BACKGROUND: In 1984 a study was initiated at the Texas Transportation Institute (TTI) to investigate declines in urban mobility in major metropolitan areas around the state. That report eventually led to a series of annual reports that would come to explore and document the nation’s long-term congestion trends, make congestion comparisons, and to describe various congestion improvement strategies.

In 1982 researcher Tim Lomax conducted research for TxDOT that formed the early basis for the methodology later used to explore urban mobility across the country. His report was titled “Estimates of Relative Mobility in Major Texas Cities” and was based largely on TxDOT data similar to that now included in the Highway Performance Monitoring System (HPMS), which helped inform the research at that time. This early report is generally not counted as part of the national report series although it is listed in this bibliography.

References here, presented in reverse chronological order, show the series on urban mobility written by Lomax and his colleagues from 1986 to 2012. Today that series is referred to as the TTI Urban Mobility Report. Technically, however, the reports were published in more than one series and under a variety of titles. The first 10 reports were performed under a TxDOT research project. Reports since then have been conducted under a variety of contracts and through various sponsors. In 2006 and 2008 the report was not published.

It is vital to note that the methodology and data used in conducting this research have changed significantly in the past 30 years. With that fact in mind, researchers who seek to compare rankings listed in these reports (which have different measures and data approaches), are advised to remember that the authors never attempted to keep measures consistent from one report to the next.

Links to full-text online versions of reports listed here are provided if publicly accessible. Copies of these and other documents are available to VDOT personnel from the VDOT Research Library. If you are a VDOT employee and need assistance contact the library at: Library.Circulation@VDOT.Virgnia.gov Employees outside of VDOT can contact their library for delivery options or contact the National Technical Information Service.

- Ken Winter, Ken.Winter@VDOT.Virgnia.gov, 434-962-8979

NOTICE: Abstracts listed in this bibliography are copyrighted by the respective publishers and are subject to all applicable copyright protection under the laws of the United States and other countries.
busineses, manufacturers, commuters and travelers. There is no rigid prescription for the "best way" each 
region must identify the projects, programs and policies that achieve goals, solve problems and capitalize on 
opportunities.
ACCESS: http://mobility.tamu.edu/ums/ or 
http://d2dtl5nnlpfr0r.cloudfront.net/tti.tamu.edu/documents/mobility-report-2012.pdf

2011 URBAN MOBILITY REPORT.
CITATION: David Schrank, Tim Lomax and Bill Eisele. , 2011. Texas Transportation Institute, Texas A & M 
University. College Park, Tex. Pg. 147.
ABSTRACT: Congestion is a significant problem in America’s 439 urban areas. And, although readers and 
policy makers may have been distracted by the economy-based congestion reductions in the last few years, 
the 2010 data indicate the problem will not go away by itself "action is needed." First, the problem is very 
large. In 2010, congestion caused urban Americans to travel 4.8 billion hours more and to purchase an extra 
1.9 billion gallons of fuel for a congestion cost of $101 billion. Second, 2008 was the best year for congestion 
in recent times; congestion was worse in 2009 and 2010. Third, there is only a short-term cause for 
celebration. Prior to the economy slowing, just 4 years ago, congestion levels were much higher than a decade 
ago; these conditions will return with a strengthening economy. There are many ways to address congestion 
problems; the data show that these are not being pursued aggressively enough. The most effective strategy is 
one where agency actions are complemented by efforts of businesses, manufacturers, commuters and 
travelers. There is no rigid prescription for the "best way" and "each region must identify the projects, 
programs and policies that achieve goals, solve problems and capitalize on opportunities."
ACCESS: Available from the National Technical Information Service, contact your library for delivery options.

2010 URBAN MOBILITY REPORT.
CITATION: David Schrank, Tim Lomax and Shawn Turner. , 2010. Texas Transportation Institute, Texas A & M 
University. College Park, Tex., Pg. 61p.
ABSTRACT: Congestion is still a problem in America's 439 urban areas. The economic recession and slow 
recovery of the last three years, however, have slowed the seemingly inexorable decline in mobility. Readers 
and policy makers might be tempted to view this as a change in trend, a new beginning or a sign that 
congestion has been "solved." However, the data do not support that conclusion. First, the problem is very 
large. In 2009, congestion caused urban Americans to travel 4.8 billion hours more and to purchase an extra 
3.9 billion gallons of fuel for a congestion cost of $115 billion. Second, 2008 appears to be the best year for congestion 
in recent times; congestion worsened in 2009. Third, there is only a short-term cause for 
celebration. Prior to the economy slowing, just 3 years ago, congestion levels were much higher than a decade 
ago; these conditions will return with a strengthening economy. There are many ways to address congestion 
problems; the data show that these are not being pursued aggressively enough. The most effective strategy is 
one where agency actions are complemented by efforts of businesses, manufacturers, commuters and 
travelers. There is no rigid prescription for the "best way" - each region must identify the projects, programs 
and policies that achieve goals, solve problems and capitalize on opportunities.

2009 URBAN MOBILITY REPORT.
Transportation Institute, Texas A & M University. College Park, Tex., Pg. 134.
ABSTRACT: This summary report describes the scope of the problem and some of the improvement strategies. 
Congestion is a problem in Americas 439 urban areas, and it has gotten worse in regions of all sizes. In 2007, 
congestion caused urban Americans to travel 4.2 billion hours more and to purchase an extra 2.8 billion 
gallons of fuel for a congestion cost of $87.2 billion an increase of more than 50% over the previous decade 
(Exhibit 1). This was a decrease of 40 million hours and a decrease of 40 million gallons, but an increase of 
over $100 million from 2006 due to an increase in the cost of fuel and truck delay. Small traffic volume 
deciles brought on by increases in fuel prices over the last half of 2007 caused a small reduction in 
congestion from 2006 to 2007. There are many congestion problems but there are also many solutions. The most effective strategy is one where agency actions are complemented by efforts of businesses, 
manufacturers, commuters and travelers. The best approach to selecting strategies is to identify projects, 
programs and policies that solve problems or capitalize on opportunities. The strategies must address the issue 
that the problems are not the same in every region or on every day the variation in travel time is often as 
frustrating and costly as the regular daily slog through traffic jams. The 2009 Urban Mobility Report clearly 
demonstrates that all the solutions are not being implemented fast enough.
2008
Note: No report was published this year.

2007 URBAN MOBILITY REPORT.
ABSTRACT: Congestion is a problem in America's 437 urban areas and it is getting worse in regions of all sizes. Congestion caused urban Americans to travel 4.2 billion hours more and to purchase an extra 2.9 billion gallons of fuel for a congestion cost of $78 billion. This was an increase of 220 million hours, 140 million gallons and $5 billion from 2004. The solution to this problem is really to consider implementing all the solutions. One lesson from more than 20 years of mobility studies is that congestion relief is not just a matter of highway and transit agencies building big projects. Those are important, but so are actions by businesses, shippers, manufacturers and employers, as well as commuters, shoppers, and travelers for all reasons. This report points out that the supply of solutions is not being implemented at a rate anywhere near the rate of travel demand growth. This report and the website data describe the scope of the problem and some of the improvement strategies.

2006
Note: No report was published this year.

2005 URBAN MOBILITY REPORT.
ABSTRACT: Congestion continues to grow in America’s urban areas. Despite a slow growth in jobs and travel in 2003, congestion caused 3.7 billion hours of travel delay and 2.3 billion gallons of wasted fuel, an increase of 79 million hours and 69 million gallons from 2002 to a total cost of more than $63 billion. The solutions to this problem will require commitment by the public and by national, state and local officials to increase investment levels and identify projects, programs and policies that can achieve mobility goals. The 2005 Urban Mobility Report shows that the current pace of transportation improvement, however, is not sufficient to keep pace with even a slow growth in travel demands in most major urban areas.
ACCESS: http://mobility.tamu.edu/ums/congestion%5Fdata/tables/san%5Ffrancisco.pdf and http://mobility.tamu.edu/ums/congestion%5Fdata/tables/san%5Ffrancisco.pdf

2004 URBAN MOBILITY REPORT.
CITATION: D. Schrank and T. Lomax. , 2004. Texas Transportation Institute, Texas A & M University. College Park, Tex. , Pg. 27.
ABSTRACT: Congestion continues to grow in America's urban areas. The 2004 Annual Urban Mobility Report presents details on the trends, findings and what can be done to address the growing transportation problems. Trend data from 1982 to 2002 for 85 urban areas provides both a local view and a national perspective on the growth and extent of traffic congestion. The 2004 Report provides clear evidence that the time for improvements has arrived. Communicating the congestion levels and the need for improvements is a goal of this report. The decisions about which, and how much, improvement to fund will be made at the local level according to a variety of goals, but there are some broad conclusions that can be drawn from this database. ACCESS: Available from the National Technical Information Service, contact your library for delivery options.

2003 URBAN MOBILITY REPORT: VOLUME 2 - FIVE CONGESTION REDUCTION STRATEGIES AND THEIR EFFECTS ON MOBILITY.
ABSTRACT: The Urban Mobility Report procedures provide estimates of mobility at the areawide level. The approach that is used describes congestion in consistent ways using generally available data allowing for comparisons across urban areas or groups of urban areas. Past procedures only looked at projects that added lanes or reduced demand and overlooked many other types of projects that affected the demand characteristics. This report extends the procedures to several other treatments. The goal is to include all improvements, but good data are necessary to accomplish this. This report describes a framework for incorporating additional treatments and shows effects of those treatments. The five treatments are ramp metering, traffic signal coordination, incident management programs, high occupancy vehicle (HOV) lanes, and
public transportation service.

2003 URBAN MOBILITY REPORT.
ABSTRACT: The Annual Urban Mobility Report provides an easy-to-understand view of urban transportation congestion issues. The 20 years of data in this Urban Mobility Report identify several significant trends and provide information to the discussion of problems and solutions at the local, state and national levels. Previous reports have been used to inform the debates about transportation priorities, funding needs and broad strategic directions. The measures are only a tool, however, and they should not be interpreted as indicating specific projects or technologies as solutions. The data may guide the amount of improvements required, and they can be a useful measure of progress toward mobility goals, but the data in this report do not replace more detailed information or project evaluations. Major transportation system improvements require time for planning, design and implementation, and often a significant amount of funding as well. Communicating the congestion levels and the need for improvements is a goal of this report.

2002 URBAN MOBILITY REPORT.
ABSTRACT: The Annual Report of the Urban Mobility Study provides some information about congestion and mobility issues in ways that everyone can understand. This report focuses on the trends from 1982 to 2000 and analyzes issues that the motoring public, transportation officials, and policy makers often raise regarding traffic congestion and urban mobility in a way that is useful to these different information markets.

2001 URBAN MOBILITY REPORT.
ABSTRACT: The 18 years of data presented in this report document the growth of congestion levels on the major roads systems of 68 U.S. urban areas. Major transportation system improvements require time for planning, design and implementation, and often a significant amount of funding as well. Communicating the condition and the need for improvements is a goal of this report. Some of the broad conclusions drawn from this research include the following. 1. Congestion is growing in areas of every size. The 68 urban areas in this report range from New York City down to those with 100,000 population. 2. Congestion costs can be expressed in a log of different factors, but they are all increasing. The total congestion "bill" for the 68 areas in 1999 came to $78 billion, which was the value of 4.5 billion hours of delay and 6.8 billion gallons of excess fuel consumed. 3. Road expansions slow the growth in congestion. In areas where the rate of roadway additions were approximately equal to travel growth, travel time grew at about one-fourth to one-third as fast as areas where traffic volume grew much faster than roads were added. 4. By themselves, however, additional roadways do not seem to be the answer. The need for new roads exceeds the funding capacity and the ability to gain environmental and public approval. 5. The "solution" is really a diverse set of options that require funding commitments, as well as a variety of changes in the ways that transportation systems are used. These options and changes include more roads and more transit, more efficient operations, and modifications to the way in which travelers use the transportation network to accommodate more demand. 6. Improving the reliability of the transportation system is an important aspect of the programs in most large cities.

1999 ANNUAL MOBILITY REPORT: INFORMATION FOR URBAN AMERICA.
ABSTRACT: The mobility provided by the nation's transportation system is the subject of discussion and debate every day. This report provides data on the performance of some elements of that transport system in 68 urban areas. The travel, demographic, facility and operational performance statistics in the study from 1982 to 1997 are oriented to the broad public interest. The report is designed to present technical information to non-technical audiences. The primary performance measures are the travel rate index and travel delay. Both measures relate to the concerns of transport users - the amount of time required to travel. The travel rate index compares the time needed to travel during peak travel periods of the average day and the time needed to travel during free-flow conditions. The index is designed to be easy to understand and useful for a
range of analyses and presentations. Travel delay is presented as an annual estimate of the amount of additional travel time caused by traffic congestion. Various federal, state, and local agencies provided the information used to update and verify the primary database -- the Federal Highway Administration's Highway Performance Monitoring Systems (HPMS).


1998 URBAN ROADWAY CONGESTION ANNUAL REPORT.
CITATION: David Schrank and Tim Lomax. 1998 / College Station, Texas : Texas A&M University. Texas Transportation Institute (TTI), Pg. 190.
ABSTRACT: This report documents roadway congestion and mobility measures in 70 major urban areas in the United States. This study contains vehicle travel, facility length and operation estimates, and urban area characteristics from 1982 to 1996 for each of these urban areas. Various federal, state, and local agencies provided the information used to update and verify the primary database -- the Federal highway Administration's Highway Performance Monitoring System (HPMS).
ACCESS: Available from the National Technical Information Service, contact your library for delivery options.

URBAN ROADWAY CONGESTION - 1982 TO 1994. VOLUME 2: METHODOLOGY AND URBANIZED AREA DATA.
ABSTRACT: This research report represents the final year of a 10-year research effort focused on quantifying urban mobility. This study contains the facility information for 50 urban areas throughout the country. The database used for this research contains information on vehicle travel, system length, and urban area characteristics from 1982 to 1994. Various federal, state, and local agencies provided the information used to update and verify the primary database. The primary database and original source of most of the information is the Federal Highway Administration's Highway Performance Monitoring System (HPMS). Researchers combined vehicle travel and system length data to develop Roadway Congestion Index (RCI) values for 50 urban areas including the seven largest in Texas. The RCI values provide an indicator of the relative mobility level within an urban area. This report includes an analysis of the cost of congestion using travel delay and increased fuel consumption as estimated quantities. The impact of congestion was also estimated by the amount of additional facility capacity required to provide urban mobility. Congestion costs were estimated on an areawide, per eligible driver, and per capita basis.

URBAN ROADWAY CONGESTION - 1982 TO 1994. VOLUME 1: ANNUAL REPORT.
ABSTRACT: This research report represents the final year of a 10-year research effort focused on quantifying urban mobility. This study contains the facility information for 50 urban areas throughout the country. The database used for this research contains information on vehicle travel, system length, and urban area characteristics from 1982 to 1994. Various federal, state, and local agencies provided the information used to update and verify the primary database. The primary database and original source of most of the information is the Federal Highway Administration's Highway Performance Monitoring System (HPMS). Researchers combined vehicle travel and system length data to develop Roadway Congestion Index (RCI) values for 50 urban areas, including the seven largest in Texas. The RCI values provide an indicator of the relative mobility level within an urban area. This report includes an analysis of the cost of congestion using travel delay and increased fuel consumption as estimated quantities. The impact of congestion was also estimated by the amount of additional facility capacity required to provide urban mobility. Congestion costs were estimated on an areawide, per eligible driver, and per capita basis.

URBAN ROADWAY CONGESTION - 1982 TO 1993. VOLUME 2: METHODOLOGY AND URBANIZED AREA DATA.
ABSTRACT: This research report represents the ninth year of a ten-year research effort focused on quantifying urban mobility. This study contains the facility information for 50 urban areas throughout the country. The database used for this research contains information on vehicle travel, system length, and urban area characteristics from 1982 to 1993. Various federal, state, and local agencies provided the information used to update and verify the primary database. The primary database and original source of most of the information is the Federal Highway Administration's Highway Performance Monitoring System (HPMS). Researchers
combined vehicle travel and system length data to develop Roadway Congestion Index (RCI) values for 50 urban areas including the seven largest in Texas. The RCI values provide an indicator of the relative mobility level within an urban area. This report includes an analysis of the cost of congestion using travel delay and increased fuel consumption as estimated quantities. The impact of congestion was also estimated by the amount of additional facility capacity required to provide urban mobility. Congestion costs were estimated on an areawide, per eligible driver, and per capita basis.

ACCESS: Available from the National Technical Information Service, contact your library for delivery options.

**URBAN ROADWAY CONGESTION - 1982 TO 1993. VOLUME 1: ANNUAL REPORT.**
ABSTRACT: This research report represents the ninth year of a ten-year research effort focused on quantifying urban mobility. This study contains the facility information for 50 urban areas throughout the country. The database used for this research contains information on vehicle travel, system length, and urban area characteristics from 1982 to 1993. Various federal, state, and local agencies provided the information used to update and verify the primary database. The primary database and original source of most of the information is the Federal Highway Administration's Highway Performance Monitoring System (HPMS). Researchers combined vehicle travel and system length data to develop Roadway Congestion Index (RCI) values for 50 urban areas including the seven largest in Texas. The RCI values provide an indicator of the relative mobility level within an urban area. This report includes an analysis of the cost of congestion using travel delay and increased fuel consumption as estimated quantities. The impact of congestion was also estimated by the amount of additional facility capacity required to provide urban mobility. Congestion costs were estimated on an areawide, per eligible driver, and per capita basis.

**URBAN ROADWAY CONGESTION - 1982 TO 1992. VOLUME 2: METHODOLOGY AND URBANIZED AREA DATA. INTERIM REPORT.**
ABSTRACT: This research report represents the seventh year of a ten-year research effort focused on quantifying urban mobility. This study contains the facility information for 50 urban areas throughout the country. The database used for this research contains information on vehicle travel, system length, and urban area characteristics from 1982 to 1992. Various federal, state, and local agencies provided the information used to update and verify the primary database. The primary database and original source of most of the information is the Federal Highway Administration's Highway Performance Monitoring System (HPMS). Vehicle travel and system length data were combined to develop Roadway Congestion Index (RCI) values for 50 urban areas including the seven largest in Texas. The RCI values provide an indicator of the relative mobility level within an urban area. An analysis of the cost of congestion was also performed using travel delay and increased fuel consumption as estimated quantities. The impact of congestion was also estimated by the amount of additional facility capacity required to provide urban mobility. Congestion costs were estimated on an areawide, per registered vehicle, and per capita basis.
ACCESS: [http://tti.tamu.edu/documents/1131-8-V2.pdf](http://tti.tamu.edu/documents/1131-8-V2.pdf)

**URBAN ROADWAY CONGESTION - 1982 TO 1992. VOLUME 1: ANNUAL REPORT. INTERIM REPORT.**
ABSTRACT: This research report represents the seventh year of a ten-year research effort focused on quantifying urban mobility. This study contains the facility information for 50 urban areas throughout the country. The database used for this research contains information on vehicle travel, system length, and urban area characteristics from 1982 to 1992. Various federal, state, and local agencies provided the information used to update and verify the primary database. The primary database and original source of most of the information is the Federal Highway Administration's Highway Performance Monitoring System (HPMS). Vehicle travel and system length data were combined to develop Roadway Congestion Index (RCI) values for 50 urban areas including the seven largest in Texas. The RCI values provide an indicator of the relative mobility level within an urban area. An analysis of the cost of congestion was also performed using travel delay and increased fuel consumption as estimated quantities. The impact of congestion was also estimated by the amount of additional facility capacity required to provide urban mobility. Congestion costs were estimated on an areawide, per registered vehicle, and per capita basis.
ACCESS: [http://tti.tamu.edu/documents/1131-7-V1.pdf](http://tti.tamu.edu/documents/1131-7-V1.pdf)
ABSTRACT: This research report represents the sixth year of a ten-year research effort focused on quantifying urban mobility. This study contains the facility information for 50 urban areas throughout the country. The database used for this research contains information on vehicle travel, system length, and urban area characteristics from 1982 to 1991. Various federal, state, and local agencies provided the information used to update and verify the primary database. The primary database and original source of most of the information is the Federal Highway Administration's Highway Performance Monitoring System (HPMS). Vehicle travel and system length data were combined to develop Roadway Congestion Index (RCI) values for 50 urban areas including the seven largest in Texas. The RCI values provide an indicator of the relative mobility level within an urban area. An analysis of the cost of congestion was also performed using travel delay and increased fuel consumption as estimated quantities. The impact of congestion was also estimated by the amount of additional facility capacity required to provide urban mobility. Congestion costs were estimated on an areawide, per registered vehicle, and per capita basis.
ACCESS: http://tti.tamu.edu/documents/1131-7-V2.pdf

TRENDS IN URBAN ROADWAY CONGESTION - 1982 TO 1991, VOLUME 1: ANNUAL REPORT.
ABSTRACT: This research report represents the sixth year of a ten-year research effort focused on quantifying urban mobility. This study contains the facility information for 50 urban areas throughout the country. The database used for this research contains information on vehicle travel, system length, and urban area characteristics from 1982 to 1991. Various federal, state, and local agencies provided the information used to update and verify the primary database. The primary database and original source of most of the information is the Federal Highway Administration's Highway Performance Monitoring System (HPMS). Vehicle travel and system length data were combined to develop Roadway Congestion Index (RCI) values for 50 urban areas including the seven largest in Texas. The RCI values provide an indicator of the relative mobility level within an urban area. An analysis of the cost of congestion was also performed using travel delay and increased fuel consumption as estimated quantities. The impact of congestion was also estimated by the amount of additional facility capacity required to provide urban mobility. Congestion costs were estimated on an areawide, per registered vehicle, and per capita basis.
ACCESS: http://tti.tamu.edu/documents/1131-6-V1.pdf

ESTIMATES OF URBAN ROADWAY CONGESTION, 1990.
ABSTRACT: This research report is the fifth year continuation of a six year research effort focused on quantifying urban mobility. This study contain the facility information for 50 urban areas throughout the country. The database used for this research contains vehicle-miles of travel, urban area information, and facility mileage data from 1982 to 1990. Various federal, state, and local agencies provided the information used to update and verify the primary database. The primary database and source of information is the Federal Highway Administration's Highway Performance Monitoring System (HPMS). Vehicle-miles of travel and lane-mile data were combined to develop Roadway Congestion Index (RCI) values for 50 urban areas including the seven largest in Texas. These RCI values provide an indicator of the relative mobility level within an urban area. An analysis of the impacts and cost of congestion were also performed using travel delay, increased fuel consumption, and additional facility lane-miles as measures of urban mobility. Congestion costs were estimated on an areawide, per registered vehicle, and per capita basis.

1989 ROADWAY CONGESTION ESTIMATES AND TRENDS.
ABSTRACT: The report is the fourth year continuation of a six year research effort focused on quantifying urban mobility. This study contains the facility information for 50 urban areas throughout the country. The data base used for this research contains vehicle-miles of travel, urban area information, facility mileage, and facility lane-mile data from 1982 to 1989. Various federal, state, and local agencies provided the information used to update and verify the primary data base. The primary data base and source of information is the Federal Highway Administration's Highway Performance Monitoring System (HPMS). Vehicle-miles of travel and
lane-mile data were combined to develop Roadway Congestion Index (RCI) values for 50 urban areas including the seven largest in Texas. These RCI values provide an indicator of the relative mobility level within an urban area. An analysis of the impacts and cost of congestion were also performed using travel delay, increased fuel consumption, and additional facility lane-miles as measures of urban mobility. Congestion costs were estimated on an areawide, per registered vehicle, and per capita basis.


CITATION: James W. Hanks, Jr. and Timothy J. Lomax. 1990 / College Station, Texas : Texas A&M University. Texas Transportation Institute (TTI)
ABSTRACT: The research report represents the results of the third year analysis of a six year research effort focused on quantifying urban mobility. The study contains roadway information for 39 urban areas representing a geographic cross-section throughout the country. The data base used for the research contains vehicle travel, urban area information, facility mileage, and vehicle travel per lane-mile information from 1982 to 1988. Various federal, state, and local information sources were used to develop and update the data base with the primary source being the Federal Highway Administration's Highway Performance Monitoring System. Vehicle-miles of travel and lane-mile data were used to develop roadway congestion index values for the seven largest Texas and 32 other U.S. urban areas. These index values serve as indicators of the relative mobility level within an urban area. An analysis of the cost of congestion was performed using travel delay, increased fuel consumption and increased auto insurance premiums as the economic analysis factors. Congestion costs were estimated on an urban areawide, per registered vehicle, and per capita basis.

CITATION: James W. Hanks and Timothy J. Lomax. 1989 / College Station, Texas : Texas A&M University. Texas Transportation Institute (TTI)
ABSTRACT: The research report studied 39 urban areas. An assessment of the freeway and major street operating conditions was performed in seven Texas and 32 other urban areas in the continental United States. In addition, the analyses from 1982 to 1986 were updated to include 1987 urban area data. Vehicle-miles of travel and lane-miles of roadway data were collected from a variety of sources to estimate congestion on the freeway/expressway and principal arterial street systems. The values for each system were combined into a roadway congestion index used to rank mobility in each urban area on a relative scale. An analysis of the cost of this congestion was performed using travel delay, increased fuel consumption and increased auto insurance premiums as the economic analysis factors. The economic cost to the urban area, and to the individual resident, was estimated.
ACCESS: http://tti.tamu.edu/documents/1131-2.pdf or

THE IMPACT OF DECLINING MOBILITY IN MAJOR TEXAS AND OTHER U.S. CITIES.
CITATION: Timothy J. Lomax, Diane L. Bullard, and James W. Hanks, Jr. 1988 / College Station, Texas : Texas A&M University. Texas Transportation Institute (TTI), Pg. 117.
ABSTRACT: An assessment of the freeway and major street operating conditions was performed in seven Texas cities and 22 other urban areas in the U.S. for the period 1982 to 1986. Vehicle-miles of travel and lane-miles of roadway data were collected from a variety of sources to estimate congestion on the freeway/expressway and principal arterial street systems. The values for each system were combined into a congestion index used to rank the urban areas on a relative scale. An analysis of the cost of this congestion was performed using travel delay, increased fuel consumption and increased auto insurance premiums as the economic analysis factors. The economic cost to the urban area, and to the individual resident, was estimated. An investigation of business attitudes toward urban area traffic congestion was performed in 13 of the study cities. The construction and widening of freeways and major streets in the urban areas were the most frequently mentioned improvements that would enhance business activity.
ACCESS: http://tti.tamu.edu/documents/431-1F.pdf

RELATIVE MOBILITY IN TEXAS CITIES, 1975 TO 1984.
CITATION: Timothy J. Lomax, 1986, College Station, Texas : Texas A&M University. Texas Transportation Institute (TTI), Pg. 56.
ABSTRACT: The major urban areas in Texas have experienced a period of unprecedented growth. Along with that growth came significant increases in traffic congestion with corresponding declines in urban mobility. This
The study uses available traffic data to assess the relative mobility levels in Austin, Corpus Christi, Dallas, El Paso, Forth Worth, Houston and San Antonio between 1975 and 1984. An estimate of the number of years before congestion reaches an undesirable level was generated for each major urban area.


**ESTIMATES OF RELATIVE MOBILITY IN MAJOR TEXAS CITIES.**
CITATION: T.J. Lomax, D.L. Christiansen, A.V. Fitzgerald. 1982 / College Station, Texas : Texas A&M University. Texas Transportation Institute (TTI),
ABSTRACT: The major urban areas in Texas have recently experienced a period of unprecedented growth. Along with that growth came significant increases in traffic congestion with corresponding declines in urban mobility. Maintaining mobility is essential if continued economic growth is to be realized. This study uses available data to assess the seriousness of congestion in the major urban areas and to estimate the relative levels of mobility that exist in major Texas cities.
ACCESS: http://tti.tamu.edu/documents/323-1F.pdf

**ADDITIONAL READING:** The following citations, listed alphabetically by title, may also be of interest to researchers. Note that some of the citations listed here are for interim reports for the series above.

**ANALYZING AND COMMUNICATING OPERATIONAL IMPROVEMENTS IN AN URBAN AREA.**
ACCESS: Contact your library for delivery options.

**ANNUAL STUDY SHOWS TRAFFIC JAMS AS A GROWING TRIPLE THREAT.**
ACCESS: http://tti.tamu.edu/publications/researcher/v38n2/38_2.pdf

**COMPARING PERCEPTIONS AND MEASURES OF CONGESTION.**
ACCESS: http://utcm.tamu.edu/publications/final_reports/Le_11-00-72.pdf or http://ntl.bts.gov/lib/46000/46300/46378/Le_11-00-72.pdf

**CONGESTED CORRIDORS REPORT - 2011.**

**ESTIMATES OF URBAN ROADWAY CONGESTION, 1990 : INTERIM REPORT.**

**EVALUATING MOBILITY AND ENERGY EFFICIENCY. FINAL REPORT.**
ACCESS: Contact your library for delivery options.

**HIGHWAY CONGESTION WORSENS : TRAFFIC SOLUTIONS AND IMPACTS EXAMINED.**

**IMPROVING MOBILITY INFORMATION WITH BETTER DATA AND ESTIMATION PROCEDURES.**
ACCESS: http://utcm.tamu.edu/publications/final_reports/Lomax_09-17-09.pdf or http://ntl.bts.gov/lib/33000/33700/33760/Lomax_09-17-09.pdf
REAL-TIMING THE 2010 URBAN MOBILITY REPORT.

REFINING THE REAL-TIMED URBAN MOBILITY REPORT.
ACCESS: http://utcm.tamu.edu/publications/final_reports/Lomax_11-06-73.pdf

RUSH HOUR?: ANNUAL TRAFFIC STUDY SHOWS IT'S NEITHER.
ACCESS: http://tti.tamu.edu/publications/researcher/v37n2/37_2.pdf

SELECTING TRAVEL RELIABILITY MEASURES.
ACCESS: http://tti.tamu.edu/documents/474360-1.pdf

STUDY SHOWS TRAFFIC WORSENING IN A VARIETY OF WAYS AND PLACES.
ACCESS: Contact your library for delivery options.

TRAFFIC JAMS: NOT JUST BIG-CITY PROBLEM.
ACCESS: Contact your library for delivery options.

THE TRAVEL RATE INDEX.
ACCESS: Contact your library for delivery options.

TRENDS IN URBAN ROADWAY CONGESTION - 1982 TO 1991, VOLUME 1: ANNUAL REPORT.
ACCESS: Contact your library for delivery options.

URBAN ROADWAY CONGESTION - 1982 TO 1992. VOLUME 1: ANNUAL REPORT. INTERIM REPORT.
ACCESS: Contact your library for delivery options.

URBAN ROADWAY CONGESTION - 1982 TO 1992. VOLUME 2: METHODOLOGY AND URBANIZED AREA DATA. INTERIM REPORT.
ACCESS: Contact your library for delivery options.

URBAN ROADWAY CONGESTION - 1982 TO 1994. VOLUME 1: ANNUAL REPORT. See above

THE URBAN TRANSPORTATION PLANNING DATABASE.
ACCESS: http://tti.tamu.edu/documents/996-1F.pdf