that they will have the rights to all toll and revenue collections.

The City of Chicago maintains the naming and advertising rights for the Skyway.[9] It also maintains several other rights regarding operations and maintenance. To ensure that current standards continue to be met on the Skyway, the Agreement between the City of Chicago and the SCC ensures that the city maintains the

> …right to enter the Skyway and each and every part thereof at all reasonable times and upon reasonable prior notice: (i) to inspect the Skyway or determine whether or not the Concessionaire is in compliance with its obligations under this Agreement…; (ii) in a Concessionaire Default then exists, to make any necessary repairs.…[10]

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[7] Except where otherwise noted, the information on Chicago, IL is derived from several representatives of the Chicago Department of Transportation (CDOT), Electronic Communication 1/10/06, and the Illinois Department of Transportation (IDOT), Electronic Communication, 4/25/06.

[8] Illinois Department of Transportation (IDOT), *Illinois Travel Statistics, 2004*, p. 21, http://www.dot.il.gov/travelstats/2004its.pdf (accessed 1/12/06); Electronic communication from Chicago DOT representative. Note that the figures from both sources could not be reconciled. The total number of miles, and the federal-aid miles shown are from the IDOT publication. However, the accuracy of the city-owned and operated mileage is questionable, as is the accuracy for the state-owned and city operated and state-owned and operated. Nevertheless, this still gives a sense of system size.

[9] Gregory Meyer, "Chicago Skyway Naming Rights Going Up for Bid," *Chicago Business* (4 April 2006), http://www.chicagobusiness.com/cgi-bin/news.pl?id=20323 (accessed 4/27/06).

[10] Chicago Skyway Concession and Lease Agreement By and Between the City of Chicago and Skyway Concession Company, LLC (October 27, 2004), p. 35, Sec. 3.7(a).

The city also reserves the right to enter the Skyway in the event of an emergency; to design, construct, and operate streets adjacent to, above, or beneath the Skyway (at the city's expense), and to install, design, manage, operate, repair, existing and/or future utilities in, on, along, under, across, over, and through the Skyway (at the city's expense).[11]

Under a separate document, the city has specified the specific tasks that must be performed by the Concessionaire in terms of operations and maintenance, to ensure compliance with city, state, and Federal regulations. A 180-page *Maintenance Manual* specifies the frequencies that such tasks must be performed as well as the maximum time duration from the time a particular deficiency is "or should reasonably be detected" to the time it is remedied. Table A-2 provides some examples of the specificity that is given with respect to these maximum time durations.

Table A-2. Maximum Time Duration Within Work Must Be Performed

Work to Be Performed (Selected Examples)	Maximum Time Duration
Roadway Work	
Bituminous Surface Repairs	14 days
Pothole Repairs – Temporary/Permanent	24 hours/3 months
Joint/Crack Repairs	6 months
Grinding and Profiling Repairs	3 months
Pavement Delineation Item	
Reflective Pavement Markers	14 days
Roadside Delineators	30 days
Pavement Markings – Letters, Symbols/Striping	45 days/30days
Drainage	
Roadway Frames & Grates	48 hours
Roadway Structures	30 days
Roadway Pipes & Conduits	30 days
Bridge Drainage Systems	48 hours
Earth Slopes	30 days
Ditches	60 days
Erosion Control – Temporary/Permanent	24 hours/60 days
Landscape/Roadside Features	
Sight Distance Obstruction	2 hours
Vegetative Waste	24 hours
Roadside Litter (Illegal Dumping)	2 hours
Fencing Repairs – Temporary/Permanent	24 hours/30 days
Lighting	
Luminaries	5 days
Sign Illumination	12 hours
Incidents	
Graffiti Removal	4 hours
Animal Incidents – Damage/Carcass Removal	24 hours/4 hours

From: URS Corporation, Concession and Lease Agreement for the Chicago Skyway Toll Bridge System, Volume I of II: Maintenance Manual – FINAL

While there is great specificity provided for maintenance and operations responsibilities in the *Maintenance Manual*, the Agreement notes that "The Operating Standards shall not be deemed to be violated by occasional or incidental acts or omissions, including any occasional or incidental failure to comply with specific requirements set forth in the Operating Standards." It further notes that failures to meet specific time limits and frequencies are acceptable as long as they are "not inconsistent with procedures that are reasonably designed to achieve compliance with the requirements set forth in the Operating Standards."[12] In other words, what constitutes a violation of the Operating Standards is somewhat open to interpretation.

[11] Chicago Skyway Concession and Lease Agreement, p. 35, Sec. 3.7(a).
[12] Ibid., p. 45, Sec. 6.1.

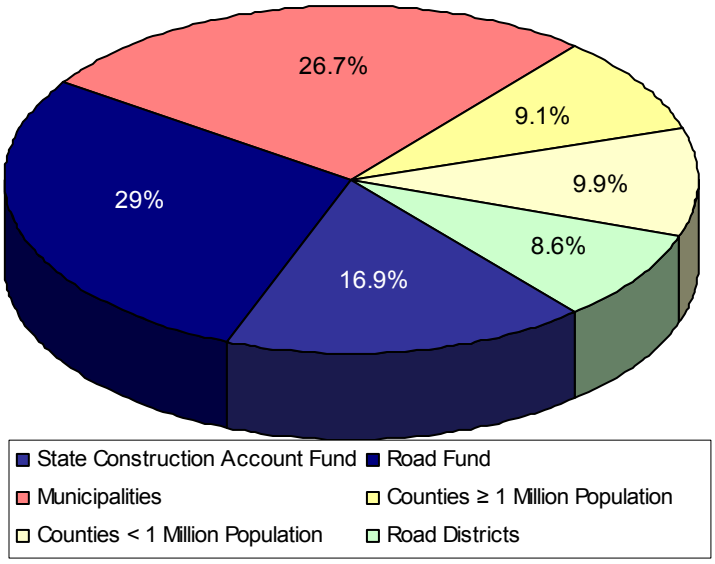
If the Concessionaire is deemed to be in default, the city may "cure" the Concessionaire default and charge they SCC for the "costs and expenses reasonably incurred by the city" along with an administrative fee of 15% of the costs and expenses.[13]

Funding Mechanisms

Monies derived from motor fuel taxes in the State of Illinois are placed into the Motor Fuel Tax Fund. Of the revenues collected each year, a specified portion is first taken out for the state Construction Account Fund, the state Boating Act Fund, and the Grade Crossing Protection Fund. After these monies are allocated, costs related to the administration of the Motor Fuel Tax Fund, both by the Department of Revenue and the Department of Transportation are taken [35 ILCS 505/8 (2005)].

Of the remaining monies in the Motor Fuel Tax Fund, the remaining apportionment provides 45.6% to the state and 54.4% to the counties, municipalities, and road districts. Within the state funds, 37% are apportioned to the state Construction Account Fund and the remainder to the Road Fund [35 ILCS 505/8 (2005)]. In years when there is bond indebtedness, the Road Fund must first be used to pay the principal and interest. Any surplus can then be used for various IDOT roadway activities [30 ILCS 105/8.3 (2005)]. Of the 54.4% directed toward local governments, 49.10% is directed to municipalities, 16.74% to counties with populations of 1 million or more, 18.27% to counties with fewer than 1 million in population, and the remainder to the road districts [35 ILCS 505/8 (2005)]. Figure A-1 provides a pictorial of the appropriation formulas (monies directed to the state are shown in shades of blue).

Figure A-1. Distribution of Motor Fuel Tax Funds Received by IDOT and Local Governing Entities after Initial Allocations



In addition to the appropriations described above, on an annual basis, the City of Chicago receives funding for maintenance of state highways within their jurisdiction via the state Maintenance Agreement, which covers specific state-owned roadways or segments thereof. While this Agreement is renewed each year, responsibilities have remained largely unchanged since the first agreement many years ago, and are described as including pothole repair, patching, snow removal, and street cleaning. An annual payment for these services is provided to the city by the state. The annual payment is based upon a rate per lane mile that takes into account average daily traffic. Thus, the rate varies from as low as $165/lane mile to as high as $5,931/lane mile, for a total in FY 2005 (July 1, 2004 to June 30, 2005) of $3.9 million.[14]

The specific rates are consistent for each municipality throughout the state, and Chicago has been hoping to modify them so that there can be different reimbursement rates for different districts. Of note, to keep pace with inflation the rates are readjusted each year according to the Construction Cost Index published in *Engineering News Record*. Monies under the Maintenance Agreement can only be used for thru-lanes

[13] Chicago Skyway Concession and Lease Agreement, p. 86, Sec. 16.1 (b, iii).
[14] State of Illinois, Department of Transportation, Computation Sheet- Municipal Maintenance for the Period beginning July 1, 2004, ending June 30, 2005, District No. 1, City of Chicago.

so the city must cover costs associated with parking, bike lanes, etc. even when located on state-owned roadways.

While the payment does not, according to representatives from Chicago DOT (CDOT), cover the full costs borne by the city for the maintenance of the designated roadways, the city agrees to the terms because it allows them to maintain a higher level of service than would otherwise be possible if the state were maintaining the roadways. Of note, for the roadways or segments that the state continues to maintain, the state prioritizes its "numbered" route system first. This prioritization, coupled with lack of sufficient funding to maintain the entire system, often leads to significant delays on repairs to "non-numbered" roadways within the city. When this occurs, the city tends to seek federal funding to help repair these state-owned roadways.

The city also receives some capital funding, derived from the May 1999 Illinois FIRST (Fund for Infrastructure, Roads, Schools, and Transit) capital program. Out of this $12.5 billion program over five years, IDOT gave CDOT $40 million each year. Though the FIRST program has since ended, the $40 million continues to be given and is used by Chicago DOT primarily for maintenance, and particularly for road resurfacing (on all roads within its borders, including city and state roadways).

Capital funding generally is derived from the federal government and passes through the state to the city. Two items are important to note here. First, historically, the state has provided the local match for these funds, but it has recently informed the City of Chicago that this will no longer be the case. Second, in the past year, the state has not provided to the city the funds that were designated in federal earmarks. While the city will likely get the funds at some point during the lifetime of SAFETEA-LU, the fact that the city is not sure when the monies will come, makes it difficult for planning and programming.

Planning/Programming
On planning and programming, (re)construction and design, the various jurisdictional entities take the lead over their portions of the roadways. However, this can prove difficult when multiple entities have jurisdiction over multiple segments of a single roadway, as is the case, for example, with Wacker Drive. Also of concern is the fact that within Chicago, though the city plans and designs for (re) construction on roadways within its jurisdiction, it still must meet state design requirements for any (re)construction employing federal or state transportation funds. With state design requirements that are stricter than federal requirements, the result is often multiple variances, lengthy time delays, and cost increases.

Transfers of Responsibility
Illinois State Code allows for the transfer of roadways between the state and counties or municipalities. According to 605 ILCS 5/4-203 (2005), IDOT may "add additional highways to the state highway system by laying out new highways or taking over highways from the county highway system, the township and district road system or the municipal street system; but such highways so taken over into the state highway system shall be highways which form a logical part of the state highway system for traffic purposes." The Code formally stipulates that IDOT must notify the appropriate public officials, in writing, that it intends to take over a particular roadway or segment. It further notes that once such a roadway is taken over IDOT will have "exclusive jurisdiction and control over only that part of such highway which the Department has constructed, or which the local authority has constructed and which has been taken over by the Department, and for the maintenance of which the Department is responsible, including the hard-surfaced slab, shoulders and drainage ditches."

From time to time, the State of Illinois has looked to "vacate" (i.e., relinquish or abandon) non-numbered state routes from the state highway system. It has also transferred jurisdiction when it owned a small portion of a larger roadway and wanted to "clean up" its overall system. According to 605 ILCS 5/9-127 (2005), except in certain specified cases, "whenever any highway or any part thereof is vacated under or by virtue of any Act of this state or by the highway authority authorized to vacate the highway, the title to the land included within the highway or part thereof so vacated, vests in the then owners of the land abutting thereon…." It further specifies the conditions under which the highway authority can vacate a highway under its jurisdiction and convey its interest to other organizations or third parties.

Special Considerations
- Skyway privatization (but retention of naming and advertising rights)
- Adjustable rate for maintenance costs to take annual inflation into account

Denver, Colorado[15]

Colorado DOT Region 6

Extent of the Roadway System (linear/center line miles)[16]

Total roadway mileage within city	1,823
City-owned and operated/maintained	1,739
State-owned and operated/maintained	54
State-owned; city operated/maintained	30
Other-owned (commissions/authorities)	0
Federal-aid	
Interstate (11)	29
Arterials (12, 14, 16)	299
Collectors (17)	211

Background

Denver city is contiguous geographically with Denver County; both are governed and operated by the same governmental entity. Prior to 1958, municipalities were responsible for maintaining state highways within their boundaries. However, after Town of Greenwood Village v District Court (1958), the statutes were amended and now, "where any part of the state highway system extends into or through a city…the construction and maintenance of such systems shall remain the obligation of the department of highways" [C.R.S. 43-2-103 (2005)]. In areas where the municipality has "adequate facilities," the state may still enter into an agreement with them for maintenance and construction [C.R.S. 43-2-103 (2005)]. Denver has entered into several such agreements with CDOT.

Description of Responsibilities

With respect to ownership of roadways, acquiring ROWs and the cost thereof falls upon either the state or locality based upon mutual agreement. On streets designated as part of the state highway system, the local jurisdiction controls the curbs and outwards, with the right to construct utilities underground as long as openings are promptly repaired. The local jurisdiction provides lighting and storm sewers on these roadways at its own expense [C.R.S. 43-2-135 (2005)]. Of note, "if new storm sewer facilities are necessary in construction of streets by the department of transportation, the cost of such facilities shall be borne by the state and municipality as may be mutually agreed upon…." [C.R.S. 43-2-135 (2005)]. Colorado DOT (CDOT) can prohibit signs between curbs and is responsible for installing, operating, maintaining, and controlling all traffic control signals, signs, and devices (including striping, lane-marking, and channelization) [C.R.S. 43-2-135 (2005)].

In Denver, the city operates and maintains all state highways, including traffic signals (1,250 total signals in the city, with roughly 280 on state highways), traffic signs, striping, and other markings, medians, sidewalks, etc. though as described above, the state is responsible for the maintenance of the travel roadway by Statute. The state is responsible for all maintenance on the interstates, except for lighting, which the city maintains. Generally, Denver DPW officials prefer this, even though it is much more costly, since it allows them to offer a much higher level of service than the state could provide. As an example, DPW representatives explained that if a traffic signal malfunctions, CDOT expects to be on the scene within 4 hours; Denver DPW's response time is less than 45 minutes (and it usually is there within 15 minutes). CDOT also sees a benefit and prefers to contract with the municipalities and counties for maintenance where possible since as the number of lane miles have grown throughout the state over the past fifty years, the same employee cap of 3,000 employees for CDOT remains from the early 1950s. making it difficult to maintain the necessary level of service everywhere.

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[15] Except where otherwise noted, the information on Denver is derived from Robert Kochevar, City Traffic Engineer, Denver Department of Public Works (DPW); Matthew Wager Assistant Director, Denver DPW; and Dan Roberts, Street Maintenance Director, Denver DPW, Personal Communication, 11/15/05, and from Pamela Hutton, Regional Transportation Director, Denver Metro Area, Colorado Department of Transportation (CDOT), Personal Communication, 12/7/05.

[16] These figures were compiled from the following sources and confirmed during the discussion with the Denver DPW representatives: Colorado DOT (CDOT), "Roadway Statistics, 2004 Street Statistics," http://www.dot.state.co.us/App_DTD_DataAccess/Statistics/dsp_folder/Roadway/2004/2004cityStreets_Mileage.htm (accessed 11/10/05); "Roadway Statistics, 2004 State Highway Statistics," http://www.dot.state.co.us/App_DTD_DataAccess/Statistics/dsp_folder/Roadway/2004/2004CLMbyCounty.htm (accessed 11/10/05); and from calculations performed on data downloaded from the CDOT website, http://www.dot.state.co.us/App_DTD_DataAccess/GeoData/index.cfm?fuseaction=GeoDataMain&MenuType=GeoData (accessed 11/10/05).

On enforcement, the city deals with enforcement on all roadways within city boundaries, including state highways and interstates.

Funding Mechanisms
In terms of funding, any municipality can loan to the state DOT the funds necessary to accelerate the completion of state highway projects. Such loans are repaid by funds for the maintenance and construction of public highways [C.R.S. 43-2-104.5 (2005)]. (Denver has not made use of this Statute.)

For the purposes of funding, Denver falls under the Statutes regarding municipalities, not counties. The city has three funding mechanisms for the maintenance and operations of the state highways within its jurisdiction: (1) legislative apportionment; (2) maintenance contract for roadways; (3) maintenance contract for traffic control devices.

2. The legislative apportionment is derived from various sources, including gas tax, sales tax, and property taxes. Nine percent of the Highways Users Tax Fund is apportioned to cities and incorporated towns subject to annual appropriations [C.R.S. 43-4-208 (2005)]. These funds may be utilized for construction, reconstruction, maintenance, repair, engineering, equipment, improvements, or administration of the system of streets within the municipalities, including state highways. Eighty percent of these funds are allocated in proportion to the adjusted urban motor vehicle registration within the municipality.[17] Twenty percent of the funds are allocated in proportion to the mileage of open, used, and maintained streets within the municipality, excluding the mileage of state highways. There has been no interest in modifying the apportionment [C.R.S. 43-4-208 (2005)].

3. The roadway maintenance contract is a five-year contract between the city and the state.[18] Monies from the contract are directed to the General Fund. The current contract was last negotiated in 2002, and stipulates an annual payment of $5,500/center line mile.[19]

   Maintenance responsibilities include the following:
   - Removal of snow and application of anti-icing/de-icing materials;
   - Routine pavement maintenance, including patching, spot reconditioning, spot stabilization, spot seal coating;
   - Covering/removing graffiti from bridges and or highway appurtenances; and,
   - Warning the state's Transportation Maintenance Superintendent representative, verbally and in written format, of any dangerous condition.[20]

   If work is not performed adequately, the state notifies the city which has 24 hours to correct the noted deficiency. If the city "does not or cannot" correct the deficiency within that period, the state can do so and either deduct the cost from subsequent payments or bill the city directly.

4. For traffic control devices, the maintenance contract is a one-year agreement, automatically renewable unless either the city or state requests a review.[21] Monies from the contract are directed to the General Fund. The last time this agreement was renegotiated was in 1992, five years after the prior agreement.

   Among the responsibilities required under the contract are the following:
   - For traffic signals, at minimum, semiannual preventative checks of all equipment and materials, all routine maintenance, all emergency breakdowns or knockdown repairs, and installation and maintenance of all cross walks and stop bars;
   - For signs and pavement markings, maintenance and replacement.[22]

[17] Urban motor vehicle registration includes passenger, truck, truck-tractor, and motorcycle registrations. The adjusted registration is calculated by applying a factor to the actual number of registrations. This is intended to "reflect the increased standards and costs of construction resulting from the concentration of vehicles in cities and incorporated places" [C.R.S. 43-4-208 (2005)].
[18] The information in this section is derived from the Highway Maintenance Contract made between the State of Colorado and the City and County of Denver, 6 February 2002, Contract Control No. RC-10019, provided by Denver DPW.
[19] RC-10019, p. 4.
[20] RC-10019, p. 3.
[21] The information in this section is derived from the Maintenance Contract made between the State of Colorado and the City and County of Denver, 23 April 1992 (Senate Bill 8), Contract Control No. RC-IX004, provided by Denver DPW.
[22] RC-IX004, p. 3.

For these services, the state makes monthly payments of $170/signal and $250/mile for signing and striping.[23] The state reserves the right to conduct periodic inspections. If the city is deemed to be deficient in its responsibilities, it must take action within 24 hours of notice by the state. If this does not happen, the state can correct the deficiency and can either deduct the actual cost of the work from subsequent payments or bill the city directly for the work.

While the state used to require detailed reporting on the funds spent under the maintenance agreements, this is no longer the case. Of note, the two different maintenance contracts do not necessarily cover the same roadways, though some overlap exists. Also, each Region negotiates its own rates for maintenance agreements and they vary across the state. In negotiating such agreements, CDOT tends to begin with a baseline of what it would cost the state to maintain the roadway at a level of service consistent with state requirements. This information is calculated through a software program that tracks maintenance costs on every section of state-owned roadways. Then, the scope of services (e.g., paving or potholes only, trash collection) is factored in.

Planning/Programming
The city and state have a very close, if informal, work relationship at the staff level. When the state is planning changes on the state highways, it usually sends the plans to the city in advance for input and coordination. Of note, recognizing that Denver's standards exceed state standards, in some cases, the state builds to Denver's standards. For example, the normal mounting for signs throughout Colorado is wood posts, but in Denver steel posts are used. When the state places new signs within Denver, they utilize steel posts with the initial expense paid by the state; the city then takes over maintenance where contracted (see Funding). At times when Denver undertakes capital programming and construction on state highways, usually involving non-roadway components such as medians, sidewalks, and curbs, the city plans, designs, and finds funding. While the city may program the funding and do the construction, plans need to be approved by the state. The state's response is generally positive as long as it can be shown that there will be no negative effect on traffic flow.

Transfers of Responsibility and/or Jurisdiction
Highways are abandoned to local jurisdictions from time to time. For each transfer, an intergovernmental agreement (i.e., a contract) is developed and then approved by the city Council and the Highway Commission. The Highway Commission is an 11-member Commission, with one representative appointed by the governor from each Transportation Commission District.[24] Each member serves a four-year term. The Commission is responsible for promulgating and adopting state budgets and programs, for determining priorities, and identifying and dealing with abandonments [C.R.S. 43-1-106 (2005)].

Most recently, a portion of State Highway (SH) 33 was abandoned under a contract made on 29 August 2001 between the State of Colorado and the city and County of Denver.[25] Though it had been designated as part of the state highway system many years ago, it functions as a local roadway and the state Transportation Commission adopted Resolution TC-954 on 24 May 2001, authorizing abandonment of the section by the state. An agreement was negotiated after determining the cost to bring the roadway up to current standards. While the state paid less than the full cost, the monies that were provided ($4.12 million) were directed to Denver DPW (rather than the General Fund) for improvements on the roadway.

Of interest, the terms of the contract also included a bridge that formed a portion of the abandoned highway that would be retained by CDOT "until it becomes structurally deficient and eligible for funding, at which time the bridge will be replaced or repaired to the satisfaction of the city, by the state and then abandoned to the city at no additional cost to CDOT."[26]

While south of the Denver metropolitan area, another transfer of note occurred in the Town of Castle Rock (est. pop. 35,000) in Douglas County, Colorado. While much smaller than Denver, it is worth mentioning this transfer since it involved, in essence, a "swap" of roadways between the local jurisdiction and the state. A local roadway had been planned and built as a four-lane arterial with a median that ran

[23] RC-IX004, Exhibit C.
[24] The Transportation Commission Districts should not be confused with CDOT's 6 Engineering Regions.
[25] The information in the following paragraphs is derived from the contract made between the State of Colorado and the City and County of Denver, 29 August 2001, Contract Control No. RC-10018, provided by Denver DPW.
[26] RC-10018, p. 3.

around the outside of the town, while the formal state highway (SH 86) was a two-lane arterial that was now serving as a main street. Both the Town of Castle Rock and CDOT agreed that the ownership swap was a logical decision based on the following:

- Founders Parkway (the four-lane arterial) provided a logical link on the state highway system;
- State Highway 86 (the two-lane highway) had developed into a more local, community-based roadway along the section under discussion; and,
- Directing traffic onto Founders Parkway to reach I-25 would reduce "intrusive traffic – especially trucks – currently entering the downtown retail area to reach I-25." It was believed that this step would also increase safety in the downtown area.[27]

The following points were additionally noted: the volume of traffic on Founders Parkway was expected to be two to three times greater than on SH 86 by the year 2030 and the Founders' alignment was more direct for traffic traveling along the nearby interstate and US highway.[28]

Of concern, both roadways needed to be brought up to state standards. Founders Parkway did not, for example, provide paved shoulders and pavement reconstruction on the main roadway was needed as well. The agreement, which resulted in a roughly 50-50 split in terms of costs, called for improvements by the state on the four-lane highway while any improvements on the two-lane highway would be dealt with by the Town. Castle Rock acquired the ROW for the four-lane so the state was able to include room for shoulders and other design enhancements. The ROW was transferred when the roadways were exchanged. During the four to five years of work until the roadways were exchanged, the Town agreed to an access management plan on the four-lane highway that instituted a high level of access management even though a great deal of development had been planned along the corridor.

Special Considerations

- Denver DPW prefers to operate and maintain the state highways, including traffic signals since it allows them to have a higher level of service than that provided by the state.
- Two separate maintenance agreements are in place – one for selected and identified roadway maintenance; one for selected and identified traffic signals
- Each region negotiates its own rates for maintenance agreements with the state.
- If Denver does not respond to a reported deficiency on a state highway within 24 hours, the state may correct the situation and either deduct the expense from future payments or bill the city directly.
- Under the terms of transfer of State Highway 33, it was agreed that the bridge on that roadway would remain under the state's jurisdiction until it is ready for replacement or repair.
- Town of Castle Rock roadway "swap."

[27] Wilson & Company, "SH 83-86 Corridor Optimization Plan – Appendix C: Right-of-Way Exchange, Founders Parkway and State Highway 86," p. 1, http://cdot.info/Commission/Documents/AppendixCExchange.pdf (accessed 1/6/05).
[28] Ibid.

Detroit, Michigan[29]

Michigan DOT Metro Region, Detroit Transportation Service Center

Extent of the Roadway System (linear/centerline miles)
unavailable

Background
The City of Detroit is situated within Wayne County, which together with Oakland, Macomb, and St. Clair Counties, make up the Michigan Department of Transportation's (MDOT) Metro Region. Of MDOT's seven regions, the Metro Region has the largest population and accounts for 43% of all vehicle miles traveled on the Michigan Freeway system.[30] Within the Metro Region there are five international border crossings, including two of the busiest North American commercial crossings (the Ambassador Bridge and Blue Water Bridge), and the second busiest passenger crossing on the US-Canadian border (the Detroit-Windsor Tunnel).[31] Within each MDOT Region are several Transportation Service Centers (TSCs) that are responsible for operations and maintenance of state-owned roadways. Detroit is served by the Detroit TSC.

Description of Responsibilities
MDOT, Wayne County Department of Public Service (DPS), and the City of Detroit are all responsible for roadways within the City of Detroit. interstates, US highways, and state highways (which, when named, are given an "M" designation) are considered "trunklines." There are also County Highways and County Primary Roads (which function primarily as collectors in the urban areas), in addition to local roadways.

On state-owned roadways within Detroit, MDOT is responsible for all maintenance and operations, including lighting and signals. Operation of signals can cause conflicts at times since the state is primarily interested in keeping traffic flowing on the trunklines, while local jurisdictions which may have roadways that cross these trunklines often prefer to see slower traffic movement.

According to MCL § 247.651b (2006), MDOT "shall bear the entire cost of maintaining…all state trunkline highways including highways within incorporated cities and villages except that the cost of maintaining additional width for local purposes…shall be borne by the city or village." MCL § 691.1402 (2006) notes that sidewalks and crosswalks fall under the city's responsibility. While responsible for the maintenance on its roadways, the state does contract out the work and the cities and counties can bid. When a city is successful in its bid, it benefits by being able to maintain a larger workforce which can assist on the local roadways as well.

For County Primary Roads running with the city's jurisdictional boundaries, the Wayne County DPS provides all roadway maintenance, but the responsibility for lighting falls under the City of Detroit Department of Public Lighting.

Finally, for enforcement of and incidents on state roadways within the City of Detroit, the state takes primary responsibility.

Funding Mechanisms
Transportation funding in Michigan is particularly complex. Public Act 51 of 1951, which became effective on June 1, 1951, governs Michigan's appropriations for transportation programs. state revenues, which make up the bulk of total transportation funding (68.7% in FY 2003), are derived primarily from motor fuel taxes (50.3% in FY 2003) and vehicle registration fees (39.6% in FY 2003). Other state revenue sources for transportation include sales taxes on motor vehicles, and license and registration fees, and interest.[32] Federal funds accounted for 31.1% of total transportation revenues in FY 2003, and 0.2% were locally derived.[33]

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[29] Except where otherwise noted, the information on Detroit is derived from Unnamed Representatives in the Wayne County Department of Public Service, Personal Communication 4/24/06 and Michigan Department of Transportation, Personal Communication 4/28/06.
[30] Michigan Department of Transportation (MDOT), *Five Year Transportation Program, 2006-2010*, volume 8 (January 17, 2006), p. 117.
[31] Ibid.
[32] William E. Hamilton, *Act 51 Primer: A Guide to 1951 Public Act 51 and Michigan Transportation Funding*, House Fiscal Agency (May 2003), p. 3, http://house.michigan.gov/hfa/PDFs/act51.pdf (accessed 4/27/06).
[33] Ibid., p. 3.

All transportation directed funding is placed in the Michigan Transportation Fund (MTF). Deductions and allocations from this fund are guided by Act 51 and subsequent amendments to it. From the MTF, grants and administrative costs for overseeing Act 51 are taken for the following: Recreation Fund, Economic Development Fund, the General Fund, and the state Trunkline Fund (which also includes statutory grants for the Local Road Program and the Critical Bridge Fund). Once these deductions are taken, the remainder of the monies under the MTF is distributed among the following:

- The state Trunkline Fund (STF) – for construction and maintenance of the trunkline roadways and bridges and for MDOT administration expenses;
- Comprehensive Transportation Fund (CTF) – for public transportation, including capital and operating assistance; and,
- Local Road Agencies – for funding of local roadways in the counties and local municipalities.

With respect to the proportional share of these distributions, Public Act 308 of 1998 amended Act 51 to require that, on average, 25% of all federal MTF funds are distributed to local jurisdictions.[34] Specifically, the statute notes that between 23% and 27% of DOT-FHWA highway research, planning, and construction monies appropriated to the state shall be allocated to programs administered by local jurisdictions, after appropriate deductions are taken (including, for example, specific earmarks) [MCL § 247.660o]. Act 51 also provides that once the deductions are taken from the MTF, the balance of the total funds (i.e., state and federal) that are distributed to the STF, CTF, and local road agencies, must be allocated in the following proportions: state (39.1%), county road commissions (39.1%) and incorporated cities and villages (21.8%).[35]

The result of all these allocations for Detroit in FY 2004 was an allocation of $64.16 million from the MTF distribution after all other deductions were taken, and $2.08 million from the Local Program Fund, for a total of $66.24 million.[36]

Capital funding for roadways in Michigan has been a source of debate for some time now and derives in some ways from the rationale behind Act 51 itself. When it was initially written, the thought was that because public funds would be used for the public good, local governments would benefit and should thus be required to contribute to the extent that they could. MCL § 247.651c (2005) thus stipulates that while MDOT is responsible for costs of "opening, widening, and improving, including construction and reconstruction…all state trunkline highways…," incorporated cities shall participate in the cost of such efforts. The amount of participation is based on population:

- Cities with 50,000 or more in population (like Detroit) contribute 12.5% of the state contribution;
- Cities with populations of between 40,000 and 49,999 contribute 11.25% of the state contribution;
- Cities with populations between 25,000 and 39,999 contribute 8.75% of the state contribution; and,
- Cities with populations beneath 25,000 need not provide a matching contribution [MCL § 247.651c (2005)].

In 1951, however, many of the local communities did not have the means for generating the funds needed for the local match. Thus, Act 51 created the local distributions with the idea that these monies would be set aside, collecting interest, and then used to help cover the costs when the state began constructing or reconstructing roadways to become part of the trunkline system. Over the years, as the number of roadways grew and the operating and maintenance needs increased, these funds have been used instead for covering operating and maintenance costs in many local jurisdictions.

In current discussions, local municipalities would like to see the local distribution of funding remain in place but would like to see the provision related to their match of state funding repealed. The state would

[34] Hamilton, *Act 51 Primer*, p. 28.
[35] Ibid., p. 10.
[36] State Transportation Commission, Financial Operations Division, *Annual Report: Michigan Transportation Fund, Fiscal Year Ending September 30, 2004*, MDOT Report No. 139, Schedule C, http://www.michigan.gov/documents/FY2004_113939_7.pdf (accessed 4/27/06).

prefer that there be no local distribution of funding so that the state could use the monies directly on the roadways.

Planning/Programming
MDOT has a five-year revolving capital plan that is closely linked with its budget. While project selection is done through a public process, local municipalities are not directly involved in prioritizing specific projects – this is based on a formal asset management assessment. Indeed, local municipalities are generally brought in for comment *after* the initial scoping process. Projects are scoped out on a five-year basis, but each year, specific projects are prioritized based on a number of factors including information derived from MDOT's Ride Quality Forecasting System (RQFS), which "uses current condition data from the pavement management system to predict future network conditions at different levels of investment."[37]

On local roadways, the local municipalities deal with design, planning, and programming. While there is some effort to coordinate (re)construction planning with the local municipalities, this is not always successful for several reasons.

- *Different mechanisms for planning and programming.* MDOT and the local municipalities tend to program, plan, design, and budget differently. MDOT programs out five years and then budgets specific projects each year, so that when it undertakes designing and (re)construction, it knows the funds will be in place. The local municipalities tend to work on a one-year cycle, and usually complete their planning and designing before they have determined how to fund the actual (re)construction.
- *Difficulty meeting forecasted schedules.* While MDOT works on a five-year rolling program with annual priorities, it is not always able to meet its forecasted schedules for the (re)construction phase, which can make it difficult to coordinate effectively with local communities.
- *Political differences*. Recognizing the ongoing debate related to the cost-share with municipalities, it can be difficult when the state programs a project on a state trunkline within a local municipality and then expects that municipality to provide its share of the funding, when the local government may view other projects are more important within its jurisdiction.

Transfers of Responsibility
In 1992, then Governor John Engler outlined his vision for improving the transportation system in Michigan. Provisions under Build Michigan I were passed by the legislature in 1992 and were followed by Build Michigan II in 1997 and Build Michigan III in 2000. As part of the Build Michigan II, the governor proposed a "Rationalization Process" for the state's highways system. At the time, the state owned 9,600 miles of 119,000 miles of roadways within the state. Noting that Michigan ranked 48th compared to the percent of roadways owned by other states, the governor argued that the state should take control of those roadways most heavily traveled. MDOT Director, James Desana, outlined roughly 9,000 miles of roadways to be brought under MDOT, which would lead to state roadways carrying 70% of all vehicle traffic and 85% of all commercial traffic.[38] The legislature voted for a number of other provisions of Build Michigan III, including Public Act 308 of 1998 (which, as noted earlier, required that an average of 25% of federal funding be directed to local projects), but the Rationalization Process was not adopted.

Though the Rationalization Process was not formally adopted, MDOT and local municipalities (none in Wayne County) did agree to several pilot roadway transfers, and in 1998 a total of roughly 120 miles were transferred from local municipalities to the state. Lacking sufficient political support, the Rationalization Process did not progress any further.

Soon after, there was a change in Michigan's leadership; more recent transfers reflect a change in vision and have tended to be road "turnback" projects where MDOT has turned over to counties or municipalities the jurisdictional obligation and responsibility for operations and maintenance of certain roadways or roadway segments. These turnback projects generally occur when the roadways are no longer functioning as part of the trunkline system. However, in these cases MDOT retains ownership of the underlying property.

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[37] Larry Galehouse, "Strategic Planning for Pavement Preventive Maintenance: Michigan Department of Transportation's "Mix of Fixes" Program," *TR News* 219 (March/April 2002): 6.
[38] James R. Desana, "Guest Editorial from the Director of MDOT," (December 12, 1997), http://www.michigan.gov/mdot/0,1607,7-151-9620_11057-94261--M_1997_12,00.html (accessed 4/21/06).

In March 2001, several transfers occurred within the City of Detroit, both from the city to the state and vice versa. Among these transfers were:

- M-8, between I-96 and Rosa Parks Blvd (1.9 miles) – transferred to the state
- M-85, between I-75 and Clark Street (4.1 miles) – transferred to the state
- M-1, between Grand River Avenue to Adams Street (0.23 miles) – transferred to the state
- M-1, between US-12 and M-10 (0.24 miles) – transferred to the city
- M-3, between M-1 and M-3 (0.17 miles) – transferred to the city
- US-12, between Griswold Street and M-1 (0.07 mile) – transferred to the city
- M-3, between Griswold Street and M-1 (0.05 miles) – transferred to the city

The total number of miles transferred was relatively negligible (6.76 miles).[39]

Special Considerations

- Ride Quality Forecasting System and focus on preventive maintenance
- Local cost share in capital (re)construction projects

[39] Michigan Highways, "Jurisdictional Transfers, 1998-2002," http://www.michiganhighways.org/indepth/juristrans_1998-2002.html (accessed 4/21/06).

Houston, Texas[40]

Texas Department of Transportation – Houston District

Extent of the Roadway System (linear/centerline miles)

Total roadway mileage within city	9,598
City-owned and operated/maintained	6,500
State-owned and operated/maintained	3,098
State-owned; city operated/maintained	0
Other-owned (commissions/authorities)	0
Federal-aid	
Interstate (11)	unavailable
Arterials (12, 14, 16)	unavailable
Collectors (17)	unavailable

Background

The City of Houston is situated in Harris County. A major NAFTA Corridor – US 59 – runs through the city, but the state is fully responsible for this roadway. The State of Texas has passed legislation related to several financing measures, including Private Activity Bonds, Tollways, and state Infrastructure Banks.

Description of Responsibilities

According to Tex. Transp. Code § 203.003 (2005), Texas Department of Transportation (TxDOT) may "lay out, construct, maintain, and operate a designated state highway with control of access…in any area of this state, whether in or outside a municipality, including a home-rule municipality." Further, TxDOT's exercise of power under this code, "…removes the county's or municipality's exclusive jurisdiction over the specific public way affected by the exercise of power."

According to Stuart Corder of TxDOT, the state has municipal maintenance agreements with all the cities throughout the state. These agreements differentiate responsibilities but do not provide funding. The responsibilities denoted in the agreements are based upon population, with those cities with populations under 50,000 having somewhat different responsibilities than those cities with 50,000 or more. In the latter group, which includes Houston, freeways (roadways with no traffic signals and speeds of over 55 mph), are owned, operated, and maintained by TxDOT. Lighting of these roadways, however, is an exception – the state installs and owns lighting on freeways, but the city maintains it. On state-owned roadways that are not freeways, the city also maintains signals, but the state continues to deal with the remainder of the responsibilities.

Many of the agreements date back several decades. Houston's Municipal Maintenance Agreement is dated January 1969. It specifies the specific roadways or portions thereof that are state maintained as well as the specific maintenance that occurs. In some cases, the state assists in mowing, litter removal, and maintenance of roadway ditches, while in others, the state is responsible solely for the roadway base and surface. Table A-3 shows the roadways in Houston that are maintained by the state. Those noted with an asterisk (*) are partly maintained by the state, and partly by the city, with the specific geographic boundaries of their responsibilities defined in the January 1969 Agreement.

Table A-3. State Maintained Roadways in Houston, TX

Non-Controlled Access Highways			Controlled Access Highways	
SH 3	US 90 ALT	FM 527	I-10E	US 59
SH 35	US 290*	FM 1093	I-10W	US 290
SH 288*	FM 518*	FM 1960	I-45	SH 225
US 59*	FM 525	Loop 137	I-610	
US 90E	FM 526	Spur 261		

[40] Except where otherwise noted, the information on Houston, TX is derived from Howard Hilliard, Deputy Assistant Director, Department of Public Works and Engineering, and Chief of Staff, ROW & Fleet Management Division, City of Houston, Personal Communication, 1/5/06; Tracey Wingate, Assistant Director, Street & Bridge Maintenance, Department of Public Works and Engineering, City of Houston, Personal Communication, 1/5/06; and Stuart C. Corder, District Traffic Engineer, Traffic Operations, Texas Department of Transportation, Personal Communication, 2/24/06.

The recommended division of responsibilities since February 2004 is shown in Table A-4 and is very close to the division of responsibilities stipulated in Houston's 1969 Agreement. Those that are shaded are not included in Houston's 1969 agreement.

Table A-4. Division of Maintenance Responsibilities on State Highways between the State and Municipalities with Populations of 50,000 or More

Area of Responsibility	Controlled Access Highways	Non-Controlled Access Highways
Travel surface and foundation	state	state
Mowing and Litter Removal	state	city/state*
Sweeping and Cleaning	state	city/state*
Snow and Ice Control	state	city/state*
Drainage Facilities within ROW	state	state
Regulatory signage	state	state
Traffic Signals	state (at ramps, frontage roads)	city
Parking Signage	city (prohibition on frontage roads)	city
Crosswalks, other striping	city	city

* To supplement the city when requested by the city and if state resources are available

From: TxDOT, "Municipal Maintenance Agreement," in Municipal Management Manual (Austin: TxDOT, October 2003), http://manuals.dot.state.tx.us/dynaweb/colinfra/mmt/@Generic_BookTextView (accessed 3/7/06). Also, "Municipal Maintenance Agreement Between the State of Texas and the City of Houston," (January 3, 1969).

Several additional maintenance agreements exist on a case by case basis and, as with the broader municipal maintenance agreements, responsibilities are identified, but no additional financial support is provided. In particular, there are five roadways for which there are agreements between TxDOT and the City of Houston: Cullen Blvd (FM) 865); Westheimer (FM 1063); Almeda Road (FM 521), North Shepard, and the Old Spanish Trail.[41] On each of these, the state owns the roadway running through the City of Houston, but the latter is responsible for signals and pothole repair.

Of interest, in 1994 the City of Houston entered into a separate 2-year contract with TxDOT, titled "Agreement of the Furnishing and Installing of Traffic Signal Equipment by a Municipality," for upgrading signalized intersections to comply with the Americans with Disabilities Act. As stipulated under this Agreement, the city furnished and installed the traffic signal equipment, but was reimbursed for it by the state. For all related construction other than the actual installation of the signal equipment, the state prepared the construction plans (with city approval), advertised for bids, and let the construction contracts. For reimbursement, the city had to submit an invoice upon completion of the project with documentation of all the work performed. If the city failed to assume the responsibilities assigned to them in a "satisfactory manner as determined by the state," the state could assume their responsibilities. Further, "the city will then be responsible to the state for actual costs incurred by the state in advertising for bids and letting construction contracts to perform the city's portion of the project…."

Funding Mechanisms

As noted above, the city does not receive any state funding for the state-owned highways within its jurisdiction. The few maintenance agreements that do exist only divvy responsibilities – no fees are specified.

In terms of funding more broadly for state highways, state fees and taxes (fuel taxes, motor vehicle license fees, lubricant sales taxes, and other) constituted 46% of the total receipts for Texas' state highway fund in FY 2005. The remainder was derived from federal reimbursements (47%), Texas Mobility fund reimbursements (5%), and local participation (2%).[42] Of note, the Texas Mobility Fund was created as a revolving fund to provide a means for financing the construction, reconstruction, acquisition, and expansion of the state highways within Texas [Tex. Const. Art III § 49-k (2005)].

[41] FM is the designation for Farm to Market Road. As the name suggests, such roads generally run (or ran) between farms and markets. They tend to be four to eight lanes wide.

[42] TxDOT, "Distribution of Total Highway Fund Receipts," http://www.dot.state.tx.us/moneymatters/moneymatters.htm?pg=receipts (accessed 2/28/06).

Of the state fees and taxes, motor fuel taxes contribute the greatest share (66%) while motor vehicle license fees provide the second greatest share (30.0%).[43] Of interest, fuel taxes are not utilized solely for roadways or even transportation. With respect to the revenues collected via the state gasoline tax, one-quarter (¼) is directed to the available school fund, and one-half (½) is directed to the state highway fund for the construction and maintenance of the state highway system. Of the remaining quarter, all revenues are directed to the county and road district highway fund until $7.3 million is credited in a given fiscal year; once that requirement is met, the remainder of the revenues are placed into the state highway fund specifically for farm to market roads on the state highway system [Tex. Tax Code § 162.503 (2005)]. Similar provisions exist for other fuel taxes though the distributions are somewhat different. In the case of diesel fuel, for example, 25% is directed to the available school fund, but the remaining 75% is directed to the state highway fund. In FY 2005, of the total motor fuel taxes collected, 24% were directed to public schools, 72% to the state highway fund, and 4% for other expenses.[44]

With respect to vehicle registration fees, all receipts are directed to the county and bridge fund until the amount credited for the calendar year equals:

- $60,000; PLUS
- $350/mile of roadway maintained by the county, not to exceed 500 miles; PLUS
- an additional amount of fees equal to several calculations including, for example, a fee on collected taxes and penalties by the county and sales tax.

Once this total is met, then 50% of the vehicle registration fees are directed to the county and bridge fund and the remaining 50% is directed to TxDOT until the total amount credited for the calendar year equals $125,000. After this total is met, all funds are directed to TxDOT [Tex. Transp. Code § 502.102 (2005) and Tex. Transp. Code § 502.1025 (2005)]. In FY 2005, the result of this legislation was that roughly one-third was designated for counties, and the remainder for the state highway fund.[45]

In terms of distribution of the funds around the state, the annual maintenance budget is determined in Austin and then divided among the 26 TxDOT districts, and further among the various area offices within each district.

In recent years, additional funding mechanisms have been south as a means for accelerating projects. New alternatives include tolling by the state, development of toll authorities, and pass-through tolls. This last one does not involve actual tolls, but a per vehicle fee or per vehicle mile fee determined by the number of vehicles using a particular roadway. For example, a local government or private entity might use its own funds to "design, develop, finance, construct, maintain, and/or operate a toll or nontoll facility on the state highway system…." The state would then reimburse the entity over time based on the payment of these pass-through tolls, which are at least in part dependent upon the increased traffic on the facility and the related maintenance expenses accrued [Tex. Transp. Code § 222.104 (2005)].[46]

Planning/Programming
The Houston-Galveston Area Council (the regional MPO) plays an important role in transportation planning and programming for the City of Houston and the surrounding area when federal funds are utilized. However, on freeways and other state highways, the state maintains responsibility for all planning and programming as well as construction and design. There is little coordination with the city on these roadways. A Downtown Street Construction Task Force was developed, with representatives from Houston Department of Public Works, the transit agencies, and several other players, but until it recently was transformed into the Mobility Task Force, there was no TxDOT representation. The Task Force is currently proposing a TxDOT representative.

[43] TxDOT, "Distribution of Total Highway Fund Receipts," http://www.dot.state.tx.us/moneymatters/moneymatters.htm?pg=receipts (accessed 2/28/06).
[44] TxDOT, "Distribution of Texas Motor Fuel Taxes," http://www.dot.state.tx.us/moneymatters/moneymatters.htm?pg=motorfuel (accessed 2/28/06).
[45] TxDOT, "Distribution of Texas Motor Vehicle Registration Fees," http://www.dot.state.tx.us/moneymatters/moneymatters.htm?pg=vehreg (accessed 2/28/06).
[46] Also based on Corder, Personal Communication, 2/2406.

Transfers of Responsibility
Legislative provisions exist to allow maintenance and jurisdictional transfers, both from the city to the state and vice versa. Maintenance transfers correspond to the transfer of responsibility for maintenance only, while jurisdictional transfers shift legal authority, control, and liability related to the roadway. In a transfer from the state to the city, the formal right of way (i.e., the title to the roadway) would remain with TxDOT regardless of whether there was a maintenance or jurisdictional transfer.

An example of a recent transfer from the city to the state is related to the project turning I-10 (the Katy Freeway) from a 6-lane freeway with frontage roads into a 10-lane freeway with frontage roads, with 4 toll lanes in the middle that will be run by the Harris County Toll Road Authority, a county government entity. The state bought a 100-foot wide railroad corridor adjacent to the freeway and also took over a city street (Old Katy Road) that ran adjacent to the railroad corridor with the intent to turn the roadway into the new westbound frontage road. A contract was used as the mechanism to allow this roadway transfer to take place.

In terms of transfers from the state to the city, there have not been any in Houston in recent years, but there have been two during the past five years in the City of Sugar Land, roughly 20 miles southwest of Houston. Both transfers involved short sections of roadways that were not deemed to be of regional significance and both resulted from negotiations with the city as part of larger agreements to update adjacent roadways.

Special Considerations
- pass-through tolls
- willingness to work more closely with private entities
- distinction between maintenance transfers, jurisdictional transfers, and ROW or title
- language in 1994 Agreement allowing state to charge city if they fail to assume their responsibilities under the contract

Orlando, Florida[47]

Florida DOT District 5

Extent of the Roadway System (linear/centerline miles)
unavailable

Background
The City of Orlando is located in Orange County, Florida and different roadways within the city's geographical boundaries are owned by the state, county, city, and the Orlando-Orange County Expressway Authority (OOCEA) and Florida Turnpike Enterprise (FTE), the latter of which exists within FDOT. Around the entire state, Florida DOT (FDOT) owns and is responsible for 12,000 miles of roadway of state highway system, composed primarily of interstates, most principal arterials, and several minor arterials. Generally, the counties own the remaining minor arterials not owned by the state, while local municipalities, including large urban areas, own and are responsible for a few minor arterials and collectors as well as local non-federal-aid roadways.

Description of Responsibilities
In terms of responsibilities, on those roadways that are part of the SHS, FDOT is responsible for all (re)construction, maintenance, programming/planning, and funding (including sidewalks, medians, striping). The only exceptions to this are lights and signals, which have historically been the maintenance responsibility of the local jurisdictions. During the past three to four years, the state has moved to a shared-cost system for signals and lighting via annual maintenance agreements, though the city continues to perform such maintenance services (See Funding). On roadways owned and operated by the Florida Turnpike Enterprise, Orlando maintains traffic signals via a contract, but the FTE maintains its own lighting and is responsible for all other maintenance on its roadways.

OOCEA roadways include S.R. 408 (East-West Expressway), S.R. 417 (Central Florida GreeneWay), a portion of S.R. 528 (Bee Line Expressway), and a portion of S.R. 429 (Western Expressway). OOCEA is responsible for all maintenance on its roadways though they contract out for much of it. OOCEA is empowered to purchase or otherwise acquire right-of-way and to build expressways and "all necessary appurtenances including approaches, roads, and bridges" though it needs approval by the municipality within which it intends to build its roadway.[48]

Finally, in terms of enforcement, the Florida Highway Patrol has primary responsibility on state-owned arterials, but the City of Orlando has a policy to respond to all incidents on roadways within its borders.

Funding Mechanisms
The City of Orlando does have some maintenance agreements for non-city-owned roadways, though they are more common between the city and state than between the city and county even though Orange County owns and is responsible for several roadways running through Orlando. Generally, it is felt that because the county offices are located in Orlando, the county better understands what is needed for maintenance and operations and is better able to predict and respond to those needs than is the state. When city-county agreements are developed, they generally do not involve additional funding so much as they help clarify responsibilities. Indeed, as one agency representative noted, "when money is involved, it is unusual."

Of interest, with the exception of the agreements pertaining to lighting and signals, city-state roadway maintenance agreements are developed on a case by case basis, rather than covering numerous roadways. Such agreements tend to be developed when the City of Orlando wishes to maintain a roadway at a higher level of service than is done so by the state. Under such agreements, FDOT usually provides the funds the state would have utilized anyway for the particular roadway or section thereof under the agreement and the city supplements these as needed. Many of these requests are related to landscaping around gateway facility areas, which the local municipality wants to maintain at a level higher than that allowed by the state. In such cases, the municipality takes on the burden of paying for and

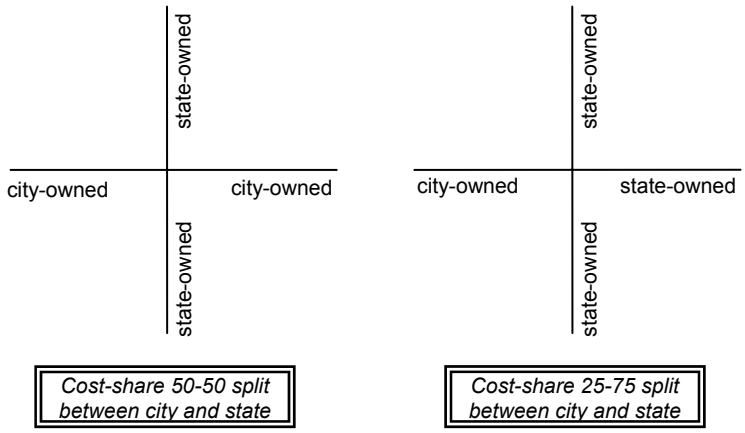
[47] Except where otherwise noted, the information on Orlando, FL is derived from Un-named Source, Personal Communication, 11/17/05 and from David Grovdahl, Director of Transportation Planning, Metroplan Orlando, and Charles Ramdatt, Traffic Engineer, City of Orlando, Personal Communication, 12/2/05.
[48] Jerrell H. Shofner, Building a Community: The History of the Orlando-Orange County Expressway Authority (Orlando: OOCEA, 2001), p. 8.

maintaining the landscaping (often having a garden club or similar organization undertake the work). If, however, the municipality fails to maintain the area, it reverts to the state.

In recent years, there have been more local capacity expansion efforts on state highways. In most cases, the local jurisdiction pays for expansion or improvements, but the state does the construction and then takes over maintenance, though this can be negotiated. While local jurisdictions that can demonstrate the needed capacity have been allowed in several cases to do the construction, there have been mixed results. In some cases, the work has adequately met state and federal standards; in others, it has failed to meet necessary requirements.

As described above, on state-owned arterials, FDOT is responsible for maintenance, but sometimes does negotiate maintenance contracts with the City of Orlando. The fees for such contracts range and are sometimes based on lane mileage, but may also be based on the type of maintenance (e.g. paving only, trash collection, or both), and on the type of facility involved (e.g. gateway). For traffic signals on the state highways, an annual agreement is in place based on a cost-share system that covers traffic signals on all state highways. The share is proportional to ownership of the legs at the intersection (Figure A-2). An established annual rate is then applied to this proportion for the cost share and Orlando performs the maintenance.

Figure A-2. Examples of Cost-Sharing of Intersection Signals



Lighting on state-owned roadways is also maintained through annual agreements with the city. The state installs or pays Orlando to install the lighting and then provides an annual payment to maintain that lighting.

Fees provided under maintenance agreements are often directed in the city's General Fund, though they may be linked to a specific project or roadway as well. Again, this determination is often on a case by case basis. However, such monies are tracked and reported upon by Orlando.

Planning/Programming

More broadly, funding is a critical issue in a state that is growing by over 300,000 annually with no new taxes and no income taxes, though there are other sources of transportation funding derived from fuel taxes, sales taxes, and impact fees.[49] Thus, much of the discussion on highways in Florida centers on investment policy. Since the mid-1980s, Florida DOT policy has been to ensure safety and preservation of the system first and then look to expansion. Roughly a decade ago, this shifted somewhat as a result of a legislative-directed initiative that designated priorities for system expansion. The Florida IntraState Highway System (FIHS), composed of approximately 4,500 miles of the total 12,000 of state highway System, was deemed most important, and "at least" half of any new discretionary highway capacity funding was directed toward the FIHS, with the remaining funding left for other portions of the system.

During the development of the 2000 Florida Transportation Plan, however, there was a there was a growing concern that other modes were not incorporated into this system or into the funding structures. In

[49] Grovdahl, Electronic Communication, 2/24/06.

2002, various stakeholders were brought together to recommend criteria for designating the Strategic Intermodal System (SIS). In 2003, the Legislature identified the SIS as consisting of "transportation facilities that meet a strategic and essential state interest" and adopted the stakeholders' designation criteria. They further legislated "that limited resources available for the implementation of statewide and interregional transportation priorities be focused on that system [Fla. Stat. § 339.61 (2005)]."

In 2004, the legislature directed that "at least" half of any new discretionary highway capacity funding be allocated to the SIS, which consists primarily of the 4,500 miles of roadways designated in the FIHS, along with airports, seaports, bus stations, rail, and roadway connecting to these facilities. FDOT has adopted a policy to gradually move toward a funding split that will utilize 75% of the capacity budget for the SIS and the remainder for other roadways throughout the state by 2015. Indeed, this split was endorsed by the legislature in 2005 (effective 7/1/05) as part of state growth management reforms and funding increases when it allocated 75 percent of the new funding increase to the SIS after allocations to a New Starts Transit Program and the Small County Outreach Program [Fla. Stat. § 201.15 (2005)].

For local governments, the result is mixed. Roadway connectors often fall under the jurisdiction of local governments which can now apply for state funding for roadways previously ineligible since, by law, the state does not fund local roads unless deemed part of the SIS or a connector. However, local governments and regional metropolitan planning organizations are concerned with the state's intention to raise the SIS proportion of the budget to 75%, believing that 25% is insufficient to maintain the remainder of the system.

Transfers of Responsibility and/or Jurisdiction
In the late 1970s, during a period of fiscal constraint, the legislature began to review the state highway system. A long, elaborate process resulted in the transfer of several hundred miles of roadways, the majority of which were transferred by the state to local jurisdictions. Most of these roadways were in rural and economically distressed areas in the northern portion of the state. Those roadways that were turned over to local jurisdiction were first brought up to the standards current at the time.

A similar review was attempted in the 1990s, during another difficult economic period, but this proved difficult politically. A decision was made, instead, to "lock" the functional classifications and jurisdictions in place as of June 10, 1995 [Fla. Stat. § 335.0415 (2005)]. Since then, there have been roughly 10 transfers each year. Most of these have involved what was referred to as "housekeeping moves." For example a two-lane road from point A to point B is being improved to a 4-lane road and a small portion of the improvement is on a new alignment, leaving several feet of the 2-lane roadway on the old alignment. In such cases, the "left-over" roadway on the old alignment is then turned over to the local jurisdiction.

More recently, a second type of transfer is being seen, usually at the instigation of local jurisdictions that request a transfer because a roadway that was used for high-speed, long-distance travel is increasingly being used for shorter-distance local traffic as the population grows. The local jurisdiction may want additional access, more pedestrian enhancements, or other types of changes which the state is not willing to fund or maintain. In such cases, agreements are developed between the local jurisdiction and the state for the transfer of authority.

This is certainly the case in Orlando where such transfers of responsibility tend to occur because the city is trying to make a particular roadway more urban in nature and, as such, the design deviates from state standards. For the city, the transfer is a benefit because it allows more flexibility in design and meeting community goals. For the state, if the roadway in question is not a major arterial or considered central in some other way, the benefit is that it does not set new precedence in design standards which it might not wish to see elsewhere.

The terms of such transfers differ in each case. Sometimes the state pays for improvements and then turns the facility over to the city. In other situations, the state might continue to pay in perpetuity. One example of such a transfer is Edgewater Drive, a minor arterial running through a particularly vocal neighborhood which wanted to focus on redevelopment of its business district. As part of this plan, the community sought to change the orientation of the roadway to emphasize local functions rather than throughput, and requested the addition of new bicycle lanes and the reduction of through lanes to accomplish this.

There have been occasional transfers between the County and the city, in which the county has approached the City of Orlando, upgrading the roadways in question to city standards and then turning them over to Orlando both in terms of ownership and ongoing maintenance. Again, these are done through local agreements between the two jurisdictions.

Special Considerations

- Cost-sharing arrangement for traffic signals at intersections
- Most fees under maintenance agreements are directed to the General Fund, though they may be linked to a specific roadway or project.
- Investment policy that prioritizes the Strategic Intermodal System

Philadelphia, Pennsylvania[50]

Pennsylvania DOT District 6

Extent of the Roadway System (linear/centerline miles)[51]

Total roadway mileage within city	2,420	(inc. 65 mi. Fairmount Park roadways, 5 mi. bridges)
City-owned and operated/maintained	2,044	
State-owned and operated/maintained	42	(interstates and limited access)
State-owned; city operated/maintained	318	(shared maintenance – see below)
Other-owned (commissions/authorities)	11	
Federal-aid		
Interstate (11)	35	
Arterials (12, 14, 16)	443	
Collectors (17)	162	

Background

The City of Philadelphia and Philadelphia County represent a co-terminus geographic area. Prior to the 1930s, the City of Philadelphia owned all the roadways within its geographic boundaries, but during the next few decades, beginning in 1937, through several state Acts, the State of Pennsylvania began acquiring responsibility for those roadways that were to become part of the state highway system. The last highway system plan in Pennsylvania was updated in the early 1960s (roughly, 1963). Similar to the situation in New York City, the Philadelphia plan is considered outdated at this point. A number of roads are not designated as part of the highway system though it is believed by the City of Philadelphia that they should be, especially given current levels of usage. Similarly, others that are currently designated probably should not exist as part of the formal system.

Description of Responsibilities

Currently, most major arterials are on the state highway system – the state technically "owns" these roadways, but the city has easements on many of them. Pennsylvania Department of Transportation (PennDOT) has a tiered system relating to maintenance on state highways that assigns classes to the various types of municipalities and varies responsibilities according to class. Based on population size, there are four classes for cities, with Philadelphia designated as a "First Class City" (Table A-5).

Table A-5. Classes of Cities in Pennsylvania[52]

Class	Population Size	Number of Cities	Example of Maintenance Responsibilities – Pavement Markings
First Class	≥ 1 million	1 – Philadelphia	installed by PennDOT only interstate and limited access highways
Second Class	250,000 – <1 million	1 – Pittsburgh	same as above
Second Class "A"	80,000 – < 250,000	1 – Scranton	all of the above, plus all numbered traffic routes, other selected state highways
Third Class	< 250,000 and haven't chosen to be Second Class "A"	51	same as above

The state fully maintains the interstates and some limited access state highways within the City of Philadelphia (with the exception of signals which the city operates and maintains). However, on other state-owned arterials, the city is expected to perform much of the maintenance that is performed by PennDOT in other locales. On these roadways, the state is primarily responsible only for road surfacing (including the surface course and base course) while the city is responsible for everything else, including medians, islands, rails, sidewalks, lighting, painting, and traffic signals and signs, as well as snow plowing

[50] Except where otherwise noted, the information on Philadelphia is derived from Robert Wright, Chief Engineer & Surveyor, City of Philadelphia, Personal Communication, 11/4/05 and from an Un-named Source, Personal Communication, 11/30/05.
[51] Pennsylvania Department of Transportation (PennDOT), Bureau of Planning & Research, *Pennsylvania Highway Statistics: 2003 Highway Data* (Harrisburg, PA: PennDOT, September 2004), pp. 11, 21, ftp://ftp.dot.state.pa.us/public/pdf/BPR_PDF_FILES/Documents/Traffic/Highway_Statistics/Annual_Report/2004/complete_report.pdf (accessed 11/4/05).
[52] 53 P.S. § 101 (2005).

[36 Pa.C.S. § 1758-204 (2005) and 36 Pa.C.S. § 1758-205 (2005)]. The city is also partially responsible for some 47 bridges on state highways, though the specific responsibilities vary from location to location. In two cases, for example, there are drawbridges that are maintained by the state but the city provides operators to control bridge movements and maintains the operating machinery.

Funding Mechanisms
Funds for maintenance of state highways are determined according to county and distributed among the PennDOT Districts for allocation among the counties. Prior to 1997, PennDOT allocated funds for the maintenance of state highways through a distribution formula enacted in June 1980. The calculation included two components:

- Base allocation, defined as "the total highway maintenance appropriations and executive authorizations received by a county maintenance district for either fiscal year 1978-1979 or, based on the best current information available to the department and certified by the Governor as of May 21, 1980, fiscal year 1979-1980, whichever is greater [75 Pa.C.S. § 9101 (2005)];" and,
- Formula allocation, an amount (Additional State Highway Maintenance Appropriations – ASHMA) based on several factors, including physical condition of the roadway and proportion of the roadway miles relative to the state total.

In terms of distributing these funds, each county maintenance district receives the following distribution:

- An amount equal to 95% of the Base allocation; plus
- An amount based on the following formula:

ASHMA = 40% RPQ + 15% BD +15% LM + 15% VM +15% SI [75 Pa.C.S. § 9101 (1992)]
Where:
RPQ is a relative pavement quality index
BD is total area of bridge decks in the county as a proportion of total statewide
LM is total lane miles in the county as a proportion of total statewide
VM is number of vehicle miles traveled in the county as a proportion of total statewide
SI is the county snow index
The snow index for each county is the average of the county's immediately preceding four calendar years' snow days (a day in which snowfall was greater than or equal to one inch in depth), multiplied by the number of state highway lane miles in the county.

In July 1997, a new funding allocation resulting from Act 1997-3 (H.B. 67), § 13 came into effect. The Base allocation was redefined as the "annual expenditure for routine maintenance operations by a county maintenance district averaged over the immediately preceding five years," and the ASHMA was modified as well. The new allocation helps avoids dramatic fluctuations since the Base allocation is now based on a five-year average of actual routine maintenance and operations costs. Further, it reflects more needs-based approach. Thus, the current distribution is as follows:

- An amount equal to the county's Base allocation; plus
- An amount based on the following formula:

ASHMA = 40% RPQc + 15% BMDc + 30% LMc + 15% VMc [75 Pa.C.S. § 9102 (2005)]
Where:
RPQ, LM, VM are the same as defined above
BMD is the Bridge Maintenance Deficiency index and is based upon bridge safety inspections evaluating the condition of all state highway bridges greater than or equal to eight feet in length on a periodic basis.
c refers to county

Of note, the other key change is that the percentage based on lane miles in the ASHMA was increased while the snow index portion of the earlier ASHMA was removed as PennDOT felt that snow removal is really part of routine maintenance and operations which now form the Base allocation.

In addition to the monies allocated for maintenance of state highways within the County of Philadelphia, the state has a separate agreement with the city for snow removal. A five-year agreement, payment is

based on the number of lane miles multiplied by a cost/lane mile for snow removal. It amounts to roughly $2 million annually. The city is required to perform these services regardless of whether the costs exceed PennDot's payment in a given year. According to an internal report issued in 1991, over the 5-year period between 1985 and 1990, the city's cost for salting/plowing exceeding PennDOT's payments by $203,280.[53]

Other maintenance agreements between the state and the City of Philadelphia do exist, but most are for bridges on state highways where there is a division of responsibility between who maintains the substructure (usually the state) and who maintains the superstructure (usually the city). However, there is no overall maintenance agreement; each of these agreements represents a separate facility or portion thereof and each is negotiated separately from the rest.

Planning/Programming

In terms of designing and programming, Robert Wright, Chief Engineer & Surveyor for the City of Philadelphia, noted that roughly half the time, the state does its own planning/programming and design for these roadways and roughly half the time they accept the city's ideas on designs and programming. Again, in terms of actual maintenance and construction, the state only deals with roadway resurfacing. Even when resurfacing one of these roadways, the state will place initial markings, but leave the design and placing of final markings to the city.

Finally, though not a focus of the current research, it bears mentioning that because of this shared responsibility, when there is liability involved, the city and state can both be sued. Further complicating matters is that Southeastern Pennsylvania Transportation Authority (SEPTA), the area's transit system, maintains paving in the trolley track areas. If an accident happens in a location situated near the trolley tracks, three different agencies can be found to bear responsibility.

Transfers of Responsibility and/or Jurisdiction

Given the patchwork nature of some of the roadway "ownership" designations within the city, over the years Philadelphia has attempted to "swap" some of these roadways, but generally PennDOT has been less interested in exchanging roadway responsibility and more interested in reducing the total number of lane miles for which they are responsible. Nevertheless, to address some of these discrepancies, legislation was enacted in 1981 to transfer to local jurisdictions roughly 12,000 miles of functionally-local roads on the state highway system [75 Pa. C.S. § 9201 thru § 9208 (2005)]. Priority was given to roadways that were primarily local traffic generators as well as those representing fragmented segments of roadways that should be on the local system but were part of the state highway system. Local jurisdictions were approached with a list of potential roadways to be turned over.

Rehabilitative work to bring roadways to "satisfactory condition" (that is, defined by and acceptable to the local jurisdiction and the state) may be performed by the state, the municipality, or contracted out, as jointly agreed [75 Pa.C.S. § 9207 (2005)]. The local jurisdiction must develop a list of work and expected costs and funding for such rehabilitation is paid for by the State Highway Transfer Restoration Restricted Account. The cost associated with rehabilitations has been cited as a reason for the slow pace of the program. Initially, roughly $30,000/linear mile was allocated for such projects; it was later raised to $80,000/linear mile, though this is a negotiable figure. To date, 4,537 miles have been transferred, with roughly 312 miles of that total within PennDOT's District 6.

After the transfer, the municipality assumes responsibility for further maintenance as well as liability for the roadway [75 Pa.C.S. § 9205 (2005)]. However, according to PennDOT's *Transfer of State Highways (Road Turnback Program) Policies and Procedures Manual*, beginning the year after the transfer, the state provides an annual maintenance payment of $2,500/linear mile.[54] Initially, there were some difficulties, particularly around bridges on these roadways, but later in the program, the state agreed that local jurisdictions could leave responsibility of the bridges with the state.

There have been two "take-backs" in Philadelphia over the years. The first occurred in 1988 and involved less than two miles (1.87) of roadway. The reason behind the transfer was a desired improvement the city

[53] "State Funding of Highway Maintenance in Philadelphia," Prepared for Alexander L. Hoskins, Commissioner (10 January 1991), internal unpublished document, p. 12.
[54] Commonwealth of Pennsylvania, Department of Transportation, *Transfer of State Highways (Road Turnback Program): Policies and Procedures Manual*, p. 1.9, ftp://ftp.dot.state.pa.us/public/bureaus/MunicipalServices/Pubs/PUB_310.pdf (accessed 1/14/06).

wanted to undertake on a state highway. The final agreement allowed Philadelphia to perform the reconstruction, but the state paid a portion of the costs.

A more significant transfer occurred 1991/1992 when Philadelphia took back roughly 21.5 miles under this legislation. The terms for this exchange were as follows: the city took over the responsibility for the roadway surface, in addition to other responsibilities it already had, but the state had to take over maintaining lighting on several limited access highways: I-76 Schuylkill Expressway, I-676 Vine Street Expressway, I-95 Delaware Expressway, US-1 Roosevelt Boulevard, and PA-63 Woodhaven Expressway). Built in the 1950s, these highways were part of the state system, but the state had never placed lighting. For safety reasons, the city had placed lighting and continued to maintain it in subsequent years at a significant cost to the city. For the City of Philadelphia, the overall result of this transfer was beneficial – their responsibility for the new roadway miles shifted minimally but they were able to do away with the lighting which had high maintenance costs.

Special Considerations

- Tiered system of maintenance responsibilities based on city population size
- Base and formula funding for maintenance of state highways, with latter based on factors including pavement quality, bridge decks, lane miles, and vehicle miles traveled
- Separate agreement with Philadelphia for snow removal
- PennDOT Road Turnback Program/Highway Transfer Program

Portland, Oregon[55]

Oregon Department of Transportation – Region 1 (Portland Metro Area)

Extent of the Roadway System (linear/centerline miles)[56]

Total roadway mileage within city:	2,059
City-owned and operated	1,936
State-owned and operated	50
State-owned; city operated	50
Other-owned (commissions/authorities)	23
Federal-aid	
Interstate (11)	39
Arterials (12, 14, 16)	218
Collectors (17)	261

Background

Portland is situated within Multnomah County. Three interstates (I-5, I-84, I-205, and I-405) run through the city as well as several state highways. According to Oregon State Code, "the Oregon Transportation Commission has general supervision and control over all matters pertaining to the selection, establishment, location, construction, improvement, maintenance, operation and administration of state highways" [ORS § 366.205 (2003)]. The Oregon Department of Transportation (ODOT) may acquire rights of way necessary for all state highways, whether or not they are within a city's jurisdictional boundaries. Expenses for such acquisitions may be borne by the state, the city, or shared, by mutual agreement [ORS § 366.320 (2003)].

Description of Responsibilities

The Oregon Department of Transportation (ODOT) is generally fully responsible for the interstates running through the City of Portland. However, there are several site-specific agreements that allow for cost sharing on lighting of these roadways. There are roughly 50 centerline miles of State Highway under the jurisdiction of the state. Jurisdiction and related maintenance responsibilities extend from curb to curb, but all other parts remain under the jurisdiction of the city. Cities also retain the right to open the road surface, but must repair the opening and bear related costs. Cities also retain "the exclusive right to grant franchises over, beneath, and upon any such street or road…" [ORS § 373.020 (2003)]. Of note, without changing classification, ODOT may construct, reconstruct, pave and improve any streets through cities where such streets form a link in the State Highway System or constitute a connection between two highways and have been designated by ODOT as streets over which there is routed state highway traffic [ORS § 373.30 (2003)]. The county may also transfer jurisdiction of county roads to the city [ORS § 373.270 (2003)].

ODOT may enter into cooperative agreements with the city for construction, reconstruction, improvements, repairs or maintenance of state highways. According to ORS § 367.804 (2003), these cooperative agreements may allow for an allocation of the cost of the project to the contracting parties. The state also has several separate facility-specific maintenance contracts which provide a cost share for signal operation and lighting.

State police have a very limited role within the city limits of Portland. Thus, the state tends to rely on city police for accident response, though incident management falls to both ODOT and Portland DOT, with coordination of traffic management centers and responses. Portland Police also provide the High Occupancy Vehicle (HOV) lane patrols on I-5. However, beyond this and a few other spot areas to identify speeding violators, there is no traffic enforcement of the interstates within the city by state Police.

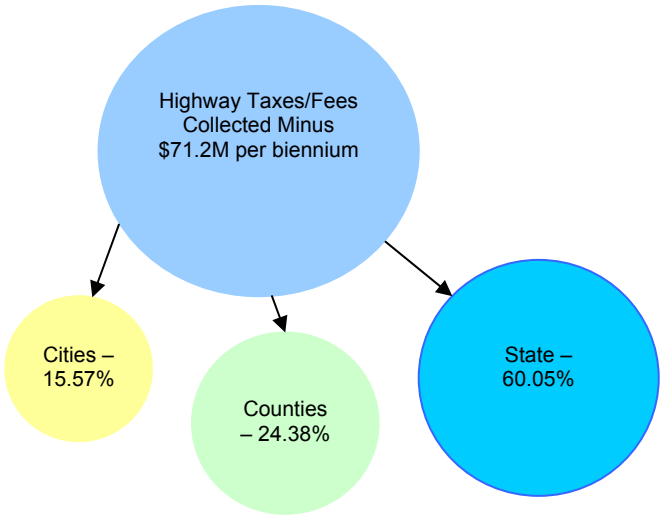
Funding Mechanisms

Portland has several funding mechanisms for roadways. ODOT's federal transportation funds and state highway funds are apportioned to Oregon's five regions and specific project funding is determined by ODOT through a process of consultation with the regional metropolitan planning organization (MPO). The

[55] Except where otherwise noted, the information on Portland, OR is derived from Richard Gray, Contract Administrator, Portland Office of Transportation, Personal Communication, 12/16/06; from Lainie Smith, Planning Manager, Oregon Department of Transportation (ODOT) and Fred Eberle, Major Projects Manager, ODOT, Personal Communication, 1/13/06; and Karla Keller, Region 1 Maintenance/Operations Manager, ODOT, Personal Communication, 1/20/06.

[56] From ODOT representative, Email Correspondence, 11/22/06.

Figure A-3. State, Counties, and Cities Share of Regular Highway Taxes and Fees



MPO also receives federal transportation funds, which it disperses to local jurisdictions through a competitive process. Though no written rules exist, there are several unwritten traditions guiding this process. First, traditionally, of the monies that Region 1 receives, roughly 80% is utilized within the Portland metropolitan area, with the remainder used in the surrounding areas. Second, ODOT typically spends most of its federal allocation on projects that benefit the Insterstate and statewide Highway system, while the MPO tends to utilize federal monies on local routes and arterial state highways.

State transportation revenues are derived from title and registration fees, fuel taxes, and fees levied on trucks based on vehicle weight and mileage. Every two years, as directed by ORS § 366.506 (2003), ODOT conducts a full highway cost allocation study or an examination of the previous study's data to determine the proportional share that users of each class of vehicle should pay for highways and to determine what they are paying. Each biennium, $71.2 million is deducted from the total of these receipts and the remainder is divided among the state, counties, and cities as shown in Figure X [ORS § 366.739 (2003)].

Every two years, the monies left after deducting the total debt service payments from the $71.2 million are also distributed between the state, counties, and cities as follows: 50% ODOT; 30% counties; 20% cities [ORS § 366.742 (2003)].

Additional monies are collected on an annual basis from specified increases in the title and registration fees, and truck fees. These are divided as follows:

- 57.3% to ODOT;
- 25.48% to ODOT to pay the principal and interest on bonds for replacement or repair of bridges on county highways; and,
- 16.99% to ODOT to pay the principal and interest on bonds for replacement or repair of bridges on city highways.

Any monies left over after expenses are distributed equitably to either the counties or cities, respectively [ORS § 366.744 (2003)].

Finally, once monies are allocated for cities, each city receives its share based on the population of the city in proportion to the total population of all cities. For counties, the share is based on the number of vehicles, trailers, semi-trailers, pole trailers, and pole & pipe trailers in the county in proportion to the total number of all these vehicles in the entire state [ORS § 366.805 (2003) and ORS § 366.764 (2003), respectively].

According to ORS § 366.790 (2003), funds may be used for administration, bicycle paths (on the roadways), construction/expansion, operations/maintenance, repair/preservation, and payments to other governments. Enforcement is not included. Since all distributed monies are to be utilized specifically for bridges and/or highways as specified, this funding is carefully tracked and reported on, and must be kept in an account separate from other city funds [ORS § 366.790 (2003)].

Planning/Programming

Generally, the state takes responsibility for capital planning and programming on state highways and on interstates, but does coordinate with the city as necessary. However, there are some nuances. For example, when there is a planned improvement with a clear local benefit, local funds may be leveraged.

For example, the costs were split evenly between the city and the state for modification of an interchange at McAdam Avenue on I-5. The interchange is near the South Waterfront where Portland is developing an old industrial area into a high tech medical center and residential area, and saw this modification as necessary improved access which would support their overall plans. In terms of actual construction, ODOT manages construction on interstates and those state highways functioning as freeways. On state highways functioning more like city streets, it is often the city that oversees the work.

Transfers of Responsibility and/or Jurisdiction
Transfers of local streets to ODOT are rare. More common are transfers from ODOT to the county or municipality. Usually, the state brings the roadway up to current standards, if necessary, prior to the formal transfer. Often there are no fees involved in the transfer; when they are, the state will sometimes calculate the cost of maintenance over 20 years to help defer the new costs but this is always on a case by case basis.

Both ODOT and the Portland Office of Transportation (PDOT) have handbooks related to jurisdictional transfers. According to ODOT's *Handbook for Making Jurisdictional Transfers*,

> It is the policy of the State of Oregon to consider, in cooperation with local jurisdictions, interjurisdictional transfers that:
> - Rationalize and simplify the management responsibilities along a particular roadway segment or corridor;
> - Reflect the appropriate functional classification of a particular roadway segment or corridor; and/or
> - Lead to increased efficiencies in the operation and maintenance of a particular roadway segment or corridor.[57]

Of importance, while the policy states that such transfers happen in cooperation with local jurisdictions, there is no statutory requirement that a city must agree to a transfer. In part, because of this, PDOT recently developed its own policy reasons for jurisdictional transfers.

PDOT stresses two key reasons why it would seek such transfers: (1) to "increase the efficiency of operation and maintenance of the PDOT system;" and/or (2) to "further a PDOT policy."[58] In responding to requests from the state, PDOT notes that it is not in the city's interest to assume maintenance and/or repair responsibilities without sufficient accompanying funds or sufficient operational/development reasons to outweigh the incremental costs associated with the transfer. Thus, PDOT's policy notes its goal "that no transfer be made for any facility that is not rated at least "good" standard" in the following areas: paving, electrical, structures, signage and striping, drainage.[59] Recognizing that the state can press a transfer, the expectation is that it would bring these items up to "good" or better standard prior to a transfer. Among the factors that might outweigh this consideration are: the possibility that taking over the roadway could increase efficiencies in operations and maintenance or could simplify management responsibilities; PDOT wants to make improvements, permit accesses, or maintain the roadway in a way that does not comply with state policies or wants to apply a higher level of standard than the state; or the roadway is needed for system connectivity within Portland.[60]

Of interest, PDOT identifies several issues for negotiation during any transfer. Among them are the following:

- Ownership of the Right of Way. Jurisdictional Transfer Agreements typically include a clause that allows all right, title, and interest in land to revert back to the state once the ROW is no longer used for public road purposes.
- Access Controls. The state can transfer a highway in its entirety or can transfer the highway while maintaining access control.
- Existing Permits, Encumbrances and Agreements. These may often entail additional agencies or councils.

[57] Portland Office of Transportation, *Jurisdictional Transfers Policy and Handbook* (October 7, 2004), cited in Appendix A.
[58] Ibid., p. 2.
[59] Ibid., p. 2 and 13.
[60] Ibid., p. 3.

- Highway Condition and Maintenance. Conditions and maintenance should be assessed as part of the cost/benefit analysis.
- Highway Improvements and Design Standards. Areas to negotiate here include how standards are met, who pays for upgrading, and the timing of construction.
- Route Designations and Signs. Route designations and signs may be moved and/or changed. Who is responsible for this move, where the new designations or signs need to be situated, and who will be responsible for maintenance post-transfer all need to be determined.
- Traffic signals and illumination. Here PDOT suggests that an intergovernmental agreement regarding "power, operations and maintenance of the signals and illumination" should be negotiated with specific timing and procedure for handing over responsibilities clearly denoted. The *Handbook* suggests development of a separate agreement to address costs.[61]

In terms of specific transfers between Portland and ODOT, there have been several in recent years: NE/SE Martin Luther King, Jr. Blvd; NE/SE Grand Avenue Pacific Highway East; Highway 26, SW Clay and SW Market Streets in Downtown Portland; Highway 30 (Sandy Blvd.) and Highway 99W (Interstate Avenue from Argyle to the Steel Bridge), and a portion of the Swift Highway (State Highway 120). Though ODOT prefers to either have all jurisdictional responsibilities or none of them, specific arrangements can be different from case to case. The agreement for NE/SE Martin Luther King, Jr. Blvd. included a full jurisdictional transfer, including right of way and title.[62] However, in the case of Swift Highway, the oldest of all the transfers, this was not the case; instead, an agreement on maintenance and operations was signed, but not the actual transfer document. The terms of agreement include the following:

- The state retains the portion of the right of way and access control of the former Swift Highway, as well as the real property acquired by the state for the highway right of way and other public purposes.
- The state conveys the operating right of way, including a bikeway along N. Portland Road, traffic signals and illumination, all slope, utility, wetland, water quality and similar easements to the city.
- The state relinquishes all maintenance and repair responsibilities as well as all liability.
- If the right of way involved is no longer used for public street purposes, it will revert to the state.
- The city agrees to accept ownership of the entire Slough Bridge once the state repairs or replaces the bridge "to acceptable city standards." This will be done through a separate agreement.
- The city agrees to maintain access control and management in certain locations and at the I-5 interchange "in an effort to preserve the integrity of the interchange."[63]

Of interest, the freight community has been very concerned regarding the full completion of this transfer, which would also include additional length of highway, as it affects Marine Drive near I-5. Some years ago, a transfer happened that resulted in plans to take a 4-lane facility that ran parallel to I-5 and had truck traffic down to 2 lanes with light rail in the middle. The resulting widths were substandard and it became difficult for trucks to make turns. The possibility of modifications to the roadway that would make it difficult for trucks was a concern with Marine Drive as well. However, some new language has been developed for such circumstances as follows:

> *Because Unit X is either on the National Highway System (NHS) or was part of the federal aid primary system in existence on June 1, 1991, it continues to be subject to the requirements of 23 USC 131 and the Oregon Motorist Information Act, ORS 377.700 to 377.840 and 377.992, after transfer, and state retains authority to enforce those laws. State maintains a state Route system and a U.S. Route System and certain roads may be part of the Federal National Network Highway System. Routes designated as part of the Federal National Network Highway System under Code of Federal Regulations Title 23 Part 658.19 require the State of Oregon to adopt provisions for Reasonable Access to terminals. Jurisdictional Transfers of sections of highway that have previously been designated as part of the National Network Highway System must retain the Reasonable Access to terminals as defined in the above Federal Regulation without restriction,*

[61] Portland Office of Transportation, *Jurisdictional Transfers Policy and Handbook*, pp. 5-8.
[62] "Abandonment and Retention Agreement No. 708, NE/SE Martin Luther King, Jr. Boulevard and NE/SE Grand Avenue Pacific Highway East, Highway 1E – City of Portland," between the State of Oregon and the City of Portland, 6/24/02.
[63] "Jurisdictional Transfer Agreement No. 770 - DRAFT between the State of Oregon and the City of Portland," 1/24/04.

unless the specific procedures for restriction as laid out, are followed, and then only for reasons of safety and engineering analysis of the route. In order to maintain viable freight routes, all allowable oversize and overweight movements will be grandfathered in with the existing escort vehicle requirements. The movement of freight will not be further restricted beyond the limits set by the state prior to transfer.[64]

Special Considerations

- Regional apportionment of federal funds, with unwritten tradition of 80% used within the Portland metropolitan area
- Distribution of state monies between the state, counties, and cities, with additional monies based on specified increases in various fees and taxes
- Careful tracking and reporting by cities of state monies for roadways
- ODOT *Handbook for Making Jurisdictional Transfers* and PDOT *Jurisdictional Transfers Policy and Handbook*

[64] Language provided by Michelle Smith, Sr. Contract Specialist, Region 1 - Contracts and Agreements Unit, ODOT, Electronic Communication, 1/26/06.

Seattle, Washington[65]

Washington State DOT – Northwest Region

Extent of the Roadway System (linear/centerline miles)

Total roadway mileage within city:	1,720
City-owned and operated	1,667
State-owned and operated	53
State-owned; city operated	0
Other-owned (commissions/authorities)	0
Federal-aid	
Interstate (11)	20
Arterials (12, 14, 16)	345
Collectors (17)	141

Background

Seattle is situated within King County. In Washington State, as of November 30, 2000, policy goals were formally legislated for the operation, performance of, and investment in, the state's transportation system. According to Rev. Code Wash. (ARCW) § 47.01.012 (2005),

> In addition to improving safety, public investments in transportation shall support achievement of these and other priority goals: No interstate highways, state routes, and local arterials shall be in poor condition; no bridges shall be structurally deficient, and safety retrofits shall be performed on those state bridges at the highest seismic risk levels; traffic congestion on urban state highways shall be significantly reduced and be no worse than the national mean; delay per driver shall be significantly reduced and no worse than the national mean; per capita vehicle miles traveled shall be maintained at 2000 levels; the non-auto share of commuter trips shall be increased in urban areas; administrative costs as a percentage of transportation spending shall achieve the most efficient quartile nationally; and the state's public transit agencies shall achieve the median cost per vehicle revenue hour of peer transit agencies, adjusting for the regional cost-of-living.

Description of Responsibilities

In terms of Seattle proper, the state owns, operates, and maintains all the interstates (I-5, I-405, and I-90) in Seattle, as well as several arterials (SR-520, for example).[66] Among other things, these responsibilities include lighting, roadway surface, incident response, traffic management, and drainage. The city maintains all underground facilities beneath these streets at its own expense, though in terms of (re)construction/design, "pavement trenching and restoration performed as part of installation of such facilities must meet or exceed requirements established by the department [of transportation] [Rev. Code Washington (ARCW) § 47.24.020 (2005)].

There are roughly 50-60 bridges that either cross over the interstates, or are crossed by the Interstate. In these cases, the City of Seattle is responsible for the surface of these bridges, but the state maintains responsibility for the structure (see Table A-7).

Non-limited access highways that are designated as part of the State Highway System (SR-519, SR-522, SR-99) are managed by the state, which built the facilities and which performs extraordinary maintenance (paving, reconstruction, new construction), but are operated and maintained by the city, which has the underlying easement. The division of responsibilities between Washington State DOT (WSDOT) and Seattle DOT (SDOT) dates back to a document over fifty years old that assigns responsibilities based on whether the work is classified as construction, routine maintenance (e.g., pothole repair), or extraordinary maintenance (e.g., repaving or rebuilding the base and paving).[67] Under this agreement, the City of

[65] Except where otherwise noted, the information on Seattle, WA is derived from Katherine Casseday, Traffic Engineer & Director, Traffic Management, City of Seattle Department of Transportation (SDOT), Personal Communication, 11/29/05; James Dare, Street Maintenance Director, SDOT, Personal Communication, 12/14/05; Richard Miller, Director, Capital Projects and Structures, SDOT, Personal Communication, 12/21/05; and David McCormick, Assistant Regional Administrator, Maintenance & Traffic, Washington State Department of Transportation, Personal Communication, 12/21/05.

[66] The city does do some landscaping on I-90, specifically of the tunnel near Mt. Baker Ridge.

[67] Maintenance Agreement, GM-20, 7/14/54, provided by Seattle DOT.

Seattle is responsible for and can undertake routine maintenance without further discussion with the state. However, work "falling within the classifications of new construction, betterment, replacement, or extraordinary maintenance" is not to be performed by the city unless agreed to and authorized by the state.[68]

A document entitled "Construction and Maintenance Classifications," dated March 1, 1949 constitutes part of the formal agreement. In 1997, Washington DOT (WSDOT) and the Association of Washington Cities developed a set of guidelines related to the interpretation of the meaning of this document for maintenance, construction, and operations. The resulting guidelines are shown in Tables A-6 and A-7 (again, these guidelines do not pertain to interstates). Beyond these documents, there is also legislation that denotes city responsibilities based on population size [Rev. Code Washington (ARCW) § 47.24.020 (2005)].

Table A-6. City/State Maintenance Responsibilities for City Streets as Part of the State Highway System[69]

Maintenance Item	Cities over 22,500 pop.	Cities Under 22,500 pop.
Roadway surface	state	state
Roadway shoulders	state	state
Stability of Cut & Fill Slopes	city	state
Sidewalks	city	city
Curbs	state	state
Parallel Roadside Ditches	city	city
Road Approach Culverts	city	city
Cross Culverts	city	city
Snow Plowing	city*	city*
Sanding & De-icing	city	city
Snow Removal	city	city
Sand Removal	city	city
Channelization	city**	state
Crosswalks	city**	state
Striping	city**	state
Directional Signals/Route Markers	state	state
Parking Signs	city	city
Regulatory Signs	city	state
Stop Signs (intersecting streets)	city	state
Signals	city	state
Guardrail, Concrete Barrier, etc.	state/city†	state/city†
Illumination	city††	city††
Street Cleaning	city	city
Street Sweeping	city	city

*With city concurrence, the state can plow the traveled lane within cities that do not have adequate snow equipment.
**When the state conducts reconstruction/resurfacing projects, it replaces "in-kind at no cost to the local agency" pavement markings that are damaged or removed as a result of the work. Cities bear costs for installation of higher quality markings.
†WSDOT maintains barriers in areas without curbs; barriers installed beyond the curb are maintained by cities.
††WSDOT maintains illumination on fully access-controlled roadways.

Of note on operations/maintenance, if the city fails to perform its maintenance obligations, WSDOT can notify the mayor to do so within 30 days; if this does not occur, WSDOT may perform the maintenance directly and deduct associated costs from any sums credited or to be credited to the city [Rev. Code Washington (ARCW) § 47.24.020 (2005)].

[68] Maintenance Agreement, GM-20, 7/14/54, p. 2, provided by Seattle DOT.
[69] "City Streets as Part of State Highways: Guidelines Reached by the Washington State Department of Transportation and the Association of Washington Cities of the Interpretation of Selected Topics of RCW 47.24 and Figures of WAC 468-18-050 for the Construction, Operations and Maintenance Responsibilities of WSDOT and Cities for Such Streets" (April 30, 1997), pp. 3-4, Table 1, http://www.wsdot.wa.gov/TA/Operations/LAG/citystreets.html (accessed 12/14/05).

In terms of signals, on state highways running through cities with a population of 22,500 or less, WSDOT installs, operates, maintains, and controls at state expense all traffic control signals, signs, and devices. Cities with larger populations, including Seattle, are responsible themselves for installation, maintenance, and control of such signals at their own expense, but are subject to WSDOT approval for installation and type of device [Rev. Code Washington (ARCW) § 47.24.020 (2005)]. Signals on these roadways are owned and operated by the city, but the state regulates their placement via permits.

When designing, though WSDOT has responsibility for limited access highways, when they are located within a city, design features must be developed in cooperation with the local agency. WSDOT's design responsibilities include the curbs (or paved shoulders where no curbs exist) and the areas between them; the city is responsible for everything beyond the curb (or shoulder).[70]

Table A-7. City/State Maintenance Responsibilities for Bridges of Cities over 22,500 Population[71]

Maintenance Item	Bridges Conveying Non-Limited Access State Highways that are also City Streets	State-Owned Bridges Conveying City Traffic over Limited or Non-Limited Access Highway
Structural Related Bridge Maintenance	state	state
Bridge Condition Inspections	state	state
L/C Overlays on Structures	state	state
Bridge Deck Membranes	state	state
Structural Asphalt Overlay on Bridge	state	state
Non-Structural Asphalt Overlay on Bridge	state	city (with prior state concurrence)
Approach Slab	state	city
Bridge Deck Joints	state	state/city***
Bridge Railing	state	state
Graffiti	city	city
Deck Sweeping	city	city
Bridge Drains/Drainage	city	city
Striping	city	city
Illumination	city*	city
Snow Plowing	city**	city
Snow Removal	city	city

*WSDOT maintains illumination on fully access-controlled roadways.
**With city concurrence, the state will plow the traveled lane of the state highway within cities that do not have adequate snow plowing equipment.
***WSDOT is responsible for joints located on the bridge deck; cities are responsible for back of pavement seat joint repairs unless they affect the structural integrity of the bridge.

Funding Mechanisms
According to the 1954 Maintenance Agreement, "all costs incurred under the terms of this Agreement shall be paid from local funds of the city and shall be subject to certification of the District Engineer of the State Highway Department before reimbursement. However, during conversations with representatives from Seattle, it appears that the state does not generally reimburse for those responsibilities which are designated as falling under the city.

Planning/Programming
While the state is responsible for planning and programming (re)construction on these roadways, it coordinates with the City of Seattle when local roadways may be affected, either by traffic diversions or through construction equipment and materials movements.

Transfers of Responsibility and/or Jurisdiction
Wording exists to allow for transfer of state highways to city jurisdiction if "no longer required as part of the state highway system" [Rev. Code Washington (ARCW) § 47.24.010 (2005)]. Similarly, there is legislation that describes when a local roadway should become part of the state highway system:

[70] WSDOT, Jurisdiction over State Highways within Cities Instructional Letter.
[71] "City Streets as Part of State Highways," pp. 5-6, Tables 2-3.

> An urban highway route that meets any of the following criteria should be designated as part of the state highway system:
>
> (a) Is designated as part of the interstate system;
>
> (b) Is designated as part of the system of numbered United states routes;
>
> (c) Is an urban extension of a rural state highway into or through an urban area and is necessary to form an integrated system of state highways;
>
> (d) Is a principal arterial that is a connecting link between two state highways and serves regionally oriented through traffic in urbanized areas with a population of fifty thousand or greater, or is a spur that serves regionally oriented traffic in urbanized areas [Rev. Code Washington (ARCW) § 47.17.001 (2005)].

Beginning September 1, 1991, the Transportation Improvement Board, which was created in 1988 to guide state investment in local transportation projects, was authorized by the legislature to begin accepting petitions from the cities, counties, and state for additions or deletions to the state highway system. The Board assesses these requests based on the criteria laid out in [Rev. Code Washington (ARCW) § 47.17.001 (2005)], and submits recommendations to the legislature for review by November 15 of each year [Rev. Code Wash. (ARCW) § 47.26.167 (2005)].[72]

According to David McCormick, Assistant Regional Administrator, Maintenance & Traffic, Washington State Department of Transportation, during the early 1990s, there was an in-depth review of the state highway system with the goal of determining the best way to update the system to meet current demand and travel patterns. At the time, a number of roadways that were either fractured jurisdictionally, were on the state system but functioning as local roadways, or were local roadways that now had state functions, were exchanged between the city and the state. Since that time there have been some "tweaks" to the system. In all cases, changes are made through Committee, with both sides needing to approve the transfer, with formal approval by the Washington State legislature.

Post-transfer, the key difficulty has been the cost to bring previously local roadways up to state standards. From the perspective of the state, the other difficulty arises with additional local ownership. Even as it is believed that local ownership is often more efficient, in turning roadways over to local jurisdictions the state loses the ability to effectively operate the entire state system *across* cities. With additional and more effective coordination and communication between and among agencies, the difficulties associated with this lack of state control can at least be mitigated to some degree. However, there is recognition at the state level that influencing coordination without jurisdictional oversight is not always possible.

Special Considerations

- Formal legislation of state policy goals for operation, performance of, and investment in the state transportation system
- Division of maintenance responsibilities based on city population size
- Great specificity of these responsibilities
- City responsible for all costs under its maintenance responsibilities, as per 1954 agreement

[72] The Transportation Improvement Board is composed of 21 members: 6 county representatives; 6 city representatives; 1 representative from the governor; 2 representatives each from WSDOT and public transit; 1 representative from the private sector; 1 representative of the ports; 1 individual representing non-motorized transportation and 1 individual representing special needs transportation [Rev. Code Washington (ARCW) § 47.26.121 (2005)] and Washington State Transportation Improvement Board Home Page, http://www.tib.wa.gov/ (accessed 1/5/06).

St. Louis, Missouri[73]

Missouri Department of Transportation District 6

Extent of the Roadway System (linear/centerline miles)

Total roadway mileage within city:	1,217	
City-owned and operated	1,162	
State-owned and operated	24	
State-owned; city operated	0	
City-owned; state operated	31	
Other-owned (commissions/authorities)		
Federal-aid	269	
Interstate (11)		unavailable
Arterials (12, 14, 16)		unavailable
Collectors (17)		unavailable

Background

As with Baltimore, MD, St. Louis is a municipality separate from St. Louis County; unlike Baltimore, however, the City of St. Louis is also a county and does fall within one of Missouri Department of Transportation (MoDOT)'s Transportation Districts. Prior to 1945, the state was forbidden by the Missouri Constitution from building and maintaining roads within municipalities, and because most of the roadways within the city were constructed prior to this date, they did not become part of the state highway system. Thus, until recently, the city owned and maintained all the arterials within its borders, with the state assuming ownership of these roadways at the city/county boundary.

Description of Responsibilities

interstates fall solely under Missouri Department of Transportation (MoDOT). MoDOT owns the ground upon which the roadways are located ("fee-simple") and performs all maintenance and operations functions, including lighting, on the roughly 55 miles of interstates running through the City of St. Louis.

Unlike the interstates, principal arterials in St. Louis have publicly-owned right-of-ways, so neither the city nor the state technically owns the ground upon which the roadways are located; however, the city owns the ROW. MoDOT had previously been responsible solely for surface maintenance on these roadways even though they had full maintenance responsibilities for arterials throughout the rest of the state. However, in 2004 the City of St. Louis and the State of Missouri agreed that, with the exception of Routes 180 and 366, MoDOT would now be responsible for curb-to-curb maintenance on the principal arterials within city limits, including sweeping, potholes, signals, signage, and striping, as well as intelligent transportation systems, and resurfacing. The city remains responsible for lighting, snow removal, permitting, landscaping, and parking meters.

Of interest, in the event that MoDOT's Highways and Transportation Commission "includes any items for which the city has responsibility to maintain as part of a Commission project, the city shall reimburse the Commission for the full cost of the activity."[74] Before such work is included, the Commission needs written approval by the Mayor and President of the Board of Public Service, and the reimbursement agreement can be negotiated separately.

Finally, typically, the city patrols and responds to all incidents on roadways within its borders.

Funding Mechanisms

With respect to funding for state highways, revenues generated by the motor fuel tax, sales tax on motor vehicles, and a portion of vehicle license fees are split between the state, cities, and counties. The state receives 75%, cities receive 15%, while counties receive 10%. Within the 15% share accorded to the cities, each city receives its proportion based on the ratio of the city's population to the population of all the cities in the state.[75] For this breakdown, the City of St. Louis falls into the city portion of the split. In 1992, the City of St. Louis helped to promote a graduated increase in the state gas tax. Counties now

[73] Except where otherwise noted, the information on St. Louis, Missouri is derived from Deanna Venker, Area Engineer, Cit of St. Louis, Missouri Department of Transportation (MoDOT), Personal Communication, 1/6/06; and from Marjorie Melton, President of the Board of Public Service, City of St. Louis, Personal Communication, 2/16/06.
[74] "Missouri Highways and Transportation Commission Maintenance Agreement for city Streets," provided by MoDOT, p. 3.
[75] MoDOT, "City/County Share of State Highway User Revenue," provided by MoDOT.

also receive 5% of any increase in motor vehicle taxes over 11 cents. Because the City of St. Louis helped promote the increase, it receives 5% of this additional 5% (as a city that is also a county).[76]

With respect to financing maintenance, on interstates, MoDOT covers all costs. If the city wants some enhancement beyond the standards usually applied by MoDOT, then the city pays for the additional costs. On principal arterials, the state pays for all operational expenses and curb-to-curb maintenance, while the city covers the costs for lighting, snow removal, drainage, and any landscaping in the medians.

Planning/Programming
On interstates, the state has the responsibility for planning and programming as well as reconstruction and design. However, it coordinates its work with the city via the regional metropolitan planning organization and through direct state and city meetings. On principal arterials, the state is now in charge of replacement and reconstruction unless the city had already programmed this work prior to 2004, in which case they retain responsibility for the specific projects denoted.

Transfers of Responsibility
The City of St. Louis continues to own the ROW for all roadways within city limits. However as a result of the 2004 agreement with the state, 31 miles of arterials are now maintained, curb-to-curb by MoDOT. The city was interested in this modification on financial grounds, suggesting that it should be treated like other cities throughout the state within which MoDOT maintained these responsibilities. From MoDOT's perspective, this agreement helps them to coordinate their entire system on a regional basis. Challenges remain in terms of coordination of signalization, work related to drainage, and permitting.

Though not as frequent, historically St. Louis also made use at times of temporary transfers. MoDOT cannot legally repair roadways or bridges that are not owned by the state. Thus, when there was a reason for MoDOT to aid in a repair within city limits, the state would temporarily take over the roadway or bridge, make the repair, and then turn it back to the city, much as has been done in Atlanta, GA.

Special Considerations
- Temporary transfers
- Publicly-owned ROW

[76] MoDOT, "City/County Share of State Highway User Revenue," provided by MoDOT; Melton, Personal Communication.

Temecula, California[77]

Caltrans District 8

Extent of the Roadway System (linear/centerline miles)[78]

Total roadway mileage within city:	206.64	
City-owned and operated	123.77	
State-owned and operated	not available	
State-owned; city operated	not available	
Other-owned (commissions/authorities)	0	
Federal-aid		
Interstate (11)	not available	
Arterials (12, 14, 16)	11.94	(only inc. 16; 12 and 14 not available)
Collectors (17)	19.38	

NOTE: To round out some of the discussion, there is also some information on the City of Los Angeles, Caltrans District 7. Except where noted, however, all information in the following paragraphs relates to Temecula.

Background

Situated within Riverside County, Temecula is much smaller than many of the other cities in this study. Having annexed Vail Ranch in 2001 and Redhawk in 2005, the city's population is now close to 91,000. Temecula is traversed by Interstate 15, which is owned, maintained, and operated by the State of California Department of Transportation (Caltrans) as part of the California Freeway and Expressway System [Cal Sts & Hy Code § 253.1 (2005)]. Freeways are defined as divided arterials with full control of access and grade separations at intersections; expressways are defined as arterials which may have partial control of access, but which may or may not be divided or have grade separations at intersections [Cal Sts & Hy Code § 257 (2005)]. There are adopted alignments for freeways which have not yet been built, but most of these exist in rural areas around the state.

The 2004 *California Performance Review* (CPR) notes that there are close to 6,500 lane-miles of state-owned and maintained highways that should be relinquished to local jurisdictions in order to save money. According to the CPR, prior to 1947, state highways began and ended at city limits, but the Collier-Burns Act changed that, allowing the state to assume responsibility for local streets to provide continuity of routes. California Streets & Highways Code now allows the state to relinquish control in coordination with local agencies [Cal Sts & Hy Code § 73]. The three primary reasons cited for roads not yet being turned over are local priorities, fiscal issues, and policy conflicts.

Description of Responsibilities

Caltrans is responsible for all interstates and roadways designated as state highways unless a contract is in place. Beyond these roadways, ownership and maintenance responsibilities on state arterials are more mixed with the state owning most (but not all) limited access arterials and some minor arterials. On roadways with contracts in place, the city's scope of maintenance responsibilities tends to be limited to drainage, sweeping, traffic signals, and safety lights, unless otherwise stipulated in the contract.

Funding Mechanisms

Cal Sts & Hy Code § 163 (2005) establishes a policy "for the use of all transportation funds that are available to the state, including the State Highway Account, the Public Transportation Account, and federal funds." Out of these accounts, expenditures are first deducted for administration of the Department of Transportation, maintenance and operation of the state highway system, rehabilitation of the state highway system, and for local assistance programs. After these are deducted, the remaining funds are available for capital improvement projects programmed in the state Transportation Improvement Program (STIP).

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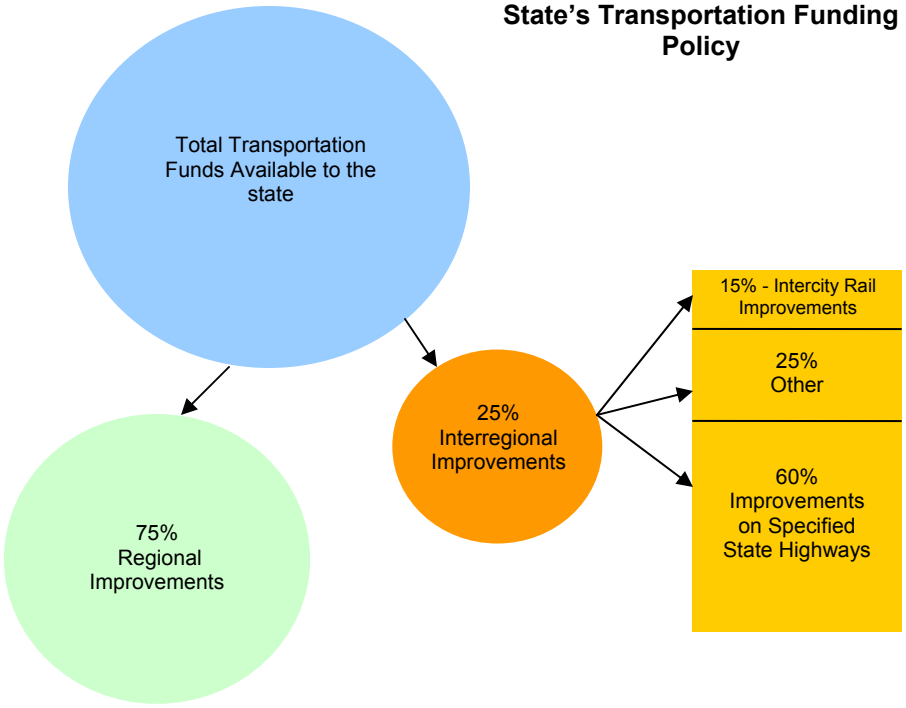
[77] Except where otherwise noted, the information on Temecula, CA is derived from Beryl Yasinosky, Management Analyst, Temecula Department of Public Works, Personal Communication, 12/16/05; Karen Fong, Acting Deputy Director Maintenance, and Bill Reagan, Deputy Director, Design, District 7, Caltrans, Personal Communication, 1/27/06.

[78] From Caltrans, "Highway Performance Monitoring System: Functional Classification – District 8, Riverside County, Temecula" http://web1.dot.ca.gov/hq/hpms/Page2.php?Dist=08&County=RIV&Jur=TMCA (accessed 1/11/06).

Figure A-4. Pictorial of California State's Transportation Funding Policy



Funds available for capital improvement projects are further apportioned as follows: One-quarter (25%) of the funds for transportation capital improvement projects are programmed and expended for interregional improvements that facilitate interregional movement of people and goods. Of the 25% directed toward interregional improvements, 60% is programmed and expended for improvements on specific state highways that are identified in the legislation. Of note, not less than 15% of these funds shall be programmed for intercity rail improvement projects, including grade separations. The remaining three-quarters (75%) are directed toward regional improvements [Cal Sts & Hy Code § 164 (2005)], which can include improvement of state highways, local roadways, public transit, intercity rail, pedestrian and bicycle facilities, transportation system management, transportation demand management, intermodal facilities, and safety projects, among others. These monies may also be used as a match for federal funds. See Figure A-4 for a pictorial of the funding policy.

In the case of the City of Los Angeles, there is a Maintenance Agreement in place, effective January 1, 2005, that provides for reimbursement to the city for providing certain specified maintenance functions.

Table A-8. Delegation of Maintenance Functions by Routes, Selected Routes and Partial Routes

Route No.	Length (miles)	Description	Maintenance	Maximum Annual Authorized Expenditure
1	4.68 1.44 2.15	Pacific Coast Hwy Sepulveda Blvd* Lincoln Boulevard	Drainage (DR) Sweeping (SW) Traffic Signals (TS) Safety Lights (SL)	$5,000 27,691 112,116 17,855 $162,662
2	2.12 1.47 4.64	Santa Monica Boulevard Alvarado Street Glendale Freeway (only signals and safety lights)	Drainage (DR) Sweeping (SW) Traffic Signals (TS) Safety Lights (SL)	$5,000 28,896 118,553 25,079 $177,528
5	12.13 13.73	Santa Ana Freeway Golden state Freeway	Traffic Signals (TS) Safety Lights (SL)	$55,620 $19,137 $74,757

* Mowing, pruning, replanting, weeding, irrigation will be performed at city expense; the state will maintain the structure of the Century Blvd. overcrossing below the top of the concrete deck surface, while the city will maintain at city expense the top of the concrete deck surface

From: Agreement for Maintenance of State Highways in the City of Los Angeles, 1 January 2005.

Table A-8 provides a description of some of these functions and the cost reimbursements for them. The city submits invoices on a quarterly basis for reimbursement under this Agreement and costs include both direct and indirect costs as well as a handling charge by the City of Los Angeles. According to representatives from District 7, if the city does not adequately provide the contracted service, Caltrans can perform the work and either send a bill directly or refuse to pay a city invoice. However, this was not noted in the Agreement.[79]

Traffic signals under the maintenance agreement are paid through a cost-share between the city and the state, between the county and state, or between the city, county and state. The exact proportional share for each specific signal is identified in the agreement. Regardless of the proportional cost share, the city maintains all traffic signals in Los Angeles.

Planning and Programming
In terms of coordination on planning and programming related to state highways, legislation exists regarding the need for Caltrans to coordinate with local agencies when building freeways. However, in certain cases within Los Angeles County, Cal Sts & Hy Code § 100.4 stipulates that Caltrans may construct a freeway without an agreement with the county or city, if all of the following conditions are met:

(a) The freeway is included within the California freeway and expressway system and a route has been adopted.
(b) Construction has commenced, but has not been completed, leaving an existing gap between the constructed portions of the freeway.
(c) In addition to the adopted route, there is at least one feasible alternative route as determined by the department.
(d) A draft environmental impact report or statement has been prepared on the un-constructed portion of the freeway.
(e) The affected freeway segment is within the jurisdiction of the Los Angeles County Metropolitan Transportation Authority.
(f) An agreement with one or more counties and cities … is not possible because an impasse, as evidenced by the lack of freeway agreements by all affected jurisdictions, has existed for 10 or more years after an initial route was adopted.
(g) Under the conditions set forth in subdivisions (a) to (f), inclusive, the commission shall hold public hearings as it may deem necessary, review the draft or final environmental impact report or statement, and consider the recommendation and records of the authority and other documents as it may deem advisable. The commission shall take into consideration all the traditional factors of route selection by the state, including the question of least adverse economic and physical impact on the communities involved, but any previous selection by the commission or its predecessor shall not be considered binding.
(h) The environmental impact report or statement shall examine the potential impacts of alternative route alignments on the communities involved. The definition and scope of these communities shall reflect the sense of community of residents within and immediately adjacent to the adopted route and alternate route location.
(i) The department shall prepare a draft environmental impact report or statement. The commission may hold public hearings on the draft environmental impact report or statement as it deems necessary. The department shall prepare a final environmental impact report or statement after the completion of the public review period of the draft environmental impact report or statement. The commission shall select a route after the completion of the environmental impact report or statement.
(j) If the route selected by the commission differs from a prior route adopted by the commission or a prior recommendation by the authority, the commission shall set forth, as a part of its decision statement, the reasons for the route selected.
(k) For any freeway constructed pursuant to this section, the department shall establish an outreach program to maximize the participation of businesses and professionals from within the county in which the freeway segment is located in the construction of the freeway segment [Cal Sts & Hy Code § 100.4].

[79] Agreement for Maintenance of State Highways in the City of Los Angeles, 1 January 2005. Also, Fong and Ragan, Personal Communication, 1/27/06.

Transfers of Responsibility
According to Cal Sts & Hy Code § 73 (2005), states: "The commission [of transportation] shall relinquish to any county or city any portion of any state highway within the county or city that has been deleted from the state highway system by legislative enactment." Relinquishments are made by resolutions and cannot be carried out until "the department has placed the highway, as defined in Section 23, in a State of good repair," which requires maintenance, including "litter removal, weed control, and tree and shrub trimming to the time of relinquishment."

If the relinquishment is not legislated, then written notice must be given by the state to the County Board of Supervisors or city Council 90 days prior to the relinquishment. Counties or cities may protest, in which case public hearings are then held [Cal Sts & Hy Code § 73 (2005)].

Temecula was recently involved a legislated relinquishment. In February 2005, via a Cooperative Agreement between the City of Temecula and the State of California, Temecula took over ownership and maintenance responsibilities of 6.25 miles of State Highway 79. The transfer included two separate segments, which are bifurcated by I-15: the northern segment, Winchester Road, consisted of 2.32 miles; the southern section of 3.95 miles is still referred to as state Road 79 South for the time being (see Figure A-5).

Prior to the transfer, the State of California was responsible for all maintenance, operations, planning/programming and design, including signals and lighting as well as construction and reconstruction. Riverside County had an established assessment district to collect fees from property owners to allow for improvements to the roadway and was responsible for making the actual improvements. However, the process was overseen by Caltrans, and was viewed as resulting in a lengthy review and approval process even for basic enhancements to what was functioning, in effect, as a local roadway.

The City of Temecula determined that it would be able to better serve its residents and motorists if state highways that functioned as local roadways within city limits were owned by the city itself. In discussing the possibility with Caltrans, the state believed the transfer would be in its best interest as well. In 2002, a Resolution of Intention was signed, beginning the Caltrans relinquishment process. At the request of the city and on its behalf, Senator Dennis Hollingsworth (R, 2002-) introduced Senate Bill 87 on January 27, 2003. The bill was briefly withdrawn in September 2003 when a nearby commercial property owner expressed concern about the possibility of the removal of a traffic signal located at one of the intersections as a result of the transfer. This issue was eventually worked out to everyone's satisfaction – Caltrans still owns the signal since it is located 900 feet from the interchange that continues under their jurisdiction. The bill was reintroduced in early 2004 with an urgency clause added in August 2004 to allow for a more rapid decision. It was approved by the Governor and Chaptered on September 9, 2004.

The terms of transfer of the final Relinquishment Agreement provided that Caltrans pay a one-time lump sum of $750,000 to the city upon the relinquishment.[80] The funds were used primarily to bring the roadway into a State of good repair and install medians. Otherwise, the city accepted the facility "as is" and now spends roughly $160,000/year to maintain it. Of note, because Caltrans did not have the monies to immediately provide the agreed upon cost, the City of Temecula agreed to accept the deed transfer and relinquishment of the physical facility prior to the disbursement of the funds. The payment was eventually made on December 16, 2005.

Of note was the post-transfer period. Once the Relinquishment Agreement was signed, the process moved more swiftly than anticipated and coordination of relinquishment of the physical facility was not as smooth as it could have been. As a result, it took time to transfer maintenance records and set markers denoting where responsibilities had changed. However, the overall belief is that this transfer has been of benefit to both city and state. While the additional annual cost to the city is roughly $160,000 (funded primarily from sales tax revenues, with a small amount from property taxes), the city has been better able to synchronize signals with the rest of the city for better traffic flow and feels it can more easily move forward with plans long-shelved when Caltrans had jurisdiction over the roadway.

[80] District Agreement 8-1258, "Cooperative Agreement Between the City of Temecula and the State of California: Relinquishment of Portions of Route 79 in the City of Temecula," 9 November 2004.

Special Considerations

- Funding prioritized for regional improvements
- Legislated relinquishment
- *California Performance Review* which identified a number of roadways or portions thereof to be relinquished

Figure A-5. Relinquishment Map for Temecula, CA