PLAN REPORT

May 2012

ENCOMPASS 2035

OKLAHOMA CITY AREA REGIONAL TRANSPORTATION STUDY

ENCOMPASS 2035 PLAN REPORT

THE OKLAHOMA CITY AREA REGIONAL TRANSPORTATION STUDY

Adopted by the Intermodal Transportation Policy Committee and endorsed by the Board of Directors of the Association of Central Oklahoma Governments on April 28, 2011.

ASSOCIATION OF CENTRAL OKLAHOMA GOVERNMENTS
21 East Main Street, Suite 100
Oklahoma City, OK 73104-2405
(405) 234-2264
Fax: (405) 234-2200
TDD/TTY: 7-1-1 Statewide
www.acogok.org

Preparation of this report was financially aided through funds provided by the U.S. Department of Transportation (Federal Highway Administration and Federal Transit Administration), the Oklahoma Department of Transportation, and local government contributions.

Intermodal Transportation Policy Committee
Local Government Members as of April 2012

BETHANY
- *Councilmember* — *Phillip Shirey*
- *Mayor* — *Bryan Taylor*
- *Councilmember* — *Randy Luinstra*

BLANCHARD
- *Councilmember* — *Mike Ferencich*

CEDAR VALLEY
- Mayor — *Stan Wieczorek*

CHOCTAW
- *Councilmember* — *Roger Malone*
- *Councilmember* — *Larry Goeller*

COLE
- *Trustee* — *William Anderson*

DEL CITY
- *Councilmember* — *Ken Bartlett*
- *Councilmember* — *Dick Carter*
- *Mayor* — *Brian E. Linley*

EDMOND
- *Councilmember* — *Elizabeth Waner*
- *Councilmember* — *Victoria Caldwell*

FOREST PARK
- *Trustee* — *Marianne Yarbrough*
- *Mayor* — *Elton Matthews*

GOLDSBY
- *No Designee*

GUTHRIE
- *Councilmember* — *John Wood*
- *Mayor* — *Chuck Burtcher*

HARRAH
- *Councilmember* — *Bill Lisby*
- *Councilmember* — *Duane Patterson*

JONES CITY
- Mayor — *Ray Poland*
- *Councilmember* — *Matt Elerick*

LEXINGTON
- *Councilmember* — *Mark Easton*

LUTHER
- *Trustee* — *Kim Bourns*
- *Mayor* — *Edward D. Threatt*

MIDWEST CITY
- *Mayor* — *Jack Fry*
- *Councilmember* — *Richard Rice*
- *Councilmember* — *Turner Mann*

MOORE
- *Councilmember* — *Kathy Griffith*
- *Councilmember* — *Janie Milum*

MUSTANG
- *Councilmember* — *Jay Adams*
- *Councilmember* — *Terry Jones*

NEWCASTLE
- *Councilmember* — *Linda Molsbee*
- *Councilmember* — *Cindy Frizzell*

NICHOLS HILLS
- *Councilmember* — *Peter Hoffman*

NICOMA PARK
- *Mayor* — *Robert Pittman*
- *Vice-Mayor* — *Jim Shonts*

NOBLE
- *Mayor* — *Gary Hayes*
- *Councilmember* — *Dianne Gray*
- *Councilmember* — *Tony Parker*

NORMAN
- *Councilmember* — *Tom Kovach*
- *Mayor* — *Cindy Rosenthal*

OKLAHOMA CITY
- *Councilmember* — *Pete White*
- *Councilmember* — *Gary Marrs*

PIEDMONT
- *Mayor* — *Valerie Thomerson*
- *Councilmember* — *Wade Johnson*

SLAUGHTERVILLE
- *Mayor* — *Bobby Cleveland*
- *Trustee* — *Larry Iovan*

SPENCER
- *Mayor* — *Earnest Ware*
- *Vice Mayor* — *Marsha Jefferson*

THE VILLAGE
- *Mayor* — *David Bennett*
- *Councilmember* — *Hutch Hibbard*

TUTTLE
- *Councilmember* — *Mary Smith*

WARR ACRES
- *Councilmember* — *David Dirkschneider*
- *Councilmember* — *Roger Godwin*
- *Mayor* — *Patrick Woolley*

YUKON
- *Councilmember* — *Bob Bradway*
- *Mayor* — *John Alberts*

CANADIAN COUNTY
- *Commissioner* — *David Anderson*
- *Commissioner* — *Jack Stewart*
- *Commissioner* — *Phil Carson*

CLEVELAND COUNTY
- *Commissioner* — *Rod Cleveland*
- *Commissioner* — *Rusty Sullivan*

LOGAN COUNTY
- *Commissioner* — *Mark Sharpton*
- *Commissioner* — *Mike Pearson*
- *Commissioner* — *Monty Piearcy*

MCCLAIN COUNTY
- Commissioner — *Wilson Lyles*
- Commissioner — *Charles Foster*

OKLAHOMA COUNTY
- *Commissioner* — *Willa Johnson*
- *Commissioner* — *Brian Maughan*
- *Commissioner* — *Ray Vaughn*

Intermodal Transportation Policy Committee (continued)
Agency Members

Central Oklahoma Transportation & Parking Authority
Kay Bickham
Rick Cain
Larry Hopper

Cleveland Area Rapid Transit
Doug Myers
Cody Ponder

Oklahoma City Airport Trust
Don G. Jones

Oklahoma Department of Transportation
John Bowman
Craig Moody
Dawn Borelli

Oklahoma Transportation Commission – District III
(McClain & Cleveland Counties in OCARTS)
Danny B. Overland

Oklahoma Transportation Commission – District IV
(Canadian, Logan & Oklahoma Counties in OCARTS)
Greg Love

Oklahoma Transportation Commission – District VII
(Grady County in OCARTS)
Bradley W. Burgess

Non-Voting Members

Federal Aviation Administration
Edward N. Agnew

Federal Highway Administration
Gary Corino
Isaac Akem
Elizabeth Romero

Federal Transit Administration
Robert C. Patrick
Blas Uribe

Association of Central Oklahoma Governments

John G. Johnson ..... Executive Director

Transportation & Planning Services Staff:

Douglas W. Rex ..... Division Director

Holly Massie ..... Special Programs Officer II

John Sharp ..... Program Coordinator

Darla Hugaboom ..... Program Coordinator

Kara Chiodo ..... Associate Planner

Michael Howard ..... Associate Planner

Jennifer Sebesta ..... Assistant Planner

Brian Schroeder ..... Assistant Planner

Ryan Baker ..... Special Programs Officer

Beverly Garner ..... Administrative Assistant

Additional ACOG Staff Assistance:

Jerry Church ..... Public Information Coordinator

Tracy Case ..... Assistant to the Executive Director

In memory of Zach D. Taylor, Jr., who served as ACOG Executive Director from 1978–2008. Zach died on January 4, 2008, having spent most of his life as an ambassador for the greater Oklahoma City region. He promoted positive regional leadership, community interaction, and collaboration for the betterment of all. This plan is indicative of his vision and influence, and illustrates his dedication to the high quality of life in Central Oklahoma.

Central Oklahoma Transportation and Parking Authority

Rick Cain ..... Administrator

Larry Hopper ..... Service Development Manager

Cleveland Area Rapid Transit

Doug Myers ..... Director

Cody Ponder ..... Planner/Grants Specialist

Oklahoma Department of Transportation

Gary Ridley ..... Secretary of Transportation/Director of ODOT

David Streb ..... Director of Engineering

John Bowman ..... Planning & Research Division Engineer

Dawn Borelli ..... Planning & Research Division STIP Administrator

Kenneth LaRue ..... Transit Programs Division Manager

Federal Highway Administration, Oklahoma Division

Gary Corino ..... Division Administrator

Elizabeth Romero ..... Planning & Tech Services Team Leader

Isaac Akem ..... Community Planner

Federal Transit Administration, Region 6

Robert C. Patrick ..... Regional Administrator

Blas Uribe ..... Deputy Regional Administrator

Peggy Crist ..... Director of Planning & Program Development

Pearlie Tiggs ..... Community Planner

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

GLOSSARY

Access, limited (or controlled access) – In transportation, to have entry and exit limited to predetermined points, as with interstates, freeways and rapid transit.

Arterial street – A major thoroughfare used primarily for through traffic rather than for access to abutting land, characterized by high vehicular capacity and continuity of movement.

Assignment – As predicted by the travel demand model, the number of units (passengers or vehicles) that pass a point on a transportation facility during a specified interval of time.

Attainment Area – An area in which levels of a criteria air pollutant meet the health-based primary standard (national ambient air quality standard, or NAAQS) for the pollutant. Attainment areas are defined using federal pollutant limits set by EPA.

Average Daily Traffic (ADT) – The average number of vehicles that pass a specified point during a 24 hour period.

Base Year – The year to which the major portion of the data gathered in a (transportation) study or survey relates. The base year is also the first year of a planning or forecast period.

Benefit-cost analysis – An analytical technique that compares the costs and benefits (measured in monetary terms) of proposed programs or policy actions. Alternative actions are compared to allow selection of one or more that yields the greatest net benefit or benefit cost ratio.

Benefit-cost ratio – The ratio of the dollars of benefits achievable to the given outlay of costs.

Bus Rapid Transit (BRT) – Buses operating primarily on their own dedicated lane or right-of-way.

Clean Air Act (CAA) – The Clean Air Act is the law that defines EPA's responsibilities for protecting and improving the nation's air quality and the stratospheric ozone layer. The Clean Air Act was enacted by Congress in 1990. Legislation passed since then has made several minor changes. In nonattainment and maintenance areas, federal funding and approval for transportation projects is only available if transportation activities are consistent with air quality goals through the transportation conformity process. The transportation conformity process includes a number of requirements that MPOs must meet.

Capital costs – Nonrecurring or infrequently recurring costs of long-term assets such as land, structures, bridges, roadways, and vehicles (such as publicly owned and operated transit vehicles).

CART – Cleveland Area Rapid Transit; the transit operator of the Norman bus system.

Citizens Advisory Committee (CAC) – An ACOG committee tasked with providing critical public input and expertise to help shape future transportation activities.

Citylink – The transit operator of the Edmond bus system.

Commuter Rail Transit (CRT) – Passenger trains operated on or adjacent to a main line railroad track to carry riders to and from work in city centers.

Constant dollars – Current dollars, that is, the value of the dollar for the year selected as a base, adjusted by using the change in the GNP deflator index or other specified indicator between the current (base) year and the desired year. The intent of using constant dollars is to remove the distortion caused by inflation during the intervening time period.

Corridor – In planning, a broad geographical band that follows a general directional flow or connects major sources of trips. It may contain a number of streets and highways.

Council of Governments (COG) – A voluntary consortium of local government representatives, from contiguous communities, meeting on a regular basis and formed to cooperate on common planning and to solve common development problems of their area. In Central Oklahoma, the Association of Central Oklahoma Governments (ACOG) serves as the COG representing the communities within Oklahoma, Cleveland, Canadian, and Logan Counties.

COTPA – Central Oklahoma Transportation and Parking Authority; the transit operator of the Oklahoma City bus system, under the name of METRO Transit.

Department of Transportation (DOT) – A municipal, county, state, or federal agency responsible for transportation. On the federal level, the U.S. DOT is a cabinet level federal agency responsible for the planning, safety, and system and technology development of national transportation, including highways, mass transit, aircraft, and ports. On the state level, the Oklahoma Department of Transportation (ODOT) oversees planning, design and construction of transportation improvements statewide under the direction of the Secretary/Director of Transportation.

Endangered or Threatened Species – Animal and plant species which have been identified for special protection under the Endangered Species Act of 1973.

Environmental Justice – A 1994 Presidential Executive Order implemented by the United States Department of Transportation that requires agencies receiving federal transportation dollars to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations

Environmental Protection Agency (EPA) – An independent federal agency in the executive branch whose responsibilities include development and enforcement of national air quality emission standards and support of anti-pollution activities by state and local governments.

Federal Aviation Administration (FAA) – A component of the U.S. Department of Transportation **responsible for ensuring the safety, capacity, and efficiency of the nation's aviation system.**

Federal Highway Administration (FHWA) – A component of the U.S. Department of Transportation, established to ensure development of an effective national road and highway transportation system. It assists states and local governments in constructing highways and roads.

Federal Transit Administration (FTA) – A component of the U.S. Department of Transportation, delegated by the Secretary of Transportation to administer the federal transit program under the Urban Mass Transportation Act of 1964, as amended, and various other statutes.

Federal Railroad Administration (FRA) – A component of the U.S. Department of Transportation responsible for promulgating and enforcing rail safety regulations, administering railroad assistance programs, conducting research and development to improve railroad safety, and national rail transportation policy.

Financial Constraint (or Fiscally Constrained) – Financial information in a metropolitan long-range transportation plan (LRP) and transportation improvement program (TIP) that demonstrates that projects can be implemented using

committed available, or reasonably available revenue sources, while adequately continuing to operate and maintain the transportation system.

Forecasting – In planning, the process of estimating future conditions, magnitudes, and patterns within the urban area, such as future population, demographic characteristics and travel demand.

Forecast Year – In planning, the terminal year for a projection. Usually designates the year in the future for which the improvements embraced in the transportation plan are to be designed.

Freeway – A divided highway for through traffic that has full access control and grade separations at all intersections.

Goal – A broad statement of direction in which planning or action is aimed; a general value statement representing an ideal end that the community or area wishes to attain.

Grade-Separated Crossing – A crossing where the intersecting facilities (road, rail, etc.) are separated vertically.

HOV Lane – A high occupancy vehicle lane. A lane of traffic that is delineated for use by transit buses or passenger vehicles carrying more than one occupant.

Input – Information to be used in an analysis.

Intelligent Transportation System (ITS) – The application of advanced technology to current transportation problems, including incident detection, signal coordination, real-time information, and other technology.

Intermodal – The interaction of various modes of transportation, particularly as it relates to connections, choices, coordination and cooperation.

Intermodal Transportation Policy Committee (ITPC) – An OCARTS area committee comprised of an elected official from each member entity and representatives of local, state, and federal transportation agencies. This committee is responsible for transportation policies, plan review and adoption, and development of programs for plan implementation.

Intermodal Transportation Technical Committee (ITTC) – An advisory committee to the ITPC comprised of technical representatives from each OCARTS entity and representatives of transportation agencies, including staff persons knowledgeable in engineering, planning, and administration. Transportation policies, plans and programs are presented to the ITTC for a recommendation prior to consideration by the ITPC.

Intersection – The place where two roads or paths cross each other. Intersections are classified into three general categories: grade-separated without ramps, grade-separated with ramps (commonly known as interchanges), and at-grade.

ISTEA, Intermodal Surface Transportation Efficiency Act – The Act was signed into law on December 18, 1991, and was effective for a six-year period (federal fiscal years 1992 through 1997). ISTEA resulted in broad changes to the way transportation decisions are made by emphasizing diversity and balance of modes and preservation of existing systems over construction of new transportation facilities. Plans must consider social, environmental, and energy factors in planning, programming and project selection. ISTEA was replaced by TEA-21.

Land Use – The purpose for which land or the structure on the land is being used; for example, residential, commercial, light industry, etc.

Level of Service (LOS) – A set of characteristics that indicate the quality and quantity of transportation service provided. For highway systems, a qualitative rating of the effectiveness of a highway or highway facility in serving traffic in terms

of operating conditions. The Highway Capacity Manual identifies operating conditions ranging from A, for best operation (low volume, high speed), to F, for worst conditions.

Metropolitan Statistical Area (MSA) – As designated by the U.S. Office of Management and Budget and defined by the U.S. Bureau of the Census, an MSA consists of the central county or counties containing a city or an urbanized area with a population of at least 50,000 and the adjacent or outlying counties that have close economic and social relationships with the central counties, with a total metropolitan population of at least 100,000. The term was adopted after the 1980 census and replaces the term Standard Metropolitan Statistical Area (SMSA).

Metropolitan Planning Organization (MPO) – According to the United States Code, the organization designated by the governor and local elected officials as responsible, together with the state, for transportation planning in an urbanized area. It serves as the forum for cooperative decision making by principal elected officials of general local government. In Central Oklahoma, ACOG serves as the MPO.

Metropolitan Transportation Plan – The official intermodal transportation plan developed and adopted through the Metropolitan Planning Organization's (MPO) transportation planning process; also known as the long-range plan (LRP).

Mode – A means of transporting people and goods, which includes automobiles, transit (i.e. buses, carpooling, HOV lanes, fixed guideway), bicycling, walking, air travel, railroads, waterways, and trucking.

Multimodal – Refers to multiple types of transportation.

Network, OCARTS – In highway engineering, the configuration of major streets and highways that constitutes the regional system.

Nonattainment Area – An area in which levels of a criteria air pollutant do not meet the health-based primary standard (national ambient air quality standard, or NAAQS) for the pollutant. Nonattainment areas are defined using federal pollutant limits set by EPA.

OCARTS – Oklahoma City Area Regional Transportation Study; OCARTS refers to a geographical area within Central Oklahoma (for transportation planning) which includes all of the currently urbanized area plus the surrounding area which is anticipated to become urbanized over the next 20 years. The OCARTS area encompasses all of Oklahoma County and Cleveland County and portions of Canadian, Cleveland, Grady, Logan and McClain Counties.

Output – Something produced, such as the result of an analytical process.

Park and Ride – A system that provides parking for riders at stations of a bus or rail line.

Regional Transit Dialogue (RTD) – An ACOG-initiated visioning process to determine the desire for expanded and enhanced regional public transportation within Central Oklahoma, involving public and private sector leaders, transportation stakeholders, and the general public. The RTD was initiated to explore options for regional transit authority creation and governance, dedicated funding sources, effective public transit coordination, and transit supportive development.

Right of way (ROW) – A general term denoting land, property, or interest therein, usually in a strip acquired for or devoted to transportation purposes.

SAFETEA-LU: Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users – Signed into law on August 10, 2005, SAFETEA- LU guarantees funding for highways, highway safety, and public transportation totaling $244.1 billion. SAFETEA-LU represents the largest surface transportation investment in our nation's history. The two landmark bills that brought surface transportation into the 21st century—the Intermodal Surface Transportation

Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21)—shaped the highway program to meet the nation's changing transportation needs. SAFETEA-LU builds on this firm foundation, supplying the funds and refining the programmatic framework for investments needed to maintain and grow our vital transportation infrastructure.

Study area – In this study, the transportation study area is synonymous with the OCARTS area; also known as the metropolitan planning area and the transportation management area (TMA).

Superfund – Also known as CERCLA (Comprehensive Environmental Response Compensation and Liability Act). A federal law that provides for compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of hazardous waste disposal sites.

TEA-21, Transportation Equity Act for the 21st Century – TEA-21 was signed into law on June 9, 1998, and was effective for a six-year period (federal fiscal years 1998 through 2003). TEA-21 built upon the initiatives and structure established in ISTEA. New areas of program focus included safety, environmental quality, and ITS research and development. TEA-21 was replaced by SAFETEA-LU.

Traffic Analysis Zone (TAZ) – A special area delineated by local transportation officials for tabulating traffic related data, especially journey-to-work and place of work statistics. A TAZ usually consists of one or one or more census blocks, block groups, or census tracts.

Traffic Count – In transportation, a process that tallies a particular movement of people or vehicles past a given point during a stated time period. It may be a directional or a two-way value.

Transit-Oriented Development (TOD) – Transit-oriented development (TOD) is the functional integration of land use and transit via the creation of compact, walkable, mixed-use communities within walking distance of a transit stop or station. A TOD brings together people, jobs, and services and is designed in a way that makes it efficient, safe, and convenient to travel on foot or by bicycle, transit, or car.

Transportation Demand Management (TDM) – Tools designed to maximize the people-moving capability of the transportation system by increasing the number of people in each vehicle or by influencing the time of, or need to travel. To accomplish these demand-side changes, TDM programs must rely on incentives or disincentives to make the shifts in behavior attractive. Specific TDM strategies involve employer-based support, telecommunications, land use policies, and public policy such as pricing or other regulation.

Travel Demand Modeling or Travel Forecasting – Used by transportation planners for simulating current travel conditions such as roadways, transit, and high-occupancy vehicles. Models help planners and policymakers analyze the effectiveness and efficiency of alternative transportation investments in terms of mobility, accessibility, and environmental and equity impacts.

Transportation Improvement Program (TIP) – The TIP is a financially constrained short-range document that lists specific projects to be implemented within the transportation planning area. Projects included in the TIP must be consistent with the long-range plan, and inclusion of projects in the TIP is a requirement for the use of federal transportation funding.

Transportation Management Area (TMA) – An urbanized are over 200,000 in population as determined by the latest decennial census. The TMA designation applies to the entire Metropolitan Planning Area.

Transportation System Management (TSM) – That part of the urban transportation planning process undertaken to improve the efficiency of the existing transportation system. The intent is to make better use of the existing transportation system by using short term, low capital transportation improvements that generally cost less and can be implemented more quickly than large, capital intensive options.

Trip – A one way movement of a person or vehicle between two points for a specific purpose; sometimes called a one-way trip to distinguish it from a round trip.

Trip purpose – The primary reason for making a trip; for example, work, shopping, medical appointment, recreation.

Unified Planning Work Program (UPWP) – The annual management plan for a metropolitan planning program designed to coordinate the planning activities of all participants in the planning process.

Urban transportation planning process – The federally required planning process for urbanized areas that is aimed at developing programs to meet a region's transportation needs by analyzing the existing system and preparing plans and studies in a comprehensive, continuing, and cooperative manner. Also known as the metropolitan planning process, it results in several documents including a unified planning work program (UPWP), a transportation improvement program (TIP), and a long-range regional transportation plan (LRP).

Urbanized Area (UZA) – An area that contains a city of 50,000 or more population plus surrounding area meeting density criteria as defined by the U.S. Census Bureau.

Vehicle Hours of Travel (VHT) – On roadways, a measurement of the total hours traveled by all vehicles in the area for a specified time period. It is calculated by multiplying the number of vehicles times the number of hours traveled in a given area or on a given roadway during the time period.

Vehicle Miles of Travel (VMT) – On roadways, a measurement of the total miles traveled by all vehicles in the area for a specified time period. It is calculated by multiplying the number of vehicles times the number of miles traveled in a given area or on a given roadway during the time period. In transit, the number of vehicle miles operated on a given route or line or network during a specified time period.

Volume – In transportation, the number of units (passengers or vehicles) that pass a point on a transportation facility during a specified interval of time, usually one hour.

Volume to Capacity Ratio (V/C Ratio) – A measure of the congestion level of streets and highways which compares the vehicular carrying capacity of a roadway with the actual volume of vehicles which travel the roadway, within a specified period of time.

Year of Expenditure (YOE) – Cost estimates that reflect inflation rate(s) anticipated for a future year or group of years. YOE dollars are required under SAFETEA-LU to demonstrate financial constraint of the metropolitan long-range plan and TIP.

ACRONYMS AND ABBREVIATIONS

AASHTO	American Association of State Highway Transportation Officials
ACOG	Association of Central Oklahoma Governments
ADA	Americans with Disabilities Act of 1990
ADT	Average Daily Traffic
APTAC	Areawide Planning and Technical Advisory Committee
B/C	Benefit to Cost Ratio
BRT	Bus Rapid Transit
BEA	Bureau of Economic Analysis
CAA	Clean Air Act
CAC	Citizens Advisory Committee
CART	Cleveland Area Rapid Transit
CBD	Central Business District
CMP	Congestion Management Process
CMAQ	Congestion Mitigation and Air Quality Improvement Program
COTPA	Central Oklahoma Transportation and Parking Authority
CRT	Commuter Rail Transit
CTPP	Census Transportation Planning Package
DEIS	Draft Environmental Impact Statement
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration

GAM	Growth Allocation Model
GIS	Geographic Information Systems
HOV	High Occupancy Vehicle
IMS	Intermodal Management System
ISTEA	Intermodal Surface Transportation Efficiency Act (1991)
ITPC	Intermodal Transportation Policy Committee
ITS	Intelligent Transportation Systems
ITTC	Intermodal Transportation Technical Committee
LOS	Level of Service
LRP	Long-Range (Transportation) Plan
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSA	Metropolitan Statistical Area
NEPA	National Environmental Policy Act
NO_X	Nitrogen Oxides
NHTS	National Household Travel Survey
OCARTS	Oklahoma City Area Regional Transportation Study
ODOC	Oklahoma Department of Commerce
ODOT	Oklahoma Department of Transportation
OESC	Oklahoma Employment Security Commission
OTA	Oklahoma Turnpike Authority
RTDM	Regional Travel Demand Model
PPP	Public Participation Plan
RTD	Regional Transit Dialogue
ROW	Right-of-Way
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005)
SIC	Standard Industrial Classification

SOV	Single Occupancy Vehicle
SPR	State Planning and Research Program
STIP	Statewide Transportation Improvement Program
TAZ	Traffic Analysis Zone
TDF	Travel Demand Forecasting
TDM	Transportation Demand Management
TEA-21	Transportation Equity Act for the 21st Century (1998)
TIP	Transportation Improvement Program
TMA	Transportation Management Area
TOD	Transit Oriented Development
TRB	Transportation Research Board (of the National Academy of Sciences)
TSM	Transportation Systems Management
UPWP	Unified Planning Work Program
USC	United States Code
UZA	Urbanized Area
V/C	Volume-to-Capacity Ratio
VHT	Vehicle Hours of Travel
VMT	Vehicle Miles of Travel
YOE	Year of Expenditure

WHERE ARE WE TODAY?

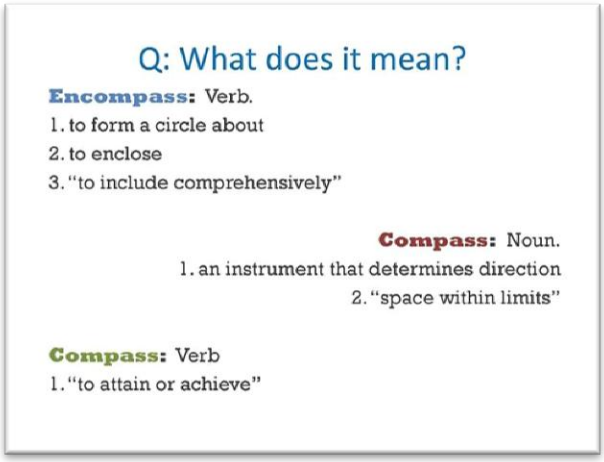
CHAPTER 1: INTRODUCTION

CHAPTER 2: STATE OF THE TRANSPORTATION SYSTEM

CHAPTER 3: REGIONAL SOCIO-ECONOMIC TRENDS

CHAPTER 1: INTRODUCTION

Transportation plays a vital role in today's economy, providing access to jobs, education, shopping and recreation. It is an integral part of our mobile society influencing urban development, economic vitality, quality of life and national defense. Our transportation system consists of many parts that work together to move people and goods within metropolitan areas, statewide, and throughout the country. Therefore, it makes sense for many transportation decisions to be made collaboratively at the regional level.



Local governments in Central Oklahoma have been continuously engaged in regional transportation planning since 1965. Not only is it a federal requirement, but planning ahead ensures that steps can be taken to maintain current transportation investments, improve mobility, and prevent gridlock as population continues to grow and travel increases.

Approved in April 2011, *Encompass 2035* is the comprehensive, long-range transportation plan for Central Oklahoma. It guides how the region will manage, operate and invest nearly $8 billion in its multi-modal transportation system over the next 25 years. The Plan uses a base year of 2005 and a forecast year of 2035 to analyze land use, population, employment and other socioeconomic factors that will influence the region's development and travel in the coming years.

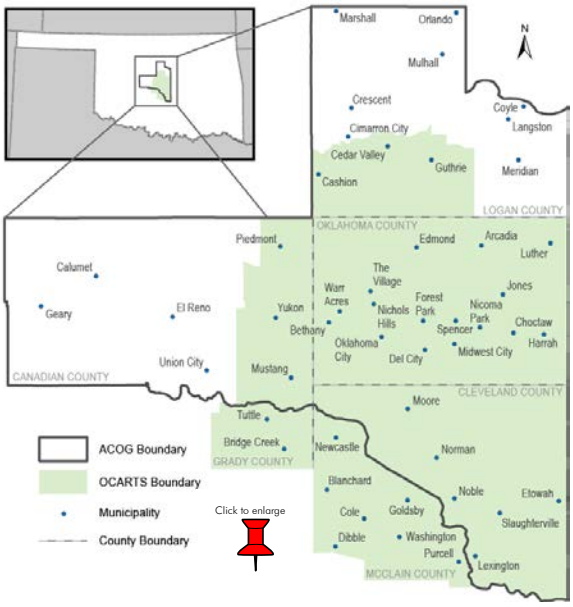
Encompass 2035 was developed in compliance with current federal transportation legislation, SAFETEA-LU — the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. Although it provides a snapshot of current conditions and future transportation needs, transportation planning is a dynamic process. Therefore, as additional studies are completed and local priorities change, amendments to the Plan may be necessary.

REGIONAL TRANSPORTATION PLANNING

Transportation planning for Central Oklahoma is coordinated by the Association of Central Oklahoma Governments (ACOG), a voluntary association of city and county governments and the Metropolitan Planning Organization (MPO) for the region. ACOG's primary role as an MPO is to conduct a comprehensive, coordinated and continuing long-range transportation planning process. Toward that end, ACOG works with area local governments, transit providers, the Oklahoma Department of Transportation, the Federal Highway and Transit Administrations, other transportation agencies and stakeholders, and the public to prepare federally required long-range transportation plans and short-range implementation programs. Such plans and programs are a prerequisite for receiving federal transportation dollars.

THE PLANNING AREA

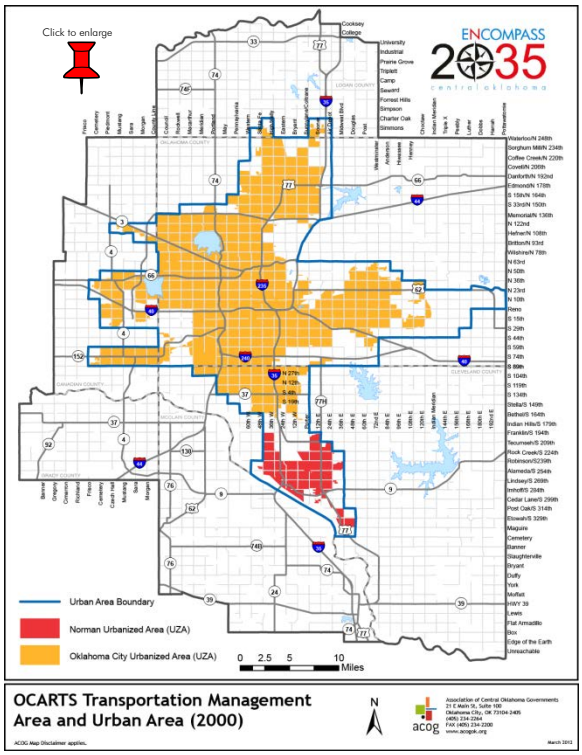
Figure 1.1: OCARTS and ACOG Areas



ACOG's transportation planning efforts are focused within a geographic area known as the Oklahoma City Area Regional Transportation Study (OCARTS) area. This planning boundary includes 2,085 square miles and 40 cities and towns located within Oklahoma and Cleveland Counties and portions of Logan, Canadian, Grady and McClain Counties. The OCARTS boundary was expanded to its current size in 2002, following the 2000 census. It is reviewed after each decennial census to ensure that the urban and urbanizing portions of the region, linked by a common economy and transportation system, are included in the MPO's transportation planning efforts.

Beginning in 2000, the U.S. Census Bureau delineated two urbanized areas within the OCARTS boundary based upon its criteria for population size and density. The Oklahoma City Urbanized Area (UZA) is considered a large UZA because it includes a population greater than 200,000, and the Norman Urbanized Area is a small UZA because it is greater than 50,000 but less than 200,000 in population. The region's urbanized areas are reflected in Figure 1.2.

Figure 1.2: OCARTS Transportation Management Area and Urban Area



Because the OCARTS area contains a census-delineated large urbanized area, it is also designated a Transportation Management Area (TMA) by the Federal Highway and Federal Transit Administrations. This TMA designation requires that ACOG also maintain a plan for managing current and future congestion, and affords the MPO project selection authority for certain sub-allocated federal funds.

Thus, the terms "OCARTS area," "MPO area or boundary," "Transportation Management Area," and "transportation planning boundary" all refer to the same geographic area in which transportation planning for Central Oklahoma is conducted.

THE PLANNING PROCESS

The OCARTS planning process follows the requirements outlined by the Federal Transit and Federal Highway Administrations of the U.S. Department of Transportation. ACOG coordinates its transportation planning process with federal, state, local and tribal entities responsible for land use, natural resources and environmental planning, as well as private sector transportation interests and local citizens.

The metropolitan transportation planning process provides a unified voice among the planning partners. The OCARTS planning process is based upon a Memorandum of Understanding (MOU) among the Oklahoma Department of Transportation (ODOT), the Central Oklahoma Transportation and Parking Authority (COTPA), Cleveland Area Rapid Transit (CART) and ACOG. Policy direction is provided through a committee structure that consists of the Intermodal Transportation Policy Committee (ITPC), the Intermodal Transportation Technical Committee (ITTC) and several advisory committees and subcommittees as shown in Figure 1.3.

The ITPC is responsible for regional transportation policy and decisions that include adoption of the metropolitan long-range transportation plan and short-range transportation improvement programs. Its voting membership includes elected officials from city, town and county governments within the region and representatives from ODOT, the local transit authorities and the Oklahoma City Airport Trust. Federal aviation, transit and highway officials are also included as non-voting ITPC members, as well as representatives of Tinker Air Force Base.

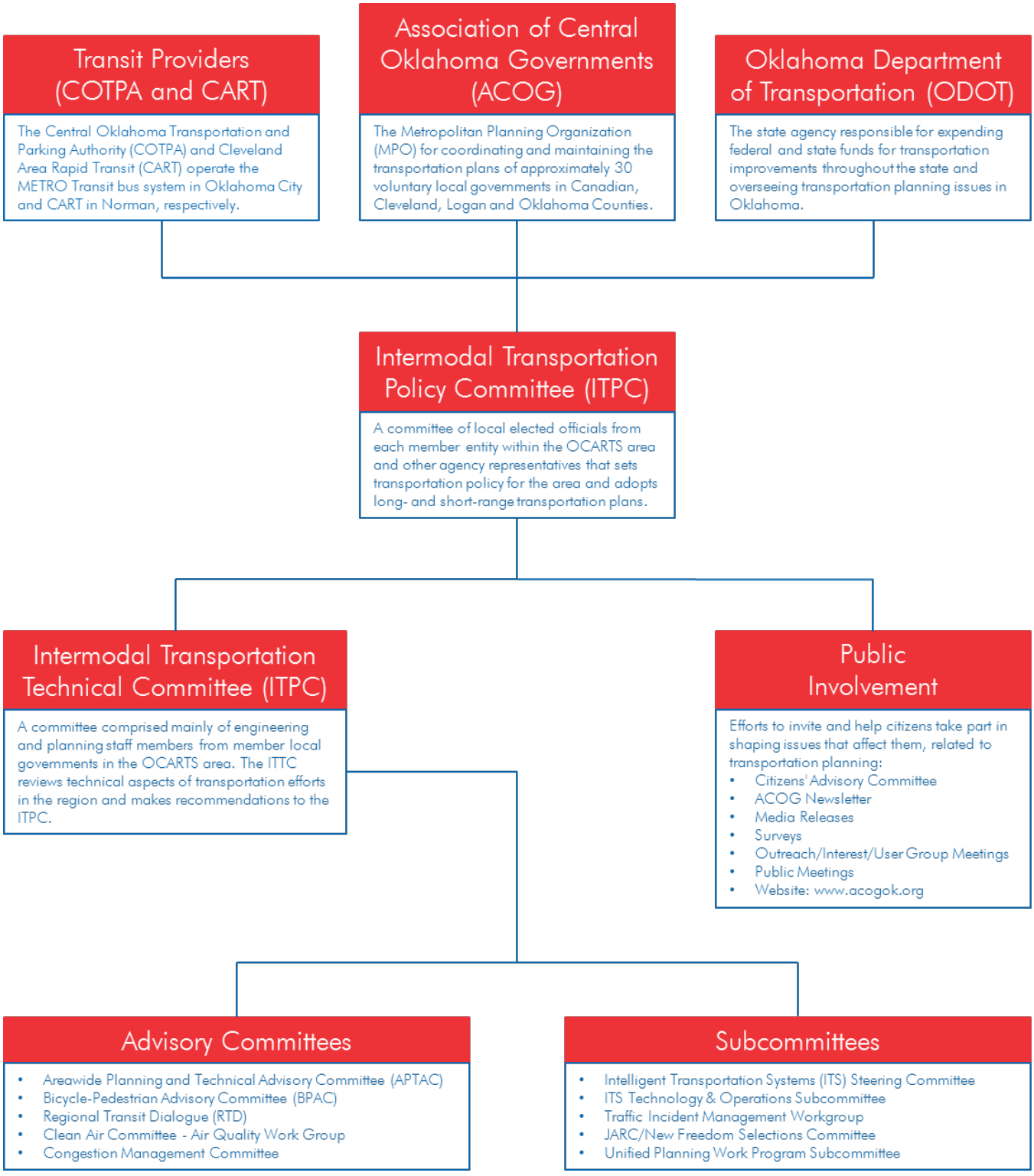
The policy committee is supported by a technical committee generally comprised of city engineers, traffic managers, and city/county planners. This committee also includes representation from state and local agencies responsible for various modes of travel and environmental quality. The ITTC provides technical expertise on transportation plans and programs and serves as a recommending body to the ITPC.

The MPO utilizes numerous advisory committees and subcommittees to focus on specific aspects of the planning process including air quality, transit programs, bicycle and pedestrian interests, congestion reduction and intelligent transportation systems planning. With each update of the long-range transportation plan, a Citizens Advisory Committee (CAC) participates in the review and development of all phases of the plan and provides its recommendations directly to the ITPC.

The Transportation & Planning Services Division of ACOG is responsible for administration of the regional transportation planning process. ACOG coordinates the preparation of an annual unified planning work program (UPWP) and provides staff support for the policy, technical and advisory committees. Regular meetings are held at the ACOG offices to provide a forum for communication and decision making.

The MPO utilizes numerous advisory committees and subcommittees to focus on specific aspects of the planning process including air quality, transit programs, bicycle and pedestrian interests, congestion reduction and intelligent transportation systems planning.

Figure 1.3: Organizational Chart



** The Oklahoma City Area Regional Transportation Study (OCARTS) area includes all of Oklahoma and Cleveland Counties and portions of Canadian, Logan, Grady and McClain Counties that are urbanized or are expected to be urbanized within the next 20 years.*

TRANSPORTATION PLANNING HISTORY IN CENTRAL OKLAHOMA

Previous OCARTS Plans:

- 1985 OCARTS Plan
  Adopted Sept. 1968
- 1995 OCARTS Plan
  Adopted May 1976
- 2005 OCARTS Plan
  Adopted March 1988
- 2020 OCARTS Plan
  Adopted March 1995
- 2025 OCARTS Plan
  Adopted Sept. 2000
- 2030 OCARTS Plan
  Adopted Aug. 2005

The local governments in Central Oklahoma and the state department of transportation have been engaged in regional transportation planning over the past five decades. The transportation planning process initiated by the Oklahoma Department of Transportation in 1965 resulted in adoption of the region's first long-range plan in 1968. In total, the MPO has adopted six previous plans to guide transportation policy and the expenditure of federal dollars to implement those plans. *Encompass 2035* replaces the previous 2030 OCARTS Plan.

Under current federal transportation legislation, metropolitan transportation plans must be updated every five years for areas that are in attainment of federal air quality standards, and every four years for non-attainment areas.

Each plan update reflects regional changes in base year and forecast year land use and socioeconomic conditions, as well as the current status of the region's air quality.

FEDERAL TRANSPORTATION PLANNING REQUIREMENTS

Encompass 2035 was developed in conformance with the Safe, Accountable, Flexible, Equitable Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was signed into law on August 10, 2005. Federal surface transportation law is approved by the U.S. Congress approximately every six years in order to establish transportation planning priorities and the funding programs and levels to implement those priorities within states and metropolitan areas throughout the country.

SAFETEA-LU authorized highway, highway safety, transit and other surface transportation programs. Although it was due to expire September 30, 2009, Congress extended the law numerous times due to lack of new legislation to take its place, and it remained in effect during the preparation and adoption of this Plan.

Federal SAFETEA-LU guidelines emphasize the role of state and local officials, in cooperation with transit operators, for tailoring the transportation planning process to meet local needs. These guidelines also emphasize protection of the natural environment and advancement of the nation's economy and competitiveness domestically and internationally through efficient, multimodal transportation.

Encompass 2035 was developed in conformance with the Safe, Accountable, Flexible, Equitable Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was signed into law on August 10, 2005.

Under SAFETEA-LU, the Federal Highway and Federal Transit Administrations require that all metropolitan areas conduct a comprehensive, coordinated and continuing transportation planning process which includes development of long and short-range plans and programs. The long-range plan must be updated every four to five years, include a forecast period of at least 20 years and address several federal planning priorities, known as planning factors.

Within the nation's larger metropolitan areas, planners must develop a congestion management process (CMP), and may also provide input into other statewide systems for improved management of bridges, pavement, highway safety, public transportation facilities, and intermodal facilities.

SAFETEA-LU also encourages proactive and inclusive public involvement in the development of the long-range plan, consistent with a locally-developed Public Participation Plan (PPP). The PPP outlines opportunities for the public to provide input into key short and long-range transportation planning decisions.

SAFETEA-LU Planning Factors:

- Economic Vitality
- Environmental Concerns
- Integration and Connectivity
- Mobility and Accessibility
- Safety
- Security
- Systems Management
- System Preservation

ENCOMPASS 2035 DEVELOPMENT PROCESS

Metropolitan transportation planning is a continuous process. It involves a number of steps that begins with monitoring base year conditions such as population, employment and travel patterns. Population and employment growth are then forecast to identify projected land use changes and major growth areas in the region that will influence future travel.

This information is used by planners to identify transportation problems and needs and to establish goals and strategies that strive to mitigate those identified problems and transportation needs. By analyzing a number of scenarios, or alternates, and their costs, an affordable long-range plan is developed which includes capital and operational improvements for moving people and goods using anticipated revenues through the plan's forecast year. The plan is also evaluated in relation to its potential environmental and social impacts upon the region.

Once the plan is adopted, it is implemented by state and local government entities using the federal funds provided through federal surface transportation legislation and state and local sources. Implementation of the long-range plan is accomplished through a short-range, project specific document called the Transportation Improvement Program, which lists the region's annual transportation funding priorities.

The development of *Encompass 2035* can be broken down into the following steps:

2005 BASE YEAR DATA

Base year data, such as land use, population, employment, housing, median income, school enrollment, automobile ownership, transit ridership, and traffic counts was collected and analyzed to determine the composition and travel characteristics of the region.

2035 FORECASTS

The base year socioeconomic and land use data was forecast to the horizon year, using various techniques, such as historical trend analysis, comparison to available forecasts from local, state, national and private sources, and spatial distribution based on the region's growth allocation model.

GOALS AND STRATEGIES

The MPO worked closely with local entities represented on the Intermodal Transportation Technical and Policy Committees, the Citizens Advisory Committee, and others through a public open house to develop a set of ten goals to serve as the guiding principles for development of *Encompass 2035*. Each goal included several strategies for its achievement, as well as the identification of challenges in meeting the goal. The plan goals will be referred to throughout this report.

MODEL CALIBRATION

The regional travel demand model contains transportation network information, such as number of lanes, posted speeds, capacity, facility class, transit routes and stops, etc. The model compared and calibrated 2005 socioeconomic data against 2005 traffic counts and transit ridership data to simulate base year travel conditions.

FINANCIAL ANALYSIS

A financial strategy was developed through an analysis of historically available maintenance and construction costs, and a comprehensive estimated future project funding, to ensure that improvements identified in *Encompass 2035* can ultimately be funded and implemented.

SCENARIO DEVELOPMENT

The regional travel demand model was utilized to test various future transportation scenarios, consisting of differing combinations of roadway and/or transit improvements, within the constraints of anticipated revenues.

SCENARIO COMPARISON

The scenarios were compared based on their ability to meet the forecast year projected daily transportation demand. Several evaluation criteria were used, including the rate of congestion, speed, daily accidents, vehicle emissions, estimated cost, etc.

SCENARIO SELECTION

The region cooperatively chose the preferred scenario that will provide the best fit to meet Central Oklahoma's future travel needs and adopted goals.

ENCOMPASS 2035 APPROVAL

Following public review and comment, *Encompass 2035* was formally adopted by the ACOG Intermodal Transportation Policy Committee on April 28, 2011. The adopted plan serves at the policy direction and transportation funding framework for Central Oklahoma through 2035.

ENCOMPASS 2035 PLAN REPORT

The purpose of this *Plan Report* is to provide citizens, business leaders and elected officials with a non-technical document, highlighting the transportation planning process, which led to the adoption of the long-range transportation plan for Central Oklahoma. Greater detail on specific topics discussed in this report may be obtained from ACOG. A list of the reports available is provided in Appendix D and reports are available on ACOG's website.

The *Encompass 2035 Plan Summary*, also available on ACOG's website, serves as an executive summary of this report. The ACOG *Encompass 2035* long-range transportation plan, as well as the long-range plans developed for the Tulsa and Lawton metropolitan areas, is included by reference in the 2035 *Oklahoma Statewide Intermodal Transportation Plan*, which was adopted by the Oklahoma Transportation Commission in December 2010.

CHAPTER 2: STATE OF THE TRANSPORTATION SYSTEM

The OCARTS planning area covers 2,085 square miles containing 42 communities, ranging from Oklahoma City (with 621 square miles alone) to small rural communities in adjacent counties with only a few hundred residents each. Overall, Central Oklahoma's population is expected to grow from about 1 million to nearly 1.5 million by 2035, with the average density increasing from 516 to 703 people per square mile. Currently, the average resident spends about 20 minutes per day commuting to work by car.

Like most Americans, residents in Central Oklahoma rely heavily on the automobile as their primary means of travel. In 2005, the average vehicle miles traveled daily in the OCARTS area was nearly 34 million, which equates to each driver traveling about 31.5 miles per day. In 2035, the OCARTS area average daily vehicle miles of travel is expected to grow to 47.5 million—a 39.5 percent increase.

With this growth in travel will come more congestion, more traffic accidents and higher levels of auto emissions. Although Central Oklahoma is home to the state's capital and is one of the more heavily developed urban areas in the state, its large geographic area and relatively low density results in almost exclusive reliance on automobile travel. If current development patterns continue, commute times will worsen in coming years as a result of increased travel distances and increased congestion.

Like most Americans, residents in Central Oklahoma rely heavily on the automobile as their primary means of travel.

The Federal-Aid Highway Act of 1956 set the stage for highway travel being the nation's primary means of mobility and goods movement. This Act called for the completion of a 40,000-mile national system of interstate and national defense highways. With the interstate system nearly complete by the late 1980s, Congress began to focus on a more multimodal approach to transportation with the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. ISTEA emphasized the need for more alternatives to private automobile travel—public transportation, bicycle networks and sidewalk systems—and established the statewide and metropolitan planning requirements to accomplish those goals. The Transportation Equity Act for the 21st Century (TEA-21) of 1998 and the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU) of 2005 built upon the foundation of ISTEA. They continued the emphasis on multimodal transportation options, while also promoting system maintenance, air quality, safety and security. The following sections provide a brief snapshot of each travel mode that makes up Central Oklahoma's regional transportation system. Each of these will be discussed in greater detail in subsequent chapters of this report.

STREETS AND HIGHWAYS

In 2005, the base year of *Encompass 2035*, the OCARTS area street and highway system consisted of 209 linear miles of interstates, freeways and expressways; 59 linear miles of turnpikes; and 2,811 linear miles of arterials. The remainder of the network is comprised of numerous miles of local and collector streets. Improvement and maintenance of these facilities generally fall under the jurisdiction of the Oklahoma Department of Transportation, the Oklahoma Turnpike Authority, and local city and county governments, respectively.

The street and highway system provides the foundation for all modes of transportation. In addition to serving automobile and truck traffic, it provides the infrastructure upon which public and private transit services are operated and provides direct access to the region's airports, trucking terminals, freight and passenger rail services, and recreational trails. Safe and efficient operation of the metropolitan street and highway system, therefore, strengthens the productivity, safety and efficiency of all transportation modes.

TRANSIT

Total transit ridership within the OCARTS area in 2005 was 14,500 trips per day. This represents less than half of one percent of the total daily trips made throughout the region. With these figures, it goes without saying that Central Oklahoma is woefully deficient in use of public transportation for a metropolitan area of this size. The amount of public transportation services available is directly tied to the level of funding spent on it from all sources—federal, state, and local. Currently, about $30 per capita is spent within our region for transit, compared to an average of $75 per capita for similar sized metro areas, including Topeka, Ft. Worth, Little Rock, Albuquerque, Kansas City, and Austin. Central Oklahoma currently has no dedicated local funding source for transit, unlike most other major metropolitan areas. Therefore, the public bus services that do exist are funded, in part, from local general revenues that must compete with other local needs such as roads, parks, and fire and police protection.

However, public desire for broader and better public transportation has been steadily growing within Central Oklahoma in recent years. In 2005, the Central Oklahoma Transportation and Parking Authority (COTPA) commissioned *the Regional Fixed Guideway Study* (FGS) that resulted in a System Plan for the year 2030. The FGS examined eleven corridors throughout the OCARTS area and recommended transit technologies for each that, as a whole, would create a regional public transportation system, connecting the downtown core with various suburban communities.

Building upon the recommendations of the Fixed Guideway Study, ACOG initiated a visioning process known as the Regional Transit Dialogue in 2009. Its purpose was to engage locally elected officials, policy stakeholders, private sector leaders, and the general public in a discussion about how the region could develop a more comprehensive public transportation system in the years and decades to come. Utilizing a steering committee and several working subcommittees, the RTD also explored potential governing concepts, funding strategies, and transit supportive land use policies. The RTD is continuing into a second phase in order to explore implementation of the initial recommendations.

REGIONAL BIKE NETWORK

Communities within the Central Oklahoma region have become increasingly engaged in planning for and implementing bicycle facilities over the past two decades. This coincides with the federal emphasis that was placed on bicycle planning as part of ISTEA in 1991 and in subsequent federal surface transportation laws. New requirements were put in place for MPOs to include regional bicycle plans as part of their long-range transportation plans and each state department of transportation was required to hire a bicycle/pedestrian coordinator to help implement this federal priority.

During the development of *Encompass 2035*, seven OCARTS area communities had adopted trails master plans, including a 450-mile system adopted by the City of Oklahoma City. In total, the region has about 285 miles of existing bike trails, and another 730 planned miles. Several federal-aid funding categories traditionally used for road projects now include bicycle and pedestrian improvements as eligible projects. In addition to these federal sources, several of Central Oklahoma's local governments have provided significant local funds to implement their bike networks. For example, a general obligation bond issue approved by Oklahoma City voters in 2007 included funding for bicycle improvements and the Oklahoma City Metropolitan Area Projects 3 (MAPS 3) sales tax package includes $40 million to continue implementation of the City's planned bike trails.

As part of each long-range plan update, ACOG provides a forum for its member communities to evaluate regional connections that can enhance their individual trails plans and establish a regional network that can eventually provide a transportation alternative.

PEDESTRIAN SYSTEM

While there is no regional network of planned sidewalks and walking trails, all OCARTS area communities are encouraged to provide sidewalks to enhance the walkability of their communities and the region. Currently, ten communities have ordinances that require sidewalk construction along arterial streets as part of the subdivision or building permit process.

The City of Oklahoma City is developing a sidewalk master plan that will build upon an analysis of existing, under construction, and funded sidewalks within the City. The Oklahoma City MAPS 3 sales tax vote included a budget of $10 million to construct sidewalks in priority locations throughout the city. One of the key considerations will be locations that provide access to bus stops. The lack of sidewalks near bus stops has been a recurring complaint among area residents for years, especially those with a disability.

Sidewalks are a federal priority and most federal-aid funding categories include construction of sidewalks and other pedestrian walkways as eligible activities. The MPO criteria for evaluating and distributing the federal funds provided to ACOG for local government projects also reflect an emphasis on sidewalks constructed both independently and in conjunction with roadway improvements.

GOODS MOVEMENT

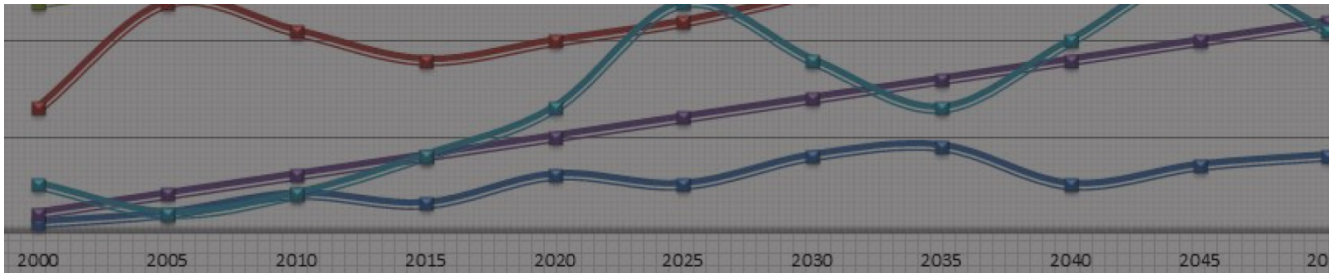
Transportation of freight is often considered the lifeline of a region because of the essential need for movement of goods and products. Our local and national economies rely on efficient, safe, and secure freight transportation to connect businesses, suppliers, markets, and consumers. Goods movement generally involves the shipment of products by truck, rail, water, air and pipeline, or a combination of two or more of these modes.

The OCARTS area includes about 189 trucking companies, two Class I and two Class III freight rail lines, four rail terminals, and seven public airports. The majority of goods are transported by truck. In 2002, 87.5 percent of all OCARTS area freight tonnage was transported by truck, another 3.3 percent was shipped by rail and less than one percent by air. As evidenced by these numbers, and typical for most metropolitan areas, truck traffic dominates the inbound, outbound, and intra-freight movements in Central Oklahoma, and this trend is expected to continue throughout the plan period.

AIRPORT ACCESS

The OCARTS area includes seven public airports: Will Rogers World Airport, Wiley Post Airport, and Clarence E. Page Airport in Oklahoma City, Max Westheimer Airport in Norman, Guthrie-Edmond Regional Airport in Guthrie, David Jay Perry Airport in Goldsby, and Purcell Municipal Airport. Additionally, Central Oklahoma is home to Tinker Air Force Base, one of the nation's three Air Logistics Centers, located about eight miles southeast of downtown Oklahoma City. Opened originally in 1941 as the Midwest Depot, Tinker AFB now employees more than 26,000 military personnel, federal civilians, and contractors, making it the largest single-site employer in Oklahoma.

The focus of *Encompass 2035* in relation to air cargo, passenger air travel, and military operations is to address improvements that will enhance airport access by other modes—streets and highways, public transportation, and rail. This Plan does not address airport operations, development, or land use within the individual airport properties. Each airport operator maintains an airport master plan to focus on its future needs and to guide growth and development within the individual airport "fence lines."

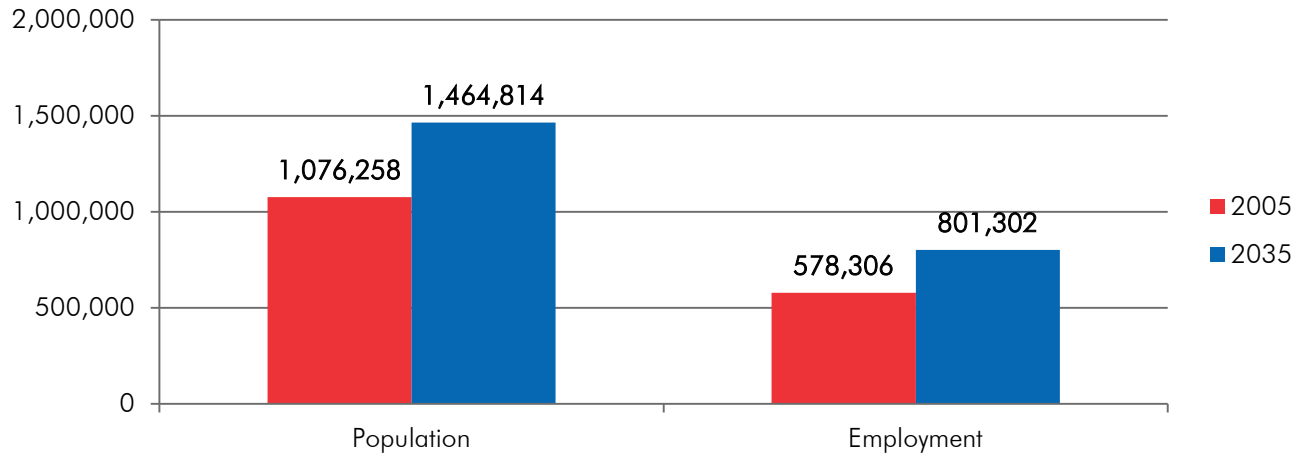


CHAPTER 3: REGIONAL SOCIO-ECONOMIC TRENDS

Central Oklahoma is projected to add approximately 390,000 residents by 2035 bringing the total population to nearly 1.5 million people. Additionally, employment in the region is forecasted to grow by nearly 225,000 to about 800,000 employees in 2035. By projecting where people are likely to live and work in the future, an assessment of the forecast year travel demand can be made.

Base year population, employment, dwelling unit, school enrollment, household income, and land use data was gathered to establish conditions as they existed in the OCARTS area in 2005. This data was then used to forecast 2035 socioeconomic and demographic conditions, allowing transportation improvements and maintenance to be targeted to the areas of greatest need. This chapter describes the development of the demographic and socioeconomic data that was used to model the effects of future travel demand on the OCARTS transportation network.

Figure 3: Population and Employment, 2005 and 2035



SUBAREAS OF DATA COLLECTION

For the purposes of data collection and analysis, socioeconomic information was gathered at the smallest geographic level possible and then aggregated to larger areas, which include traffic analysis zones, city boundaries, the full or partial counties that comprise the OCARTS area, and the entire study area. Socioeconomic data available from the U.S. Census Bureau was obtained at the Census Block or Block Group level, which served as the building blocks for traffic analysis zones, or TAZs. Each TAZ is similar in population although their geographic sizes vary from a few blocks in heavily developed areas to several square miles in the rural portions of the study area. In total, the OCARTS area contains 2,450 TAZ datasets that provided input to the regional transportation model. Additionally, 31 external

stations, located just beyond the OCARTS boundaries, were utilized to determine the number of trips that enter or leave the study area from surrounding locations.

GROWTH ALLOCATION MODEL

One of the primary undertakings to develop *Encompass 2035* was the calibration and application of the Growth Allocation Model (GAM)[1], a regional land use distribution model. The GAM requires substantial data inputs, including base year and forecast year land use, and projections of forecast year population, employment, dwelling units, and school enrollment within the transportation study area.

Using historical trends and locally defined growth assumptions, as described later in this chapter, the GAM distributed the regional population and employment growth forecasts to each of the traffic analysis zones within the OCARTS area. The type and amount of future development within each zone was dependent upon the availability of developable land, its planned land use(s), and its attractiveness for new development. These zone-level figures, in combination with feedback from city and county planners, were used by the transportation model to predict the quantity and type of trips that each subarea would generate and attract in the future. This provided the basis for determining whether the current transportation system would be adequate or whether additional improvements would be needed over the coming decades.

CURRENT AND PLANNED LAND USE

The MPO worked closely with local planners on the collection of base year land use within each OCARTS area entity. Each local government also provided information on future, planned land uses based on their adopted comprehensive plans, zoning ordinances and other sources reflective of local development trends. Base year land use information was grouped into eight "present" land use categories, and all undeveloped land was assigned a "planned" land use category, as shown in Table 3.1. These standardized categories provided regional consistency for modeling purposes. Land use information from the previous OCARTS transportation plan and digital aerial photography served as guides for updating the region's land use, using GIS software.

Central Oklahoma is projected to add approximately 390,000 residents by 2035 bringing the total population to nearly 1.5 million people.

[1] The GAM is a modification of a similar model designed by Rice University for the Houston-Galveston Area Council of Governments. ACOG first used this model to develop socioeconomic forecasts for the 2005 OCARTS Plan in the 1980s and, with a few refinements, used it again for preparing population and employment forecasts for the last three planning cycles.

Table 3.1: *Encompass 2035* Land Use Categories

PRESENT LAND USE CATEGORIES (2005 BASE YEAR)	
Single-Family Residential Single-Family (detached/attached), Duplex, Mobile Home (Includes large suburban acreages of 1 to 40 acres, and urban residential development at 2-12 units/acre)	**Industrial** Warehousing, Light Industrial, Moderate and Heavy Industrial, Transportation and Utilities, Mineral Extraction, Land Fill, Water/Sewage Treatment Plant
Multi-Family Residential 3 or more dwelling units per structure (Includes urban residential complexes at 13+ units/acre)	**Parks and Open Space** Open Space and Recreational Areas, Lakes and Waterways, Floodways
Commercial Retail Commercial, Wholesale Commercial, Office in Commercial Setting, Malls	**Transportation Corridors** Railroad, Highway, Arterial Right-of-Way
Office Office, Public/Private; State Capitol Complex	**Institutional/Public** Schools, Hospitals, Colleges, Local Public Office Buildings, Other Institutional Uses
PLANNED LAND USE CATEGORIES (2035 FORECAST YEAR)	
Agriculture/Farm 10+acres/dwelling unit	**Office** Office, Public/Private; State Capitol Complex
Rural Residential 5-10 acres dwelling/unit	**Institutional/Public** Schools, Hospitals, Colleges, Local Public Office Buildings, Other Institutional Uses
Suburban Residential 1-4 acres/dwelling unit	**Industrial**
Single-Family Residential 2-12 dwelling units/acre, Apartments, Townhouses, Condominiums	**Parks and Open Space** Open Space and Recreational Areas, Lakes and Waterways, Floodways
Multi-Family Residential 13 or more units per acre	**Transportation Corridors** Railroad, Highway, Arterial Right-of-Way
Commercial Retail Commercial, Wholesale Commercial, Office, Malls	

2005 & 2035 POPULATION ESTIMATES

Before running the residential portion of the Growth Allocation Model (GAM), it was necessary to establish population control totals for 2035. Base year population for the OCARTS area and its counties, cities, and traffic analysis zones (TAZs) were developed from the 2000 Census and supplemented with local information on residential building permits and group quarters[2] from 2000 to 2004. Units lost due to fire, demolition, or natural disasters were also considered. The Intermodal Transportation Policy Committee approved a base year population of 1,076,258 for the OCARTS area in June 2008. The Committee also approved base year totals for each TAZ, by entity, at that time.

The 2035 population projections for the OCARTS area were developed using three sources—county level projections from Woods & Poole[3] (2005-2040), the Oklahoma Department of Commerce (2000-2060), and 1980-2000 historical population data, along with the 2005 population estimates, extrapolated to 2035. The three different methodologies generated different growth rates for each county. When choosing which methodology to use, staff analyzed both the recent historical population trends and the county and city control totals from the 2030 OCARTS Plan. A method was chosen for each county reflective of its rate of growth based on recent historical trends.

The 2035 population control total of 1,464,814 for the OCARTS area was approved by the ITPC in October 2009, as shown in Table 3.2. This represents a projected 36.1 percent increase in population between 2005 and 2035, which equals an average annual growth of 1.2 percent.

Table 3.2: Population Estimates By County, 2005 and 2035

COUNTY	2005 POPULATION	2035 POPULATION	CHANGE
Canadian (pt.)	79,145	130,272	64.6%
Cleveland	237,052	345,335	45.7%
Grady (pt.)	11,835	18,819	59.0%
Logan (pt.)	27,263	40,113	47.1%
McClain (pt.)	24,904	41,407	66.3%
Oklahoma	696,059	888,866	27.7%
OCARTS	**1,076,258**	**1,464,814**	**36.1%**

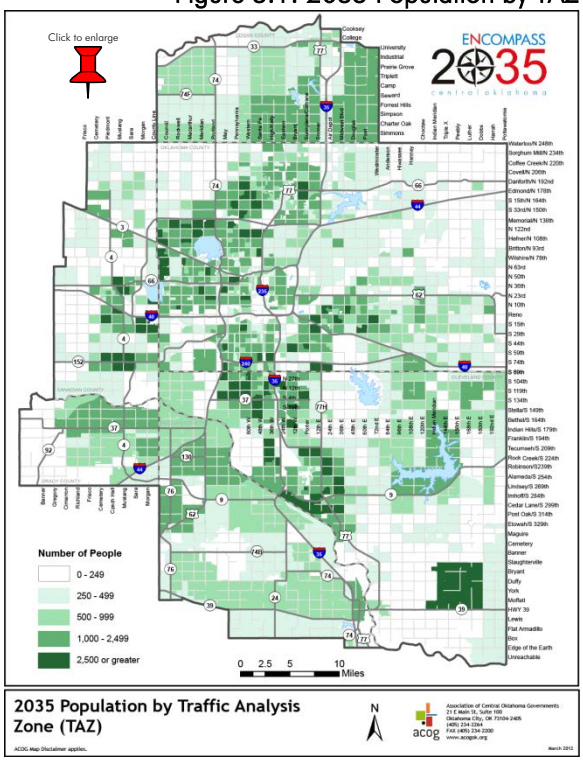
Note: "(Pt.)" means the part of the county located within the OCARTS area.

[2] The Census Bureau classifies all people not living in households as living in group quarters. There are two types of group quarters: institutional (for example, correctional facilities, nursing homes, and mental hospitals) and non-institutional (for example, college dormitories, military barracks, group homes, missions, and shelters).

[3] Woods & Poole Economics, Inc. is a private econometric research firm that specializes in long-term county economic and demographic projections.

RESIDENTIAL GROWTH ASSUMPTIONS AND FACTORS FOR 2035

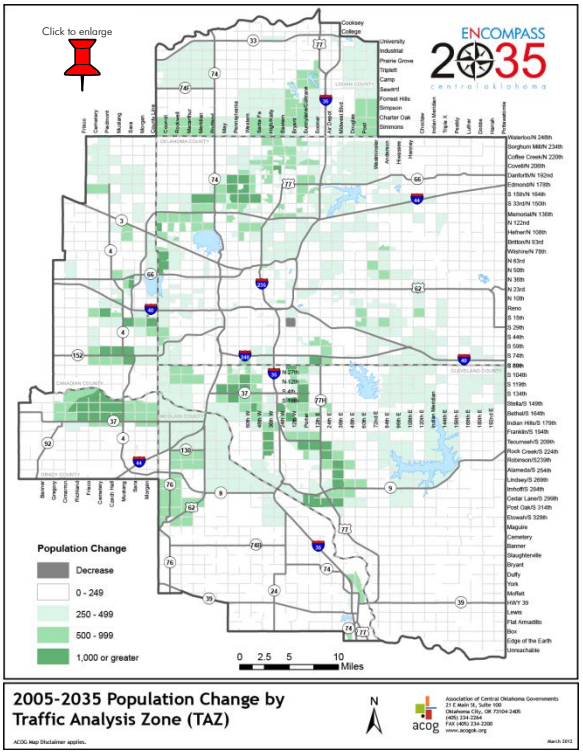
Figure 3.1: 2035 Population by TAZ



Residential growth assumptions describe the type of population growth to be allocated once the Growth Allocation Model (GAM) has determined the share of population increase for each zone where future developable residential land exists. Using assumptions about future residential densities, dwelling unit mix, occupancy rates, household size, units lost[4], and group quarters, the GAM distributes the growth between single and multi-family populations and group quarters populations. The estimated growth in dwelling units is then distributed between single and multi-family units. *Encompass 2035* used a ten year trend period, 2005-2015, that was projected out over the 30-year plan period.

The residential factors used by the GAM included perceived school district quality, median household income, historical residential trends, and existing residential densities. The influence of these factors on potential growth was determined by calibrating the 2030 OCARTS Plan GAM results to reproduce the actual population growth between 2000 and 2005. Using a series of mathematical equations, each traffic analysis zone was assigned a percent attraction for 2035, which when summed equaled 100 percent of the study area's projected population growth.

Figure 3.2: 2005-2035 Population Change



Based on the shares of population, results of the growth assumptions, and available land, the GAM determined if each zone would have the capacity to accept the population and dwelling units allocated by its relative attractiveness. If the growth capacity would be exceeded, the GAM reallocated the excess population to other zones within the same community, and in the case of Oklahoma City, within the same county.

Figures 3.1 and 3.2 show the projected 2035 population densities by traffic analysis zone and the anticipated change in population from 2005 to 2035 by TAZ, respectively.

[4] Dwelling units removed from the housing inventory due to fire, demolition or natural disaster.

2005 & 2035 EMPLOYMENT ESTIMATES

The Growth Allocation Model was also used to distribute projected 2035 employment throughout the OCARTS area. New employment over the planning period was estimated by comparing base year conditions with 2035 employment projections.

The 2005 employment data was developed from Oklahoma Employment Security Commission (OESC) wage and salary employment records (Year 2005, second calendar quarter) and Census Transportation Planning Package (CTPP Year 2000, Part 2) self-employment counts. This information was supplemented with data from various phone directories, local newspapers and input from member entities to ensure employment was distributed throughout the region accurately. Employment records were sorted by Standard Industrial Classification (SIC) codes and categorized as either retail or non-retail for the modeling process. The CTPP Year 2000 self-employment data was factored up to 2005 at the TAZ level by using a ratio of 10 percent, since the OCARTS area 2000 self-employment was roughly 10 percent of the 2000 wage and salary employment.

Employment in the OCARTS area is expected to reach 801,302 in the year 2035, which represents a 38.6 percent increase from the 2005 employment total of 578,306. The Intermodal Transportation Policy Committee approved the employment control totals for *Encompass 2035* in October 2009. The projected growth in employment was allocated among the counties (or portions) included in the OCARTS area as shown in Table 3.3.

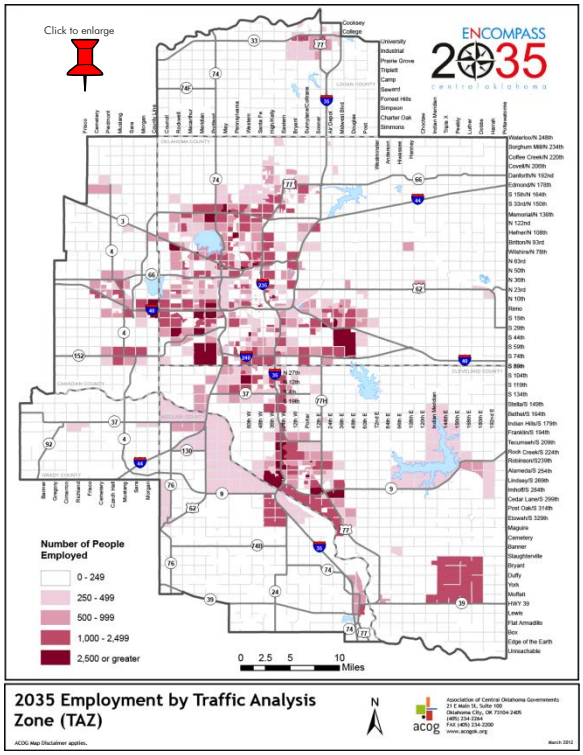
Table 3.3: Employment Estimates By County, 2005 and 2035

COUNTY	2005 EMPLOYEES	2035 EMPLOYEES	CHANGE
Canadian (pt.)	26,517	44,850	69.1%
Cleveland	86,026	156,888	82.3%
Grady (pt.)	1,996	2,695	35.0%
Logan (pt.)	6,717	10,245	52.5%
McClain (pt.)	7,186	12,510	74.1%
Oklahoma	449,864	574,113	27.6%
OCARTS	**578,306**	**801,302**	**38.6%**

Note: "(Pt.)" means the part of the county located within the OCARTS area.

EMPLOYMENT GROWTH ASSUMPTIONS AND FACTORS FOR 2035

Figure 3.3: 2035 Employment by TAZ

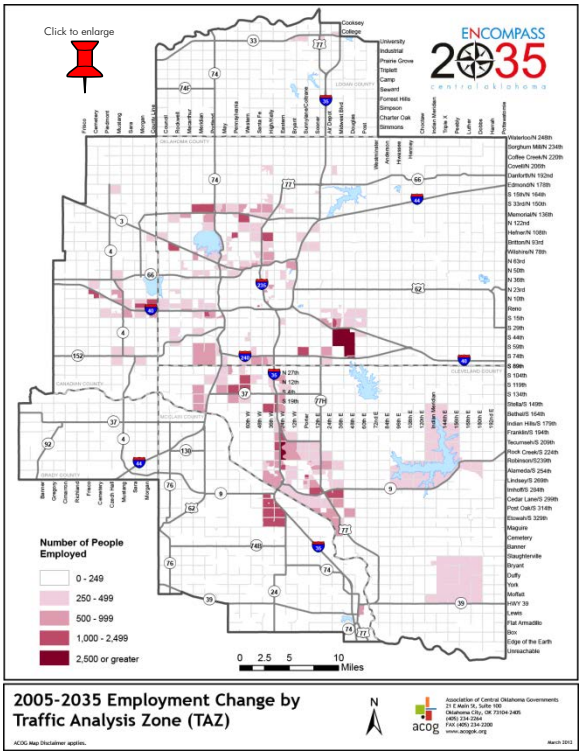


Using the approved 2035 regional, county, and city employment control totals, the GAM was run to redistribute the forecasted employment to the traffic analysis zones. The 2035 TAZ figures were compared against the 2030 TAZ employment numbers, and the availability of appropriate planned land uses was verified (commercial, office, industrial, and public).

Recent and impending employment developments since the 2005 base year were tracked and factored into the traffic analysis zone employment figures to ensure that enough forecasted employment was assigned to the appropriate entities and TAZs. Local planners were consulted to identify specific changes in their communities. As with previous models, the preliminary TAZ forecasts were analyzed and adjusted as needed.

The employment portion of the GAM used employment density, proximity to population, existing employment centers (2005), transportation corridors, and available land to develop 2035 attractiveness scores for each traffic analysis zone. Future employment density for each zone was developed by multiplying the 2005 base year TAZ density by 1.25, for a 25 percent increase. Base year employment densities were calculated by TAZ for each employment land use type—commercial, office, industrial, and public.

Figure 3.4: 2005-2035 Employment Change by TAZ



The GAM distributed future employment to the TAZs with the highest attractiveness scores, if there was land available. An iterative process was used to distribute employment to the next highest scoring zones until all forecasted employment growth was distributed throughout the region.

Figures 3.3 and 3.4 show the projected 2035 employment by traffic analysis zone and the anticipated change in employment from 2005 to 2035 by TAZ, respectively.

2005 & 2035 SCHOOL ENROLLMENT ESTIMATES

Because schools are also a large determinant of travel, the MPO gathered base year school data in order to project it to the 2035 forecast year. School enrollment and employment are used to determine daily trips from home to school sites.

To obtain the 2005 base year school enrollment, the MPO staff used several sources including the Oklahoma Department of Education, the Oklahoma State Department of Vocational and Technical Education, the Oklahoma State Regents for Higher Education, local telephone directories, various newspaper articles and telephone surveys. The enrollment data was projected for four different categories of education—public schools (pre-kindergarten through 12th grade), private schools (pre-kindergarten through 12th grade), vocational-technical schools, and university and college education. Charter school data within Oklahoma City was added to the public school database by school district.

To obtain the 2005 base year school enrollment, the MPO staff used several sources including the Oklahoma Department of Education, the Oklahoma State Department of Vocational and Technical Education, the Oklahoma State Regents for Higher Education, local telephone directories, various newspaper articles and telephone surveys.

The methodologies used to project school enrollment to the year 2035 were based on the relationship between population growth and school enrollment and a historical analysis of this trend in the OCARTS area. Public school district projections were based upon the relationship between the 2005 population throughout the OCARTS area and school enrollment figures obtained from the Oklahoma Department of Education. Projections for private and vocational-technical schools, and universities and colleges were developed using historical trend analysis of available enrollment data from 1990-2005. Adjustments were made for new schools that were currently planned or recently built, but not yet operational, or based on planned changes or enrollment maximums identified by school administrators. New school enrollments were included only if a known location of the school could be provided by the district. Comments from school district planning personnel were solicited and considered in the case of magnet or other specialty schools.

Generally, school enrollment is expected to increase in the OCARTS area at a little higher rate than population. As shown in Table 3.4, total school enrollment is estimated to increase 40.0 percent over the planning period from approximately 261,714 students in 2005 to more than 366,584 in 2035.

Table 3.4: Estimated School Enrollment by Entity, 2005 and 2035

ENTITY	2005			2035		
	PUBLIC PK-12	PRIVATE PK-12	OTHER*	PUBLIC PK-12	PRIVATE PK-12	OTHER*
Bethany	3,926	30	2,435	4,250	50	4,308
Blanchard	1,454	0	0	2,497	0	0
Bridge Creek	1,120	0	0	2,041	0	0
Choctaw	3,444	0	636	5,447	0	809
Del City	3,939	1,070	584	4,416	1,490	700
Dibble	843	0	0	1,811	0	0
Edmond	15,868	1,933	12,440	24,503	3,215	16,000
Forest Park	136	0	0	237	0	0
Guthrie	3,918	166	0	5,504	270	0
Harrah	2,222	46	0	3,317	75	0
Jones	1,040	0	0	1,958	0	0
Lexington	1,736	0	0	2,288	0	0
Luther	771	0	0	1,715	0	0
Midwest City	8,659	426	4,933	9,946	665	5,000
Moore	8,680	399	202	14,840	808	427
Mustang	4,307	0	0	7,486	0	0
Newcastle	1,258	0	0	2,165	0	0
Nichols Hills	0	351	0	0	509	0
Nicoma Park	1,237	0	0	1,709	0	0
Noble	3,081	0	0	4,526	0	0
Norman	14,072	1,137	24,541	19,964	1,855	33,700
Oklahoma City	73,240	6,356	28,251	94,621	9,180	39,796
Piedmont	1,707	0	0	4,091	0	0
Purcell	1,405	0	0	2,168	0	0
Spencer	1,098	124	0	1,263	200	0
The Village	582	987	0	669	1,300	0
Tuttle	1,458	0	0	2,703	0	0
Warr Acres	3,845	0	0	4,466	0	0
Washington	817	0	0	1,352	0	0
Yukon	6,066	426	0	6,826	600	0
Oklahoma Co.	2,312	0	0	6,848	0	0
OCARTS	**174,241**	**13,451**	**74,022**	**245,627**	**20,217**	**100,740**

Table reflects only those communities that have at least one school.
*Other – Colleges, Universities and Vocational-Technology Centers

HOW DO WE PLAN FOR 2035?

CHAPTER 4: GOALS AND STRATEGIES

CHAPTER 5: PUBLIC INVOLVEMENT

CHAPTER 6: PROJECT SELECTION PROCESS

CHAPTER 7: PROTECTING HUMAN HEALTH AND THE ENVIRONMENT

CHAPTER 4: GOALS AND STRATEGIES

The greater Oklahoma City metropolitan area is a dynamic, ever changing region. A lot has changed in the last 30 years and a lot will change through the Plan's horizon year of 2035. Some changes are beyond our control, while others can be guided through careful planning and collaboration. Central Oklahoma consists of vibrant urban and suburban communities and is known for its affordability and relatively low unemployment, as well as the recent and ongoing revitalization of its urban core in the downtown and Bricktown areas of Oklahoma City.

These positives are also coupled with challenges in planning for Central Oklahoma's transportation system due to our large, low-density geographic setting, including:

- increased costs for building and maintaining infrastructure
- often considerable distances between housing, jobs and other services
- dependence on single-passenger automobile travel
- increasing congestion on the region's interstate facilities
- aging roads and bridges
- difficulty in providing, and lack of resources for, alternative transportation choices
- increasing emissions from cars and trucks that worsen air quality

Nationally, future transportation services are also influenced by fluctuating energy prices, federal transportation priorities and financial resources, environmental considerations, and the aging of the population.

GOAL DEVELOPMENT

The previous chapters of this report described the current characteristics of the OCARTS area, as well as forecast assumptions about land use, population and employment that will impact where and how we will travel in Central Oklahoma in the future. These forecasts were developed through close cooperation with area local governments and were based on their locally adopted comprehensive plans to produce forecasts for the overall growth and development of the region.

In addition, the region's long-range transportation goals were developed to support the federal planning priorities established in SAFETEA-LU by the U.S. Department of Transportation. These planning factors require that metropolitan transportation plans support the region's economic vitality, increase the safety and security of the transportation system, increase accessibility and mobility for people and freight, protect and enhance the environment, improve connectivity among all modes, promote efficient system management, and preserve the existing transportation system.

The OCARTS area socioeconomic information and the federal transportation planning factors provided the foundation for establishing a set of long-range transportation goals and strategies centered on the following themes:

- Community
- Connectivity
- Economic Strength
- Environmental Responsibility
- Equity
- Livability
- Maintenance
- Options
- Performance
- Safety and Security

The *Encompass 2035* goals and strategies were first drafted by ACOG staff using the results of a public survey issued in summer 2009. The survey revealed a strong public interest in future passenger rail and an improved bus system, as well as an emphasis on maintaining and improving the safety of the region's streets, highways, and bridges.

The goals were reviewed and finalized by local planners and engineers, elected officials, and area citizens through various ACOG committee meetings and a public kick-off meeting, as described in Chapter 5 – Public Involvement. The Intermodal Transportation Policy Committee approved the final *Encompass 2035* goals and strategies in October 2009.

The following pages provide the regional transportation vision for *Encompass 2035*, articulated through long-range transportation goals, strategies for achieving the goals, and some anticipated challenges.

The Encompass 2035 goals and strategies were drafted using the results of a public survey. The survey revealed a strong public interest in future passenger rail and an improved bus system, as well as an emphasis on maintaining and improving the safety of the region's streets, highways, and bridges.

Community

Goal: Participate in active dialogue to shape the transportation system.

Planning for a vibrant, dynamic, and comprehensive transportation system requires that all voices are heard concerning what the future system should look like, how it will be designed, and what it will accommodate. Communication is a two-way street. Planners must listen to what people have to say and build on that interaction and engagement.

Strategies:

- Use new-media and emerging communication tools.
  The Internet and cell phones have become primary modes of communication and information gathering. These technologies must be utilized in spreading the word about transportation and long-range plan development.

- Simplify language used in the communication process.
  Central Oklahomans shouldn't be bogged down by technical or government language. Planners must strive to state things simply and to the point.

- Make dialogue comprehensive and inclusive.
  Central Oklahomans need to have confidence that when they express their thoughts and opinions, their comments will be given full consideration in the process.

- Support local engagement with citizens and cooperation with other communities.
  Central Oklahoma functions as one regional community. While dialogue between citizens and planners is vital, cities, towns, and counties also need to communicate with one another.

Challenges to consider:

- How can we inspire people to engage in the planning process?
- How do we provide equitable consideration to differing views?
- What can we do to reach out to underrepresented and disadvantaged populations?
- Can we realistically imagine the future beyond the here and now?
- How can we bridge the technology disconnect?

Connectivity

Goal: Develop connections between all types of transportation.

A high quality of life depends on how well different modes of transportation are integrated and connected to achieve a transportation system that meets the needs of its users. A seamless transportation network should effectively carry people and goods to where they need and want to go.

Strategies:

- **Provide efficient connections within and between modes and facilities.**
  Reliable, convenient, and well-connected transportation modes are essential to providing efficient movement of goods and effective services for all Central Oklahomans.

- **Improve integration of transportation and land use.**
  Coordination of transportation and land use planning will reduce automobile trips, decrease travel time, enhance mobility, and preserve agricultural and recreational lands.

- **Invest in projects that complement the existing transportation infrastructure.**
  We should build on our existing transportation network by encouraging projects that provide the greatest benefit to the region, including park-and-ride lots, sidewalks, and bike racks.

Challenges to consider:

- How do we mitigate transportation impacts of sprawl?
- How do we improve coordination among transportation providers?

Economic Strength

Goal: Promote economic vitality through enhanced mobility.

Central Oklahoma is at the crossroads of two major interstates that connect the region to the nation's borders. Major railroads cross paths here, and Will Rogers World Airport is centrally located, too. Seamless connections among these and other transportation facilities are the foundation of commerce, economic growth, access to jobs, and personal mobility.

Strategies:

- Improve the efficiency of the existing transportation system.
  Time is money. Roadway design, maintenance, signalization, signage, and technology help improve traffic flow, reduce accidents, bottlenecks, and congestion. Efficient public transportation must be reliable and on time.

- Improve accessibility to regional employment centers.
  The transportation system should provide the opportunity for all people to gain access to jobs through a variety of travel options. Among other modes of travel, public transportation that serves large employment centers will enhance the region's economic vitality.

- Encourage mixed use development.
  Travel can be significantly reduced through development that meets residential, employment, retail and/or service needs at a single or nearby location. Mixed use development reduces sprawl, reduces costs associated with public infrastructure (roads, water, sewer, etc.), and can lessen congestion and air pollution.

- Improve freight transportation by increasing options for goods movement.
  Freight is transported in various ways—truck, rail, water, air or pipeline. Most freight transportation begins and ends with a truck, which underscores the need for an efficient roadway network. Where multiple modes are involved, commerce is dependent upon an integrated transportation system and adequate intermodal facilities for seamless transfers.

Challenges to consider:

- How do we encourage land use policies that function effectively?
- How do we accurately forecast economic conditions and future growth?
- How do we plan for desired improvements with limited financial resources?
- How do we reconcile long-term planning with immediate needs and trends?

Environmental Responsibility

Goal: Minimize environmental impacts associated with transportation.

Emissions from transportation are currently growing faster than from any other source. For a healthy environment, we need to reduce vehicle emissions by using less fuel-intensive transportation and making system improvements.

Strategies:

- **Continue regional air quality education efforts and promote ridesharing.**
  Encourage environmentally-friendly travel behavior that achieves better fuel efficiency and helps reduce the overall number of automobile trips.

- **Promote alternative modes of transportation.**
  To reduce the number of automobile trips, we need to focus on other transportation modes, such as biking, carpooling, rail, transit, and walking.

- **Encourage land-use patterns of development that reduce travel distance.**
  Driving less uses less fuel and prevents harmful emissions. If residents are able to reach more destinations by walking, biking or taking the bus, fewer vehicle trips can be achieved.

- **Encourage use of alternative energy and cleaner-burning fuels.**
  To lower emissions, we should increase the use of alternative fuels, such as natural gas, biofuels, and hydrogen; and use better technology to make vehicles more efficient.

- **Improve network efficiency.**
  The implementation of transportation strategies, such as idle reduction and signal timing, can help reduce fuel consumption and emissions.

Challenges to consider:

- How do we achieve greater emission reductions with voluntary programs?
- How do we measure the value of public outreach programs?
- How do we encourage people to adopt more environmentally friendly transportation habits?
- How do we promote greater coordination among multiple agencies?

Equity

Goal: Provide transportation access for everyone.

All Central Oklahomans deserve access to transportation. However, many obstacles can stand in the way, such as distance between destinations, inability to purchase or drive a vehicle, inaccessible or incomplete information about available transportation services, and difficulties speaking or reading the English language.

Strategies:

- **Ensure that transportation improvements and services are provided equitably.**
  Transportation improvements and services in Central Oklahoma must be provided without discrimination regardless of the race, color, national origin, disability/handicap, sex, age, or income of the transportation user.

- **Construct and maintain accessible sidewalks and provide better pedestrian crossings.**
  Sidewalks and crosswalks are used not only for recreational walking, but also to catch the bus, reach parking lots, and access other destinations. Sidewalks must have curb cuts and pedestrian crossings should use safety technologies.

- **Expand and maintain a public transportation system that provides accessible fleets, centers, and sheltered stops.**
  Buses and transit centers must be equipped to accommodate people with limited mobility and disabilities, while transit stops must also be accessible and provide shelter from the elements.

- **Expand paratransit service beyond the minimum federal requirement.**
  Expanding the paratransit service area will greatly enhance travel options and mobility for Central Oklahomans with disabilities.

- **Improve access and coordination among human service agencies and public and private transportation providers.**
  Coordination between human service agencies and transportation providers will ensure that people are able to find the transportation services they need, and that resources will not be wasted by duplication of effort.

- **Provide more materials in languages other than English where feasible and appropriate.**
  Not all Central Oklahomans speak or read English. When reasonable, transportation-related materials will be provided in other languages.

Challenges to consider:

- How do we encourage communities to construct more sidewalks?
- How do we better plan for an aging population?
- Where will sufficient and reliable funding sources for public transportation come from?

Livability

Goal: Integrate land use and transportation for more livable, healthy communities.

The quality of life in Central Oklahoma can be enhanced through the provision of multiple forms of transportation, better coordination among land uses and transportation, and improved neighborhood connections in order to achieve more healthy and active lifestyles.

Strategies:

- **Increase accessibility to and between centers of activity.**
  Increase accessibility of all transportation modes and remove barriers so that Central Oklahomans can get around with ease.

- **Integrate land use and transportation to create active, healthy communities.**
  Improve connections among parks, residential areas, commercial districts, and transportation corridors. Provide guidance to municipalities regarding pedestrian and transit oriented development.

- **Promote alternate transportation including biking, carpooling, rail, transit, and walking.**
  The automobile is just one of the many methods of transportation. Complete Streets initiatives encourage multiple modes within a transportation corridor.

- **Encourage visually attractive streetscapes.**
  Attractive streetscapes encourage economic and social activity. The region should promote such developments, preserve views and landscapes, and incorporate green spaces, where appropriate and possible.

- **Improve and increase the walkability of the region.**
  Encourage municipalities to develop sidewalks and trails that provide adequate safety features for pedestrians and drivers. Communities should adopt pedestrian oriented ordinances that support a safe, reliable, and complete sidewalk and trail network.

Challenges to consider:

- How do we manage sprawl?
- How do we overcome the historical focus on the automobile?
- How do we encourage development that supports alternative modes of transportation?

Maintenance

Goal: Maintain and improve the quality of the transportation system.

To ensure a high quality transportation system, maintenance of the current and future transportation network is of high importance. A well-maintained system allows for the efficient movement of people and goods. Continuous monitoring of the network will allow planners to more adequately provide the limited resources to identified areas of concern.

Strategies:

- **Preserve existing and future transportation investments.**
  Budget appropriate funding for maintenance of road and bridge infrastructure. Perform regularly scheduled maintenance on all public transit vehicles to ensure reliability and safety.

- **Establish maintenance priorities through data collection and analysis.**
  Monitor the transportation system by reviewing pavement condition, bridge deficiencies, travel delay, traffic signal timing and crash locations. Work with local communities to gather appropriate information.

- **Decrease unnecessary bridge and roadway wear and tear.**
  Post bridge weight limits and underpass clearance heights, and reduce bridge deterioration through preventative painting and sealing. Utilize weigh stations to discourage overloading and reduce roadway damage.

Challenges to consider:

- How do we keep up?
- Can we preserve the system we currently have?
- How do we improve enforcement of legal weight limits?

Options

Goal: Enhance transportation choices for the movement of people and goods.

Here in college football country, the term "option" has a different connotation. However, providing options in transportation means creating choices that will reduce household transportation costs, strengthen local economies, lower traffic congestion, and reduce reliance on foreign oil. To truly provide transportation options, we must go above and beyond what we've done in the past.

Strategies:

- **Enhance the region's existing transit service.**
  Expand the existing bus service throughout the region to provide an effective transportation option for all Central Oklahomans.

- **Explore the development of rail-based public transportation and other fixed guideway technologies.**
  Evaluate and implement the recommendations of the 2005 Fixed Guideway Study and the Regional Transit Dialogue.

- **Expand regional bicycle and pedestrian networks.**
  Continue to build a safe, coordinated network that is a healthy and environmentally-friendly alternative.

- **Promote improvements for more efficient goods movement**.
  Better access to markets will reduce the cost of products and increase delivery reliability.

- **Maintain and improve the regional street and highway network.**
  It is critical to preserve the current system and expand when and where appropriate.

- **Encourage all entities to construct sidewalks and create a master sidewalk plan.**
  Sidewalks are the backbone of the pedestrian transportation system. An insufficient sidewalk system compromises safety by forcing people to use busy streets.

Challenges to consider:

- Where do we start?
- How do we make a difference with limited funds?
- How do we build consensus for funding non-road projects?

Performance

Goal: Increase the efficiency and reliability of the transportation system.

It is essential that our transportation system performs to the best of its abilities. Inefficiencies and system malfunctions lead to travel delays, congestion, traffic incidents, and losses in economic productivity.

Strategies:

- **Maximize the system by implementing enhanced operation and management techniques and technologies.**
  Intelligent Transportation Systems (ITS) technologies can help improve our existing transportation system. For example, changeable message signs have the ability to inform drivers of traffic delays and road conditions.

- **Influence travel behavior by supplying traffic information and alternative travel options.**
  For every person that carpools, there is one less car on the road. By promoting alternative travel options, such as ridesharing or transit, our transportation system will experience less congestion and perform more efficiently.

- **Increase system reliability by identifying and fixing problem locations.**
  There are places where bottlenecks and incidents frequently occur. We must be diligent in correcting these spots to make sure that recurring delays do not diminish the quality of life and economic vitality.

- **Increase capacity where needed.**
  Sometimes the best answer to improving system performance is adding more lanes, building new roadways, or increasing transit services.

Challenges to consider:

- How can we encourage a stronger focus on improving system efficiencies?
- How can we promote more multi-jurisdictional cooperation on traffic operations?

Safety and Security

Goal: Provide a safe and secure transportation system.

It is crucial to reduce the number and severity of accidents, just as it is important to effectively manage incidents through close coordination among transportation providers, system managers, and the emergency management community.

Strategies:

- **Improve design, construction, and maintenance of infrastructure to reduce accidents, injuries, and fatalities.**
  Proper road maintenance and the use of safety related improvements, such as cable barriers and rumble strips, greatly enhance safety.

- **Educate the public on safety issues and skills.**
  Public education on safe driving behavior is provided through ongoing campaigns, such as Oklahoma's "Click it or ticket" initiative, or through national programs, such as "Nation Child Passenger Safety Week" or "Safe Routes to School." Brochures and other resources on various safety topics are also available for distribution to the public.

- **Cooperatively implement traffic incident management techniques.**
  Traffic management includes the coordinated use of resources to reduce the duration and impact of incidents, and improve the safety of motorists, crash victims, and emergency responders alike. Such management techniques include early detection through roadway sensors, enhanced Wireless 9-1-1, and the quick clearance of crash sites to prevent secondary accidents.

- **Promote enforcement of traffic laws and advocate for development of new safety policies.**
  Implementation of safety rules and enforcement of traffic laws are essential to discouraging unsafe driving and removing drivers from the roadway who pose a hazard.

- **Ensure the security of the transportation system.**
  The transportation system is designed for accessibility and efficiency, which makes it a perfect target for anyone seeking to disrupt travel and commerce. Reasonable measures must be taken to put in place and maintain a system of threat deterrence, protection, and response.

Challenges to consider:

- How do we foster better communication between transportation and emergency management professionals?
- How can we reduce bad driving behavior?

CHAPTER 5: PUBLIC INVOLVEMENT

THE OCARTS PUBLIC PARTICIPATION PROCESS

Essential to the transportation planning process, public participation ensures that Central Oklahoma citizens, community leaders and transportation stakeholders will help shape the region's transportation future from the policy to the project-specific level. Much of ACOG's plan development work occurs within MPO transportation committee meetings, but it's the public's reaction and input to that work that allows the long-range planning process to move forward.

Public participation is an opportunity for citizens to help define the goals upon which the region's transportation policies and investments will be based, as well as to make more specific recommendations. Therefore, it needs to begin early, continue throughout the plan development process, and ensure timely access to key decisions in order to be meaningful. To accomplish this, the MPO updated the *OCARTS Public Participation Plan* in 2007. This plan described the public outreach opportunities envisioned for the long-range plan, general timeframes and milestones, and the various stakeholders and resource agencies that should be involved.

In order to help the public easily and quickly identify the efforts and products of the long-range plan update, the MPO developed a brand and logo. Formally known as the 2035 Oklahoma City Area Regional Transportation Study (OCARTS) Plan, the plan is also known as *Encompass 2035*. Coupled with a recognizable logo featuring a compass, the logo was included on all agendas, flyers, brochures, maps, and the webpage dedicated to the plan. The "encompass" brand was carefully chosen. Not only does it play on the visual metaphor of a directional compass, but used as a verb, the term encompass means to "include comprehensively"—the primary purpose of the MPO's public outreach and long-range planning efforts.

The plan webpage is located on the ACOG website. During the plan development process, this webpage was used as a communications portal to distribute surveys and to announce the plan kickoff, public meetings, and "call for projects." Today, it provides *Encompass 2035* background information and products—the *Encompass 2035 Plan Summary* and *Plan Report*—as well as more detailed reports documenting individual tasks associated with the plan.

ENCOMPASS 2035 STAKEHOLDERS

Central Oklahoma's transportation stakeholders consist of three general categories—local citizens, transportation interests, and advocacy organizations. Citizen stakeholders include individuals of all ages, incomes, and backgrounds who live and work within Central Oklahoma, as well as organizations that represent the interests of specific citizen groups, such as neighborhood associations, churches, minorities, persons with disabilities, and others. Elected officials from OCARTS cities and towns also represent the interests of their respective citizens.

Transportation interest stakeholders include:

- Bicycle coalitions
- Walking groups
- Transit advocacy groups
- Passenger rail advocacy groups
- Transit providers
- Representatives of public transportation employees
- Highway Users Federation
- Oklahoma Turnpike Authority
- Oklahoma Trucking Association
- Oklahoma Railroad Association
- Freight shippers
- Providers of freight transportation services
- State and local emergency service providers
- Federal Highway Administration
- Federal Transit Administration
- Federal Aviation Administration

Although many of the stakeholders reflected above represent advocacy organizations for a particular population group or transportation interest, additional advocates are also important participants in the transportation planning process, including:

- Major employers
- Chambers of commerce
- Developers
- Environmental groups
- Social services agencies

As reflected in Figure 1.3 of Chapter 1, the region's transit providers, the Oklahoma Department of Transportation, and ACOG are the MPO transportation planning partners. Assistance and data is also provided by additional local, state, tribal and federal agencies responsible for land use, transportation planning, natural resources and other environmental concerns. The collaboration and data provided by these agencies are described in the Impacts chapter of this report.

GETTING THE WORD OUT

ACOG maintains a database of individuals, organizations and agencies that includes all of the groups described above. In general, notification concerning public involvement opportunities is provided electronically to a database of approximately 6,000 through news releases to all metro area media outlets (print, radio and television), included in ACOG's electronic newsletter, and is posted on the ACOG website, Facebook page and Twitter feed. It's also common for other agencies to repost MPO public participation activities in their newsletters and email blasts.

All of the methods referenced above were used to announce the *Encompass 2035* long-range plan development public participation activities described in the following paragraphs.

PUBLIC PARTICIPATION ACTIVITIES

Transportation Survey

As part of the public engagement process for the long-range transportation plan, ACOG launched a web-based survey in May 2009. The survey tool was easy to use, allowing respondents to take the survey online and skip any questions they did not wish to answer. In total, 1,893 responses were received. Although it was not a scientific survey, the responses provided planners with insight into the public's needs and desires concerning their transportation priorities, travel patterns, interest in alternative transportation modes, and the most acceptable means of financing transportation improvements.

According to the survey results, 83 percent of the respondents drive alone to work, and more than 80 percent commute less than 20 minutes to get to work. When asked what type of travel they would prefer to use in the future, the top three responses were rail, car, and bus, respectively. When asked what the top three priorities for *Encompass 2035* should be, those surveyed said that "developing passenger rail, maintaining roads and bridges, and improving the public bus system," were important.

ACOG planners and MPO transportation committee members used the survey results to draft the goals and strategies that would guide development of the long-range plan. See Figure 5.1.

Table 5.1: Survey Question Results

Q11: What are your top three priorities for the transportation system within Central Oklahoma? (choose three*)	Response Total	Response Percent*
Develop passenger rail	1003	56 %
Maintain roads and bridges	891	50 %
Improve public bus system	619	35 %
Add more bicycle paths/bike lanes	582	33 %
Add more sidewalks/walking paths	469	26 %
Expand interstate rail (Amtrak)	451	25 %
Improve interchanges on interstates	241	14 %
Add lanes to interstates	233	13 %
Improve traffic signals/intersections	227	13 %
Increase transportation services for elderly and disabled	226	13 %
Add lanes to roads	206	12 %
Total Respondents	1782	
Skipped Question	111	

Plan Kick-off

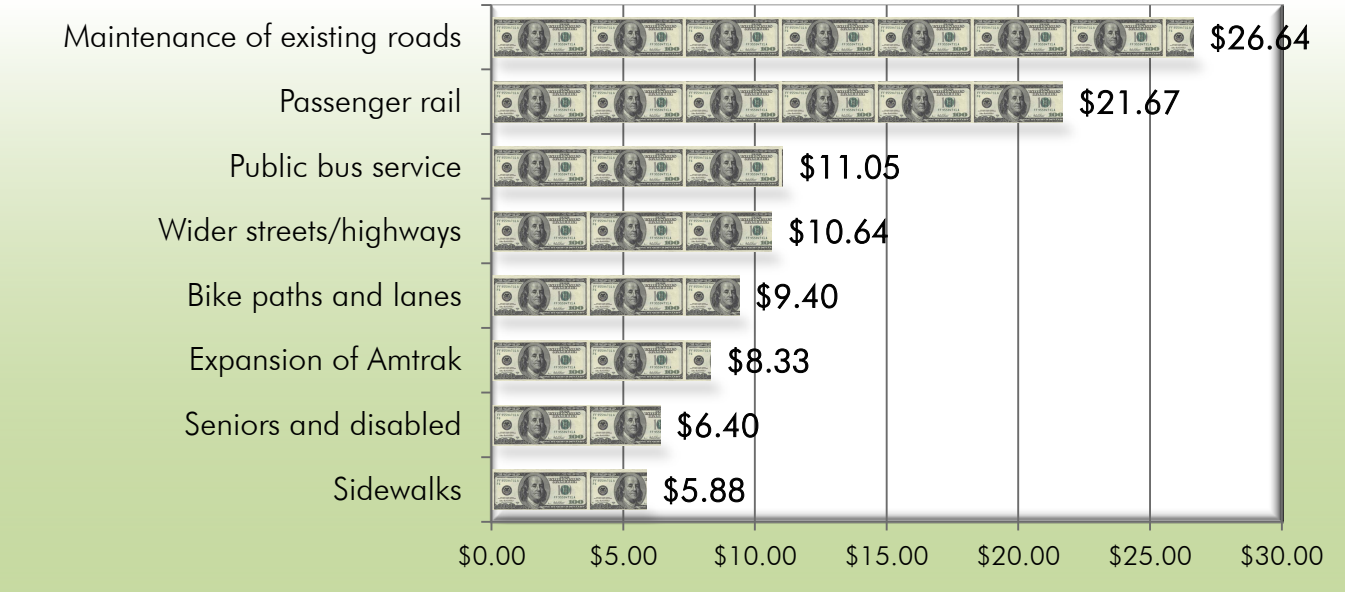
Although the MPO staff had been engaged for several years in updating the region's land use, population, employment, and other socioeconomic foundation for the long-range plan update, the plan process was formally introduced to the public through a kickoff meeting held in downtown Oklahoma City in October 2009. The meeting showcased various stations that provided maps and data about the region's transportation modes, air quality, previous OCARTS transportation plans, and other planning initiatives such as the Regional Rideshare Program and the Regional Transit Dialogue.

The meeting, which was attended by nearly 100 citizens, was intended to educate the public about the long-range planning process and to gather input on the draft *Encompass 2035* goals. Each goal was posted on a large board,

and participants were provided stickers to indicate how strongly they supported the goal, as well as comments about how to achieve the goal. Similarly, a "retreat" was held with the MPO policy board to gauge their feedback on the proposed goals.

During the kickoff meeting, participants were given $100 in play money to spend on whatever transportation modes reflected their personal priorities. The choices included Amtrak expansion, bike facilities, bus transportation, regional passenger rail, roadway maintenance, services for seniors and the disabled, sidewalks, and wider streets and highways. The dollar breakdown (Figure 5.1) indicated that Central Oklahomans place a high value on roadway maintenance and the development of passenger rail.

Figure 5.1: Kickoff Meeting Exercise Results



Red Dirt Monopoly

Throughout the plan development process, the MPO utilized a planning game called "Red Dirt Monopoly" to acquaint various citizen and civic groups with the transportation planning process and the federal requirement to develop a multimodal plan within a budget that includes both long-term capital and maintenance expenditures. Each game utilized a toolkit shared among three to six players. The "game board" was a map of the OCARTS area, upon which the group could use game pieces (stickers and strings) to indicate the type and extent of improvements they would like to include in the long-range plan. Of course, each improvement had an associated capital cost, depending on the mode and the distance improved, and players were required to periodically set aside a certain amount of funds to maintain the overall transportation system.

Throughout the exercise, it became apparent that priorities would have to be agreed upon by the players, compromises reached, and a realization acknowledged that there would not be adequate funding to implement all desired transportation improvements.

Citizens Advisory Committee

ACOG also utilized a Citizens Advisory Committee (CAC) to assist with review of plan data, assumptions, and products as they were developed, and to provide a non-technical perspective to the long-range planning process. The *Encompass 2035* CAC consisted of voting members who represent various citizen, neighborhood, business, minority, modal, environmental, and social service interests throughout the region, as well as non-voting members from federal, state, and local government agencies who serve as technical assistance/resource support to the committee. The CAC's recommendations were provided directly to the Intermodal Transportation Policy Committee (ITPC), and the Committee continues to meet, as needed, to review requests to amend *Encompass 2035* or to provide input into other transportation studies affecting Central Oklahoma.

Open House Meetings

A series of three public Open House Meetings were held throughout the region in April 2011 to discuss the proposed 2035 long-range transportation plan for the region. The meetings were held at Francis-Tuttle Technology Center in northwest Oklahoma City, the Norman Public Library in downtown Norman, and the Oklahoma City Community Foundation in downtown Oklahoma City. During the meetings, ACOG staff also presented background information about ACOG, its role as the MPO, the metropolitan planning area, benefits of regional planning, and federal transportation planning requirements.

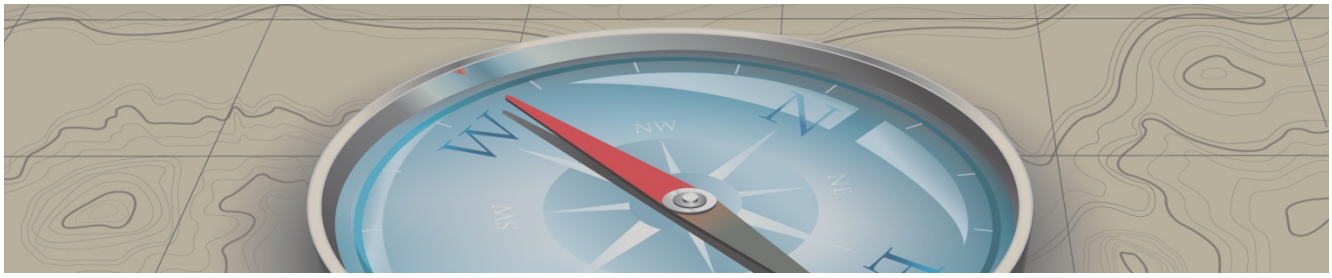
Similar to the plan kickoff, the open houses featured stations that included maps and data about the region's current transportation system (streets and highways, public transportation, bicycle and pedestrian facilities, goods movement). The stations also presented policy recommendations to enhance each mode throughout the planning period, as supported by the *Encompass 2035* goals, as well as specific project recommendations to improve the street and highway network and the region's bicycle and pedestrian networks.

Draft Plan Summary

A preliminary plan, known as the *Encompass 2035 Draft Plan Summary*, was prepared by MPO staff and made available for public review and comment prior to and during the public meetings. The Draft Plan Summary was widely distributed. It was announced in a news release and posted on ACOG's website in order to present the recommended plan to the public prior to final action by the MPO policy board. It included an overview of the long-range plan development process, the adopted goals and strategies, the policy and project-specific recommendations proposed for adoption in the final plan, and the financial strategy to ensure that the plan would be affordable.

Other Events and Opportunities

MPO staff utilized numerous opportunities to speak to civic clubs, chambers of commerce, city councils, and other professional and advocacy groups to present the *Encompass 2035* planning process and the goals and recommendations proposed in the plan.



CHAPTER 6: PROJECT SELECTION PROCESS

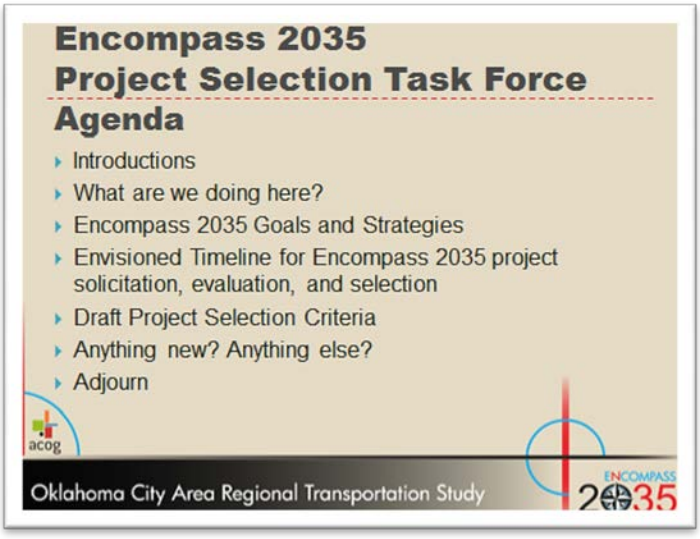
The careful selection of transportation projects that improve the way people and goods move around Central Oklahoma is a critical element of *Encompass 2035*. In previous long-range transportation plan updates, ACOG utilized its transportation model to test alternative transportation networks for the selection of street and highway projects primarily focused on a minimum threshold of volume/capacity ratio.

For *Encompass 2035*, ACOG staff proposed a more robust selection process where all submitted projects would be measured against a more comprehensive set of criteria that reflect the new goals and strategies adopted by the Intermodal Transportation Policy Committee in October 2009. Projects would still need to provide the necessary relief of future congestion, but other objectives to achieve a more diverse and equitable transportation system need to be considered.

TASK FORCE

In June 2010, a multi-disciplinary Task Force was established with the purpose of assisting in the formulation of a methodology to select transportation projects for inclusion in *Encompass 2035* – the Oklahoma City Area Regional Transportation Study (OCARTS) Long-Range Transportation Plan.

The task force met several times during June and July 2010 and included representation from Edmond, Oklahoma City, Midwest City, Moore, Norman, Tuttle, Oklahoma County, Neighborhood Alliance, Mustang Chamber of Commerce, Oklahoma Highway Users' Federation, Oklahoma City Mayor's Committee on Disability Concerns, Oklahoma Department of Transportation, Oklahoma Turnpike Authority, Oklahoma Trucking Association, Central Oklahoma Transportation and Parking Authority, Oklahomans for New Transportation Alternatives Coalition (OnTrac), and private citizens.



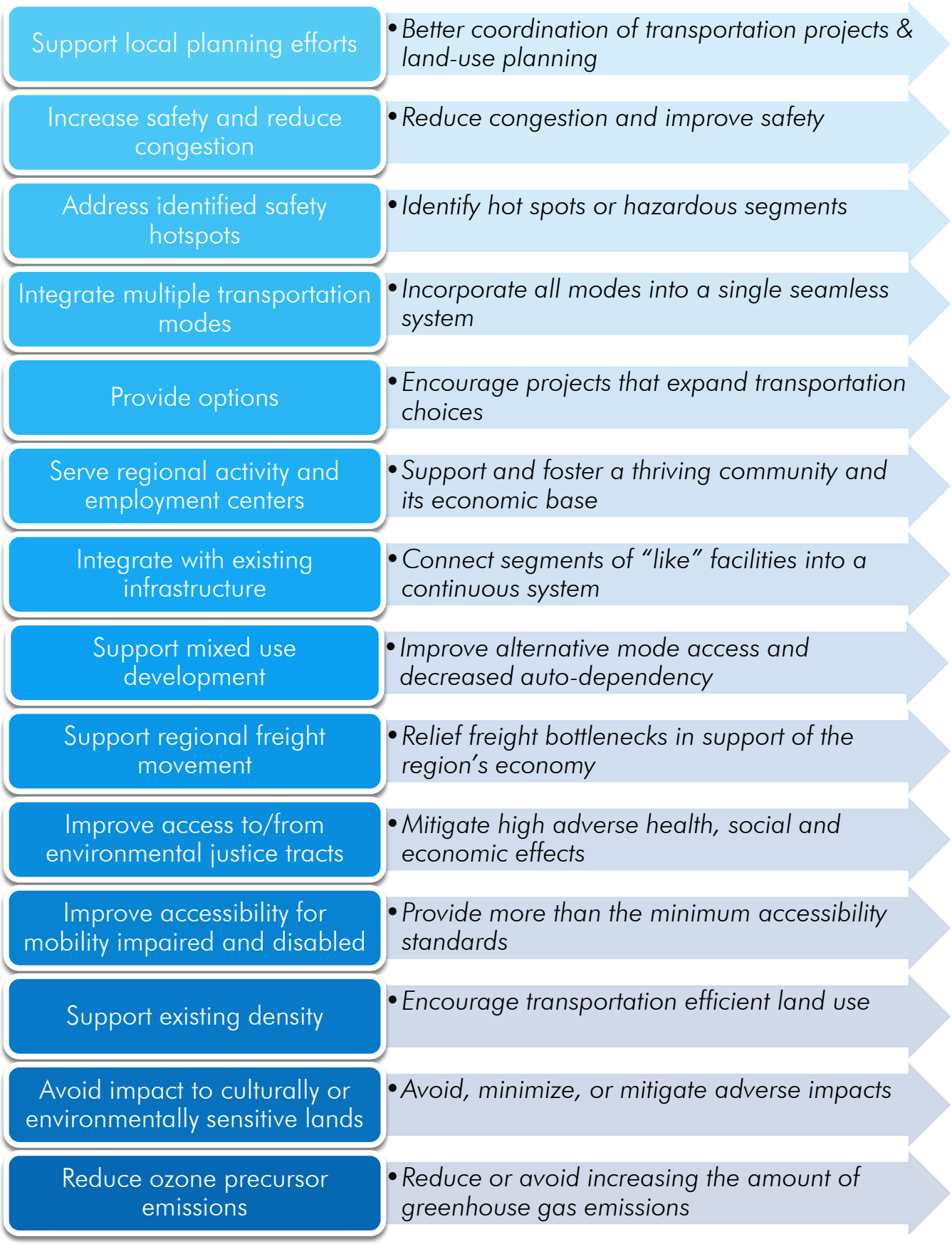
SELECTED CRITERIA

The task force advanced a Project Submission Guidebook that included 39 questions centered on 15 criteria that reflected the adopted *Encompass 2035* goals. Included in the guidebook was a weighted scoring system that further determined the importance of each criterion in meeting the Plan's vision. Table 6.1 illustrates the relationship between the selected criteria and Plan goals. The project selection criteria and guidebook were adopted by the ITPC on August 12, 2010.

Table 6.1: Project Selection Criteria relationship to *Encompass 2035* Policy Goals

	POLICY GOALS										
Criteria	Community	Connectivity	Economic Strength	Environmental Resp.	Equity	Livability	Maintenance	Options	Performance	Safety and Security	**Points Available**
Level of Service			●						●	●	10
Included in Local Plan/Study	●	●	●	●	●	●	●	●	●	●	10
Increases Safety/Reduces Congestion				●		●		●	●	●	10
Addresses Accident Hotspots									●	●	10
Integrates Multiple Modes		●		●	●	●		●			15
Provides Options		●		●	●	●		●			10
Supports Regional Activity and Employment Centers		●	●		●	●					5
Connects to Existing Infrastructure		●	●						●		10
Supports Mixed Use Development		●	●	●		●					10
Supports Regional Freight Movement			●					●	●	●	5
Provides Access to Environmental Justice Tracts	●	●	●		●	●		●			5
Promotes Accessibility	●	●			●	●		●		●	5
Supports Existing Densities				●		●	●		●		5
Protects Environmentally Senitive Lands				●		●					5
Reduces Ozone Precursor Emissons				●		●			●	●	20
										Total Points:	135

Figure 6.1: Project Selection Criteria



CALL FOR PROJECTS

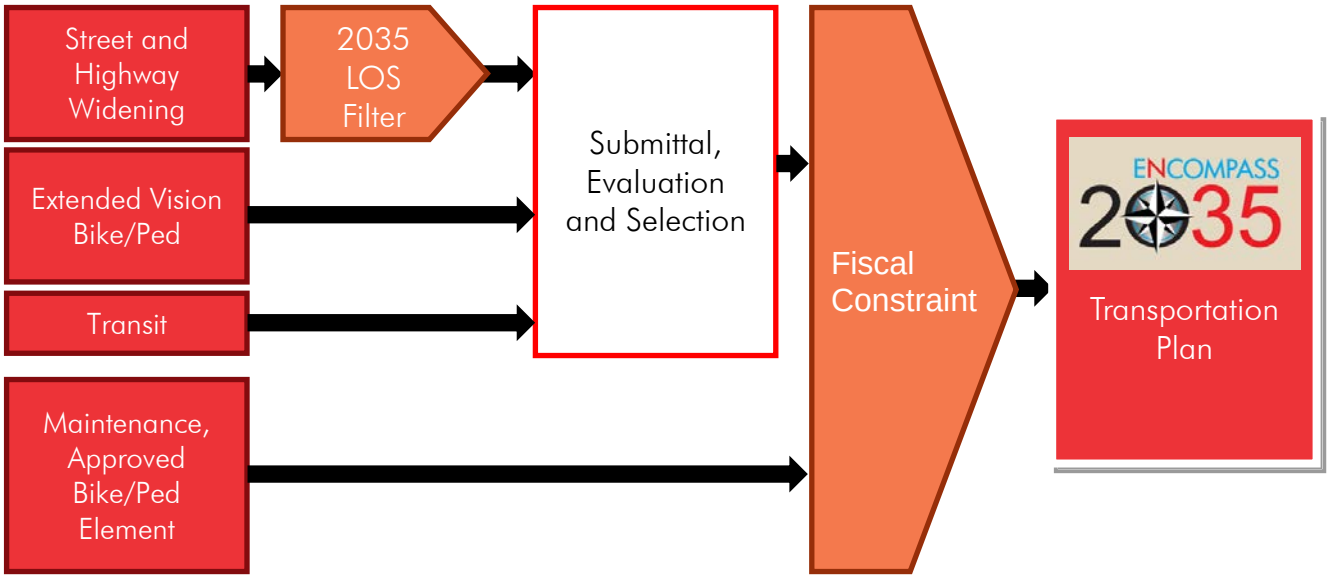
In January 2011, ACOG staff conducted a call for regionally significant transportation projects that support *Encompass 2035*'s adopted policy goals. Local entities and transportation agencies were invited to submit projects for consideration in the plan utilizing the newly created Guidebook. Entities were informed that projects listed in the region's previous plan, *2030 OCARTS Plan,* would not automatically be carried forward into the new plan. All projects — new or old — had to be submitted due to changing federal financial and environmental guidelines and to support a new policy direction for *Encompass 2035*.

Call for Projects Schedule

- Call for projects workshop (12/1/2010)
- Call for projects open (12/13/2010)
- Call for projects closed (1/14/2011)
- Staff analysis (1/15/2010-2/9/2011)
- Special ITTC meeting (2/10/2011)

The *Encompass 2035* Plan project list spans a multitude of transportation options, including bicycle trails, roadways, sidewalks, public transit, as well as other operational improvements (e.g. intelligent transportation systems). Submitted projects fit within at least one of the following categories—Roadway, Bicycle/Pedestrian, or Transit. Maintenance projects were not required to be submitted as part of the call for projects since the *Encompass 2035* financial analysis would account for the cost of up to three cycles of maintenance on every facility in the regional network. See Figure 6.2 for the project submittal process.

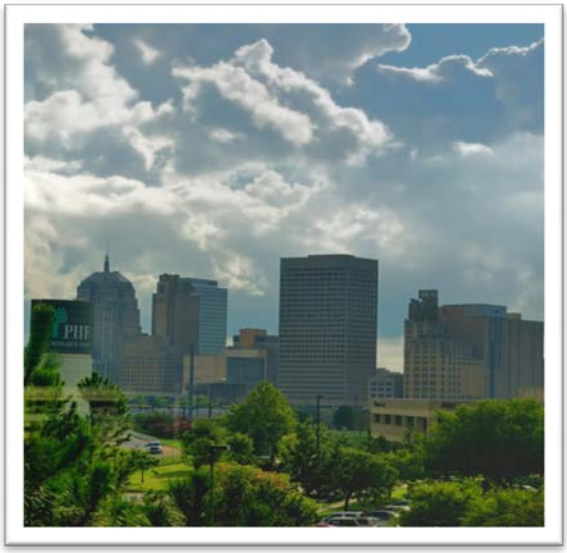
Figure 6.2: Project Submittal Process



Approximately 200 projects were submitted through an online application and scored by ACOG staff. Scoring of projects provided an easily justifiable methodology to rank projects according to their ability to meet the adopted goals of the fiscally constrained plan. This had never been done before in Central Oklahoma for a long-range transportation plan. Additionally, the increased level of project detail that was requested proved to be an important resource for maintaining records and performing analysis as projects move forward. Ultimately all eligible projects that were submitted during this process were included in the final plan list. Please see Chapter 13 – The Adopted Plan - for a complete list of selected projects. More detailed information on the *Encompass 2035* project selection criteria and the Project Submission Guidebook is available in Appendix B.

CHAPTER 7: PROTECTING HUMAN HEALTH AND THE ENVIRONMENT

Encompass 2035 touches anyone who lives or works in Central Oklahoma. We all use highways, roads, sidewalks, trails, and public transit to get around. Therefore, it's important to evaluate the potential social, economic, and environmental impacts of the plan to ensure that future transportation projects will have a positive impact on the quality of life of the people of Central Oklahoma.



Effective transportation systems can produce multiple benefits at the local and regional level by linking communities' roadway, trail and pedestrian systems, helping to protect natural resources, and adding to the economic vitality and livability of the area. The 2005 Safe Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) includes requirements for environmental integration and mitigation.

HUMAN HEALTH AND ENVIRONMENTAL IMPACTS CONSIDERED IN THE PROJECT SELECTION PROCESS

As part of the *Encompass 2035* development process, ACOG staff evaluated social, economic, and environmental factors important to the study area, and developed plan goals that would promote early consideration of these factors when evaluating the potential impact of transportation projects.

Additionally, the impact data was utilized during the *Encompass 2035* project evaluation and scoring process to encourage initial consideration at the local level. Table 7.1 illustrates how projects submitted for inclusion in *Encompass 2035* were evaluated against several performance measures, including their anticipated impact on air quality. This criterion was used to reward projects that would reduce the amount of vehicle miles traveled, reduce fuel consumption, and improve the performance of the overall transportation system. Projects with multimodal aspects were most likely to achieve these goals.

Table 7.1: Criteria that directly addresses plan impacts on human health and the environment

	POLICY GOALS										
Criteria	Community	Connectivity	Economic Strength	Environmental Resp.	Equity	Livability	Maintenance	Options	Performance	Safety and Security	Points Available
Level of Service			●						●	●	10
Included in Local Plan/Study	●	●	●	●	●	●	●	●	●	●	10
Increases Safety/Reduces Congestion				●		●		●	●	●	10
Addresses Accident Hotspots									●	●	10
Integrates Multiple Modes		●		●	●	●		●			15
Provides Options		●		●	●	●		●			10
Supports Regional Activity and Employment Centers		●	●		●	●					5
Connects to Existing Infrastructure		●	●						●		10
Supports Mixed Use Development		●	●	●		●					10
Supports Regional Freight Movement			●					●	●	●	5
Provides Access to Environmental Justice Tracts	●	●	●		●	●		●			5
Promotes Accessibility	●	●			●	●		●		●	5
Supports Existing Densities				●		●	●		●		5
Protects Environmentally Senitive Lands				●		●					5
Reduces Ozone Precursor Emissons				●		●			●	●	20
										Total Points:	135

PROTECTING THE ENVIRONMENT

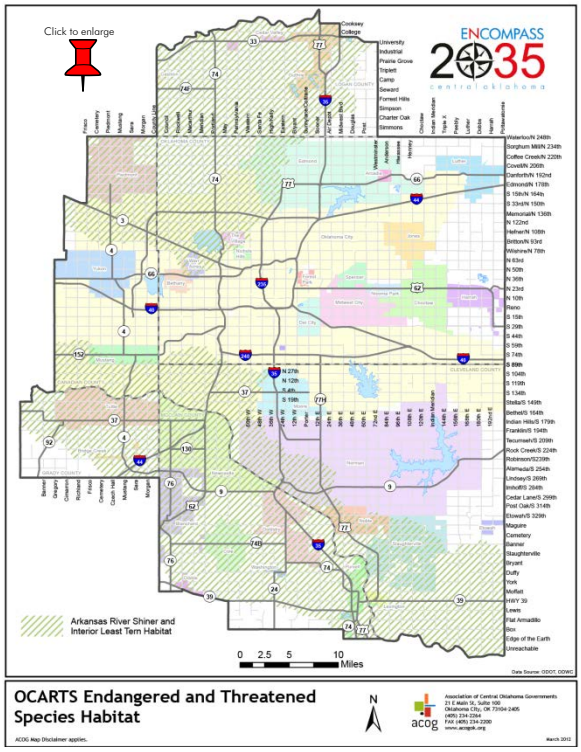
Protecting Environmental Resources

Central Oklahoma contains a wide variety of important natural resources. Geographically, it is essentially a transition buffer between the wetter and more forested Eastern Oklahoma (Cross Timbers) and the semi-arid high plains of Western Oklahoma (Southern Great Plains). We have an abundance of wildlife and plant species within this region including some federally listed as threatened and endangered (e.g. Whooping Crane, Interior Least Turn and the Arkansas River Shiner). Oklahoma has the largest number of manmade lakes in the United States with the Central Oklahoma region containing approximately 23 square miles of lakes.

Environmental Data Evaluated:

- Parks and Recreational Areas
- Wildlife and Endangered Species
- Flood Plains
- Water Quality: Surface and Aquifers
- Hazardous Waste and Superfund Sites
- Leaking Underground Storage Tanks
- Noise Sensitive Areas/Sites

Figure 7.1: Endangered Species Habitat



Legal Foundation for Environmental Justice

The concept of "environmental justice" is rooted in Title VI of the Civil Rights Act of 1964, which prohibited discrimination based on race, color and national origin, and other nondiscrimination statutes as well as other statutes including the National Environmental Policy Act of 1969, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, and 23 U.S.C Section 109(h).

Enacted in 2005, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) placed additional emphasis on environmental stewardship, the consideration of environmental issues as a part of metropolitan and statewide transportation planning, and the linking of planning and the environmental assessment process. Each of these aspects strengthens the linkages between planning and environment and creates opportunities to examine the potential for environmental justice issues early on and throughout the project delivery process.

The fifth of the eight planning factors defined in SAFETEA-LU states that the planning process "shall provide for consideration of projects and strategies that will protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns." SAFETEA-LU also contains a new requirement that a transportation plan "shall include a discussion of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan."

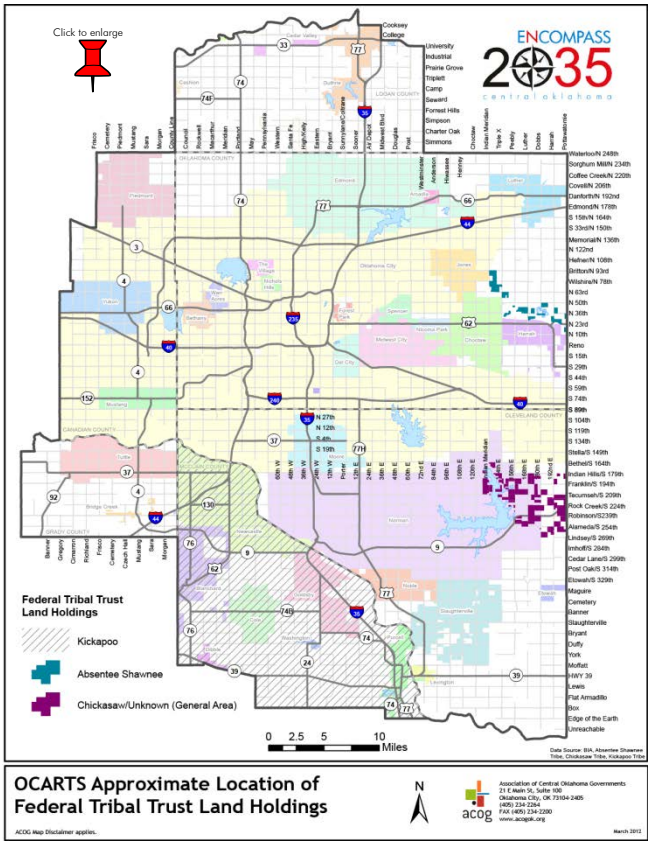
Protecting Social and Cultural Resources

For long-range transportation planning, it is important to consider the potential impacts on cultural/social resources. Projects are evaluated in terms of their proximity to and their potential effect on noise sensitive community resources such as hospitals, schools and churches. Before projects are constructed, their potential impact on historic resources must also be determined. Even though Oklahoma as a state has a relatively recent history, its archeological record is quite extensive with an abundance of identified prehistoric and Native American sites. Nationally, the Cross Timbers of Central Oklahoma is increasingly recognized as an important location for explaining prehistoric peoples' adaptations to changing ecological situations.

Social/Cultural Data Evaluated:

- Archaeological Sites
- Tribal Lands
- National Historic Sites and Districts
- Noise Sensitive Areas/Sites

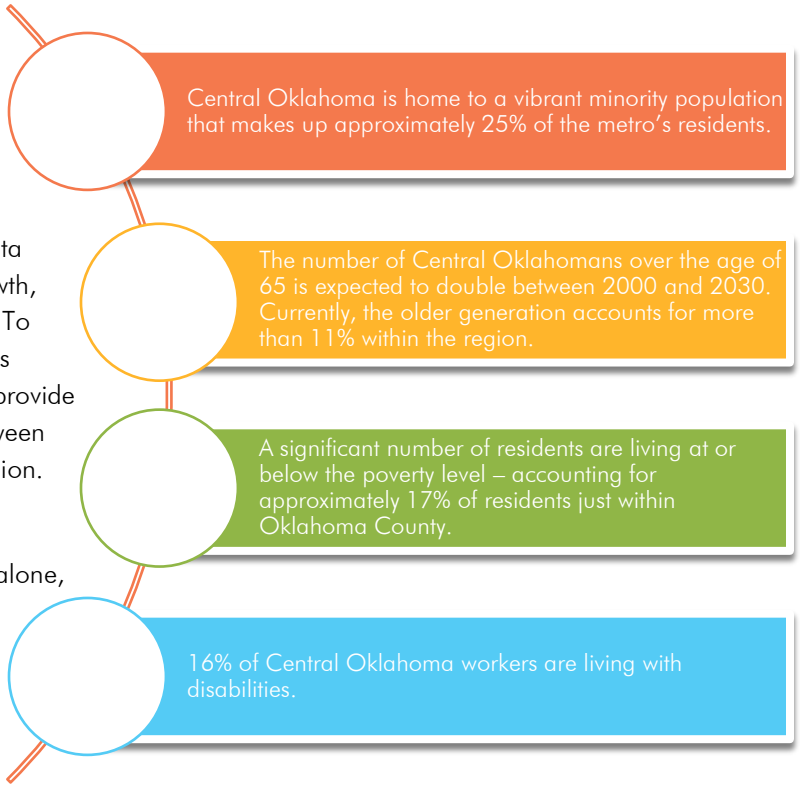
Figure 7.2: Federal Tribal Trust Land Holdings



MINIMIZING SOCIO-ECONOMIC IMPACT

A major producer of natural gas, oil and agricultural goods, Oklahoma relies on an economic base of aviation, energy, telecommunications, and biotechnology. It has one of the fastest growing economies in the nation, ranking among the top states in per capita income growth and gross domestic product growth, and has consistently lower unemployment rates. To support and foster this thriving community and its economic base, the transportation system must provide access to jobs and offer strong connections between economic centers - inside and outside of the region.

The diverse and changing population requires adapting transportation options beyond driving alone, with particular emphasis on alternatives for those who cannot drive due to financial or physical limitations.



Economic Data Evaluated:

- Residential and Employment Displacements
- Neighborhoods Low Income and Traditionally Underserved Groups
- *Encompass 2035* Plan Costs

Figure 7.3: OCARTS Area Residents by Ethnicity

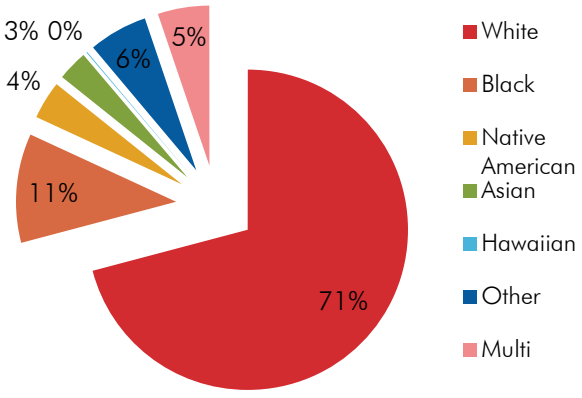
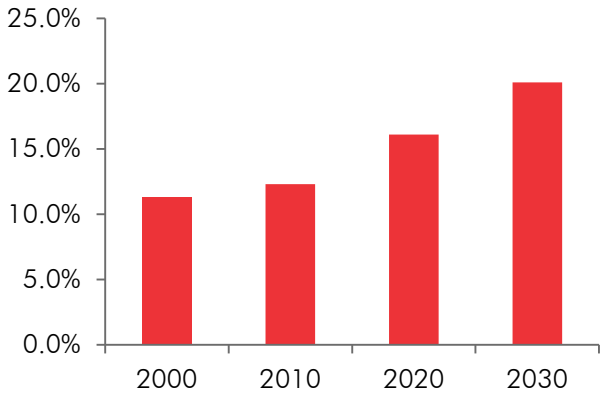


Figure 7.4: Persons Over 65 as a Percent of Total Population



IMPACT RECOMMENDATIONS

TRANSPORTATION AND LAND USE

- Strengthen integration of land use and transportation to create active and healthy communities
- Encourage adoption of Complete Streets policies that help make roadways safe, attractive, and comfortable for all users
- Encourage mixed use development
- Encourage land use patterns that reduce travel distance
- Improve and increase walkability of the region.
- Encourage visually attractive streetscapes.

ACCESSIBILITY

- Increase accessibility to and between centers of activity and regional employment centers.
- Improve access and coordination among human service agencies as well as public and private transportation providers.

EQUITY

- Ensure participation by potentially affected populations in the decision making process.
- Ensure that transportation improvements and services are provided equitably.
- Provide more materials in languages other than English where feasible and appropriate.

GOALS ADDRESSED

- *COMMUNITY*
- *EQUITY*
- *ENVIRONMENTAL RESPONSIBILITY*
- *ECONOMIC STRENGTH*
- *OPTIONS*
- *LIVABILITY*

PROTECTING HUMAN HEALTH

Our transportation system directly and indirectly impacts the health of Central Oklahomans. Driving produces exhaust fumes and pollutants that can damage lung tissue, and is especially harmful for those with heart disease, asthma and other chronic lung diseases.

Air pollution affects humans, animals, plant life, water quality, property, and visibility. There are numerous sources of air pollution, including those occurring naturally (vegetation, windblown dust, volcanic eruptions), transportation sources (cars, buses, planes, trucks, and trains) and other man-made stationary sources (factories, power plants).

Table 7.2: Oklahoma County persons potentially affected by air pollution

Total Population:	**706,617**
Pediatric Asthma:	**17,533**
Adult Asthma:	**46,222**
Chronic Bronchitis:	**22,645**
Emphysema:	**8,815**
Cardiovascular Disease:	**189,205**
Diabetes:	**51,626**

Source: American Lung Association 2010 State of the Air Report

The Clean Air Act Amendments of 1990 (CAAA) strengthened the need for improved coordination between air quality and transportation planning, and established mandatory requirements for metropolitan areas that violate federal air quality standards.

While Central Oklahoma remains in attainment for all federally regulated pollutants, ground level ozone continues to be a problem. Consequently, ACOG has been proactive in its planning endeavors to reduce mobile source emissions—cars and trucks—which account for approximately 60 percent of the region's pollution.

As required by EPA, ozone levels are routinely monitored by the Oklahoma Department of Environmental Quality (ODEQ) at six locations in Central Oklahoma between the months of May and October. Carbon monoxide is monitored at one site in north Oklahoma City. If the ozone standard is exceeded at just one monitoring station, the entire region is considered to be in violation.

Air Quality Regulations and Transportation

The 1970 Clean Air Act (CAA), and the subsequent 1977 and 1990 amendments, charged the Environmental Protection Agency (EPA) with the task of establishing air quality standards for six pollutants—carbon monoxide, ozone, lead, nitrogen dioxide, particulate matter, and sulfur dioxide—based on maximum acceptable atmospheric concentrations. All states are required to develop plans that demonstrate how they will attain and maintain the federal standards, including how they will address emissions from motor vehicles.

Working with state, tribal, and local governments, the EPA must ensure that air quality standards are met using various strategies to control air pollutant emissions from vehicles, factories, and other sources. The CAA provides the principal framework for protecting air quality, and improvements in the nation's air quality have been realized through effective implementation of clean air laws, regulations, and efficient industrial technologies.

POLLUTANTS OF PRIMARY CONCERN TO CENTRAL OKLAHOMA

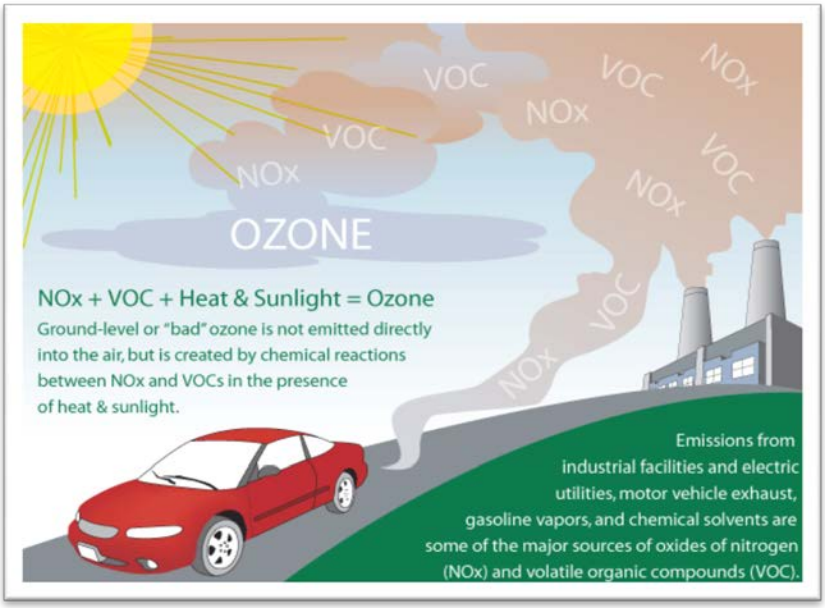
Ground-level ozone—also known as smog—can damage lung tissue and is especially harmful for those with asthma and other chronic lung diseases. Therefore, EPA has set national ozone standards and designed control programs to protect against its adverse health effects. Ozone that occurs higher up in the atmosphere is generally natural in origin and forms a protective layer that shields life on earth from the sun's harmful rays.

Ozone is formed throughout the lower part of the earth's atmosphere through a series of chemical reactions involving sunlight and ozone precursors such as volatile organic compounds (VOCs) and oxides of nitrogen (NOx). Carbon monoxide (CO) and methane (CH4) also contribute to ozone formation. These precursors are emitted from a variety of man-made sources including industrial facilities, power plants, landfills, and motor vehicles. Precursor emissions from natural sources such as lightning, soil, and trees also contribute to ozone formation.

Transportation sources are significant contributors to several pollutants that EPA regulates, including volatile organic compounds (VOCs) and oxides of nitrogen (NOx), the two major air pollutants related to smog. Transportation emissions are the result of the interaction of four factors: vehicle fuel efficiency, the carbon content of the fuel burned, the number of miles that vehicles travel, and the operational efficiency experienced during travel.

Another pollutant of concern is particulate matter (PM). Particulate matter is a complex mixture of extremely small particles and liquid droplets. When breathed in, these particles can reach the deepest regions of the lungs. Exposure to particle pollution is linked to a variety of significant health problems. Particle pollution is also the main cause of visibility impairment (haze) in the nation's cities and national parks. PM pollution is also produced from some natural, or biogenic, sources such as wildfires and dust from dry soils.

Carbon monoxide (CO) is a colorless, odorless, toxic gas produced by any process that involves the incomplete combustion of carbon-containing substances. It is considered a wintertime problem, and approximately 90 percent of CO emissions are generated by mobile sources. In March 1990, the EPA redesignated Central Oklahoma an attainment area after having been classified as nonattainment for carbon monoxide since 1984. The region has not experienced any CO exceedances since the 1990 redesignation and continues to monitor CO values at a station in north Oklahoma City.



AIR QUALITY PROGRAM ACTIVITIES

While the Oklahoma City Area Regional Transportation Study (OCARTS) area remains in attainment for all federally regulated pollutants, ozone continues to be a problem. ACOG employs proactive planning efforts to help maintain its air quality attainment status, including the following:

- Daily review of ozone and carbon monoxide monitoring sites throughout the OCARTS area
- Opting into an 8-hour Ozone Flex Program with the Environmental Protection Agency. (ACOG also participated in a previous EPA program, the 8-hour Ozone Early Action Compact.)
- Administration of the Regional Rideshare Program – GetAroundOK
- Administration of a Public Fleet Conversion Grant program
- Administration of the Central Oklahoma Clean Cities program
- Use of an "air quality friendly" criterion in the selection of projects that will utilize the MPO's Surface Transportation Program Urbanized Area (STP-UZA) funds
- Award of additional points for proposed long-range transportation plan projects that reduce emissions by decreasing fuel consumption and vehicle miles traveled, as well as by improving transportation system performance.
- Regular meetings of the ACOG Clean Air Committee. Initiatives born out of this group include:
    - The Clean Air Alert Day Program
    - *Get Your Own Square of Clean Air* Public Awareness Campaign

These efforts are described briefly in the sections below. Separate, more detailed reports on many of these activities are available on the ACOG website.

8-hour Ozone Flex Program Agreement with EPA

The 8-O_3Flex program is the third generation of voluntary ozone programs designed to allow participating communities greater flexibility when selecting emission reduction programs and strategies. By providing local control of the process, these programs recognize that each region has distinct emission characteristics and socioeconomic variables that make a standardized approach unrealistic and unrepresentative.

The Association of Central Oklahoma Governments worked in concert with a number of stakeholders to develop the emission control measures for the voluntary 8-O_3Flex program. Some of the essential facets of the 8-O_3Flex plan include early planning, implementation of emission reduction measures, broad-based public input and local control, as well as state support to ensure the technical integrity of the plan.

During 2007, regional stakeholders worked diligently to formulate a powerful agreement that includes emission reduction measures that are even stronger than those submitted with the previous 8-Hour Ozone Early Action Compact (EAC). In June 2008, the 5-year plan for Central Oklahoma[5] was officially signed and put into place by ACOG, EPA and ODEQ. ACOG is currently in compliance with the plan and has completed all required semi-annual and annual progress reports.

Regional Rideshare Program – GetAroundOK

The Central Oklahoma rideshare program is dedicated to aiding commuters in finding easy, viable, and sustainable transportation. Its primary goal is to reduce the number of single occupancy vehicles in the OCARTS area, by promoting and encouraging all forms of "alternative transportation"—any mode of commuting besides driving alone—to help reduce traffic congestion, improve air quality, lessen commuting stress, and save commuters money.

[5] Central Oklahoma 8-Hour Ozone Flex Program Plan for 2008-2013, June 2008.

To do this, the rideshare program provides a free, web-based ride matching service that allows users to connect with other commuters with similar commuting schedules and preferences. The website offers services and information on carpooling, vanpooling, transit, bike trails, and park-and-ride lots. GetAroundOK.com is simple, quick, and easy to use, while employing all measures possible to secure the identities and privacy of the users to ensure a safe and positive experience. To be eligible for this service, users must either have an origin and/or destination within the OCARTS area.

Fleet Conversion Grant Program

The Association of Central Oklahoma Governments' Public Fleet Conversion Grants allow OCARTS member local governments and their public school districts to access federal Congestion Mitigation/Air Quality (CMAQ) funds for fleet conversions to clean fuel technologies to include alternative fuel vehicles, hybrid vehicles and alternative fuel vehicle refueling infrastructure.

Central Oklahoma Clean Cities Program

Central Oklahoma Clean Cities program stakeholders represent more than 40 businesses and government agencies. Stakeholders are dedicated to the Clean Cities goals of reducing petroleum dependence in the transportation sector, improving air quality, expanding domestic alternative fuel use, accelerating deployment of advanced technology vehicles, low-level alternative fuel blends, hybrid vehicles, fuel efficient vehicles, fuel economy policies, and idle reduction technologies and policies. More information is available at the program's dedicated website: www.okcleancities.org.

Air Quality Criterion for Urbanized Area Project Selection

Since 1992, the *Criteria and Process for Evaluation of Surface Transportation Program Urbanized Area (STP-UZA) Projects* has served as the MPO policy for prioritizing projects to be funded with federal urbanized area monies. In order to assess projects equitably, the following evaluation criteria are used: 1) Average Daily Traffic, 2) Volume/Capacity Ratio, 3) Accident Severity Rate, 4) Air Quality, 5) Surface Condition, 6) Congestion Corridors, and 7) Project Readiness.

These criteria were chosen to represent the mobility, environmental, and social factors important to the development of an efficient transportation system. Points for the air quality criterion vary based upon the project's impact on ambient air quality.

Public Awareness Campaign

Established in 1992, the Clean Air Alert Day Program is designed to help citizens and employers take proactive steps to help keep the Central Oklahoma region in compliance with federal air quality standards.

The ACOG Clean Air Committee, which includes staff from the Association of Central Oklahoma Governments (ACOG), City of Oklahoma City, Central Oklahoma Transportation and Parking Authority (METRO Transit), Oklahoma Department of Transportation (ODOT), Oklahoma Department of Environmental Quality (ODEQ), OGE Energy Corp. (OG&E), Chesapeake Energy, and the Greater Oklahoma City Chamber, meets before and during ozone season to manage public education activities for the program. The Clean Air Committee notifies local media and calls attention to ACOG Ozone Alert Days when weather conditions may be conducive to elevated readings of ozone or carbon monoxide. Informing the public a day in advance gives people the opportunity to plan their activities, with the intent of reducing pollution levels.

AIR QUALITY RECOMMENDATIONS

- Continue regional air quality public education efforts that reduce vehicle trips and transportation related emissions.
- Develop regional strategies that encourage more transportation efficient land use.
- Develop consistency between land use and transportation plans to support reduction in auto dependency.
- Encourage non-motorized transportation through the adoption of Complete Street policies that help make roadways safe, attractive, and comfortable for all users.
- Encourage use of public transportation. (Refer to the Transit Recommendations.)
- Encourage policies to reduce the use of petroleum based products by using alternative and renewable fuels, fuel economy measures, and idle reduction technologies.
- Encourage system efficiency through operational and incident management, as well as increased traveler information.

GOALS ADDRESSED

- *ENVIRONMENTAL RESPONSIBILITY*
- *LIVABILITY*
- *PERFORMANCE*
- *SAFETY AND SECURITY*

ACTIVITIES AND PLANNING FOR THE FUTURE

CHAPTER 8: BICYCLE AND PEDESTRIAN

CHAPTER 9: PUBLIC TRANSIT

CHAPTER 10: GOODS MOVEMENT

CHAPTER 11: STREETS AND HIGHWAYS

CHAPTER 12: SAFETY & SECURITY

CHAPTER 8: BICYCLE AND PEDESTRIAN

SYSTEM SNAPSHOT

Bicycle and pedestrian transportation is an important component of *Encompass 2035*. Bicycle and pedestrian facilities continue to become more prevalent in the OCARTS area. Sidewalks, bicycle facilities, and multi-use trails have typically been planned and implemented at the local level. Over the years, the U.S. Department of Transportation has encouraged metropolitan areas to develop regional trails networks through coordinated planning and implementation among jurisdictions and have increased federal funding opportunities for bicycle and pedestrian facilities.

System Snapshot

QUICK STATS:

- *$187 MILLION FOR NEW BICYCLE FACILITIES*
- *$142 MILLION FOR PEDESTRIAN FACILITIES*
- *430 MILES OF NEW BIKE LANES AND TRAILS*
- *380 MILES OF NEW SIGNED BIKE ROUTES*
- *800+ MILES OF SIDEWALKS*

CURRENT BICYCLE FACILITIES

Bicycle facilities are located in various urban, suburban, and recreational areas across Central Oklahoma. Within the OCARTS area, 17 local governments have existing bicycle or multi-use trail facilities.

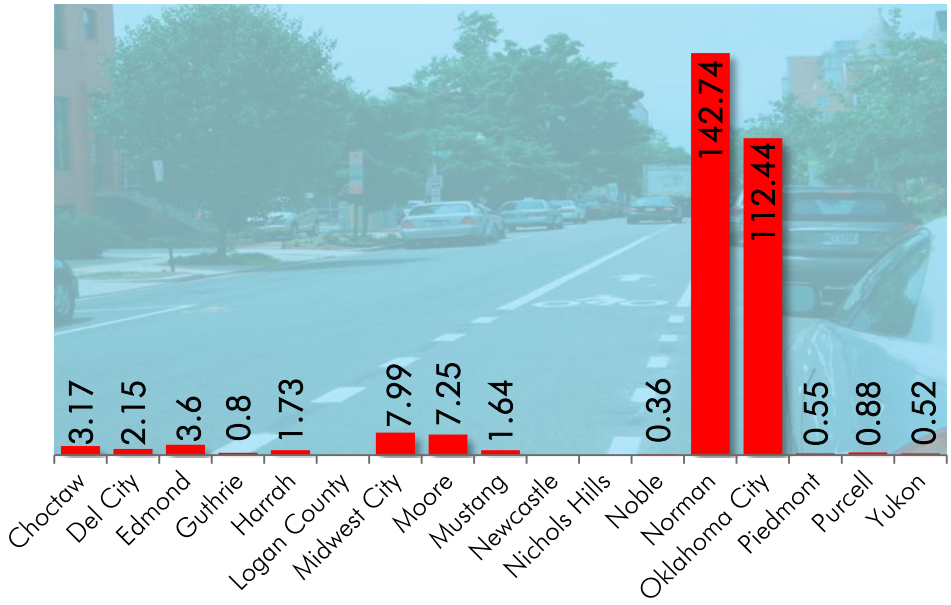
Seven OCARTS entities have a trails master plan, a trails element within their current comprehensive plan, or a bicycle facilities plan that has been adopted at the local level. The facilities included in these plans, as well as trail projects with a local or federal-aid funding commitment, are considered planned improvements. Local trails master plans typically assess existing bicycle and multi-use trail facilities, identify new routes to enhance and expand the network, specify design guidelines for new facility construction, identify potential construction and maintenance funding sources, and recommend a course for plan implementation. Three OCARTS communities (Harrah, Moore, and Midwest City) have adopted trails master plans since adoption of the previous long-range plan in 2005. Figure 8.1 illustrates the existing facilities in the OCARTS area.

ADOPTED MASTER TRAILS PLANS IN THE OCARTS AREA:

- Oklahoma City (1997)
- Norman (1997)
- Edmond (1999)
- Guthrie (2002)
- Harrah (2002/2007)
- Moore (2008)
- Midwest City (2009)

As of December 2009, there were approximately 286 miles of existing bicycle facilities in the OCARTS area. Since 2005 the OCARTS area communities have built over 80 miles of bicycle routes. Illustrated below in Figure 8.1 are existing bicycle facility miles by entity.

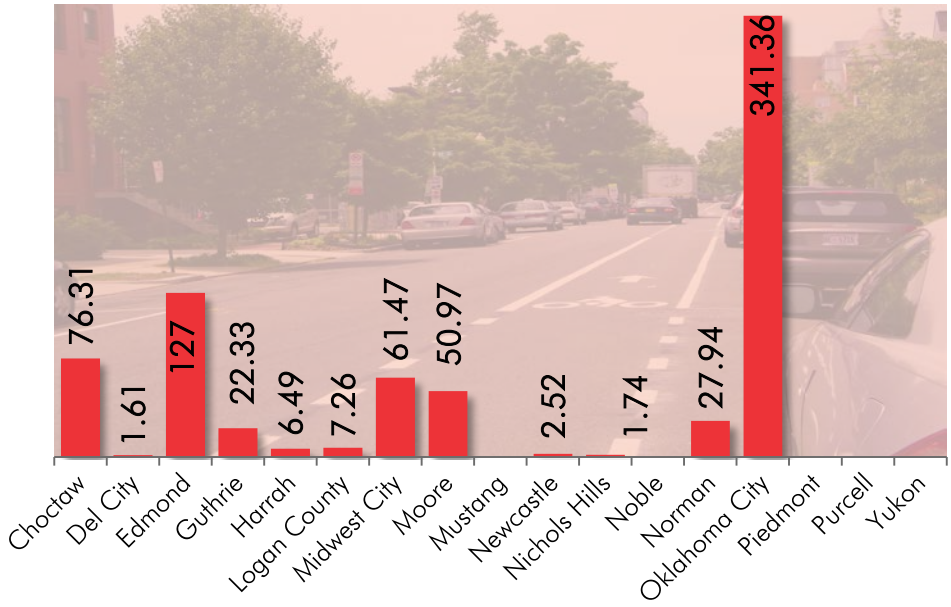
Figure 8.1: Existing Bicycle Facility Miles



PLANNED BICYCLE FACILITIES

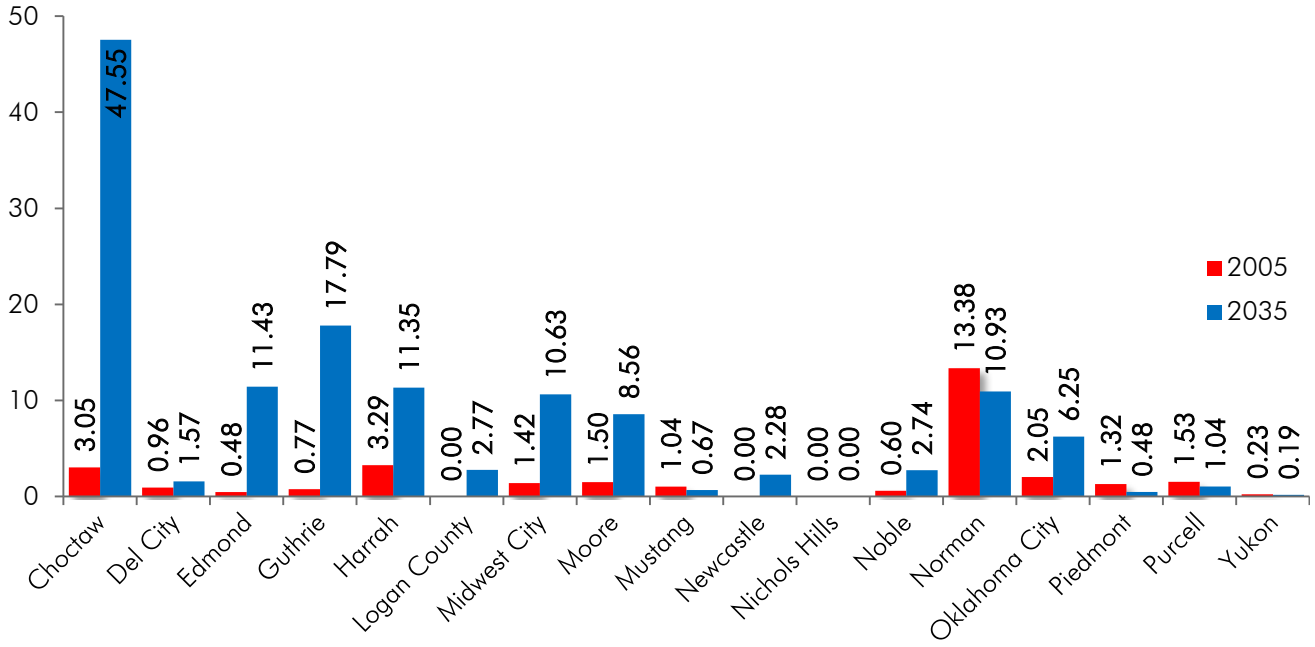
Bicycle facilities are also being planned in the OCARTS area. Nearly 727 miles of routes have been adopted by communities for future expansion. Cities like Choctaw, Edmond, Guthrie, Midwest City, Moore, and Norman are planning to build over 365 miles of facilities. Oklahoma City, by itself, has plans for over 341 miles. Even smaller communities like Del City and Harrah are getting in the mix and expanding their facilities. Illustrated below in Figure 8.2 are planned bicycle facility miles by entity.

Figure 8.2: Planned Bicycle Facility Miles



The following chart, Figure 8.3, illustrates the existing and planned bicycle facility miles by entity, normalized by population in 2005 and 2035 respectively.

Figure 8.3: Existing and Planned Miles per 10,000 Population by Entity and Year



OCARTS BICYCLE FACILITY BREAKDOWN

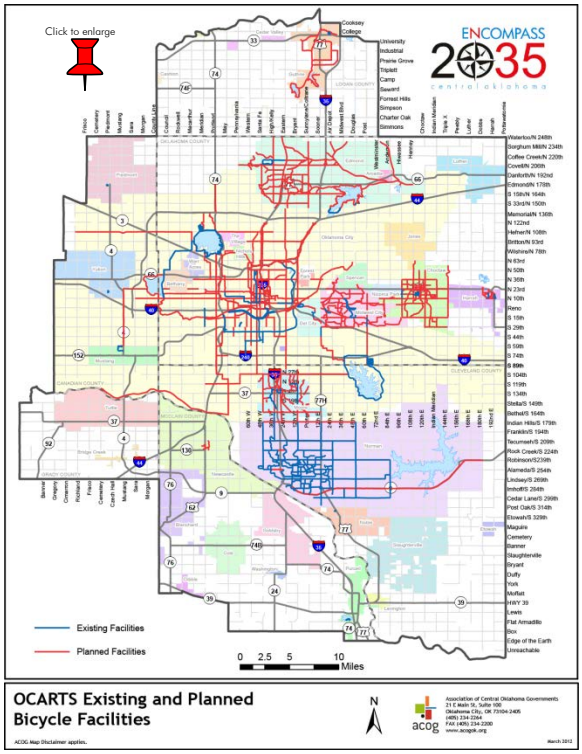
The OCARTS area bicycle network is comprised primarily of multi-use trails (Bicycle Paths Shared with Pedestrians-BPS) and Signed-On-Road Bicycle Routes (SOR). Future facility development across the region is planned in similar fashion. Table 8.1 provides mileage figures by facility category.

Table 8.1: Existing and Planned Bicycle Mileage by Category, 2009

FACILITY CATEGORY	EXISTING MILES	PLANNED MILES	TOTAL MILES
BL – Bicycle Lane	4.55	14.11	18.66
BPE – Bicycle Path Exclusive to Bicycles	*24.75	0.03	24.78
BPS – Bicycle Path Shared w/ Pedestrians	104.96	305.19	410.15
SH – Bicycle Route using Roadway Shoulder	0.00	54.43	54.43
SOR – Signed-On-Road Bicycle Route	109.11	353.24	462.35
STR – Share-the-Road	42.45	0.00	42.45
TOTAL MILES	**285.82**	**727.00**	**1,012.82**

* Includes 18.82 miles of maintained off-road trails

Figure 8.4: Existing and Planned Bicycle Facilities



BIKE TO WORK DAY

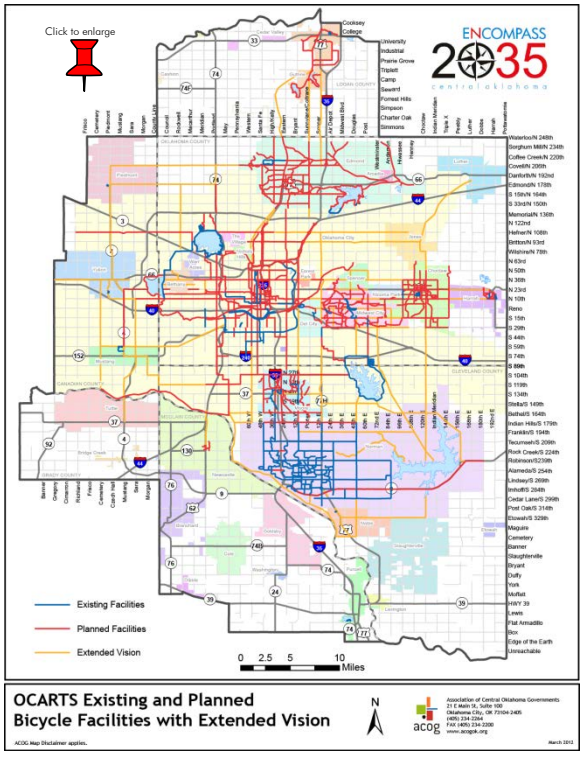
Starting in 2005, the cities of Oklahoma City, Edmond, and Norman have held Bike to Work Day events. Central Oklahoma Bike to Work Day is part of a national campaign to promote bicycling as a healthy and efficient transportation alternative. The League of American Bicyclists has recognized the month of May as National Bike Month since 1956. National Bike to Work Day offers metropolitan areas an annual opportunity to call attention to the benefits of bicycling and to increase safety awareness among bicyclists and motorists.

In 2009, the OCARTS communities of Bethany, Edmond, Guthrie, Moore, Mustang, Norman, Oklahoma City, and Yukon held Bike to Work Day events. The events were held separately in each city, but featured a similar theme. Additional OCARTS communities have shown interest in participating in future events. ACOG provides those interested communities with planning assistance to ensure their Bike to Work Day event is a success.

BICYCLE FACILITY ASPIRATIONS

In October 2009, ACOG hosted a workshop at which staff from nine member entities and several Citizens Advisory Committee members were present to discuss preliminary Year 2035 *Extended Vision* bicycle and multi-use trail routes. Also in October 2009, citizens were asked to discuss preliminary Year 2035 Extended Vision bicycle facilities as part of the *Encompass 2035* Kick-Off. Extended Vision trail routes are a set of informal and non-binding corridors that, due to lack of formal action by a governing body and/or insufficient funds, are beyond the scope of currently existing and planned trails. These Extended Vision routes are ones that could significantly enhance the Central Oklahoma regional bicycle and multi-use trail network. Participants indicated a desire to continue developing a conceptual network of trails that would link existing and planned trails among communities and promote transportation connectivity across the region. This Extended Vision network is shown in Figure 8.5.

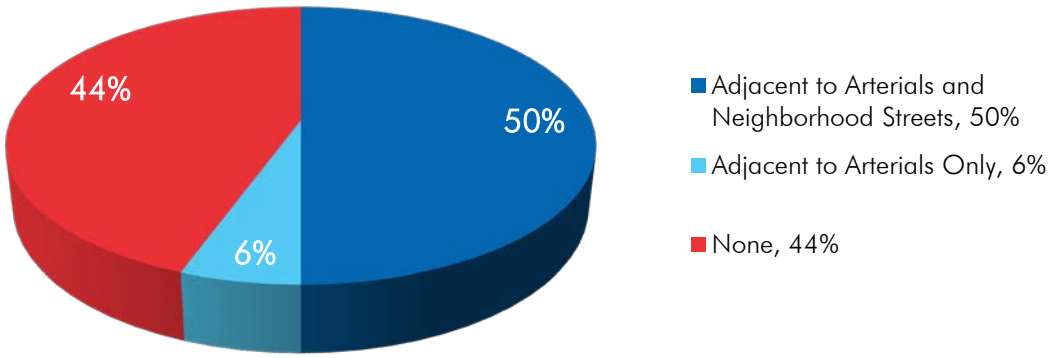
Figure 8.5: Existing and Planned Bicycle Facilities with Extended Vision



CURRENT PEDESTRIAN FACILITIES

Sidewalk and pedestrian facilities throughout the OCARTS area are typically planned and built at the local level as required by municipal codes. Generally, sidewalks are constructed by cities using local revenues or by private developers using private funds. Many communities in Central Oklahoma do not require sidewalk construction as part of the building permit or land development process. Currently, pedestrian facilities appear in a random pattern across the OCARTS area, hindering pedestrian connectivity within and between local entities. Figure 8.6 reflects the responses received to a 2009 survey regarding OCARTS area sidewalk facility requirements.

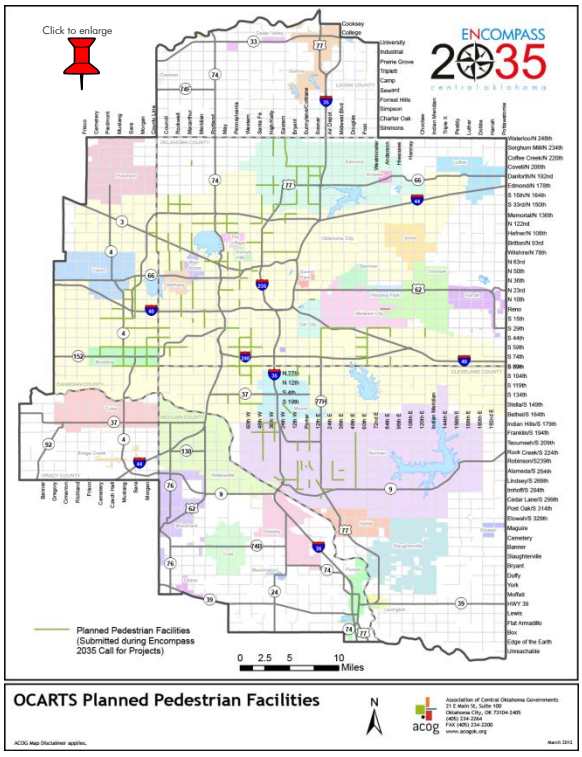
Figure 8.6: Percentage of OCARTS Cities with Sidewalk Requirements



Source: OCARTS Sidewalk Facilities Survey, ACOG, 2009

Figure 8.7 below illustrates planned sidewalk facilities for the OCARTS area.

Figure 8.7: Planned Pedestrian Facilities



BICYCLE AND PEDESTRIAN ISSUES AND NEEDS ASSESSMENT

ACOG sought input through various means for the development of *Encompass 2035*, including various MPO committees, local government staff and elected officials, the 2035 OCARTS regional transportation survey, open houses, and the extended vision for trails workshop. Long-range bicycle and pedestrian transportation planning themes and issues raised were considered in the development of the trails component of *Encompass 2035*, as explained below.

ADDITIONAL TRAILS

Respondents to the survey, as well as *Encompass 2035* Kick-off participants, indicated that additional bicycle lanes and paths were important to individuals who wanted a variety of transportation options.

TRAILS TO LINK COMMUNITIES

Public and community interest surfaced for connecting communities through continuous trails. Individuals who walk or bike on pathways prefer to have the option of seamlessly traveling from place to place regardless of municipal boundaries. Support for east-west and north-south corridors that link bicycle facilities across the region indicate a desire for more trails that connect communities.

SUPPORT FOR MULTI-USE TRAILS

Survey respondents and others indicated that a multi-use trail system was, on the whole, a plus for the region. The mix of bicyclists, walkers, children in route to school, etc. can also contribute to the overall friendly environment of the region. Demarcation, signage, and safety warnings were noted as helpful tools that make trail facilities a useful and safe mode for a variety of individuals.

Additionally, recent actions by several cities and economic development groups in the region have asserted that the presence of a trails network is an asset to the quality of life in the region. A regional trails network promotes healthy lifestyles, local tourism, and opportunities for quality economic development.

Public and community interest surfaced for connecting communities through continuous trails.

SIDEWALKS AND SAFE CROSSWALKS

Citizen input from several sources indicated a concern for safe crosswalks and additional sidewalks. Most of the people who answered the survey said that they favored local government requirements for developers to construct sidewalks in conjunction with new residential and commercial developments. Less than a third of the survey participants favored using public funds for sidewalk construction in existing residential and commercial areas devoid of such facilities.

BICYCLE RECOMMENDATIONS

- Encourage adoption of ordinances providing for the implementation of safe bicycle facilities that meet minimum design standards of the American Association of State Highway Transportation Officials (AASHTO).
- Enforce the 2006 State law that established a minimum 3' safe-passing distance from bicyclists by motorists through adoption at the local level.
- Encourage connections within communities by linking neighbor-hoods with popular destinations such as schools, employment, retail centers, tourist attractions, medical facilities, and outdoor recreation areas.
- Evaluate potential connections between transit routes, park-and-ride lots, pedestrian ways, and existing and planned bicycle routes for opportunities to improve connections among modes.
- Explore opportunities for preservation and/or construction of bicycle facilities within floodways, greenways, public open spaces, utility rights-of-way, abandoned railroad rights-of-way, and school land.
- Encourage cooperation and coordination among cities, state agencies and the private sector regarding public awareness, education, safety, and funding relating to bicycle use.
- Continue to regularly update the OCARTS area bicycle database containing existing and planned facilities.
- Support cycling through activities such as Bike-to-Work Day, which promote riding a bicycle as a viable mode of transportation.
- Encourage employers to provide support facilities for employees who bicycle to work.
- Implement Complete Street principles, as appropriate, when constructing and/or improving streets, highways, and bridges.

GOALS ADDRESSED

- *LIVABILITY*
- *CONNECTIVITY*
- *ENVIRONMENTAL RESPONSIBILITY*
- *EQUITY*
- *OPTIONS*

PEDESTRIAN RECOMMENDATIONS

- Encourage the adoption of ordinances requiring sidewalk construction in conjunction with residential and commercial development and redevelopment.
- Explore opportunities for preservation or construction of pedestrian pathways within floodways, greenways, public open spaces, utility rights-of-way, abandoned railroad rights-of-way, and school land.
- Link pedestrian systems with transit stop locations, nearby schools, and retail centers.
- Encourage cooperation and coordination among cities, state agencies and the private sector regarding public awareness, education, safety, and funding relating to pedestrian facilities.
- Encourage communities to include sidewalks in conjunction with street improvement projects, and implement Complete Street principles, as appropriate.
- Ensure that pedestrian projects meet or exceed ADA accessibility standards. Identify gaps and retrofit existing locations that lack accessible sidewalks.

GOALS ADDRESSED

- *LIVABILITY*
- *CONNECTIVITY*
- *ENVIRONMENTAL RESPONSIBILITY*
- *EQUITY*
- *OPTIONS*

CHAPTER 9: PUBLIC TRANSIT

SYSTEM SNAPSHOT

Whatever name you give it—public transit, mass transit, public transportation, or mass transportation, this mode is an important component of *Encompass 2035* and continues to be an essential transportation element in the OCARTS area. For some, the use of public transit is a choice, but many citizens depend on it to get to work, school, medical, shopping, social, and recreational activities. Public transit in the OCARTS area has typically been planned and implemented at the local level, occasionally utilizing interlocal agreements. Various Federal Transit Administration (FTA) programs provide a portion of the capital and operating funding for public transit in the OCARTS area, as well as for other metropolitan areas throughout the country.

System Snapshot

QUICK STATS:

- *40+ LOCAL FIXED ROUTES*
- *2 EXPRESS ROUTES*
- *5-6 MILES OF NEW DOWNTOWN OKC CIRCULATOR*
- *$120 MILLION FOR NEW DOWNTOWN CIRCULATOR*

OCARTS PUBLIC TRANSIT SERVICES

Fixed Route Service

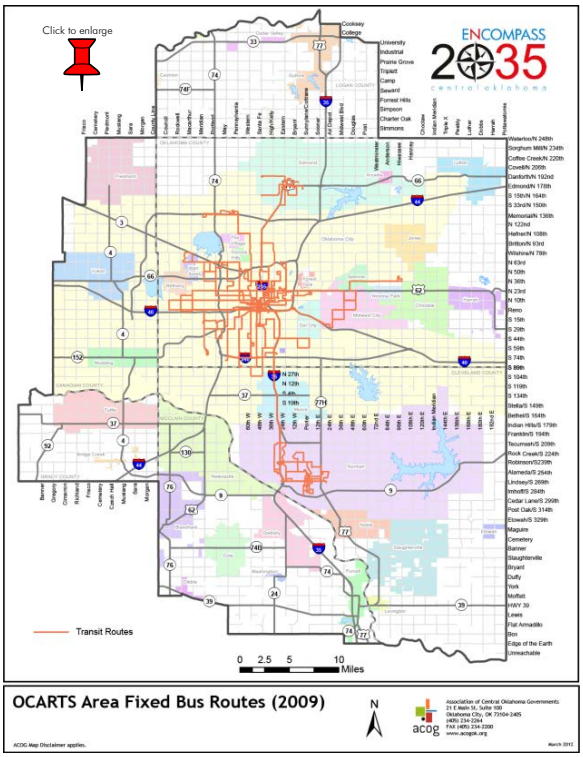
Fixed route bus service in the OCARTS area is operated by three providers in Central Oklahoma. The Central Oklahoma Transportation and Parking Authority (COTPA) operates METRO Transit in Oklahoma City (with some service provided to Midwest City), the University of Oklahoma Transit Services Division operates Cleveland Area Rapid Transit (CART) in the City of Norman, and McDonald Transit operates Citylink under contract with the City of Edmond.

METRO Transit

At the time of Plan adoption, METRO Transit ran 23 local routes, an express route between Oklahoma City and Norman, a trolley bus route in downtown Oklahoma City, and a free shuttle service at the University of Oklahoma Health Sciences Center in Oklahoma City.

METRO Transit service is concentrated in the service area of Oklahoma City and Midwest City, with express bus service to Norman. The Oklahoma City system has fixed routes that radiate from the Downtown Transit Center at NW 5th Street and Harvey Ave. The Transit Center opened in July 2004 and is near many employment destinations due to its location within the Central Business District. Route 23, the Crosstown Route, travels NE & NW 23rd St. facilitating the transfer of passengers from route to route without having to go to the Transit Center. Some routes have loops that intersect each other, allowing passengers to transfer from one quadrant to another without going through the Transit Center. Buses generally depart from the Transit Center in 15-minute intervals throughout the day.

Figure 9.1: OCARTS Area Transit Fixed Bus Routes



METRO Transit buses operate weekdays from approximately 5:30 a.m. to 7:30 p.m. and Saturdays from approximately 6:20 a.m. to 6:30 p.m. Many portions of the region not served by the Oklahoma City system are not heavily populated areas. However, several suburban communities within the region's urban core do not receive bus service because local funding is not budgeted to help fund the service.

Cleveland Area Rapid Transit

CART runs 10 local routes serving the OU campus and a large portion of the City of Norman's urbanized area, and collaborates with COTPA to run the express route to and from Oklahoma City. It also provides a shuttle service between the campus and the Lloyd Noble Arena park-and-ride lot. CART buses operate weekdays from 7:00 a.m. to 9:00 p.m. and Saturdays from 10:00 a.m. to 7:00 p.m.

Citylink

Citylink runs five local routes serving the University of Central Oklahoma (UCO) campus and a large portion of the City of Edmond, as well as an express route to and from Oklahoma City. Citylink buses operate weekdays from 7:00 a.m. to 6:00 p.m. and Saturdays from approximately 9:00 a.m. to 5:00 p.m. All Citylink routes are free. Citylink began operation on July 1, 2009. Prior to this, public bus service within the City of Edmond was provided by COTPA.

The City of Edmond also has plans to construct a multimodal transit center north of 2nd Street between Broadway Avenue and the BNSF Railroad. The center is envisioned to serve as a bus transfer point with commuter parking, bicycle and pedestrian accommodations, a pedestrian bridge across 2nd Street, and space and infrastructure to support future passenger rail service. The Edmond Multimodal Transit Center was considered during development of the affordable Plan and is considered a part of *Encompass 2035*.

Figure 9.1 provides a general picture of the local and express fixed routes within the OCARTS area provided by COTPA, CART, and Citylink.

Non-Fixed Route Services

Non-fixed route service is public transportation service available to anyone that does not follow a specific path, route, or line on a map. Generally, it serves a specific area, and passengers call ahead to schedule trips within the service area.

COTPA contracts with Airport Express, a local shuttle service, for the operation of METRO Link, which operates beyond normal bus schedules on weekday evenings and Sundays. Routes serve a designated area (roughly bounded by N. 63rd Street, I-240, MacArthur, and Bryant) and stop at major activity centers on a regular schedule. In addition, passengers can call to schedule a trip that deviates from the scheduled stops.

CART offers a late night curb-to-curb service near and around the University of Oklahoma campus, Monday through Thursday during the fall and spring semesters. Curb-to-curb rides may be scheduled anywhere in the late-night service area. Requests are met on a first-come, first served basis and can be reserved no more than a week in advance. All vehicles on the route are lift-equipped for passengers with disabilities.

PARATRANSIT AND SPECIAL TRANSIT SERVICES

In addition to the fixed routes, COTPA, CART, and Citylink provide special services to meet the needs of the elderly and persons with disabilities in the Central Oklahoma area. These paratransit services and special transportation services include the following:

Paratransit Services

- **METRO Lift – Oklahoma City**
  METRO Lift provides public transportation for mobility-impaired persons in compliance with U.S. Department of Transportation regulations and the Americans with Disabilities Act (ADA). The DOT regulations require that similar transit service (paratransit) be provided for persons with disabilities within at least three-quarters of a mile around all fixed transit routes. This is known as Zone 1. All ADA services areas outside of Zone 1 are known as Zone 2. Norman and Edmond Zone 2 paratransit services are provided citywide.

- **CARTaccess - Norman**
  CARTaccess is CART's origin-to-destination service for individuals who, because of disability, are unable to ride the fixed route buses.

- **CAP (Citywide Access Paratransit) - Edmond**
  CAP is a curb-to-curb service that enables disabled residents to be picked up by Citylink and driven to appointments within the city limits of Edmond in a wheelchair accessible bus. CAP provides services in accordance with the Americans with Disability Act (ADA).

Special Services Offered Through METRO Transit

- **Congregate Meals**
  The Congregate Meal Transportation is a donation-based service for the Oklahoma County Senior Nutrition Project. Citizens age 60 and older, who live within the service area, are provided round trip van service to one of 15 local nutrition sites for a noon meal.

- **Daily Living Center**
  Round-trip, door-to-door transportation service is provided for older adults and persons with disabilities to the Daily Living Center. An adult day care center, the Daily Living Center provides nutrition, nurse monitoring, therapeutic programs and physical and occupational therapy.

- **Discount Bus Pass Program**
  Bus fares and passes are half price for persons 60 and older or doctor certified as disabled.

- **Helpline**
  Helpline is a taxi service for emergency or medically related transportation for the homeless.

- **Interim**
  Interim is a one-time service coordinated through social service agencies to transport persons 60 and older for essential trips only. Participants must be unable to secure transportation from any other source.

- **Non-Emergency Medical Trip (NEMT)**
  Curb-to-curb trips for citizens 60 and older to doctor and other non-emergency medical appointments are provided in a service area including much of Oklahoma City, Midwest City, Del City, Moore, Bethany, Warr Acres, The Village, Nichols Hills, Spencer, Nicoma Park, and Forest Park.

- **RSVP**
  The Retired Senior Volunteer Provide-A-Ride program links senior volunteer drivers with low to moderate income seniors in need of transportation to medical appointments.

- **Senior Companion Program**
  The Senior Companion program matches able seniors with frail elderly persons. Seniors are trained volunteers, helping other seniors in preparing meals, providing companionship, assisting with housekeeping or supporting the need for other professional services. A van transports volunteers from their residences to the residences of the elderly.

- **Share-A-Fare**
  Share-A-Fare provides lower cost taxi fares for older adults and persons with disabilities. Participating communities and METRO Transit pay 40 percent of the cost and the participant pays 60 percent.

- **STEP**
  The STEP (Supplemental Transportation for the Elderly and Disabled Persons) shopping shuttle provides van service to designated grocery stores for persons 60 and older who live in the service area.

Table 9.1 summarizes the schedules, fares and average ridership for the OCARTS area public transportation services described above.

Table 9.1: Transit Services Available in the OCARTS Area

METRO TRANSIT	SCHEDULE	FARE	FY 2010 RIDERSHIP
Fixed Routes (Local)	M-F 5:30 am - 7:30 pm Sat 6:20 am – 6:30 pm	OKC: Regular $1.50; Special* $0.75 Downtown (Blue) Trolley: Regular $0.25 Special* $0.10	Avg. Systemwide Fixed Route Daily Ridership (Including Express and Trolley Routes): M-F - 9,729 ; Sat - 4,215
Fixed Routes (Sooner Express) (operated by COTPA)	Monday-Friday 6:20 a.m.- 6:10 p.m.	Regular $2.25 Special* $1.10	Avg. Daily Ridership: 59
Paratransit (METRO Lift)	M-F 5:30 am - 7:30 pm Sat 6:20 am – 6:30 pm	OKC: Zone 1-$3.00; Zone 2-$6.00	Avg. Daily Ridership: M-F – 143 ; Sat - 33
METRO Link	M-F 7:00 pm - 12:00 am Sun 7:00 am – 7:00 pm	$1.50	Avg. Daily Ridership: M-F – 107 ; Sun - 192
Congregate Meals	Monday-Friday	Free – donations accepted	Avg. Daily Ridership: 125
Daily Living Center	Monday-Friday	Free – donations accepted	Avg. Daily Ridership: 44
Helpline	24 hours per day – every day	Free-subsidized by City of Oklahoma City & COTPA	Avg. Daily Ridership: n/a
Interim	As needed	Free - subsidized by Areawide Aging Agency & COTPA	Avg. Daily Ridership: 1
RSVP	As needed	Free – donations accepted	Avg. Daily Ridership: 21
Senior Companion Program	As needed	Free – donations accepted	Avg. Daily Ridership: 13
Share-A-Fare	24 hours per day – every day	$6.00 for $10.00 fare	Avg. Daily Ridership: 49
STEP	Monday-Friday	Free – donations accepted	Avg. Daily Ridership: 65
CART	**SCHEDULE**	**FARE**	**FY 2010 RIDERSHIP**
Fixed Routes (local)	M-F 7:00 am - 9:00 pm Sat 10:00 am - 7:00 pm	Regular $0.50, Special* $0.25, OU students/faculty/staff free	Avg. Systemwide Fixed Route Daily Ridership (Including Express): Monday-Friday: 4,958
Fixed Routes (Sooner Express) (operated by CART)	Monday-Friday 6:20 a.m.- 6:10 p.m.	Regular $2.25; Special* $1.10	Avg. Daily Ridership: 111
Paratransit (CARTAccess)	M-F 7:00 am - 9:00 pm Sat 10:00 am - 7:00 pm	Zone 1-$1.00; Zone 2-$2.50 OU students/faculty/staff free in Zone 1, $1.50 in Zone 2	Avg. Daily Ridership: Monday-Friday: 122
CITYLINK	**SCHEDULE**	**FARE**	**FY 2010 RIDERSHIP**
Fixed Routes (local)	M-F 7:00 am - 6:00 pm Sat 9:00 am - 5:00 pm	Free	Avg.Systemwide Fixed Route Daily Ridership (Including Express): 343
Fixed Routes (Expresslink)	Monday-Friday 6:00 a.m.-7:00 p.m.	Free	Avg. Daily Ridership: 137
Paratransit (CAP—Citywide Access Paratransit)	M-F 7:00 am - 6:00 pm Sat 9:00 am - 5:00 pm	Free	Avg. Daily Ridership: 15

* Ages 60+, Disabled, Medicare/ADA Cardholders, or Children ages 6-17 years

Section 5310 – Elderly and Persons with Disabilities Program

In addition to the transportation services available to the elderly and persons with disabilities provided through the public transportation providers, numerous organizations operate wheelchair accessible vans and buses under the Section 5310 program[6]. This program allows private, non-profit organizations to purchase vehicles, with federal assistance, to transport elderly and disabled clients to meet their everyday needs, including transportation to work, medical appointments, shopping, and recreation. Oklahoma's Section 5310 program is administered by the Department of Human Services, Aging Division.

Section 5311 - Rural Transit Service

In addition to the transit services operating in the urban part of the OCARTS area, First Capital Trolley in Guthrie and Delta Public Transit in McClain County provide transit service under the federal Section 5311 program, which assists non-urbanized areas (less than 50,000 population) in providing rural public transportation services. The Oklahoma Department of Transportation, Transit Services Division, administers the Section 5311 program[7], which includes around 20 rural transit providers statewide.

Taxi Operations

In the Oklahoma City metropolitan area, public transportation services are supplemented by several private taxicab operations. Although over a dozen taxi and shuttle services are located in the area, the primary operator is under the management of Yellow Cab Company.

Amtrak Passenger Rail Service

Amtrak rail service in the OCARTS area consists of the Heartland Flyer service to Fort Worth, Texas. The train departs Oklahoma City's Santa Fe Depot, located at Reno Avenue and E. K. Gaylord, at 8:25 a.m. daily and arrives in Fort Worth at 12:39 p.m. It departs Fort Worth at 5:25 p.m. daily and arrives back in Oklahoma City at 9:39 p.m. The train also serves the Oklahoma communities of Norman, Purcell, Pauls Valley, and Ardmore, as well as Gainesville, Texas. Table 9.2 provides historical ridership and funding information for the Heartland Flyer.

[6] Program authorized under 49 U.S.C. § 5310.
[7] Program authorized under 49 U.S.C. § 5311.

Table 9.2: Heartland Flyer Statistics

FEDERAL FISCAL YEAR	RIDERSHIP	OKLAHOMA FUNDING	TEXAS FUNDING
2000	65,529	n/a	n/a
2001	57,799	n/a	n/a
2002	52,584	n/a	n/a
2003	46,592	n/a	n/a
2004	54,223	n/a	n/a
2005	66,968	$3.9 million	$0
2006	64,078	$3.9 million	$0
2007	68,245	$2 million	$2 million
2008	80,892	$2 million	$2 million
2009	73,564	$2 million	$2 million
2010	81,749	$2 million	$2 million

Note: In 1998, Oklahoma received a one time grant of $23 million from the 1997 Tax Payer Relief Act. Oklahoma utilized these federal monies for initial BNSF track improvements and four years of Heartland Flyer direct cost of operation. From 2003 to 2006, all State of Oklahoma funds paid for the Heartland Flyer, and starting with the FFY 2007 contract Oklahoma and Texas have split the cost of the Flyer.

Source: Oklahoma Department of Transportation

The Heartland Flyer service corridor (Oklahoma City to Fort Worth), as well as the Oklahoma City to Tulsa corridor (no train service is currently provided) are both part of the federally-designated South Central High-Speed Rail Corridor. In January 2009, the Federal Railroad Administration (FRA) awarded $11 million in high-speed and intercity passenger rail funding to Texas, which included $4 million for adjusting signal timing over 63 miles of Burlington Northern Santa Fe (BNSF) track. The project was expected to reduce travel time on the Texas leg of the Heartland Flyer by over 15 minutes by increasing travel speeds from 49 mph to 79 mph.

In March 2010, Amtrak completed a feasibility study for the Kansas Department of Transportation (KDOT) on the costs and logistics of a potential expansion of passenger rail service in Kansas. Out of four possible scenarios, two involved extension of Heartland Flyer service to either Newton or Kansas City. The next step was the selection of one of the four alternatives and incorporation of the feasibility study data into a Service Development Plan, a comprehensive business and operations plan for implementing expanded passenger rail service in Kansas. KDOT was awarded a $250,000 American Recovery and Reinvestment Act federal grant to create the Service Development Plan. The federal funds provide only a 50 percent share and must be matched by another $250,000. KDOT and the Oklahoma Department of Transportation (ODOT) are sharing the cost of the match requirement.

PLANNING FOR REGIONAL PUBLIC TRANSPORTATION

Fixed Guideway Study

The Regional Fixed Guideway Study (FGS), prepared by Carter-Burgess (now Jacobs Engineering) under contract with COTPA, was completed in December 2005, and formally received by the COTPA Board of Trustees, the City of Oklahoma City Council, and ACOG Intermodal Transportation Policy Committee in 2006.

The study resulted in the creation of the 2030 System Plan for Central Oklahoma and recommended the following regional public transportation vision:

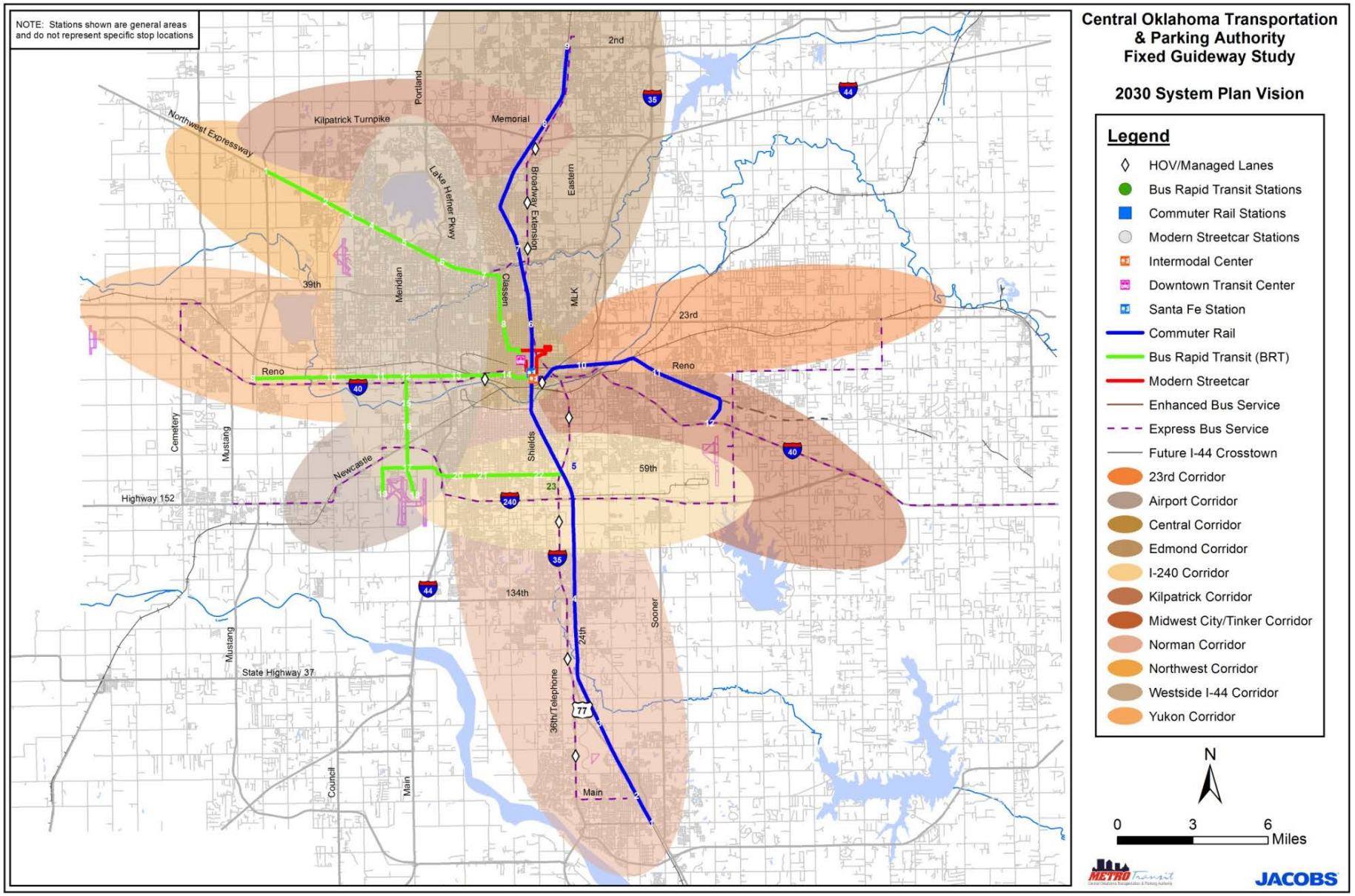
- Commuter rail between Edmond and downtown Oklahoma City
- Commuter rail between Norman and downtown Oklahoma City
- Commuter rail between Midwest City/Tinker Air Force Base and downtown Oklahoma City
- Bus rapid transit (BRT) along portions of Reno Avenue, Northwest Expressway, SW 59th Street, and Meridian Avenue
- Modern streetcar in downtown Oklahoma City
- Enhanced bus service to support the recommended future rail and BRT lines with a larger service area and more frequent service
- Downtown intermodal transit station where the commuter rail, streetcar, BRT, local and interstate bus service, and other transportation modes would connect.

The FGS final report can be accessed on the ACOG website at acogok.org.

On December 8, 2009, Central Oklahoma took a step toward its regional vision when Oklahoma City voters approved MAPS 3, a one-cent sales tax beginning April 1, 2010, and lasting seven years and nine months. The package of projects included $120 million toward funding the downtown streetcar and $10 million toward other transit infrastructure, such as an intermodal transit hub or commuter rail improvements, as recommended by the Fixed Guideway Study. Separate studies for these efforts are described in subsequent sections of this chapter.

The recommendations of the Regional Fixed Guideway Study 2030 System Plan are presented in Figure 9.2.

Figure 9.2: Regional Fixed Guideway Study 2030 System Plan Map



Regional Transit Dialogue

In recent years, since completion of the Fixed Guideway Study, communities in Central Oklahoma have become energized about public transportation. As a result, ACOG, in cooperation with local partners, initiated a visioning process to determine the desire for expanded and enhanced regional public transportation. This "Regional Transit Dialogue" (RTD) engaged locally elected officials, policy stakeholders, private sector leaders, and the general public to articulate how transit can serve the OCARTS area in the years and decades to come. Specifically, the process was designed to address a number of key themes including:

- Development of a seamless regional transit system,
- Exploration of dedicated funding sources and strategies,
- Provision for more effective coordination and integration of regional transit services,
- Improved integration between transit and land use.

The RTD process was managed by a steering committee and four subcommittees. A planning team was established to handle the initial logistics of the dialogue and to staff the committees. The initial phase of the RTD began in April 2009 and concluded in July 2010.

Additional information about the RTD and the reports produced by the RTD subcommittees can be found on the ACOG website. A second phase of the RTD will begin in 2012 to further evaluate and refine the initial RTD recommendations and continue exploration of the administrative, financial and legal foundation required to establish a regional transit authority.

Greater Downtown Alternatives Analysis (AA)

A major recommendation of the Fixed Guideway Study was to conduct detailed public transportation Alternatives Analyses (AA), starting with the AA for the greater downtown area of Oklahoma City. An Alternatives Analysis examines all transportation options and, once complete, identifies the best overall transportation technology and route. The AA is a required step for receiving federal capital funds for fixed guideway transit improvements.

In hopes of building on the proposed MAPS 3 modern streetcar project, COTPA conducted an Alternatives Analysis (AA) for the downtown area, using an experienced consultant team. An AA Steering Committee made up of citizens led the study with input from the transit consultants, city planners, and engineers. The study considered capital and operating costs, ridership forecasts, and other factors, as well as listened to comments from the public about where they wanted the system to go.

The AA began in early 2008 and resulted in selection of the locally preferred alternative (LPA) mode and route in July 2011 by the COTPA Board of Trustees and Oklahoma City Council. Figure 9.3 shows the proposed streetcar route resulting from the AA, along with two locations identified for further evaluation.

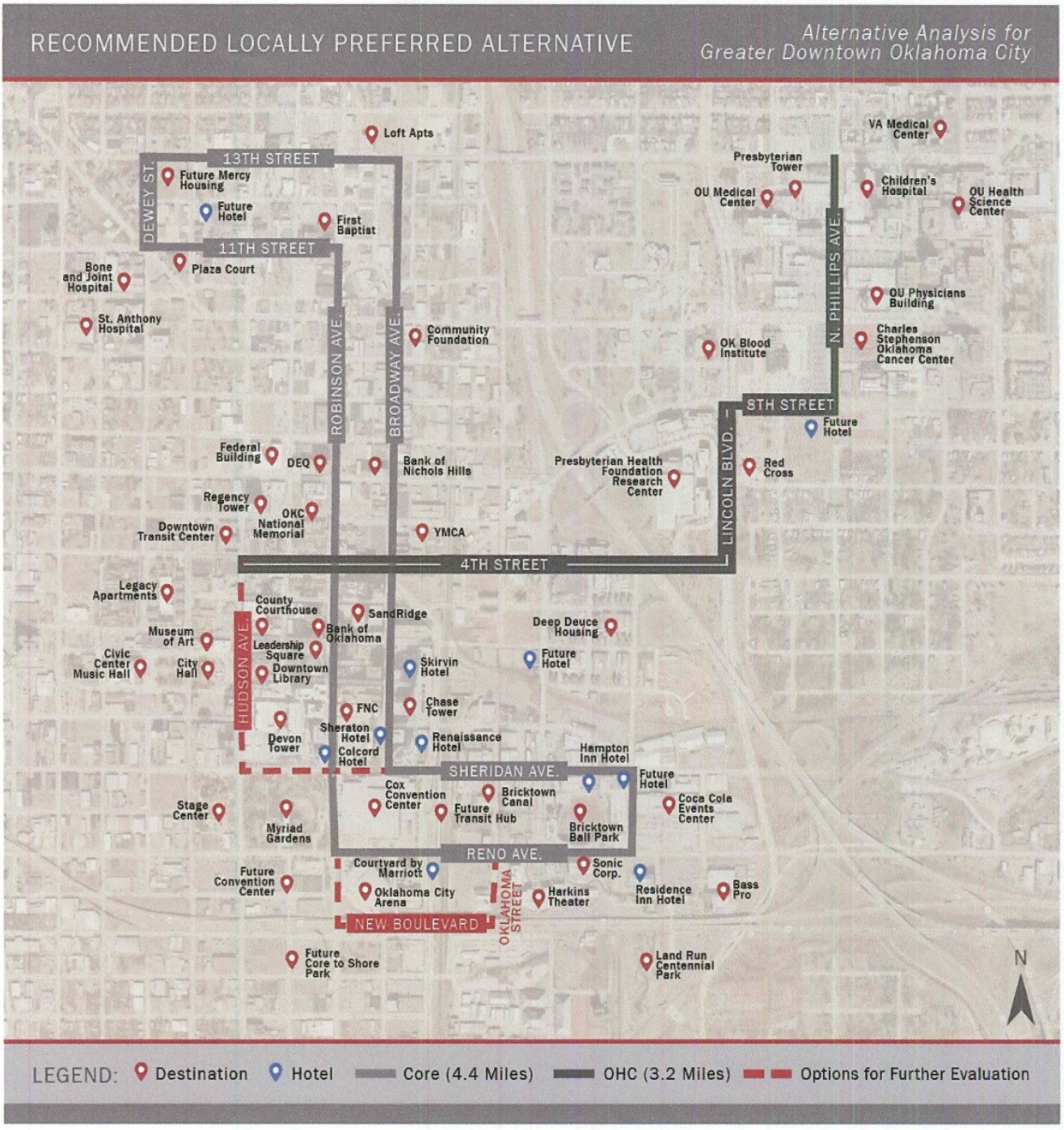
The LPA route will be further refined during the next phase of the federal process, the environmental assessment (EA). In October 2010, COTPA was notified by the U.S. Department of Transportation that it was selected to receive TIGER II[8] grant funds which will be used to conduct the EA. Federal capital funding, if eventually approved, would allow the City to develop a larger streetcar system than could be built with MAPS 3 funding alone.

While a modern streetcar will provide improved mobility in the Oklahoma City downtown, Bricktown, and midtown areas, the system is viewed as an integral piece of a larger regional public transportation system. Future connections

[8] Transportation Investment Generating Economic Recovery, Phase II grant cycle. TIGER competitive grant funds were part of the American Recovery and Reinvestment Act of 2009 (ARRA).

via commuter rail, bus rapid transit, and enhanced bus are needed to connect the downtown core and communities across the region over the coming decades.

Figure 9.3: Downtown AA LPA



Intermodal Hub Study

Passenger rail transportation is viewed as a critical component of the region's future transportation system. Toward that end, one of the first items addressed was determining the location of an intermodal hub to accommodate connections among all transportation modes, both current and planned. The hub would serve Central Oklahoma, Amtrak interstate rail service, and possibly future high speed rail service within the South Central High-Speed Rail Corridor.

Passenger rail transportation is viewed as a critical component of the region's future transportation system.

In partnership with the Central Oklahoma Transportation and Parking Authority, the City of Oklahoma City, and the Oklahoma Department of Transportation, ACOG led the Intermodal Transportation Hub Study, which was prepared by Jacobs Engineering and completed in June 2011. The year-long study involved a two-tier evaluation process that began with ten initial sites along the major rail lines within downtown Oklahoma City and culminated with selection of the Santa Fe Depot on E.K. Gaylord Boulevard in downtown Oklahoma City. The Santa Fe Depot currently houses Oklahoma City's Amtrak Heartland Flyer service, and through the hub study, it was determined that the adjacent rail yard is sufficient to support the future commuter rail services recommended by the Regional Fixed Guideway Study (FGS). In addition, current right-of-way exists to construct a third platform if future passenger rail demand were to grow beyond that identified in the FGS 2030 System Plan.

The results of the hub study are presented in the *Intermodal Transportation Hub Master Plan* which is available on ACOG's website www.acogok.org. The study reflects a partnership effort among community stakeholders throughout the region and the public to envision and plan for a broader public transit system to improve mobility, encourage growth and development within downtown and Bricktown, and enhance the quality of life across the region. While the study area considered in the hub plan was concentrated in downtown Oklahoma City, the conclusions of the Hub Master Plan have far reaching implications for improving regional travel between the central city and the communities of Edmond, Norman, Midwest City, and others. The Master Plan includes the operational analysis of the rail yard, building and parking needs, conceptual site and building layouts, proposed phasing and construction strategies, and phased estimated capital and operating costs.

Commuter Corridor Alternatives Analyses

In addition to the Greater Downtown Area Alternatives Analysis (AA) and intermodal hub study, the 2005 Regional Fixed Guideway Study also recommended that alternatives analyses eventually be conducted for all corridors in the study. This sentiment was seconded by the Regional Transit Dialogue Steering Committee. The FGS 2030 System Plan identified the corridors between Edmond and downtown OKC, Norman and downtown OKC, and Midwest City/Tinker Air Force Base and downtown OKC as potential candidates for commuter rail.

In light of these recommendations, ACOG has allocated a portion of its federal formula funding for AAs in these three corridors, and the six communities adjacent to the corridors have committed local matching funds to support the studies. ACOG will initiate the study in FY 2012.

PUBLIC TRANSIT NEEDS AND CHALLENGES

Several tools and techniques have been used in order to define transit passenger needs and preferences in Central Oklahoma. In May 2009, ACOG circulated a transportation survey and received over 1,800 responses. In late 2009, an open house was held to receive public input. Additionally, comments from various OCARTS area committees, insights from professional research, and public involvement in plans/processes such as the Oklahoma City Urban Area Coordinated Plan, Greater Downtown Alternatives Analysis, Let's Talk Transit public meetings, and bus route change public meetings have been used to define the region's transit needs and issues.

OCARTS area citizens have indicated a desire for more, in the way of quality and quantity of, public transportation options. Park-and-ride lots, bus stops closer to home and employment locations, express routes that provide direct and relatively speedy transport from neighborhood to workplace, and more frequent service are among the suggestions for improving the current system.

Connecting to available transit services is a problem for some Central Oklahoma residents. Lack of continuous sidewalks, absence of bicycle trails, and/or the scarcity of bus shelters to protect riders from the weather pose problems for some potential bus riders. The system can be greatly improved by implementing improvements in these areas.

Transportation system users noted a preference for a stronger focus on public transportation services for those with special needs. Survey responses as well as public meeting feedback said that additional transit services for seniors, persons with disabilities, and low income households were important.

Safety and security are priorities for area public transit users and patrons of buses and Amtrak. Survey respondents indicated that they would be more inclined to use public transit if they were assured of safe buses, well lit transit shelters, security at the Amtrak terminal, and reasonable cautionary arrangements at park-and-ride lots.

The biggest challenge to attaining the type of public transportation desired by area citizens is the lack of funding. Current funding levels are barely adequate to maintain the current level of service, much less grow it into the type of regional multimodal transportation system described in the previous sections. Central Oklahoma is one of only a few metropolitan areas which have no local funding source specifically dedicated to transit. This lack of dedicated funding for transit operations is the kingpin of all other transit shortcomings—infrequent service, limited hours of service, limited service area, and lack of transit amenities.

TRANSIT RECOMMENDATIONS

- Continue transit coordination discussions as begun under the Regional Transit Dialogue, to include topics such as a regional transit authority, dedicated local funding source(s) to expand public transportation, and appropriate state legislation to establish and implement a regional transit authority.
- Implement the recommendations of the 2005 Fixed Guideway Study.
- Pursue funding for and development of a Regional Intermodal Transportation Hub.
- Encourage improved coordination between land use and transit planning, including pedestrian and bicycle connections to transit routes, practical transit stop locations, transit shelters, park-and-ride lots, access for elderly and disabled, and transit oriented development.
- Improve transit access to Will Rogers World Airport.
- Continue to promote regional clean air goals by providing alternatives to the single occupant motor vehicle, including more express bus routes, park-and-ride opportunities, reduced or free bus fare on Ozone Alert Days, and the purchase of alternative-fueled buses.
- Enhance marketing of new and existing transit services to expand ridership.
- Pursue efforts to fund and expand passenger rail service linking Oklahoma City with other cities and states.

GOALS ADDRESSED

- *CONNECTIVITY*
- *ENVIRONMENTAL RESPONSIBILITY*
- *EQUITY*
- *LIVABILITY*
- *OPTIONS*

CHAPTER 10: GOODS MOVEMENT

SYSTEM SNAPSHOT

Our local and national economies rely on efficient, safe, and secure freight transportation. The movement of goods connects businesses, suppliers, markets, and consumers throughout the nation and facilitates regional specialization. Freight can be transported in various ways—single modes such as truck, rail, water, air, or pipeline or any combination of modes. Many factors influence the choice of mode for freight transportation, including access of the shipper and receiver to the particular mode; transportation, warehousing and other logistics costs; value and weight of commodities; and service characteristics specific to the mode. This interplay of factors is responsible for the modal choices of the freight market.

System Snapshot

QUICK STATS:

- *24% INCREASE IN TOTAL FREIGHT TONNAGE*
- *33% INCREASE IN TRUCK FREIGHT TONNAGE*

Figure 10: Percent of Freight Movement by Mode, 2002 and 2035

CURRENT FACILITIES

Trucking Infrastructure

Trucking directly impacts every goods-moving industry in Oklahoma. A large number of Oklahoma communities are exclusively served by trucks for freight purposes, since they do not possess rail or airport access. Approximately 189 trucking companies are located in the OCARTS area, each categorized as one of the seven types of haulers: general, motor freight, heavy hauling, light hauling, refrigerated hauling, liquid/dry bulk, and local cartage. General trucking is by far the largest category and makes up over half of all trucking firms, as reflected in Table 10.1.

Table 10.1: OCARTS Area Trucking Companies

CARGO TYPE	NUMBER OF FIRMS	PERCENTAGE BY TYPE
General Trucking*	98	52%
Motor Freight	47	25%
Heavy Hauling	15	8%
Light Hauling	6	3%
Refrigerated	8	4%
Liquid/Dry Bulk	8	4%
Local Cartage	7	4%
TOTAL	189	100%

Roadways are critical components of the freight transportation system. The performance of the highway and street network is directly tied to the efficiency of truck transportation. Reliable travel times are critical to truckers who serve just-in-time manufacturing and distribution systems. The National Highway System (NHS) within the OCARTS area, which includes all Interstates, certain U.S. Highways and State Highways, as well as all NHS connectors, best describes the region's designated truck routes. Figure 10.1 shows these designated truck routes, as well as intermodal freight facilities and warehouse facilities.

Truck terminals are used for handling and sorting freight, storage and maintenance of trucks, and administrative and operational functions, and are characterized by a large amount of truck traffic. The truck terminals shown in Figure 10.2 are expressed by the associated number of employees. Warehouses are used for the handling and sorting of freight, as well as the temporary storage of goods before their distribution, and may belong to either a major manufacturer or a trucking company. Many major manufacturers also operate freight terminals. The manufacturing facilities shown in Figure 10.3 are based on the OCARTS employment database. These terminals mark the origin of truck freight within the OCARTS area. Table 10.2 reflects the inbound, outbound, and intraregional freight transported by truck in the OCARTS area in 2002 and anticipated in 2035. Overall, truck freight is anticipated to grow by nearly 33 percent.

Table 10.2: 2002 and 2035 Inbound, Outbound, and Intraregional Freight Transported by Truck

FREIGHT	2002 TONNAGE	2035 TONNAGE	2002-2035 % CHANGE	ANNUAL AVERAGE GROWTH RATE
Inbound	22,936,521	41,407,661	80.53%	1.81%
Outbound	15,462,278	26,690,834	72.62%	1.67%
Intraregional	78,077,510	86,405,170	10.67%	0.31%
Total Truck (excl. through)	116,476,309	154,503,666	32.65%	0.86%

Source: Freight Analysis Framework, Version 2, Federal Highway Administration, 2002

Figure 10.1: OCARTS Area Truck Routes

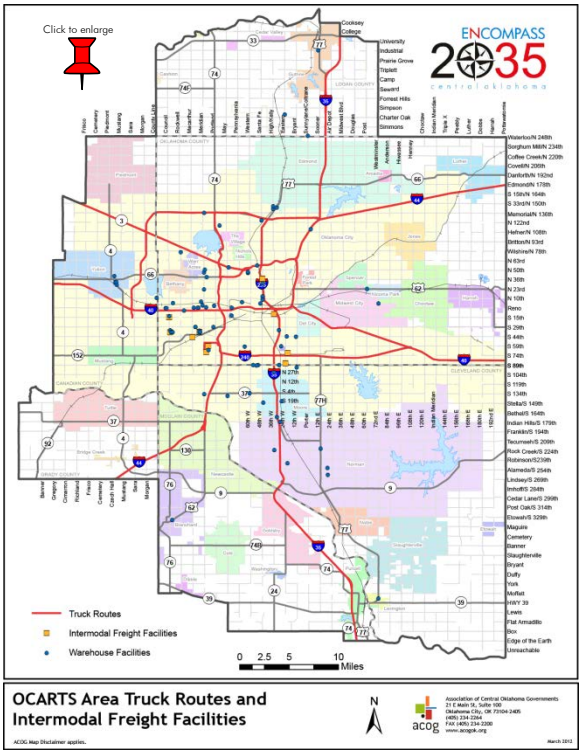


Figure 10.2: OCARTS Area Truck Employment

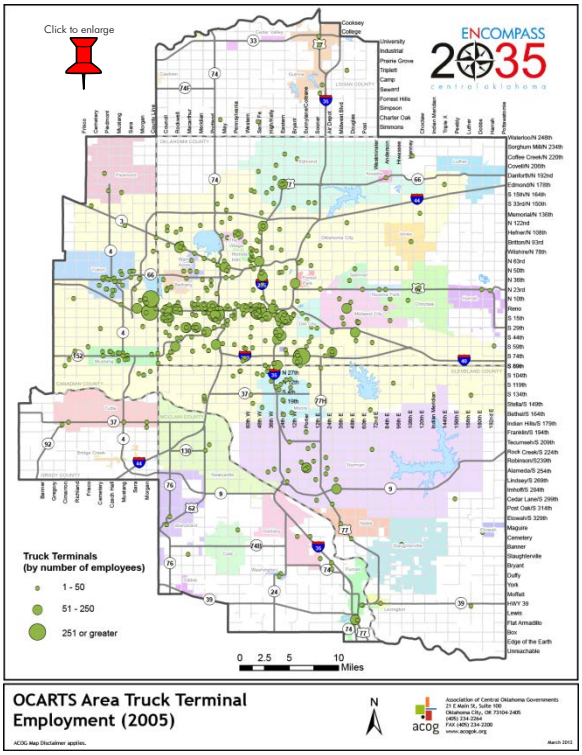


Figure 10.3: OCARTS Area Manufacturing

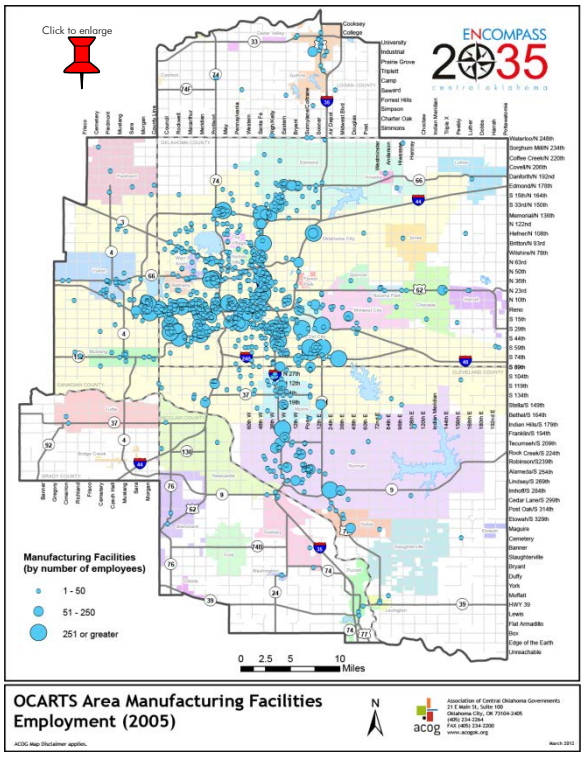
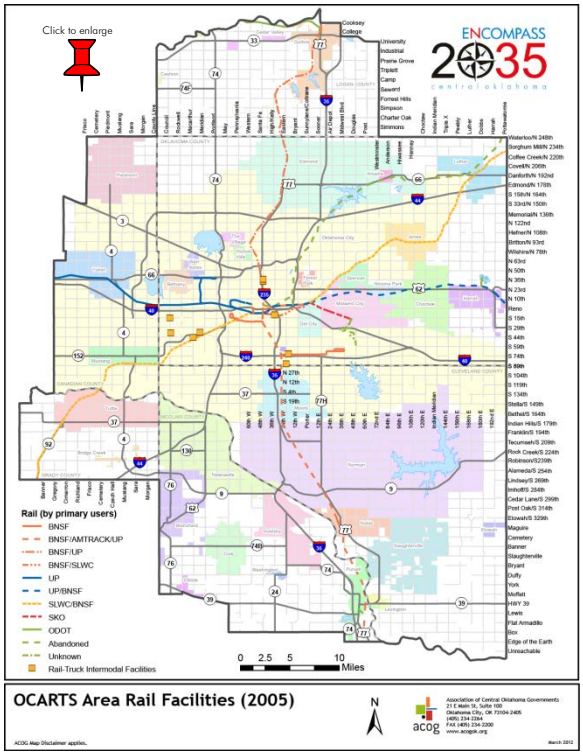


Figure 10.4: 2005 OCARTS Area Rail Facilities



Within the OCARTS area, rail moves about five percent of the outbound freight tonnage, and about 11 percent of inbound tonnage.

Since the early 1980's, the Oklahoma Department of Transportation has taken an active role in planning and operating the rail system in response to the loss of major rail carriers and a large number of rail abandonments. A large portion of tracks owned by ODOT are leased to Union Pacific (UP), a Class I railroad company, and other portions are leased to two Class III railroad companies, thus aiding in the preservation of existing rail infrastructure. In addition, the railroad companies have executed multiple trackage right agreements among each other to allow full utilization of the existing infrastructure. The primary users of the railroad tracks within the OCARTS area are shown in Figure 10.4, along with the location of rail-truck intermodal facilities.

Class I railroad companies represent rail lines operated by large-scale railroad corporations, serving the nationwide market. The OCARTS area is served by two Class I railroads—Burlington Northern Santa Fe (BNSF) and Union Pacific (UP). BNSF is operating on the most extensive network of tracks within the study area. Amtrak has trackage rights on BNSF owned tracks.

Also called Short Lines, Class III railroads represent small-scale rail lines, which are usually locally operated, and function only within a single state or a few contiguous states. Two Class III railroads operate within the OCARTS area—Southern Kansas & Oklahoma (SK&O) and Stillwater Central Railroad (SLWC). The railroad companies have taken up operations on multiple miles of state owned tracks, based on a long-term lease and operating agreement with the ODOT.

Table 10.3 reflects inbound, outbound, and intraregional freight tonnage moved by rail in the OCARTS area in 2002 and anticipated in 2035. The drastic drop in outbound rail freight can be attributed to the loss of the General Motors manufacturing plant.

Table 10.3: 2002 and 2035 Inbound, Outbound, and Intraregional Freight Transported by Rail

FREIGHT	2002 TONNAGE	2035 TONNAGE	2002-2035 % CHANGE	ANNUAL AVERAGE GROWTH RATE
Inbound	2,965,373	4,671,684	57.54%	1.39%
Outbound	1,362,420	512,680	-62.37%	-2.92%
Intraregional	0	0	0.00%	0.00%
Total Rail (excl. through)	4,327,793	5,184,364	19.79%	0.55%

Source: Freight Analysis Framework, Version 2, Federal Highway Administration, 2002

Air Freight Infrastructure

Air cargo is suited to goods with a high time value, such as perishables, electronic parts, apparel, shoes, printed material, and pharmaceuticals. Because of time advantages, shippers are willing to pay higher transportation costs to deliver goods in days versus weeks and, thus, are more likely to pay higher costs to ensure reliable, rapid delivery.

A fraction of one percent of freight is carried in and out of the OCARTS area via air carrier operations, a trend typical for all of Oklahoma's air freight movements. The OCARTS area does not contain a major hub airport and therefore has no significant portion of through-freight transported by air. Although representing only a small portion of total shipments, air carrier operations are critical, because they have a higher proportionate share of high value shipments and carry the full load of airmail operations. The majority of OCARTS air freight is handled through the only commercial airport in the metropolitan area—Will Rogers World Airport.

The Will Rogers World Airport terminal is located approximately two miles from State Highway 152 and four miles from Interstate 44. A general warehouse at Will Rogers World Airport offers storage that can accommodate a wide variety of goods and containers, including intermodal containers on chassis. The warehouse is accessible via Interstate 44. Neither the air freight terminals nor the airport warehouse have direct access to rail service. However, the Burlington Northern Santa Fe railroad borders the northwest corner of the airport.

The Port Authority at Will Rogers World Airport is the governing board of Oklahoma's largest Foreign Trade Zone (FTZ), having responsibility for a 41-county region in central and western Oklahoma. FTZs are sites within the U.S. where foreign and domestic goods are considered to be international commerce. Goods are admitted to the zone without formal U.S. Customs entry and the payment of duty is deferred and, under certain circumstances, reduced or eliminated. Within the zone, goods may be stored, tested, relabeled or repackaged, exhibited, mixed with domestic and/or foreign material, and used in assembly or manufacturing processes. Goods or finished products from a FTZ entering the U.S. commerce are subject to duty and taxes. Goods or finished products exported and destined for international commerce from the zone are not subject to duty and taxes.

Table 10.4 reflects the 2002 inbound and outbound airfreight tonnage within the OCARTS area and its anticipated growth through the forecast year.

Table 10.4: 2002 and 2035 Inbound and Outbound Freight Transported by Air

FREIGHT	2002 TONNAGE	2035 TONNAGE	2002-2035 % CHANGE	ANNUAL AVERAGE GROWTH RATE
Inbound	4,604	7,882	71.21%	1.64%
Outbound	6,272	9,867	57.32%	1.38%
Total Air	10,876	17,749	63.20%	1.50%

Source: Freight Analysis Framework, Version 2, Federal Highway Administration, 2002

GOODS MOVEMENT NEEDS AND CHALLENGES

Below are goods movement issues and concerns raised as a result of the *Encompass 2035* Transportation Survey, the Open House, and by freight stakeholders.

Truck Freight

- **Design Improvements and Elimination of Safety Hazards**
  Since goods movement by truck relies on OCARTS interstates, highways, and arterials, the needs of motor carriers should be considered in the design and maintenance of the region's roads and bridges. Insufficient turning radii, insufficient queuing length at off-ramps or intersections, and other trucking safety hazards need to be considered in roadway design.

- **Congestion and Delays**
  As congestion steadily grows on the street and highway network, so do delays and costs to consumers. The growth of truck traffic and the overall growth of traffic volumes on major highway facilities through 2035 will lead to significantly increased congestion levels.

- **Increase of Network Capacity and Use of Intelligent Transportation Systems**
  Continued reliance on adding lanes as a means of congestion relief is financially and physically impractical. Capacity improvements are possible by managing the existing system more efficiently through the use of Intelligent Transportation Systems (ITS) technologies.

- **Increased Truck traffic due to North American Free Trade Agreement (NAFTA)**
  In light of expected future growth in freight movement along the I-35 International Trade Corridor, as well as I-40, rerouting of through truck traffic, and other mitigation efforts, will become more important. Overall, the OCARTS area needs to preserve the existing system by maintaining major trucking routes at satisfactory or moderately congested levels of service, through improved maintenance and by better intermodal connectivity.

- **Truck Rerouting**
  According to the trucking industry, rerouting through truck traffic would result in better traffic conditions than creating separate truck lanes. This would be especially beneficial in rerouting hazardous materials around populated areas.

- **Diverting Truck Freight onto Rail**
  An interest in diverting long-haul truck freight onto rail, especially dry bulk commodities, was expressed by the trucking industry as well, thus freeing up additional roadway capacity. The key to such operations lies within increased partnerships and better intermodal connections.

- **Use of Triple-Trailers, Pavement and Bridge Stress**
  Currently, only a few states, including Oklahoma, allow the use of double trailer rigs. The trucking industry is considering the effects of using three-trailer, six-axle vehicles, which would be capable of carrying up to 90,000 lbs. The rationale is to be able to "take one out of every nine vehicles" off the roadway, which would free up capacity. It is also said to be less strenuous on the road pavement, which seems to be affected more by the number of trucks, rather than simply the weight of the vehicle. The life-span of bridges, however, is affected differently than the pavement and reacts to the number of trucks, total weight, axle weight, axle distance, and other factors. The impact of the proposed type of truck on pavement, as well as bridges, will therefore require further study.

- **Change in Shipper Behavior**
  Although just-in-time delivery will continue to play an important role in the freight industry, some shippers have returned to larger "safety stock" inventories after the lesson learned during a 2002 port strike.

- **Time-definite Trucking versus Air Freight**
  Time-definite trucking competes directly with air freight.[9] Shippers see an advantage in the drastically reduced transportation costs, if their freight does not require overnight forwarding.

- **Intermodal Trends**
  There has been a dramatic increase in containerization, although the OCARTS area seems a less likely candidate for these trends, due to its lack of intermodal facilities.

Rail Freight

The following rail freight issues and concerns should be considered when making improvements to the existing transportation network.

- **Oklahoma Freight and Passenger Rail Plan**
  The Oklahoma Department of Transportation is developing a new comprehensive Freight and Passenger Rail Plan to guide the state's planning efforts for freight and passenger rail into one single coordinated effort. Issues of economy, mobility, safety, environmental sustainability and current and future needs of Oklahoma rail will be evaluated. ODOT conducted statewide public meetings to gather input for the new plan in February 2011. More information is available at .

- **Diverting Truck Freight onto Rail**
  An interest in diverting long haul truck freight onto rail, especially dry bulk commodities, was expressed by the trucking industry, thus freeing up additional roadway capacity. The key to such operations lies in increased partnerships and better intermodal connections.

- **Improving Rail Service and Intermodal Connectivity**
  Track and rail yard construction and maintenance are the responsibility of the railroad company owning the facility. Private investments are market driven, and ODOT investments into state owned rail infrastructure are limited by the amount of special funds available.

- **Interstate Rail moving Freight**
  Rail supporters have stated a need for additional interstate rail options to transport raw materials and finished products between key locations in Oklahoma and neighboring states.

[9] MergeGlobal, "Continental Shifts," March 2004

- **Industry Approach to Rail Freight Growth**
  The rail industry is able to accommodate expected growth with the existing capacities for the near future. However, its sustained ability to accommodate potential freight diverted from trucks will depend on working with ODOT to improve the intermodal capabilities of the existing rail yards, making way for an increase in trucking-rail partnerships.

- **Trends in Rail Transportation**
  Recent developments in containerization and other intermodal initiatives could prove to have a revitalizing effect on rail transportation in the OCARTS area, provided that adequate facilities will exist:

  - The use of railroaders—semitrailers specially designed to travel both on highways and on rails—is increasing. The OCARTS area does not yet have a yard capable of handling railroaders.
  - Another industry trend is the use of micro containers. These containers are small enough to be lifted off trains and transferred to trucks even outside of specially designed intermodal facilities.
  - Additionally, a trend exists towards freight transportation in mega-sized container ships. Such shipments are capable of feeding certain northeastern ports, but could bypass the OCARTS area.

- **Air Quality**
  Due to better fuel efficiency, an increased use of rail freight over truck freight may preserve or even improve air quality within the OCARTS area. This is an important issue, especially in light of the current air quality standards, and the prospect of more stringent standards in the near future.

- **Safety**
  With over 300 at-grade rail crossings within the OCARTS area, the need for grade-separated crossings and implementation of the frontage road concept remain top priorities, since a projected increase in rail freight has the potential of creating greater safety risks. Other rail safety issues include:

  - Need for crossing improvements and increase in safety features at railroad intersections with urban arterials and highways;
  - Concerns about possibility of broken rails causing derailments on main line railroad tracks; and
  - Problems associated with the transport of chemicals and hazardous material through the heavily populated, urbanized areas.

Air Freight

The following air freight issues and concerns should be considered when making improvements to the existing transportation network.

- **Congestion on Airport Access Roads**
  In the OCARTS area, air-to-truck goods transfers are the only intermodal aspect of air freight movement. Therefore, accessibility of airports via the existing street and highway network and future connectivity to other modes of transportation is vital to maintaining traffic flow and reducing delays around area airports.

- **Trends in Air Freight Transportation**
  A 63 percent increase in air freight tonnage is projected between 2002 and 2035. Just-in-time management, as well as an increase in e-commerce volume is factored into this development. However, complete projections of the impact of e-commerce are not available at this time and its further development should be closely monitored. Time-definite trucking competes directly with air freight, offering reliability and only slightly lower delivery speeds at a fraction of the transportation cost. Higher security stock inventories and safety concerns also have an impact on air freight logistics.

- Airport Growth
  The existing storage facilities at Will Rogers World Airport are scheduled for expansion as outlined in the current airport master plan, thus increasing the airport's freight handling capacities.

- Intermodal Connectivity
  As there is currently no direct connection to railroad tracks, air-truck transportation is expected to continue to be the main aspect of intermodal air freight.

- Increase of Network Capacity and Use of Intelligent Transportation Systems
  Physical solutions to increase the capacity of the street network that provides access to the airport are limited. Intelligent Transportation Systems (ITS) technologies should continue to be explored as a way to operate the existing system more efficiently.

- Transportation Planning Coordination
  The Federal Aviation Administration has asked for increased coordination of transportation planning between the top 100 airports in the nation (includes Will Rogers World Airport) and the MPOs monitoring the regions' street and highway network. Will Rogers World Airport completed the first two phases of a 3-phase expansion plan in November 2006. Phase III will eventually involve the extension of the concourse to the east for the addition of 11 new departure gates. This phase will start when further expansion of the terminal is needed. Further information about the airport's expansion is available at

GOODS MOVEMENT RECOMMENDATIONS

INTERMODAL FREIGHT

- Encourage development of intermodal facilities and connections to enhance and integrate area freight movement.
- Increase goods movement efficiency through freight specific intelligent technology.
- Closely coordinate the efforts of ODOT and the MPO of routine freight data collection and freight modeling.

TRUCK FREIGHT

- Improve commercial vehicle routes in conjunction with roadway construction projects.
- Consider wider turning radii, greater pavement strength, improved access management, and elimination of safety hazards on heavily traveled commercial vehicle routes.
- Work with the State and private stakeholders to study potential rerouting of through-traffic around the core metropolitan area.
- Enhance MPO participation in the planning and implementation of Commercial Vehicle Operations (CVO) deployment.
- Explore development of a regional truck route system.

RAIL FREIGHT

- Work with ODOT Rail Division to alleviate safety concerns at railroad crossings, upgrade key crossings with mast arms, lights and/or other safety features, and eliminate unnecessary or poorly functioning crossings.
- Consider grade separation at high traffic railroad crossings.
- Encourage industrial development near rail corridors to enhance intermodal freight movement.
- Participate in the development and implementation of the State Rail Plan.

AIR FREIGHT

- Enhance MPO participation in airport planning efforts to ensure optimal use of the street and highway network accessing the airport facilities.
- Consider implementing Travel Demand Management (TDM) strategies and Intelligent Transportation Systems (ITS) technologies to increase the capacity of the street and highway network providing access to the airport.

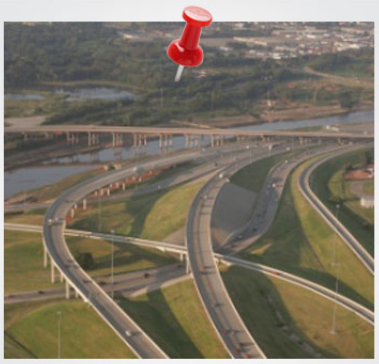
GOALS ADDRESSED

- *CONNECTIVITY*
- *ECONOMIC STRENGTH*
- *MAINTENANCE*
- *OPTIONS*
- *PERFORMANCE*
- *SAFETY AND SECURITY*

CHAPTER 11: STREETS AND HIGHWAYS

SYSTEM SNAPSHOT

The street and highway system constitutes the foundation of the region's overall transportation infrastructure, enabling the movement of people and goods. While the roadway system primarily serves the movement of automobiles, Central Oklahoma's public transportation and freight movements are also heavily dependent on an efficient street and highway network. Additionally, the viability of non-motorized transportation options, such as walking and bicycling, are heavily influenced by the makeup, condition and configuration of this network. The street and highway system plays a major role in supporting and realizing the region's transportation goals.



System Snapshot

QUICK STATS:

- *VEHICLE MILES OF TRAVEL WILL INCREASE 39.5% BY 2035*
- *VEHICLE TRIPS WILL INCREASE 38.4% BY 2035*

CURRENT FACILITIES

Central Oklahoma is truly a crossroads for the nation's transportation systems. Two of the most important interstate highways, I-40, which runs from Los Angeles to Raleigh, NC and I-35, which runs all the way from Mexico to Canada, meet in downtown Oklahoma City. The addition of I-44 that runs from Wichita Falls to St. Louis, as well as I-240 and I-235 reinforces Central Oklahoma's status as an important national transportation hub.

IDENTIFICATION OF SYSTEM DEFICIENCIES

Central Oklahoma's abundance of street and highway infrastructure has resulted in some of the lowest congestion levels for a region of over 1 million people. However, forecasted population and employment growth will make it difficult to maintain the level of movement the region currently enjoys unless infrastructure improvements keep pace with projected growth.

TRAVEL DEMAND FORECASTING MODEL DEVELOPMENT

Before transportation needs could be determined, ACOG commissioned a consulting team to overhaul the OCARTS area travel demand forecasting model. The project, which began in 2008, used a new computer modeling approach to ensure greater accuracy and for the first time the ability to analyze a range of premium and standard modal alternatives in the future (e.g. bus, commuter rail, bus rapid transit, streetcar, etc.). The new model is implemented in Citilabs' CUBE software platform. For technical information detailing the modeling efforts for *Encompass 2035*, please visit ACOG's website.

ENCOMPASS 2035 ALTERNATE STREET AND HIGHWAY NETWORKS

Alternate One: Present Plus Committed (P+C) Network

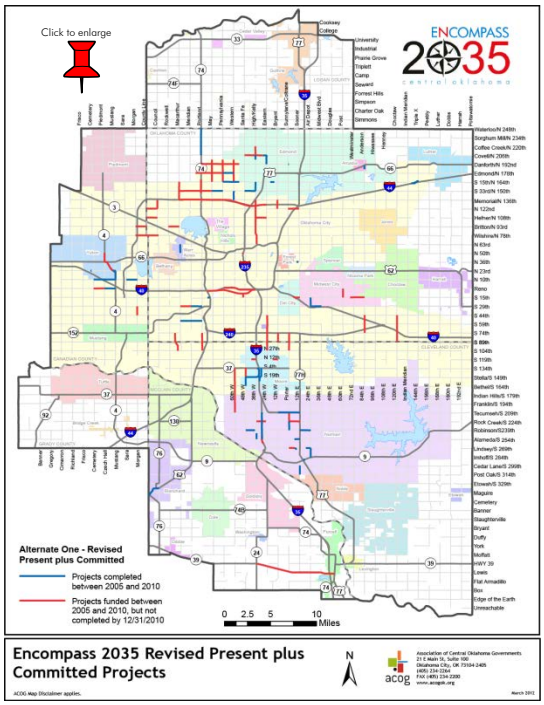
In an effort to mitigate our growing street and highway needs, *Encompass 2035* conducted an assessment of the future regional transportation system. A hypothetical analysis was performed, reviewing 2035 roadway travel conditions under a scenario where only currently committed transportation projects through the year 2010 would be completed, as well as projects for which funding was committed through September 2011. This network – sometimes referred to as the "no build" scenario – would allow the region to complete projects currently underway, but virtually all remaining street and highway funds would be used to maintain the present system.

Alternate Two: Revised Present Plus Committed Network

In an effort to ensure consistency between the OCARTS area Transportation Improvement Program (TIP) and the new transportation plan, widening projects in the FFY 2012 and FFY 2013 elements of the OCARTS area Transportation Improvement Program and the Oklahoma Department of Transportation's 8-Year Construction Work Plan were added to the P+C network. The revised Present Plus Committed, or Alternate Two, became the new foundational network against which all other alternate networks would be compared (See Figure 11.1).

As expected, the analysis of the revised Present Plus Committed network revealed that the level of service it would provide would not be sufficient to mitigate future street and highway congestion. Approximately 294 lane miles were forecasted to be at or near capacity by 2035.

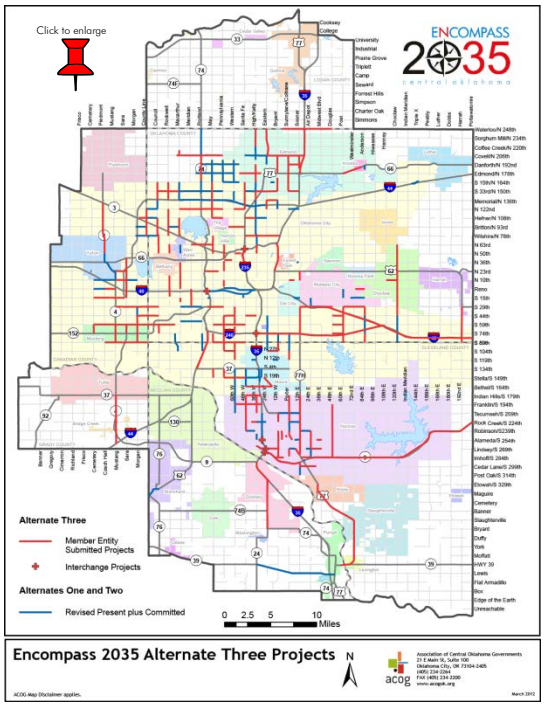
Figure 11.1: Alternate Two Projects Map



Alternate Three: Member Entity Submitted Projects

When it was determined that the previous alternates would not be sufficient to combat future congestion, member local governments and ODOT were invited to submit proposed street and highway improvements in response to an ACOG call for projects in December 2010. Approximately 200 projects were received, evaluated and scored according to the adopted *Encompass 2035* Project Selection Criteria. The selected projects are illustrated in Figure 11.2.

Figure 11.2: Alternate Three Projects Map



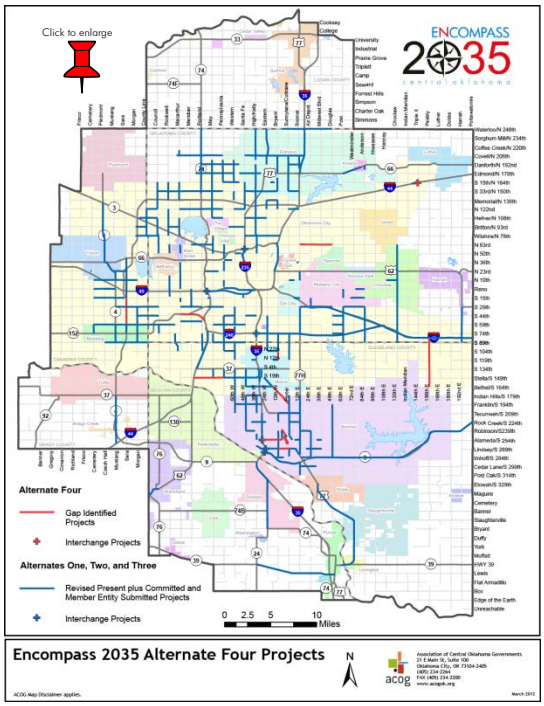
Alternate Four: Identified Gap Projects

Following review of the Alternate Three results, ACOG staff recommended additional street and highway projects to bridge identified gaps in improvements that remained from the previous alternates (Figure 11.3)

Alternate Four-B was ultimately approved by the Intermodal Transportation Policy Committee on March 31, 2011 as the 2035 street and highway network for the OCARTS area. The alternate proved to provide superior level of service. In fact, the proposed improvements resulted in a reduction over Alternate Two of nearly 64 lane miles of roadway at or near capacity.

A listing and map of all proposed street and highway projects can be found in Chapter 13: *The Adopted Plan*.

Figure 11.3: Alternate Four Projects Map



EVALUATION OF ALTERNATE STREET AND HIGHWAY NETWORKS

Table 11.1 provides a summary of the travel conditions projected for each alternate street and highway network in the year 2035, as compared to 2005 base year conditions. Evaluation factors included each network's ability to meet projected daily transportation demand, network performance in terms of congested road miles and speed, and estimated costs to implement each alternate.

A description of each evaluation factor is described below.

CONGESTED ROAD MILES

In order to determine potential congestion levels for the alternate street and highway networks, the traffic volumes for the forecast year were assigned to each of the four alternates individually. After each alternate assignment, the 24-hour non-directional capacities based on level of service (LOS)[10] E, were applied to derive volume-to-capacity (V/C) ratios for individual links on the networks. Full capacity is represented by a V/C ratio of 1.0. Thus, a roadway segment was considered moderately congested if its V/C ratio was greater than 0.69 and seriously congested if the V/C ratio was above 0.99. The purpose of this analysis was to provide a picture of the anticipated congestion levels in the year 2035 using different improvement scenarios. With the aid of these detailed modeling results, local planners, engineers, and elected officials could focus on the individual congested locations to propose localized improvements without losing sight of regional mobility and network continuity goals.

VEHICLE MILES OF TRAVEL

Daily vehicle miles of travel (VMT) is an indicator of the usage of streets and highways over a 24-hour period by the traveling public. The VMT estimates were generated by the transportation modeling software, which sums the assigned volume multiplied with the associated street segment. Separate estimates were evaluated for freeway and non-freeway facilities.[11] The VMT estimates were also used to project estimates of accidents and road user costs in the calculation of benefit-cost analysis for each of the four alternates.

VEHICLE HOURS OF TRAVEL

Vehicle hours of travel (VHT) is another indicator of network efficiency. The VHT estimates were generated by the transportation model as well, providing a separate estimate for freeway and non-freeway facilities for each alternate.

AVERAGE SPEEDS

Another performance measure used in the network alternate analysis was the average speed for freeways and non-freeway facilities. The speeds were calculated by dividing the VMT by the VHT for the two functional classification categories.

OTHER EVALUATION MEASURES

In addition to the factors reflected in Table 11.1, the alternate street and highway networks were evaluated in terms of the recommended plan's effect on a number of environmental and social impacts, including an environmental justice analysis of the potential impacts to low income and minority populations, and their cost effectiveness (benefit-cost ratio). Information can be found in Chapter 7 – *Protecting Human Health and the Environment*, and Chapter 14 – *Financial Strategies, Revenues and Cost,* respectively.

[10] Level of Service (LOS) is a qualitative rating of effectiveness of a highway or roadway system in serving traffic in terms of operating conditions, ranging from "A" for best operation (low volume, high speed) to "F" for worst conditions.

[11] The freeway classification includes free and toll limited access facilities. The non-freeway classification includes principal arterials, minor arterials, and collectors.

Table 11.1: Alternate Comparison Table

	2005 BASE YEAR	2035 OCARTS AREA PROJECTIONS			
		ALTERNATE ONE	ALTERNATE TWO	ALTERNATE THREE	ALTERNATE FOUR
Demographic Data					
Population	1,076,258.00	1,464,814.00	1,464,814.00	1,464,814.00	1,464,814.00
Employment	578,306.00	801,302.00	801,302.00	801,302.00	801,302.00
Daily Transportation Demand					
Vehicle Miles of Travel (thousands)	33,980.00	46,909.00	46,896.00	47,517.00	47,389.00
Vehicle Hours of Travel (thousands)	859.50	1,290.30	1,289.30	1,282.80	1,275.50
Vehicle Trips (thousands)	3,895.00	5,391.00	5,391.00	5,391.00	5,391.00
Transit Ridership (thousands)	14.50	16.50	16.50	16.50	16.50
System Performance					
Average Overall Speed (mph)	40	36	36	37	37
Average Freeway Speed (mph)	48	44	44	46	46
Average Arterial Speed (mph)	35	32	32	33	33
Total Estimated Plan Costs					
Street & Highway Capital (mil)	-	$953.90	$958.00	$2,744.90	$2,799.20
Street & Highway Maintenance (mil)	-	$3,085.00	$3,085.00	$3,458.80	$3,473.30
Transit (mil)	-	$1,004.60	$1,004.60	$1,004.60	$1,004.60
Bicycle and Pedestrian (mil)	-	$328.90	$328.90	$328.90	$328.90
Total (mil)	-	$5,372.40	$5,376.50	$7,537.20	$7,606.00

STREET AND HIGHWAY CHALLENGES

The street and highway network will continue to be the transportation backbone in the year 2035. Indeed, the level of service the driving public demands will be predicated on the region's ability to contruct and maintain the street and highway system. Like most transportation modes identified in this report, adequate funding will continually have to be pursued. Even if funds are readily available, it is clear from the *Encompass 2035* process, that the region will be unable to build its way out of congestion. As a result, the plan addresses the need to look at a more comprehensive approach focusing on land use practices to decrease the demand for the automobile and to continue to diversify the region's transportation options.

STREET AND HIGHWAY RECOMMENDATIONS

- Implement *Encompass 2035* street and highway improvements to minimize congestion and improve safety throughout the OCARTS area. The approved list of projects can be found in Table 13.5 of this report.
- Maintaining the existing transportation system must be a priority.
- Improve the integration of transportation and land use to reduce automobile trips, decrease travel time, enhance mobility and preserve agriculture and recreational lands.
- Improve the efficiency of the region's transportation system by utilizing technology to improve traffic flow of the existing system, reduce accidents, bottlenecks and congestion.

GOALS ADDRESSED

- *CONNECTIVITY*
- *ECONOMIC STRENGTH*
- *MAINTENANCE*
- *OPTIONS*
- *PERFORMANCE*
- *SAFETY AND SECURITY*

CHAPTER 12: SAFETY AND SECURITY

Safety and security are essential aspects of Central Oklahoma's transportation system and its ability to support economic vitality and improve the quality of life of its users. Federal surface transportation law has elevated safety and security of our national infrastructure as a priority.

The Safety and Security goal and strategies identified in *Encompass 2035* were crafted with the intended purpose of improving and protecting transportation users through sound engineering, education, enforcement, and effective emergency services.

QUICK STATS:

- *106 MILES OF NEW CABLE BARRIER*
- *41 ADDITIONAL CCTV ROADWAY MONITORING CAMERAS*
- *20 ADDITIONAL DYNAMIC MESSAGE SIGNS*
- *700+ TRAFFIC SIGNAL INTERCONNECTS, TIMING AND EMERGENCY VEHICLE PREEMPTION*

TRANSPORTATION SAFETY INITIATIVES

Motor vehicle crashes and fatalities have a major impact on the lives of Central Oklahomans. According to the U.S. Census Bureau, more than 2.1 million people were killed and approximately 12.4 million injured in 52.7 million motor vehicle crashes across the nation from 2005-2009. In the OCARTS area alone, 547 people were killed and more than 24,000 were injured during the same timeframe.

To combat this serious problem, transportation providers, agencies, and professionals are devoted to working cooperatively to plan and implement safety initiatives throughout Central Oklahoma.

OKLAHOMA HIGHWAY SAFETY PLAN

In compliance with SAFETEA-LU, the Oklahoma Department of Transportation (ODOT) developed a Strategic Highway Safety Plan (SHSP) in 2007 to provide a comprehensive framework for reducing highway fatalities and serious injuries on all public roadways. The plan established strategies and countermeasures to reduce fatalities and injuries in the following areas of emphasis: crashes involving young drivers, lane departure crashes, unsafe driver behavior and intersection crashes. The SHSP also includes the identification of emphasis area teams to oversee the implementation and continued responsibility of each area of emphasis.

INCIDENT RESPONSE

It happens every day in Central Oklahoma – traffic delays caused by an accident or disabled vehicle in the roadway. In fact, over 60% of all traffic congestion in Oklahoma is the result of some sort of incident. This is a significant problem since for every one minute a wreck remains on the road, drivers can count on their travel being delayed an average of four additional minutes and the chances of a secondary accident increasing by 2.8 percent.

The OCARTS area has adopted several countermeasures to diminish traffic incident response time, reduce the amount of time first responders spend at the scene of an incident, and minimize the amount of incident-related congestion on the roadways of Central Oklahoma.

- Quick Clearance

  On November 1, 2003, a new Oklahoma law came into effect focusing on safety for emergency responders and motorists. The new "Quick Clearance" law was instituted to help reduce delay caused by motor vehicle crashes and other incidents.

  In general, the law has two sections. The first section deals with the motoring public and says that drivers must make every reasonable effort to remove their vehicle in a "non-injury" traffic incident. The second section refers to law enforcement and reinforces the officer's authority to move disabled vehicles, or require the driver to move them. Officers are not liable for any damages or loss to the vehicle or cargo as long as the officer did not act with gross negligence.

- Traffic Incident Management Protocol

  Managing the scene of a traffic incident is vital to the safety and security of the victims of the incident and directly impacts the reduction of congestion and risk of secondary crashes for other motorists on the road. The Traffic Incident Management program in Central Oklahoma is critical to improving the safety and efficiency of our urban transportation system and to reducing the number of first responders and roadway patrons killed because of secondary crashes.

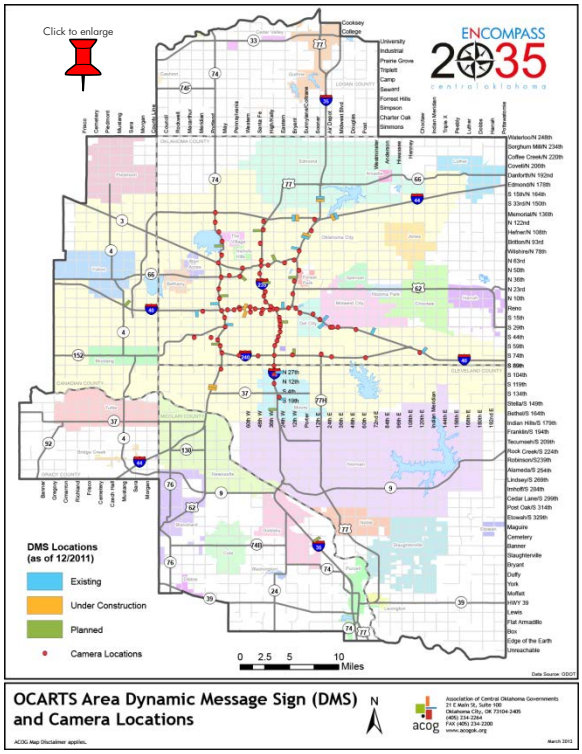
  A multi-agency group including transportation, public safety, and emergency response agencies within the Central Oklahoma area was created in 2003 as an effort to minimize response and clearance times through better coordination and communication among traffic incident responders. A memorandum of understanding was signed by the heads of eight agencies responsible for traffic incident management, who pledged to cooperatively work towards the development of a coordinated incident management program in Central Oklahoma. Ongoing efforts, including inner-agency cooperation, informational workshops and coordinated meetings, continue to raise awareness of the importance of traffic incident management and its vital role in reducing incident response time and ultimately saving the lives of first responders and travelers on Central Oklahoma roadways.

- **Use of DMS**

Dynamic Message Signs (DMS) are an Intelligent Transportation System (ITS) tool that provide travelers with information regarding traffic congestion, speed limits, traffic incidents, or serve as an additional safety measure to alert drivers of construction zones. DMSs serve as a notification device to disseminate pertinent roadway information, allowing the driver to make informed decisions when choosing the most efficient route to their final destination, which ultimately contributes to the alleviation of heavy traffic congestion during a roadway incident.

Currently, in the OCARTS area there are 23 existing DMS locations, with 12 locations slated for future use. ODOT is responsible for maintaining the signs, which are strategically placed along major highways and interstates within Central Oklahoma, as seen in Figure 12.1.

Figure 12.1: Dynamic Message Signs and Camera Locations



EMERGENCY MANAGEMENT

- **Regional Snow Routes**
  Although severe winter weather is infrequent in Central Oklahoma, it is not uncommon for the region to receive its fair share of winter precipitation. In an effort to improve public safety and avoid crashes attributed to winter weather, multiple municipal, county, and statewide entities and agencies work together to develop a comprehensive annual OCARTS Regional Snow Routes Map that highlights the best route choices for motorist when inclement winter weather strikes. The designated routes are considered to be the highest priority roadways and are to be the first roads to have resources directed to them during snow and ice storms.

  The designated snow routes are the best routes to take if and when drivers are out in a severe winter weather event. However, motorists are encouraged to observe winter driving rules and to only drive on snow and ice covered roads when necessary.

ADVANCED TRAFFIC MANAGEMENT SYSTEMS

Intelligent Transportation Systems (ITS)

Intelligent Transportation Systems (ITS) are the application of communications technologies, information processing, and advanced control strategies designed to assist and enhance transportation operations, mobility, and reduce congestion on roadways. ITS is a proven and critical tool used to effectively combat congestion and incident related traffic problems.

In order to improve the mobility of people and goods, which in turn promotes a strong economy, enhances and protects environmental quality, and improves overall quality of life, ACOG encourages the use and exploration of ITS capabilities for use within individual entities, and promotes the connectivity of roadway technologies between member local governments and across the Central Oklahoma region.

- **ODOT – OU-ITS Lab**
  Apart from the deployment of additional ITS technologies by member local governments, ODOT, in coordination with the School of Electrical and Computer Engineering at the University of Oklahoma, has developed a virtual regional ITS Lab. Since its inception in 2006, the OU-ITS Lab has provided regional stakeholders with direct access to traffic sensor information and travel speeds along major interstate corridors for the purpose of enhancing the traffic incident management process. Real-time video images from major interstate and highway intersections are also available for users on the Oklahoma Pathfinder website. Under defined circumstances, participating stakeholders are also given control over pan-tilt-zoom cameras and DMS.

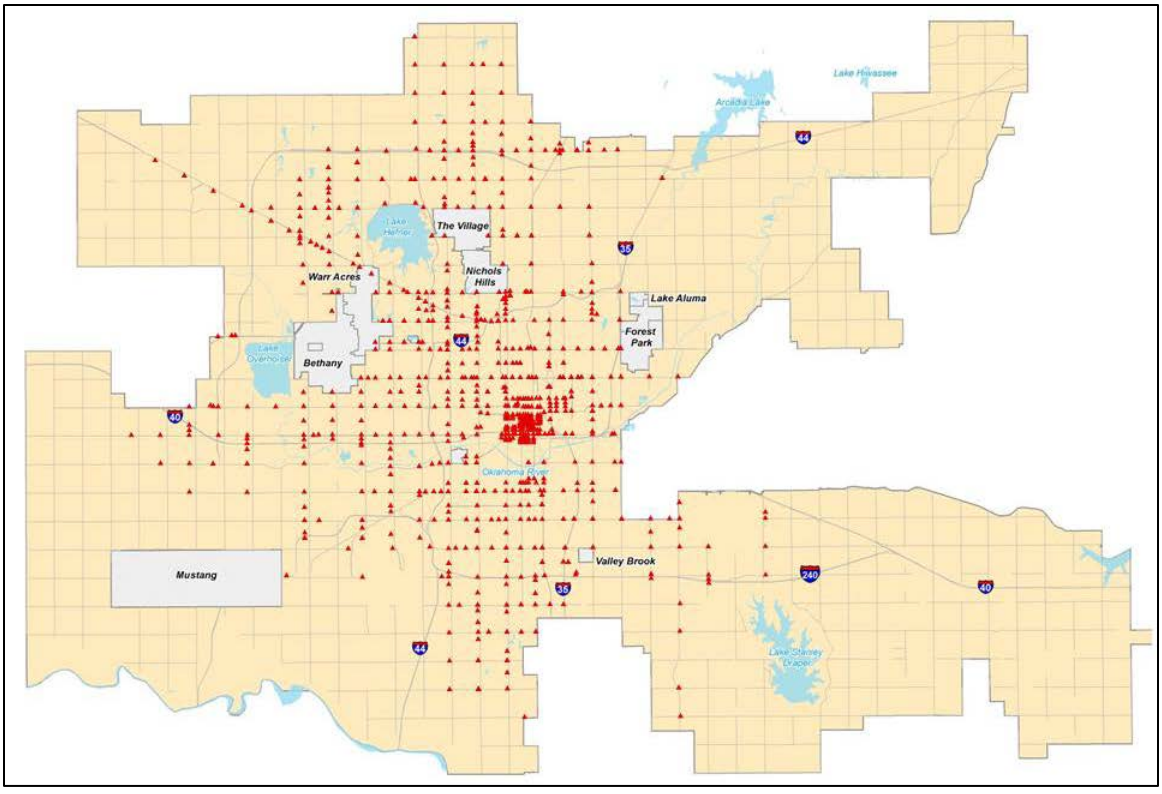
- **Smart Work Zones**
  ODOT has also established and successfully deployed ITS based technology to alert drivers of construction zone delays and drive times to the end of construction zones. Smart Work Zones utilize ITS fiber optics and vehicle sensors to monitor traffic flow in construction zones, enabling motorists to change traffic patterns based on time delays posted on mobile DMS. The messages on the DMSs are triggered by data collected at the sensor sites downstream, relaying information about upcoming traffic conditions to the drivers ahead of time to help them in either choosing an alternate route or simply preparing for upcoming delays. The collected data is uploaded to the Oklahoma Pathfinder website for real-time monitoring, and has provided information to travelers in work zones along major interstate corridors within the OCARTS area.

- **Edmond**
  The City of Edmond completed a feasibility study in 2009 to determine the usefulness and utility of establishing coordinated signalized intersections, a traffic operations management center, as well as the interconnection of controls with active rail crossing devices, and the use of DMS along key thoroughfares. Through the development of an ITS Master Communications Plan, the City has determined that installation of essential hardware, such as a fiber optic network, will be essential to the ongoing success of future ITS implementation and signal coordination within city limits. Construction of the project is slated to begin in 2012.

- **Oklahoma City**
  In November 2010, the City of Oklahoma City began the installation of an ITS system capable of providing dynamic traffic signal timing through automated coordination of the more than 700 signalized intersections throughout Oklahoma City. The project utilizes the existing city-owned Wi-Fi network, one of the largest in the world, to monitor, control and report on the individual signalized intersections where the ITS controllers are installed. The City hopes to have all 700 intersections connected through the system by 2014. See Figure 12.2 for a map of the intersections.

- **Regional Signal Coordination**
  Innovative ITS implementation will remain a top priority for assisting in the analysis of traffic incident patterns and contribute to achieving the overall reduction of recurring and non-recurring congestion in Central Oklahoma. Signal coordination throughout the region is a technology that can provide for the efficient movement of goods, administer safety alerts and countermeasures, and support live traffic updates to centralized traffic management centers within the OCARTS area. Establishing an initial framework of signal coordination between member local governments is fundamental for the continued success of regional transportation organization and for advancing safety efforts to users of the Central Oklahoma transportation system.

Figure 12.2: Oklahoma City Intersection Locations



STREET AND HIGHWAY PROJECT SELECTION

Developing a list of transportation projects that improve the safe movement of people and goods around the region was a critical element in establishing the long-range transportation plan for the OCARTS area. Planned projects span a multitude of transportation options, including bicycle trails, roadways, sidewalks, public transit, and more. Implementing safety measures in all transportation projects is highly encouraged and accident severity rate is a consideration in the selection of projects to receive federal funding.

- STP-UZA
  Surface Transportation Program Urbanized Area (STP-UZA) funds, made available on an annual basis by the Federal Highway Administration through ODOT, are for the implementation of eligible transportation projects within the OCARTS area. Up to 10 percent of these annual funds are available each year to fund 100 percent of eligible safety projects that have been selected. Eligible safety projects include: traffic control signalization, pavement marking, commuter carpooling and vanpooling, installation of traffic signs, traffic lights, guardrails, impact attenuators, concrete barrier end treatments, breakaway utility poles or priority control systems for emergency vehicles or transit vehicles at intersections.

- *Encompass 2035* Project Selection Criteria
  ACOG understands that safety and congestion management are vital to having a high-performing transportation network. A set of criteria was established to encourage projects that employ strategies that are proven to reduce congestion and improve safety. These measures include projects that improve traffic signal timing, access management, intersection geometry and sight distance; add lane capacity; deploy Intelligent Transportation Systems; promote the use of alternate modes of transportation; increase transit services, coverage area, and access; promote carpooling and park-and-ride; and transportation projects located within a school zone.

TRANSIT SAFETY

Integrating safety into all aspects of a transit system's daily operations solidifies an ambition for working toward the prevention of accidents involving public transportation operators and patrons. Transit agencies within the OCARTS area, the Central Oklahoma Parking and Transit Authority (COTPA), Cleveland Area Rapid Transit (CART), and Citylink, are encouraged to rely on the Federal Transit Administration's Transit Safety Management and Performance Measurement Guidebook as a template for establishing their own safety management systems and safety performance measurement systems.

In addition to monthly Unified Planning Work Program Safety Reporting and periodic safety audits, which ensure transit passenger and driver safety, Central Oklahoma transit agencies have incorporated Intelligent Transportation Systems into their daily operations, both within the vehicles and at vehicle maintenance facilities.

- Maintenance Facility Upgrades
  In April 2009, COTPA upgraded their M5 Maintenance Software System, which automates tracking of repair and fueling activities in each METRO Transit bus. In addition, buses are "detected" as they are placed in queue at the fueling bay as to the proper fuel required and which fluids are ready to be refilled in the buses.

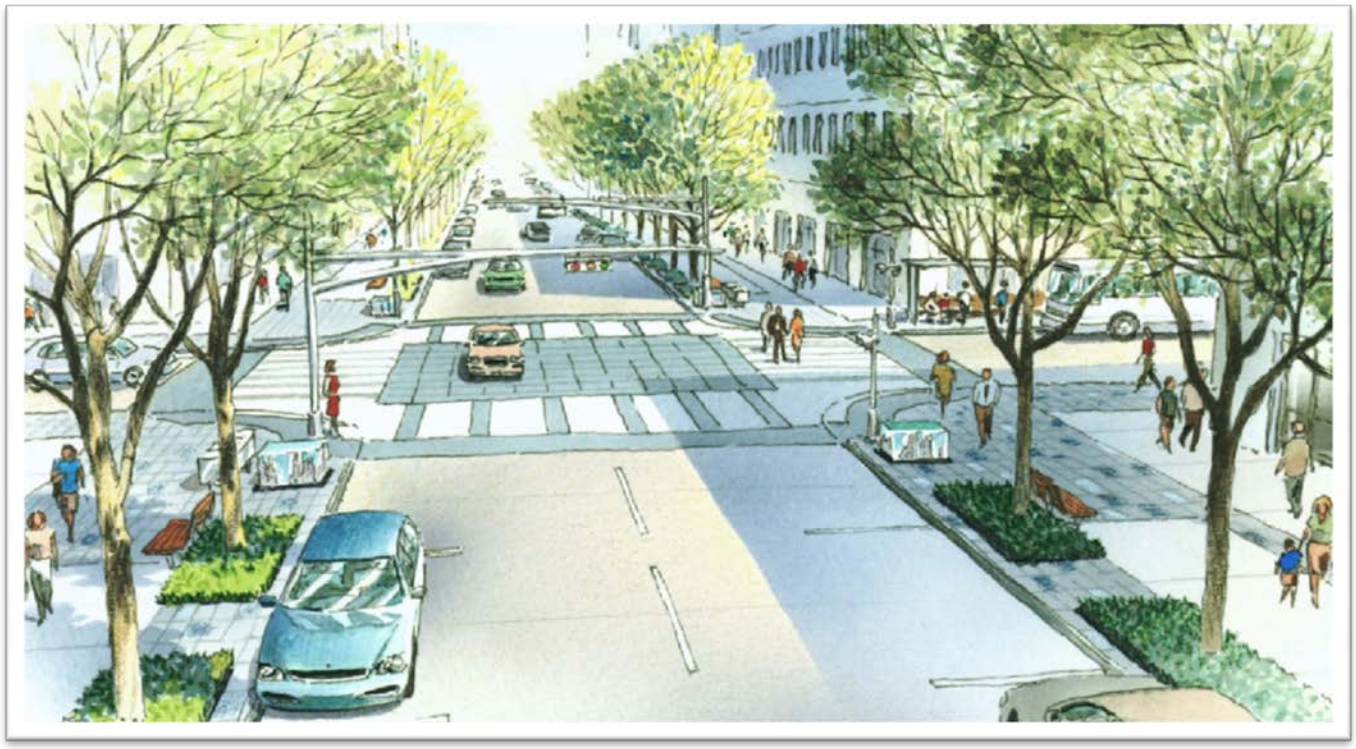
- AVL
  Since 2008, CART has implemented Automated Vehicle Location (AVL) devices on their entire fleet of fixed-route buses, including an automated passenger counting system. The Agency has also installed on-board camera systems to ensure safety of drivers and passengers. Likewise, COTPA is slated to install similar AVL devices and on-board camera systems to their fleet of buses.

BICYCLE AND PEDESTRIAN SAFETY

Central Oklahoma has witnessed a renewed interest in sidewalk and bicycle facility construction. Aging infrastructure and simply the desire to provide residents with more and better transportation options has fueled its resurgence and produced a safer system that has been nationally recognized. Inspired enthusiasm in prioritizing sidewalk and trail construction projects spans the gap between Complete Street Initiatives on existing and new roadway infrastructure and increases interest in safe recreational transportation options for public use.

- Complete Street Initiatives
  - Project 180

    In an effort to improve the appearance of downtown Oklahoma City streets, sidewalks, parks and plazas, and make the central core more pedestrian friendly, Oklahoma City initiated a four-year downtown revitalization measure known as Project 180. The project, funded largely from Tax Increment Financing (TIF) from the Devon Tower construction, called for the addition of landscaping, public art, marked bike lanes, decorative street lighting, reduction of street lanes in an effort to slow traffic, and additional on-street parking spaces within the Central Business District.



- Trail Design Workshops

  Transportation planners and engineers are encouraged to participate in various multimodal workshops aimed at promoting bicycle and pedestrian friendly communities and construction projects. The first Oklahoma Bike Summit was held in Oklahoma City in 2011, which highlighted many opportunities for planners and engineers to incorporate bicycle, pedestrian, and multi-modal infrastructure into the current roadway framework. Bike Friendly Community Workshops, sponsored by the League of American Bicyclists, encourage communities to review their current bicycle and pedestrian infrastructure and prioritize consideration for future expansion of their current non-motorized infrastructure.

  The national Safe Routes to School Program connects parents, schools, community leaders and government officials and promotes improved health and well-being by enabling and encouraging children to walk or bike to school.

- **Bike Friendly America**
  Sponsored by the League of American Bicyclists, Bike Friendly America is a program that provides incentives, hands-on assistance, and awards communities, universities, and businesses that actively support bicycling and foster a bike-friendly environment within their communities. In 2011, the City of Norman was designated a Bicycle Friendly Community, and received a bronze rating for adding striped bike lanes and increased bicycle signage and other bicycle related facilities along existing bike routes within the city. All communities within the OCARTS area are encouraged to review their existing multimodal transportation infrastructure and increase safety by placing an emphasis on separating bike and pedestrian facilities from motor vehicle facilities.

- **3-Foot Law**
  In 2006, the Oklahoma State Legislature passed a bill requiring motorists to yield at least three feet from a bicyclist when passing on a roadway. To ensure compliance at the local law enforcement level, Oklahoma City, Edmond and Norman adopted city ordinances in support of the state law. The passing of the bill and ratifying of city ordinances demonstrates a desired commitment for bicycle safety in Oklahoma, and paves a path for future, safety-driven bicycle and pedestrian efforts.

TRANSPORTATION SECURITY

Concern over the security of the transportation system has grown as the country has responded to increasing incidents of terrorism and natural disasters. Federal regulations now require that security be addressed as a separate factor in the long-range transportation planning process.

ACOG has embraced this mandate and is actively involved in dialogue among local governments, transportation providers, and emergency responders regarding the regional coordination of response plans, response capabilities, and emergency medical services in the event of a major incident or catastrophic event. The region's intelligent transportation infrastructure is an integral part of our region's security. Current and future transportation and transit ITS elements include closed-circuit televisions, lane control signals, dynamic message signs, vehicle detectors, transit vehicle tracking, integrated radio systems and automated vehicle location, and centralized intersection signal control. These traffic monitoring, incident detection, and response systems are utilized in improving the security of the regional transportation system.

ACOG has a long history of working in the area of security and emergency management. ACOG was instrumental in developing and implementing the enhanced 9-1-1 emergency system in Central Oklahoma. System financing was provided by a vote of the area's citizens in the spring of 1987, followed by the system coming "on-line" May 1, 1989.

Again in 2005, ACOG led a regional movement to address the 9-1-1 system's capacity to receive calls from mobile phones with the number and location information necessary to dispatch emergency services. A regional election was held in December 2005, and voters in all counties in Central Oklahoma voted yes for approval of a monthly service fee to finance the system. Since then, the system has been built out and awaits future developments as technology evolves.

- **Emergency Evacuation Coordination**
  Understanding the critical role transportation infrastructure can play in a catastrophic event, ACOG has increased its involvement in regional security working groups. In 2007, ACOG participated with other regional stakeholders to develop an evacuation plan for the Oklahoma Office of Homeland Security Region 6 (Canadian County, Cleveland County, Lincoln County, Logan County, McClain County, and Pottawatomie County) and Region 8 (Oklahoma County). The plan grants the governor and political subdivisions the authority to require evacuation during an emergency that threatens the health and safety of the public. The plan addresses resources that would be available to respond to the need for localized evacuations in the event of natural or man-made catastrophes, such as acts of terrorism or a release of hazardous materials.

The plan also outlines evacuation operations and notification procedures through the state's 511 system, mass transit notification, designation of evacuation routes, and traffic management coordination between the Oklahoma Department of Transportation, Oklahoma Turnpike Authority, Oklahoma Highway Patrol and local law enforcement agencies.

- Identifying Security Gaps

  Central Oklahoma is blessed with an extensive transportation network; a network that residents have come to depend on in their daily activities. As part of the region's preparedness efforts, *Encompass 2035* addresses the need to identify critical infrastructure that may be at risk. This analysis underscores the importance of having a transportation network that "builds in" redundancy for moving large numbers of people and goods, and strategies for dealing with choke points or bottlenecks in the system. Through a careful analysis of future traffic congestion and the ability of our regional infrastructure to accommodate that growth, the *Encompass 2035* Plan identifies infrastructure improvements that will keep the transportation system functional. Planned improvements can be viewed in Chapter 13 – The Adopted Plan.

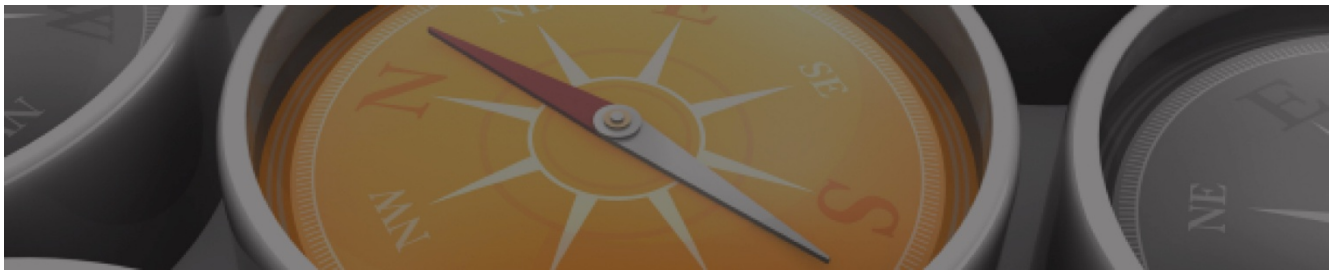
  Encompass 2035 also recognizes the need to maintain the existing streets and bridges that are critical to a safe and secure system. In fact, over 50 percent of projected transportation funds will be allocated to street and bridge maintenance. The Oklahoma Department of Transportation has accelerated its bridge maintenance efforts throughout the state. Since 2006, ODOT has replaced or rehabilitated 626 bridges and will replace an additional 799 bridges, including 416 structurally deficient bridges, as part of the 2012-2019 Construction Work Plan.

WHAT IS THE SELECTED PLAN FOR 2035?

CHAPTER 13: THE ADOPTED PLAN

CHAPTER 14: FINANCIAL STRATEGIES, REVENUES AND COST

CHAPTER 15: CLOSING



CHAPTER 13: THE ADOPTED PLAN

The long-range transportation plan, known as *Encompass 2035*, was adopted on April 28, 2011. It includes both location-specific projects and policy recommendations. It contains all modes of transportation within the OCARTS area and consists of affordable improvements, as well as maintenance of those improvements, which are based on a realistic projection of transportation revenues for this region.

POLICY RECOMMENDATIONS

The following policy recommendations are supportive of the *Encompass 2035* goals adopted by the MPO policy board. In order to implement many of these policies, they will need to be supported and adopted at the local level. It is recognized that not all OCARTS local governments will choose to implement every recommendation and that, depending on the urban or rural nature of the community or parts of the community, not all recommendations are appropriate throughout the entire study area. In addition, many recommendations are multimodal in nature, thereby enhancing the concept of a seamless regional transportation system.

I. BICYCLE POLICY RECOMMENDATIONS:

- Encourage adoption of ordinances providing for the implementation of safe bicycle facilities that meet minimum design standards of the American Association of State Highway Transportation Officials (AASHTO).
- Enforce the 2006 State law that established a minimum 3' safe-passing distance from bicyclists by motorists through adoption at the local level.
- Encourage connections within communities by linking neighborhoods with popular destinations such as schools, employment, retail centers, tourist attractions, medical facilities, and outdoor recreation areas.
- Evaluate potential connections between transit routes, park-and-ride lots, pedestrian ways, and existing and planned bicycle routes for opportunities to improve connections among modes.
- Explore opportunities for preservation and/or construction of bicycle facilities within floodways, greenways, public open spaces, utility rights-of-way, abandoned railroad rights-of-way, and school land.
- Encourage cooperation and coordination among cities, state agencies and the private sector regarding public awareness, education, safety, and funding relating to bicycle use.
- Continue to regularly update the OCARTS area bicycle database containing existing and planned facilities.
- Support cycling through activities such as Bike-to-Work Day, which promote riding a bicycle as a viable mode of transportation.
- Encourage employers to provide support facilities for employees who bicycle to work.
- Implement Complete Street principles, as appropriate, when constructing and/or improving streets, highways, and bridges.

II. PEDESTRIAN POLICY RECOMMENDATIONS:

- Encourage the adoption of ordinances requiring sidewalk construction in conjunction with residential and commercial development and redevelopment.
- Explore opportunities for preservation or construction of pedestrian pathways within floodways, greenways, public open spaces, utility rights-of-way, abandoned railroad rights-of-way, and school land.
- Link pedestrian systems with transit stop locations, nearby schools, and retail centers.
- Encourage cooperation and coordination among cities, state agencies and the private sector regarding public awareness, education, safety, and funding relating to pedestrian facilities.
- Encourage communities to include sidewalks in conjunction with street improvement projects, and implement Complete Street principles, as appropriate.
- Ensure that pedestrian projects meet or exceed ADA accessibility standards. Identify gaps and retrofit existing locations that lack accessible sidewalks.

III. TRANSIT POLICY RECOMMENDATIONS:

- Continue transit coordination discussions as begun under the Regional Transit Dialogue, to include topics such as a regional transit authority, dedicated local funding source(s) to expand public transportation, and appropriate state legislation to establish and implement a regional transit authority.
- Implement the recommendations of the 2005 Fixed Guideway Study.
- Pursue funding for and development of a regional intermodal transportation hub.
- Encourage improved coordination between land use and transit planning, including pedestrian and bicycle connections to transit routes, practical transit stop locations, transit shelters, park-and-ride lots, access for elderly and disabled, and transit oriented development.
- Improve transit access to Will Rogers World Airport.
- Continue to promote regional clean air goals by providing alternatives to the single occupant motor vehicle, including more express bus routes, park-and-ride opportunities, reduced or free bus fare on Ozone Alert Days, and the purchase of alternative-fueled buses.
- Enhance marketing of new and existing transit services to expand ridership.
- Pursue efforts to fund and expand passenger rail service linking Oklahoma City with other cities and states.

IV. INTERMODAL FREIGHT POLICY RECOMMENDATIONS:

- Encourage development of intermodal facilities and connections to enhance and integrate area freight movement.
- Increase goods movement efficiency through freight specific intelligent technology.
- Closely coordinate the efforts of ODOT and the MPO of routine freight data collection and freight modeling.

TRUCK FREIGHT POLICY RECOMMENDATIONS:

- Improve commercial vehicle routes in conjunction with roadway construction projects.
- Consider wider turning radii, greater pavement strength, improved access management, and elimination of safety hazards on heavily traveled commercial vehicle routes.
- Work with the State and private stakeholders to study potential rerouting of through-traffic around the core metropolitan area.
- Enhance MPO participation in the planning and implementation of Commercial Vehicle Operations (CVO) deployment.
- Explore development of a regional truck route system.

RAIL FREIGHT POLICY RECOMMENDATIONS:

- Work with ODOT Rail Division to alleviate safety concerns at railroad crossings, upgrade key crossings with mast arms, lights and/or other safety features, and eliminate unnecessary or poorly functioning crossings.
- Consider grade separation at high traffic railroad crossings.
- Encourage industrial development near rail corridors to enhance intermodal freight movement.
- Participate in the development and implementation of the State Rail Plan.

AIR FREIGHT POLICY RECOMMENDATIONS:

- Enhance MPO participation in airport planning efforts to ensure optimal use of the street and highway network accessing the airport facilities.
- Consider implementing Travel Demand Management (TDM) strategies and Intelligent Transportation Systems (ITS) technologies to increase the capacity of the street and highway network providing access to the airport.

V. STREET AND HIGHWAY POLICY RECOMMENDATIONS:

- Implement *Encompass 2035* street and highway improvements to minimize congestion and improve safety throughout the OCARTS area
- Maintaining the existing transportation system must be a priority
- Improve the integration of transportation and land use to reduce automobile trips, decrease travel time, enhance mobility, and preserve agricultural and recreational lands
- Improve the efficiency of the region's existing transportation system by utilizing technology to improve traffic flow and reduce accidents, bottlenecks, and congestion.

VI. MANAGEMENT SYSTEMS RECOMMENDATIONS

- Evaluate and update the regional Congestion Management Process.
- Implement identified Congestion Management Process strategies and monitor their effectiveness.
- Coordinate the implementation and maintenance of the OCARTS Regional Intelligent Transportation Systems Architecture.

- Implement and expand the use of Intelligent Transportation Systems and Transportation System Management strategies on highways and heavily traveled arterials.
- Develop a Regional Operations Plan to assist with the coordination of traffic control among jurisdictions.
- Improve regional traffic incident management to include public education on the Quick Clearance law, increased use of Dynamic Message Signs for motorist information, and development of regular multi-agency traffic incident management training sessions.

VII. SECURITY RECOMMENDATIONS

- Ensure transportation sector involvement in emergency preparedness planning efforts.
- Encourage engagement of key transportation stakeholders in the security planning process.
- Involve transportation sector in emergency preparedness training and exercises.
- Encourage transportation sector engagement in special needs populations planning.

VIII. IMPACT RECOMMENDATIONS

TRANSPORTATION AND LAND USE

- Strengthen integration of land use and transportation to create active and healthy communities
- Encourage adoption of Complete Streets policies that help make roadways safe, attractive, and comfortable for all users
- Encourage mixed use development
- Encourage land use patterns that reduce travel distance
- Improve and increase walkability of the region.
- Encourage visually attractive streetscapes.

AIR QUALITY

- Continue regional air quality public education efforts that reduce vehicle trips and transportation related emissions.
- Develop regional strategies that encourage more transportation efficient land use.
- Develop consistency between land use and transportation plans to support reduction in auto dependency.
- Encourage non-motorized transportation through the adoption of Complete Street policies that help make roadways safe, attractive, and comfortable for all users.
- Encourage use of public transportation. (Refer to the Transit Recommendations.)

- Encourage policies to reduce the use of petroleum based products by using alternative and renewable fuels, fuel economy measures, and idle reduction technologies.

- Encourage system efficiency through operational and incident management, as well as increased traveler information.

ACCESSIBILITY

- Increase accessibility to and between centers of activity and regional employment centers.

- Improve access and coordination among human service agencies as well as public and private transportation providers.

EQUITY

- Ensure participation by potentially affected populations in the decision making process.

- Ensure that transportation improvements and services are provided equitably.

- Provide more materials in languages other than English where feasible and appropriate.

PROJECT SPECIFIC RECOMMENDATIONS – BICYCLE AND PEDESTRIAN PROJECTS

The following projects include the *Planned Bicycle Facilities* shown in Chapter 8 of this report, as well as the planned bicycle and pedestrian improvements that were submitted by OCARTS area local governments, primarily in conjunction with a roadway project, during the *Encompass 2035* Call for Projects.

Planned projects include those which have been endorsed by the local community through inclusion in an adopted master plan, by resolution, or through a grant agreement with a state or federal funding agency. This list is not intended to be all inclusive. Any additional bicycle and pedestrian facilities constructed in conjunction with road improvements, or independently, are encouraged in order to further the region's bicycle and pedestrian networks.

Table 13.1: List of Planned Bicycle/Pedestrian Projects

Improvement Location	From	To	Improvement*	Length (Miles)	Project Source	Entity
Choctaw Rd.	N. 63rd St.	S. 29th St.	SOR, BL	7.00	E2035 Call for Projects	Choctaw
Choctaw Rd.	N. 50th St.	N. 10th St.	SH	3.01	Bike/Ped Report	Choctaw
Choctaw Rd.	N. 10th St.	S. 29th St.	BPS	3.08	Bike/Ped Report	Choctaw
Choctaw Trail	E. of Henney Rd.	W. of Indian Meridian Rd.	BPS	2.27	Bike/Ped Report	Choctaw
Clarke & Katherine St.	N. 36th St.	N. 23rd St.	SH	1.00	Bike/Ped Report	Choctaw
Conner Rd.	S. 15th St.	S. of S. 15th St.	SH	0.44	Bike/Ped Report	Choctaw
Croydon Rd.	W. of Hiwassee Rd.	Choctaw Rd.	BPS	2.53	Bike/Ped Report	Choctaw
Del Ct.	N. 10th St.	S. 15th St.	BPS	1.97	Bike/Ped Report	Choctaw
Grand Ave.	Henney Rd.	Choctaw Rd.	BPS	1.00	Bike/Ped Report	Choctaw
Harper St.	N. 50th St.	N. 36th St.	BPS	1.01	Bike/Ped Report	Choctaw
Harper St.	N. 36th St.	N. 10th St.	SH	2.02	Bike/Ped Report	Choctaw
Harper Rd.	1st St.	N. 10th St.	BL	1.50	E2035 Call for Projects	Choctaw
Harper St., Trail W. of	S. of N. 23rd St.	N. of N. 10th St.	BPS	0.25	Bike/Ped Report	Choctaw
Henney Rd.	N. of N. 10th St.	S. of N. 10th St.	BPS	1.04	Bike/Ped Report	Choctaw
Henney Rd.	N. 63rd St.	N. 10th St.	SH	4.12	Bike/Ped Report	Choctaw
Henney Rd., Trail E. of	N. of N. 23rd St.	N. 23rd St.	BPS	0.40	Bike/Ped Report	Choctaw
Hiwassee Rd.	N. 36th St.	N. 23rd St.	SH	1.00	Bike/Ped Report	Choctaw
Hiwassee Rd.	N. 10th St.	S. 15th St.	SH	1.96	Bike/Ped Report	Choctaw
Indian Meridian Rd.	N. 36th St.	N. 10th St.	SH	2.00	Bike/Ped Report	Choctaw
Indian Meridian Rd.	S. 15th St.	S. 29th St.	SH	1.00	Bike/Ped Report	Choctaw
Kent Dr.	N. of N. 10th St.	N. 10th St.	BPS	0.13	Bike/Ped Report	Choctaw
Leslie Rd.	W. of Indian Meridian Rd.	Indian Meridian Rd.	SH	0.39	Bike/Ped Report	Choctaw
Louise Dr.	N. 36th St.	N. 23rd St.	SH	1.00	Bike/Ped Report	Choctaw
Main St.	N. of N. 23rd St.	N. 23rd St.	BPS	0.40	Bike/Ped Report	Choctaw
Orchard Rd.	S. of N. 23rd St.	S. 29th St.	BPS	4.08	Bike/Ped Report	Choctaw
Triple X Rd.	N. of N. 50th St.	S. 15th St.	SH	5.70	Bike/Ped Report	Choctaw
Whippoorwill Rd.	N. 23rd St.	S. 15th St.	BPS	3.50	Bike/Ped Report	Choctaw
Willow Rd.	N. 23rd St.	S. 15th St.	BPS	3.18	Bike/Ped Report	Choctaw
N. 36th St.	Hiwassee Rd.	Indian Meridian Rd.	SH	3.00	Bike/Ped Report	Choctaw
N. 23rd St.	Hiwassee Rd.	Triple X Rd.	SH	3.96	Bike/Ped Report	Choctaw
N. 21st St.	Hiwassee Rd.	Indian Meridian Rd.	BPS	4.06	Bike/Ped Report	Choctaw
N. 10th St.	Westminster Rd.	Triple X Rd.	SH	5.95	Bike/Ped Report	Choctaw
N. 10th St., Trail N. of	Anderson Rd.	Henney Rd.	BPS	2.21	Bike/Ped Report	Choctaw
N. 10th St.	Henney Rd.	Choctaw Rd.	BL	1.00	E2035 Call for Projects	Choctaw
3rd St.	Hiwassee Rd.	E. of Choctaw Rd.	BPS	2.53	Bike/Ped Report	Choctaw
S. 15th St.	Hiwassee Rd.	Triple X Rd.	SH	3.96	Bike/Ped Report	Choctaw
S. 29th St.	Choctaw Rd.	Triple X Rd.	BPS	1.96	Bike/Ped Report	Choctaw
Ray Trent Park Trail	W. of Sunnylane Rd.	S. of Reno Ave.	BPS	1.61	Bike/Ped Report	Del City
Arcadia Lake Trail	N. 178th St. (Edmond Rd.)	N. 136th St. (Memorial Rd.)	BPS	14.39	Bike/Ped Report	Edmond
Blake Park Trail	N. 192nd St. (Danforth Rd.)	N. of N. 178th St. (Edmond Rd.)	BPS	0.94	Bike/Ped Report	Edmond
Broadway Ave.	N. 248th St. (Waterloo Rd.)	N. 234th St. (Sorghum Mill Rd.)	BPS, S	1.00	E2035 Call for Projects	Edmond
Broadway Ave.	N. 234th St. (Sorghum Mill Rd.)	N. 220th St. (Coffee Creek Rd.)	BPS, S	1.00	E2035 Call for Projects	Edmond
Broadway Ave.	N. 220th St. (Coffee Creek Rd.)	N. 206th St. (Covell Rd.)	BPS, S	1.00	E2035 Call for Projects	Edmond
Bryant Ave.	N. 206th St. (Covell Rd.)	N. 192nd St. (Danforth Rd.)	BPS, S	1.00	E2035 Call for Projects	Edmond
Bryant Ave.	N. 192nd St. (Danforth Rd.)	N. 178th St. (Edmond Rd./US-77)	BPS, S	1.00	E2035 Call for Projects	Edmond
Bryant Ave.	9th St.	N. 150th St. (33rd St.)	BPS, S	1.50	E2035 Call for Projects	Edmond
Chisholm Creek Trail	N. 220th St. (Coffee Creek Rd.)	S. of N. 206th St. (Covell Rd.)	BPS	2.01	Bike/Ped Report	Edmond
Chisholm Creek Trib. Trail	N. 178th St. (Edmond Rd.)	N. 164th St. (33rd St.)	BPS	5.61	Bike/Ped Report	Edmond

*BL = Bicycle Lane; BPE = Bicycle path exclusive to bicycles; BPS = Bicycle path shared with pedestrians; S = Sidewalks; SH = Bicycle route using roadway shoulder; SOR = Signed-on-road bicycle route

Improvement Location	From	To	Improvement*	Length (Miles)	Project Source	Entity
Chisholm Creek Trib. Trail	Western Ave.	E. of Santa Fe Ave.	BPS	2.22	Bike/Ped Report	Edmond
Chisholm Creek Trib. Trail	W. of Santa Fe Ave.	Kelly Ave.	BPS	1.92	Bike/Ped Report	Edmond
Coffee Creek Trail	Sunnylane Rd. (Coltrane Rd.)	Anderson Rd.	BPS	10.03	Bike/Ped Report	Edmond
Cowbell Creek Trail	N. of N. 234th St. (Sorghum Mill Rd.)	N. of N. 220th St. (Coffee Creek Rd.)	BPS	1.23	Bike/Ped Report	Edmond
Deep Fork River Trail	W. of Post Rd.	Henney Rd.	BPS	5.09	Bike/Ped Report	Edmond
Eastern Ave. (Boulevard)	N. 192nd St. (Danforth Rd.)	N. 164th St. (15th St.)	SOR	2.11	Bike/Ped Report	Edmond
Fink Park Trail	N. 178th St. (Edmond Rd.)	N. of N. 164th St. (15th St.)	BPS	1.11	Bike/Ped Report	Edmond
Fox Lake Trail	S. of N. 178th St. (Edmond Rd.)	N. 164th St. (15th St.)	BPS	0.68	Bike/Ped Report	Edmond
Kelly Ave.	N. 248th St. (Waterloo Rd.)	N. 150th St. (33rd St.)	SOR	7.02	Bike/Ped Report	Edmond
Kelly Ave.	N. 248th St. (Waterloo Rd.)	N. 220th St. (Coffee Creek Rd.)	BPS, S	2.00	E2035 Call for Projects	Edmond
Kelly Ave.	N. 192nd St. (Danforth Rd.)	N. 178th St. (Edmond Rd.)	BPS, S	1.00	E2035 Call for Projects	Edmond
Kelly Ave.	N. 178th St. (Edmond Rd.)	N. 164th St. (15th St.)	BPS, S	1.00	E2035 Call for Projects	Edmond
Kelly Ave.	N. 150th St. (33rd St.)	0.5 mile S. of N. 150th St. (33rd St.)	S	0.50	E2035 Call for Projects	Edmond
Kickingbird Powerline Trail	N. 192nd St. (Danforth Rd.)	N. 164th St. (15th St.)	BPS	2.39	Bike/Ped Report	Edmond
N. Coffee Creek Tributary Trail	Eastern Ave.	Sunnylane Rd. (Coltrane Rd.)	BPS	2.50	Bike/Ped Report	Edmond
N. Spring Creek Trail	E. of Bryant Ave.	E. of Sunnylane Rd. (Coltrane Rd.)	BPS	1.52	Bike/Ped Report	Edmond
OG&E Trail	Eastern Ave.	W. of Sunnylane Rd. (Coltrane Rd.)	BPS	1.80	Bike/Ped Report	Edmond
Oil Peaving Creek Trail	N. of N. 234th St. (Sorghum Mill Rd.)	S. of N. 220th St. (Coffee Creek Rd.)	BPS	3.25	Bike/Ped Report	Edmond
Ross School Trail	E. of Santa Fe Ave.	Broadway Ave.	BPS	1.76	Bike/Ped Report	Edmond
S. Coffee Creek Tributary Trail	Eastern Ave. (Boulevard)	Sunnylane Rd. (Coltrane Rd.)	BPS	3.08	Bike/Ped Report	Edmond
Santa Fe Ave.	N. 206th St. (Covell Rd.)	N. 164th St. (15th St.)	SOR	3.01	Bike/Ped Report	Edmond
Santa Fe Railroad Trail	N. 248th St. (Waterloo Rd.)	S. of N. 150th St. (33rd St.)	BPS	7.75	Bike/Ped Report	Edmond
Soldier Creek Trail	N. of N. 234th St. (Sorghum Mill Rd.)	N. of N. 178th St. (Edmond Rd.)	BPS	4.70	Bike/Ped Report	Edmond
Sooner Rd.	N. 206th St. (Covell Rd.)	0.5 mile S. of N. 192nd St. (Danforth Rd.)	BPS, S	1.50	E2035 Call for Projects	Edmond
Spring Creek Trail	E. of Eastern Ave. (Boulevard)	E. of Air Depot Blvd.	BPS	5.13	Bike/Ped Report	Edmond
Sunnylane Rd. (Coltrane Rd.)	N. of N. 234th St. (Sorghum Mill Rd.)	S. of N. 150th St. (33rd St.)	SOR	7.00	Bike/Ped Report	Edmond
Sunnylane Rd. (Coltrane Rd.)	N. 206th St. (Covell Rd.)	N. 192nd St. (Danforth Rd.)	BPS, S	1.00	E2035 Call for Projects	Edmond
Sunnylane Rd. (Coltrane Rd.)	N. 192nd St. (Danforth Rd.)	N. 164th St. (15th St.)	BPS, S	2.00	E2035 Call for Projects	Edmond
Sunnylane Rd. (Coltrane Rd.)	N. 164th St. (15th St.)	N. 150th St. (33rd St.)	BPS, S	1.00	E2035 Call for Projects	Edmond
Thatcher St.	E. of Kelly Ave.	E. of Eastern Ave. (Boulevard)	SOR	0.68	Bike/Ped Report	Edmond
University of Central Oklahoma Linkage	W. of Eastern Ave. (Boulevard)	E. of Bryant Ave.	SOR	3.24	Bike/Ped Report	Edmond
Willow Creek Trail	N. 164th St. (15th St.)	S. of N. 150th St. (33rd St.)	BPS	1.31	Bike/Ped Report	Edmond
N. 206th St. (Covell Rd.)	Pennsylvania Ave.	Midwest Blvd.	SOR	8.66	Bike/Ped Report	Edmond
N. 206th St. (Covell Rd.)	Broadway Ave.	Sunnylane Rd. (Coltrane Rd.)	BPS, S	1.80	E2035 Call for Projects	Edmond
N. 206th St. (Covell Rd.)	Sunnylane Rd. (Coltrane Rd.)	I-35	BPS, S	1.20	E2035 Call for Projects	Edmond
N. 192nd St. (Danforth Rd.)	Kelly Ave.	Sunnylane Rd. (Coltrane Rd.)	SOR	3.00	Bike/Ped Report	Edmond
N. 192nd St. (Danforth Rd.)	Sunnylane Rd. (Coltrane Rd.)	I-35	BPS, S	1.20	E2035 Call for Projects	Edmond
N. 178th St. (Edmond Rd.)	0.5 mile W. of Santa Fe Ave.	Kelly Ave.	BPS, S	1.50	E2035 Call for Projects	Edmond
N. 178th St. (Edmond Rd.)	Kelly Ave.	Fretz Ave.	BPS, S	0.50	E2035 Call for Projects	Edmond
7th St.	Kelly Ave.	Eastern Ave. (Boulevard)	SOR	1.26	Bike/Ped Report	Edmond
N. 164th St. (15th St.)	Santa Fe Ave.	Midwest Blvd.	SOR	7.21	Bike/Ped Report	Edmond
N. 150th St. (33rd St.)	Kelly Ave.	Sunnylane Rd. (Coltrane Rd.)	SOR	3.39	Bike/Ped Report	Edmond
N. 150th St. (33rd St.)	Kelly Ave.	Boulevard	BPS, S	1.00	E2035 Call for Projects	Edmond
N. 150th St. (33rd St.)	Boulevard	Bryant Ave.	BPS, S	1.00	E2035 Call for Projects	Edmond
N. 150th St. (33rd St.)	Sunnylane Rd. (Coltrane Rd.)	I-35	BPS, S	1.00	E2035 Call for Projects	Edmond
Bird Creek Trail	Sooner Rd. (Division St.)	E. of Air Depot Blvd. (Pine St.)	BPS	1.76	Bike/Ped Report	Guthrie
Children's Home Linkage	College Ave.	S. of College Ave.	BPS	0.17	Bike/Ped Report	Guthrie
Cottonwood Creek Linkage	W. of Sunnylane Rd. (Coltrane Rd.)	W. of Sooner Rd. (Division St.)	BPS	1.65	Bike/Ped Report	Guthrie
Guthrie Business Park Trail	W. of Sooner Rd. (Division St.)	E. of Sooner Rd. (Division St.)	BPS	0.73	Bike/Ped Report	Guthrie
Guthrie Lake Trail	Sunnylane Rd. (Coltrane Rd.)	Sooner Rd. (Division St.)	BPS	3.79	Bike/Ped Report	Guthrie
Industrial Rd./Backhaus Rd.	N. of University Ave.	University Ave.	BPS	0.26	Bike/Ped Report	Guthrie

*BL = Bicycle Lane; BPE = Bicycle path exclusive to bicycles; BPS = Bicycle path shared with pedestrians; S = Sidewalks; SH = Bicycle route using roadway shoulder; SOR = Signed-on-road bicycle route

Improvement Location	From	To	Improvement*	Length (Miles)	Project Source	Entity
Kiwanis Trail	College Ave.	S. of College Ave.	BPS	0.28	Bike/Ped Report	Guthrie
Liberty Lake Trail	N. of Seward Rd.	Forrest Hills Rd.	BPS	4.03	Bike/Ped Report	Guthrie
Liberty-Guthrie Lakes Linkage	Camp Rd. (Lakewood Rd.)	Seward Rd.	BPS	1.27	Bike/Ped Report	Guthrie
Santa Fe Trail	N. of College Ave.	Industrial Rd.	BPS	2.43	Bike/Ped Report	Guthrie
Santa Fe Trail	Triplett Rd.	Camp Rd.	BPS	1.08	Bike/Ped Report	Guthrie
Snake Creek Trail	University Ave.	Prairie Grove Rd.	BPS	4.88	Bike/Ped Report	Guthrie
Beal St.	W. of Harrah Rd. (Church Ave.)	Harrah Rd. (Church Ave.)	BPS	0.20	Bike/Ped Report	Harrah
Dobbs Rd.	N. of N. 23rd St.	N. of N. 10th St.	BPS	0.86	Bike/Ped Report	Harrah
Downtown Linkage	S. of N. 23rd St.	N. of N. 10th St.	BPS	0.64	Bike/Ped Report	Harrah
Elm St.	Dobbs Rd.	W. of Harrah Rd. (Church Ave.)	BPS	0.50	Bike/Ped Report	Harrah
Harrah Community Trail (Phase II)	E. of Dobbs Rd.	Harrah Rd. (Church Ave.)	BPS	0.97	Bike/Ped Report	Harrah
Harrah Park Trail (Phase II)	W. of Harrah Rd. (Church Ave.)	E. of Harrah Rd. (Church Ave.)	BPS	0.35	Bike/Ped Report	Harrah
Harrah Schools Linkage	Dobbs Rd.	E. of Dobbs Rd.	BPS	1.03	Bike/Ped Report	Harrah
Harrison St.	N. 23rd St.	S. of N. 23rd St.	BPS	0.36	Bike/Ped Report	Harrah
Russell Babb Elementary School	N. of N. 10th St.	N. 10th St.	BPS	0.38	Bike/Ped Report	Harrah
Tim Holt Dr.	S. of N. 23rd St.	N. 10th St.	BPS	0.82	Bike/Ped Report	Harrah
Walker St.	E. of Dobbs Rd.	W. of Harrah Rd. (Church Ave.)	BPS	0.25	Bike/Ped Report	Harrah
N. 23rd St. Linkage	W. of Dobbs Rd.	Dobbs Rd.	BPS	0.11	Bike/Ped Report	Harrah
Guthrie Business Park Trail	E. of Sunnylane Rd. (Coltrane Rd.)	W. of Sooner Rd. (Division St.)	BPS	0.17	Bike/Ped Report	Logan County
Guthrie Business Park Trail	E. of Sooner Rd. (Division St.)	Air Depot Blvd. (Pine St.)	BPS	3.06	Bike/Ped Report	Logan County
Industrial Rd./Backhaus Rd.	University Ave.	Industrial Rd.	BPS	1.78	Bike/Ped Report	Logan County
Santa Fe Trail	Industrial Rd.	Triplett Rd.	BPS	2.04	Bike/Ped Report	Logan County
Snake Creek Trail	E. of Sunnylane Rd. (Coltrane Rd.)	W. of Sooner Rd. (Division St.)	BPS	0.21	Bike/Ped Report	Logan County
Bella Vista Dr.	N. 10th St.	Reno Ave.	SOR	1.08	Bike/Ped Report	Midwest City
Choctaw Creek	W. of Anderson Rd.	Hiwassee Rd.	BPS	2.53	Bike/Ped Report	Midwest City
Choctaw Creek Connector	N. of Reno Ave.	N. of S. 29th St.	BPS	3.97	Bike/Ped Report	Midwest City
Crutcho Creek	N. of N. 36th St.	Reno Ave.	BPS	4.70	Bike/Ped Report	Midwest City
Crutcho Creek Connector	S. of Reno Ave.	S. 29th St.	BPS	2.17	Bike/Ped Report	Midwest City
Draper Lake	S. of S. 15th St.	S. 29th St.	BPS	0.68	Bike/Ped Report	Midwest City
Felix Dr.	Reno Ave.	N. of S. 15th St.	SOR	0.78	Bike/Ped Report	Midwest City
Hospital Connector	S. of N. 10th St.	N. of Reno Ave.	SOR	0.28	Bike/Ped Report	Midwest City
Key Blvd.	Reno Ave.	S. of S. 15th St.	SOR	1.63	Bike/Ped Report	Midwest City
Kiwanis Connector	Midwest Blvd.	E. of Midwest Blvd.	SOR	0.71	Bike/Ped Report	Midwest City
Lions Park	W. of Midwest Blvd.	E. of Midwest Blvd.	BPS	0.31	Bike/Ped Report	Midwest City
N. Canadian Connector	W. of Air Depot Blvd.	E. of Air Depot Blvd.	SOR	0.64	Bike/Ped Report	Midwest City
Palmer Loop	S. 15th St.	S. 29th St.	BPS	2.69	Bike/Ped Report	Midwest City
Post Rd.	N. of N. 10th St.	S. 15th St.	SOR	2.56	Bike/Ped Report	Midwest City
Rail with Trail	Reno Ave.	S. 15th St.	BPS	2.72	Bike/Ped Report	Midwest City
Rail with Trail E. Extension	E. of Douglas Blvd.	E. of Westminster Rd.	BPS	2.60	Bike/Ped Report	Midwest City
Reed Extension	N. of S. 15th St.	S. of S. 15th St.	SOR	0.59	Bike/Ped Report	Midwest City
Reno Ave.	W. of Air Depot Blvd.	E. of Midwest Blvd.	BPS	2.68	Bike/Ped Report	Midwest City
Reno Ave.	Friendly Rd.	Anderson Rd.	S	0.90	E2035 Call for Projects	Midwest City
Rolling Lane	N. 10th St.	N. of Reno Ave.	SOR	1.27	Bike/Ped Report	Midwest City
Rose State Connector	W. of Air Depot Blvd.	W. of Midwest Blvd.	SOR	2.15	Bike/Ped Report	Midwest City
Silver Creek	N. of N. 23rd St.	S. of N. 10th St.	BPS	2.33	Bike/Ped Report	Midwest City
Silver Creek Connector	W. of Midwest Blvd.	W. of Post Rd.	BPS	2.09	Bike/Ped Report	Midwest City
Silver Meadows	W. of Air Depot Blvd.	E. of Midwest Blvd.	SOR	1.80	Bike/Ped Report	Midwest City
Soldier Creek Extension	S. of N. 23rd St.	N. 10th St.	BPS	1.28	Bike/Ped Report	Midwest City
Spencer Rd.	N. 23rd St.	N. 10th St.	SOR	1.00	Bike/Ped Report	Midwest City
Tributary 4	E. of Midwest Blvd.	Post Rd.	BPS	2.10	Bike/Ped Report	Midwest City
Tributary 4 Alternate	Douglas Blvd.	W. of Post Rd.	BPS	0.50	Bike/Ped Report	Midwest City

*BL = Bicycle Lane; BPE = Bicycle path exclusive to bicycles; BPS = Bicycle path shared with pedestrians; S = Sidewalks; SH = Bicycle route using roadway shoulder; SOR = Signed-on-road bicycle route

Improvement Location	From	To	Improvement*	Length (Miles)	Project Source	Entity
Tributary 4 Extension	Post Rd.	E. of Westminster Rd.	BPS	1.93	Bike/Ped Report	Midwest City
Tributary 4 Extension Alternate	Post Rd.	Westminster Rd.	BPS	0.87	Bike/Ped Report	Midwest City
W. 10th St.	Sooner Rd.	E. of Midwest Blvd.	BPS	2.50	Bike/Ped Report	Midwest City
S. 15th St.	Sooner Rd.	E. of Post Rd.	SOR	3.95	Bike/Ped Report	Midwest City
S. 29th St.	Sooner Rd.	Douglas Blvd.	BPS	3.11	Bike/Ped Report	Midwest City
S. 29th St.	Midwest Blvd.	Douglas Blvd.	S	1.00	E2035 Call for Projects	Midwest City
S. 29th St.	Post Rd.	Anderson Rd.	S	1.00	E2035 Call for Projects	Midwest City
Broadway Ave.	S. 149th St. (S. 19th St.)	Eastern Ave.	BPS, S	0.50	E2035 Call for Projects	Moore
Broadway Ave.	Eastern Ave.	S. 164th St. (S. 34th St.)	BPS, S	0.75	E2035 Call for Projects	Moore
Bryant Ave.	N. of S. 104th St. (N. 27th St.)	S. 119th St. (N. 12th St.)	BPS	1.60	Bike/Ped Report	Moore
Bryant Ave.	S. 149th St. (S. 19th St.)	S. 179th St. (Indian Hills Rd.)	BPS	1.78	Bike/Ped Report	Moore
Bryant Ave.	Bryant Ave.	E. of Bryant Ave.	BPS	0.23	Bike/Ped Report	Moore
Bryant Ave., Trail W. of	S. 104th St. (N. 27th St.)	N. of S. 134th St. (S. 4th St.)	BPS	1.85	Bike/Ped Report	Moore
Bryant Ave., Trail E. of	N. of S. 119th St. (N. 12th St.)	S. of S. 164th St. (S. 34th St.)	BPS	4.61	Bike/Ped Report	Moore
Eastern Ave., Trail E. of	S. 104th St. (N. 27th St.)	S. of S. 119th St. (N. 12th St.)	BPS	2.03	Bike/Ped Report	Moore
Eastern Ave., Trail E. of	S. of S. 119th St. (N. 12th St.)	N. of S. 134th St. (S. 4th St.)	SOR	0.47	Bike/Ped Report	Moore
Eastern Ave., Trail W. of	N. of S. 104th St. (N. 27th St.)	S. of S. 119th St. (N. 12th St.)	BPS	2.14	Bike/Ped Report	Moore
Eastern Ave., Trail W. of	S. 134th St. (S. 4th St.)	S. 179th St. (Indian Hills Rd.)	BPS	3.08	Bike/Ped Report	Moore
I-35, Trail E. of	I-35	E. of I-35	BPS	1.37	Bike/Ped Report	Moore
I-35, Trail E. of	N. of S. 119th St. (N. 12th St.)	S. 164th St. (S. 34th St.)	SOR	3.97	Bike/Ped Report	Moore
I-35, Trail W. of	S. 104th St. (N. 27th St.)	S. of S. 119th St. (N. 12th St.)	BPS	1.56	Bike/Ped Report	Moore
Kelley Ave. (Telephone Rd.)	S. of S. 119th St. (N. 12th St.)	S. 164th St. (S. 34th St.)	SOR	2.61	Bike/Ped Report	Moore
Kelley Ave. (Telephone Rd.), Trail W. of	N. of S. 164th St. (S. 34th St.)	S. of S. 164th St. (S. 34th St.)	BPS	0.56	Bike/Ped Report	Moore
Riverwalk Trail	N. of S. 134th St. (S. 4th St.)	S. 134th St. (S. 4th St.)	BPS	0.33	Bike/Ped Report	Moore
Santa Fe Ave.	W. of Santa Fe Ave.	Santa Fe Ave.	BPS	0.60	Bike/Ped Report	Moore
Santa Fe Ave.	S. 104th St. (N. 27th St.)	S. 164th St. (S. 34th St.)	SOR	4.02	Bike/Ped Report	Moore
Santa Fe Ave., Trail E. of	N. of S. 149th St. (S. 19th St.)	S. 149th St. (S. 19th St.)	BPS	0.31	Bike/Ped Report	Moore
Sunnylane Rd.	W. of Sunnylane Rd.	Sunnylane Rd.	BPS	0.86	Bike/Ped Report	Moore
Sunnylane Rd., Trail W. of	S. of S. 119th St. (N. 12th St.)	S. of S. 134th St. (S. 4th St.)	BPS	1.06	Bike/Ped Report	Moore
S. 104th St. (N. 27th St.)	Santa Fe Ave.	Bryant Ave.	BPS	2.99	Bike/Ped Report	Moore
S. 104th St. (N. 27th St.)	Eastern Ave.	Bryant Ave.	SOR, S	1.00	E2035 Call for Projects	Moore
S. 104th St. (N. 27th St.)	S. 104th St. (N. 27th St.)	N. of S. 119th St. (N. 12th St.)	BPS	1.01	Bike/Ped Report	Moore
S. 134th St. (S. 4th St.), Trail N. of	E. of Kelley Ave. (Telephone Rd.)	W. of Eastern Ave.	BPS	0.19	Bike/Ped Report	Moore
S. 134th St. (S. 4th St.), Trail N. of	Kelley Ave. (Telephone Rd.)	Bryant Ave.	SOR	2.03	Bike/Ped Report	Moore
S. 134th St. (S. 4th St.), Trail N. of	Santa Fe Ave.	E. of I-35	SOR	1.48	Bike/Ped Report	Moore
S. 149th St. (S. 19th St.)	W. of Eastern Ave.	E. of Bryant Ave.	BPS	2.70	Bike/Ped Report	Moore
S. 149th St. (S. 19th St.), Trail N. of	Santa Fe Ave.	E. of Santa Fe Ave.	SOR	0.55	Bike/Ped Report	Moore
S. 164th St. (S. 34th St.)	Santa Fe Ave.	Sooner Rd.	SOR	4.99	Bike/Ped Report	Moore
S. 164th St. (S. 34th St.)	Santa Fe Ave.	Kelley Ave. (Telephone Rd.)	BPS	1.00	E2035 Call for Projects	Moore
S. 164th St. (S. 34th St.)	Kelley Ave. (Telephone Rd.)	BNSF Railroad Tracks	BPS	0.75	E2035 Call for Projects	Moore
S. 164th St. (S. 34th St.)	BNSF Railroad Tracks	Eastern Ave.	BPS	0.25	E2035 Call for Projects	Moore
S. 164th St. (S. 34th St.)	Eastern Ave.	Broadway Ave.	BPS	0.50	E2035 Call for Projects	Moore
Cemetery Rd. (Clear Springs Rd.)	S. 59th St.	SH-152 (S. 74th St.)	SOR, BL, S	1.00	E2035 Call for Projects	Mustang
Morgan Rd.	S. 59th St.	S. 89th St.	BL, S	2.00	E2035 Call for Projects	Mustang
Mustang Rd. (SH-4)	S. 59th St.	S. 74th St. (SH-152)	BL, S	1.00	E2035 Call for Projects	Mustang
Mustang Rd.	S. 74th St. (SH-152)	S. 89th St.	BL, S	1.00	E2035 Call for Projects	Mustang
Sara Rd.	S. 59th St.	SH-152	BL, S	1.00	E2035 Call for Projects	Mustang
S. 59th St.	Cemetery Rd. (Clear Springs Rd.)	County Line Rd.	BL, S	5.00	E2035 Call for Projects	Mustang
S. 89th St.	Czech Hall Rd.	County Line Rd.	BL, S	4.00	E2035 Call for Projects	Mustang
Newcastle ISTEA Trail	S. 209th St. (N. 16th St.)	S. 224th St. (Fox Rd.)	BPS	1.46	Bike/Ped Report	Newcastle
US-62/Public Schools Trail	S. of S. 209th St. (N 16th St.)	N. of S. 224th St. (Fox Rd.)	BPS	1.06	Bike/Ped Report	Newcastle

*BL = Bicycle Lane; BPE = Bicycle path exclusive to bicycles; BPS = Bicycle path shared with pedestrians; S = Sidewalks; SH = Bicycle route using roadway shoulder; SOR = Signed-on-road bicycle route

Improvement Location	From	To	Improvement*	Length (Miles)	Project Source	Entity
Grand Blvd.	S. of N. 78th St. (Wilshire Rd.)	N. 63rd St.	BPS	1.74	Bike/Ped Report	Nichols Hills
Air Depot Blvd. (24th Ave. E.)	S. 239th St. (Robinson St.)	S. 269th St. (Lindsey St.)	SOR, S	2.00	E2035 Call for Projects	Norman
Alameda Dr.	Alameda Dr.	S. of Alameda Dr.	SH	0.03	Bike/Ped Report	Norman
Bryant Ave. (12th Ave. W.)	S. 209th St. (Tecumseh Rd.)	S. 224th St. (Rock Creek Rd.)	SOR, S	1.00	E2035 Call for Projects	Norman
Bryant Ave. (Berry Rd.)	S. 239th St. (Robinson St.)	S. 284th St. (Imhoff Rd.)	SOR, S	3.00	E2035 Call for Projects	Norman
Classen Blvd.	S. 269th St. (Lindsey St.)	N. of Sooner Rd. (12th Ave. E.)	SOR, S	0.70	E2035 Call for Projects	Norman
Douglas Blvd. (48th Ave. E.)	S. 194th St. (Franklin Rd.)	SH-9	SOR, S	6.00	E2035 Call for Projects	Norman
Flood Ave.	S. 239th St. (Robinson St.)	S. 254th St. (Main St.)	SOR, S	1.00	E2035 Call for Projects	Norman
Interstate Dr.	N. of Alameda Dr.	Alameda Dr.	BPE	0.03	Bike/Ped Report	Norman
James Garner Ave. (Realignment)	S. 254th St. (Main St.)	Tonhawa St.	SOR, S	0.20	E2035 Call for Projects	Norman
Jenkins Ave.	S. 269th St. (Lindsey St.)	Constitution Ave.	SOR, S	0.90	E2035 Call for Projects	Norman
Kelley Ave. (36th Ave. W.)	S. 179th St. (Indian Hills Rd.)	S. 209th St. (Tecumseh Rd.)	SOR, S	2.00	E2035 Call for Projects	Norman
SH-9	W. of Bryant Ave. (12th Ave. W.)	Air Depot Blvd. (24th Ave. E.)	SOR	4.05	Bike/Ped Report	Norman
SH-9	Air Depot Blvd. (24th Ave. E.)	Dobbs Rd. (180th St. E.)	SH	14.27	Bike/Ped Report	Norman
Santa Fe Ave. (48th Ave. W.)	S. 179th St. (Indian Hills Rd.)	S. 239th St. (Robinson St.)	SOR, S	4.00	E2035 Call for Projects	Norman
Sooner Rd. (12th Ave. E.)	SH-9	S. 299th St. (Cedar Lane Rd.)	SOR, S	0.50	E2035 Call for Projects	Norman
Sunnylane Rd. (Porter Ave.)	S. 179th St. (Indian Hills Rd.)	S. 224th St. (Rock Creek Rd.)	SOR, S	3.00	E2035 Call for Projects	Norman
Sunnylane Rd. (Porter Ave.)	S. 239th St. (Robinson St.)	S. 254th St. (Alameda St.)	SOR, S	1.00	E2035 Call for Projects	Norman
S. 179th St. (Indian Hills Rd.)	Santa Fe Ave. (48th Ave. W.)	Douglas Blvd. (48th Ave. E.)	SOR	8.01	Bike/Ped Report	Norman
S. 179th St. (Indian Hills Rd.)	Santa Fe Ave. (48th Ave. W.)	I-35	SOR, S	1.50	E2035 Call for Projects	Norman
S. 194th St. (Franklin Rd.)	Western Ave. (60th Ave. W.)	I-35	SOR, S	2.50	E2035 Call for Projects	Norman
S. 224th St. (Rock Creek Rd.)	W. of I-35	E. of I-35	SOR	0.69	Bike/Ped Report	Norman
S. 254th St. (Main St.)	W. of Kelley Ave. (36th Ave. W.)	E. of I-35	SOR	1.05	Bike/Ped Report	Norman
S. 254th St. (Alameda St.)	Ridge Lake Blvd.	Midwest Blvd. (36th Ave. E.)	SOR, S	0.60	E2035 Call for Projects	Norman
S. 269th St. (Lindsey St.)	Kelley Ave. (36th Ave. W.)	Bryant Ave. (Berry Rd.)	SOR, S	2.00	E2035 Call for Projects	Norman
S. 269th St. (Lindsey St.)	Air Depot Blvd. (24th Ave. E.)	Midwest Blvd. (36th Ave. E.)	SOR, S	1.00	E2035 Call for Projects	Norman
S. 284th St. (Imhoff Rd.)	SH-9	Chautauqua Ave.	SOR, S	0.80	E2035 Call for Projects	Norman
S. 284th St. (Imhoff Rd.)	Classen Blvd.	Air Depot Blvd. (24th Ave. E.)	SOR, S	1.00	E2035 Call for Projects	Norman
Agnew Ave.	N. 10th St.	S. 29th St.	SOR	3.02	Bike/Ped Report	OKC
Airport Trail	N. of S. 44th St.	S. of S. 149th St.	BPS	11.09	Bike/Ped Report	OKC
Anderson Rd.	S. 29th St.	S. 44th St.	BL, S	1.00	E2035 Call for Projects	OKC
Anderson Rd.	S. 74th St.	S. 89th St.	BL, S	1.00	E2035 Call for Projects	OKC
Blackwelder Ave.	S. 29th St.	S. of S. 44th St.	SOR	1.46	Bike/Ped Report	OKC
Broadway Extension Trail	N. 122nd St.	N. of N. 10th St.	BPS	15.18	Bike/Ped Report	OKC
Bryant Ave.	N. 63rd St.	S. of N. 10th St.	SOR	4.52	Bike/Ped Report	OKC
Bryant Ave.	S. 89th St.	S. 104th St.	BL, S	1.00	E2035 Call for Projects	OKC
Byers Ave.	Reno Ave.	S. 29th St.	SOR	2.47	Bike/Ped Report	OKC
Choctaw Rd.	S. 29th St.	S. 44th St.	BL, S	1.00	E2035 Call for Projects	OKC
Classen Blvd.	N. 108th St. (Hefner Rd.)	N. 10th St.	SOR	8.44	Bike/Ped Report	OKC
Council Rd.	N. 164th St.	N. 136th St. (Memorial Rd.)	BL, S	2.00	E2035 Call for Projects	OKC
Council Rd.	N. 108th St. (Hefner Rd.)	N. 50th St.	SOR, S	4.00	E2035 Call for Projects	OKC
Council Rd.	S. 59th St.	S. 74th St.	BL, S	1.00	E2035 Call for Projects	OKC
County Line Rd.	N. 122nd St.	N. 78th St. (Wilshire Blvd.)	SOR, S	3.00	E2035 Call for Projects	OKC
Deep Fork Greenway Trail	E. of Western Ave.	Bryant Ave.	BPS	4.77	Bike/Ped Report	OKC
Eastern Ave.	N. of N. 136th St. (Memorial Rd.)	N. of S. 104th St.	SOR	16.90	Bike/Ped Report	OKC
Eastern Ave.	0.5 mile N. of N. 136th St. (Memorial Rd.)	N. 122nd St.	BL, S	1.50	E2035 Call for Projects	OKC
Exchange Ave.	W. of Pennsylvania Ave.	Western Ave.	BL	1.65	Bike/Ped Report	OKC
Grand Blvd.	N. 63rd St.	S. of N. 63rd St.	SOR	0.39	Bike/Ped Report	OKC
Grand Blvd.	N. 63rd St.	N. of N. 50th St.	BPS	0.83	Bike/Ped Report	OKC
Harrah Rd.	I-40	S. 89th St.	SOR, BL	0.50	E2035 Call for Projects	OKC
Harvey Ave.	S. of N. 10th St.	N. of Reno Ave.	SOR	0.29	Bike/Ped Report	OKC

*BL = Bicycle Lane; BPE = Bicycle path exclusive to bicycles; BPS = Bicycle path shared with pedestrians; S = Sidewalks; SH = Bicycle route using roadway shoulder; SOR = Signed-on-road bicycle route

Improvement Location	From	To	Improvement*	Length (Miles)	Project Source	Entity
I-35 Service Rd.	N. 122nd St.	N. 63rd St.	SOR	9.45	Bike/Ped Report	OKC
I-44 Trail W.	N. of N. 63rd St.	S. of I-40	BPS	7.11	Bike/Ped Report	OKC
Independence Ave./Drexel Blvd.	N. of N. 63rd St.	S. of N. 23rd St.	SOR	4.19	Bike/Ped Report	OKC
John Kilpatrick Turnpike Trail	N. 136th St. (Memorial Rd.)	N. 108th St. (Hefner Rd.)	BPS	2.06	Bike/Ped Report	OKC
Kelley Ave.	0.5 mile N. of N. 136th St. (Memorial Rd.)	N. 136th St. (Memorial Rd.)	BL, S	0.50	E2035 Call for Projects	OKC
Kelley Ave.	N. 63rd St.	N. 50th St.	SOR, BL	1.00	E2035 Call for Projects	OKC
Lake Hefner Dr. S.	E. of MacArthur Blvd.	E. of Portland Ave.	SOR	3.85	Bike/Ped Report	OKC
Lake Hefner Trail	E. of Portland Ave.	E. of May Ave.	BPS	1.37	Bike/Ped Report	OKC
Lake Overholser Trail W.	N. 39th St.	N. 10th St.	BPS	5.57	Bike/Ped Report	OKC
Lincoln Blvd.	N. 50th St.	Reno Ave.	SOR	8.17	Bike/Ped Report	OKC
Lincoln Blvd./Robinson Blvd. Linkage	S. of N. 63rd St.	N. of Reno Ave.	BPS	7.54	Bike/Ped Report	OKC
Lindsay Ave.	S. of N. 23rd St.	N. of N. 10th St.	BL	0.85	Bike/Ped Report	OKC
MacArthur Blvd.	N. 108th St. (Hefner Rd.)	N. 78th St. (Wilshire Blvd.)	BL, S	2.00	E2035 Call for Projects	OKC
MacArthur Blvd.	N. 36th St.	Reno Ave.	BL, S	3.00	E2035 Call for Projects	OKC
MacArthur Blvd.	S. 15th St.	S. 22nd St.	BL, S	0.50	E2035 Call for Projects	OKC
Main General Pershing	E. of Western Ave.	May Ave.	BL	3.49	Bike/Ped Report	OKC
May Ave.	N. 164th St.	N. 136th St. (Memorial Rd.)	SOR, BL	2.00	E2035 Call for Projects	OKC
May Ave.	N. 136th St. (Memorial Rd.)	N. 108th St. (Hefner Rd.)	BL, S	2.00	E2035 Call for Projects	OKC
May Ave.	N. 78th St. (Wilshire Blvd.)	N. 50th St.	BL, S	2.00	E2035 Call for Projects	OKC
May Ave.	S. 74th St.	S. 89th St.	BL, S	1.00	E2035 Call for Projects	OKC
May Ave.	S. 134th St.	S. 149th St.	BL, S	1.00	E2035 Call for Projects	OKC
McKinley Ave.	N. of S. 15th St.	S. 29th St.	SOR	1.62	Bike/Ped Report	OKC
Meridian Ave.	N. 122nd St.	N. 108th St. (Hefner Rd.)	SOR	0.92	Bike/Ped Report	OKC
Meridian Ave.	Reno Ave.	S. 29th St.	BL, S	2.00	E2035 Call for Projects	OKC
Morgan Rd.	S. 44th St.	S. 59th St.	BL, S	1.00	E2035 Call for Projects	OKC
Multiple Locations			S	350.00	2007 Go Bond Issue	OKC
Mustang Rd.	N. 23rd St.	S. 59th St.	SOR	6.01	Bike/Ped Report	OKC
N. Canadian E. Greenway Trail	I-35	Douglas Blvd.	BPS	16.09	Bike/Ped Report	OKC
N. Canadian W. Trail	W. of Council Rd.	May Ave.	BPS	9.23	Bike/Ped Report	OKC
Oklahoma River Trail	May Ave.	I-35	BPS	3.52	Bike/Ped Report	OKC
Pennsylvania Ave.	N. 63rd St.	I-44	BL, S	1.50	E2035 Call for Projects	OKC
Pennsylvania Ave.	N. 38th St.	N. 23rd St.	BL, S	1.10	E2035 Call for Projects	OKC
Pennsylvania Ave.	N. 10th St.	Main St.	BL, S	0.90	E2035 Call for Projects	OKC
Pennsylvania Ave.	S. 44th St.	S. 104th St.	BL, S	4.00	E2035 Call for Projects	OKC
Pennsylvania Ave.	S. 134th St.	S. 149th St.	BL, S	1.00	E2035 Call for Projects	OKC
Phillips Ave.	N. of N. 10th St.	N. 10th St.	BL	0.56	Bike/Ped Report	OKC
Portland Ave.	N. 136th St. (Memorial Rd.)	N. 108th St. (Hefner Rd.)	SOR	2.09	Bike/Ped Report	OKC
Portland Ave.	N. of N. 63rd St.	S. 104th St.	SOR	12.69	Bike/Ped Report	OKC
Portland Trail	N. 178th St. (Edmond Rd.)	N. 136th St. (Memorial Rd.)	BPS	2.95	Bike/Ped Report	OKC
Post Rd.	S. 29th St.	S. 89th St.	SOR	4.01	Bike/Ped Report	OKC
Post Rd.	S. 29th St.	S. 89th St.	BL, S	4.00	E2035 Call for Projects	OKC
Reno Ave.	Czech Hall Rd.	Mustang Rd.	BL, S	1.00	E2035 Call for Projects	OKC
Robinson Ave.	N. 23rd St.	S. of N. 10th St.	BL	1.98	Bike/Ped Report	OKC
Robinson Ave.	N. of Reno Ave.	S. of S. 15th St.	SOR	2.01	Bike/Ped Report	OKC
Rockwell Ave.	N. 164th St.	N. 136th St. (Memorial Rd.)	BL, S	2.00	E2035 Call for Projects	OKC
Rockwell Ave.	N. 122nd St.	N. 78th St. (Wilshire Blvd.)	BL, S	3.00	E2035 Call for Projects	OKC
Rockwell Ave.	N. 63rd St.	N. 50th St.	BL, S	1.00	E2035 Call for Projects	OKC
Rockwell Ave.	N. 16th St.	North Canadian River	BL, S	1.90	E2035 Call for Projects	OKC
S. Canadian Trail	Cemetery Rd.	May Ave.	BPS	12.87	Bike/Ped Report	OKC
Santa Fe Ave.	N. 164th St.	N. 122nd St.	BL, S	3.00	E2035 Call for Projects	OKC
Sara Rd.	N. 39th Expressway (SH-66)	S. 15th St.	BL, S	4.50	E2035 Call for Projects	OKC

*BL = Bicycle Lane; BPE = Bicycle path exclusive to bicycles; BPS = Bicycle path shared with pedestrians; S = Sidewalks; SH = Bicycle route using roadway shoulder; SOR = Signed-on-road bicycle route

Improvement Location	From	To	Improvement*	Length (Miles)	Project Source	Entity
Shartel Ave.	N. of N. 23rd St.	S. of N. 10th St.	SOR	1.90	Bike/Ped Report	OKC
Springlake Dr.	Kelley Ave.	Martin Luther King Rd.	SOR	1.17	Bike/Ped Report	OKC
Stiles Ave.	S. of N. 23rd St.	N. of N. 10th St.	SOR	0.37	Bike/Ped Report	OKC
Stonewall Ave.	N. of N. 10th St.	S. of N. 10th St.	BL	0.90	Bike/Ped Report	OKC
Sunnylane Rd.	S. 104th St.	S. 119th St.	BL, S	1.00	E2035 Call for Projects	OKC
Thompson Lake	Bryant Ave.	E. of Bryant Ave.	BPS	0.35	Bike/Ped Report	OKC
Tinker/Draper Lake Trail	S. 15th St.	S. of I-240	BPS	5.43	Bike/Ped Report	OKC
Tulsa Ave.	N. of N. 63rd St.	N. 36th St.	SOR	3.04	Bike/Ped Report	OKC
Villa Ave.	S. 29th St.	S. 44th St.	SOR	1.00	Bike/Ped Report	OKC
Walker Ave.	N. 50th St.	S. 104th St.	SOR	10.97	Bike/Ped Report	OKC
Walnut Ave.	S. of N. 23rd St.	N. of N. 10th St.	SOR	0.57	Bike/Ped Report	OKC
Walnut Ave.	S. of N. 10th St.	Reno Ave.	BL	0.66	Bike/Ped Report	OKC
Western Ave.	N. 63rd St.	N. 50th St.	SOR	1.86	Bike/Ped Report	OKC
Western Ave.	N. 50th St.	Reno Ave.	BL	4.01	Bike/Ped Report	OKC
Western Ave.	Reno Ave.	S. 59th St.	SOR	3.99	Bike/Ped Report	OKC
Western Ave.	S. 29th St.	S. 59th St.	BL, S	2.00	E2035 Call for Projects	OKC
Western Ave.	S. 62nd St.	I-240 Service Rd.	BL, S	0.75	E2035 Call for Projects	OKC
Western Ave.	S. 89th St.	S. 119th St.	BL, S	2.00	E2035 Call for Projects	OKC
N. 164th St. (S. 15th St.) and Kelly Ave. (High Rd.)	Meridian Rd.	Pennsylvania Ave.	SOR	3.04	Bike/Ped Report	OKC
N. 164th St. (S. 15th St.) and Kelly Ave. (High Rd.)	W. of Santa Fe Ave.	Eastern Rd.	SOR	4.60	Bike/Ped Report	OKC
N. 150th St.	Council Rd.	MacArthur Blvd.	BL, S	2.00	E2035 Call for Projects	OKC
N. 136th St. (Memorial Rd.)	Eastern Ave. (Boulevard)	Bryant Ave.	BL, S	1.00	E2035 Call for Projects	OKC
N. 122nd St.	MacArthur Blvd.	Lake Hefner Parkway (SH-74)	BL, S	2.00	E2035 Call for Projects	OKC
N. 122nd St.	Lake Hefner Parkway (SH-74)	Pennsylvania Ave.	BL, S	2.00	E2035 Call for Projects	OKC
N. 122nd St.	Western Ave.	Santa Fe Ave.	BL, S	1.00	E2035 Call for Projects	OKC
N. 108th St. (Hefner Rd.)	Northwest Expressway (SH-3)	County Line Rd.	BL, S	1.00	E2035 Call for Projects	OKC
N. 108th St. (Hefner Rd.)	Richland Rd.	MacArthur Blvd.	SOR	11.11	Bike/Ped Report	OKC
N. 108th St. (Hefner Rd.)	Portland Ave.	Kelley Ave.	SOR	5.24	Bike/Ped Report	OKC
N. 108th St. (Hefner Rd.)	May Ave.	Pennsylvania Ave.	BL, S	1.00	E2035 Call for Projects	OKC
N. 108th St. (Hefner Rd.)	Broadway Extension	Kelley Ave.	BL, S	1.00	E2035 Call for Projects	OKC
N. 93rd St. (Britton Rd.)	W. of Western Ave.	I-35	SOR	4.87	Bike/Ped Report	OKC
N. 93rd St. (Britton Rd.)	Waverly Ave.	Broadway Extension	BL, S	1.30	E2035 Call for Projects	OKC
N. 78th St. (Wilshire Blvd.)	MacArthur Blvd.	E. of MacArthur Blvd.	BPS	0.16	Bike/Ped Report	OKC
N. 78th St. (Wilshire Blvd.)	W. of May Ave.	E. of May Ave.	SOR	1.03	Bike/Ped Report	OKC
N. 78th St. (Wilshire Blvd.)	Broadway Extension	I-35	BL, S	3.00	E2035 Call for Projects	OKC
N. 63rd St.	Meridian Ave.	Pennsylvania Ave.	BL, S	3.00	E2035 Call for Projects	OKC
N. 63rd St.	Broadway Extension	Martin Luther King Rd.	SOR	2.22	Bike/Ped Report	OKC
N. 50th St.	W. of Western Ave.	Martin Luther King Rd.	SOR	3.36	Bike/Ped Report	OKC
N. 50th St.	Western Ave.	Hudson Ave.	BL, S	0.50	E2035 Call for Projects	OKC
N. 39th St.	Pennsylvania Ave.	Classen Blvd.	BL, S	0.75	E2035 Call for Projects	OKC
N. 36th St.	MacArthur Blvd.	W. of Western Ave.	SOR	4.77	Bike/Ped Report	OKC
N. 36th St.	W. of Western Ave.	Bryant Ave.	SOR	4.24	Bike/Ped Report	OKC
N. 36th St.	Sunnylane Rd. (Coltrane Rd.)	Sooner Rd.	SOR	1.11	Bike/Ped Report	OKC
N. 23rd St.	Mustang Rd.	Morgan Rd.	SOR	2.03	Bike/Ped Report	OKC
N. 23rd St.	Mustang Rd.	Sara Rd.	BL, S	1.00	E2035 Call for Projects	OKC
N. 23rd St.	W. of Council Rd.	Council Rd.	SOR	0.63	Bike/Ped Report	OKC
N. 23rd St.	W. of MacArthur Blvd.	E. of MacArthur Blvd.	SOR	0.98	Bike/Ped Report	OKC
N. 23rd St.	I-44	Villa Ave.	BL, S	1.25	E2035 Call for Projects	OKC
N. 19th St.	Meridian Rd.	Western Ave.	SOR	5.16	Bike/Ped Report	OKC
N. 18th St.	Western Ave.	E. of Western Ave.	SOR	0.17	Bike/Ped Report	OKC
N. 16th St.	W. of Council Rd.	E. of Portland Ave.	SOR	5.14	Bike/Ped Report	OKC

*BL = Bicycle Lane; BPE = Bicycle path exclusive to bicycles; BPS = Bicycle path shared with pedestrians; S = Sidewalks; SH = Bicycle route using roadway shoulder; SOR = Signed-on-road bicycle route

Improvement Location	From	To	Improvement*	Length (Miles)	Project Source	Entity
N. 16th St.	E. of Western Ave.	Lincoln Blvd.	SOR	1.47	Bike/Ped Report	OKC
N. 10th St.	Mustang Rd.	Sara Rd.	BL, S	1.00	E2035 Call for Projects	OKC
N. 10th St.	Sara Rd.	Walker Ave.	SOR	10.49	Bike/Ped Report	OKC
N. 10th St.	Walker Ave.	Sunnylane Rd.	SOR	5.63	Bike/Ped Report	OKC
N. 6th St./Harrison Ave./N. 8th St.	Western Ave.	Lincoln Blvd.	SOR	1.59	Bike/Ped Report	OKC
N. 4th St.	E. of Western Ave.	E. of Bryant Ave.	SOR	4.10	Bike/Ped Report	OKC
S. 15th St.	Cemetery Rd. (SH-92)	John Kilpatrick Turnpike	BL, S	2.75	E2035 Call for Projects	OKC
S. 29th St.	Mustang Rd.	Council Rd.	BL, S	4.00	E2035 Call for Projects	OKC
S. 29th St.	Independence Ave.	Pennsylvania Ave.	BL, S	1.50	E2035 Call for Projects	OKC
S. 29th St.	Sooner Rd.	Midwest Blvd.	BL, S	2.00	E2035 Call for Projects	OKC
S. 44th St.	Morgan Rd.	Council Rd.	BL, S	2.00	E2035 Call for Projects	OKC
S. 44th St.	Pennsylvania Ave.	Western Ave.	BL, S	1.00	E2035 Call for Projects	OKC
S. 44th St.	Santa Fe Ave.	Kelley Ave. (High Ave.)	SOR, BL	1.00	E2035 Call for Projects	OKC
S. 44th St.	Douglas Blvd.	Post Rd.	BL, S	1.00	E2035 Call for Projects	OKC
S. 59th St.	E. of Czech Hall Rd.	W. of Mustang Rd.	BPS	0.27	Bike/Ped Report	OKC
S. 59th St.	County Line Rd.	Regina Ave.	BL, S	2.50	E2035 Call for Projects	OKC
S. 59th St.	May Ave.	Santa Fe Ave.	BL, S	3.00	E2035 Call for Projects	OKC
S. 59th St.	Douglas Blvd.	Post Rd.	BL, S	1.00	E2035 Call for Projects	OKC
S. 74th St.	Douglas Blvd.	Post Rd.	BL, S	1.00	E2035 Call for Projects	OKC
S. 89th St.	May Ave.	Santa Fe Ave.	BL, S	3.00	E2035 Call for Projects	OKC
S. 104th St.	Pennsylvania Ave.	Western Ave.	BL, S	1.00	E2035 Call for Projects	OKC
S. 104th St.	Bryant Ave.	Midwest Blvd.	SOR	4.37	Bike/Ped Report	OKC
S. 104th St. Trail	Bryant Ave.	Midwest Blvd.	BPS	4.35	Bike/Ped Report	OKC
S. 104th St. and S. 110th St.	Meridian Rd.	Santa Fe Ave.	BPS	5.99	Bike/Ped Report	OKC
S. 149th St.	Pennsylvania Ave.	Santa Fe Ave.	BL, S	2.00	E2035 Call for Projects	OKC
Sooner Rd.	S. 29th St.	S. 74th St.	BL, S	3.00	E2035 Call for Projects	OKC, Del City
N. 10th St.	Sunnylane Rd. (Coltrane Rd.)	Vickie Dr.	BL, S	0.50	E2035 Call for Projects	OKC, Del City
MacArthur Blvd.	0.5 mile N. of N. 206th	N. 206th St.	S	0.50	E2035 Call for Projects	OK Co.

*BL = Bicycle Lane; BPE = Bicycle path exclusive to bicycles; BPS = Bicycle path shared with pedestrians; S = Sidewalks; SH = Bicycle route using roadway shoulder; SOR = Signed-on-road bicycle route

Figure 13.1: Planned Bicycle Projects

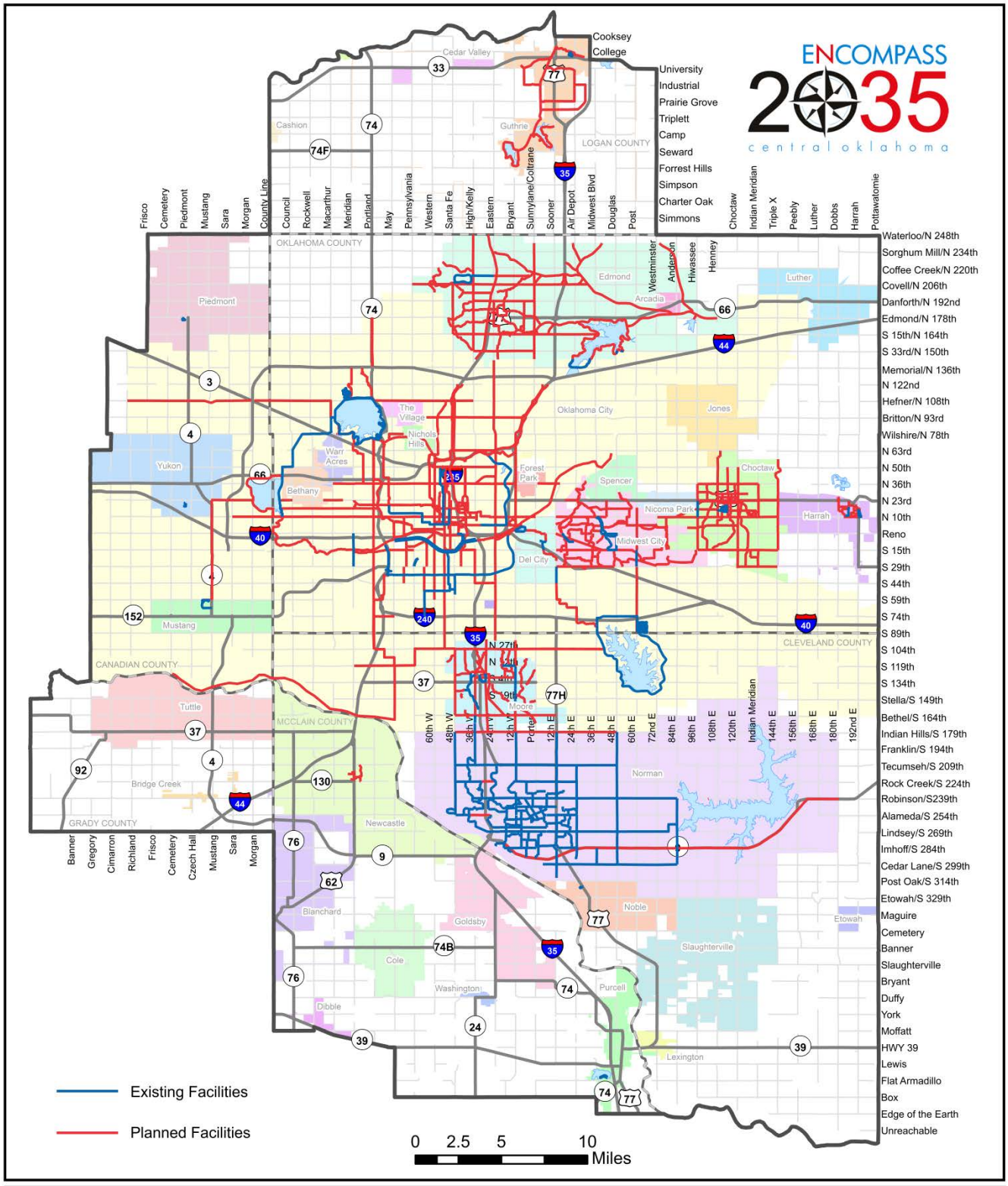
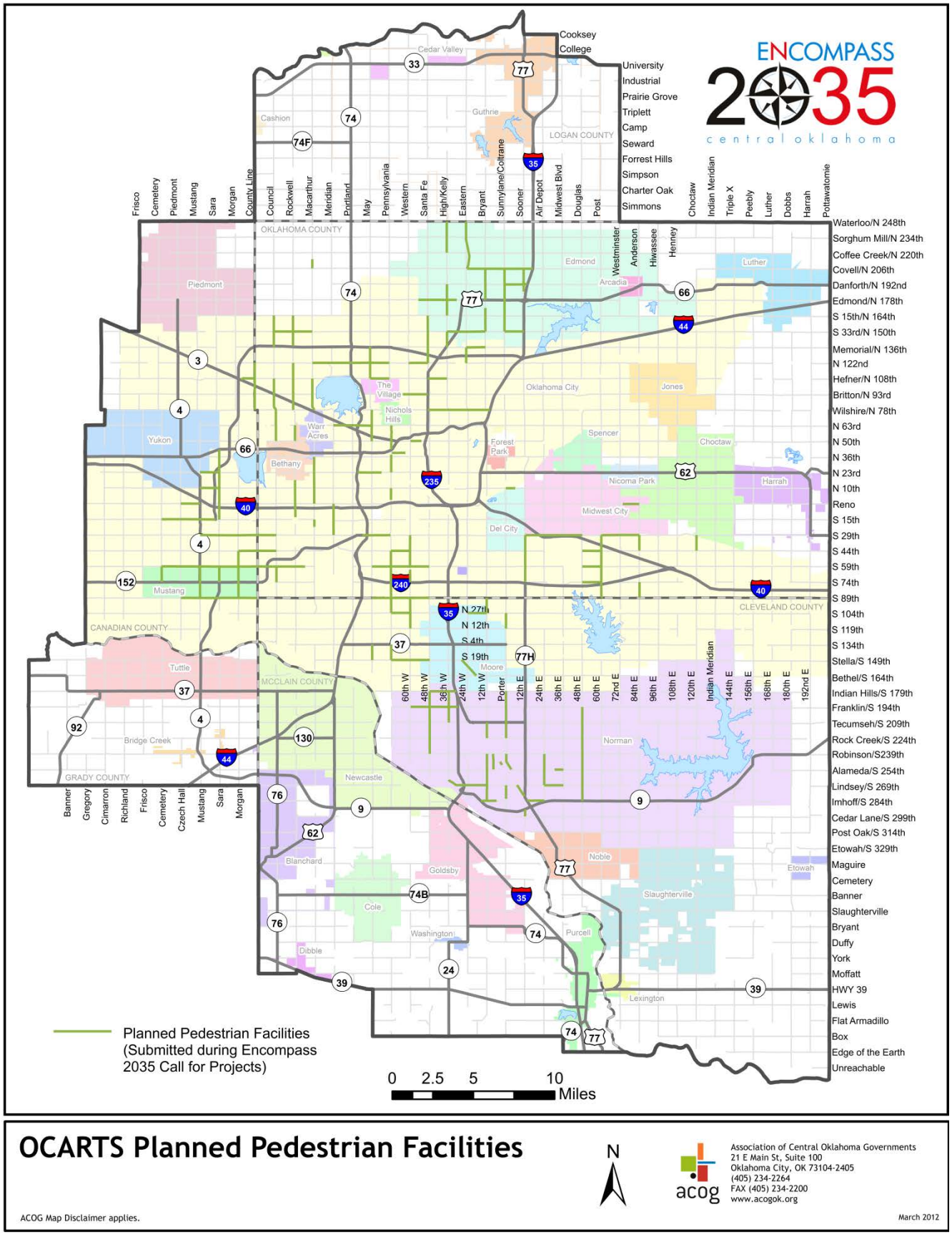


Figure 13.2: Planned Pedestrian Projects



PROJECT SPECIFIC RECOMMENDATIONS – TRANSIT PROJECTS

In addition to ongoing capital, maintenance, operating, and planning of the region's public bus systems (METRO Transit, CART, and Citylink), *Encompass 2035* includes the following transit projects. These projects are included in the Plan's financial capacity analysis (Chapter 14) as part of the affordable plan.

Table 13.2: Planned Transit Projects, Beyond Public Bus Services

- Project: Edmond Multimodal Transit Center
- Sponsor: City of Edmond
- General Location: North of 2nd Street, between Broadway Ave. and BNSF Railroad Tracks
- Description: The center is envisioned to serve as a bus transfer point with commuter parking, bicycle and pedestrian accommodations, a pedestrian bridge across 2nd Street, and space and infrastructure to support future passenger rail service.
- Anticipated Funding Source(s): City of Edmond, FTA funds, STP-UZA
- Plan Inclusion Date: April 28, 2011

- Project: Oklahoma City Downtown Streetcar Locally Preferred Alternative (LPA)
- Sponsor: Central Oklahoma Transportation and Parking Authority
- General Location: LPA alignment is 8-miles linking the OKC central business district, midtown, Bricktown, and Oklahoma Health Center; and two half-mile options to be studied as part of the environmental assessment. (See map in Chapter 9)
- Description: LPA mode is Modern Streetcar
- Anticipated Funding Source(s): City of Oklahoma City (MAPS 3), FTA Small Starts Program, FTA Formula and Discretionary funds
- Plan Inclusion Date: September 29, 2011

- Project: Intermodal Transportation Hub
- Sponsor: City of Oklahoma City
- General Location: Santa Fe Depot on E.K. Gaylord Blvd. in Oklahoma City
- Description: Initial efforts included in *Encompass 2035*: Acquisition of the Santa Fe Depot property, renovation of the depot to create a grand hall and common area for the entire hub, Amtrak station area (ticketing, baggage and waiting areas), bike rental facility, pedestrian tunnel through the existing elevated railroad structure to connect Bricktown and downtown, and streetscape, bicycle and pedestrian enhancements on E.K. Gaylord Blvd.
- Anticipated Funding Source(s): City of Oklahoma City (MAPS 3), FTA Discretionary funds, State (ODOT) in-kind funding, STP-UZA
- Plan Inclusion Date: October 27, 2011

PROJECT SPECIFIC RECOMMENDATIONS – STREET AND HIGHWAY PROJECTS

Encompass 2035 street and highway projects are presented in three tables. Some projects were underway (funded, under construction and/or completed) during the period of time that the plan was being developed (2005 – 2010), while other projects will be implemented throughout the remaining 25 years of the plan through 2035.

Table 13.3 reflects the projects that were completed prior to plan adoption between Jan. 1, 2005 and Dec. 31, 2010, Table 13.4 includes projects that were funded within the same period, but not completed, and Table 13.5 lists the planned street and highway improvements.

Planned projects were submitted by the Oklahoma Department of Transportation (ODOT) and OCARTS member local governments in response to the *Encompass 2035* Call for Projects. The sponsoring entity of each project estimated its implementation phase as being either short-range (by 2015), medium-range (2016-2025), or long-range (2026-2035). The phasing is non-binding and served as a guide for estimating future plan costs as part of the financial capacity described in Chapter 14.

All federally funded transportation projects are implemented through the Transportation Improvement Program (TIP), which identifies the region's short-range funding priorities, from the long-range plan, that will be funded and constructed over the next few years. A new TIP is prepared every other year in coordination with OCARTS area local governments, ODOT, the local transit providers, and area airports.

Table 13.3: Street and Highway Improvements Completed Between Jan. 2005 and Dec. 2010

Improvement Location	From	To	Improvement (lanes)	Length (miles)	Entity
Air Depot Blvd.	S. 15th St.	S. 29th St.	4 to 5	1.00	Midwest City
Air Depot Blvd. (24th Ave. E.)	S. 269th St. (Lindsey St.)	SH-9	2 to 4	1.00	Norman
Anderson Rd.	SH-66	0.5 mile S. of SH-66	New 2	0.50	OK Co.
Broadway Ave.	S. 134th St. (S. 4th St.)	S. 149th St. (S. 19th St.)	3 to 4	1.00	Moore
Classen Blvd.	S. 269th St. (Lindsey St.)	0.3 mile S. of S. 269th St. (Lindsey St.)	3 to 4	0.30	Norman
Eastern Ave. (Boulevard)	N. 206th St. (Covell Rd.)	N. 192nd St. (Danforth Rd.)	2 to 4	1.00	Edmond
I-35 (South)	S. 209th St. (Tecumseh Rd.)	S. 254th St. (Main St.)	4 to 6	4.00	Norman
I-35 East Service Rd.	S. 149th St. (S. 19th St.)	0.5 mile N. of S. 164th St. (S. 34th St.)	2 to 3	0.50	Moore
I-35 West Service Rd.	S. 134th St. (S. 4th St.)	S. 149th St. (S. 19th St.)	2 to 3	1.00	Moore
Kelley Ave. (36th Ave. W.)	Bob White Ave.	S. 254th St. (Main St.)	4 to 5	0.75	Norman
Kelly Ave.	300' S. of N. 206th St. (Covell Rd.)	0.5 mile N. of N. 192nd St. (Danforth Rd.)	2 to 4	0.30	Edmond
Kelly Ave.	N. 164th St. (15th St.)	N. 150th St. (33rd St.)	4 to 4 Divided	1.00	Edmond
MacArthur Blvd.	N. 63rd St.	N. 50th St.	4 to 5	1.00	Warr Acres
Reno Ave.	Czech Hall Rd.	Mustang Rd.	2 to 4	1.00	OKC
Santa Fe Ave.	S. 149th St. (S. 19th St.)	S. 164th St. (S. 34th St.)	2 to 4	1.00	Moore, OKC
SH-4 (Mustang Rd.)	N. 23rd St. (Vandament Ave.)	N. 10th St.	2 to 4	1.00	Yukon
SH-9	Classen Blvd. (US-77)	0.2 mile E. of Classen Blvd. (US-77)	3 to 4	0.20	Norman
SH-74 (Portland Ave.)	N. 248th St. (Waterloo Rd.)	N. 234th St. (Sorghum Mill Rd.)	2 to 5	1.00	OK Co.
SH-74 (Portland Ave.)	N. 234th St. (Sorghum Mill Rd.)	N. 206th St. (Covell Rd.)	2 to 5	2.00	OK Co.
Sooner Rd. (12th Ave. E.)	S. 299th St. (Cedar Land Rd.)	S. 314th St. (Post Oak Rd.)	2 to 3	1.00	Norman
Sunnylane Rd. (Porter Ave.)	S. 224th St. (Rock Creek Rd.)	S. 239th St. (Robinson St.)	3 to 5	0.90	Norman
Turner Turnpike (I-44)	Westbound on-ramp, Eastbound off-ramp		New Interchange		OKC
US-62	County Line Rd.	Tyler Ave.	2 to 5	1.50	Blanchard
Western Ave.	N. 150th St.	N. 136th St. (Memorial Rd.)	2 to 4	1.00	OKC
N. 206th St. (Covell Rd.)	Thomas Dr.	Eastern Ave. (Broadway Ave.)	2 to 4	0.50	Edmond
N. 192nd St. (Danforth Rd.)	Sunnylane Rd. (Coltrane Rd.)	850' W. of Sunnylane Rd. (Coltrane Rd.)	2 to 4	0.16	Edmond
N. 178th St.	Pennsylvania Ave.	Western Ave.	2 to 4	1.00	OKC
N. 164th St.	Pennsylvania Ave.	Western Ave.	2 to 4	1.00	OKC
N. 164th St.	Western Ave.	0.5 mile E. of Western Ave.	2 to 4	0.50	OKC
N. 164th St. (15th St.)	Edgewood Dr.	Pine Oak Dr.	4 to 5	0.40	Edmond
N. 150th St.	May Ave.	Pennsylvania Ave.	2 to 4	1.00	OKC
N. 150th St. (33rd St.)	Santa Fe Ave.	Kelly Ave.	2 to 4	1.00	Edmond
N. 36th St.	0.2 mile W. of Sooner Rd.	Sooner Rd.	4 to 2	0.20	OKC
N. 23rd St. (Vandament Ave.)	Ranchwood Blvd.	Mustang Rd.	2 to 4	0.20	Yukon
N. 23rd St. (Vandament Ave.)	Wal-Mart Dr.	Westport Blvd.	2 to 4	0.10	Yukon

Improvement Location	From	To	Improvement (lanes)	Length (miles)	Entity
N. 10th St.	Cemetery Rd.	Mustang Rd.	2 to 4	2.00	Yukon
N. 10th St.	Sara Rd.	Morgan Rd.	2 to 4	1.00	OKC
S. 15th St.	Dell Dr.	I-44	4 to 5	0.25	OKC
S. 29th St.	Meridian Ave.	Portland Ave.	2 to 4	1.00	OKC
S. 29th St.	Air Depot Blvd.	Midwest Blvd.	4 to 4 Divided	1.00	Midwest City
S. 54th St.	MacArthur Blvd.	Portland Ave.	2 to 4	2.00	OKC
S. 149th St. (S. 19th St.)	Santa Fe Ave.	Kelley Ave. (Telephone Rd.)	2 to 4	1.00	Moore
S. 149th St. (S. 19th St.)	Kelley Ave. (Telephone Rd.)	I-35 West Service Rd.	5 to 7	0.20	Moore
S. 149th St. (S. 19th St.)	I-35 West Service Rd.	Broadway Ave.	4 to 5	0.30	Moore
S. 209th St. (Tecumseh Rd.)	Bryant Ave. (12th Ave. W.)	Sunnylane Rd. (Porter Ave.)	2 to 4	1.00	Norman
S. 209th St. (Tecumseh Rd.)	Sunnylane Rd. (Porter Ave.)	Sooner Rd. (12th Ave. E.)	New 4	1.00	Norman
S. 239th St. (Robinson St.)	Santa Fe Ave. (48th Ave. W.)	Brookhaven Blvd.	2 to 4	0.80	Norman
S. 239th St. (Robinson St.)	Sooner Rd. (12th Ave. E.)	Air Depot Blvd. (24th Ave. E.)	2 to 5	1.00	Norman
S. 254th St. (Main St./Alameda St.)	Carter Ave.	Sooner Rd. (12th Ave. E.)	2 to 4	0.50	Norman
S. 269th St. (Lindsey St.)	Oakhurst Ave.	Air Depot Blvd. (24th Ave. E.)	2 to 5	0.45	Norman

Table 13.4: Street and Highway Improvements Funded but not Completed Prior to Dec. 2010

Improvement Location	From	To	Improvement (lanes)	Length (miles)	Proposed Staging*	Entity
Anderson Rd.	S. 44th St.	S. 59th St.	2 to 4	1.00	S	OKC
Anderson Rd.	S. 59th St.	S. 74th St.	2 to 4	1.00	S	OKC
Bryant Ave.	N. 136th St. (Memorial Rd.)	N. 122nd St.	2 to 4	1.00	S	OKC
Bryant Ave.	S. 74th St.	S. 89th St.	2 to 4	1.00	M	OKC
Choctaw Rd.	S. 44th St.	S. 59th St.	2 to 4	1.00	S	OKC
Choctaw Rd.	S. 59th St.	S. 74th St.	2 to 4	1.00	S	OKC
Choctaw Rd.	S. 74th St.	S. 89th St.	2 to 4	1.00	M	OKC
Council Rd.	N. 136th St. (Memorial Rd.)	N. 122nd St.	2 to 4	1.00	S	OKC
Eastern Ave.	S. 44th St.	S. 74th St.	2 to 4	2.00	S	OKC
Eastern Ave.	S. 74th St.	0.5 mile N. of S. 104th St.	2 to 4	1.50	S	OKC
Eastern Ave.	0.5 mile N. of S. 104th St. (N. 27th St.)	S. 104th St. (N. 27th St.)	2 to 4	0.50	S	Moore
I-235	N. 50th St.	BNSF Railroad Tracks	4 to 6	0.10	S	OKC
I-35 (South)	0.5 mile N. of S. 254th St. (Main St.)	0.5 mile S. of S. 254th St. (Main St.)	4 to 6	1.00	S	Norman
I-40 Crosstown (Realignment)	I-44	I-235	New 10	3.50	S	OKC
I-40	0.1 mile W. of S. 15th St.	0.1 mile E. of S. 15th St.	6 to 8	0.20	S	OKC, Del City
Kelley Ave.	N. 136th St. (Memorial Rd.)	N. 122nd St.	2 to 4	1.00	M	OKC
Kelley Ave.	N. 122nd St.	N. 108th St. (Hefner Rd.)	2 to 4	1.00	S	OKC
Kelley Ave.	N. 108th St.	N. 93rd St. (Britton Rd.)	2 to 4	1.00	M	OKC
Kelley Ave.	N. 93rd St. (Britton Rd.)	N. 78th St. (Wilshire Rd.)	2 to 4	1.00	M	OKC
Kelley Ave.	N. 78th St. (Wilshire Rd.)	N. 63rd St.	2 to 4	1.00	S	OKC
MacArthur Blvd.	N. 164th St.	N. 150th St.	2 to 4	1.00	S	OKC
MacArthur Blvd.	N. 150th St.	John Kilpatrick Turnpike	2 to 4	1.00	S	OKC
MacArthur Blvd. (Realignment)	S. 74th St.	S. 89th St.	New 4	1.00	S	OKC
MacArthur Blvd. (Realignment)	S. 89th St.	S. 104th St.	New 4	1.00	S	OKC
May Ave.	0.5 mile N. of N. 192nd St.	N. 178th St.	2 to 4	1.50	S	OKC
May Ave.	N. 178th St.	N. 164th St.	2 to 4	1.00	S	OKC
Morgan Rd.	S. 29th St.	S. 44th St.	2 to 4	1.00	M	OKC
Oklahoma City Blvd. (Old I-40 Alignmt.)	Pennsylvania Ave.	I-235	New 6	3.00	S	OKC
Pennsylvania Ave.	0.5 mile N. of N. 192nd St.	N. 192nd St.	2 to 4	0.50	M	OKC
Pennsylvania Ave.	N. 192nd St.	N. 178th St.	2 to 4	1.00	M	OKC
Pennsylvania Ave.	N. 178th St.	N. 164th St.	2 to 4	1.00	S	OKC
Portland Ave. (SH-74)	0.25 mile N. of N. 164th St.	0.25 mile S. of N. 150th St.	2 to 4	1.50	S	OKC
Portland Ave.	S. 74th St.	S. 104th St.	2 to 4	2.00	S	OKC
Post Rd.	Reno Ave.	S. 15th St.	2 to 4	1.00	S	MWC, Spen, Nic Pk
Reno Ave.	Cemetery Rd.	Czech Hall Rd.	2 to 4	1.00	M	OKC
Robinson Ave.	S. 9th St.	S. 15th St.	2 to 4	0.50	S	OKC
Santa Fe Ave.	S. 134th St. (S. 4th St.)	S. 149th St. (S. 19th St.)	2 to 4	1.00	S	Moore, OKC
SH-4 (Cornwell Dr.)	N. 50th St. (Wagner Rd.)	Main St. (*Yukon*)	2 to 4	1.00	S	Yukon
SH-4 (Ranchwood Blvd.)	Main St. (*Yukon*)	N. 23rd St. (Vandament Ave.)	2 to 4	1.25	S	Yukon
SH-39	1.78 miles E. of SH-24	US-77	2 to 4	5.60	S	McCln Co., Purcell
Sunnylane Rd.	S. 74th St.	S. 89th St.	2 to 4	1.00	S	OKC
Sunnylane Rd.	S. 89th St.	S. 104th St.	2 to 4	1.00	M	OKC
Sunnylane Rd. (Porter Ave.)	S. 209th St. (Tecumseh Rd.)	S. 224th St. (Rock Creek Rd.)	3 to 4	1.00	S	Norman
Western Ave.	0.5 mile N. of N. 192nd St.	N. 178th St.	2 to 4	1.50	M	OKC
Western Ave.	N. 178th St.	N. 164th St.	2 to 4	1.00	S	OKC

*S = Short-Range Project (proposed between 2011 and 2015); M = Medium-Range Project (proposed between 2016 and 2025)

Improvement Location	From	To	Improvement (lanes)	Length (miles)	Proposed Staging*	Entity
Western Ave.	S. 134th St.	S. 179th St.	2 to 4	3.00	S	OKC
Western Ave. (60th Ave. W.)	S. 179th St. (Indian Hills Rd.)	S. 209th St. (Tecumseh Rd.)	2 to 4	2.00	S	Norman
N. 206th St. (Covell Rd.)	Santa Fe Ave.	Thomas Dr.	2 to 4 Divided	1.50	S	Edmond
N. 192nd St.	Portland Ave.	May Ave.	2 to 4	1.00	S	OKC
N. 192nd St.	May Ave.	Pennsylvania Ave.	2 to 4	1.00	S	OKC
N. 192nd St.	Pennsylvania Ave.	0.5 mile W. of Santa Fe Ave.	2 to 4	1.50	S	OKC
N. 178th St.	0.5 mile W. of Portland Ave.	Portland Ave.	2 to 4	0.50	S	OKC
N. 178th St.	Portland Ave.	May Ave.	2 to 4	1.00	S	OKC
N. 178th St.	May Ave.	Pennsylvania Ave.	2 to 4	1.00	M	OKC
N. 150th St.	MacArthur Blvd.	Meridian Ave.	2 to 4	1.00	M	OKC
N. 150th St.	Meridian Ave.	Portland Ave.	2 to 4	1.00	S	OKC
N. 150th St.	Portland Ave.	May Ave.	2 to 4	1.00	S	OKC
N. 122nd St.	County Line Rd.	Council Rd.	2 to 4	1.00	S	OKC
N. 122nd St.	Sunnylane Rd. (Coltrane Rd.)	Sooner Rd.	2 to 4	1.00	S	OKC
N. 108th St. (Hefner Rd.)	County Line Rd.	Council Rd.	2 to 4	1.00	S	OKC
N. 108th St. (Hefner Rd.)	Kelley Ave.	Eastern Ave.	2 to 4	1.00	S	OKC
N. 93rd St. (Britton Rd.)	Morgan Rd.	County Line Rd.	2 to 4	1.00	M	OKC
N. 93rd St. (Britton Rd.)	Rockwell Ave.	MacArthur Blvd.	2 to 4	1.00	S	OKC
N. 78th St. (Wilshire Rd.)	Morgan Rd.	County Line Rd.	2 to 4	1.00	S	OKC
N. 78th St. (Wilshire Rd.)	County Line Rd.	Council Rd.	2 to 4	1.00	S	OKC
S. 15th St.	I-40	Sooner Rd.	4 to 5	0.50	S	Del City
S. 29th St.	MacArthur Ave.	Meridian Ave.	2 to 4	1.00	S	OKC
S. 119th St. (N. 12th St.)	Janeway Ave.	I-35 West Service Rd.	4 to 5	0.50	S	Moore
S. 119th St. (N. 12th St.)	0.5 mile E. of Eastern Ave.	Bryant Ave.	2 to 4	0.50	S	Moore
S. 224th St. (Rock Creek Rd.)	Kelley Ave. (36th Ave. W.)	Eastern Ave. (24th Ave. W.)	2 to 4	1.00	S	Norman
S. 224th St. (Rock Creek Rd.)	Sunnylane Rd. (Porter Ave.)	Sooner Rd. (12th Ave. E.)	2 to 4	1.00	S	Norman
S. 269th St. (Lindsey St.)	Jenkins Ave.	Classen Blvd.	2 to 4	0.60	S	Norman

*S = Short-Range Project (proposed between 2011 and 2015); M = Medium-Range Project (proposed between 2016 and 2025)

Figure 13.3: Street and Highway Improvements Completed and Committed Between 2005-2010

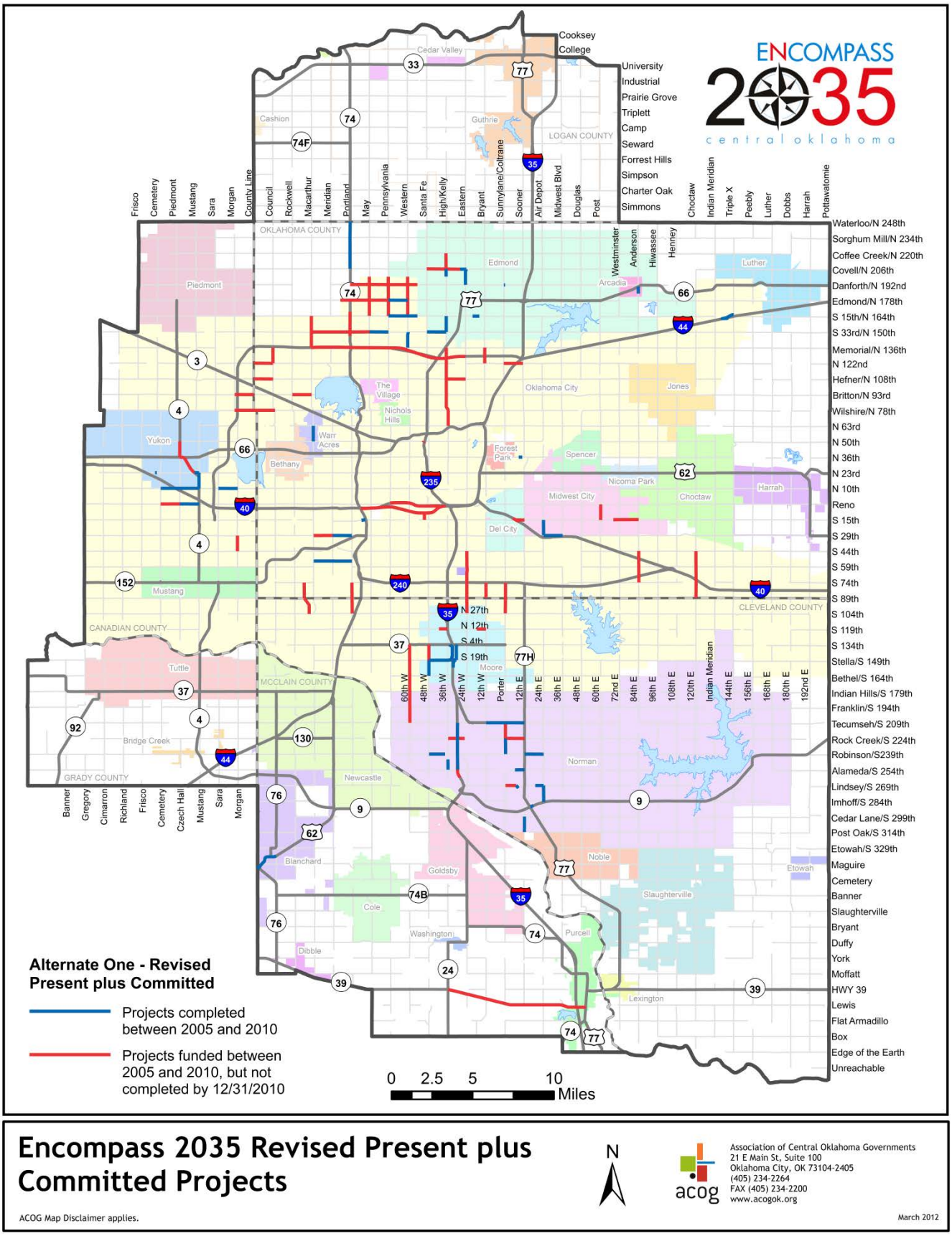


Table 13.5: Planned *Encompass 2035* Street and Highway Improvements

Improvement Location	From	To	Improvement (lanes)*	Length (miles)	Proposed Staging**	Entity
Air Depot Blvd. (24th Ave. E.)	S. 239th St. (Robinson St.)	S. 269th St. (Lindsey St.)	2 to 4 R,S	2.00	M	Norman
Airport Rd.	MacArthur Ave.	I-44	4 to 6	2.20	L	OKC
Anderson Rd.	S. 29th St.	S. 44th St.	2 to 4 L,S	1.00	M	OKC
Anderson Rd.	S. 74th St.	S. 89th St.	2 to 4 L,S	1.00	L	OKC
Broadway Ave.	N. 248th St. (Waterloo Rd.)	N. 234th St. (Sorghum Mill Rd.)	2 to 4 T,S	1.00	M	Edmond
Broadway Ave.	N. 234th St. (Sorghum Mill Rd.)	N. 220th St. (Coffee Creek Rd.)	2 to 4 Divided T,S	1.00	M	Edmond
Broadway Ave.	N. 220th St. (Coffee Creek Rd.)	N. 206th St. (Covell Rd.)	2 to 4 Divided T,S	1.00	M	Edmond
Broadway Ave.	S. 149th St. (S. 19th St.)	Eastern Ave.	2 to 4 T,S	0.50	M	Moore
Broadway Ave.	Eastern Ave.	S. 164th St. (S. 34th St.)	2 to 4 T,S	0.75	L	Moore
Broadway Ave.	S. 164th St. (S. 34th St.)	S. 179th St.	2 to 4	1.40	L	Moore
Broadway Ave.	S. 179th St. (Indian Hills Rd.)	S. 194th St. (Franklin Rd.)	2 to 4	1.30	L	Norman
Bryant Ave.	N. 206th St. (Covell Rd.)	N. 192nd St. (Danforth Rd.)	4 to 4 Divided T,S	1.00	M	Edmond
Bryant Ave.	N. 192nd St. (Danforth Rd.)	N. 178th St. (Edmond Rd./US-77)	4 to 4 Divided T,S	1.00	M	Edmond
Bryant Ave.	9th St.	N. 150th St. (33rd St.)	4 to 4 Divided T,S	1.50	M	Edmond
Bryant Ave.	S. 89th St.	S. 104th St.	2 to 4 L,S	1.00	M	OKC
Bryant Ave.	S. 104th St. (N. 27th St.)	S. 119th St. (N. 12th St.)	2 to 4	1.00	M	Moore
Bryant Ave. (12th Ave. W.)	S. 209th St. (Tecumseh Rd.)	S. 224th St. (Rock Creek Rd.)	2 to 4 R,S	1.00	M	Norman
Bryant Ave. (Berry Rd.)	S. 239th St. (Robinson St.)	S. 284th St. (Imhoff Rd.)	2 to 4 R,S	3.00	L	Norman
Cemetery Rd. (Clear Springs Rd.)	S. 59th St.	SH-152 (S. 74th St.)	2 to 4 R,L,S	1.00	M	Mustang
Choctaw Rd.	N. 63rd St.	S. 29th St.	2 to 4 R,L	7.00	M	Choctaw
Choctaw Rd.	S. 29th St.	S. 44th St.	2 to 4 L,S	1.00	L	OKC
Classen Blvd.	S. 269th St. (Lindsey St.)	N. of Sooner Rd. (12th Ave. E.)	3 to 4 R,S	0.70	L	Norman
Council Rd.	N. 164th St.	N. 136th St. (Memorial Rd.)	2 to 4 L,S	2.00	M	OKC
Council Rd.	N. 108th St. (Hefner Rd.)	N. 50th St.	4 to 5 R,S	4.00	M	OKC
Council Rd.	S. 59th St.	S. 74th St.	2 to 4 L,S	1.00	L	OKC
County Line Rd.	N. 122nd St.	N. 78th St. (Wilshire Blvd.)	2 to 4 R,S	3.00	L	OKC
Douglas Blvd. (48th Ave. E.)	S. 194th St. (Franklin Rd.)	SH-9	2 to 4 R,S	6.00	L	Norman
Eastern Ave.	0.5 mile N. of N. 136th St. (Memorial Rd.)	N. 122nd St.	4 to 5 L,S	1.50	L	OKC
Flood Ave.	S. 239th St. (Robinson St.)	S. 254th St. (Main St.)	2 to 4 R,S	1.00	L	Norman
Harrah Rd. (SH-270)	S. 29th St.	I-40	2 to 4	3.50	L	Harrah, OKC, OK Co.
Harrah Rd.	I-40	S. 89th St.	2 to 4 R,L	0.50	L	OKC
I-35	N. 248th St. (Waterloo Rd.)	N. 178th St. (SH-66/Edmond Rd.)	4 to 6	5.00	L	Edmond, OK Co.
I-35	I-44	N. 23rd St.	4 to 6	3.30	M	OKC
I-35 (South)	SH-9 West Interchg.	SH-74/Goldsby Exit	4 to 6	2.40	L	Goldsby
I-35/I-240 Interchg.			Reconstruct		M	OKC
I-35/S. 254th St. (Main St.) Interchg.			Reconstruct		M	Norman
I-35/S. 269th St. (Lindsey St.) Interchg.			Reconstruct		M	Norman
I-35/SH-9 West Interchg.			Reconstruct		M	Norman
I-40	I-240	Pottawatomie Rd.	4 to 6	8.50	M	OKC
I-40	Midwest Blvd.	I-240	4 to 6	5.80	L	OKC
I-40/I-44 Interchg.			Reconstruct		L	OKC
I-44	I-240	SH-37 (S. 134th St.)	4 to 6	5.50	L	OKC, Newcastle
I-235	I-44	N. 36th St.	4 to 6	1.40	M	OKC
I-235/I-44 Interchg.			Reconstruct		M	OKC
I-240	I-35	I-40	4 to 6	11.50	L	OKC
James Garner Ave.	Flood Ave.	S. 239th St. (Robinson St.)	New 1-lane	0.15	L	Norman
James Garner Ave.	S. 239th St. (Robinson St.)	Acres St.	New 2-lane	0.50	L	Norman

*R = On-street Bike Route; S = Sidewalks; L = On-street Bike Lane; T = Multi-use Trail

**S = Short Range Project (proposed between 2011 and 2015); M = Medium Range Project (proposed between 2016 and 2025); L = Long-Range Project (proposed between 2026 and 2035)

Improvement Location	From	To	Improvement (lanes)*	Length (miles)	Proposed Staging**	Entity
James Garner Ave. (Realignment)	S. 254th St. (Main St.)	Tonhawa St.	2 to 2 R,S	0.20	M	Norman
Jenkins Ave.	S. 269th St. (Lindsey St.)	Constitution Ave.	2 to 4 R,S	0.90	L	Norman
Kelley Ave.	0.5 mile N. of N. 136th St. (Memorial Rd.)	N. 136th St. (Memorial Rd.)	4 to 5 L,S	0.50	M	OKC
Kelley Ave.	N. 63rd St.	N. 50th St.	2 to 4 R,L	1.00	L	OKC
Kelley Ave. (36th Ave. W.)	S. 179th St. (Indian Hills Rd.)	S. 209th St. (Tecumseh Rd.)	2 to 4 R,S	2.00	M	Norman
Kelly Ave.	N. 248th St. (Waterloo Rd.)	N. 220th St. (Coffee Creek Rd.)	2 to 4 Divided T,S	2.00	M	Edmond
Kelly Ave.	N. 220th St. (Coffee Creek Rd.)	N. 206th St. (Covell Rd.)	2 to 4 Divided	1.00	S	Edmond
Kelly Ave.	N. 192nd St. (Danforth Rd.)	N. 178th St. (Edmond Rd.)	4 to 4 Divided T,S	1.00	M	Edmond
Kelly Ave.	N. 178th St. (Edmond Rd.)	N. 164th St. (15th St.)	4 to 4 Divided T,S	1.00	M	Edmond
Kelly Ave.	N. 150th St. (33rd St.)	0.5 mile S. of N. 150th St. (33rd St.)	4 to 4 Divided S	0.50	M	Edmond
MacArthur Blvd.	0.5 mile N. of N. 206th	N. 206th St.	2 to 4 S	0.50	S	OK Co.
MacArthur Blvd.	N. 108th St. (Hefner Rd.)	N. 78th St. (Wilshire Blvd.)	4 to 5 L,S	2.00	M	OKC
MacArthur Blvd.	N. 36th St.	Reno Ave.	4 to 5 L,S	3.00	L	OKC
MacArthur Blvd.	S. 15th St.	S. 22nd St.	4 to 5 L,S	0.50	L	OKC
May Ave.	N. 164th St.	N. 136th St. (Memorial Rd.)	4 to 5 R,L	2.00	M	OKC
May Ave.	N. 136th St. (Memorial Rd.)	N. 108th St. (Hefner Rd.)	4 to 5 L,S	2.00	M	OKC
May Ave.	N. 78th St. (Wilshire Blvd.)	N. 50th St.	4 to 5 L,S	2.00	M	OKC
May Ave.	S. 74th St.	S. 89th St.	4 to 5 R,L	1.00	L	OKC
May Ave.	S. 134th St.	S. 149th St.	2 to 4 L,S	1.00	M	OKC
Meridian Ave.	Reno Ave.	S. 29th St.	4 to 5 L,S	2.00	M	OKC
Morgan Rd.	S. 44th St.	S. 59th St.	2 to 4 L,S	1.00	M	OKC
Morgan Rd.	S. 59th St.	S. 89th St.	2 to 4 L,S	2.00	M	Mustang
Mustang Rd. (SH-4)	S. 59th St.	S. 74th St. (SH-152)	4 to 5 L,S	1.00	M	Mustang
Mustang Rd.	S. 74th St. (SH-152)	S. 89th St.	4 to 5 L,S	1.00	M	Mustang
Mustang Rd. (new SH-4)	SH-37	I-44	2 to 4	5.00	M	Grady Co.
Peebly Rd.	I-40	S. 164th St. (Bethel Rd.)	2 to 4	5.50	L	OKC
Pennsylvania Ave.	N. 63rd St.	I-44	4 to 5 L,S	1.50	L	OKC
Pennsylvania Ave.	N. 38th St.	N. 23rd St.	4 to 5 L,S	1.10	L	OKC
Pennsylvania Ave.	N. 10th St.	Main St.	4 to 5 L,S	0.90	L	OKC
Pennsylvania Ave.	S. 44th St.	S. 104th St.	4 to 5 L,S	4.00	M	OKC
Pennsylvania Ave.	S. 134th St.	S. 149th St.	2 to 4 L,S	1.00	M	OKC
Post Rd.	S. 29th St.	S. 89th St.	2 to 4 L,S	4.00	L	OKC
Reno Ave.	Czech Hall Rd.	Mustang Rd.	4 to 6 L,S	1.00	L	OKC
Reno Ave.	Friendly Rd.	Anderson Rd.	2 to 5 S	0.90	M	Midwest City
Rockwell Ave.	N. 164th St.	N. 136th St. (Memorial Rd.)	2 to 4 L,S	2.00	M	OKC
Rockwell Ave.	N. 122nd St.	N. 78th St. (Wilshire Blvd.)	4 to 5 L,S	3.00	M	OKC
Rockwell Ave.	N. 63rd St.	N. 50th St.	4 to 5 L,S	1.00	L	OKC
Rockwell Ave.	N. 16th St.	North Canadian River	4 to 5 L,S	1.90	L	OKC
Santa Fe Ave.	N. 164th St.	N. 122nd St.	4 to 5 L,S	3.00	M	OKC
Santa Fe Ave. (48th Ave. W.)	S. 179th St. (Indian Hills Rd.)	S. 239th St. (Robinson St.)	2 to 4 R,S	4.00	L	Norman
Sara Rd.	N. 39th Expressway (SH-66)	S. 15th St.	2 to 4 L,S	4.50	L	OKC
Sara Rd.	S. 15th St.	S. 59th St.	2 to 4	3.00	M	OKC
Sara Rd.	S. 59th St.	SH-152	2 to 4 L,S	1.00	M	Mustang
SH-4 (Czech Hall Rd.)	Northwest Expressway (SH-3)	N. 50th St. (Wagner Rd.)	2 to 4	5.60	L	Yukon, OKC
SH-9	Eastern Ave. (24th Ave. W.)	Sooner Rd. (12th Ave. E.)	4 to 6	3.20	M	Norman
SH-9	Air Depot Blvd. (24th Ave. E.)	Midwest Blvd. (36th Ave. E.)	2 to 4	1.00	S	Norman
SH-9	Midwest Blvd. (36th Ave. E.)	Westminster Rd. (72nd Ave. E.)	2 to 4	3.00	M	Norman
SH-9	Westminster Rd. (72nd Ave. E.)	Luther Rd. (168th Ave. E.)	2 to 4	9.30	L	Norman

*R = On-street Bike Route; S = Sidewalks; L = On-street Bike Lane; T = Multi-use Trail

**S = Short Range Project (proposed between 2011 and 2015); M = Medium Range Project (proposed between 2016 and 2025); L = Long-Range Project (proposed between 2026 and 2035)

Improvement Location	From	To	Improvement (lanes)*	Length (miles)	Proposed Staging**	Entity
SH-9	Luther Rd. (168th Ave. E.)	Pottawatomie Rd.	2 to 4	3.00	L	Norman, CLV Co.
SH-66	Post Rd.	0.4 mile W. of Anderson Rd.	2 to 4	1.60	M	Arcadia
SH-74 (Portland Ave.)	N. 206th Rd. (Covell Rd.)	0.8 mile N. of N. 164th St.	2 to 4	2.80	M	OKC, OK Co.
SH-74 (Main St.)	I-35	5.5 miles S. of I-35 (S. 250th St.)	2 to 4	5.50	L	Goldsby
Sooner Rd.	N. 206th St. (Covell Rd.)	0.5 mile S. of N. 192nd St. (Danforth Rd.)	2 to 4 T,S	1.50	M	Edmond
Sooner Rd.	N. 23rd St.	N. 10th St.	2 to 4	1.00	M	Midwest City
Sooner Rd.	S. 29th St.	S. 74th St.	4 to 5 L,S	3.00	M	OKC, Del City
Sooner Rd. (SH-77H)	S. 179th St. (Indian Hills Rd.)	Classen Blvd.	4 to 6	7.00	L	Norman
Sooner Rd. (12th Ave. E.)	SH-9	S. 299th St. (Cedar Lane Rd.)	2 to 4 R,S	0.50	M	Norman
Sunnylane Rd. (Coltrane Rd.)	N. 206th St. (Covell Rd.)	N. 192nd St. (Danforth Rd.)	2 to 4 T,S	1.00	M	Edmond
Sunnylane Rd. (Coltrane Rd.)	N. 192nd St. (Danforth Rd.)	N. 164th St. (15th St.)	2 to 4 T,S	2.00	M	Edmond
Sunnylane Rd. (Coltrane Rd.)	N. 164th St. (15th St.)	N. 150th St. (33rd St.)	2 to 4 T,S	1.00	M	Edmond
Sunnylane Rd.	S. 104th St.	S. 119th St.	2 to 4 L,S	1.00	M	OKC
Sunnylane Rd. (Porter Ave.)	S. 179th St. (Indian Hills Rd.)	S. 224th St. (Rock Creek Rd.)	2 to 4 R,S	3.00	M	Norman
Sunnylane Rd. (Porter Ave.)	S. 239th St. (Robinson St.)	S. 254th St. (Alameda St.)	4 to 5 R,S	1.00	L	Norman
Turner Turnpike (I-44)	Eastbound on-ramp, Westbound off-ramp		Interchg. Modif.		L	OKC
University Blvd.	Daws St.	Boyd St.	Convert to One-way	0.80	M	Norman
US-77	S. 329th St. (Etowah Rd.)	Banner Rd.	2 to 4	4.00	M	Multiple
US-77	Banner Rd.	Bryant Rd.	2 to 4	3.00	M	Multiple
US-77	Bryant Rd.	0.5 mile E. of SH-74 (N. Green Ave.)	2 to 4	4.50	M	Multiple
Webster Ave./Asp Ave.	Acres St.	Boyd St.	Convert to One-way	1.10	M	Norman
Western Ave.	S. 29th St.	S. 59th St.	4 to 5 L,S	2.00	M	OKC
Western Ave.	S. 62nd St.	I-240 Service Rd.	4 to 5 L,S	0.75	M	OKC
Western Ave.	S. 89th St.	S. 119th St.	4 to 5 L,S	2.00	L	OKC
N. 248th St. (Waterloo Rd.)	0.5 mile W. of Sunnylane Rd. (Coltrane Rd.)	Douglas Blvd.	2 to 4	4.50	M	OK Co., Logan Co.
N. 206th St.	0.25 mile W. of MacArthur Blvd.	MacArthur Blvd.	2 to 4	0.25	S	OK Co.
N. 206th St.	MacArthur Blvd.	Pennsylvania Ave.	2 to 4	4.00	L	OK Co.
N. 206th St. (Covell Rd.)	Broadway Ave.	Sunnylane Rd. (Coltrane Rd.)	2 to 4 Divided T,S	1.80	M	Edmond
N. 206th St. (Covell Rd.)	Sunnylane Rd. (Coltrane Rd.)	I-35	2 to 4 Divided T,S	1.20	M	Edmond
N. 192nd St. (Danforth Rd.)	Sunnylane Rd. (Coltrane Rd.)	I-35	2 to 4 T,S	1.20	M	Edmond
N. 178th St. (Edmond Rd.)	0.5 mile W. of Santa Fe Ave.	Kelly Ave.	4 to 4 Divided T,S	1.50	M	Edmond
N. 178th St. (Edmond Rd.)	Kelly Ave.	Fretz Ave.	4 to 4 Divided T,S	0.50	M	Edmond
N. 150th St.	Council Rd.	MacArthur Blvd.	2 to 4 L,S	2.00	M	OKC
N. 150th St. (33rd St.)	Kelly Ave.	Boulevard	4 to 4 Divided T,S	1.00	M	Edmond
N. 150th St. (33rd St.)	Boulevard	Bryant Ave.	4 to 4 Divided T,S	1.00	M	Edmond
N. 150th St. (33rd St.)	Sunnylane Rd. (Coltrane Rd.)	I-35	2 to 4 T,S	1.00	M	Edmond
N. 136th St. (Memorial Rd.)	Eastern Ave. (Boulevard)	Bryant Ave.	4 to 5 L,S	1.00	L	OKC
N. 122nd St.	MacArthur Blvd.	Lake Hefner Parkway (SH-74)	4 to 5 L,S	2.00	M	OKC
N. 122nd St.	Lake Hefner Parkway (SH-74)	Pennsylvania Ave.	4 to 5 L,S	2.00	M	OKC
N. 122nd St.	Western Ave.	Santa Fe Ave.	4 to 5 L,S	1.00	M	OKC
N. 108th St. (Hefner Rd.)	Northwest Expressway (SH-3)	County Line Rd.	2 to 4 L,S	1.00	L	OKC
N. 108th St. (Hefner Rd.)	May Ave.	Pennsylvania Ave.	4 to 5 L,S	1.00	L	OKC
N. 108th St. (Hefner Rd.)	Broadway Extension	Kelley Ave.	2 to 4 L,S	1.00	L	OKC
N. 93rd St. (Britton Rd.)	Waverly Ave.	Broadway Extension	4 to 5 L,S	1.30	L	OKC
N. 78th St. (Wilshire Blvd.)	Broadway Extension	I-35	2 to 4 L,S	3.00	L	OKC
N. 63rd St.	Meridian Ave.	Pennsylvania Ave.	4 to 5 L,S	3.00	M	OKC
N. 63rd St.	Sooner Rd.	Douglas Blvd.	2 to 4	3.00	M	OKC
N. 50th St.	Western Ave.	Hudson Ave.	4 to 5 L,S	0.50	M	OKC

*R = On-street Bike Route; S = Sidewalks; L = On-street Bike Lane; T = Multi-use Trail

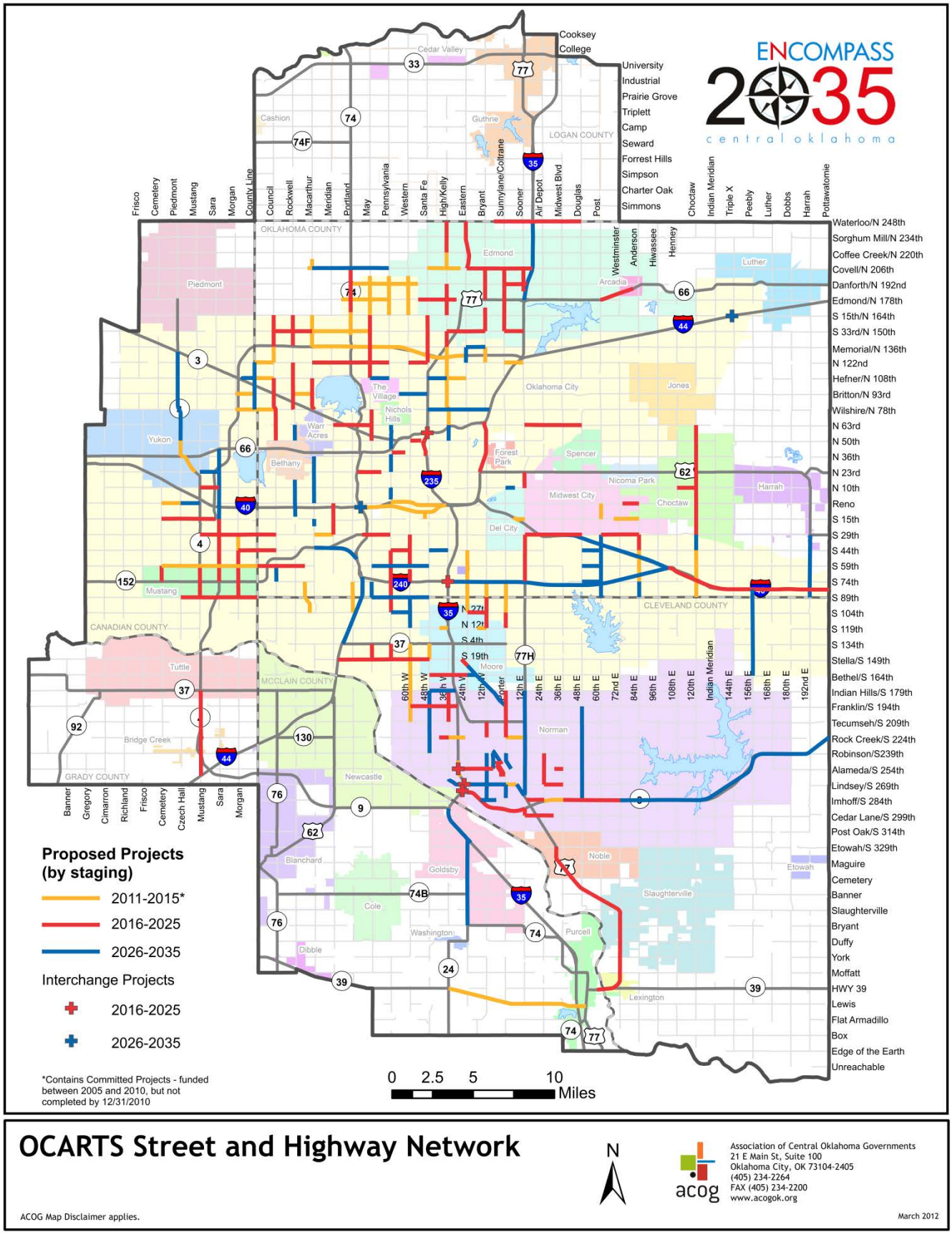
**S = Short Range Project (proposed between 2011 and 2015); M = Medium Range Project (proposed between 2016 and 2025); L = Long-Range Project (proposed between 2026 and 2035)

Improvement Location	From	To	Improvement (lanes)*	Length (miles)	Proposed Staging**	Entity
N. 39th St.	Pennsylvania Ave.	Classen Blvd.	4 to 5 L,S	0.75	M	OKC
N. 23rd St.	Mustang Rd.	Sara Rd.	2 to 4 L,S	1.00	L	OKC
N. 23rd St.	I-44	Villa Ave.	4 to 5 L,S	1.25	M	OKC
N. 10th St.	Mustang Rd.	Sara Rd.	2 to 4 L,S	1.00	M	OKC
N. 10th St.	Sunnylane Rd. (Coltrane Rd.)	Vickie Dr.	4 to 5 L,S	0.50	L	OKC, Del City
N. 10th St.	Henney Rd.	Choctaw Rd.	2 to 3 L	1.00	M	Choctaw
S. 15th St.	Cemetery Rd. (SH-92)	John Kilpatrick Turnpike	2 to 4 L,S	2.75	M	OKC
S. 15th St.	Lynn Fry Blvd.	Anderson Rd.	2 to 4	1.30	S	Midwest City
S. 29th St.	Mustang Rd.	Council Rd.	2 to 4 L,S	4.00	M	OKC
S. 29th St.	Independence Ave.	Pennsylvania Ave.	4 to 5 L,S	1.50	M	OKC
S. 29th St.	Sooner Rd.	Midwest Blvd.	4 to 5 L,S	2.00	M	OKC
S. 29th St.	Midwest Blvd.	Douglas Blvd.	4 to 5 S	1.00	M	Midwest City
S. 29th St.	Post Rd.	Anderson Rd.	2 to 5 S	1.00	M	Midwest City
S. 44th St.	Morgan Rd.	Council Rd.	2 to 4 L,S	2.00	M	OKC
S. 44th St.	Pennsylvania Ave.	Western Ave.	4 to 5 L,S	1.00	M	OKC
S. 44th St.	Santa Fe Ave.	Kelley Ave. (High Ave.)	4 to 5 R,L	1.00	L	OKC
S. 44th St.	Douglas Blvd.	Post Rd.	2 to 4 L,S	1.00	L	OKC
S. 59th St.	Cemetery Rd. (Clear Springs Rd.)	County Line Rd.	2 to 4 L,S	5.00	S	Mustang
S. 59th St.	County Line Rd.	Regina Ave.	2 to 4 L,S	2.50	M	OKC
S. 59th St.	May Ave.	Santa Fe Ave.	4 to 5 L,S	3.00	L	OKC
S. 59th St.	Douglas Blvd.	Post Rd.	2 to 4 L,S	1.00	L	OKC
S. 74th St.	Douglas Blvd.	Post Rd.	2 to 4 L,S	1.00	L	OKC
S. 89th St.	Czech Hall Rd.	County Line Rd.	2 to 4 L,S	4.00	M	Mustang
S. 89th St.	May Ave.	Santa Fe Ave.	4 to 5 L,S	3.00	L	OKC
S. 104th St.	Pennsylvania Ave.	Western Ave.	4 to 5 L,S	1.00	L	OKC
S. 104th St. (N. 27th St.)	Eastern Ave.	Bryant Ave.	2 to 4 R,S	1.00	M	Moore
S. 149th St.	I-44	Pennsylvania Ave.	2 to 4	2.80	M	OKC
S. 149th St.	Pennsylvania Ave.	Santa Fe Ave.	2 to 4 L,S	2.00	M	OKC
S. 164th St. (S. 34th St.)	Santa Fe Ave.	Kelley Ave. (Telephone Rd.)	2 to 4 T	1.00	M	Moore
S. 164th St. (S. 34th St.)	Kelley Ave. (Telephone Rd.)	BNSF Railroad Tracks	2 to 4 T	0.75	M	Moore
S. 164th St. (S. 34th St.)	BNSF Railroad Tracks	Eastern Ave.	2 to 4 T	0.25	M	Moore
S. 164th St. (S. 34th St.)	Eastern Ave.	Broadway Ave.	2 to 4 T	0.50	L	Moore
S. 179th St. (Indian Hills Rd.)	Santa Fe Ave. (48th Ave. W.)	I-35	2 to 4 R,S	1.50	L	Norman
S. 194th St. (Franklin Rd.)	Western Ave. (60th Ave. W.)	I-35	2 to 4 R,S	2.50	M	Norman
S. 224th St. (Rock Creek Rd.)***	Grand View Ave.	Kelley Ave. (36th Ave. W.)	2 to 4	0.50	M	Norman
S. 254th St. (Main St.)	I-35	Flood Ave.	4 to 5	1.70	M	Norman
S. 254th St. (Alameda St.)	Ridge Lake Blvd.	Midwest Blvd. (36th Ave. E.)	2 to 5 R,S	0.60	M	Norman
S. 269th St. (Lindsey St.)	Kelley Ave. (36th Ave. W.)	Bryant Ave. (Berry Rd.)	3 to 5 R,S	2.00	L	Norman
S. 269th St. (Lindsey St.)	Bryant Ave. (Berry Rd.)	Jenkins Ave.	2 to 4	1.00	L	Norman
S. 269th St. (Lindsey St.)	Air Depot Blvd. (24th Ave. E.)	Midwest Blvd. (36th Ave. E.)	2 to 5 R,S	1.00	M	Norman
S. 284th St. (Imhoff Rd.)	SH-9	Chautauqua Ave.	2 to 4 R,S	0.80	L	Norman
S. 284th St. (Imhoff Rd.)	Classen Blvd.	Air Depot Blvd. (24th Ave. E.)	3 to 4 R,S	1.00	M	Norman
S. 299th St. (Cedar Lane Rd.)***	Sooner Rd. (12th Ave. E.)	0.5 mi. E. of Air Depot Blvd. (24th Ave. E.)	2 to 4	1.50	M	Norman

*R = On-street Bike Route; S = Sidewalks; L = On-street Bike Lane; T = Multi-use Trail

**S = Short Range Project (proposed between 2011 and 2015); M = Medium Range Project (proposed between 2016 and 2025); L = Long-Range Project (proposed between 2026 and 2035)

Figure 13.4: *Encompass 2035* Street and Highway Network



AMENDING THE PLAN

Encompass 2035 was developed based on future projections of population, housing, employment, land use and other socioeconomic factors. Change in each of these areas is inevitable, and must be addressed through periodic update of the plan. Changes in revenue forecasts and cost assumptions are also an integral part of the plan update process.

Currently, federal law requires that long-range transportation plans for air quality attainment areas, like the OCARTS area, be prepared every five years. In order to accommodate policy changes that may arise before the next plan update, the Intermodal Transportation Policy Committee may consider and approve amendments to the plan.

Upon resolution of its governing body, an amendment request may be made by any OCARTS member city or county, the Oklahoma Department of Transportation, the Oklahoma Turnpike Authority (OTA), the Central Oklahoma Transportation and Parking Authority (COTPA), Cleveland Area Rapid Transit (CART), or ACOG. Public input is sought on each requested amendment, and the Policy Committee receives a recommendation from the Intermodal Transportation Technical Committee and the Citizens Advisory Committee prior to final action. Each plan amendment must reflect estimated costs and revenues, by funding source, to demonstrate that the plan will remain affordable, as required by SAFETEA-LU.

ELIGIBILITY FOR FEDERAL-AID HIGHWAY FUNDS

Federal law requires each state, in consultation with the metropolitan areas, to cooperatively develop and maintain a functional classification of streets, including identification of routes on the National Highway System[12]. The federal functional classification system[13] is approved by the Federal Highway Administration and is used to determine eligible routes for federal-aid assistance, as well as to provide a planning tool for needs assessments, establishment of jurisdictional (urban/rural) responsibilities, design criteria, and other planning activities.

With the exception of bridge improvements, the expenditure of federal-aid highway funds in metropolitan areas is restricted to locations that are functionally classified as rural major collectors, urban collectors, arterials, freeways or interstates. In order to maintain the integrity and safety of the overall transportation system, certain federal funding categories permit the replacement or rehabilitation of any bridge, regardless of its functional classification. Therefore, bridge improvements on any public road may be performed using eligible federal-aid funding categories regardless of functional classification or location on the OCARTS street and highway network.

The *Encompass 2035* network identifies routes that are the most regionally significant in terms of traffic demand. Not all streets located within Central Oklahoma are included on the OCARTS network. Additionally, not all streets included in the OCARTS network may be part of the federal functional classification system described above.

Street and highway improvements involving new construction, reconstruction, rehabilitation, resurfacing or widening must be included on both the *Encompass 2035* Plan network and the federal functional classification system in order to be eligible for federal-aid funding. Locations of federal-aid safety improvements, such as traffic signals, school zone signals, or traffic signs, must be a part of the federal functional classification system, but sometimes are not included on the OCARTS street and highway network if they have lower traffic volumes. The location requirements for federal-aid eligibility are summarized in Table 13.6.

[12] The National Highway System (NHS) includes the Interstate Highway System as well as other roads important to the nation's economy, defense, and mobility. The NHS was developed by the Department of Transportation (DOT) in cooperation with the states, local officials, and MPOs.

[13] The 2000 Oklahoma City Urban Area Functional Classification System was approved by the Federal Highway Administration, Oklahoma Division Office, on November 7, 2002.

Table 13.6: Requirements for Use of Federal-Aid Highway Funds

PROJECT TYPE	FEDERAL FUNCTIONAL CLASSIFICATION	OCARTS NETWORK
Bridge Improvement	No	No
New Construction	Yes	Yes
Reconstruction	Yes	Yes
Rehabilitation	Yes	Yes
Resurfacing	Yes	Yes
Widening	Yes	Yes
Safety Improvements[14]	Yes	No

[14] Safety improvements include traffic control signalization, pavement marking, commuter carpooling and vanpooling, or installation of traffic signs, traffic lights, guardrails, impact attenuators, concrete barrier end treatments, breakaway utility poles, and priority control systems for emergency vehicles at signalized intersections.

SOCIAL, ECONOMIC AND EVIRONMENTAL IMPACTS OF THE ADOPTED PLAN

As part of the *Encompass 2035* development process, ACOG staff evaluated social, economic, and environmental factors important to the study area. Data relating to these topics was gathered and analyzed in relation to the alternate networks. The data was reviewed by ACOG's citizen, technical, and policy committees, and it was presented to the public during the *Encompass 2035* public meetings.

To promote early consideration of potential transportation impacts, plan goals were established that considered the social, economic, and environmental effects of transportation systems. Additionally, the impact data was utilized during the *Encompass 2035* project evaluation and scoring process to encourage initial consideration at the local level.

It is important to note that the *Encompass 2035* impact analysis is regional in scale and does not replace project-level environmental assessments required by the National Environmental Policy Act (NEPA) for federally funded transportation improvements. However, it is useful in providing local governments and other transportation agencies with information on critical areas that may need special attention during project development.

Table 13.7 summarizes the potential social, economic, and environmental impacts that were identified in the development of *Encompass 2035*. A more detailed discussion of these impacts is provided in the following two reports, available on the ACOG website: *Evaluation of Social, Economic, and Environmental Impacts of Encompass 2035* and *Environmental Justice Analysis of Encompass 2035*. The reports include maps identifying the locations of most of the following impacts within the OCARTS area.

Table 13.7: Potential Economic, Environmental and Social Impacts of *Encompass 2035*

ECONOMIC IMPACTS	CONSIDERATION		ANTICIPATED IMPACTS
Residential and Employment Displacements	Acquisition of rights-of-way for roadway improvement may result in displacement of residential and business properties.		Accommodations may be necessary for specific projects.
Neighborhoods Low Income and Traditionally Underserved Groups	Acquisition of rights-of-way and/or proximity of improvements may impact low income groups.		Accommodations may be necessary for specific projects. No disproportionate impact on low income or minority neighborhoods is anticipated.
***Encompass 2035* Plan Costs**	Street and Highway: Transit: Bicycle/Pedestrian:	$6,272,533,691 $1,004,563,795 $ 328,943,366 $7,606,040,852	None. *Encompass 2035* is financially constrained.

Table 13.7 (Cont.): Social, Economic, and Environmental Impacts of *Encompass 2035*

ENVIRONMENTAL IMPACTS	CONSIDERATION	ANTICIPATED IMPACTS
Parks and Recreational Areas	There will be minimal effects from bike or pedestrian paths on the natural environment; increased costs to handle additional stormwater runoff may develop.	Minor accommodations may be necessary for specific projects.
Wildlife, and Endangered Species	There are five endangered or threatened species in the OCARTS area; a portion of the South Canadian River, between McClain and Cleveland counties, has been designated a critical habitat by the Fish and Wildlife Service; the exact habitat of threatened avian species is unpredictable from year to year due to their migratory nature.	Minor accommodations may be necessary for specific projects.
Flood Plains	Street widening and construction projects across or near Cottonwood Creek, North Fork Walnut Creek, Deep Fork, Cimarron, Little, North or South Canadian Rivers or other major flood prone areas will incur increased construction costs.	Accommodations may be necessary for specific projects.
Water Quality: Surface and Aquifers	Street widening and construction projects will incur increased costs to protect surface and underground water resources from stormwater runoff and construction activities (EPA NPDES, Oklahoma's CSGWPP, and other Source Water Protection Programs).	Minor accommodations may be necessary for specific projects.
Hazardous Waste and Superfund Sites	There are 136 hazardous waste sites (some of which may require remediation) and 5 superfund sites within the OCARTS area.	Planning and design of street widening/ construction projects near these sites will require special attention.
Leaking Underground Storage Tanks	There are approximately 103 open investigations of suspected or confirmed leaking underground storage tanks in the OCARTS area; removal of tanks and remediation could delay progress on intersection improvements or street widening projects.	Minor accommodations may be necessary for specific projects.
Noise Sensitive Areas/Sites	There are 4,197 noise sensitive locations, (e.g., day care centers, schools, colleges, nursing homes, hospitals) within the OCARTS area.	Street widening and construction projects could increase noise levels for residential areas and accommodations may be necessary for specific projects.

Table 13.7 (Cont.): Social, Economic, and Environmental Impacts of *Encompass 2035*

SOCIAL IMPACTS	CONSIDERATION	ANTICIPATED IMPACTS
Archaeological Sites	There are approximately 800 archaeological sites within the OCARTS area.	Minor accommodations may be necessary for specific projects; no significant impact.
Tribal Lands	The federal tribal trust lands in the OCARTS are mostly located in the eastern parts of Cleveland, McClain and Oklahoma counties.	The Bureau of Indian Affairs (BIA) and individual tribes must be contacted to determine exact locations. Otherwise no anticipated impact.
National Historic Sites and Districts	There are 146 sites and 24 districts in the OCARTS area that are listed on the National Park Service's National Register of Historic Places.	Minor accommodations may be necessary for specific projects. Otherwise no anticipated impact.
Safety (Annual Accidents Predicted)	Fatalities - 113 Injuries – 11,352	Project level design should strive to resolve potential safety hazards.

CHAPTER 14: FINANCIAL STRATEGIES, REVENUES AND COST

U.S. Department of Transportation guidelines require that metropolitan long-range transportation plans include a financial strategy that demonstrates how the adopted plan can be implemented. The plan must ensure that the total estimated costs to operate and maintain federal-aid roadways and public transportation will not exceed reasonably expected transportation revenues available from public and private sources. Additionally, the financial plan must:

- ensure the maintenance and preservation of the existing transportation system.
- contain system-level estimates of cost and revenue sources.
- identify and ensure the availability of any new funding sources.
- reflect year-of-expenditure dollars for revenue and cost estimates included in the plan.

This chapter describes the projected revenues for the OCARTS area over the 30-year plan period, 2005–2035, and the estimated costs associated with construction and maintenance of the region's planned street and highway network, bicycle and pedestrian trails, and public transportation system. The financial strategy presented in the following sections demonstrates that *Encompass 2035* is an affordable plan which can be implemented using reasonably anticipated revenues.

For the purposes of financial capacity analysis, highway and transit funds were accounted for separately despite the fact that current federal law allows a portion of some categories of federal funds to be flexed between highway and transit purposes. There are several limitations on the ability to accurately predict future revenues and costs, including the following:

- Projections are for a period of 30 years, during which significant changes to transportation financing and priorities are possible at both the federal and local level.
- Future federal funding involves a great deal of uncertainty due to shifts in transportation budgeting and deficit-reduction policies and because these funds are primarily administered on a statewide basis.
- Cost estimates for projects beyond the first few years of the plan period may involve significant future changes due to the long-range nature of the plan, modifications to project scope, uncertainty about future inflation, and the absence of detailed project design.
- The analysis combines federal, state and local funding and compares the total against the aggregate expenditures identified in the plan. Except for the distinction between highway and transit, this doesn't account for the fact that certain funding sources are available only for specific purposes.

ANTICIPATED REVENUES FOR *ENCOMPASS 2035*

A 30-year projection of transportation revenue was developed by the MPO and approved in December 2010 by the Intermodal Transportation Policy Committee for *Encompass 2035*. Transportation revenues historically available to, or spent within, the OCARTS area were identified from a variety of federal, state and local sources, and reflect funding for all transportation modes that move both people and goods. The total revenue projection is just over $10 billion.

Federal and state funds spent within the OCARTS area during FY 2005 through FY 2009 served as the historical basis to develop an annual average that was projected over the 30-year planning period. Additionally, federal discretionary funds, tied to specific OCARTS projects, were included in the estimated federal revenues, and local revenues were estimated based on a survey of OCARTS area local governments. The funding categories listed below are part of the *Encompass 2035* revenue projection.

FEDERAL REVENUE SOURCES[15]

- Streets and Highways – Federal Highway Administration Formula Programs:
  - Bridge Replacement and Rehabilitation (BR)
  - Congestion Mitigation/Air Quality (CMAQ)
  - Highway Safety Improvement Program (HSIP)
  - Interstate Maintenance (IM)
  - National Highway System (NHS)
  - Surface Transportation Program (STP) (Statewide, Urbanized Area, Enhancement, and Safety)

- Streets and Highways – Federal Highway Administration Discretionary Programs:
  - American Recovery and Reinvestment Act of 2009 (ARRA)
  - Demonstration Funds
  - High Priority Projects (HPP)
  - Intelligent Transportation Systems (ITS)
  - Transportation Community Systems Preservation (TCSP)
  - Other Discretionary Earmarks

- Transit – Federal Transit Administration Formula Programs:
  - Sec. 5307 – Urbanized Area Funds (Oklahoma City UZA and Norman UZA)
  - Sec. 5310 – Elderly and Persons with Disabilities Program
  - Sec. 5311 – Non-Urbanized Area Formula Program
  - Sec. 5316 – Jobs Access and Reverse Commute (JARC)
  - Sec. 5317 – New Freedom (NF)
  - Congestion Mitigation/Air Quality (CMAQ) – Transferred from FHWA to FTA

- Transit – Federal Transit Administration Discretionary Programs:
  - Sec. 5309 – Discretionary Capital Program
  - Other Discretionary Earmarks

[15] Reflects funding categories of the Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU).

STATE REVENUE SOURCES

- Streets and Highways:
  - State Highway Maintenance Funds
  - Industrial Access Program
  - Lake Access Program
  - State Taxes & Fees Distributed to Counties for Roads
  - State Taxes & Fees Distributed to Cities and Towns
  - Oklahoma Turnpike Authority (OTA)

- Transit:
  - Public Transit Revolving Fund

LOCAL REVENUE SOURCES

- Dedicated to Arterial Street, Bicycle and Pedestrian Improvements:
  - General Fund
  - General Obligation Bonds
  - Sales Tax
  - Street and Alley Fund
  - Contributions by Developers

- Transit:
  - Municipal and County funds – budgeted for transit
  - University funds – budgeted for transit
  - Farebox Revenues
  - Donations, advertising, private funds, other
  - Temporary Sales Tax dedicated to transit from MAPS 3

Table 14.1 summarizes the total OCARTS area revenue projection. All figures are rounded to the nearest thousand dollars. An inflation factor was not applied to the anticipated revenues due to uncertainty about funding levels in the next multi-year federal surface transportation bill and the future of the Highway Trust Fund.

Table 14.1: Estimated Transportation Revenues for Implementation of *Encompass 2035*

STREET AND HIGHWAYS, BICYCLE & PEDESTRIAN MODES - FFY 2005-2035	ESTIMATED 30-YEAR TOTAL
Federal Sources (incl. matching funds)	
Federal-aid Formula Funds Includes BR, CMAQ, HSIP, IM, NHS & STP Funds (UZA, Statewide, Enhancement)	$3,970,531,000
Discretionary Funds - FFY 2005-2009 Includes ARRA, Demo, HPP, ITS, I-40 Crosstown earmarks & TCSP	$424,565,000
Future Discretionary Funds - FFY 2010-2035 Includes (remaining) ARRA, I-40 Crosstown earmarks, previous appropriations.	$79,346,000
State Sources	
State Maintenance, Industrial Access and Lake Access Programs Includes County Road & Bridge Funds and State Road, Bridge & RR Maintenance Funds	$416,957,000
Oklahoma Turnpike Authority (OTA) - (equals estimated turnpike costs)	$219,812,000
State Taxes & Fees Distributed Directly to Counties for Roads Includes Gasoline, Diesel & Special Fuel Taxes, Gross Production Taxes, and Motor Vehicle Collections	$776,908,000
State Taxes & Fees Distributed Directly to Cities and Towns Includes Gasoline Excise Tax, Motor Vehicle Collections	$306,770,000
Local Sources	
Local Funds for Roadway Construction and Maintenance Includes funding for roadways from: General Fund, Street & Alley Fund, Developer Contributions, General Obligation Bonds, and Dedicated Sales Taxes	$2,725,582,000
Local Funds for Bicycle & Pedestrian Construction and Maintenance Includes funding for bicycle & pedestrian improvements from: General Fund, Developer Contributions, General Obligation Bonds, and Dedicated Sales Taxes	$129,490,000
Subtotal	$9,049,961,000
TRANSIT MODE - FFY 2005-2035	
Federal Sources	
Federal-aid Formula Funds Includes FTA Sec. 5307, Sec. 5311, JARC, New Freedom, and CMAQ Transfers	$272,090,000
Discretionary Funds Includes FTA Sec. 5309, ARRA, and special projects	$89,367,000
State Sources	
Transit Revolving Funds for COTPA, CART, Citylink, First Capital Trolley, and Delta Public Transit (partial)	$34,329,000
Local Sources	
Includes municipal, county, university & private funds for urban and rural operators	$608,778,000
Subtotal	$1,004,564,000
TOTAL ESTIMATED REVENUES FOR *ENCOMPASS 2035*	**$10,054,525,000**

Note: Estimated Revenues are not inflated

ESTIMATED COSTS FOR *ENCOMPASS 2035*

Cost Inflation Assumptions

The Safe Accountable Flexible Efficient Transportation Equity Act—A Legacy for Users (SAFETEA-LU) introduced a new requirement that metropolitan planning organizations (MPOs) consider inflation in the development of transportation plans and programs. Specifically, SAFETEA-LU requires that revenue and cost estimates that support the metropolitan plan must reflect "year of expenditure dollars" (YOE). This proved to be challenging since there is no federal guidance or common best practices available to MPOs for estimating future inflation. ACOG staff developed the following methodology to address the YOE inflation requirement.

Project cost estimates were inflated using an estimated growth rate of two percent per year as the basis, which equates to a 60 percent increase over the life of the 30-year plan. The two percent annual increase was based on national economic indicators which are showing a gradual downward trend in growth. According to the U.S. Bureau of Labor Statistics and Bureau of Economic Analysis, the Consumer Price Index reflected an average annual growth rate of approximately 3.0 percent between 1990 and 1999, and a little over 2.5 percent between 2000 and 2010. The Oklahoma State University Center for Applied Economic Research[16] projected a further decrease in growth through 2018 to approximately 2.0 percent per year. The MPO used this estimated rate of growth throughout the remainder of the plan period.

Since the implementation of projects and maintenance will be spread out over the 30-year plan period, three separate inflation bands were assumed in order to create year-of-expenditure project cost estimates. Base year costs were inflated by 10 percent for projects expected to be constructed in the short-term (2005-2015), 30 percent for projects expected to be constructed in the medium-term (2016-2025), and 50 percent for long-term projects (2026-2035). The amount of inflation (10, 30 or 50 percent) correlates to the 10-year period in which construction is estimated to occur, as provided by the state or local government project sponsor. The inflation estimates used for the short, medium, and long-term bands reflect the average, or mid-point, of inflation for the respective 10-year period. Maintenance costs were inflated by the same factors correlating to the 10-year period in which the maintenance would occur.

Street and Highway Costs

The following street and highway networks were developed and tested with projected 2035 traffic volumes as part of the *Encompass 2035* plan development process:

Alternate One – Present Plus Committed Network

The Present plus Committed Network included all existing streets and highways, with improvements implemented since 2005, as well as those for which funding was committed through September 2011. This network—sometimes referred to as a "no build" scenario—would allow the region to complete projects underway, with all future transportation funding focused on maintenance of the existing system.

Alternate Two – Revised Present Plus Committed Network

Alternate Two included all Alternate One improvements and FFY 2012 and FFY 2013 widening projects approved as updates to the OCARTS area Transportation Improvement Program (TIP). It also included FFY 2012 and FFY 2013 widening projects from the Oklahoma Department of Transportation's 8-Year Construction Work Plan. This revised P+C network ensured consistency between the region's TIP projects and the new long-range plan, upon its adoption.

[16]2011 Greater Oklahoma City Economic Forecast, for the Greater Oklahoma City Chamber of Commerce, Center for Applied Economic Research, Oklahoma State University, January 2011.

Alternate Three – Member Entity Submitted Projects

The Alternate Three Network included the Alternate Two improvements plus projects that OCARTS local governments submitted in response to the December 2010 call for projects. Approximately 200 projects were received, evaluated and scored according to the adopted *Encompass 2035 Project Selection Criteria*.

Alternate Four – Identified Gap Projects

Following review of the Alternate Three results, the MPO suggested additional street and highway projects to bridge identified gaps in improvements that remained from the previous alternates.

As described in the following section, a benefit-cost analysis of the various networks showed that Alternate Four was the most cost effective, and it was subsequently adopted as the *Encompass 2035* street and highway network.

Each of the *Encompass 2035* plan alternates was assigned an estimated cost by the MPO. The street and highway costs were based on estimated unit costs developed from recent construction information provided by the Oklahoma Department of Transportation (ODOT) and by local entities for the non-highway facilities.

Table 14.2 provides the OCARTS area unit costs approved by the Policy Committee in October 2010 and used for estimating the costs of construction, maintenance, and right-of-way acquisition for *Encompass 2035*. Unit costs for construction include engineering, grading, drainage, surface and base improvements, utility relocation, sodding, signing, and structure costs (such as interchanges, curbs, and gutters). Unit costs for maintenance are for resurfacing with a two-inch asphalt overlay.

Unit costs for roadway segments vary based upon federal functional classification and urban or rural location. The four functional classifications included in the OCARTS network are interstates/freeways, principal arterials, minor arterials, and urban collectors. Since the costs of construction and maintenance of interstate and freeway facilities are significantly higher than other classifications, separate unit costs were applied to those facilities. Typically, it is more expensive to build and maintain roadways that are in the urban area than a rural area. As a result, unit costs were prepared for both urban and rural facilities. The urban/rural designation was based on the Oklahoma City Urban Area Boundary map in effect at the time of plan development, and as approved by the Federal Highway Administration on November 7, 2002.

The approved unit cost estimates shown in Table 14.2 reflect 2005 base year dollars, which were later inflated, by project, using the methodology described in the previous section. Table 14.2 also reflects the base year unit costs that were applied to sidewalks and multi-purpose trails submitted for the long-range plan that were beyond those already reflected in the OCARTS area *Encompass 2035* Planned Bicycle/Pedestrian Network. This network and its estimated cost is described further in the Bicycle and Pedestrian Facility Costs section later in this chapter.

As reflected in the table below, unit costs were developed for maintenance as well as construction. The maintenance unit costs assume a 2-inch mill and overlay with a useful life of 10 years. Therefore, it was assumed that existing facilities would require maintenance a total of three times over the 30-year plan period. The initial maintenance cycle costs were inflated by 10 percent, the second by 30 percent, and the third by 50 percent, as described in the Cost Inflation Assumptions section above.

Table 14.2: Estimated Unit Costs Per Lane-Mile in 2005 Dollars

PROJECT CONSTRUCTION TYPE - PER LANE-MILE	INTERSTATES & FREEWAYS	OTHERS*
A. URBAN AREA		
1. NEW CONSTRUCTION		
Construction on New Alignment	$5,334,000	$ 531,500
2. WIDENING		
Reconstruction - Widening with Access Roads	$1,112,200	N/A
Reconstruction - Widening without Access Roads	$ 710,700	$ 817,600
3. MAINTENANCE		
Mill and Overlay with necessary Base Repair	$ 139,200	$ 88,900
4. OTHERS		
Bridges (if constructed separately) - per square foot	$ 100	$ 100
Right-of Way - per acre	$ 290,400	$ 193,600
B. RURAL AREA		
1. NEW CONSTRUCTION		
Construction on New Alignment	$ 2,620,300	$ 406,300
2. WIDENING		
Reconstruction - Widening	$ 710,700	$ 430,700
3. MAINTENANCE		
Mill and Overlay with necessary Base Repair	$ 139,200	$ 73,100
4. OTHERS		
Bridges (if constructed separately) - per square foot	$ 100	$ 100
Right-of Way - per acre	$ 87,600	$ 96,800
C. INTERMODAL IMPROVEMENTS		
Sidewalk (4 ft width) - per linear foot	N/A	$ 16.00
Sidewalk (5-6 ft width) - per linear foot	N/A	$ 22.00
Multi-purpose Trail (10 ft width) - per linear foot	N/A	$ 40.00

* Principal arterials, minor arterials, and collectors

Table 14.3 summarizes the estimated cost of the *Encompass 2035* street and highway network by type of improvement and functional classification.

Table 14.3: Estimated Costs of *Encompass 2035* Street & Highway Network

FUNCTIONAL CLASSIFICATION	LINEAR MILES	LANE MILES	ESTIMATED COSTS[A]						
			CONSTRUCTION	MAINTENANCE	RIGHT-OF-WAY	MAJOR INTERCHANGES[B]	OTHER IMPROV.[C]	BRIDGES[D]	TOTALS
Turnpikes[e]	57	245	79,200,000	130,711,584	0	9,900,000	n/a	0	219,811,584
Interstates & Freeways	212	1,227	716,024,566	667,405,920	118,212,000	724,400,000	n/a	120,613,059	2,346,655,545
Principal Arterials	469	1,870	100,455,594	547,699,489	32,970,923	0	n/a	43,107,265	724,233,271
Minor Arterials	2,349	6,138	526,286,417	1,803,003,372	150,206,568	0	n/a	39,471,047	2,518,967,404
Collectors	530	1,212	50,540,236	324,463,885	12,828,805	0	n/a	12,232,961	400,065,887
Totals	3,617	10,692	1,472,506,813	3,473,284,250	314,218,295	734,300,000	62,800,000	215,424,332	6,272,533,691

[a] Individual project costs were inflated by 10 percent for short-term projects (2005-2015), 30 percent for medium-term projects (2016-2025), and 50 percent for long-term projects (2026-2035)
[b] Major interchanges include I-35/I-240, I-40/I-44, I-235/I-44, I-35/SH-9 West, I-35/Main St. (Norman), I-35/Lindsey St. (Norman) and the Turner Turnpike Gate near Luther ($6 mil. – WB On & EB Off and $3.9 mil. – EB On & WB Off)
[c] Includes system wide operational improvements through Traffic System Management (TSM), Travel Demand Management (TDM), and Intelligent Transportation Systems (ITS)
[d] Includes bridge replacement/major rehabilitation projects identified in "Update on Oklahoma Bridges and Highways by the Oklahoma Department of Transportation," Aug. 2010
[e] Construction cost is for Kilpatrick Turnpike widening from 4 to 6 lanes between MacArthur and Eastern

BENEFIT-COST ANALYSIS OF THE 2035 STREET AND HIGHWAY ALTERNATES

The MPO conducted a benefit-cost analysis among Alternates Two, Three, and Four to compare the benefits and costs associated with each alternate network and to determine if the suggested improvements were representative of sound investment decisions.

The benefit-cost (B/C) ratio is a standard measure of cost-effectiveness recommended by the Federal Highway Administration (FHWA). FHWA's suggested method focuses on the value of **travel time and operating cost savings** experienced by users of the system against the **capital and maintenance costs** involved in the construction and upkeep of the transportation network.

The benefit-cost ratio is calculated using the following formula:

$$\text{Benefit/Cost Ratio} = \frac{(RU_B - RU_P) - (D_P - D_B)}{(I_P - I_B)}$$

Where:

RU_B: the annual road user cost (annual vehicle operating costs plus annual travel time costs) for the base alternate

RU_P: the annual road user cost (annual vehicle operating costs plus annual travel time costs) for the alternate to be compared to the base alternate

D_B: the annual street maintenance cost for the base alternate

D_P: the annual street maintenance cost for the alternate to be compared to the base alternate

I_B: the annualized capital cost for the base alternate

I_P: the annualized capital cost for the alternate to be compared to the base alternate

The following assumptions were made:

- Road user per mile cost was based on AAA estimates - $0.52 per mile in 2007 ($0.75 in 2035)
- Travel time cost was based on FHWA guidance on travel time valuation - $21.20 in 2000 ($36.06 in 2035)
- One percent (1%) travel time savings, as a result of operational improvements (e.g. intersection upgrades, Intelligent Transportation Systems deployment, signalization, signal coordination, etc.) throughout the network.

The B/C ratio analysis compares each network alternate to the previous most beneficial alternate to determine whether the benefit derived per dollar invested is less than, or greater than, the benefit derived from the previous alternate. If the value of the B/C ratio is 1.0 or greater, then the new alternate is considered a better investment than the previous alternate. *Therefore, if the B/C ratio is greater than 1.0* – based on value of travel time and operating cost savings to persons using the transportation network – *the alternate network can reasonably be considered cost-effective.*

Table 14.4: Benefit/Cost Ratio Comparison of Alternates

ALTERNATES BEING COMPARED	B/C RATIO
Alternate Three compared to Alternate Two	0.49
Alternate Four compared to Alternate Two	1.75
Alternate Four compared to Alternate Three	34.89

According to the B/C ratio analysis shown in the table above, Alternate Four offers a benefit over Alternate Two, and also has a significantly better benefit/cost ratio than Alternate Three.

GOODS MOVEMENT COSTS

Within the OCARTS area, goods are moved by truck, rail and air as described in the Goods Movement Chapter of this report. All of these modes for transporting goods are reliant upon the street and highway system for a seamless trip from the manufacturer to the customer. Therefore, the costs for improving access to airport terminals, rail yards, warehouses and intermodal facilities are reflected in the street and highway alternates. Costs for upkeep and improvement of freight rail tracks and yards are the responsibility of the owning entity. Long-range planning and costs for improving access and mobility within the "fence line" of area airports are the responsibility of the airport administrators and are reflected in their airport comprehensive plans and budgets, and thus are not included in this Plan.

PUBLIC TRANSPORTATION COSTS

Most of the estimated costs for public transportation capital and operations were based on historical federal, state, and local funding spent within the OCARTS area between FY 2005 and FY 2009. Information was gathered from the Federal Transit Administration's National Transit Database (NTD) reports, as well as from local transit operators/administrators—the Central Oklahoma Transportation and Parking Authority (COTPA), Cleveland Area

Rapid Transit (CART), Citylink, and the Transit Programs Division[17] of the Oklahoma Department of Transportation (ODOT). This information was used to develop an annual estimate that was projected over the 30-year plan period. The 30-year estimated transit costs are presented in Table 14.5.

Table 14.5: Estimated Costs of *Encompass 2035* Transit Network

TRANSIT OPERATOR	FEDERAL		STATE	LOCAL	ESTIMATED 30-YEAR TOTAL
	Formula	Discretionary*			
COTPA	182,820,306	48,842,499	24,799,326	547,148,133	803,610,264
CART	27,444,020	39,710,150	2,742,474	39,821,904	109,718,548
Citylink	15,000,000	0	2,228,700	11,987,550	29,216,250
First Capital Trolley	9,877,836	728,460	4,406,154	6,994,704	22,007,154
Delta Public Transit**	1,532,220	86,349	152,304	828,522	2,599,395
Other***	35,415,360	0	0	1,996,824	37,412,184
Total	272,089,742	89,367,458	34,328,958	608,777,637	1,004,563,795

* Discretionary funds include FTA Sec. 5309 funds, unspent Congressional earmarks, and American Recovery and Reinvestment Act (ARRA) funds. Except for FTA Sec. 5309 funds, no future discretionary funds were assumed.
** Amounts are 25% of total funds; approximately 25% of service area is located within the OCARTS area.
*** Other Federal includes Jobs Access and Reverse Commute (JARC), New Freedom, and Elderly & Disabled Program funds. Other Local includes advertising, local bond, and other non-federal revenues

As reflected earlier under "Local Revenue Sources," new transit funding was approved by Oklahoma City voters in December 2009 as part of the Metropolitan Area Projects (MAPS 3) temporary sales tax. MAPS 3 allocated $120 million for construction of a downtown circulator (later determined to be a modern streetcar) and another $10 million toward rail infrastructure improvements and/or an intermodal transportation hub. Therefore, $130 million in costs were assumed for these capital items, and an annual operating cost of $3.2 million/year by the City of Oklahoma City was assumed for the latter 20 years of the plan (2016–2035) for operation of the downtown streetcar. These estimated costs are included under "COTPA Local" in Table 14.5 above.

In total, approximately $1 billion in public transportation costs were assumed over the 30-year plan period, which is generally equivalent to the projected revenues for public transportation. Federal law requires that metropolitan transportation plans be financially realistic. Therefore, the region cannot include transit improvements/services in its long-range plan beyond its foreseeable revenue sources. This results in the level of public transportation within the OCARTS area remaining relatively constant in upcoming years even though the demand for more public transportation service is growing. Additional revenues, dedicated to transit, from federal, state, and/or local sources would have to become available in order to include a more extensive regional public transportation system in the adopted plan.

[17]The ODOT Transit Programs Division administers the FTA Sec. 5311 Rural Public Transit Program, which provides transit service within portions of the OCARTS area via First Capital Trolley in Guthrie and Delta Public Transit in the southern part of the region.

BICYCLE AND PEDESTRIAN FACILITY COSTS

The Bicycle and Pedestrian chapter of this report identifies more than 700 miles of planned bicycle facilities throughout the OCARTS area. Cost estimates for the majority of this network were derived from various local governments' adopted trails master plans. Estimates for planned bicycle facilities that lacked formal cost estimates were developed by applying the unit costs shown in Table 14.6. In addition, many of the roadway projects submitted during the *Encompass 2035* Call for Projects contained bicycle and pedestrian components for which applicable unit costs were applied. All bicycle and pedestrian base year unit costs were inflated by 30 percent in an effort to capture the average year of expenditure (YOE) cost.

Table 14.6: Estimated Unit Costs for Bicycle Facilities by Facility Type

BICYCLE FACILITY TYPE	BASE YEAR COST PER MILE	YOE COST PER MILE
BL – Bike Lane	$305,000	$396,500
BPE – Bike Path Exclusive to Bicycles	$241,000	$313,300
BPS – Bike Path Shared with Pedestrians	$241,000	$313,300
SH – Bike Route using Roadway Shoulder	$110,000	$143,000
SOR – Signed-On-Road Bike Route	$130,000	$169,000
STR – Share-the-Road Bike Route	$5,500	$7,150

Base year unit costs reflect those included in the Oklahoma City Trails Master Plan and adjusted to Year 2005 dollars. These figures do not include maintenance costs. Typical maintenance cost for a one-mile paved trail is approximately $10,000. Resurfacing of an asphalt trail, which typically occurs on a ten-year cycle, is estimated to cost between $50,000-$70,000/mile.[18]

The Bicycle and Pedestrian Chapter of this report also identifies another 400 miles of desired bicycle routes and multi-use trails known as "extended vision trails." Development of extended vision facilities depends upon the willingness of local governments to add these routes to their trails master plans, local planning and budgeting priorities, and the availability of funds.

Encompass 2035 does not include a region-wide sidewalk plan. However, it does include estimated costs of sidewalks identified by the City of Oklahoma City as part of a 2007 bond issue and Project 180[19] in downtown Oklahoma City. The Plan also includes estimated costs for sidewalks submitted as components of roadway projects received in response to the *Encompass 2035* Call for Projects.

All OCARTS area local governments are encouraged to provide accessible public sidewalks that connect residential, commercial and public areas, in order to enhance pedestrian movement as an alternative to driving and to improve access to transit stops. Often, sidewalk construction is required by communities of private developers at the time construction permits are sought.

[18] Source: LandPlan Consultants, Inc., 2005

[19] Project 180 is a four year, $160 million redesign of downtown streets, sidewalks, parks and plazas in Oklahoma City to improve their appearance and make the central core more pedestrian friendly. Plans call for the addition of landscaping, public art, marked bike lanes, decorative street lighting, and additional on-street parking spaces.

In total, nearly $329 million in YOE dollars will be required to implement all planned bicycle and pedestrian facilities within the OCARTS area, as reflected in Table 14.7.

Table 14.7: Estimated Total Costs for OCARTS Area Planned Bicycle and Pedestrian Facilities

ENTITY/DESCRIPTION	ESTIMATED COST (2005 $)	ESTIMATED INFLATED COST
Choctaw	$13,134,990	$17,075,487
Edmond*	$25,435,320	$33,065,916
Guthrie*	$5,381,530	$6,995,989
Harrah*	$1,564,090	$2,033,317
Midwest City*	$7,991,100	$10,388,430
Moore*	$7,367,370	$9,577,581
Norman*	$3,347,748	$4,352,072
Oklahoma City*	$59,729,350	$77,648,155
All Other Entities	$3,164,330	$4,113,629
Bike Subtotal	$127,115,828	$165,250,576
Encompass 2035 Projects with Bicycle Component	$16,230,135	$21,597,703
BIKE TOTAL	$143,345,963	$186,848,279
Encompass 2035 Projects with Sidewalk Component	$44,569,326	$60,783,087
OKC Sidewalks Projects in 2007 Bond Issue & Project 180	$73,920,000	$81,312,000
SIDEWALK TOTAL	$118,489,326	$142,095,087
BICYCLE/PEDESTRIAN TOTAL	$261,835,289	$328,943,366

*Community has adopted trails master plan.

As reflected in Table 14.8, adequate funding has been identified to implement the region's planned bicycle and pedestrian improvements, as well as a portion of the extended vision routes. Approximately 60 percent of the projected bicycle/pedestrian revenues were identified from federal sources, with the remainder from local government sources.

THE AFFORDABLE PLAN

Table 14.8 also provides an estimated funding distribution by mode for the total 30-year revenue projection and comparison with the estimated costs of *Encompass 2035*. This breakdown was developed for planning purposes only and is consistent with historical trends and federal program guidelines. It is intended to ensure that all modes are considered in the Plan's financial capacity analysis, and reflects the fact that revenues for roadway and transit purposes are generally provided separately at the federal level through programs administered by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

The following information demonstrates that the *Encompass 2035* metropolitan transportation plan is financially feasible and that the estimated costs to implement the Plan's recommendations will not exceed the estimated revenues reasonably available to the OCARTS area during the 30-year plan period.

Table 14.8: Anticipated Revenues and Costs for *Encompass 2035*

MODE	ESTIMATED PERCENT	PROJECTED REVENUES	ESTIMATED PLAN COSTS	DIFFERENCE
Streets and Highways	86.7%	$8,717,273,175	$6,272,533,691	$2,444,739,484
Transit (Urban & Rural)	10.0%	$1,005,452,500	$1,004,563,795	$888,705
Bicycle and Pedestrian*	3.3%	$331,799,325	$328,943,366	$2,855,959
Total	100.0%	$10,054,525,000	$7,606,040,852	$2,448,484,148

*Bike/Ped revenues include local sources and 5% of federal formula fund revenues from Table 13.1.

More detailed information concerning estimated costs for each of the street and highway alternates, as well as the methodology and estimated revenues from each funding source described in this chapter is available in the following report, available on the ACOG website: Task 2.01(12)-Financial Element of *Encompass 2035*.

CHAPTER 15: CLOSING

Central Oklahoma residents enjoy an exceptional quality of life. Indeed, it is our pioneering spirit that has led to tremendous growth and progress during a time when most of the United States has suffered economically. In many respects, the rest of the country is just waking up to the promise Central Oklahoma offers. This growth, of course, is expected to continue and presents its own challenges to our future transportation infrastructure. More people will make more trips, and in Central Oklahoma that means additional trips by automobile.

Encompass 2035 recommendations on the preceding pages will be implemented to help alleviate some of the congestion issues, but will not solve the problem. As a result, we are proposing the following regional collaborative opportunities:

- Initiate Discussion on Regional Land Use Planning
  The future will not be like the past. Changing demographics and evolving markets will emphasize the need for areas of intensified development that cluster housing, businesses, retail and services. Such development would result in fewer and shorter automobile trips, slower growth in congestion and the creation of an environment that is more livable.

- Pursue a more comprehensive Regional Public Transportation System
  In 2005, with the completion of the Fixed Guideway Study (FGS), communities in Central Oklahoma have become energized about public transportation. The study began with an examination of travel patterns and the identification of 11 concept corridors in the greater Oklahoma City metropolitan area. From there, evaluation criteria helped to establish recommendations for a system plan.

Despite the region's best efforts, we are still forecasting significant congestion on our highway system by the year 2035. In other words, we cannot build our way out of congestion. It appears that a more comprehensive approach to solving our transportation issues is warranted. Increased focus needs to be placed on land use practices and regional public transportation that will decrease demand for the automobile.

APPENDICES

APPENDIX A: FEDERAL PLANNING FACTORS

APPENDIX B: PROJECT SUBMISSION GUIDEBOOK

APPENDIX C: ILLUSTRATIVE PROJECTS

APPENDIX D: UPWP REPORTS

APPENDIX A: FEDERAL PLANNING FACTORS

In 2005, Congress passed the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU). SAFETEA-LU is the federal legislation that outlines the requirements for the transportation planning process, including the designation of metropolitan planning organizations (MPOs) to oversee the process in metropolitan areas. SAFETEA-LU revamped the areas that MPOs and states should consider when developing their long-range transportation plans to include new language related to security and the environment. The security factor is now a stand-alone factor, apart from safety. The environmental factor was expanded for integration of planned growth and development of metropolitan areas. The eight SAFETEA-LU planning factors are listed below, along with details about how ACOG and *Encompass 2035* are meeting the goals established under this legislation for metropolitan transportation planning.

PLANNING FACTORS

1. *Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency*

The plan's economic vitality policy goal "promote economic vitality through enhanced mobility" addresses this planning factor. Specific strategies include improving the efficiency of the existing transportation system, improving multimodal accessibility to regional employment centers, encouraging mixed use development, and improving freight transportation by increasing options for goods movement. These strategies also focus on ensuring the transportation system is well maintained and that congestion relief and traffic management strategies are enhanced. The plan recognizes Central Oklahoma's unique position at the crossroads of the nation and acknowledges that seamless transportation connections are vital to commerce, economic growth, job accessibility, and personal mobility.

The streets and highways, public transportation, and goods movement chapters of this report include specific recommendations for achieving the economic vitality goal.

2. *Increase the safety of the transportation system for motorized and non-motorized users*

The plan's safety and security policy goal "provide a safe and secure transportation system" addresses this planning factor. A key safety strategy is to improve roadway design, construction, and maintenance in an effort to reduce accidents, injuries, and fatalities. Additional safety strategies include better public education on safety issues, cooperative implementation of traffic incident management techniques, and continued and improved enforcement of traffic safety laws. The Plan also includes recommendations to enhance the safety and functionality of the region's bicycle and pedestrian facilities to improve their viability as a transportation option for all citizens, including those with disabilities.

A specific plan chapter is devoted to safety and security and describes the various transportation initiatives underway in Central Oklahoma. Other relevant plan chapters, devoted to streets and highways, public transportation, and bicycle and pedestrian facilities, include specific projects and policy recommendations aimed at improving the safety of the traveling public and the region's transportation system overall.

3. *Increase the security of the transportation system for motorized and non-motorized users*

The plan's safety and security policy goal "provide a safe and secure transportation system" addresses this planning factor. The key security objective is to improve transportation security within the region. The transportation system is designed for accessibility and efficiency, which makes it a perfect target for anyone seeking to disrupt travel or commerce. Reasonable measures must be taken to put in place and maintain a system of threat deterrence, public protection, and response. Developing incident management plans and maintaining partnerships among state and local law enforcement entities are key security strategies.

The safety and security chapter of this report addresses regional security planning efforts, such as emergency evacuation, coordination, and the identification of choke points and bottlenecks. The region's intelligent transportation infrastructure is an integral part of our security effort. Current and future transportation and transit ITS elements will assist with traffic monitoring, incident detection, and response.

4. *Increase the accessibility and mobility of people and for freight*

The plan's options policy goal "enhance transportation choices for the movement of people and goods" addresses this planning factor, as well as the plan's equity policy goal "provide transportation access for everyone." Key strategies include enhancing the region's public transportation services, including the exploration of fixed guideway transit technologies, developing regional bicycle/pedestrian plans and networks, maintaining and improving the street and highway system, and supporting efficient goods movement. All Central Oklahomans deserve access to transportation. However, obstacles can stand in the way such as the inability to purchase or drive a vehicle, lack of public transportation options, and inadequate or inaccessible sidewalks. This plan strives to ensure that transportation improvements and services will be provided equitably, modal choices will be increased, and connectivity between activity centers and transportation resources will be enhanced.

Relevant plan chapters include those dealing with streets and highways, goods movement, public transportation, and bicycle and pedestrian planning. The public transportation and bicycle/pedestrian chapters reflect specific recommendations for improving accessibility.

5. *Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns*

Several policy goals, including connectivity, economic strength, environmental responsibility, and livability address this planning factor. Key strategies include improving integration of transportation and land use, providing for efficient connections between modes, improving access to employment centers, and encouraging mixed use development as a means to reduce congestion, reduce travel times and fuel consumption, and aid in the seamless flow of commerce. Due to the correlation between vehicular emissions and air pollution, the plan includes strategies that support alternative fuels, coordination among land uses and transportation, multiple modes of transportation, and air quality public education efforts. Livability strategies are intended to further advance the quality of life in Central Oklahoma by encouraging visually attractive streetscapes, the walkability of the region, and the integration of bicycle and pedestrian improvements into roadway and development projects.

The bicycle/pedestrian, public transportation, streets and highways, air quality, and closing chapters of this report discuss specific strategies for protecting the environment, improving quality of life, and promoting the integration of land use and transportation planning.

6. *Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight*

The plan's connectivity policy goal "develop connections between all types of transportation" addresses this planning factor. A high quality of life depends on how well different modes of transportation are integrated and connected to achieve a transportation system that meets the needs of its users. A seamless transportation network should effectively carry people and goods to where they need and want to go. Key strategies are to improve connections between modes and facilities by accommodating bicycle, pedestrian, and transit users, where appropriate, improving multimodal access to employment and other activity centers, and investing in projects that complement the existing transportation infrastructure. Examples include the provision of park-and-ride lots for carpoolers and bus riders at appropriate locations, construction of sidewalks near transit routes and stops, and provision of bike racks at bike-able destinations and on public buses.

Goods are transported in various ways—truck, rail, water, air, or pipeline. Most freight transportation begins and ends with a truck, which underscores the need for an efficient and well maintained roadway network. Where multiple modes are involved, commerce is dependent upon an integrated transportation system and adequate intermodal facilities for seamless transfers. The streets and highways, public transportation, bicycle/pedestrian, and goods movement chapters of this report include recommendations that support this planning factor.

7. *Promote efficient system management and operation*

The plan's performance policy goal "increase the efficiency and reliability of the transportation system" and maintenance policy goal "maintain and improve the quality of the transportation system" address this planning factor. The performance strategies focus on system management techniques that optimize the use of existing roadways, increase roadway capacity where needed, correct hot spots that cause congestion and bottlenecks, and promote travel options that will reduce the number of vehicles on the road (e.g. bicycling, walking, transit, and ridesharing). A well maintained system extends the life of expensive transportation investments and aids in the efficient movement of people and goods. It requires continuous monitoring of the network so that planners and engineers can focus resources on the most critical needs in a timely fashion. Therefore, key strategies for efficient system management are to establish priorities and budget appropriate funds for maintenance, continuously monitor system conditions (pavement, bridges, traffic signals, signs, etc.), and perform preventative painting, sealing, and load posting to decrease bridge and roadway wear and tear.

The streets and highways, goods movement, adopted plan, and financial strategy chapters of this plan report include strategies for efficient system performance.

8. *Emphasize the preservation of the existing transportation system.*

The plan's maintenance policy goal "maintain and improve the quality of the transportation system" addresses this planning factor. Strategies related to this factor focus on maintaining in good condition the infrastructure needed for all modes of transportation, as well as our intelligent transportation systems. The plan recommends investment strategies to ensure maintenance activities are adequately funded and network components are monitored in order to set system preservation priorities, which are essential to maximize performance of the current transportation system. Inefficiencies and system malfunctions lead to travel delays, congestion, traffic incidents, and losses in economic productivity. The total cost of the planned 2035 street and highway network includes 55 percent for system maintenance and 45 percent for construction activities.

Relevant plan report chapters include the street and highway, bicycle/pedestrian, and public transportation chapters which contain recommendations related to system preservation of current capital and service investments. The financial strategies chapter discusses the affordability of the adopted plan in terms of both system improvements and preservation.

APPENDIX B: PROJECT SUBMISSION GUIDEBOOK

INTRODUCTION

Developing a list of transportation projects that improve the way people and goods move around Central Oklahoma is a critical element of *Encompass 2035*, the long-range transportation plan of the OCARTS area. This federally required project listing is intended to help the region identify and prioritize future transportation investments based on adopted regional goals, strategies and estimated financial resources.

ACOG staff conducts this *new* call for regionally significant transportation projects that support *Encompass 2035*'s adopted policy goals. Local entities and transportation agencies are invited to submit projects for consideration in the plan. Projects listed in the existing long-range plan, 2030 Oklahoma City Area Regional Transportation Study (OCARTS) Plan, **will not** automatically be carried forward into the new plan. All projects — new or old — need to be submitted again due to changing federal financial and environmental guidelines and to support a new policy direction for *Encompass 2035*.

Funds will not be distributed as a result of this call for projects. However, there are many reasons to submit projects for the long-range transportation plan:

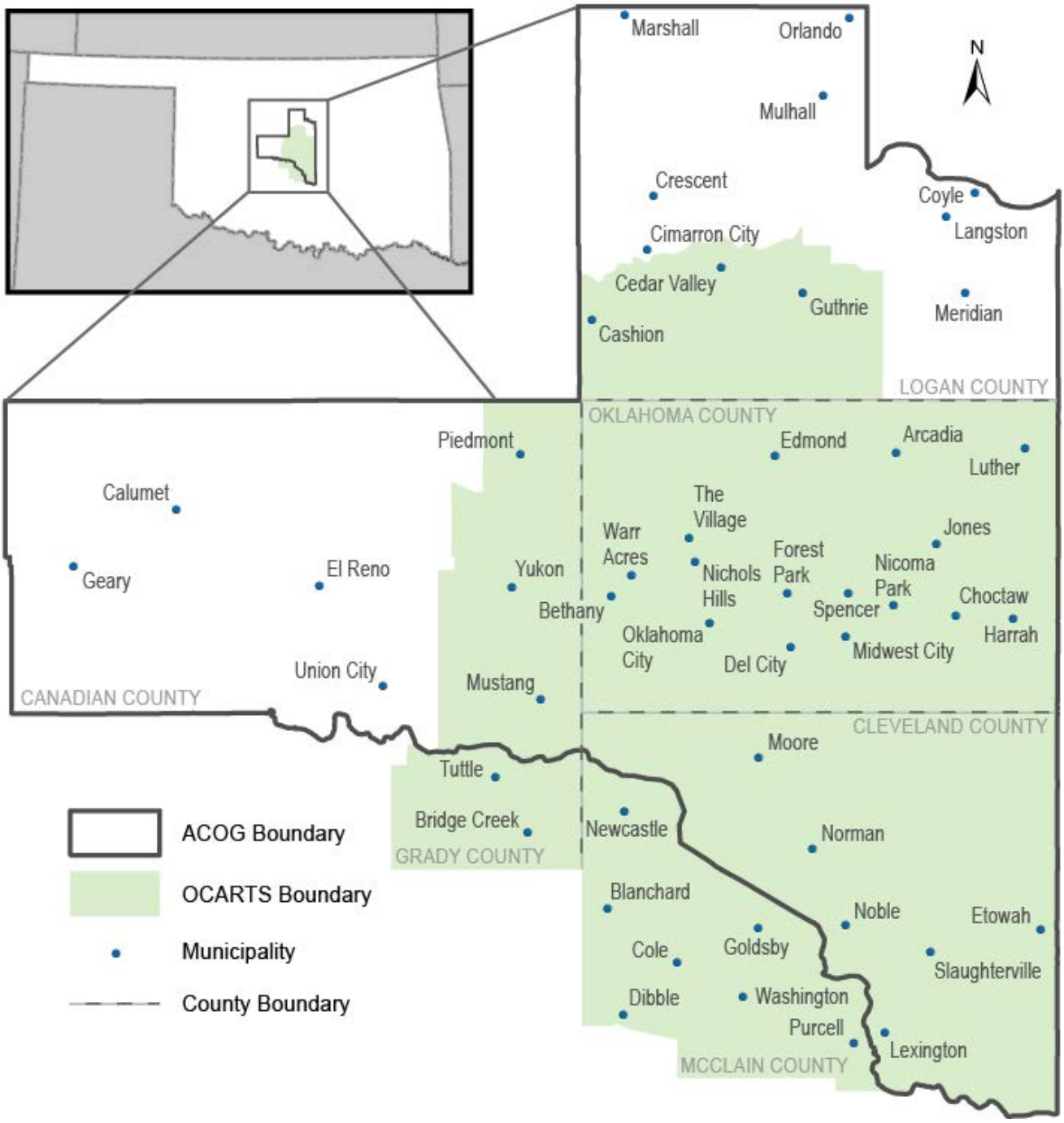
1. For all federal funding programs, only projects that are included in or are consistent with the long-range transportation plan are eligible for funds.
2. Identifying regional transportation priorities will direct the investment of federal funds.
3. Regionally significant roadway projects, from any funding source, need to be reflected in the network and modeled to determine their impact on future mobility.
4. Being listed in the long-range transportation plan will help communicate to the public information about projects planned for your community.

CALL FOR PROJECTS SCHEDULE

Call for projects workshop	12/1/2010 1:00-3:30
Call for projects open	12/13/2010
Call for projects closed	1/14/2011
Staff analysis	1/15/2010-2/9/2011
Special ITTC meeting	2/10/2011

WHO SHOULD SUBMIT PROJECTS?

Entities (cities and counties) and transportation agencies located within the Oklahoma City Area Regional Transportation Study (OCARTS) area are eligible to submit projects for consideration in *Encompass 2035*. All submitted projects must be located within the OCARTS area.



WHAT TYPES OF PROJECTS SHOULD BE SUBMITTED?

The *Encompass 2035* Plan project list will span a multitude of transportation options, including bicycle trails, roadways, sidewalks, public transit, and others. Submitted projects should fit within at least one of the following categories—Roadway, Bicycle/Pedestrian, or Transit, as described in the following sections:

A. ROADWAY PROJECTS

Submitted roadway projects must include the following characteristics:

1) Widening projects must be on roadways with projected 2035 Level of Service (LOS) D, E, or F

   If in the opinion of a requesting entity the 2035 LOS Map does not accurately reflect the future congestion on a specific street segment or corridor, the entity may provide additional information to support its claim. The supporting narrative must clearly demonstrate that the road segment/corridor in question will operate at an unacceptable level (D-F) in the future or that the proposed improvement will alleviate the congestion problem on a parallel route that currently meets the LOS requirements for capacity improvements. The ITTC may consider this commentary as part of the Encompass 2035 project evaluation process.

2) Roadway projects must have consistent improvements throughout the full length.
   a. Acceptable project submission example: <u>one</u> mile of widening with <u>one</u> mile of sidewalk
   b. Unacceptable project submission example: <u>two</u> miles of widening with <u>one</u> mile of sidewalk. This project must be split into two separate submissions.

Roadway projects may include, but are not limited to:

- Adding general purpose and/or continuous turn lanes
- Access management
- Construction of new roads
- Realignment of existing roads
- Dedicated transit lanes/High Occupancy Vehicle (HOV) lanes
- Highway interchanges (new or major reconstruction)
- Significant reconstruction
- Bridge construction not associated with a roadway widening project that will increase capacity

Do <u>NOT</u> submit the following roadway projects:

- Resurfacing
- Intersection modifications
- Maintenance projects
- Signalization projects
- Widening projects on roadways with projected 2035 Level of Service A, B, or C
- Bridge reconstruction or rehabilitation that does not increase roadway capacity

B. BICYCLE/PEDESTRIAN PROJECTS

Bicycle/Pedestrian projects must serve a transportation purpose and should fulfill one, or more, of the following:

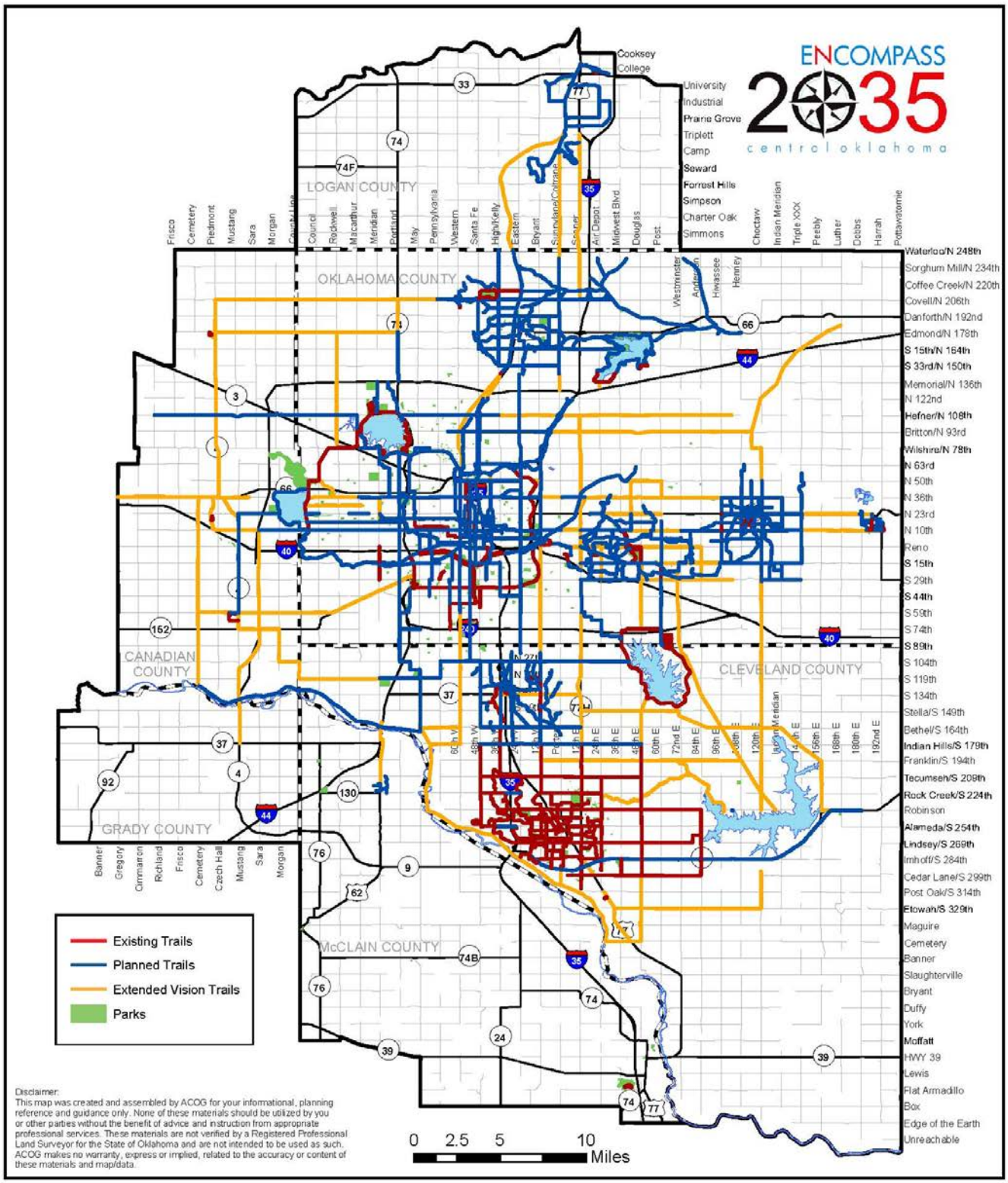
1) Bicycle/Pedestrian projects that are located on the "Extended Vision" plan (shown in yellow on map)
2) Projects that connect existing facilities
3) Projects that enhance the bicycle/pedestrian network

Bicycle/Pedestrian projects may include, but are not limited to:

- Sidewalks
- Multi-use trails
- On-street bike lanes
- On-street bike routes
- Bike/ped bridge or tunnel

Do NOT submit the following Bike/Ped projects:

- "Planned Trails" described in the "Bicycle and Pedestrian Facilities Report for *Encompass 2035* Plan Development" shown in blue on the map on the next page. *These projects will be included in Encompass 2035 since they are part of the adopted regional plan.*
- Recreational trails



Oklahoma City Area Regional Transportation Study (OCARTS) Area Trails/Bike Routes

N

acog
Association of Central Oklahoma Governments
21 E Main St, Suite 100
Oklahoma City, OK 73104-2405
(405) 234-2264
FAX (405) 234-2200
www.acogok.org

March 2010

C. TRANSIT PROJECTS

Submitted transit projects should reflect proposed capital improvements that will alter the built transit environment, rather than operation and maintenance activities.

Transit projects may include, but are not limited to:

- Local transit and paratransit projects
- Bus rapid transit projects
- Passenger rail and high speed rail projects
- Park-and-ride lots
- Transit centers
- Transit stops or stations
- Transit Intelligent Transportation System (ITS) improvements

Do NOT submit the following Transit projects:

- Operation and maintenance activities (driver salaries, fuel costs, facility maintenance, etc.)
- Changes to existing bus routes
- Transit vehicle purchases

POLICY GOALS AND SCORING CRITERIA

Encompass 2035 has identified broad policy goals that are major objectives we want to achieve with Central Oklahoma's transportation system. Submitted projects will be evaluated based on how closely they align with the plan's policy goals and criteria listed in the following table. These scores will serve as one tool to evaluate submissions and will be subject to ACOG (staff and committee) review, follow-up technical analysis, and public input. **Funds will not be distributed as a result of this solicitation.**

Encompass 2035 Goals:

	POLICY GOALS										
Criteria	Community	Connectivity	Economic Strength	Environmental Resp.	Equity	Livability	Maintenance	Options	Performance	Safety and Security	Points Available
Level of Service			●						●	●	10
Included in Local Plan/Study	●	●	●	●	●	●	●	●	●	●	10
Increases Safety/Reduces Congestion				●		●		●	●	●	10
Addresses Accident Hotspots									●	●	10
Integrates Multiple Modes		●		●	●	●		●			15
Provides Options		●		●	●	●		●			10
Supports Regional Activity and Employment Centers		●	●		●	●					5
Connects to Existing Infrastructure		●	●						●		10
Supports Mixed Use Development		●	●	●		●					10
Supports Regional Freight Movement			●					●	●	●	5
Provides Access to Environmental Justice Tracts	●	●	●		●	●		●			5
Promotes Accessibility	●	●			●	●		●		●	5
Supports Existing Densities				●		●	●		●		5
Protects Environmentally Senitive Lands				●		●					5
Reduces Ozone Precursor Emissons				●		●			●	●	20
										Total Points:	135

SUBMISSION FORM WITH EXAMPLES AND INSTRUCTIONS

A sample of the project submission form is shown below with explanations to help project sponsors answer questions and understand staff considerations during scoring. All projects must be submitted online. The deadline to submit projects is **Friday, January 14, 2011.**

PROJECT DESCRIPTION

1. PROJECT NAME

Give your project a short name that will help ACOG staff identify the project. Example: "Kelly Ave. Widening," "Western and I-240 Interchange Improvement," or "MacArthur Blvd. Realignment."

2. PROJECT LOCATED ON:

For road names, please provide the regional name and the local name, if applicable, in parenthesis. On "From" and "To," list streets either north to south or west to east. See example below:

Primary road: N. 178th (2nd St., Edmond Rd.)

From: Sunnylane Rd. (Coltrane)

To: Sooner Rd.

3. PROJECT LENGTH:

Enter the project length in miles.

Length (miles): 1.00

4. FURTHER DESCRIBE THE PROJECT'S LOCATION, IF NECESSARY:

If the project is a transit, bike/ped, or other project whose location cannot be accurately described by the question above, please use this space to do so.

5. DESCRIBE THE PROJECT'S PURPOSE:

Give a brief narrative about the reason the project is needed and the purpose it will serve.

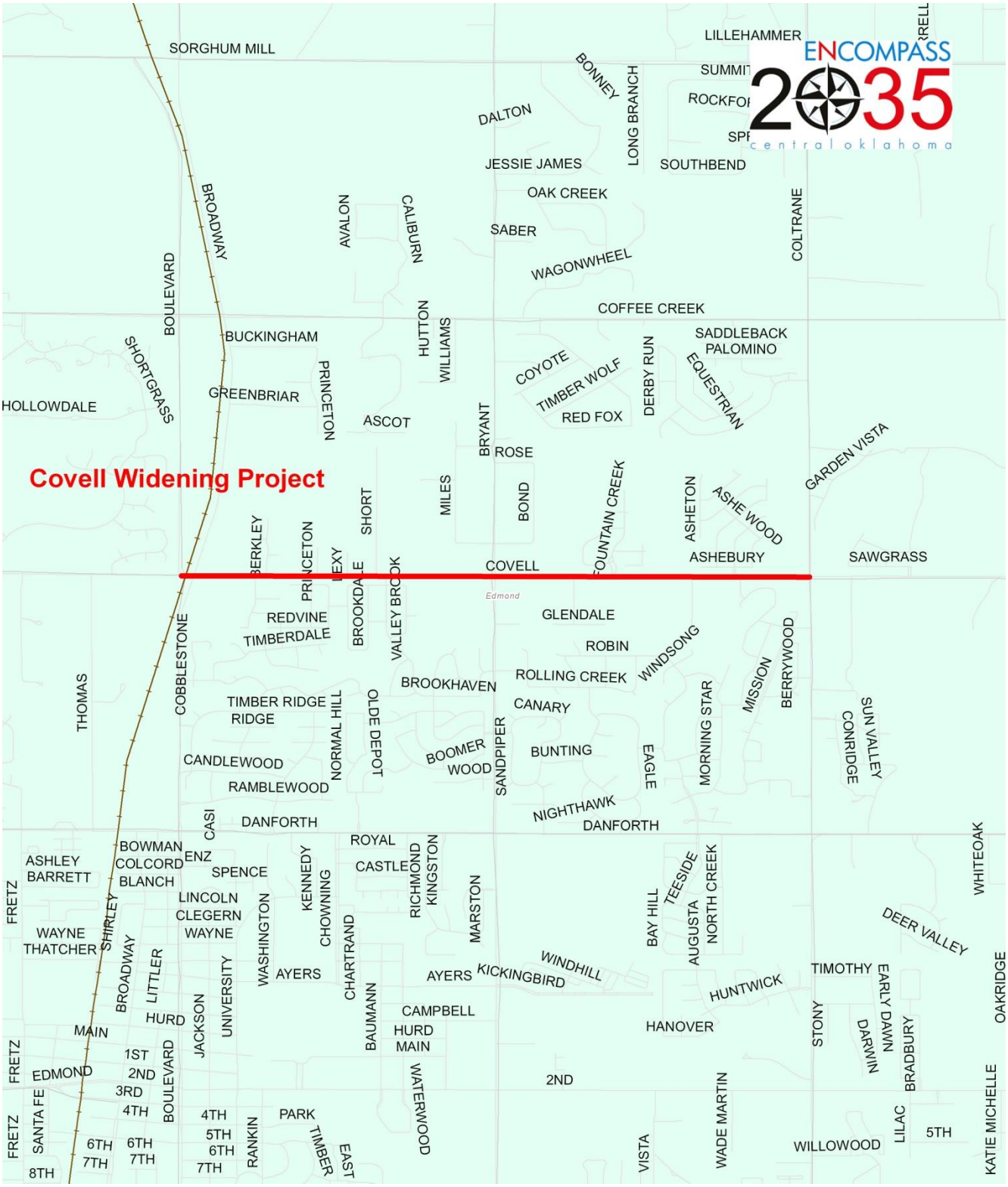
Example: "This project will construct five foot sidewalks along Main Street with the necessary curb cuts and drive approaches. The project will provide area residents access to necessary local services including important fixed route transit, grocery, shopping, drug stores, and health clinics. Separating pedestrians from vehicle traffic will also be a significant safety improvement for this project."

6. JOINT PROJECT WITH ANOTHER ENTITY:

Are there any other entities involved with this project? If so, please tell us who they are.

7. UPLOAD A MAP OF YOUR PROJECT:

Using the online project submission tool, click the "Browse" button to upload a map which shows the project location. Preferred file types are: .PDF, .JPEG, .GIF. Maximum file size is 5000 KB. Give the file a name and short description. Only ONE file may be uploaded for this question.



Example Project Map

PROJECT DETAILS

8. PRIMARY PROJECT TYPE:

What is the *primary* type of your project? A project can consist of multiple modes, but which mode will require the most funding? Choose only one.

- Roadway
- Bicycle/Pedestrian
- Transit

9. SELECT ALL OF THE ROADWAY COMPONENTS THAT THIS PROJECT INCLUDES:

Does your project contain any of the following roadway components? Click all that apply.

- New construction
- Widening
- Bridge
- High Occupancy Vehicle (HOV) Lane(s)
- Freight improvements
- Intelligent Transportation Systems (ITS)
- Other, please specify

10. SELECT ALL OF THE BICYCLE/PEDESTRIAN COMPONENTS THAT THIS PROJECT INCLUDES:

Does your project contain any of the following bike/ped components? Click all that apply.

- On-street bike lane(s)
- On-street bike route
- Sidewalks (both sides of street)
- Sidewalks (only one side of street)
- Multi-use trail
- Bike/ped bridge or tunnel
- Other, please specify

11. SELECT ALL OF THE TRANSIT COMPONENTS THAT THIS PROJECT INCLUDES:

Does your project contain any of the following transit components? Click all that apply.

- Bus infrastructure (i.e. shelters, stations, stops)
- Bus Rapid Transit (BRT) infrastructure
- Bus pull-out lanes
- Passenger rail infrastructure
- Transit Intelligent Transportation Systems (ITS)
- Other, please specify

12. CURRENT TRAFFIC COUNT, IF APPLICABLE:

If your project is a roadway project, enter the current average daily traffic count. If it is not a roadway project or if it is new construction, skip this question.

13. FUTURE 2035 LEVEL OF SERVICE (LOS): (10 PTS)

Please choose the ACOG projected LOS for your project. (Up to 10 pts)

Only roadway widening projects with LOS D, E, or F may be submitted for consideration in *Encompass 2035*. Refer to 2035 LOS Map. If your project is LOS A, B, or C, it will not be considered for inclusion in the plan. **Therefore, you do not need to continue with the application process for this project.**

> *If in the opinion of a requesting entity the 2035 LOS Map does not accurately reflect the future congestion on a specific street segment or corridor, the entity may provide additional information to support its claim. The supporting narrative must clearly demonstrate that the road segment/corridor in question will operate at an unacceptable level (D-F) in the future or that the proposed improvement will alleviate the congestion problem on a parallel route that currently meets the LOS requirements for capacity improvements. The ITTC may consider this commentary as part of the Encompass 2035 project evaluation process.*

Transit and bicycle/pedestrian projects select "Not Applicable."

- Project is located on a street/highway anticipated to operate at LOS A-C based on the present-plus committed network (0 pts)
- Project is located on a street/highway anticipated to operate at LOS D based on the present-plus committed network (3 pts)
- Project is located on a street/highway anticipated to operate at LOS E, based on the present-plus-committed network (5 pts)
- Project is located on a street/highway anticipated to operate at LOS F, based on the present-plus-committed network (10 pts)
- Not Applicable (e.g. transit, bike-ped)

14. UPLOAD A JUSTIFICATION FOR ANY DISAGREEMENT WITH THE LOS:

Using the online project submission tool, click the "Browse" button to upload a document. Preferred file types are: .PDF, .DOC, .DOCX. Maximum file size is 5000 KB. Give the file a name and short description. Only ONE file may be uploaded for this question.

15. CURRENT NUMBER OF LANES, IF APPLICABLE:

Enter the number of lanes as a number between 1 and 10. If your project is not a roadway project, skip this question.

16. FUTURE NUMBER OF LANES, IF APPLICABLE:

Enter the number of lanes as a number between 1 and 10. If your project is not a roadway project, skip this question.

17. CURRENT RIGHT-OF-WAY WIDTH:

Please enter the current right-of-way in feet. If your project includes a sidewalk, trail, bike lane and/or other component, please remember to consider the additional right-of-way needs for these intermodal improvements.

If your project is not a roadway project, skip this question.

18. FUTURE RIGHT-OF-WAY WIDTH:

Please enter the future right-of-way in feet. If your project includes a sidewalk, trail, bike lane and/or other component, please remember to consider the additional right-of-way needs for these intermodal improvements.

If your project is not a roadway project, skip this question.

19. ADDITIONAL RIGHT-OF-WAY WIDTH TO BE ACQUIRED:

Please enter the additional right-of-way in feet that must be acquired. If your project includes a sidewalk, trail, bike lane and/or other component, please remember to consider the additional right-of-way needs for these intermodal improvements.

If your project is not a roadway project, skip this question.

20. CURRENT FEDERAL FUNCTIONAL CLASSIFICATION:

- Interstate
- Freeway/Expressway
- Principal Arterial
- Minor Arterial
- Major Collector
- Local (not eligible for Federal funding)
- Not applicable – Future
- Not applicable – Non roadway

See ODOT Functional Classification Maps:

All roadway projects must be located on a street that has a "Major Collector" classification or higher.

For new roadway construction projects select "Not applicable – Future." For transit and bicycle/pedestrian projects select "Not applicable – Non roadway."

21. CURRENT CONDITION OF THE FACILITY/ASSET:

- Excellent
- Good
- Fair
- Poor
- Very Poor

22. CONSTRUCTION START DATE:

When is construction expected to begin on this project?

- By Dec. 31, 2015
- 2016 – 2025
- 2026 – 2035

23. ANTICIPATED DATE OF FACILITY OPENING:

When do you anticipate the project to be open for service?

- By Dec. 31, 2015
- 2016 – 2025
- 2026 – 2035

24. PROJECT'S CURRENT STAGE IN THE DESIGN PROCESS:

- No planning has occurred
- Preliminary plan
- Final plan
- Other, please specify

PROJECT RELATIONSHIP TO *ENCOMPASS 2035* GOALS

25. DOES THIS PROJECT SUPPORT A LOCAL PLAN/STUDY? (10 PTS)

Quality places are created intentionally. For that to occur, better coordination and strategic integration of transportation projects and land-use planning is needed - with an eye towards sustainability and longevity.

- Project is not supported by or included in a plan/study (0 pts)
- Project is supported by or included in a study (5 pts)
- Project is supported by or included in a plan (10 pts)

In order to receive full credit, explain how the project is supported by a plan/study and provide a hyperlink and page citation to the plan/study for ACOG staff to verify. If the plan/study is not available online, please provide a hard copy.

Inclusion in the 2030 OCARTS Plan does not qualify a project for points in this question.

26. DOES THIS PROJECT INCREASE SAFETY AND REDUCE CONGESTION? (10 PTS)

Safety and congestion management are critical to having a high performing transportation network. This criterion is intended to encourage projects that employ strategies which are proven to reduce congestion and improve safety.

1 point for each item checked from these Congestion Management Process *(CMP) strategies* (up to 10 Points)

- Project does not increase safety and reduce congestion (0 pts)
- Improves traffic signal timing (1 pt)
- Improves access management (1 pt)
- Improves intersection geometry (1 pt)
- Adds capacity (1 pt)
- Deploy Intelligent Transportation Systems (ITS) (1 pt)
- Promotes use of alternate modes of transportation (1 pt)
- Increases transit services, coverage area, and access (1 pt)
- Promotes carpooling and park-and-ride (1 pt)
- Located within a school zone (1 pt)
- Improves sight distance (1 pt)

27. DOES THIS PROJECT ADDRESS A HIGH ACCIDENT LOCATION? (10 PTS)

This criterion helps identify roadway segments with an unproportionally high number of crashes.

$$\frac{\text{Accidents} \quad X \quad \text{One Million}}{365 \text{ X (Vehicle Miles of Travel)}}$$

Accident rates for street segments are defined as annual accidents per million vehicle miles of travel:

- The accident severity rate is 12.0 or greater. (10 pts)
- A distinct number of points will be assigned to projects with a severity rate between 3.0 and 12.0. (1 to 9 points)
- The accident severity rate is less than 3.0. (0 pts)

For applicant entities that choose to use their own city police department data, midblock accidents are defined as those occurring beyond 500 feet of the nearest intersecting centerlines or more than 450 feet from the stop bars of the bordering leg of the intersection, whichever is greater. The ODOT accident report defines each accident as intersection or mid-block related.

The accident severity rate on a facility is averaged over a three year period. (The use of average accident data is intended to avoid over-emphasizing accidents which occurred due to random chance. The three year period shall cover the most recent consecutive 36-month period available.)

Applicants enter the appropriate data into the "Accident Severity Rate – Worksheet" to calculate the severity index of the proposed project. (ODOT's severity index system will be used: property damage accident = 2, fatality accident = 4, injury accident = 4.)

28. UPLOAD SUPPORTING DOCUMENTATION FOR HIGH ACCIDENT LOCATION:

Please upload supporting documentation for the calculation for accident severity. For verification purposes, a file containing the list of accidents – along with information on the severity of the accidents ("Property Damage Only" or "Injury/Fatality") – must be uploaded.

Using the online project submission tool, click the "Browse" button to upload a document. Preferred file type: .PDF. Maximum file size is 5000 KB. Give the file a name and short description. Only ONE file may be uploaded so it will be necessary to combine multiple documents into one PDF document.

29. DOES THIS PROJECT INTEGRATE MULTIPLE TRANSPORTATION MODES? (15 PTS)

This criterion is intended to incorporate all modes of transportation into a single seamless system. Higher scoring projects demonstrate inclusion and integration of multiple modes.

- Project design includes only 1 mode (0 pts)
- Project design includes 2 modes (5 pts)
- Project design includes 3 modes (10 pts)
- Project design includes 4 modes (15 pts)

Use the text area to describe how the project addresses multiple modes in order to receive full credit.

Definition of Modes:

Automobile or Truck - Street and Highway

Public Transit - Bus AND/OR Rail

Bicycle - Bicycle Facility AND/OR On-street Bike Lane AND/OR Multi-Use Trail

Pedestrian - Sidewalk AND/OR Trail

30. DOES THIS PROJECT PROVIDE OPTIONS? (10 PTS)

This criterion is intended to encourage projects that expand people's transportation choices. Streets and highways are the most common transportation infrastructure in Central Oklahoma, so points are awarded for projects that focus on other modes of transportation.

- Street and Highway project (0 pts)
- Bicycle and/or Pedestrian project (5 pts)
- Transit project (5 pts)

Select all that apply. The points are cumulative. Up to 10 points.

31. DOES THIS PROJECT SERVE REGIONAL ACTIVITY AND EMPLOYMENT CENTERS? (5 PTS)

To support and foster a thriving community and its economic base, the transportation system must provide access to jobs and offer strong connections between economic centers - inside and outside of the region.

- Project is not adjacent to a center (0 pts)
- Project is adjacent to a center (5 pts)

In order to receive full credit, explain how the project serves a regional activity/employment center.

Regional activity and employment centers draw travelers from across and beyond the region. Examples of such regional centers are:

- *Universities and Colleges with several thousand students*
- *Employment Sites with several hundred employees, such as large office parks and business centers*
- *Convention Centers, Museums, Permanent Event Centers, etc. that draw several hundred visitors on a daily basis or several thousand visitors per event*
- *Unique commercial sites that are frequented by several thousand patrons per day*

32. DOES THIS PROJECT INTEGRATE WITH EXISTING INFRASTRUCTURE? (10 PTS)

This criterion is intended to encourage projects that address connecting segments of "like" facilities into a continuous system (i.e. Bike Trail, Roadway, Sidewalk, and Transit).

- Project does not connect to existing like-infrastructure (0 pts)
- Project connects with 1 existing like-infrastructure (5 pts)
- Project connects with 2+ existing like-infrastructures (10 pts)

In order to receive full credit, explain how the project connects like-infrastructure.

Examples of connecting "like" infrastructures:

- A trail project that fills a gap between two existing trails (this would receive 10 points for connecting 2+ existing like-infrastructures)
- A 2 to 4 lane widening project that connects to a 4 lane road on one end (this would receive 5 points for connecting to 1 existing like-infrastructure)
- A sidewalk project that connects to an existing sidewalk on one end (5 points)

33. DOES THIS PROJECT SUPPORT MIXED USE DEVELOPMENT? (10 PTS)

*This criterion is intended to develop a transportation system that supports mixed land uses through improved alternative mode access and decreased auto-dependency. Projects that can demonstrate this **and** are included in an entity's comprehensive plan and zoning will score higher.*

- Project does not support mixed use development (0 pts)
- Project supports mixed use development, but is not included in entity's comprehensive plan (2 pts)
- Project supports mixed use development as indicated in entity's comprehensive plan (3 pts)
- Project supports mixed use development as indicated in entity's comprehensive plan and zoning (5 pts)
- Project supports existing mixed use development. (10 pts)

In order to receive full credit, explain how the project supports mixed use development and include plan/zoning citation.

Definition: Mixed Use Development is a combination of residential, commercial, office, or other land use occupying a building or set of buildings. This type of development encourages walking for short trips by integrating residential living with commercial/retail services. Mixed Use Development is commonly associated with ground floor commercial/retail and residential/office above.

Mixed Use vs. Mix of Uses: It is important to point out that there is a significant difference between a mixed-use development and a large development or area that has a mix, or variety, of uses. The latter is development that includes housing, retail and office uses in the same proximity, but not integrated or designed to function together or benefit each other. This is typical of suburban development patterns and many master planned communities.

Collection of single-use districts

Mix of Uses

or

Mixed-Use District

34. DOES THIS PROJECT SUPPORT REGIONAL FREIGHT MOVEMENT? (5 PTS)

This criterion is intended to encourage projects that support regional freight movement. Our transportation system moves goods as well as people, so points are awarded for projects that improve freight movement.

- Project does not improve freight movement (0 pts)
- Project improves regional freight movement (5 pts)

In order to receive full credit, explain how the project supports regional freight movement. Example: daily truck traffic, warehouse or distribution center location, etc.

Freight project examples:

- Roadway improvement on locally designated truck routes or other routes frequented by trucks
- Implementing or improving an intermodal connector
- Grade separation project
- Bridge project to mitigate weight restrictions on locally designated truck routes or other routes frequented by trucks
- Deployment of ITS for commercial vehicle operations, traveler information systems and incident management

35. IF THIS PROJECT IS LOCATED IN OR ADJACENT TO AN ENVIRONMENTAL JUSTICE AREA, HOW DOES IT IMPROVE ACCESS? (5 PTS)

This criterion is intended to avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low income populations.

Project must be located in or adjacent to an environmental justice (E.J.) area (shown in red on map) in order to receive points. Refer to E.J. Area maps. 1 point for each item checked from the following list (up to 5 Points).

- Project does not improve access or is not located in or adjacent to an E.J. area (0 pts)
- Improves transit service (1 pt)
- Does not result in the relocation of residents (1 pt)
- Improves access to jobs (1 pt)
- Improves livability* (1 pt)
- Shortens commute time (1 pt)

In order to receive full credit, explain how the project improves access to an E.J. area.

*Please refer to http://www.fhwa.dot.gov/livability/partnerships for the definition of livability.

36. DOES THIS PROJECT IMPROVE ACCESSIBILITY FOR MOBILITY IMPAIRED/DISABLED CITIZENS BY GOING ABOVE AND BEYOND ADA REQUIREMENTS? (5 PTS)

This criterion is intended to reward projects that will provide more than the minimum accessibility standards in order to improve mobility for all citizens.

- Project does not improve accessibility for the mobility impaired or disabled beyond what is required for ADA compliance (0 pts)
- Project improves accessibility beyond ADA requirements and applicant clearly explains how (5 pts)

In order to receive full credit, explain how the project goes above and beyond ADA requirements.

Examples:

- Adding curb ramps to **pre-ADA** highways, streets, roads, and sidewalks that have **not** been altered**.** This only goes beyond the ADA if other alterations are **not** being made.
- Installing Accessible Pedestrian Signals (APS**)** at crosswalks. These signals provide information in non-visual format, which includes audible tones or verbal messages, and/or vibrotactile information. This only goes beyond the ADA if other alterations are **not** being made.
- Constructing or expanding sidewalks wider than the 5 foot required width.
- Medians/pedestrian refuges provided in crosswalks.

37. DOES THE PROJECT SUPPORT EXISTING DENSITY? (5 PTS)

This criterion is intended to encourage transportation efficient land use. Projects that are within or partially in the Urban Area Boundary support infill development.

Refer to the Urban Area Boundary map to determine if your project is included.

- Project is located outside of the Urban Area Boundary (0 pts)
- Project is located partially within the Urban Area Boundary (3 pts)
- Project is located completely within the Urban Area Boundary (5 pts)

38. DOES THIS PROJECT AVOID ADVERSE IMPACT TO CULTURALLY OR ENVIRONMENTALLY SENSITIVE LANDS? (5 PTS)

This criterion is intended to avoid, minimize, or mitigate adverse environmental impact on culturally or environmentally sensitive lands by avoiding development in these sensitive areas.

- The project is located in an area that may adversely impact culturally or environmentally sensitive lands (0 pts)
- The project is not located in an area that may adversely impact culturally or environmentally sensitive lands (5 pts)

Refer to the ACOG Environmental Impact Maps.

39. DOES THE PROJECT REDUCE OZONE PRECURSOR EMISSIONS? (20 PTS)

This criterion is intended to reduce or avoid increasing the amount of greenhouse gas emissions through transportation measures by reducing the amount of vehicle-miles traveled, reducing fuel consumption, and improving the performance of the transportation system.

2 points for each of these strategies (up to 20 Points):

- Project does not reduce emissions (0 pts)
- Enhances transit access or services (2 pts)
- Promotes biking and walking (2 pts)
- Employs Intelligent Transportation Systems (2 pts)
- Project is located on one of the identified Congestion Corridors (2 pts) (Refer to ACOG Congestion Corridor Map)
- Relieves a bottleneck (2 pts)
- Promotes ridesharing (2 pts)
- Promotes transportation efficient land use (2 pts)
- Promotes truck idling reduction (2 pts)
- Uses "Complete Streets*" techniques or policy (2 pts)
- Other (Applicant provides explanation) (2 pts)

In order to receive full credit, explain what options were chosen and why. For additional information on transportation greenhouse gas reduction strategies, refer to the ULI Moving Cooler Report.

*"Complete Streets" is an initiative to design and build roads that adequately accommodate all users of a corridor, including pedestrians, bicyclists, users of mass transit, people with disabilities, the elderly, motorists, freight providers, emergency responders, and adjacent land users. This concept dictates that appropriate accommodation(s) be made so that all modes of transportation can function safely and independently in current and future conditions.

QUESTIONS?

For assistance with the online submission form, data and resources, or questions about eligible projects, please contact Andrea Weckmueller-Behringer at awbehringer@acogok.org or (405) 234-2264.

APPENDIX C: ILLUSTRATIVE PROJECTS

Metropolitan long-range transportation planning requires local decision-makers to identify transportation needs, financial resources, and priorities in a cooperative manner.

Federal law requires that metropolitan transportation plans be fiscally constrained by including projects for which funding sources already exist or are reasonably anticipated in the future. In other words, the adopted plan must be affordable rather than a wish list. Federal guidelines also allow MPOs to identify projects for illustrative purposes that would be included in the adopted plan if additional financial resources were available. These "illustrative projects" are not part of the fiscally constrained plan and, therefore, cannot be advanced to implementation unless new revenue source(s) are identified and the plan is amended.

ENCOMPASS 2035 ILLUSTRATIVE PROJECTS

During the development of *Encompass 2035*, the following transit projects were considered desirable, but not affordable based on OCARTS area transportation revenue projections through 2035. Through continued efforts such as the Regional Transit Dialogue, Alternatives Analyses for specific transit corridors, and additional modeling efforts, the region is committed to further study of these projects to determine the feasibility, long-term costs, potential revenue sources, and local political will for each.

Regional Fixed Guideway Study (FGS) – 2030 System Plan Recommendations:

The 2030 System Plan represents a multimodal vision for a fixed guideway transit system providing reliable, fast, and safe public transportation service within the Oklahoma City Metropolitan Area. The plan recommends approximately:

- 670 miles of Enhanced Bus
- 40 miles of Bus Rapid Transit (BRT)
- 42 miles of Commuter Rail Transit (CRT) *
- A new centrally located Intermodal Transportation Hub* for transfers among bus, BRT, CRT, streetcar, and all other modes.

The FGS also recommended 5-6 miles of downtown modern streetcar, which is included in *Encompass 2035*, as described in Chapter 13 of this report.

*Additional study of these components has been completed or is underway, as described in Chapter 9 of this report.

As part of the *Encompass 2035* Plan, ACOG staff, at the request of the ITTC, developed a street and highway alternate scenario (Alternate Four-B) to determine the impact that the Southwest Outer Loop would have on projected 2035 traffic congestion. The modeling results revealed that, while the Loop provided for some localized congestion relief, it did not lower travel time enough on a regional level to be considered a cost effective strategy.

Still, the ITTC believed that further analysis of the Loop's subparts was worthy of additional analysis sometime in the future. As a result, the ITPC on the recommendation of the ITTC and CAC, approved the inclusion of the Southwest Outer Loop as an illustrative project for further analysis.

Southwest Outer Loop Highway:

Previous OCARTS Transportation Plans, dating back to the 1970's, have called for an outer loop highway to help route through-traffic, particularly truck traffic, around the urban core and alleviate congestion on existing interstates. The northwest portion of the loop, known as the Kilpatrick Turnpike, was completed in 2001. Extension of the loop may be warranted in the future for the following locations:

- Between the Kilpatrick Turnpike and I-44
- Between I-44 and I-35 South

APPENDIX D: UPWP REPORTS

RELATED REPORTS ON THE DEVELOPMENT OF THE *ENCOMPASS 2035* PLAN

FY 2009 UPWP Report – Task 1.01, Subtask 1, *Calibration of the 2035 Growth Allocation Model (GAM),* ACOG, September 2010.

FY 2009 UPWP Report – Task 1.01, Subtask 2b, *2035 Population Control Totals,* ACOG, December 2010.

FY 2009 UPWP Report – Task 1.01, Subtask 6, *2035 Employment Control Totals*, ACOG, December 2011.

FY 2009 UPWP Report – Task 1.01, Subtask 7, *2035 School Enrollment Projections,* ACOG, February 2010.

FY 2010 UPWP Report – Task 1.01, Subtask 1, *Growth Allocation Model (GAM) Technical Documentation,* ACOG, January 2012.

FY 2010 UPWP Report – Task 2.01, Subtask 4a, *Passenger Transit Report for the 2035 OCARTS Plan*, ACOG, December 2010.

FY 2010 UPWP Report – Task 2.01, Subtask 4b, *Bicycle & Pedestrian Facilities Report for Encompass 2035 Plan Development*, ACOG, February 2010.

FY 2010 UPWP Report – Task 2.01, Subtask 4c, *Goods Movement Report for Encompass 2035 Development*, ACOG, January 2011.

FY 2011 UPWP Report – Task 1.01, Subtask 6, *Encompass 2035 Impacts,* ACOG, May 2011.

FY 2011 UPWP Report – Task 1.01, Subtask 7, *Environmental Justice for the Encompass 2035 Plan,* ACOG, September 2011.

FY 2011 UPWP Report – Task 2.01, Subtask 5, *Travel Demand Model Update Documentation,* ACOG, December 2010.

FY 2011 UPWP Report – Task 2.01, Subtask 8, *Benefit/Cost Analysis for the Encompass 2035 OCARTS Plan,* ACOG, May 2012.

FY 2011 UPWP Report – Task 2.01, Subtask 9, *Financial Element of 2035 OCARTS Plan – Estimated Costs and Anticipated Revenues,* ACOG, April 2012.

FY 2011 UPWP Report – Task 2.01, Subtask 13b, Draft Downtown Streetcar Alternatives Analysis Report, COTPA, November 2011.

FY 2011 UPWP Report – Task 2.01, Subtask 15, *Regional Transit Dialogue*, ACOG, July 2010.

FY 2011 UPWP Report – Task 2.03, Subtask 1, *Recurring Congestion Corridors Status Report (2007-2008) & (2009-2010),* ACOG, March 2012.

FY 2011 UPWP Report – Task 2.03, Subtask 1b, *Incident Management Status Report (2009-2011)*, ACOG, April 2012.

FY 2011 UPWP Report – Task 2.03, Subtask 2, *ITS Status Report (2009-2011 Data),* ACOG, March 2012.

FY 2011 UPWP Report – Task 3.01, Subtask 8b, *Encompass 2035 Plan Brochure,* ACOG, May 2012.

FY 2011 UPWP Report – Task 3.01, Subtask 10, *Public Involvement for the Encompass 2035 Plan,* ACOG, January 2012.

DISCLAIMER: Maps/data presented in this report were created and assembled by the Association of Central Oklahoma Governments (ACOG) for informational, planning reference and guidance only. You are admonished to use these materials only as a starting point and not a final product or document. None of these materials should be utilized by you or other parties without the benefit of advice and instruction from appropriate professional services. These materials are not verified by a Registered Professional Land Surveyor for the State of Oklahoma and are not intended to be used as such. ACOG makes no warranty, express or implied, related to the accuracy or content of these materials and data.

ACOG
21 E. Main Street, Suite 100
Oklahoma City, OK 73104-2405
Voice: 405-234-2264
Fax: 405-234-2200
Email: acog@acogok.org
www.acogok.org

acog

Preparation of this report was financially aided through funds provided by the U.S. Department of Transportation (Federal Highway Administration and Federal Transit Administration), the Oklahoma Department of Transportation and local government contributions.