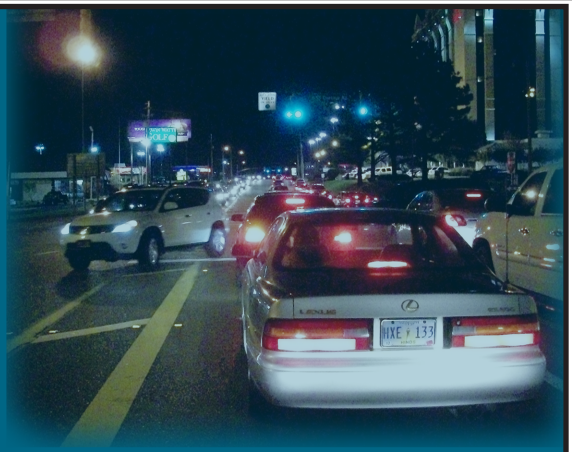

2035
Jackson Urbanized Area Transportation Plan

Volume I
STREETS & HIGHWAYS PLAN
(Including Financial Plan)

Prepared by:

CMPDD
Central Mississippi Planning and Development District

In cooperation with the:

Mississippi Department of Transportation
Federal Highway Administration
Federal Transit Administration

Adopted
March 30, 2011

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Chapter 1

Introduction and Transportation Planning Process

1.1.1 Introduction

The long-range transportation plan for the Jackson Urbanized Area is intended to be a multimodal plan describing the transportation system that will best suit the projected travel needs of the public to the year 2035. The multimodal aspect of the plan takes into account the projected needs and desires of the various sectors of the public for mobility; whether by car, public transit, truck, rail or bicycle and according to purpose, for work, school, commerce or pleasure.

Long-range planning starts with an understanding of the current situation, followed by a forecast of the population and economy to the year 2035 and projection of the impact the resulting travel demand will place on the transportation system. The identification of potential improvements to manage future travel demand should be guided by the goals and objectives that the general public and the governing bodies establish for the region. In developing the current plan, particular attention was given to demographic forecast data, land use changes, and goals and objectives for the region.

The challenge of developing a long-range plan is further compounded by the need to consider the availability of funding to finance proposed improvements. The history of financing transportation improvements within the region serves as a reasonable baseline of potential funding for future project development.

This is the principal transportation planning document for the region. It was developed through a coordinated process between the Metropolitan Planning Organization (MPO), local jurisdictions, various agencies, and the public in order to develop regional solutions to transportation needs. The new target years for this plan are 2015 for the short range, 2025 for the intermediate range, and 2035 for the long-range stages.

This document constitutes the latest update to the MPO's long-range transportation plan, and fulfills the federal planning requirements (23 CFR 450) necessary to receive transportation funds through the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was signed into law in 2005 to provide guaranteed federal funding for highways, highway safety, and public transportation.

1.1.2 Historical Background

In response to the Federal Highway Act of 1962, most communities throughout the United States initiated comprehensive transportation planning efforts to both address their existing transportation concerns and to plan for future growth needs. Transportation planning efforts often competed with other priorities for funding and scheduling. The sophistication and vision of the individual

transportation plans varied substantially in response to the availability of funding resources. Such plans were frequently formulated as part of community plans developed by the local planning offices. Others were prepared by various State Departments of Transportation.

This plan is modeled in TransCAD version 5.0 and was developed by Neel-Schaffer, Inc in conjunction with the Mississippi Department of Transportation (MDOT) and the MPO planning staff. Explanations of the demographic data and the transportation modeling process used in the preparation of this plan will be provided in later chapters.

1.1.3 Regulatory Framework for MTP Development

With the passing of the Federal Aid Highway Act of 1962, Congress made urban transportation planning a condition for receipt of federal funds for highway projects in urban areas with a population of 50,000 or more. That legislation encouraged a continuing, comprehensive transportation planning process carried on cooperatively by the states and local communities. MPOs were designated by the governor in each state to carry out this legislative requirement. Following that initial federal legislation, there have been a series of acts by Congress that have continued to fund transportation projects, the most recent being SAFETEA-LU.

In August 2005, SAFETEA-LU was authorized and currently serves as the regulatory and funding framework for transportation planning in metropolitan areas. SAFETEA-LU succeeded a series of transportation legislative acts that have drastically changed the process of planning for transportation systems. These legislative acts include the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 and the Transportation Equity Act for the 21st Century (TEA-21) in 1998. All of these legislative acts have been a direct result of the Clean Air Act Amendments of 1990 (CAAA), which broadened the goals of transportation system planning to include reducing vehicle miles traveled, expanding travel mode options, improving air quality, and integrating land use considerations into the planning process.

The authorization of ISTEA in 1991 created a major shift in metropolitan transportation planning. In accordance with the CAAA, it required transportation agencies to promote the protection of ecological and human environments. ISTEA mandated metropolitan areas within regions in violation of the National Ambient Air Quality Standards to plan for improvements in emissions, while preserving mobility. These additional considerations required planning for reductions in privately occupied vehicles, expansion of transit, and bicycle/pedestrian options. In addition, ISTEA recognized the growing changes in cultural and economic diversity within urban areas and provided metropolitan planning organizations with greater control of transportation systems in each region.

In 1998, TEA-21 was authorized to succeed ISTEA. TEA-21 incorporated many of the same regulatory requirements as the previous legislation. However, various additions were implemented, including a greater focus on safety and security for motorized and non-motorized users; accessibility and mobility for people and freight; efficient systems management and operation; and integration or connectivity within and across different transportation modes.

In 2005, SAFETEA-LU succeeded TEA-21. This legislation maintains the core considerations of mobility, accessibility, quality of life, safety and security, environmental protection, air quality, economic

development, and operations management. This legislation also establishes a metropolitan planning process that is a cooperative, continuous, and comprehensive framework for making transportation decisions in metropolitan areas.

SAFETEA-LU

SAFETEA-LU provided funding for highways, highway safety, transit, bicycle and pedestrian facilities, and multi-modal infrastructure for a five year period, 2005 to 2009. The Metropolitan Transportation Plan (MTP) is one of the planning documents required to obtain federal funds through SAFETEA-LU. SAFETEA-LU also requires that the MPO select and prioritize a set of regionally significant transportation projects for programming in a Transportation Improvement Program (TIP), which must be updated every four years. The TIP identifies federally funded transportation projects to be implemented during the next four years. These projects are included in the TIP based on a realistic estimate of the available revenues and are consistent with the MTP. Although SAFETEA-LU is no longer in effect, appropriations will most likely follow those of the previous year until new legislation is adopted.

The MTP consists of a set of short-range and long-range strategies to address transportation needs and guide investment in the regional transportation system in a manner that will address the deficiencies of the system. The MTP must also be consistent with the region's land use and economic development objectives in addition to the region's overall social, environmental, system performance, and energy conservation objectives.

Federal regulations require that the planning process for the MTP include:

- Consideration of social, economic, and environmental effects;
- Public participation in the planning process;
- No discrimination based on race, color, gender, national origin, or physical disabilities;
- A special effort to plan for public transportation facilities and services for the elderly, people with disabilities, and people of low income;
- Consideration of energy conservation;
- Involvement of all appropriate public and private transportation providers; and
- Consultation and coordination with other public agencies.

SAFETEA-LU, Section 5303, also requires that a metropolitan planning area carry out a planning process that provides for consideration and implementation of projects and strategies and services that will:

1. *Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;*
2. *Increase the safety of the transportation system for motorized and nonmotorized users;*
3. *Increase the security of the transportation system for motorized and nonmotorized users;*

4. *Increase the accessibility and mobility of people and for freight;*
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;*
6. *Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight;*
7. *Promote efficient system management and operation; and*
8. *Emphasize the preservation of the existing transportation system.*

These are known as the eight (8) SAFETEA-LU planning factors.

1.1.4 The Jackson Urbanized Area Metropolitan Planning Organization

The US Census Bureau has identified over 400 regions throughout the United States that they consider to be urbanized. Urban Areas, by definition, contain a population greater than 50,000. Federal law (23 CFR Part 450) mandates the creation of a MPO for each census defined urbanized area, with the purpose of involving local governments in transportation decisions involving federal highway and/or transit funds. Under these regulations, the Central Mississippi Planning and Development District (CMPDD) has been designated by the Governor as the MPO for the Jackson Urbanized Area and is the responsible agency for transportation planning activities.

The study area is comprised of portions of three counties (Hinds, Madison, and Rankin). The Hinds County portion is comprised of the City of Jackson and the smaller cities of Clinton, Byram, Terry, Raymond, and Bolton. The Madison County portion of the study area contains the cities of Canton, Madison, Ridgeland, and Flora. The Rankin County portion of the study area contains the cities of Flowood, Pearl, Brandon, Richland, Florence, and Pelahatchie. The remainder of the study area includes the Jackson Urbanized Area as defined by the U.S. 2000 Census. The Jackson Urbanized Area (UZA) is located roughly 45 miles southwest of the geographic center of the state of Mississippi, some 40 miles east of the Mississippi River, and 160 miles north of New Orleans. Figure 1-1 shows the current boundaries of the Jackson Urbanized Area, as well as the expanded study area included in this plan. The study area is the portion of the region that is anticipated to be included in the urbanized area within the 25-year planning horizon.

Local jurisdictions involved in the planning activities of the Jackson Urbanized Area MPO include the following:

- Hinds County
- Madison County
- Rankin County

- City of Jackson

In addition, the Mississippi Department of Transportation, Federal Highway Administration, and Federal Transit Administration participated in the MPO process.

The Jackson Urbanized Area MPO organizational structure is designed so that it operates as an entity separate from the participating jurisdictions so that no single entity dominates the organization's decision-making processes.

Two committees shape the decision making process of the Jackson Urbanized Area MPO: the Metropolitan Planning Policy Committee (MPPC) is the official decision making body, and the Intermodal Technical Committee (ITC) advises the MPO on technical matters of projects, plans, and programs.

Metropolitan Planning Organization Board

The MPO Board serves as the official decision making body for the MPO. The Board oversees how federal transportation dollars are spent in the transportation study area. Responsibilities include the review and approval of all plans, programs, and projects. It is comprised of elected officials from regions within the MPO study area. A list of members is available at the MPO office.

JACKSON
URBANIZED AREA MPO
TRANSPORTATION PLAN
2035

Figure 1-1
Jackson Urbanized Area MPO Study Area

Legend

Map layers
- 2000 Smothed UZA
- Census Place (2000)
- Study Area
- County
- Water Area
- River
- Streets

0 3 6 9
Miles

Source: NSI, Census Bureau

N W E S

Prepared For:

MDOT Mississippi Department of Transportation
CMPDD

Prepared By:

NEEL-SCHAFFER
Solutions you can build upon

In Association With:

WilburSmith Associates

Intermodal Technical Committee (ITC)

The ITC reviews plans, programs, projects, studies, reports and provides the MPO with recommendations concerning these documents. The ITC includes representatives from all agencies involved in the transportation planning process. Participants include municipalities, counties, the Mississippi Department of Transportation, the Federal Highway Administration, Federal Transit Administration, and other selected transportation interests. A list of members is available at the MPO office.

Federal and state transportation planning responsibilities for the Jackson Urbanized Area MPO can generally be summarized as follows:

- Develop and maintain an MTP and Metropolitan Transportation Improvement Program (MTIP) consistent with state and federal planning requirements.
- Review specific transportation and development proposals for consistency with the MTP.
- Coordinate transportation decisions among local jurisdictions, state agencies, and area transit operators.
- Develop an annual work program (known as the Unified Planning Work Program [UPWP]).
- Maintain the regional travel-demand model for the purposes of assessing, planning, and coordinating regional travel demand impacts.

1.1.5 The MTP Purpose, Goals and Objectives

The purpose of the MTP is to identify the transportation needs of the community over the next 25 years, establish priorities for funding those improvements, and chart a course for meeting the community's identified transportation needs. The study identifies the existing and future land use trends and transportation needs, and develops coordinated strategies to provide transportation facilities essential for the continued mobility and economic vitality of the Jackson Urbanized Area.

The MTP is a Long Range Transportation Master Plan, which is a blueprint to guide the establishment of priorities for development programs and transportation projects within the Jackson Urbanized Area. The MTP seeks to balance investments in various transportation modes against anticipated funding from federal, state, and local sources while maintaining flexibility to address the dynamic changes in both the needs and the resources of the community.

Access to transportation shapes the lives of the members of the community. The transportation system supports access to jobs and shopping, to recreation and social opportunities, to health care and emergency services, to evacuation and travel routes, and to people and places near and far. The transportation system also supports the movement of goods and services to, from, and through the community. The transportation system is the structure upon which many other aspects of the life of the community rest.

As the transportation system grows, so grows the community. The transportation system affects both the physical and social environment of the community. It affects the physical health of the residents

and the economic health of the businesses. Transportation systems cost millions of dollars to build and maintain, and changes can take many years to implement. Because of the many impacts of transportation on the community, the large investment of public resources, and the extended time frame necessary to design and implement changes in the transportation system, it is essential that the community be involved in the planning process that creates the future transportation system. The community has been involved in the process and has established a vision and a set of goals for its transportation system.

1.1.5.1 MTP Goals and Objectives

One of the first tasks of the study is the formulation of a set of goals and objectives to provide a framework for the MTP and to maintain it as a viable document. The goals and objectives are also used as guidelines in preparing and evaluating potential improvements to the system.

The purpose of establishing goals and objectives for transportation system development is to provide a rational and coherent basis for evaluating proposed capital and operating improvements related to the movement of people and goods in the Jackson Urbanized Area. A balanced approach must be sought that maximizes the general welfare without unfairly burdening any particular group and that maximizes the utility of the system itself. In addition, the transportation system must be safe, secure, efficient, economically feasible, and in harmony with the character of the area.

Ultimately, the summary goals and objectives outlined on the following pages, along with associated evaluation criteria, are intended to facilitate the development of a long-range regional transportation plan that will enhance travel within the area and make the Jackson Urbanized Area a better place in which to live, work, and do business. (Note: Evaluation criteria are italicized and bulleted.)

GOAL 1: ENHANCE TRANSPORTATION SYSTEM MOBILITY AND ACCESSIBILITY FOR ALL ROADWAY USERS AND MODES

1. Relieve traffic congestion and decrease travel time.

   - *Volume-to-capacity (V/C)<1.25 for all routes*
   - *Operational Level of Service (LOS) D or better for all routes*
   - *Increased average speed for regional network*
   - *Reduced overall vehicular delay for regional network*

2. Facilitate the design of roadways to accommodate multiple users.

   - *Absolute increase in multi-use route-miles > Absolute increase in system route-miles*

3. Enhance the availability, attractiveness, and efficiency of public transportation.

   - *Increased transit system route-miles*
   - *Increased transit vehicle hours of operation*
   - *Increased total ridership*
   - *Increased passengers per vehicle hour of operation*

4. Enhance the mobility of those who are elderly, physically or mentally impaired, or lacking the economic means to take advantage of existing transportation options.

   - *Increased paratransit vehicle hours of operation*
   - *Increased population residing within one quarter-mile of fixed-route transit service*

5. Improve rural/urban connectivity for roadway and transit.

6. Consider the impact of development on adjacent roadway corridors.

7. Improve regional access to community facilities.

8. Plan and promote viable alternative modes of travel for commuters.

   - *Increased number of designated ridesharing locations*
   - *Increased number of designated parking spaces at ridesharing locations*

9. Facilitate intermodal goods movement.

   - *Increased route-miles for designated intermodal connectors*
   - *Increased vehicular capacity for designated intermodal connectors*
   - *Decreased V/C for routes providing access to airports and seaports*
   - *LOS C or better for routes providing access to airports and seaports*

10. Enhance bicycle and pedestrian mobility and accessibility.

    - *Increased bicycle and pedestrian path miles*
    - *Increased bicycle and pedestrian path signalization, signage, and crosswalks*
    - *Increased number of bike-and-ride transit patrons*

11. Optimize the use of available resources by prioritizing potential projects on the basis of their probable effectiveness in relieving congested conditions.

GOAL 2: ENHANCE REGIONAL CONNECTIVITY AND ECONOMIC VIABILITY

1. Improve regional connectivity by enhancing mobility between different parts of the metropolitan area.

   - *Reduced vehicular travel delay on principal arterials*

2. Optimize the use of available resources by prioritizing potential projects on the basis of their regional significance and potential benefit to the area as a whole.

3. Increase the potential benefits to be derived from expenditure of scarce public resources by developing projects capable of attracting private-sector investment and broad community support.

4. Maximize the economic development potential of the transportation system.

   - *Increased arterial share of regional street and highway mileage*

5. Provide for the development of a balanced transportation system compatible with future plans that serve the specific needs of the citizens in support of the region's economic vitality.

   - *Increased transit share and travel by alternative modes*

GOAL 3: ENHANCE ENVIRONMENTAL QUALITY AND PUBLIC SAFETY

1. Support hurricane and other emergency evacuation planning efforts by giving priority consideration to proposed transportation system improvements that would facilitate the safe and expeditious removal of people from the area in the event of an impending catastrophe.

   - *Increased route mileage on designated emergency evacuation network*
   - *Increased vehicular capacity on designated emergency evacuation network*

2. Promote the safety of motorists and users of non-motorized modes.

   - *Reduced crashes, injuries, and fatalities per million vehicle-miles*

3. Support the allocation of resources to upgrade grade crossing protection and warning systems on major rail lines in the region.

   - *Reduced number of crossings without gates and warning lights*
   - *Reduced number of collisions between trains and cars, trucks, buses, and other vehicles*

4. Enhance air quality in the region by developing projects that would help reduce mobile-source emissions of pollutants.

   - *Reduced mobile-source emissions of ozone precursors and other monitored pollutants*

5. Promote access management, divided roadway, and other roadway design measures intended to maximize safety for all roadway users.

   - *Increased percentage of major roads with median or center turn-lane, some level of access control or traffic calming treatments*

6. Promote the design of safe intersections for all roadway users.

7. Promote traffic calming strategies where warranted.

8. Promote "context sensitive" design in the project development process.

9. Consider the environmental impacts of transportation project alternatives.

GOAL 4: SUPPORT LOCAL VALUES AND PRESERVE EXISTING COMMUNITY RESOURCES

1. Preserve and make use of existing transportation infrastructure wherever possible by encouraging the development of projects that optimize available system capacity through the application of intelligent transportation system (ITS) techniques and transportation system management (TSM) concepts.

   - *Increased share of transportation funding resources allocated for roadway maintenance*
   - *Increased share of funding resources allocated for ITS and TSM activities*

2. Ensure that proposed improvements are consistent with local plans, goals, and objectives.

   - *Documentation of local review and approval, as well as preserving local historic sites and districts*

3. Support local standards by giving priority consideration to projects that meet community expectations regarding walkability, aesthetic appeal, and other quality-of-life issues.

4. Support local land use and community planning activities by developing projects that are consistent with access management and traffic-calming strategies for transportation system development.

5. Identify and acquire or protect transportation corridors and the necessary rights-of-way in advance of immediate need to permit future safe and efficient transportation improvements at a minimal cost.

6. Promote the designation of scenic byways.

   - *Increased route-miles of designated scenic byways*

GOAL 5: PROVIDE A TRANSPORTATION PLANNING PROCESS THAT INFORMS AND INVOLVES THE PUBLIC, AS WELL AS ELECTED OFFICIALS

1. Increase public understanding of and involvement in the regional transportation planning process.

2. Identify stakeholders and encourage their participation in development of the long-range Regional Transportation Plan.

3. Provide adequate public input into decision making.

GOAL 6: DEVELOP A LONG-RANGE REGIONAL TRANSPORTATION PLAN THAT IS FINANCIALLY FEASIBLE

1. Develop a plan that meets the requirements of the U. S. Department of Transportation (Federal Highway Administration and Federal Transit Administration) and the Mississippi Department of Transportation.

    - *Estimated revenue anticipated through the year 2035 ≥ estimated plan cost*

1.1.6 Planning Process and Methodology

The long-range transportation planning process begins with a vision of the area's future that can be understood and communicated easily and used to build consensus regarding the need for transportation improvements in the region. This vision can then be translated into a set of goals and objectives that will guide the development of transportation improvement projects, programs, and policies. The planning process seeks to determine how resources likely to be available for expanding and improving transportation infrastructure can best be invested. The Jackson Urbanized Area MPO identifies a variety of potential funding options and weighs the benefits of providing various modal options to meet anticipated travel demand. Finally, the study takes into consideration the long-range implications of improvements for both individual communities and the larger environment.

The planning process is intended to fulfill the following responsibilities undertaken by the MPO:

- Provide opportunities for public involvement in development of the long-range plan.
- Forecast future population and employment in the region and assess project land uses.
- Identify major growth corridors.
- Analyze transportation needs and options, and develop alternative capital and operating strategies.
- Estimate the impact of the transportation system on air quality and environment.
- Develop fiscally constrained plans and programs that serve both to preserve the existing system and provide for new capital investments.

Adoption of the MTP is the first step towards implementation of a transportation project. Following formal adoption of the plan, a project can be programmed for design, right-of-way acquisition or construction in the TIP identifying the sources and estimated amount of funding to be used. The process that will be used to adopt the MTP is as follows.

- The proposed list of projects will be published for public review and comment.
- Public input on the proposed list will be solicited through both the MPO website and through public meeting(s).

- Any further analysis requested by the MPO Policy Committee based on public comment will be conducted.
- The MPO Policy Committee will adopt a final fiscally constrained list of projects and approve the MTP.
- The MTP will be forwarded to the Mississippi Department of Transportation, the Federal Highway Administration, and the Federal Transit Administration for their review and comment.

1.1.6.1 Transportation Improvement Program and MTP Amendments

Projects listed in the short-range Transportation Improvement Program (TIP) for the Jackson Area must be consistent with the fiscally constrained long-range transportation plan. The long-range plan includes a short-range component representing immediate needs to be addressed in developing the TIP. Since the Jackson Urbanized Area is an "attainment area" with respect to EPA air quality requirements, the long-range plan must be updated at least every five years. An attainment area is an area considered to contain air quality as good as or better than the National Ambient Air Quality standards as defined in the Clean Air Act (CAA). An area may be an attainment area for one pollutant and a nonattainment area for others.

Between five-year updates the need may arise for an amendment adding a project which significantly alters the scope or budget of the long-range plan. The Jackson Urbanized Area MPO can be contacted for further information about the process of these amendments.

1.1.7 The MTP Update Cycle

Federal law (23 CFR Part 450) mandates that the MPO shall review and update the transportation plan at least every four years in air quality nonattainment and maintenance areas and at least every five years in attainment areas. This requirement ensures that transportation plans remain valid and consistent with current and forecasted transportation and land use conditions. In addition, this requirement also ensures that the MPO will have a plan with at least a 20-year planning horizon. The MPO may revise the transportation plan at any time without a requirement to extend the horizon year. The transportation plan (and any revisions) shall be approved by the MPO and submitted for information purposes to the Governor. Copies of any updated or revised transportation plans must be provided to the FHWA and the FTA.

Since the Jackson Urbanized Area is an attainment area for air quality, the long-range plan must be updated every five years. Since the current plan has a long-range planning target of 2035, and it is necessary to maintain a 20-year planning horizon, the next update must be adopted before March 30, 2015. If any of the areas within the study area were to be reclassified as nonattainment areas, the update cycle would be increased to every four years with more stringent project selection and development processes.

Chapter 2

Public Outreach

1.2.1 Introduction

Metropolitan transportation planning is the process of examining region wide travel and transportation issues and needs, and developing a guiding vision with clearly defined goals and objectives to meet those needs. It includes a demographic analysis of the region, as well as an examination of travel patterns and trends. The planning process includes an analysis of alternatives to meet projected future demands, and to provide a safe, secure, and efficient transportation system that meets the mobility needs of both people and goods while not creating adverse impacts on the environment.

Now more than ever, it is critical to understand how transportation system improvements will affect the principles of land use planning and development and vice versa. At a minimum, the coordination of land use and transportation requires that those concerned with the well-being of a community (or region, state, or nation) assess and evaluate how land use decisions affect the transportation system and can increase viable options for people to access opportunities, goods, services, and other resources to improve the quality of their lives. In turn, the transportation sector should be aware of the effects the existing and future transportation systems may have on land use development demand, choices, and patterns.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which became federal law in August 2005, reconfirms the need to consider land use through the federally-supported transportation planning program. One of the eight planning factors (see 23 USC 134 (h) (1)) states the following:

> *"(E) 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".*

The MTP planning process is mandated by federal legislation and funded by the Mississippi Department of Transportation (MDOT), and therefore must conform to the rules and regulations established by these governing authorities. Nevertheless, the MTP is a local plan designed specifically to meet local community needs and reflect local community values. This MTP outreach process, therefore, focused on gathering the locally generated plans and information, as well as the knowledge and wisdom of the local community while following the state and federal guidelines that structured the planning process.

1.2.2 Initial Data Collection Process

To carry out the development of the MTP for the Jackson Urbanized Area, a Study Team was established, consisting of the Jackson Urbanized Area MPO Intermodal Technical Committee, the MPO staff, and a professional planning and engineering consulting team. The role of the Study Team was to

provide technical expertise, recommendations, and professional judgment throughout the MTP development process.

The initial task of the Study Team was to gather existing data, plans, reports, institutional knowledge about land use patterns, economic development goals, demographic trends, environmental issues, safety and security issues, and the transportation system of the study area. This task was carried out through a series of public involvement activities undertaken in connection with the 2035 Jackson Urbanized Area Transportation Study. These activities included an initial stakeholder/public meeting for transportation interests in the study area and the solicitation of input utilizing the stakeholder email listing maintained by the MPO. The principal purpose of these public involvement activities was to provide opportunities for individuals to participate in the development of the long-range regional transportation plan by (1) expressing opinions and/or providing relevant information regarding goals and objectives for the transportation planning process and (2) identifying specific needs to be addressed in the transportation plan and met through implementation of that plan.

1.2.3 Stakeholders/Public Meeting Summary

A stakeholder meeting was held in conjunction with a public meeting on April 7, 2010 between 5:00 PM and 7:00 PM to solicit the involvement of knowledgeable individuals with a stake in the development of the regional transportation plan. The two-hour meeting provided educational information about the planning process and the organization of the MPO. Also presented was an overview of the existing long-range plan, which included population, employment, dwelling unit, and school enrollment trends. Funding issues, including a historic overview of funds received from 1992 through 2004, were discussed.

The meeting was facilitated by Larry Smith, Planning Director, and Mike Monk, both of the Central Mississippi Planning and Development District. Key participants were L.P. Ledet and Vijay Kunada, project managers from Neel-Schaffer Inc., who are assisting with the development of the Long-Range Transportation Plan. Linda Carpenter from Wilbur Smith Associates and Donna Lum from Neel-Schaffer also attended the meeting to assist and gather comments from attendees.

Participants included the following:

Participant Name	Organization
Jeff Ely	Mississippi Department of Transportation
Jeff Pierce	Mississippi Department of Transportation
Eddie Perry	Madison County Citizens Services Agency (MCCSA)
Mike McCollum	City of Ridgeland
Kent Alday	City of Byram
Amy Douglas	City of Byram
Ken Seawright	City of Brandon
Ricky Bouldin	Madison CCSA
Robert Lee	City of Jackson

Participant Name	Organization
Theresa Marble	City of Byram
Stephanie Welch	Pickering
Corinne Fox	City of Jackson
Slade Exley	Neel-Schaffer
Whitney Grant	MSU/Jackson Community Design Center
BethAnne Clark	Mississippi Department of Transportation
Les Childress	Town of Flora
Sharon Weathersby	MCCSA
Mary Merck	Neel-Schaffer
Denson Robinson	City of Madison
Jimmy Clyde	City of Magee
Sandra Kilpatrick	USFWS
Ray Balentine	Wilbur Smith Associates
Tim Coulter	City of Brandon
Steve Reno	City of Byram
Shirley Rainey	MDHS
Danny Lee	City of Madison
David Williams	City of Ridgeland
Dr. Mary Sims-Johnson	MCCSA
Robert Walker	Neel-Schaffer

After a brief presentation by Larry Smith and a question and answer period, attendees were provided with a comment and questionnaire form designed to solicit input concerning existing conditions, funding expenditures, and needed transportation projects for the area. The form also solicited information that will assist planners in developing effective public involvement techniques and venues. A summary of the 15 comment and questionnaire forms filled out by the participants follows:

Question 1

Existing Conditions						
On a scale from 1 to 5 (with 1 being "very satisfied"), how would you rate the following aspects of the Jackson Urbanized Area Transportation System?	*Response (in percentages)*					
	1 Very Satisfied	*2*	*3 Satisfied*	*4*	*5 Very Unsatisfied*	*No Answer*
Traffic flow		6.6	79.9	13.2		
Highway and street condition		6.6	46.6	26.6	19.9	
Sidewalk availability and condition		13.2	26.6	33.3	19.9	6.6
Public bus service	6.6	19.9	26.6	26.6	13.2	6.6
Bicycle paths availability and condition		26.4	13.2	19.9	39.9	
Amount of neighborhood traffic	6.6	26.4	26.4	33.3		6.6
Road safety		6.6	46.6	46.6		
Air quality		33.3	13.2	46.6	6.6	

Question 2

Funding expenditures	
How would you divide $100 among the following transportation needs to reflect the relative importance of each improvement? (If you like, you may allocate all the money to one item or spread it around.)	*Response (in percentages)*
Pavement markings, intersection lighting, and readable street signs	7.77
Intersection safety (turn lanes, sight distances, traffic controls, etc.)	8.78
Roadway conditions (fix pot holes, resurface, signage, other)	28.70
Street aesthetics (trees, lighting, planted medians, shoulders, other)	6.82
Traffic flow (limit driveways, median breaks, coordinate signals)	9.25
Public transportation (buses, bus stops, routing, other)	5.74
Sidewalks (curb ramps, crosswalks at intersections, etc.)	6.89
Bike lanes and multi-use paths	7.29
Creating new connector parkways, such as the proposed Airport Parkway	9.18
Widening and building interstate highways	7.56
List other improvements here: more ADA accessible transportation for ill and disabled	1.69
Connect rural areas with metro access (rail system perhaps?)	.34
TOTAL*	**97.97**

*Three of the 15 participants did not "spend" all of their funds; one individual "spent" more than the allotted $100.

This chart indicates attendees felt 28.7 percent of funding should be designated for improving "roadway conditions."

Question 3

List the most important projects in the Jackson urbanized area.
Improve sidewalks in Hinds County
Improve road beds in Byram; Improve traffic flow around school zones in Byram; Improve bridges in Byram area (weight limits restrict use by Fire Department eq.)
Create and improve sidewalks and pedestrian crossing in the Brandon area; create roadways to lessen congestion and safety hazards in Brandon and Rankin County; Ensure that major thoroughfares, attractions, and downtown area is paved and maintained; Funding and construction of the East Brandon Bypass. It is currently 6th on the MDOT priority list. Huge commercial impact; Create biking and pedestrian paths linking cities throughout the metro much like the S MS path (Longleaf Trail?); Consider allocating a certain amount each year to counties and municipalities through MDOT
Three-lane I-55 South to Crystal Springs; complete I-220 all the way around the Jackson Metro area; put in another interchange to exit to the industrial park south of Byram not the one at Wynndale exit
Helping change truck routes in Flora; Widen Highway 22 from Edwards to Canton; New red lights on Highway 49 at the intersections of 49 and Highway 22 and 49 and Cox Ferry
Four-lane Highway 463 from I-55 to Reunion Subdivision; Extend Reunion Blvd. to Galleria (?) Parkway; including on/off ramp @ I-55; four-lane Hoy Road from Highway 51 to North Old Canton Road; four-lane Madison Ave. from Highland Colony Parkway to Highway 51
Connector roads from Madison/Ridgeland Interchange; Lake Harbour extension from Highway 51 to Highland Colony Parkway; Traffic improvements @ County Line Road and I-55
Highway 471 – Brandon – shoulders for multi-use path; Highway 18 – Brandon – shoulders for multi-use path; Highway 463 – Jackson/Pearl/Brandon – signage on existing shoulders for multi-use transportation, expand shoulders where needed; Natchez Trace – multi-use trail completion Clinton to Reservoir; I-20 east expansion to three-lanes; Increase multi-use separate path connections throughout metro area where feasible
1. Completion of 463 from Crawford St. to Highway 51 and Hoy Road; 2. I-55 and Madison Av. Interchange and connector roads, also in Ridgeland; 3. Reunion Interchange and connector roads to Parkway East and Bozeman Road; 4. Widen 463 from I-55 to Reunion Parkway to 4-lanes; 5. 4-lane Bozeman Rd from 463 to Gluckstadt Road
1. To provide transportation resources to connect citizens to urban areas of the state; 2. To improve roadways (pot holes, etc.); 3. To improve traffic flow and traffic jams
The most important transportation project in the Jackson area for me is the Road Conditions. Uneven pavement, potholes, the road are good at all in the metro area.
Implement a comprehensive transportation plan in conjunction with a rezoning effort to address population growth and land use in a manner that would actually require less roads and less dependence on the car
Improvement/expansion of I-55 South; Improvement of Exit 25 between Byram and Wynndale;

New interchange; Provide sidewalks and medians with turn lanes for Siwell Road in downtown Byram; Widening of Terry Road; Control lights for Byram additional traffic
Widen I-55 south from I-20; 6-lane I-20 to Vicksburg; Widen Gary Road, Daubs Road, Terry Road in Hinds County

Question 4

Please let us know how we can improve the public involvement process. Our goal is to provide information and to hear from you.

Question 4 a

Was the purpose of tonight's meeting clear to you? (Circle a score)										
	Very Clear					Acceptable				Not Clear
Score	***10***	***9***	***8***	***7***	***6***	***5***	***4***	***3***	***2***	***1***
Response	1	3	5	3	1	1				

*1 no answer

Question 4 b

How would you rate tonight's meeting overall? (Circle a score)										
	Very Good					Acceptable				Poor
Score	***10***	***9***	***8***	***7***	***6***	***5***	***4***	***3***	***2***	***1***
Response	2	1	4	3	2					

*3 no answer

Question 4 c

How can we improve this effort to engage the public?
Give more media coverage
Ask Aldermen (Councilmen) of municipalities and counties to submit list of more vocal constituents they represent. Mail to them asking for a response. These are the people they hear from 75 % of the time and they will give you an honest and open answer or suggestions.
Invite private land owners and developers that might have interest in traffic routes
Sustain the current public meetings
Continue to advertise for public input. Thanks
I cannot any at the moment; this was my 1st but it was informative
I was expecting the presentation of the proposed transportation plan

Chapter 3

Demographic Data Trends and Projections

1.3.1 Introduction

Travel demand is greatly influenced by the pattern of development or land use in the study area. Changes in land use will create new travel demand or modify existing patterns. A definite relationship exists between trip making, land use, and demographic data such as population, number of housing units, employment, and school attendance. This data was compiled from several sources: population and housing from the 2008 Claritas dataset, employment from a database of employers in the Jackson study area purchased from InfoUSA, and school attendance from the County School Boards, Department of Education, and individual private schools.

The accuracy necessary for generating trips from planning data requires that the data be aggregated by small geographic areas called Traffic Analysis Zones (TAZs). These TAZs are generally homogeneous areas and are delineated based on factors such as population, land use, census tracts, physical landmarks, and governmental jurisdictions. The Jackson MTP 2035 study area was divided into 664 TAZ's with 310 in Hinds County, 150 in Madison County, and 204 in Rankin County. A map of the TAZs is shown in Figure 3-1. The study area includes portions of Hinds, Madison, and Rankin Counties (as well as the cities of Jackson, Clinton, Byram, Terry, Raymond, Bolton, Canton, Madison, Ridgeland, Flora, Flowood, Pearl, Brandon, Richland, Florence, and Pelahatchie.)

The required demographic data input for the trip generation programs can be subdivided into five major categories: occupied dwelling units, population, retail employment, non-retail employment, and school attendance. The remainder of this chapter summarizes the existing and future projections of these variables.

Throughout this report, there may be slight differences in the totals for this data. These apparent discrepancies are due to mathematical rounding, which takes place as a result of calculations by the computer modeling software.

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2035

Figure 3-1

2008 Traffic Analysis Zones

MADISON

HINDS

RANKIN

Legend

Map layers
- Study Area
- County
- Model TAZ
- Water Area
- River

0 3 6 9
Miles

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER
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In Association With:

WilburSmith Associates

1.3.2 Existing (2008) Planning Data

1.3.2.1 Population and Dwelling Units

The largest single type of developed land use in the study area is residential land. The number of dwelling units plays a major role in trip generation since many trips have an origin and/or destination in residential areas. In 2000 (Census 2000), there were 167,242 total dwelling units in the study area; 96,462 in Hinds County, 27,041 in Madison County, and 43,739 in Rankin County. Of that total, 153,934 (92%) were occupied; 87,463 in Hinds County, 25,605 in Madison County, and 40,866 in Rankin County.

The Central Mississippi Planning and Development (CMPDD), the Metropolitan Planning Organization for the Jackson, MS area, developed the 2008 total dwelling unit estimates by utilizing the 2008 Claritas dataset. Occupied dwelling unit (household) estimates were developed by multiplying the 2008 total dwelling unit estimates with the Census 2000 dwelling unit occupancy rate. Similarly, population estimates for year 2008 were also compiled by multiplying the 2008 estimated occupied dwelling units with the Census 2000 average household size.

By using this methodology, the 2008 total dwelling units of the study area were estimated at 190,610, with 176,432 being occupied. The corresponding numbers for each county are: 97,829/89,151 for Hinds County, 34,656/32,849 for Madison County, and 58,125/54,432 in Rankin County. Figure 3-3 shows the 2008 estimated dwelling units by TAZ.

Similarly, the 2008 estimated household population of the study area was 472,539 with 239,772 in Hinds County, 88,176 in Madison County, and 144,591 in Rankin County. The 2008 study area population by TAZ is shown in Figure 3-2.

For trip estimation purpose, estimated occupied dwelling units were further classified by auto ownership and household size using the 2000 5% Public Use Microdata Samples (PUMS) dataset and 2000 Census data. Table 3-1 lists the study area population and dwelling units along with different cross-classifications of households by persons and auto availability.

Table 3-1

2008 Study Area Population and Dwelling Units

Variable	Description	Total
POP	Total Population in Households	472,539
DU	Total Dwelling Units	190,610
OCCDU	Occupied Dwelling Units	176,432
HHS1	Households with 1-person	42,959
HHS2	Households with 2-persons	54,665
HHS3	Households with 3-persons	32,631
HHS4	Households with 4-persons	27,477
HHS5P	Households with 5-or-more persons	18,701
HH_VEH0	Households with 0-cars	12,146
HH_VEH1	Households with 1-car	58,752
HH_VEH2	Households with 2-cars	71,284
HH_VEH3P	Households with 3-or-more cars	34,250
HH1VEH0	Households with 1-person and 0 cars	5,535
HH1VEH1	Households with 1-person and 1 car	29,156
HH1VEH2	Households with 1-person and 2 cars	6,952
HH1VEH3	Households with 1-person and 3-or-more cars	1,308
HH2VEH0	Households with 2-persons and 0 cars	2,280
HH2VEH1	Households with 2-persons and 1 car	13,593
HH2VEH2	Households with 2-persons and 2 cars	30,168
HH2VEH3	Households with 2-persons and 3-or-more cars	8,631
HH3VEH0	Households with 3-persons and 0 cars	2,106
HH3VEH1	Households with 3-persons and 1 car	7,184
HH3VEH2	Households with 3-persons and 2 cars	13,913
HH3VEH3	Households with 3-persons and 3-or-more cars	9,429
HH4VEH0	Households with 4-persons and 0 cars	1,115
HH4VEH1	Households with 4-persons and 1 car	4,673
HH4VEH2	Households with 4-persons and 2 cars	12,706
HH4VEH3	Households with 4-persons and 3-or-more cars	8,982
HH5VEH0	Households with 5-or-more persons and 0 cars	1,111
HH5VEH1	Households with 5-or-more persons and 1 car	4,148
HH5VEH2	Households with 5-or-more persons and 2 cars	7,544
HH5VEH3	Households with 5-or-more persons and 3-or-more cars	5,895

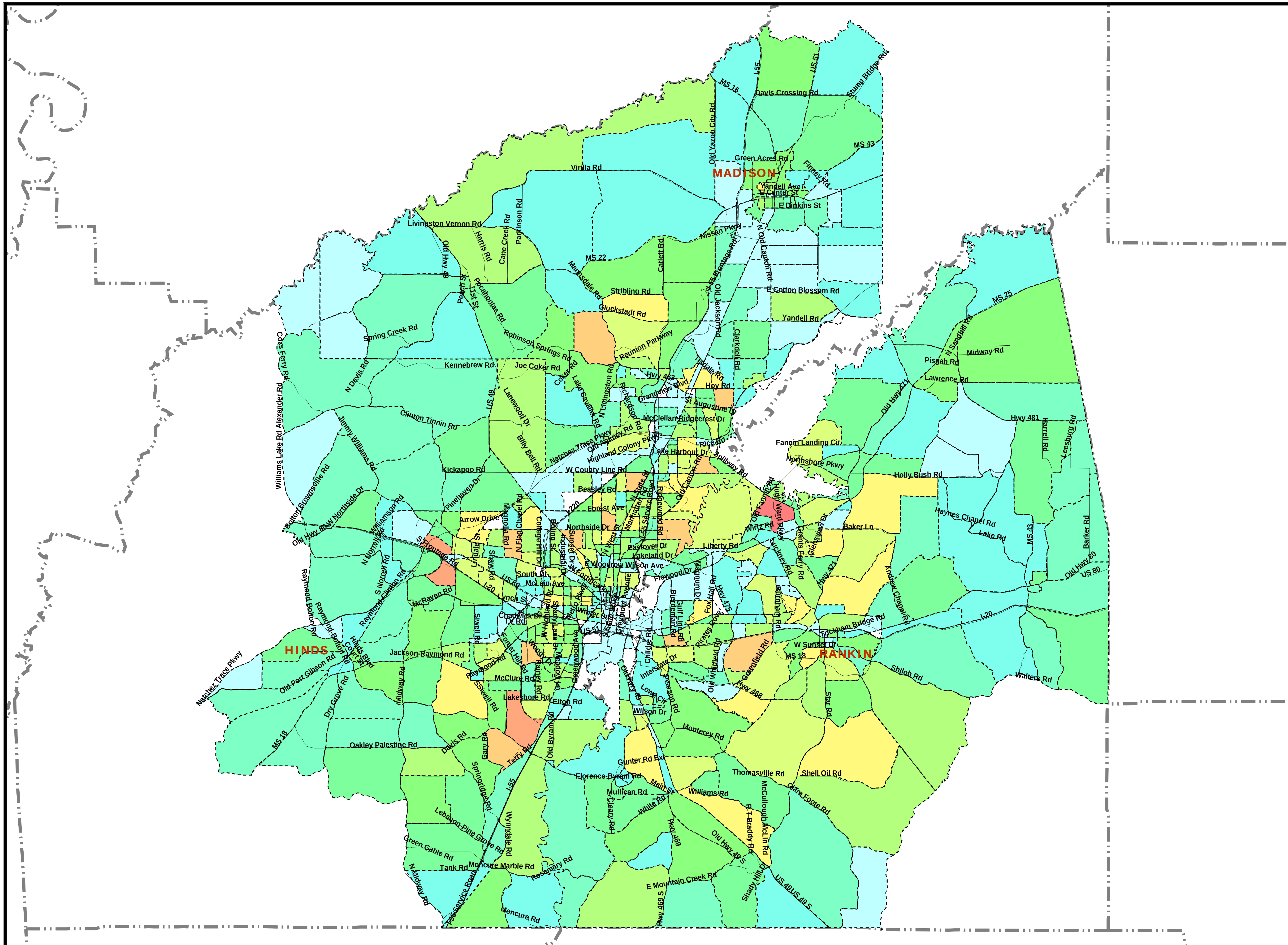

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Figure 3-2

2008 Population

Legend

Map layers

- County
- Model TAZ
- Roadway Network

Persons

- 0
- 1 to 150
- 151 to 300
- 301 to 500
- 501 to 750
- 751 to 1000
- 1001 to 1500
- 1501 to 2000
- 2001 to 3000
- 3001 to 4000
- 4001 to 6000
- >6000

0 3 6 9
Miles

Source: NSI, Census Bureau CMPDD

N S E W

Prepared For:

MDOT MISSISSIPPI DEPARTMENT OF TRANSPORTATION   CMPDD

Prepared By:

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2035

Figure 3-3

2008 Dwelling Units

Legend

Map layers
- County
- Model TAZ
- Roadway Network

Units
- 0
- 1 to 50
- 51 to 100
- 101 to 200
- 201 to 300
- 301 to 400
- 401 to 500
- 501 to 750
- 751 to 1000
- 1001 to 1500
- 1501 to 2000
- >2000

0 3 6 9

Miles

Source: NSI, Census Bureau
CMPDD

N W E S

Prepared For:

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CMPDD

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1.3.2.2 Employment

The location of employment centers has a major impact on travel in the area, particularly home-based work trips. A database of employers from InfoUSA was used to develop the various employment types in the study area based on the Standard Industrial Classification (SIC) codes assigned to the business. Total employment in the study area in 2008 was 232,545 with 46,360 being in retail. The distribution (total employment/retail employment) by county is 128,322/21,109 in Hinds County, 47,135/11,294 in Madison County, and 57,088/13,957 in Rankin County. For modeling purposes, employment variables were differentiated into the following categories.

- Agriculture, Mining, and Construction (SIC 1-19)
- Manufacturing, Transportation/Communications/Utilities, and Wholesale Trade (SIC 20-51)
- Retail Trade (SIC 52-59)
- Government, Office, and Services (SIC 60-97)
- Other Employment (SIC 99)

Table 3-2

2008 Study Area Employment Classifications

Variable	Description	Total
TOT_EMP	Total Employment	232,545
RET_EMP	CBD Retail Employment	270
RET_EMP2	Non-CBD Retail Employment	46,090
AMC_EMP	Agriculture, Mining and Construction Employment	11,978
MTCUW_EMP	Manufacturing/Transportation/Communications/Utilities/Wholesale	42,119
OS_EMP	Government, Office and Services Employment	130,928
OTH_EMP	Other Employment	1,160

The 2008 study area total employment and retail employment by TAZ are shown in Figure 3-4 and Figure 3-5 respectively.

1.3.2.3 School Attendance

School attendance includes public and private elementary, middle, and high schools; colleges; universities; and vocational and business schools. Total school attendance in the study area in 2008 was 121,461 students with 75,695 in Hinds County 19,262 in Madison County, and 26,504 in Rankin County. For modeling purposes, the school attendance is measured by the number of students attending a school in a traffic zone and *not* by the number of students residing in a traffic zone. The 2008 study area school attendance by TAZ is shown in Figure 3-6.

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2035

Figure 3-4

2008 Total Employment

Legend

Map layers
- County
- Model TAZ
- Roadway Network

Employees
- 0
- 1 to 50
- 51 to 100
- 101 to 200
- 201 to 300
- 301 to 500
- 501 to 750
- 751 to 1000
- 1001 to 2000
- 2001 to 4000
- 4001 to 7000
- >7000

0 3 6 9

Miles

Source: InfoUSA

N W E S

Prepared For:

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2035

Figure 3-5

2008 Retail Employment

Legend

Map layers
- County
- Model TAZ
- Roadway Network

Employees
- 0
- 1 to 25
- 26 to 50
- 51 to 100
- 101 to 200
- 201 to 300
- 301 to 400
- 401 to 500
- 501 to 700
- 701 to 1000
- 1001 to 1500
- >1500

0 3 6 9

Miles

Source: InfoUSA

Prepared For:

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2035

Figure 3-6

2008 School Attendance

Legend

Map layers
- County
- Model TAZ
- Roadway Network

School Enrollment
- 0
- 1 to 50
- 51 to 100
- 101 to 250
- 251 to 500
- 501 to 750
- 751 to 1000
- 1001 to 1500
- 1501 to 2000
- >2000

0 3 6 9
Miles

Source: CMPDD

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1.3.3 Future Planning Data

To adequately forecast future transportation needs, future projections of demographic variables are needed. CMPDD developed the methodology for forecasting population, number of dwelling units, employment, and school enrollment based upon adopted Land Use Plans from counties and municipalities in the study area. The forecast methodology utilizes measurements of acreage from adopted Land Use Plans for various land uses, including residential, commercial, industrial, and public/quasi-public uses, and applies residential population density factors from the local plans and employment factors from the Institute of Transportation Engineers Trip Generation Manual to develop the forecasts. The MPO office can be contacted for further information. The non-retail employment was further classified into various types as shown in Table 3-4 based on the assumption of the same percentages of non-retail employment from the base year (2008).

Table 3-3 and Table 3-4 present the forecast demographic data for the study area. Figures 3-7 thru 3-16 show the population, dwelling units, employment, and school enrollment data by TAZ for year 2035 and respective change maps from 2008 to 2035.

Table 3-3

Study Area Demographic Forecast Data by Year

Variable	Description	2008	2015	2025	2035
DU	Total Dwelling Units	190,610	206,148	221,687	237,225
OCCDU	Occupied Dwelling Units	176,432	191,104	205,776	220,448
POP	Total Population in Households	472,539	513,496	554,451	595,408
SCHATT	School Enrollment	121,461	131,758	138,741	145,723
HHS1	Households with 1-person	42,959	45,742	48,524	51,307
HHS2	Households with 2-persons	54,665	59,251	63,837	68,423
HHS3	Households with 3-persons	32,631	35,500	38,370	41,240
HHS4	Households with 4-persons	27,477	30,245	33,014	35,782
HHS5P	Households with 5-or-more persons	18,701	20,366	22,031	23,696
HH_VEH0	Households with 0-cars	12,146	12,937	13,728	14,520
HH_VEH1	Households with 1-car	58,752	62,549	66,345	70,142
HH_VEH2	Households with 2-cars	71,284	77,729	84,173	90,618
HH_VEH3	Households with 3-or-more cars	34,250	37,889	41,529	45,168
HH1VEH0	Households with 1-person and 0 cars	5,535	5,932	6,329	6,726
HH1VEH1	Households with 1-person and 1 car	29,156	30,944	32,733	34,521
HH1VEH2	Households with 1-person and 2 cars	6,952	7,425	7,899	8,372
HH1VEH3	Households with 1-person and 3-or-more	1,308	1,430	1,553	1,676
HH2VEH0	Households with 2-persons and 0 cars	2,280	2,416	2,553	2,690
HH2VEH1	Households with 2-persons and 1 car	13,593	14,496	15,399	16,301
HH2VEH2	Households with 2-persons and 2 cars	30,168	32,856	35,544	38,233
HH2VEH3	Households with 2-persons and 3-or-more	8,631	9,495	10,359	11,224
HH3VEH0	Households with 3-persons and 0 cars	2,106	2,234	2,363	2,491
HH3VEH1	Households with 3-persons and 1 car	7,184	7,673	8,162	8,651
HH3VEH2	Households with 3-persons and 2 cars	13,913	15,189	16,466	17,742
HH3VEH3	Households with 3-persons and 3-or-more	9,429	10,401	11,373	12,345
HH4VEH0	Households with 4-persons and 0 cars	1,115	1,189	1,262	1,336
HH4VEH1	Households with 4-persons and 1 car	4,673	5,024	5,376	5,727
HH4VEH2	Households with 4-persons and 2 cars	12,706	14,004	15,302	16,600
HH4VEH3	Households with 4-persons and 3-or-more	8,982	10,030	11,078	12,126
HH5VEH0	Households with 5-or-more persons and 0	1,111	1,171	1,231	1,291
HH5VEH1	Households with 5-or-more persons and 1	4,148	4,430	4,711	4,993
HH5VEH2	Households with 5-or-more persons and 2	7,544	8,255	8,966	9,676
HH5VEH3	Households with 5-or-more persons and 3-or-more cars	5,895	6,505	7,115	7,724

Table 3-4

Study Area Employment Forecast Data by Year

Variable	Description	2008	2015	2025	2035
TOT_EMP	Total Employment	232,545	272,508	312,462	352,419
RET_EMP	CBD Retail Employment	270	306	340	376
RET_EMP2	Non-CBD Retail Employment	46,090	71,168	96,256	121,342
AMC_EMP	Agriculture, Mining and Construction Employment	11,978	12,949	13,917	14,884
MTCUW_EMP	Manufacturing, Transportation/Communications /Utilities and Wholesale Trade Employment	42,119	46,656	51,193	55,730
OS_EMP	Government, Office and Services Employment	130,928	140,122	149,305	158,489
OTH_EMP	Other Employment	1,160	1,306	1,451	1,597

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Figure 3-7

2035 Population

Legend

Map layers
- County
- Model TAZ
- Roadway Network

Persons
- 0
- 1 to 150
- 151 to 300
- 301 to 500
- 501 to 750
- 751 to 1000
- 1001 to 1500
- 1501 to 2000
- 2001 to 3000
- 3000 to 4000
- 4001 to 6000
- >6000

0 3 6 9

Miles

Source: CMPDD

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

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Figure 3-8

2008-2035

Population Change

Legend

Map layers

- County
- Model TAZ
- Roadway Network

Population Change

- -150 or more
- -75 to -150
- -25 to -75
- -1 to -25
- 0
- 1 to 75
- 76 to 150
- 151 to 250
- 251 to 350
- 351 to 500
- 501 to 750
- >750

0 3 6 9

Miles

Source: CMPDD

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Figure 3-9

2035 Dwelling Units

Legend

Map layers
- County
- Model TAZ
- Roadway Network

Units
- 0
- 1 to 50
- 51 to 100
- 101 to 200
- 201 to 300
- 301 to 400
- 401 to 500
- 501 to 751
- 751 to 1000
- 1001 to 1500
- 1501 to 2000
- >2000

0 3 6 9

Miles

Source: CMPDD

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Figure 3-10

2008-2035

Dwelling Unit Change

Legend

Map layers

- County
- Model TAZ
- Roadway Network

Dwelling Unit Change

- -51 or more
- -26 to -50
- -11 to -26
- -1 to -10
- 0
- 1 to 25
- 26 to 50
- 51 to 75
- 76 to 100
- 101 to 150
- 151 to 300
- >300

0 3 6 9

Miles

Source: CMPDD

N W E S

Prepared For:

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2035

Figure 3-11

2035 Total Employment

Legend

Map layers
- County
- Model TAZ
- Roadway Network

Employees
- 0
- 1 to 50
- 51 to 100
- 101 to 200
- 201 to 300
- 301 to 500
- 501 to 750
- 751 to 1000
- 1001 to 2000
- 2001 to 4000
- 4001 to 7000
- >7000

0 3 6 9

Miles

Source: CMPDD

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

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TRANSPORTATION PLAN
2035

Figure 3-12
2008-2035
Total Employment Change

Legend

Map layers
- County
- Model TAZ
- Roadway Network

Employee Change
- -250 or more
- -75 to -250
- -25 to -75
- -1 to -25
- 0
- 1 to 25
- 26 to 100
- 101 to 200
- 201 to 300
- 301 to 500
- 501 to 750
- >750

0 3 6 9
Miles

Source: CMPDD

N W E S

Prepared For:

MDOT Mississippi Department of Transportation
CMPDD

Prepared By:

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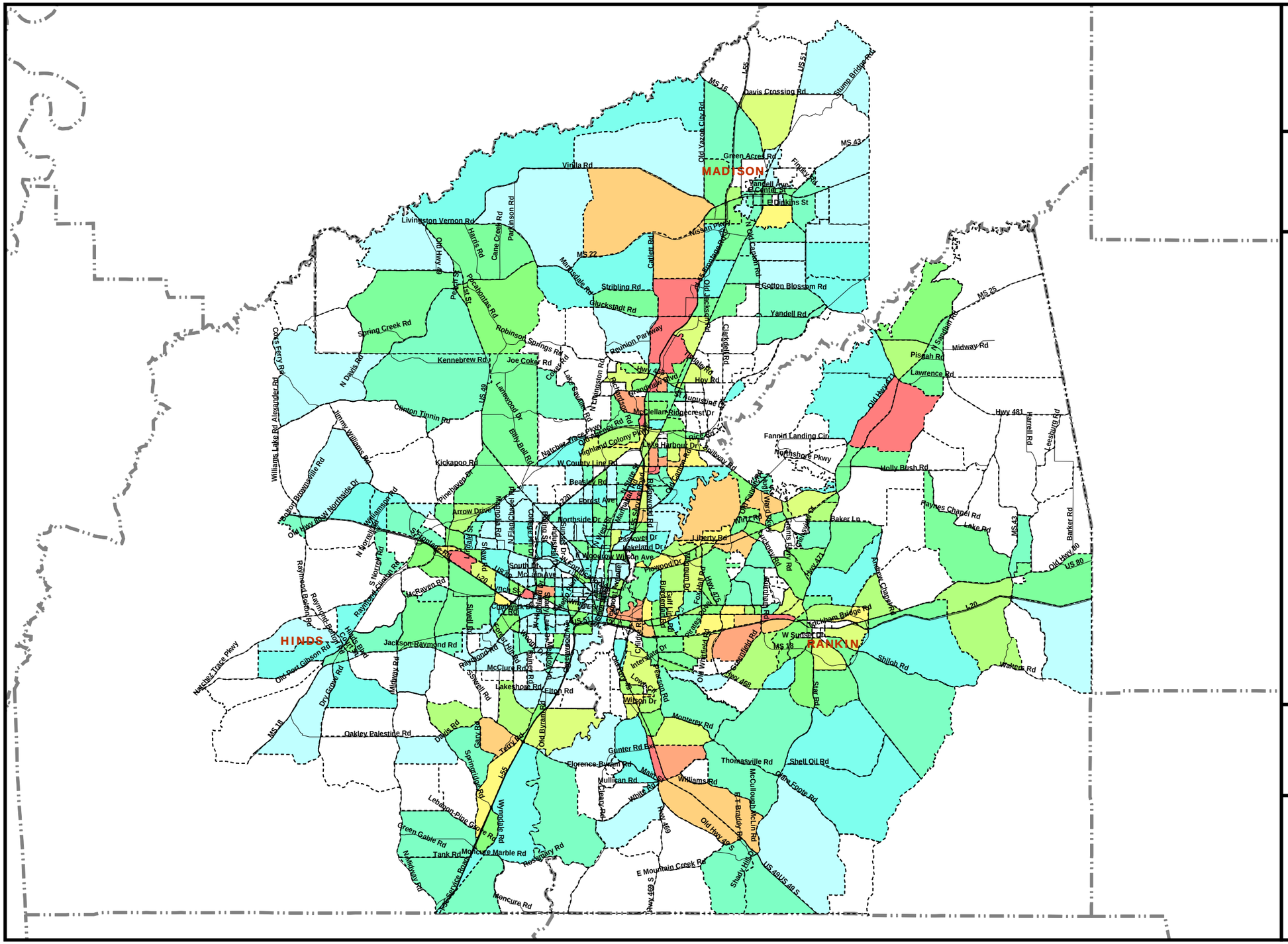
2035

Figure 3-13

2035 Retail Employment



Legend

Map layers
- County
- Model TAZ
- Roadway Network

Employees
- 0
- 1 to 25
- 26 to 51
- 51 to 100
- 101 to 200
- 201 to 300
- 301 to 400
- 401 to 500
- 501 to 700
- 701 to 1000
- 1001 to 1500
- >1500

0 3 6 9

Miles

Source: CMPDD

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

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TRANSPORTATION PLAN
2035

Figure 3-14
2008-2035
Retail Employment Change

Legend

Map layers
- County
- Model TAZ
- Roadway Network

Employee Change
- -51 or more
- -26 to -50
- -11 to -25
- -1 to -10
- 0
- 1 to 25
- 26 to 50
- 51 to 75
- 76 to 100
- 101 to 200
- 201 to 400
- >401

0 3 6 9
Miles

Source: CMPDD

Prepared For:
MDOT Mississippi Department of Transportation
CMPDD

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Figure 3-15

2035 School Attendance

Legend

Map layers
- County
- Model TAZ
- Roadway Network

School Enrollment
- 0
- 1 to 50
- 51 to 100
- 101 to 250
- 251 to 500
- 501 to 750
- 751 to 1000
- 1001 to 1500
- 1501 to 2000
- >2000

0 3 6 9
Miles

Source: CMPDD

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

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Figure 3-16
2008-2035
School Attendance Change

Legend

Map layers
- County
- Model TAZ
- Roadway Network

Enrollment Change
- -201 or more
- -101 to -200
- -51 to -100
- -1 to -50
- 0
- 1 to 50
- 51 to 100
- 101 to 200
- 201 to 300
- 301 to 500
- 501 to 750
- >750

0 3 6 9
Miles

Source: CMPDD

Prepared For:
MDOT Mississippi Department of Transportation
CMPDD

Prepared By:
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Chapter 4

Financial Analysis and Fiscal Constraint

1.4.1 Introduction

Federal regulations require that the adopted MTP must be "fiscally constrained," meaning that the cost of projects included in the MTP cannot exceed the anticipated funding for the region. This chapter presents a financial analysis of funding resources that the Jackson Urbanized Area MPO can reasonably expect to receive to fund the projects in the plan and to support operations and maintenance of the transportation system.

1.4.2 Streets and Highway Revenue Analysis

In the Jackson Urbanized Area, the amount of State and Federal funding for transportation projects is determined by MDOT, in consultation with the MPO, on an annual basis. MDOT has a statewide pool of transportation funds used for urban transportation projects in the state. The actual amount of State and Federal funds spent in any single urban area can vary widely from year to year. For this reason, revenue forecasts are based on averages. First, the historical average amount of funding is calculated, and then a future average amount of funding is projected based on these historical trends.

1.4.2.1 Historical Funding

In order to determine the financial feasibility of implementing a program of projects in the MTP, an analysis of historical funding was conducted. A database of project lettings in the Jackson Study Area from 1991 through 2010 was obtained from MDOT. This database contains all sources of State and Federal funding. The projects were grouped by the year in which they were let. Then, the costs for the projects were factored up to 2010 dollars using the Consumer Price Index (CPI) for the year of letting. This database also contains both recurring and non-recurring funds. In order to estimate the reasonably expected future revenues, the non-recurring funds were excluded from each year's total historical revenue.

Table 4-1

Historical State and Federal Funding (1991 – 2010)

Year	Real Dollars	CPI Factor	2010 Dollars
1991	$11,783,659	1.597	$18,818,504
1992	$67,659,119	1.555	$105,209,930
1993	$3,403,184	1.509	$5,135,405
1994	$10,594,194	1.469	$15,562,871
1995	$9,116,522	1.424	$12,981,927
1996	$22,211,886	1.382	$30,696,826
1997	$65,146,326	1.349	$87,882,393
1998	$78,254,269	1.332	$104,234,686
1999	$62,003,522	1.311	$81,286,618
2000	$49,883,596	1.270	$63,352,167
2001	$112,047,768	1.234	$138,266,946
2002	$133,182,899	1.224	$163,015,868
2003	$103,550,571	1.194	$123,639,381
2004	$72,716,996	1.168	$84,933,451
2005	$35,907,934	1.133	$40,683,690
2006	$53,220,881	1.088	$57,904,318
2007	$102,122,193	1.063	$108,555,892
2008	$70,253,838	1.015	$71,307,645
2009	$33,186,558	1.021	$33,883,475
2010	$156,213,405	1.000	$156,213,405

Source: MDOT; NSI, 2010

1.4.2.2 Funding Sources

The implementation of a financially constrained plan for the Jackson Urbanized Area will necessarily involve several sources of funding. These sources include various programs at the local, State, and Federal levels. Since many of the improvement projects are located on the State and Federal Highway System, substantial financial assistance could be obtained through funding programs of the MDOT and the Federal Highway Administration (FHWA).

The following section describes the State and Federal funding sources, as well as several local programs that can be used to fund local projects.

Potential Funding Sources – Federal

SAFETEA-LU

The *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* authorizes the Federal surface transportation programs for highways, highway safety, and transit for the five-year period 2005 – 2009. SAFETEA-LU builds on the firm foundation of the two previous 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).

SAFETEA-LU provided total funding of $244.1 billion nationally for the above five-year period and is currently extended under continuing resolutions. This legislation includes several categories of funding, under which many of the projects in the financially constrained plan will be eligible for Federal funding assistance. These categories are:

Interstate Maintenance (IM)

This category provides financing to restore, resurface, and rehabilitate the Interstate system. Reconstruction is also eligible if it does not add capacity.

National Highway System (NHS)

This category covers all Interstate routes and a large percentage of urban principal arterials. The Federal/State funding ratio for arterial routes is 80/20. The Interstate system, although a part of NHS, will retain its separate identity and will receive separate funding at a 90/10 ratio. The U.S. Congress passed the National Highway System bill in 1996.

Priority or Demonstration Projects

This category provides special funds for projects selected by the U.S. Congress. These funds are prescriptive in availability and timing. The conflict in timing between needs and availability of funds for Priority Projects necessitates the use of an advanced construction technique for payment.

Surface Transportation Program (STP)

The STP is a block grant funding program with subcategories for States and Urban Areas.

These funds can be used for any road (including NHS) that is not functionally classified as a local road or rural minor collector. The State portion can be used on roads within an urbanized area and the urban portion can only be used on roads within an urbanized area. The funding ratio is 80/20.

Subcategories of the STP funds are:

- STP greater than 200,000 population (STP>200K)
- STP less than 200,000 population (STP<200K)
- STP less than 5,000 population (STP <5K)
- STP Flexible (STP-FLEX)
- STP Hazard Elimination (STP-HAZ)
- STP Enhancement (STP-ENH)

Bridge Replacement and Rehabilitation Program (FBR)

These funds can be used to replace or repair any bridge on a public road. The Federal/State funding ratio is 80/20.

Congestion Mitigation and Air Quality (CMAQ)

Urban areas which do not meet ambient air quality standards are designated as nonattainment areas by the U.S. Environmental Protection Agency (USEPA). These funds are apportioned to those urban areas for use on projects that contribute to the reduction of mobile source air pollution through reducing vehicle miles traveled, fuel consumption, or other identifiable factors. The matching ratio for this program is 80/20 except for traffic signal systems, park & ride lots, and ridesharing projects which are 100% federally funded. The eligibility of specific projects under these funding categories is based on the functional classification system mandated by SAFETEA-LU.

Potential Funding Sources – Local

Any costs not covered by Federal and State programs will be the responsibility of the local governmental jurisdictions. Local funding can come from a variety of sources including property taxes, sales taxes, user fees, special assessments, and impact fees.

Each of these potential sources is important and warrants further discussion.

Property Taxes

Property taxation has historically been the primary source of revenue for local governments in the United States. More than 80 percent of all tax revenues at this level come from this tax. Property is not subject to federal government taxation, and state governments have in recent years shown an increasing willingness to leave this important source of funding to local governments.

General Sales Taxes

The general sales tax is also an important revenue source for local governments. The most commonly known form of the general sales tax is the retail sales tax. The retail sales tax is imposed on a wide range of commodities, and the rate is usually a uniform percentage of the selling price.

User Fees

User fees are fees which are collected from those who utilize a service or facility. The fees are collected for the purpose of paying for the cost of a facility, financing the cost of operations and/or generating revenue for other uses. Water and sewer services are the most commonly known public improvements for which a user fee is charged. This method of generating revenue to finance public improvements has also been employed to finance the cost of public parks, transit systems, and solid waste facilities. The theory behind the user fee is that those who directly benefit from the public improvement pay for the cost of the improvement.

Special Assessments

Special assessment is a method of generating funds for public improvements whereby the cost of a public improvement is collected from those who directly benefit from the improvement. In many instances, new streets are financed by special assessment. The owners of property located adjacent to the new streets are assessed a portion of the cost of the new streets, based on the amount of frontage they own along the new streets.

Special assessments have also been used to generate funds for general improvements within special districts, such as central business districts. In some cases, these assessments are paid over a period of time rather than as a lump sum payment.

Impact Fees

Development impact fees have been generally well received in other states and municipalities in the United States. New developments create increased traffic volumes on the streets around them. Development impact fees are a way of attempting to place a portion of the burden of funding improvements on developers who are creating or adding to the need for improvements.

Bond Issues

Property tax and sales tax funds can be used on a pay-as-you go basis, or the revenues from them can be used to pay off general obligation or revenue bonds. These bonds are issued by local governments upon approval of the voting public.

System Maintenance and Operation

The maintenance and operation of the transportation system was considered in the development of the plan and staged program. Typically, maintenance costs are applicable to the system as a whole. Where possible, maintenance projects are identified individually. However, it is not possible to develop project specific maintenance schedules beyond the near term. The maintenance costs identified in this plan are the responsibility of various governmental jurisdictions.

The balancing act of meeting identified transportation improvement needs and maintaining the present transportation system will continue to place local decision makers and revenue forecasts somewhat at odds. Recommendations in this plan are conservative because they factor in the impact of maintenance costs in the determination of available funding. Some of the existing programs for highway and bridge infrastructure are listed below.

Interstate Maintenance Program (IM)

This Federal funding category is intended to “rehabilitate, restore, and resurface” the Federal Interstate system. $25.2 billion is authorized nationwide for the 5 years of the SAFETEA-LU for this category.

Federal Bridge Replacement Program (FBR)

This Federal funding category is intended to provide funding to any bridge on a public road. Funding under this program amounted to $21.5 billion for fiscal years 2005 through 2009.

State of Mississippi Overlay, Maintenance, and Operations Program

A variety of both Federal and State funds are used to implement the statewide overlay, maintenance, and operations program including Surface Transportation Funds, National Highway System Funds, General Mississippi Trust Fund monies, and State of Mississippi general funds.

The Plan projects for the 25-year period were allocated to appropriate funding programs to develop an estimated need by fund source for the Plan.

1.4.2.3 Forecast Funding Availability

The feasibility of the Financially Constrained Plan can be assessed by comparing the estimated cost of the programmed improvements to the projected funds available from various funding sources. The projection of funding was made by analyzing historical data on expenditures for street and highway construction in the study area.

Historical information obtained from MDOT indicates that, on average, in the last 20 years contracts totaling $43 million per year in 2010 dollars have been let for construction and maintenance of the transportation infrastructure within the Jackson Study Area. This historic figure was calculated excluding expenditures on projects funded through non-recurring sources of funds. These non-recurring funding sources are Interstate, DEMO and ARRA. The costs were then totaled and divided to obtain an average annual expenditure in 2010 dollars.

An inflation factor of 1% per year was then applied to the $43 million to forecast the annual availability of funds through 2035. The total State and Federal funds forecast to be available over the life of the Financially Constrained Plan will be approximately $1.227 billion.

1.4.2.4 Financially Constrained Plan

The annual amounts were then aggregated to the three time periods of the MTP resulting in the following levels of State and Federal funding to be available for each Stage.

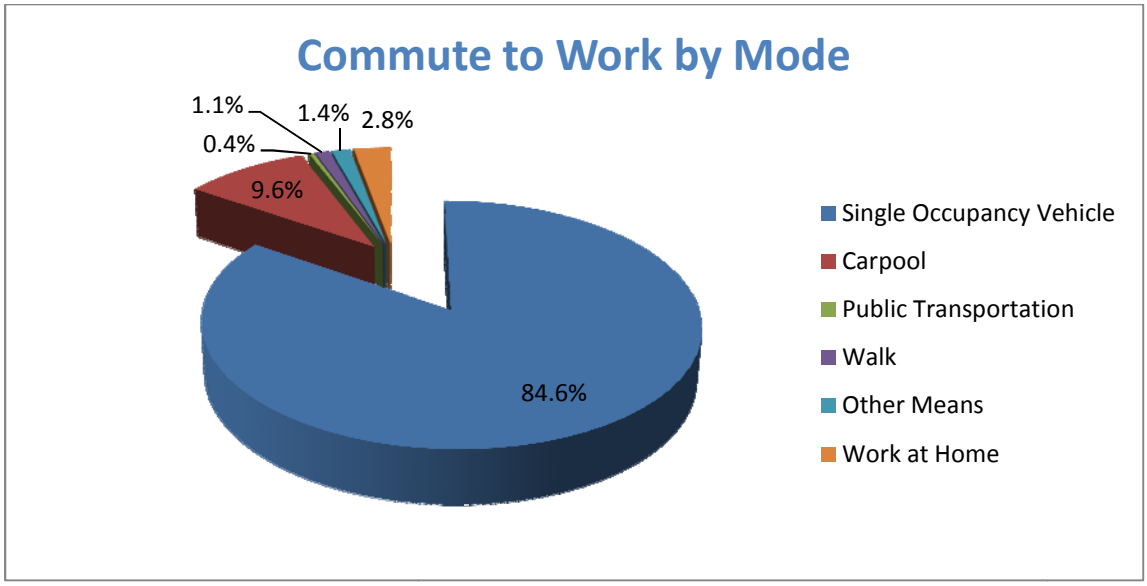
- STAGE 1 (2010-2015) - $221,536,648
- STAGE 2 (2016-2025) - $477,551,526
- STAGE 3 (2026-2035) - $527,513,981

Chapter 5

Streets and Highways

1.5.1 Introduction

The predominant mode of transportation for people living in the Jackson study area is by single-occupancy vehicle travel. The chart below shows the percentage of travel by different transportation modes.



Source: Census Bureau, 2006-2008 American Community Survey of Hinds, Madison, and Rankin Counties

Region roadways also provide right of way for buses making the roadway network an integral part of the public transit system. In addition, roadways are used for bicycle travel in the region. Despite the need to emphasize multi-modal transportation system and travel demand management (TDM) strategies to reduce vehicular demand to improve air quality and reduce congestion, roadways remain a primary component in addressing the region's transportation needs.

Planning for the future transportation system improvements starts with the evaluation of the existing transportation system and its needs. This chapter identifies the conditions of the existing transportation system, determines the system's needs through deficiency analysis of current and future conditions, and recommends a planned improvement program to address those needs.

1.5.2 Existing (2008) Transportation Network

1.5.2.1 State and Federal Highways

Several federal and state highways serve the study area. These facilities constitute the main network of roadways in the area. The most significant of these facilities are:

I-20 I-20 begins near Midland, TX at I-10 and travels east to Florence, SC. It goes through the study area from west to east.

I-55 I-55 begins in LaPlace, LA at I-10 and travels north to Chicago, IL. It travels through the study area from south to north, overlapping I-20 for about 2 miles in an area known as the "spaghetti bowl".

I-220 I-220 provides an additional connection between I-20 West and I-55 North, establishing a closed loop around the core urban area of Jackson.

US 49 US 49 begins in Gulfport, MS and travels north to Piggot, AR. US 49 goes through the study area from the north west to the south east.

US 51 US 51 starts in LaPlace, LA and runs north to its intersection with MI 2 in Ironwood, MI. US 51 runs from the south west of the study area, through to the north east.

US 80 US 80 begins in El Paso, TX and goes east to Savannah, GA. It runs east and west through the study area, usually along I-20. Outside of the study area, US 80 dual routes with I-20 at some sections.

MS 16 MS 16 leads west to Yazoo City and east to Carthage and Philadelphia.

MS 43 MS 43 runs north to Kosciusko and south to Bay St. Louis on the Gulf Coast.

MS 25 Originating in the city of Jackson, MS 25 heads northeast to Starkville and ultimately to Tishomingo County in the extreme northeastern corner of the state.

MS 18 MS 18 runs westward to Port Gibson on the Mississippi River; traveling in the opposite direction, it winds its way through Raleigh, Bay Springs, Pachuta, and Quitman on the way to western Alabama.

MS 22 MS 22 is the shortest of the major state routes, only 40 miles or so: Beginning at Edwards, just west of the study area to Canton at the northern limit of the Jackson Urbanized Area.

1.5.2.2 Existing Street and Highway Functional Classifications

In developing the TransCAD model, the street and highway network was based on the functional classification system prepared by the MDOT (Figure 5-1). The system was updated in 2003 to reflect the expanded urbanized area defined by the 2000 census. The components of this network are interstates, freeways, principal arterials, minor arterials, and collectors. The distribution of mileage in these categories is shown in Table 5-1.

Table 5-1

Study Area Roadway Network Mileage by Functional Class

Classification	Total Miles	%
Interstate	109.94	7.52%
Principal Arterial	372.72	25.50%
Minor Arterial	314.81	21.54%
Collector	663.98	45.43%
Total	**1,461.45**	**100.00%**

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Figure 5-1

Functional Classification

Legend

Map layers
- Study Area
- County
- Water Area
- Roadway Network

Functional Class
- Rural Interstate
- Rural Principal Arterial
- Rural Minor Arterial
- Rural Major Collector
- Rural Minor Collector
- Rural Local
- Urban Interstate
- Urban Principal Arterial
- Urban Minor Arterial
- Urban Collector
- Urban Local

0 3 6 9

Miles

Source: MDOT

N W E S

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Each type of facility provides separate and distinct traffic service functions and is best suited for accommodating particular demands. Their designs also vary in accordance with the characteristics of traffic to be served by the facility.

Freeways: These facilities are divided highways with full control of access and grade separations at all intersections. The controlled access character of freeways results in high-lane capacities, which are three times greater than the individual lane capacities of urban arterial streets.

Expressways: These facilities are roads which are controlled access, but not designed as part of the interstate system.

Arterials: These facilities are important components of the total transportation system. They serve both as feeders to freeways and expressways, and as principal travel ways between major land use concentrations within the study area. Arterials are typically divided facilities (undivided where right-of-way limitations exist) with relatively high traffic volumes and traffic signals at major intersections. The primary function of arterials is moving traffic, and they are the main means of local travel. A secondary function of arterials is land access.

Collectors: These facilities provide both land service and traffic movement functions. Collectors serve as intermediate feeders between arterials and local streets and primarily accommodate short distance trips. Since collector streets are not intended to accommodate long through trips, they are generally not continuous for any great length.

Local Streets: The sole function of these facilities is to provide access to immediately adjacent land. Within the local street classification, three subclasses are established to indicate the type of area served: residential, industrial, and commercial. Some of the local streets have been included in the model network for the purpose of connectivity.

1.5.2.3 Base Year (2008) Travel Demand Model Development

The determination of future transportation needs in the Jackson Urbanized Area MPO planning area requires the ability to accurately forecast travel demand based on estimates of future population and employment. The objective of the transportation planning process is to provide the information necessary for making decisions on when and where improvements should be made to the transportation system to meet the forecasted travel demand.

For this purpose, a travel demand model capable of testing various roadway improvements with various land use growth scenarios was developed. The Jackson Urbanized Area Travel Demand Model is based upon the conventional trip-based four-step modeling approach.

Broadly, the main model components fall within the following four categories:

- ***Trip Generation*** - The process of estimating trip productions and attractions at each TAZ.
- ***Trip Distribution*** - The process of linking trip productions to trip attractions for each TAZ pair.
- ***Modal Choice*** - The process of estimating the number of trips using a particular mode for each TAZ pair. Because of the low frequency of transit trips, pedestrian, and bicycle trips in the modeling area, this step was not performed.
- ***Trip Assignment*** - The process of assigning auto and truck trips onto specific highway facilities in the region.

The following trip purposes were used in the development of the Jackson Urbanized Area MPO model. Table 5-2 summarizes daily study area trips by trip purpose.

- Internal Trip Purposes
  - Home-Based Work (HBW)
  - Home-Based Other (HBO)
  - Non Home-Based (NHB)
  - Commercial Vehicle Trips (CMVEH)
  - Truck Trips (TRK)
- External Trip Purposes
  - External-Internal Auto Trips (EIAUTO)
  - External-Internal Truck Trips (EITRK)
  - External-External (Through) Auto Trips (EEAUTO)
  - External-External (Through) Truck Trips (EETRK)

There was a significant discussion about truck traffic within and through the study area during the public outreach process. The Study Team considered these discussions and included a truck trip purpose in the model development using the procedures outlined in "Quick Response Freight Manual II, U.S. Department of Transportation". In addition, the model was developed using the Multi-Modal Multi-Class Assignment (MMA) procedure which allows analysis of truck only lanes.

Table 5-2 Daily Study Area Trips by Trip Purpose		
Trip Purpose	**Trips**	**Type**
HBW	335,329	Person Trips
HBO	795,535	Person Trips
NHB	412,763	Person Trips
CMVEH	146,983	Vehicle Trips
TRK	18,863	Vehicle Trips
Internal Trips Total	**1,709,473**	
EI AUTO	115,695	Vehicle Trips
EI TRUCK	33,038	Vehicle Trips
EE AUTO	10,014	Vehicle Trips
EE TRUCK	3,409	Vehicle Trips
External Trips Total	**162,156**	
Total Daily Trips	**1,871,629**	

The gravity model was used to distribute the trips between Origin-Destination (O-D) pairs to develop a region wide O-D matrix to use in trip assignment. Traffic assignment models are used to estimate the traffic flows on a network. TransCAD's MMA with User Equilibrium (UE) as the assignment type and the Bureau of Public Roads (BPR) Volume-Delay function was used for Jackson Urbanized Area Travel Demand Model. The MMA model is a generalized cost assignment that assigns trips by individual modes or user classes to the network simultaneously. Each mode or class can have different network exclusions, congestion impacts (passenger car equivalent values), values of time, and toll costs.

A travel demand model needs to be validated to ensure that the model is performing within the limits that define an acceptable range of deviation from observed "real-world" values. Validation of the Jackson Urbanized Area Travel Demand Model was assessed first at the area wide scale, then by roadway classification, then Average Daily Traffic (ADT) range. In the final stage of the validation process the accuracy of the model with respect to specific routes and roadway groups was analyzed. At each level an appropriate degree of accuracy was defined in terms of the maximum tolerable deviation from base-year vehicular volumes, i.e., estimated annual average daily traffic and Root Mean Square Error (RMSE).

Overall, the cumulative model volume for all network links associated with MDOT traffic count locations (10,869,013 vehicles) differed from total model estimated ADT (10,933,124 vehicles) by only -0.59 percent compared to an allowable error limit of five percent.

Validation results by ADT group and by functional class are shown in Table 5-3 and Table 5-4 respectively. Base year (2008) link Volume/Capacity (VOC) maps are shown in Figure 5-2 (Study Area) and Figure 5-3 (Downtown Jackson).

Table 5-3

Validation of Base-Year Model by ADT Group

ADT Range	Total Count[1]	Total Model Volume[2]	% Dev Limit[3]	% Dev	% RMSE Limit[4]	% RMSE
ADT < 5000	1,206,640	1,261,745	+/- 50.0	4.6	115.8	63.4
5,000<= ADT < 10,000	1,490,684	1,398,711	+/- 25.0	-6.2	43.1	40.7
10,000<= ADT < 20,000	2,987,300	3,039,305	+/- 20.0	1.7	28.3	30.5
20,000<= ADT < 40,000	3,174,500	3,176,436	+/- 15.0	0.1	25.4	20.6
40,000<= ADT < 60,000	1,466,000	1,430,129	+/- 12.0	-2.4	30.3	11.9
ADT >= 60,000	608,000	562,687	+/- 10.0	-7.5	19.2	9.0
Total	10,933,124	10,869,013	+/- 5.0	-0.6	40.0	32.7

Table 5-4

Validation of Base-Year Model by Roadway Functional Class

Functional Class	Total Count[1]	Total Model Volume[2]	% Dev Limit[3]	% Dev
INTERSTATES	3,302,500	3,465,989	+/- 7.0	5.0
RAMPS	864,240	875,349	+/- 25.0	1.3
PRINCIPAL ARTERIALS	4,537,367	4,468,215	+/- 10.0	-1.5
MINOR ARTERIALS	1,352,254	1,262,650	+/- 15.0	-6.6
COLLECTORS	863,572	776,840	+/- 25.0	-10.0
LOCAL STREETS	22,891	23,023	+/- 25.0	0.6
Total	10,933,124	10,869,013	+/- 5.0	-0.6

(1) Total Count represents the sum of average daily traffic estimates for all MDOT count locations (area wide), all count locations on principal arterials, all locations on minor arterials, and all on major/minor collectors.

(2) Total Model Volume is the sum of model-generated traffic volumes for all network links associated with MDOT count locations (area wide), all links associated with count locations on principal arterials, all links associated with locations on minor arterials, and all links associated with count locations on collectors.

(3) % Dev Limit is the maximum acceptable plus/minus percentage deviation from estimated base-year (2008) average daily traffic (ADT) based on counts conducted by MDOT.

(4) % RMSE Limit is the maximum acceptable magnitude of the error relative to that of the counts conducted by the MDOT.

From the results of the validation effort, it was concluded that the Jackson Urbanized Area MPO study area travel demand forecasting model performs well within the established limits of acceptable deviation from base-year estimated volumes.

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Figure 5-2
Base Network
2008 Volume/Capacity

Legend

Volume/Capacity
- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2008 Volumes

75000 37500 18750

0 3 6 9

Miles

2008 Base Network

Source: NSI

N W E S

Prepared For:

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Figure 5-3
Base Network
2008 Volume/Capacity
Downtown Jackson

Legend

Volume/Capacity
- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2008 Volumes

75000 37500 18750
0 .5 1 1.5
Miles

2008 Base Network

Source: NSI

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1.5.3 Deficiency Analysis of Roadway Network

The first step in determining the roadway network needs of the study area was the assignment of the target year trips to the Existing plus Committed (E+C) Network. Committed projects are improvements for which construction has been completed or begun since the base year (2008), a contract for construction has been awarded, or projects for which funding has been dedicated, such as through Legislative approval of the Proposed Construction Program. The Committed Projects are listed in Table 5-5 and shown in Figure 5-4.

Table 5-5

Existing Plus Committed (E+C) Projects

Project	County	Route Name	Location	Improvement
EC01	Hinds	Lynch St	Wiggins St to US 80	Std 12' Lanes, Bike Lane, Sidewalks
EC02	Hinds	W County Line Rd	Tougaloo College to US 51	New 4 Lane Realignment, RR Grade Separation
EC03	Hinds	Pinehaven Rd	Northside Dr to 400' north of Berry Dr	Widen to 5 Lanes, Multi-use Trial, Sidewalks
EC04	Hinds	Northside Dr	650' either side of Pinehaven Rd	Widen to 5 Lanes, Multi-use Trial, Sidewalks
EC05	Hinds	Northside Dr	650' east of Pinehaven Rd	Widen to 5 Lanes
EC06	Hinds	Fortification St	Bailey Ave to I-55	Reconstruct from 4/5 Lanes to 3 Lanes with sidewalks
EC07	Hinds	Hampstead Blvd	US 80 to Springridge Rd	New 3 Lane
EC08	Hinds	Capitol St	State St to Robinson St	Convert from one-way operation to two-way operation
EC09	Hinds	Jessie Mosley Dr	High St to Farish St	Construct new 2 Lane Roadway, Sidewalks
EC31	Madison	Sowell Rd	Old Jackson Rd to US 51	New 2 Lane
EC32	Madison	Hoy Rd	Rice Rd to N Old Canton Rd	Center Turn Lane
EC33	Madison	Hoy Rd	US 51 to Rice Rd	Widen to 4 Lanes Divided
EC34	Madison	Old Canton Rd	Natchez Trace to Calumet Dr	Widen to 4 Lanes Divided
EC35	Madison	Old Canton Rd	Hoy Rd to St Augustine Dr	Center Turn Lane

Table 5-5

Existing Plus Committed (E+C) Projects

Project	County	Route Name	Location	Improvement
EC36	Madison	Lake Harbour Dr	US 51 to Northpark Dr	Widen to 5 Lanes
EC37	Madison	Calhoun Station Pkwy	Gluckstadt Rd to Church Rd	New 3 Lane
EC38	Madison	Calhoun Station Pkwy	Sowell Rd to MS 22	New 3 Lane
EC39	Madison	Stribling Rd	Church Rd to Catlett Rd	New 2 Lane
EC51	Madison	I-55	@ Gluckstadt Rd	Interchange modification
EC52	Madison	I-55	Old Agency Rd to MS 463	Split Diamond Interchange, Frontage roads
EC53	Madison	Connector Road	US 51 to MS 43	New 4 Lane Divided
EC61	Rankin	East Metro Corridor	I-20 to MS 25	New 4 Lane Divided
EC62	Rankin	MS 477 W Rankin Pkwy	US 80 to MS 25	New 4 Lane Divided
EC63	Rankin	Old Fannin Rd	Flowood Corp Limits to Spillway Rd	Widen to 5 Lanes
EC64	Rankin	Erlich Rd Ext.	US 49 to Williams Rd	New 2 Lane
EC81	Rankin	I-20	MS 468 to Greenfield Rd	Widen to 6 Lanes
EC82	Rankin	MS 471	US 80 to Grants Ferry Rd	Widen to 5 Lanes
EC83	Rankin	MS 468	4th St (Flowood) to MS 475	Widen to 4 Lanes Divided
EC84	Rankin	US 49	Florence to Richland Scale Area	Widen to 6 Lanes
EC85	Rankin	Erlich Rd	MS 469 to US 49	New 2 Lane realignment and extension

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Figure 5-4

Committed Projects

Legend

Improvement

- Widen Add Lanes
- New Roadway
- Reconstruction
- One way to Two way
- Center Turn Lane
- New Interchange
- Interchange Modification

Source: MDOT, CMPDD

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

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Following the E+C network development, the study area link traffic volumes and volume-over-capacity (VOC) ratios for the years 2015, 2025, and 2035 were developed using the travel demand model and forecast planning data. It is recommended that those facilities which show a projected volume/capacity ratio of greater than 1.00, or in terms of Level of Service (LOS), any facilities which have a LOS of E and higher, should be considered deficient.

The roadway facilities estimated to be deficient by 2035 are listed below and are also shown in Figures 5-5 and 5-6.

Major corridors forecast to be deficient by the year 2015 are:

- I-55 NB On Ramp at E County Line Road
- I-20 EB On Ramp at MS 18
- I-20 EB Off Ramp at US 80
- US 80 from I-20 to Louis Wilson Drive
- US 49 from McBride Street to Bud Street
- US 51 from Tisdale Road to Green Oak Lane
- Overby Street from US 80 to Busick Pond Road
- MS 43 at the I-20 Interchange
- E County Line Road from I-55 to Ridgewood Road
- S Pearson Road from Interstate Drive to Whitfield Road
- Lakeland Drive from Park Drive to Old Fannin Road
- Lakeland Drive from Cooper Road to Hugh Ward Parkway
- Bozeman Road from Cedarmont Drive to Hwy 463
- Hwy 463 (Main Street) from Herron Street to Magnolia Street
- Old Jackson Road from Cloverleaf Drive to W Sowell Road

In addition to those listed above, major corridors forecast to be deficient by the year 2025 are:

- I-20 EB Off Ramp at US 49
- US 80 from Louis Wilson Drive to Trickhambridge Road
- US 80 from I-20 to Paige McDill Road
- US 49 from US 80 to Bud Street
- US 49 from McBride Street to Cleary Road
- US 51 from Yandell Road to Green Oak Lane
- S Pearson Road from Interstate Drive to E Harper Street
- College Street from US 80 to E Jasper Street
- College Street from E Sunset Drive to Hwy 468
- College Street from Walnut Drive to MS 18
- E Main Street from Old Hwy 49 to US 49
- Old Brandon Road from Hwy 475 to Airport Road
- Hwy 471 from Grants Ferry Road to Dominion Parkway
- Lakeland Drive from Old Fannin Road to Cooper Road
- Flowood Drive from Liberty Road to Hawthorne Hill Road
- Hwy 471 from Hwy 468 to MS 25
- Hwy 463 (New Mannsdale Road) from Bozeman Road to I-55
- Bozeman Road from Reserve Crossing to Cedarmont Drive

In addition to those listed in 2015 and 2025, major corridors forecast to be deficient by 2035 are:

- I-55 from Southern End of the Service Roads to Old Agency Road
- I-55 at I-220
- I-55 SB Off Ramp at W County Line Road
- I-55 NB from E Woodrow Wilson Avenue to E Fortification Street
- I-55 from McDowell Road to Daniel Lake Boulevard

- I-55 SB Off Ramp at Siwell Road
- I-20 WB from S State Street to I-55
- I-20 EB On Ramp at US 49
- I-20 at Pearson Road
- I-20 from MS 18 to US 80
- US 49 from Cleary Road to Monterey Road
- US 49 from Old Pearson Road to Lacy Drive
- US 49 from E Main Street to Monmouth Road
- US 51 from E Sowell Road to Church Road
- US 51 from Jackson Street to Rice Road
- MS 18 from I-20 to Greenway Drive
- S Pearson Road from I-20 to Smalls Drive
- S Pearson Road from E Harper Street to Ebenezer Road
- Greenfield Road from I-20 to Glasgow Drive
- Hwy 471 from School Road to College Street
- Overby Street from Busick Pond Road to W Jasper Street
- Louis Wilson Drive from US 80 to Shiloh Road
- MS 18 from Louis Wilson Drive to Hebron Hill Drive
- Lakeland Drive from Hugh Ward Parkway to Grants Ferry Road
- Flowood Drive from Hawthorne Hill Road to Old Fannin Road
- Old Fannin Road from Flowood Drive to Stockton Drive
- Hwy 471 from Bourgeois Drive to Dominion Parkway
- Northshore Parkway from Fannin Landing Circle to Windrose Drive
- Old Canton Road from Main Street to Madison Avenue
- Weisenberger Road from Grandview Parkway to US 51

- MS 43 from Hart Street to Nissan Parkway
- Gluckstadt Road from Distribution Drive to I-55
- Hwy 463 (Main Street) from I-55 to Grandview Boulevard
- New Mannsdale Road from Bennett Road to Moss Road
- Mannsdale Road from Robinson Springs Road to N Livingston Road

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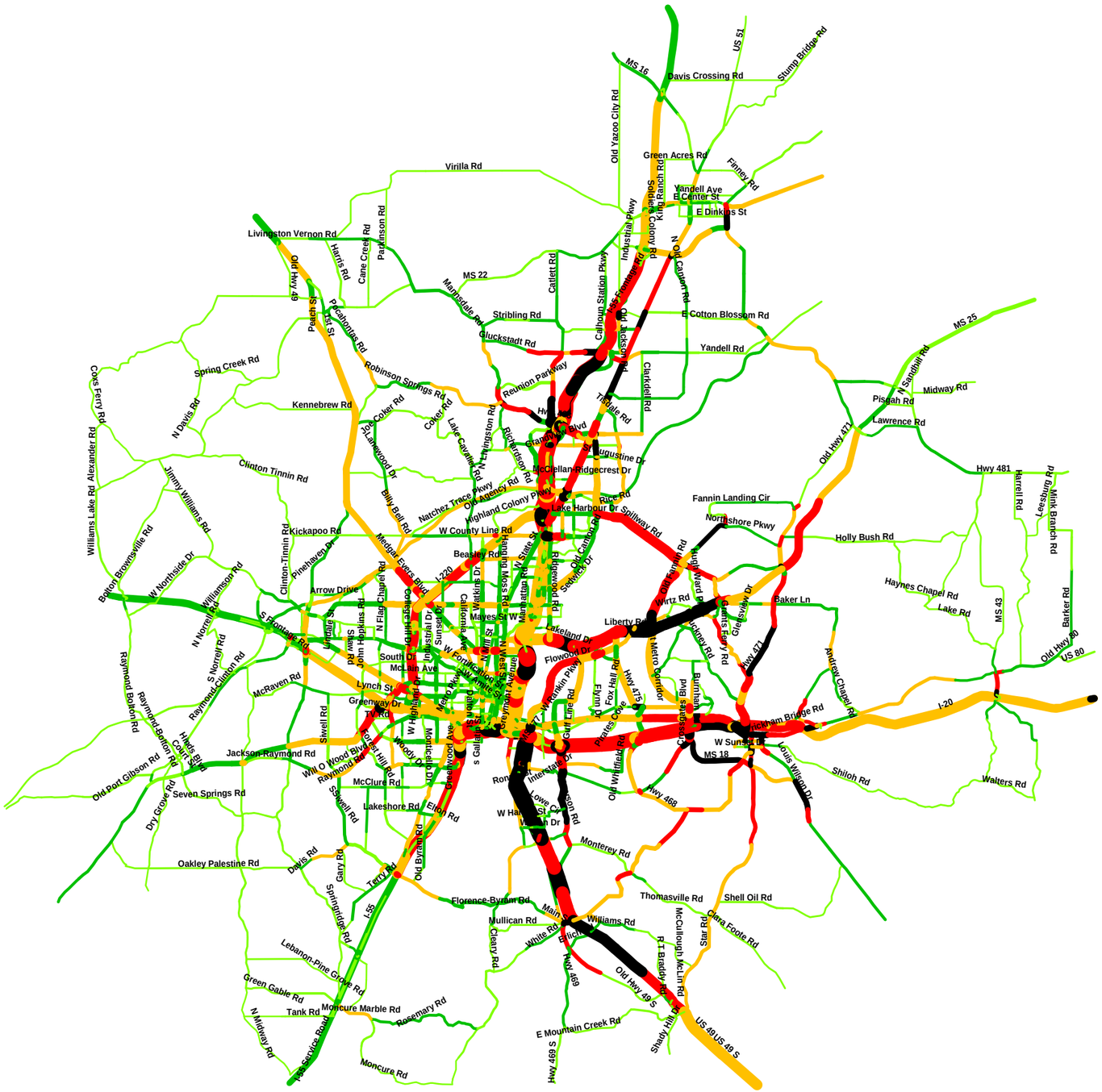
2035

Figure 5-5

E + C Network
2035 Volume/Capacity



Legend

Volume/Capacity
- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2035 Volumes

75000 37500 18750

0 3 6 9

Miles

Existing + Committed Network

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER
Solutions you can build upon

In Association With:

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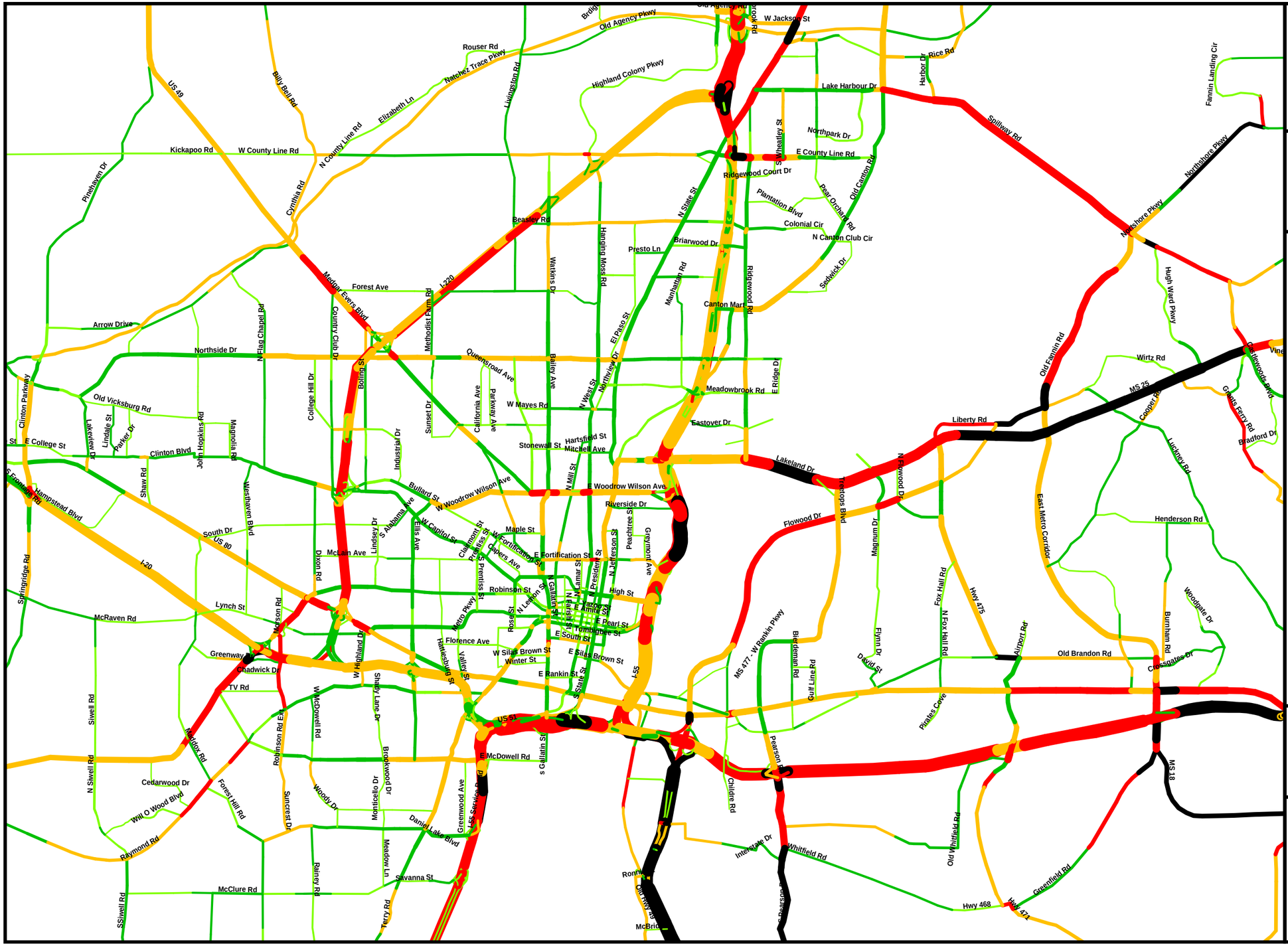

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TRANSPORTATION PLAN
2035

Figure 5-6
E + C Network
2035 Volume/Capacity
Downtown Jackson

Legend

Volume/Capacity
- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2035 Volumes

75000 37500 18750
0 .5 1 1.5
Miles

Existing + Committed Network

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation
CMPDD

Prepared By:

NEEL-SCHAFFER
Solutions you can build upon

In Association With:

WilburSmith Associates

1.5.4 Strategies to Address Roadway Needs

As summarized in the previous section, the E+C scenario has significant roadway system deficiencies in the future year (2035). A number of strategies are available to address these identified deficiencies including the addition of new capacity to the roadway system.

1.5.4.1 Roadway Preservation and Rehabilitation

The functionally classified roadway network in the Jackson Urbanized Area is more than 1,300 miles long and provides surface transportation to more than 470,000 people in the region. All of these roads are expected to continue to provide service throughout the planning period. Reconstruction projects, which are a part of operation and maintenance, are needed to preserve and maintain the highway system. Sufficient resources must be allocated to protect the public investment, as well as provide a safe and high quality travel experience. This plan gives funding priority to system preservation and allocates a sizeable portion of available revenues to this purpose.

1.5.4.2 Transportation Demand Management (TDM)

About 84% of the commuting trips within the study area are made in single-occupancy vehicles. Therefore, one cost-effective strategy is to find ways to reduce these single-occupancy vehicle trips, which will reduce congestion and improve air quality without adding any additional capacity to the roadway system.

TDM focuses on strategies to reduce future travel volumes within the roadway network. This can be accomplished by:

- Increasing the number of high-occupancy vehicle trips by promoting carpooling, shuttle buses to major employment centers, etc.
- Supporting Flex-time work schedules with employers to reduce congestion at peak times.
- Support for efforts to allow employees to telecommute when possible.
- The establishment of Park and Ride facilities.
- Providing a community education program on the costs and benefits of high-occupancy trips and options available to the public.

1.5.4.3 Traffic Operational Improvements

Traffic operational improvements increase efficiencies within the roadway network. It is anticipated that these will include:

- Signal Improvements (including new traffic signals), Signal Synchronization, Signal Interconnect.
- Access Management {Driveway consolidation, Driveway spacing/design, Left-turn restrictions, Elimination of on-street parking, Intersection/signal spacing, Frontage Roads, Turn lanes, Roadway Modification (geometry, medians, sight distance)}
- One-way/Reversible Streets (Streets that are modified from two-way to one-way; this strategy modifies roadway capacity during peak hours to increase number of lanes in peak direction by changing a non-peak direction to a peak direction).
- Intersection Improvements.

- Improvements to Traffic Control (Regulatory Signs, Warning Signs, Informational Signs to limit driver confusion).
- Turn Prohibitions (Limit conflicting movements in peak hours, Make pedestrian crossings safer).

1.5.4.4 Intelligent Transportation System (ITS)

There has been a recent emergence of cost effective ITS technologies, which can be integrated within the transportation network. The cost/benefit of applying these technologies is frequently related to the travel characteristics of the roadway network, with urban networks more likely benefiting. ITS technologies being applied within the Jackson Urbanized Area MPO are listed below, and as the cost of technology applications declines, other ITS venues may be considered. More information can be found at MDOT's website, under the ITS division's section.

MDOT ITS Division- http://gomdot.com/Divisions/ITS/Home.aspx

Closed Circuit Television (CCTV) Cameras – The study area makes use of CCTV cameras at several locations along I-220, I-55, and US 49. There are proposed cameras along I-20, I-220, I-55, and US 49. Corridors that have proposed cameras with data collectors include I-20 and I-55.

Dynamic Message Signs (DMS) – MDOT currently makes use of DMS at several locations in the study area along I-20, I-220, I-55, and US 49. There are three more DMS proposed along I-55, two along I-220, and one each on US 49 and I-20.

Fiber Optic Cable – The study area has fiber optic cable installed as part of its ITS infrastructure along sections of I-20, I-220, I-55, US 51 from I-55 to Ridgeland, and MS 25 from the Traffic Management Center to the Jackson International Airport. Proposed fiber optic cable will also be placed along more sections of I-20 and I-55, as well as US 49. Radar detection coverage is also part of the ITS program for I-20, I-220, I-55, and US 49 of road, both current and proposed.

Traffic Management Center – The study area has a traffic management center located in the City of Jackson and is a division of the City's Public Works Department.

1.5.4.5 Roadway Capacity Improvements

The plan also identifies the need for roadway capacity improvements based on forecasted capacity deficiencies in the year 2035. These projects are classified in two ways; committed projects (see section 5.2), for which funding has been allocated due to inclusion in the fiscal years 2010 to 2013 Transportation Improvement Program (TIP); and recommended long range roadway capacity improvement projects. The remainder of this section describes the process used to develop the list of potential capacity improvement projects, analysis of projects, and the project selection process to keep the plan financially constrained.

Development of Roadway Improvement Test Projects

Throughout the plan development process, the Study Team gathered information on test projects from the public, local government agencies, and MPO committee members. Along with these test projects, a non-financially constrained roadway network was developed which also included the remaining projects

in the current MTP and the committed roadway projects. Figure 5-7 shows all the test projects evaluated in the non-financially constrained roadway network plan.

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TRANSPORTATION PLAN
2035

Figure 5-7

Test Projects

Legend

Map layers
- Study Area
- County
- Roadway Network

Test Projects
- Center Turn Lane
- New Roadway
- New Interchange
- Realign and widen to 4/5 Lanes
- Reconstruct Interchange
- Reconstruct to 4 Lane divided
- Widen to 4 Lane Toll Road
- Widening, Add 2 Lanes

0 3 6 9

Miles

Source: MDOT, CMPDD

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

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In Association With:

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I-72

Analysis of Roadway Projects

Even though the deficiency analysis indicated a need for a significant number of capacity improvement projects throughout the study area, as per federal regulations, the MTP has to be financially constrained. For this reason, the Study Team has compiled two test network scenarios with each scenarios estimated cost matching the expected funding available. These two test network scenarios include unimplemented projects from the current plan and new concepts that were developed during the public outreach process. The test scenarios were then analyzed to compare alternative improvements to alleviate forecast deficiencies.

Test Network Scenario 1

The first test network scenario was designed primarily to evaluate improvements that are in the current plan. The current plan projects were reorganized into three stages based on their status. A few other projects that are in the current plan but identified as immediate needs in the public outreach process were also included. Projects included in the test network scenario 1 are shown in Table 5-6 and Figure 5-8.

While the analysis of test network scenario 1 shows improvement over the E+C network, there are still areas of congestion within the study area. The remaining deficiencies are shown in Figure 5-9.

Test Network Scenario 2

The second test network scenario was designed to evaluate improvements irrespective of whether a proposed project is in the current plan or not. To develop the projects under this scenario, the Jackson Urbanized Area Travel Demand Model was used to rank the projects based on their effectiveness in reducing the system-wide congestion. For this purpose, each test project was added individually to the E+C network and the model was run to calculate the project benefits in terms of Vehicle Miles Travelled (VMT), Vehicle Hours Travelled (VHT), and Vehicle Hours of Delay (VHD). At the end of the first iteration, the project that reduced the system-wide congestion most was selected and added to the E+C network. The iterative process continued with the remaining projects by selecting one project at a time. Table 5-7 displays the top ten (10) projects ranked by congestion relief.

Following this analysis, the Study Team has compiled a combination of projects from the current plan and the projects shown in Table 5-7 to define the test network scenario 2.

Projects included in the test network scenario 2 are shown in Table 5-8 and Figure 5-10. The remaining deficiencies are shown in Figure 5-11.

Table 5-6

Test Network Scenario 1 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
I	101	Hinds	Byram-Clinton-Norrell Corridor	I-20 to I-55	18.30	Construct new 4-lane roadway
I	EC08	Hinds	Capitol St	State St to Robinson St	0.60	Reconstruction, convert to two way operation
I	EC09	Hinds	Jessie Mosley Dr	High St to Farish St	0.13	New 2 Lane
I	EC01	Hinds	Lynch St	Wiggins St to US 80	2.70	Reconstruction, sidewalks, bike path
I	EC03	Hinds	Pinehaven Rd/Northside Dr	Northside Dr to 400' north of Berry Dr	1.22	Widen to 5 Lanes, sidewalks, bike path
I	102	Hinds	Gary Rd	Terry Rd to Davis Rd	2.50	Widen to 4 Lanes
I	EC06	Hinds	Fortification St	Bailey Ave to I-55	1.77	Reconstruction to 3 Lanes, sidewalks
I	EC07	Hinds	Hampstead Blvd (Clinton)	US 80 to Springridge Rd	0.75	New 3 Lane
I	EC05	Hinds	Northside Dr	Pinehaven Rd to Cynthia Rd	1.74	Widen to 5 Lanes
I	EC02	Hinds	W County Line Rd	Brown St to US 51	0.50	RR Grade Crossing
I	EC52	Madison	I-55	MS 463 to Old Agency Rd	3.20	Widen to 6 lanes, Split Diamond Interchange
I	EC32	Madison	Hoy Rd	Rice Rd to N Old Canton Rd	1.12	Center Turn Lane
I	127	Madison	Lake Harbour Dr Extension	Highland Colony Pkwy to US 51	0.85	New 4 Lane divided roadway
I	227	Madison	Madison Ave	Highland Colony Pkwy to US 51	2.50	Widen to 4 Lanes Divided
I	130	Madison	Reunion Pkwy	Bozeman Rd to US 51	2.35	New 4 Lane divided roadway

Table 5-6

Test Network Scenario 1 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
I	124	Madison	I-55	@ Reunion Pkwy	--	New Interchange
I	EC51	Madison	I-55	@ Gluckstadt Rd	--	Interchange Improvement
I	122	Madison	MS 463	Reunion Pkwy to Madison Central Dr	2.62	Widen to 5 lanes
I	EC33	Madison	Hoy Rd	US 51 to Rice Rd	1.07	Widen to 5 lanes
I	EC36	Madison	Lake Harbour Dr	US 51 to Northpark Dr	1.60	Widen to 5 lanes
I	EC35	Madison	Old Canton Rd	Hoy Rd to St Augustine Dr	1.00	Center Turn Lane
I	EC53	Madison	MS 43-US 51 Connector	MS 43 to US 51	2.89	New 4 Lane divided roadway
I	121	Madison	Harbor Dr	Rice Rd to Lake Harbour Dr	0.35	Widen to 4 Lanes
I	132	Madison	Wheatley St Extension	Madison Ave to Ridgeland Ave	1.50	New 4 Lane divided roadway
I	EC85	Rankin	Erlich Rd	US 49 to MS 469	1.40	New 2 Lane realignment
I	EC64	Rankin	Erlich Rd Extension	US 49 to Williams Rd	0.60	New 2 Lane roadway
I	EC81	Rankin	I-20	Greenfield Rd to US 80 east of Brandon	4.70	Widen to 6 Lanes
I	176	Rankin	East Brandon Bypass	MS 18 to US 80	2.00	New 4 Lane divided roadway
I	267	Rankin	I-20	Pirates Cove Rd	--	New Interchange
I	180	Rankin	Old Brandon Rd	Bierdeman Rd to Pemberton Dr	1.10	Center Turn Lane

Table 5-6

Test Network Scenario 1 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
I	178	Rankin	Old Hwy 471	MS 25 to MS 43	2.00	Widen to 4 Lanes
I	177	Rankin	Old Whitfield Rd	MS 468 to MS 475	4.00	Center Turn Lane
I	173	Rankin	Pearl-Richland Intermodal Corridor	US 49 to Pearson Rd	2.15	New 4 Lane divided roadway
I	EC84	Rankin	US 49	Scales Area to Florence	7.26	Widen to 6 lanes
I	174	Rankin	Spillway Rd	Northshore Pkwy to Grants Ferry Rd	1.59	Widen to 5 lanes
I	161	Rankin	Crossgates Blvd	Old Brandon Rd to I-20	0.80	Reconstruct as 6-lane divided roadway
I	EC83	Rankin	MS 468	4th St to MS 475	3.10	Widen to 4 lanes
I	EC82	Rankin	MS 471	Grants Ferry RD to US 80	2.11	Widen to 5 lanes
I	EC62	Rankin	MS 477 (West Rankin Pkwy)	Flowood Dr to US 80	3.60	New 4 Lane divided roadway
I	EC63	Rankin	Old Fannin Rd	Flowood Corp Limits to Spillway Rd	2.00	Widen to 5 lanes
I	164	Rankin	Grants Ferry Pkwy	MS 471 to Trickham Bridge Rd	2.73	New 4 Lane divided roadway
I	EC61	Rankin	East Metro Corridor	Lakeland Dr (MS 25) to Old Brandon Rd	4.14	New 4 Lane divided roadway
I	361	Hinds /Rankin	Airport Pkwy	I-55 to MS 475 & MS 25	11.90	New 4/6 Lane roadway
II	204	Hinds	I-20	MS 18 (Robinson St)	--	Reconstruct interchange
II	206	Hinds	I-55	Lakeland Dr to Rankin County Line	3.36	Widen to 8 Lanes

Table 5-6

Test Network Scenario 1 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
II	203	Hinds	I-20	Clinton-Raymond Rd to MS 18	4.75	Widen to 6 Lanes
II	205	Hinds	I-55	I-20 to Siwell Rd	6.97	Widen to 6 Lanes
II	201	Hinds	Beasley Rd	State St to I-55	0.60	Widen to 5 lanes
II	202	Hinds	Bullard St	Boling Dr to Woodrow Wilson Dr	1.20	Reconstruct 4-lane divided roadway
II	104	Hinds	Raymond Rd	Siwell Rd to McDowell Rd	2.55	Widen to 4 Lanes
II	225	Madison	I-55	MS 22 to MS 463	10.67	Widen to 6 Lanes
II	131	Madison	US 51	Weisenberger Rd to Tisdale Rd	2.38	Widen to 5 lanes
II	221	Madison	Bozeman Rd	Gluckstadt Rd to MS 463	3.20	Widen to 4 Lanes
II	329	Madison	Hoy Rd	Rice Rd to N Old Canton Rd	1.12	Widen to 5 lanes
II	228	Madison	Pine Knoll Dr Extension	Northpark Dr to Old Canton Rd	0.25	New 2 Lane roadway
II	229	Madison	Rice Rd	Hoy Rd to Old Canton Rd	4.13	Widen to 5 lanes
II	230	Madison	Rice Rd	US 51 to Old Canton Rd	1.56	Widen to 5 lanes
II	231	Madison	Ridgewood Rd	US 51 to Centre St	0.65	Widen to 5 lanes
II	232	Madison	South Wheatley St	Lake Harbour Dr to County Line Rd	1.01	Widen to 5 lanes
II	234	Madison	Weisenberger Rd	Gluckstadt Rd to US 51	0.79	Widen to 5 lanes

Table 5-6

Test Network Scenario 1 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
II	222	Madison	Cox Ferry Rd	Railroad Ave to Cane Creek Rd (Flora)	1.97	New 2 Lane roadway
II	168	Rankin	Lakeland Dr (MS 25)	MS 475 to Grants Ferry Rd	4.92	Widen to 6 lanes
II	169	Rankin	Lakeland Dr (MS 25)	Grants Ferry Rd to MS 471	3.18	Widen to 6 lanes
II	269	Rankin	US 49	Main St (Florence) to Erlich Rd	0.90	Widen to 6 lanes
II	266	Rankin	Pearson Rd-Monterey Rd	East Harper St to US 49	2.24	Widen to 4 lanes
II	268	Rankin	Trickham Bridge Rd	Paige McDill Rd to US 80	1.84	Widen to 5 lanes
II	170	Rankin	Main St (MS 469 - Florence)	Old Hwy 49 to US 49	0.50	Widen to 5 lanes
II	272	Rankin	MS 18	Greenfield Rd to Star Rd	3.50	Widen to 4 lanes
II	271	Rankin	MS 468 (Pearl)	S Pearson Rd to MS 475	2.80	Widen to 4 lanes
II	167	Rankin	MS 475	Old Brandon Rd to I-20	1.33	Widen to 6 lanes
II	270	Rankin	US 80	State St to Pearson Rd	2.42	Widen to 6 Lanes
II	165	Rankin	Grants Ferry Rd	Spillway Rd to MS 25	1.00	Widen to 5 lanes
II	265	Rankin	Pearson Rd	Whitfield Rd (MS 468) to E Harper St	1.67	Widen to 4 lanes
II	264	Rankin	Paige McDill Rd	Trickham Bridge Rd to US 80	1.03	Realign and widen to 4 lanes
III	303	Hinds	I-55	Siwell Rd to Copiah County Line	10.47	Widen to 6 lanes

Table 5-6

Test Network Scenario 1 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
III	302	Hinds	I-220	Madison County line to US 80	8.54	Widen to 6 lanes
III	301	Hinds	Hanging Moss Rd	County Line Rd to Meadow Rd	1.82	Widen to 4 lanes
III	304	Hinds	Robinson Rd	MS 18 to Raymond Rd	1.23	Widen to 4 lanes
III	306	Hinds	Woodrow Wilson Ave	Livingston Rd to I-55	1.90	Widen to 6 lanes
III	305	Hinds	Siwell Rd	I-55 to Rankin County Line	1.03	Reconstruct as 4-lane toll road
III	327	Madison	I-55	Green Acres Rd	--	New Interchange
III	226	Madison	McClellan Dr Extension	Highland Colony Pkwy to US 51	1.75	New 4 Lane roadway
III	235	Madison	Yandell Rd	I-55 to N Old Canton Rd	3.30	Realign and widen to 4/5 lanes divided
III	328	Madison	I-220	I-55 to Hinds County Line	2.00	Widen to 6 lanes
III	369	Rankin	I-20	@ Trickham Bridge Rd	--	New Interchange
III	372	Rankin	Gunter Rd Extension	US 49 to Cleary Rd	2.90	New 2 Lane roadway
III	267	Rankin	Pirates Cove Rd Extension	I-20 to MS 468	2.00	New 2 Lane roadway
III	371	Rankin	US 49	Erlich Rd Extension to Star Rd	5.52	Widen to 6 lanes
III	367	Rankin	MS 469	Monterey Rd to MS 468	4.00	Widen to 4 lanes
III	368	Rankin	MS 475	I-20 to MS 468	2.50	Widen to 6 lanes

Table 5-6

Test Network Scenario 1 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
III	364	Rankin	Church St	Main St to Erlich Rd	1.16	Widen to 4 lanes
III	366	Rankin	Greenfield Rd	MS 468 to MS 18	3.22	Widen to 4 lanes
III	370	Rankin	Old Brandon Rd	MS 475 to Crossgates Blvd	2.00	Widen to 4 lanes
III	365	Rankin	Florence-Byram Rd	Hinds County line to Cleary Rd	4.19	Realign and reconstruct as 4-lane toll road

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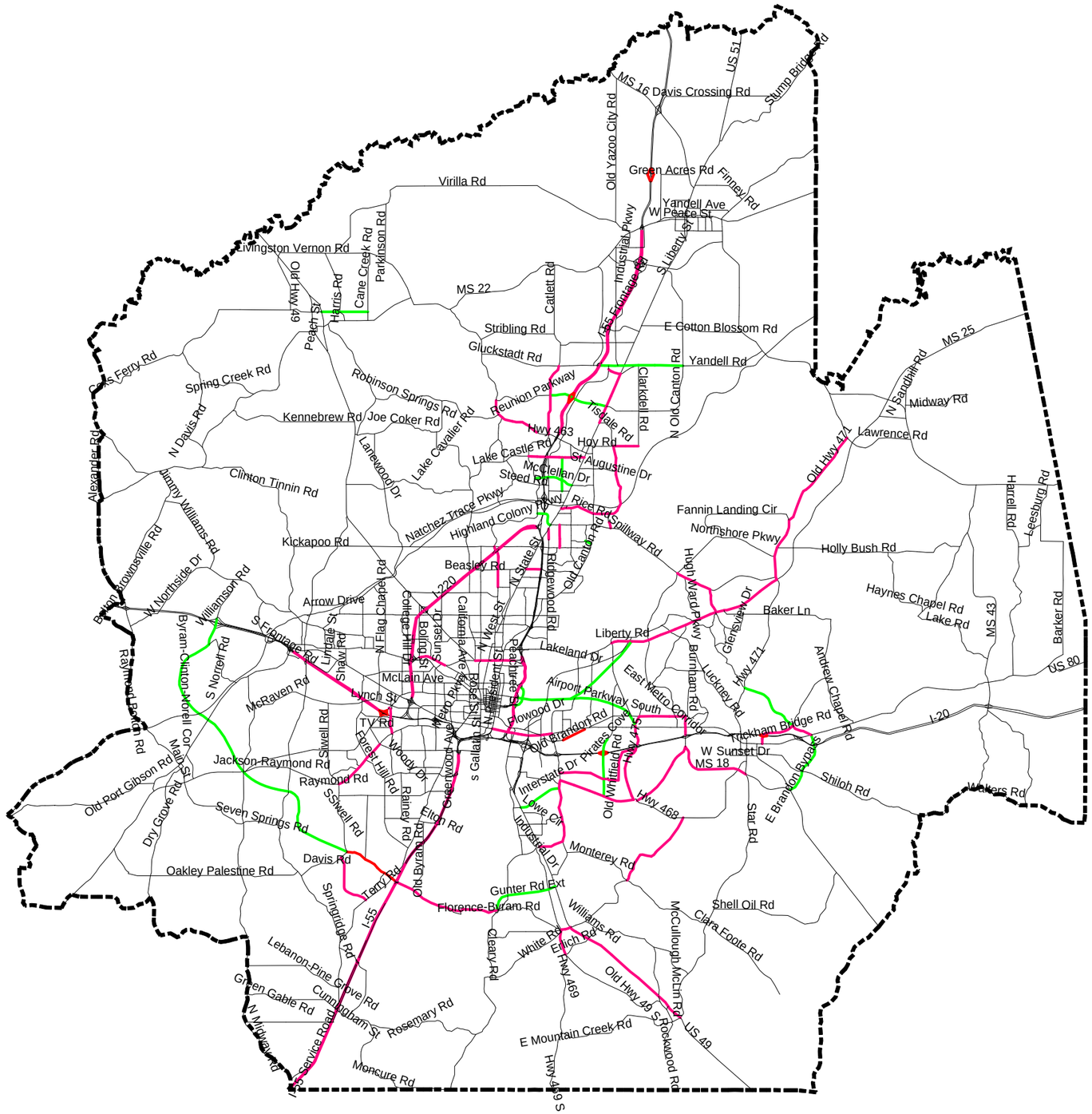
TRANSPORTATION PLAN
2035

Figure 5-8

Test Network Scenario 1 Projects



Legend

Map layers

- Roadway Network
- Study Area
- Other Changes
- Widening
- New Roadway

0 3 6 9

Miles

Scenario 1 Network

Source: MDOT, CMPDD NSI

Prepared For:

MDOT Mississippi Department of Transportation

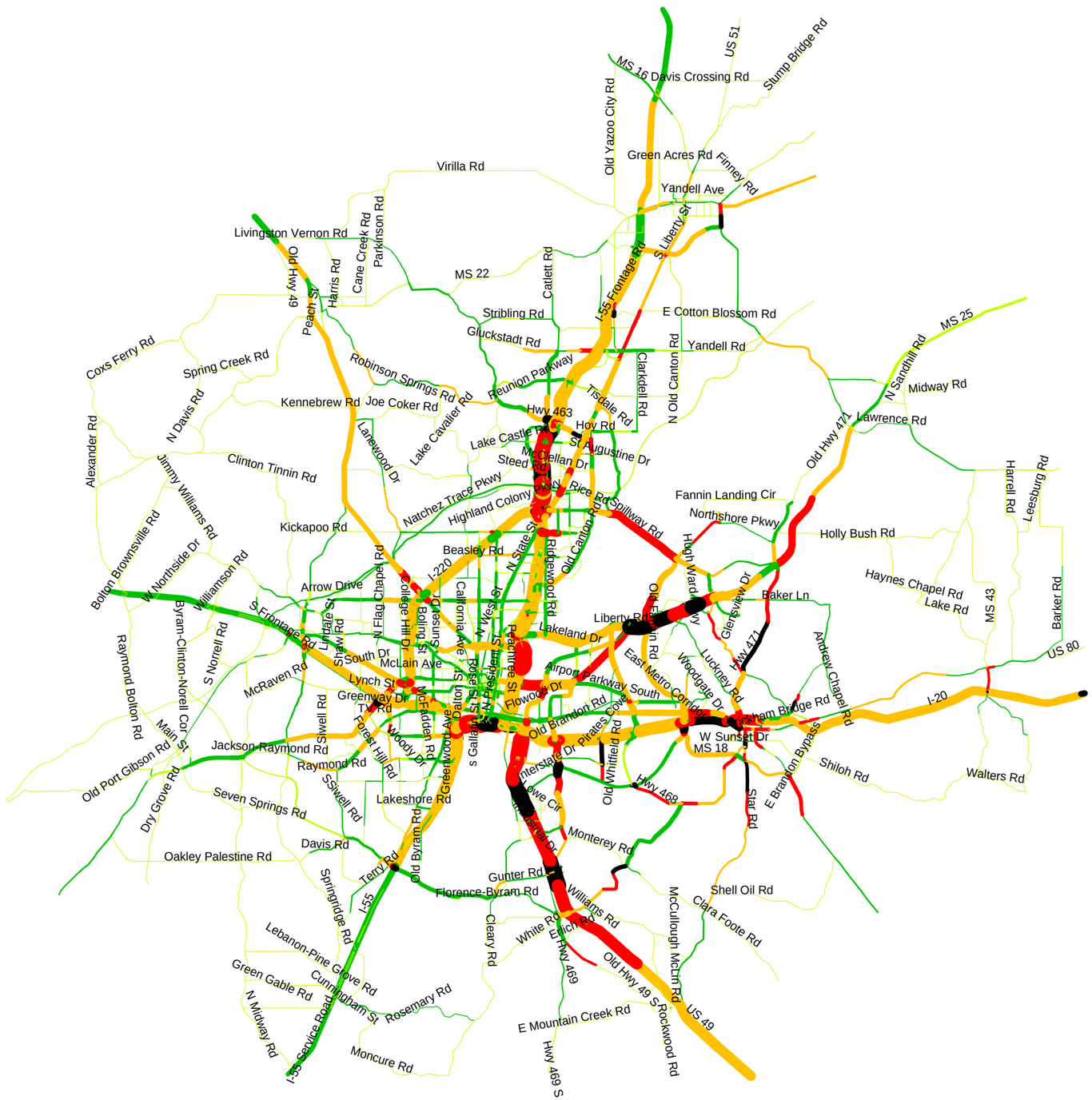
CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

WilburSmith Associates



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2035

Figure 5-9

Test Network Scenario 1
2035 Volume/Capacity

Legend

Volume/Capacity
- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2035 Volumes

75000 37500 18750

0 3 6 9

Miles

Scenario 1 Network

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

WilburSmith Associates

Table 5-7

Top 10 Projects by Congestion Relief

Rank	Project ID	County	Route	Location	Improvement
1	225	Madison	I-55	MS 22 to MS 463	Widen to 6 Lanes
2	168	Rankin	Lakeland Dr (MS 25)	MS 475 to Grants Ferry Rd	Widen to 6 lanes
3	205	Hinds	I-55	I-20 to Siwell Rd	Widen to 6 Lanes
4	367	Rankin	MS 469	Monterey Rd to MS 468	Widen to 4 lanes
5	302	Hinds	I-220	Madison County line to US 80	Widen to 6 lanes
6	272	Rankin	MS 18	Greenfield Rd to Star Rd	Widen to 4 lanes
7	365	Hinds/Rankin	Siwell Rd/Florence-Byram Rd	I-55 to Cleary Rd	Reconstruct as 4-lane toll road
8	371	Rankin	US 49	Erlich Rd to Star Rd	Widen to 6 lanes
9	176	Rankin	East Brandon Bypass	MS 18 to US 80	New 4 Lane divided roadway
10	270	Hinds/Rankin	US 80	State St to Pearson Rd	Widen to 6 Lanes

Table 5-8

Test Network Scenario 2 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
I	101	Hinds	Byram-Clinton-Norrell Corridor	I-20 to I-55	18.30	Construct new 4-lane roadway
I	EC08	Hinds	Capitol St	State St to Robinson St	0.60	Reconstruction, convert to two way operation
I	EC09	Hinds	Jessie Mosley Dr	High St to Farish St	0.13	New 2 Lane
I	EC01	Hinds	Lynch St	Wiggins St to US 80	2.70	Reconstruction, sidewalks, bike path
I	EC03	Hinds	Pinehaven Rd/Northside Dr	Northside Dr to 400' north of Berry Dr	1.22	Widen to 5 Lanes, sidewalks, bike path
I	102	Hinds	Gary Rd	Terry Rd to Davis Rd	2.50	Widen to 4 Lanes
I	EC06	Hinds	Fortification St	Bailey Ave to I-55	1.77	Reconstruction to 3 Lanes, sidewalks
I	EC07	Hinds	Hampstead Blvd (Clinton)	US 80 to Springridge Rd	0.75	New 3 Lane
I	EC05	Hinds	Northside Dr	Pinehaven Rd to Cynthia Rd	1.74	Widen to 5 Lanes
I	EC02	Hinds	W County Line Rd	Brown St to US 51	0.50	RR Grade Crossing
I	EC52	Madison	I-55	MS 463 to Old Agency Rd	3.20	Widen to 6 lanes, Split Diamond Interchange
I	EC32	Madison	Hoy Rd	Rice Rd to N Old Canton Rd	1.12	Center Turn Lane
I	127	Madison	Lake Harbour Dr Extension	Highland Colony Pkwy to US 51	0.85	New 4 Lane divided roadway
I	227	Madison	Madison Ave	Highland Colony Pkwy to US 51	2.50	Widen to 4 Lanes Divided
I	130	Madison	Reunion Pkwy	Bozeman Rd to US 51	2.35	New 4 Lane divided roadway

Table 5-8

Test Network Scenario 2 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
I	124	Madison	I-55	@ Reunion Pkwy	--	New Interchange
I	EC51	Madison	I-55	@ Gluckstadt Rd	--	Interchange Improvement
I	122	Madison	MS 463	Reunion Pkwy to Madison Central Dr	2.62	Widen to 5 lanes
I	EC33	Madison	Hoy Rd	US 51 to Rice Rd	1.07	Widen to 5 lanes
I	EC36	Madison	Lake Harbour Dr	US 51 to Northpark Dr	1.60	Widen to 5 lanes
I	EC35	Madison	Old Canton Rd	Hoy Rd to St Augustine Dr	1.00	Center Turn Lane
I	EC53	Madison	MS 43-US 51 Connector	MS 43 to US 51	2.89	New 4 Lane divided roadway
I	121	Madison	Harbor Dr	Rice Rd to Lake Harbour Dr	0.35	Widen to 4 Lanes
I	132	Madison	Wheatley St Extension	Madison Ave to Ridgeland Ave	1.50	New 4 Lane divided roadway
I	EC85	Rankin	Erlich Rd	US 49 to MS 469	1.40	New 2 Lane realignment
I	EC64	Rankin	Erlich Rd Extension	US 49 to Williams Rd	0.60	New 2 Lane roadway
I	EC81	Rankin	I-20	Greenfield Rd to US 80 east of Brandon	4.70	Widen to 6 Lanes
I	176	Rankin	East Brandon Bypass	MS 18 to US 80	2.00	New 4 Lane divided roadway
I	267	Rankin	I-20	Pirates Cove Rd	--	New Interchange
I	180	Rankin	Old Brandon Rd	Bierdeman Rd to Pemberton Dr	1.10	Center Turn Lane

Table 5-8

Test Network Scenario 2 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
I	178	Rankin	Old Hwy 471	MS 25 to MS 43	2.00	Widen to 4 Lanes
I	177	Rankin	Old Whitfield Rd	MS 468 to MS 475	4.00	Center Turn Lane
I	173	Rankin	Pearl-Richland Intermodal Corridor	US 49 to Pearson Rd	2.15	New 4 Lane divided roadway
I	EC84	Rankin	US 49	Scales Area to Florence	7.26	Widen to 6 lanes
I	174	Rankin	Spillway Rd	Northshore Pkwy to Grants Ferry Rd	1.59	Widen to 5 lanes
I	161	Rankin	Crossgates Blvd	Old Brandon Rd to I-20	0.80	Reconstruct as 6-lane divided roadway
I	EC83	Rankin	MS 468	4th St to MS 475	3.10	Widen to 4 lanes
I	EC82	Rankin	MS 471	Grants Ferry RD to US 80	2.11	Widen to 5 lanes
I	EC62	Rankin	MS 477 (West Rankin Pkwy)	Flowood Dr to US 80	3.60	New 4 Lane divided roadway
I	EC63	Rankin	Old Fannin Rd	Flowood Corp Limits to Spillway Rd	2.00	Widen to 5 lanes
I	164	Rankin	Grants Ferry Pkwy	MS 471 to Trickham Bridge Rd	2.73	New 4 Lane divided roadway
I	EC61	Rankin	East Metro Corridor	Lakeland Dr (MS 25) to Old Brandon Rd	4.14	New 4 Lane divided roadway
I	361	Hinds /Rankin	Airport Pkwy	I-55 to MS 475 & MS 25	11.90	New 4/6 Lane roadway
II	204	Hinds	I-20	MS 18 (Robinson St)	--	Reconstruct interchange
II	203	Hinds	I-20	Clinton-Raymond Rd to MS 18	4.75	Widen to 6 Lanes

Table 5-8

Test Network Scenario 2 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
II	302	Hinds	I-220	Madison County line to US 80	8.54	Widen to 6 lanes
II	303	Hinds	I-55	Siwell Rd to Copiah County Line	10.47	Widen to 6 lanes
II	205	Hinds	I-55	I-20 to Siwell Rd	6.97	Widen to 6 Lanes
II	301	Hinds	Hanging Moss Rd	County Line Rd to Meadow Rd	1.82	Widen to 4 lanes
II	104	Hinds	Raymond Rd	Siwell Rd to McDowell Rd	2.55	Widen to 4 Lanes
II	304	Hinds	Robinson Rd	MS 18 to Raymond Rd	1.23	Widen to 4 lanes
II	306	Hinds	Woodrow Wilson Ave	Livingston Rd to I-55	1.90	Widen to 6 lanes
II	225	Madison	I-55	MS 22 to MS 463	10.67	Widen to 6 Lanes
II	328	Madison	I-220	I-55 to Hinds County Line	2.00	Widen to 6 lanes
II	226	Madison	McClellan Dr Extension	Highland Colony Pkwy to US 51	1.75	New 4 Lane roadway
II	235	Madison	Yandell Rd	I-55 to N Old Canton Rd	3.30	Realign and widen to 4/5 lanes divided
II	221	Madison	Bozeman Rd	Gluckstadt Rd to MS 463	3.20	Widen to 4 Lanes
II	229	Madison	Rice Rd	Hoy Rd to Old Canton Rd	4.13	Widen to 5 lanes
II	233	Madison	US 51	MS 16 to Weisenberger Rd	7.66	Widen to 4 lanes
II	222	Madison	Cox Ferry Rd	Railroad Ave to Cane Creek Rd (Flora)	1.97	New 2 Lane roadway

Table 5-8

Test Network Scenario 2 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
II	372	Rankin	Gunter Rd Extension	US 49 to Cleary Rd	2.90	New 2 Lane roadway
II	267	Rankin	Pirates Cove Rd Extension	I-20 to MS 468	2.00	New 2 Lane roadway
II	168	Rankin	Lakeland Dr (MS 25)	MS 475 to Grants Ferry Rd	4.92	Widen to 6 lanes
II	169	Rankin	Lakeland Dr (MS 25)	Grants Ferry Rd to MS 471	3.18	Widen to 6 lanes
II	371	Rankin	US 49	Erlich Rd to Star Rd	5.52	Widen to 6 lanes
II	269	Rankin	US 49	Main St (Florence) to Erlich Rd	0.90	Widen to 6 lanes
II	165	Rankin	Grants Ferry Rd	Spillway Rd to MS 25	1.00	Widen to 5 lanes
II	367	Rankin	MS 469	Monterey Rd to MS 468	4.00	Widen to 4 lanes
II	264	Rankin	Paige McDill Rd	Trickham Bridge Rd to US 80	1.03	Realign and widen to 4 lanes
III	206	Hinds	I-55	Lakeland Dr to Rankin County Line	3.36	Widen to 8 Lanes
III	201	Hinds	Beasley Rd	State St to I-55	0.60	Widen to 5 lanes
III	202	Hinds	Bullard St	Boling Dr to Woodrow Wilson Dr	1.20	Reconstruct 4-lane divided roadway
III	327	Madison	I-55	Green Acres Rd	--	New Interchange
III	131	Madison	US 51	Weisenberger Rd to Tisdale Rd	2.38	Widen to 5 lanes
III	329	Madison	Hoy Rd	Rice Rd to N Old Canton Rd	1.12	Widen to 5 lanes

Table 5-8

Test Network Scenario 2 Projects

Stage	Project ID	County	Route	Location	Length (miles)	Improvement
III	230	Madison	Rice Rd	US 51 to Old Canton Rd	1.56	Widen to 5 lanes
III	231	Madison	Ridgewood Rd	US 51 to Centre St	0.65	Widen to 5 lanes
III	232	Madison	South Wheatley St	Lake Harbour Dr to County Line Rd	1.01	Widen to 5 lanes
III	234	Madison	Weisenberger Rd	Gluckstadt Rd to US 51	0.79	Widen to 5 lanes
III	369	Rankin	I-20	@ Trickham Bridge Rd	--	New Interchange
III	271	Rankin	MS 468 (Pearl)	S Pearson Rd to MS 475	2.80	Widen to 4 lanes
III	167	Rankin	MS 475	Old Brandon Rd to I-20	1.33	Widen to 6 lanes
III	364	Rankin	Church St	Main St to Erlich Rd	1.16	Widen to 4 lanes
III	370	Rankin	Old Brandon Rd	MS 475 to Crossgates Blvd	2.00	Widen to 4 lanes
III	366	Rankin	Greenfield Rd	MS 468 to MS 18	3.22	Widen to 4 lanes
III	265	Rankin	Pearson Rd	Whitfield Rd (MS 468) to E Harper St	1.67	Widen to 4 lanes
III	272	Rankin	MS 18	Greenfield Rd to Star Rd	3.50	Widen to 4 lanes
III	263	Rankin	MS 18	Star Rd to Mohr Rd	3.42	Widen to 4 lanes
III	270	Hinds/ Rankin	US 80	State St to Pearson Rd	2.42	Widen to 6 Lanes
III	305/ 365	Hinds/ Rankin	Siwell Rd/Florence-Byram Rd	I-55 to Cleary Rd	5.25	Reconstruct as 4-lane toll road

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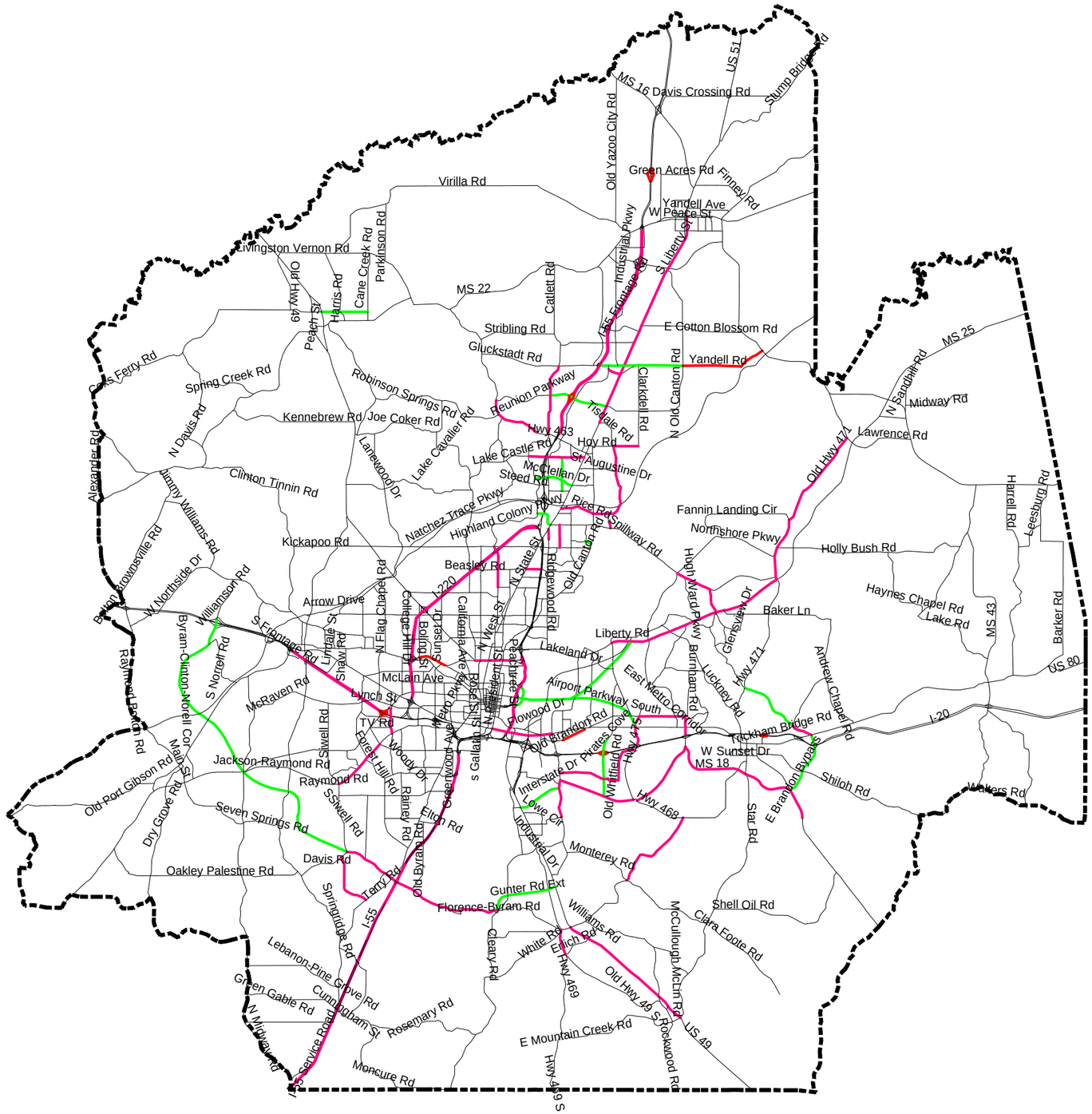
TRANSPORTATION PLAN
2035

Figure 5-10

Test Network Scenario 2 Projects



Legend

Map layers

- Roadway Network
- Study Area
- Other Changes
- Widening
- New Roadway

0 3 6 9

Miles

Scenario 2 Network

Source: MDOT, CMPDD NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

WilburSmith Associates

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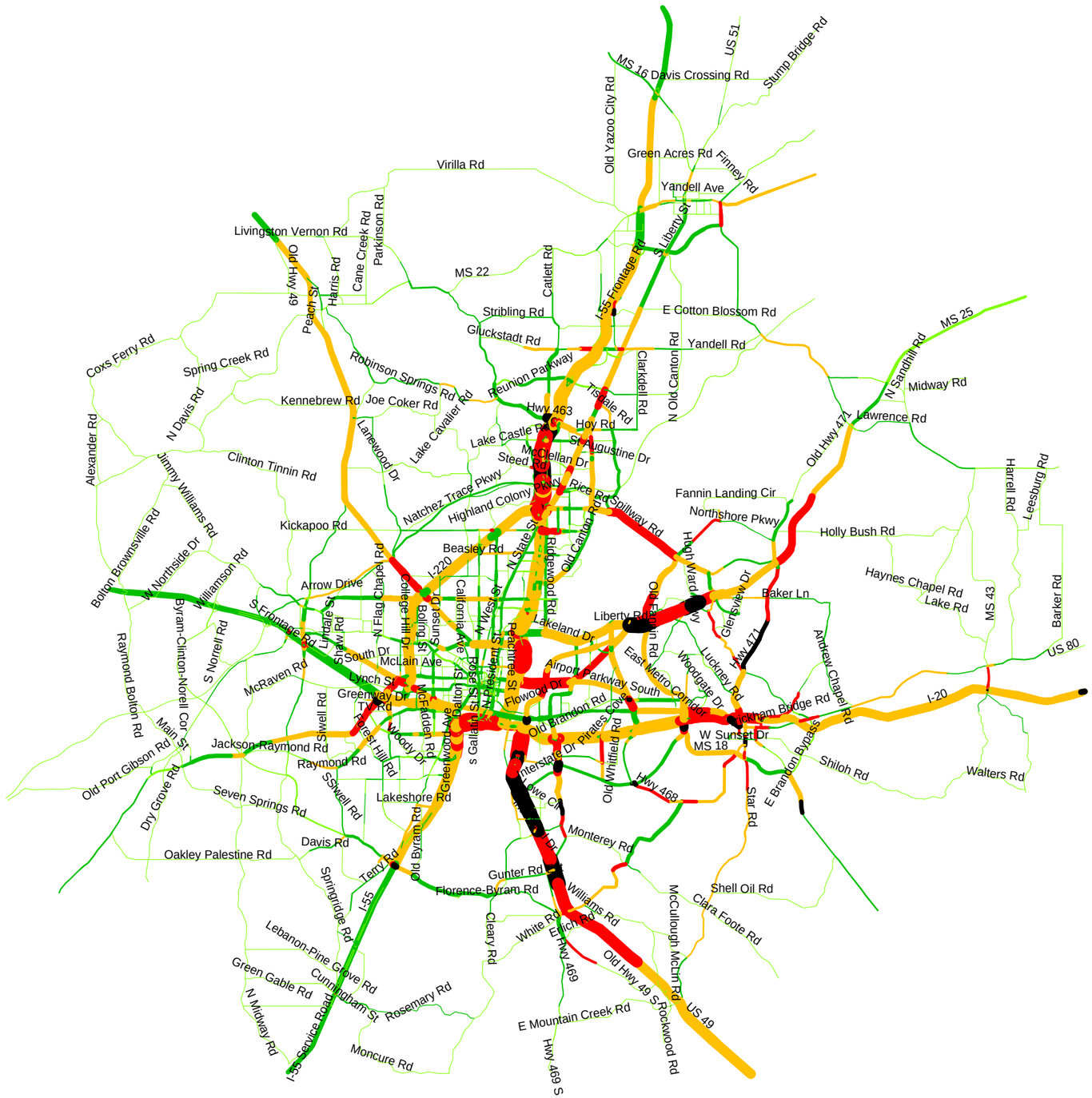
TRANSPORTATION PLAN
2035

Figure 5-11

Test Network Scenario 2
2035 Volume/Capacity



Legend

Volume/Capacity
- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2035 Volumes

75000 37500 18750

0 3 6 9

Miles

Scenario 2 Network

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

WilburSmith Associates

Summary of Alternative Scenario Analysis Results

A summary of the daily model results for the test network scenario 1, test network scenario 2, and E+C network is shown in Table 5-9.

Table 5-9

Alternative Scenario Analysis
Daily Model Results

Scenario	Vehicle Miles Travelled	Vehicle Hours Travelled	Vehicle Hours of Delay
EC 2015; Stage I	17,715,266.02	487,958.19	72,944.93
EC 2025; Stage II	20,288,744.37	583,107.38	107,579.27
EC 2035; Stage III	23,206,860.42	699,262.05	154,632.89
Scenario 1; Stage I	17,664,893.53	481,508.30	68,758.54
Scenario 1; Stage II	20,255,087.89	558,076.16	86,337.52
Scenario 1; Stage III	23,211,092.67	654,479.26	118,125.65
Scenario 2; Stage I	17,791,417.20	484,558.23	70,742.45
Scenario 2; Stage II	20,353,663.16	558,463.89	86,832.64
Scenario 2; Stage III	23,266,682.85	655,477.59	117,407.16

Chapter 6

Staged Improvement Program

1.6.1 Introduction

The Staged Improvement Program is a fiscally constrained list of transportation projects that collectively represent the Jackson Urbanized Area's planned future transportation network. Projects included in the adopted long-range transportation plan become eligible for federal and/or state funding assistance through programs such as Interstate Maintenance, National Highway System, Surface Transportation Program funding, etc. funded under Public Law 109-59: the "Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users" (SAFETEA-LU).

In developing this plan, the approach has been to identify transportation needs and to consider alternative ways of meeting those needs. In many cases additional study may be required in order to determine the best (i.e., the most effective and feasible) improvement alternative. Suggested improvements identified in the Staged Improvement Program in some cases are meant to convey the type of improvement that would seem to make the most sense based on currently available information. In other cases the suggested improvement covers a fairly broad range of potential solutions that should be considered as more detailed analysis and additional public opinion gathering activities are undertaken. This approach acknowledges our inability to avoid all future traffic congestion simply by building as much roadway capacity as the anticipated demand for travel would seem to require. It also recognizes the reality of induced demand, that is, additional roadway capacity inevitably generates additional traffic. One principle which has guided the development of this plan has been the idea that alternative travel options should be made available wherever possible, whether they are new or improved parallel routes or modal choices that serve the same origins and destinations. In some cases, where there is a projected need for additional roadway capacity, the preferred response may not be a wider facility but enhanced operational efficiency achieved through Transportation System Management (TSM), Travel Demand Management (TDM), or Intelligent Transportation System (ITS) strategies and access management techniques that serve to optimize the performance of a facility.

The Staged Improvement Program is a long-range plan for transportation improvements in the Jackson Urbanized Area that envisions implementation over the period spanning from 2011 until 2035. Recommended improvements are distributed among three stages: Stage I covers the short-term period from 2011 through 2015; Stage II corresponds to the intermediate period from 2016 through 2025; and Stage III is the long-range period from 2026 through 2035. The identification of a given project with a given stage was largely determined by two factors: (1) prioritization of projects based on projected future travel demand, as well as other mobility-related considerations (safety, emergency evacuation, access to developable areas, etc.); and (2) the anticipated availability of pro-rated funding by each county in the Jackson Urbanized Area MPO necessary to implement planned improvements.

1.6.2 Street and Highway Funding

As stated previously in Chapter 4 and assuming future funding for transportation improvements will be consistent with the level of expenditure indicated by recent historical data, an average of $43 million per year is forecast to be available in State and Federal funds for transportation improvements in the Jackson Urbanized Area MPO study area. By factoring in a 1% annual inflation rate, the total amount forecast to be available through 2035 is $1.23 billion. The annual amounts were then aggregated to the three time periods of the MTP resulting in the following levels of State and Federal funding to be available for each stage.

- STAGE I (2011-2015) - $221,536,648
- STAGE II (2016-2025) - $477,551,526
- STAGE III (2026-2035) - $527,513,981

1.6.3 Staged Improvement Program: Streets and Highways

1.6.3.1 Typical Project Cost Estimates

In order to develop a Staged Improvement Program consistent with the financial constraints imposed by the projected availability of funding described in section 6-2, implementation costs were projected for all proposed improvements. Cost estimates for some projects were available from MDOT or local public agencies. However, for most, it was necessary to develop new estimates. This effort began with cost estimates obtained from historic project costs from the Louisiana Department of Transportation and Development (LADOTD), MDOT, and the previously mentioned local public agencies. Where such construction estimates were not available, the team prepared order-of-magnitude cost estimates in 2010 dollars based on projects in the historic funding database. The typical construction cost estimates for the latter improvements are as shown in Table 6-1.

Table 6-1
Typical Project Cost by Improvement Type (2010 Dollars)

Improvement Type	Avg. Cost	Unit
New 4 Lane Freeway	$15,000,000	Mile
New 2 Lane Roadway	$5,000,000	Mile
New 4 Lane Arterial	$7,500,000	Mile
Interstate Widening	$8,500,000	Mile
Interstate Rehab	$1,750,000	Mile
Arterial Widening	$3,000,000	Mile
Center Turn Lane	$2,800,000	Mile
Reconstruction	$1,750,000	Mile
Overlay	$600,000	Mile
ITS	$350,000	Mile
New Bridge	$3,000,000	Each
Bridge Replacement	$1,800,000	Each
Traffic Signal	$1,000,000	Each
RR Crossing	$175,000	Each
Intersection Improvement	$750,000	Each
Interchange Improvement	$5,250,000	Each
New Interchange	$20,500,000	Each
Underpass	$10,000,000	Each
RR Overpass	$5,750,000	Each

Source: MDOT Historic Project Lettings 1991-2010, LADOTD Historic Project Lettings 1981-2008

Note: Costs include Construction, Engineering, Right-of-Way & Utilities

For projects included in Stage II and Stage III of the Plan, the typical cost calculated for each project was factored up by an annual rate of 2% to account for inflation. Since it is not possible to predict exactly which year in the Stage the project would be constructed, the inflation value for the mid-point of the Stage was used. For Stage II the rate is 1.22 and for Stage III it is 1.49. Application of these rates results in an opinion of probable cost for each project.

1.6.3.2 Stage I (2011-2015)

Stage I is planned for improvement in the years 2011 to 2015 as shown in Table 6-2. These projects are funded with local, State, and Federal funds. The planned improvements in Stage I are projected to cost **$1.162 billion** and represent improvements consisting of intersection improvements, roadway widening, new roadway construction, new bridge construction, bridge replacements, roadway maintenance, enhancements, and corridor preservation projects. Stage I projects are shown in Figure 6-1.

2015 link Volume/Capacity (VOC) maps with Stage I projects are shown in Figure 6-2 and Figure 6-3.

Table 6-2
Jackson Urbanized Area MTP 2035
Staged Improvement Program
Stage I (2011-2015)

County	Project #	Route	Location	Improvement	Length (miles)	Funding Source *	Stage I Est. Cost
Hinds	101	Byram-Clinton-Norrell Corridor	I-20 to I-55	New 4 Lane	18.30	Local	$74,831,206
Hinds	EC08	Capitol St	State St to Robinson St	Reconstruction, convert to two way operation	0.60	Local	$16,536,000
Hinds	EC09	Jessie Mosley Dr	High St to Farish St	New 2 Lane	0.13	Local	$719,210
Hinds	--	Little "J" Bike Trail	Valley St to Ellis Ave & US 80	Pedestrian/Bicycle Trail	--	Local	$1,020,000
Hinds	EC01	Lynch St	Wiggins St to US 80	Reconstruction, sidewalks, bike path	2.70	Local	$4,885,192
Hinds	--	Northside Dr	Tanglewood Dr	Intersection Improvements	0.50	Local	$2,533,400
Hinds	EC03	Pinehaven Rd	Northside Dr to 400' north of Berry Dr	Widen to 5 Lanes, sidewalks, bike path	1.22	Local	$7,067,102
Hinds	--	Woodrow Wilson Dr	I-55 to Mill St	Overlay	1.36	Local	$1,625,125
Hinds	--	Pascagoula St	I-55 to Mill St	Overlay	1.25	NHS	$1,314,372
Hinds	--	Pearl St	I-55 to Mill St	Overlay	1.25	NHS	$1,314,372
Hinds	--	Mill St	Woodrow Wilson Dr to Pascagoula St	Overlay	1.90	NHS/Local	$1,760,145
Hinds	102	Gary Rd	Terry Rd to Davis Rd	Widen to 4 Lanes	2.50	State Aid/County	$20,223,000
Hinds	EC06	Fortification St	Bailey Ave to I-55	Reconstruction to 3 Lanes, sidewalks	1.77	STP>200K	$15,254,100
Hinds	--	Fortification St	Five intersections	Signalization	--	STP>200K	$550,800
Hinds	EC07	Hampstead Blvd (Clinton)	US 80 to Springridge Rd	New 3 Lane	0.75	STP>200K	$4,145,571

Table 6-2
Jackson Urbanized Area MTP 2035
Staged Improvement Program
Stage I (2011-2015)

County	Project #	Route	Location	Improvement	Length (miles)	Funding Source *	Stage I Est. Cost
Hinds	EC05	Northside Dr	Pinehaven Rd to Cynthia Rd	Widen to 5 Lanes	1.74	STP>200K	$6,728,800
Hinds	--	Palestine Rd (Raymond)	Port Gibson Rd to Dry Grove St	Overlay	0.17	STP>200K	$153,000
Hinds	--	Ridgewood Rd	Old Canton Rd to Sheffield Dr	Intersection Improvements	0.30	STP>200K	$518,888
Hinds	EC02	W County Line Rd	Brown St to US 51	RR Grade Crossing	0.50	STP>200K	$15,870,400
Hinds	--	Cunningham Ave (Terry)	I-55 to Railroad Ave	Overlay	0.70	STP>200K, ARRA	$475,652
Madison	EC52	I-55	MS 463 to Old Agency Rd	Widen to 6 lanes, New Interchange	3.20	IM	$48,724,650
Madison	EC32	Hoy Rd	Rice Rd to N Old Canton Rd	Center Turn Lane	1.12	Local	$6,949,463
Madison	127	Lake Harbour Dr Extension	Highland Colony Pkwy to US 51	New 4 Lane	0.85	Local	$10,600,000
Madison	227	Madison Ave	Highland Colony Pkwy to US 51	Widen to 4 Lanes Divided	2.50	Local	$12,000,000
Madison	130	Reunion Pkwy	Bozeman Rd to US 51	New 4 Lane	2.35	Local	$16,000,000
Madison	124	I-55	@ Reunion Pkwy	New Interchange	--	Local, ARRA	$41,000,000
Madison	EC51	I-55	@ Gluckstadt Rd	Interchange Improvement	--	NHS	$37,128,000
Madison	122	MS 463	Reunion Pkwy to Madison Central Dr	Widen to 5 lanes	2.62	STP Flex	$16,233,726
Madison	EC33	Hoy Rd	US 51 to Rice Rd	Widen to 5 lanes		STP>200K	$14,055,600
Madison	EC36	Lake Harbour Dr	US 51 to Northpark Dr	Widen to 5 lanes	1.60	STP>200K	$17,034,160
Madison	EC35	Old Canton Rd	Hoy Rd to St Augustine Dr	Center Turn Lane	1.00	STP>200K	$4,836,000

Table 6-2
Jackson Urbanized Area MTP 2035
Staged Improvement Program
Stage I (2011-2015)

County	Project #	Route	Location	Improvement	Length (miles)	Funding Source *	Stage I Est. Cost
Madison	--	Pear Orchard Rd	@ Rice Rd	Signalization	--	STP>200K	$432,000
Madison	--	Ridgewood Rd	@ Centre St	Signalization	--	STP>200K	$324,000
Madison	EC53	MS 43-US 51 Connector	MS 43 to US 51	New 4 Lane	2.89	TIF/PID	$24,684,000
Madison	121	Harbor Dr	Rice Rd to Lake Harbour Dr	Widen to 4 Lanes	0.35	TIF/PID/City	$2,725,840
Madison	132	Wheatley St Extension	Madison Ave to Ridgeland Ave	New 4 Lane	1.50	TIF/PID/City	$10,608,000
Rankin	EC85	Erlich Rd	US 49 to MS 469	New 2 Lane realignment	1.40	County	$2,228,665
Rankin	EC64	Erlich Rd Extension	US 49 to Williams Rd	New 2 Lane roadway	0.60	County	$1,242,000
Rankin	EC81	I-20	Greenfield Rd to US 80 east of Brandon	Widen to 6 Lanes	4.70	IM	$21,573,000
Rankin	176	East Brandon Bypass	MS 18 to US 80	New 4 Lane	2.00	Local	$27,719,000
Rankin	--	Gunter Rd Extension	US 49 to Cleary Rd	New 2 Lane (PE only)	2.90	Local	$637,500
Rankin	--	Hwy 149 (Richland)	@ KCS Railroad	Bridge Replacement	--	Local	$2,438,000
Rankin	267	I-20	Pirates Cove Rd	New Interchange	--	Local	$5,300,000
Rankin	180	Old Brandon Rd	Bierdeman Rd to Pemberton Dr	Center Turn Lane	1.10	Local	$3,498,000
Rankin	178	Old Hwy 471	MS 25 to MS 43	Widen to 4 Lanes	2.00	Local	$700,000
Rankin	177	Old Whitfield Rd	MS 468 to MS 475	Center Turn Lane	4.00	Local	$15,900,000
Rankin	173	Pearl-Richland Intermodal Corridor	US 49 to Pearson Rd	New 4 Lane	2.15	Local	$13,467,300
Rankin	EC84	US 49	Scales Area to Florence	Widen to 6 lanes	7.26	NHS	$36,400,000

Table 6-2
Jackson Urbanized Area MTP 2035
Staged Improvement Program
Stage I (2011-2015)

County	Project #	Route	Location	Improvement	Length (miles)	Funding Source *	Stage I Est. Cost
Rankin	174	Spillway Rd	Northshore Pkwy to Grants Ferry Rd	Widen to 5 lanes	1.59	Pearl River Valley/County	$12,852,000
Rankin	161	Crossgates Blvd	Old Brandon Rd to I-20	Reconstruct as 6-lane divided roadway	0.80	State Aid/County	$5,022,000
Rankin	EC83	MS 468	4th St to MS 475	Widen to 4 lanes	3.10	STP Flex	$17,002,400
Rankin	--	MS 468 (Pearl)	Deeb St to MS 475	Widen to 4 lanes (ROW only)	2.80	STP Flex	$4,576,000
Rankin	EC82	MS 471	Grants Ferry RD to US 80	Widen to 5 lanes	2.11	STP Flex	$29,848,000
Rankin	EC62	MS 477 (West Rankin Pkwy)	Flowood Dr to US 80	New 4 Lane	3.60	STP Flex	$18,360,000
Rankin	--	Brooks Ave (Pelahatchie)	MS 43 to US 80	Overlay	1.17	STP>200K	$765,000
Rankin	--	College St	@ US 80	Signalization	--	STP>200K	$148,800
Rankin	EC63	Old Fannin Rd	Flowood Corp Limits to Spillway Rd	Widen to 5 lanes	2.00	STP>200K	$11,297,937
Rankin	--	Williams Rd (Florence)	MS 469 to Corp Limits	Overlay	0.86	STP>200K	$1,027,079
Rankin	164	Grants Ferry Pkwy	MS 471 to Trickham Bridge Rd	New 4 Lane	2.73	TIF/PID	$20,088,000
Rankin	EC61	East Metro Corridor	Lakeland Dr (MS 25) to Old Brandon Rd	New 4 Lane	4.14	TIF/PID/ County	$14,040,000
Hinds/ Rankin	361	Airport Pkwy	I-55 to MS 475 & MS 25	New 4/6 Lane	11.90	Toll	$351,900,000
Rankin/ Madison	--	Bob Anthony Pkwy	Northshore Pkwy to Harbor Dr	Overlay	3.60	Local	$800,000
Rankin/ Madison	--	Harbor Walk	Post Rd to Northshore Pkwy	Pedestrian/Bicycle Trail	4.90	Local	$1,255,188

Table 6-2
Jackson Urbanized Area MTP 2035
Staged Improvement Program
Stage I (2011-2015)

County	Project #	Route	Location	Improvement	Length (miles)	Funding Source *	Stage I Est. Cost
Rankin/ Madison	--	Bob Anthony Pkwy	Grants Ferry Rd to Breakers Ln	Safety Project	5.00	STP>200K	$406,250
Study Area		Various	Various	Bridge Replacements	--	Bridge Replacement	$31,800,000
Study Area		Various	Various	Enhancements	--	STPENH	$10,600,000
Study Area		Various	Various	Maintenance	--	State Funded	$53,000,000
Study Area		Various	Various	Safety Projects	--	Various	$5,300,000
						Stage I Program, Estimated Total Cost	**$1,162,053,892**

*Potential Funding Sources:
TIF – Tax Increment Financing
PID – Public Improvement District
ARRA – American Recovery and Reinvestment Act
STP>200K – Federal Surface Transportation Program funds allocated to metropolitan areas with population greater than 200,000
STP Flex – STP funds apportioned to states and administered by the State DOT
STPENH – Enhancement Program
NHS – National Highway System
IM – Interstate Maintenance
State Aid – Mississippi State Aid Program

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TRANSPORTATION PLAN
2035

Figure 6-1

Stage I (2011-2015) Projects

Legend

Improvement

- Widen Add Lanes
- New Roadway
- Reconstruction
- Center Turn Lane
- 1 Way to 2 Way
- Interchange Improvement
- New Interchange

Source: NSI

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

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TRANSPORTATION PLAN
2035

Figure 6-2

Stage I Volume/Capacity

Legend

Volume/Capacity

- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2015 Volumes

75000 37500 18750

0 3 6 9

Miles

Stage I Network

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

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2035

Figure 6-3
Stage I Volume/Capacity
Downtown Jackson

Legend

Volume/Capacity
- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2015 Volumes

75000 37500 18750

0 .33 .67 1

Miles

Stage I Network

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

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1.6.3.3 Stage II (2016-2025)

Stage II is planned for improvement in the years 2016 to 2025 as shown in Table 6-3. The planned improvements in Stage II are projected to cost **$667.8 million** and represent improvements consisting of intersection improvements, roadway widening, new roadway construction, new bridge construction, bridge replacements, roadway maintenance, enhancements, and corridor preservation projects. Stage II projects are shown in Figure 6-4.

2025 link Volume/Capacity (VOC) map with Stage I and Stage II projects is shown in Figure 6-5 and Figure 6-6.

Table 6-3
Jackson Urbanized Area MTP 2035
Staged Improvement Program
Stage II (2016-2025)

County	Project #	Route	Location	Improvement	Length (miles)	Funding Source*	Stage II Est. Cost
Hinds	204	I-20	MS 18 (Robinson St)	Reconstruct interchange	--	IM	$24,379,888
Hinds	203	I-20	Clinton-Raymond Rd to MS 18	Widen to 6 Lanes	4.75	IM	$20,844,805
Hinds	302	I-220	Madison County line to US 80	Widen to 6 lanes	8.54	IM	$37,423,129
Hinds	303	I-55	Siwell Rd to Copiah County Line	Widen to 6 lanes	10.47	IM	$45,834,190
Hinds	205	I-55	I-20 to Siwell Rd	Widen to 6 Lanes	6.97	NHS	$30,474,860
Hinds	301	Hanging Moss Rd	County Line Rd to Meadow Rd	Widen to 4 lanes	1.82	STP>200K	$10,361,453
Hinds	104	Raymond Rd	Siwell Rd to McDowell Rd	Widen to 4 Lanes	2.55	STP>200K	$14,932,682
Hinds	304	Robinson Rd	MS 18 to Raymond Rd	Widen to 4 lanes	1.23	STP>200K	$7,009,218
Hinds	306	Woodrow Wilson Ave	Livingston Rd to I-55	Widen to 6 lanes	1.90	STP>200K	$13,530,838
Madison	225	I-55	MS 22 to MS 463	Widen to 6 Lanes	10.67	IM	$46,687,486
Madison	328	I-220	I-55 to Hinds County Line	Widen to 6 lanes	2.00	IM	$8,776,760
Madison	226	McClellan Dr Extension	Highland Colony Pkwy to US 51	New 4 Lane	1.75	Local	$14,627,933
Madison	235	Yandell Rd	I-55 to N Old Canton Rd	Realign and widen to 4/5 lanes divided	3.30	Local	$22,185,698
Madison	221	Bozeman Rd	Gluckstadt Rd to MS 463	Widen to 4 Lanes	3.20	STP>200K	$14,262,235
Madison	229	Rice Rd	Hoy Rd to Old Canton Rd	Widen to 5 lanes	4.13	STP>200K	$23,465,643
Madison	233	US 51	MS 16 to Weisenberger Rd	Widen to 4 lanes	7.66	STP Flex	$43,518,101

Table 6-3
Jackson Urbanized Area MTP 2035
Staged Improvement Program
Stage II (2016-2025)

County	Project #	Route	Location	Improvement	Length (miles)	Funding Source*	Stage II Est. Cost
Madison	222	Cox Ferry Rd	Railroad Ave to Cane Creek Rd (Flora)	New 2 Lane	1.97	TIF/ PID/ County/ City	$4,632,179
Rankin	372	Gunter Rd Extension	US 49 to Cleary Rd	New 2 Lane	2.90	Local	$6,826,369
Rankin	267	Pirates Cove Rd Extension	I-20 to MS 468	New 2 Lane	2.00	Local	$16,639,274
Rankin	168	Lakeland Dr (MS 25)	MS 475 to Grants Ferry Rd	Widen to 6 lanes	4.92	NHS	$28,890,168
Rankin	169	Lakeland Dr (MS 25)	Grants Ferry Rd to MS 471	Widen to 6 lanes	3.18	NHS	$18,650,615
Rankin	371	US 49	Erlich Rd to Star Rd	Widen to 6 lanes	5.52	NHS	$24,136,090
Rankin	269	US 49	Main St (Florence) to Erlich Rd	Widen to 6 lanes	0.90	NHS	$5,302,626
Rankin	165	Grants Ferry Rd	Spillway Rd to MS 25	Widen to 5 lanes	1.00	STP>200K	$5,680,514
Rankin	367	MS 469	Monterey Rd to MS 468	Widen to 4 lanes	4.00	STP Flex	$22,917,095
Rankin	264	Paige McDill Rd	Trickham Bridge Rd to US 80	Realign and widen to 4 lanes	1.03	TIF/ PID/ County/ City	$5,851,173
Study Area		Various	Various	Bridge Replacements	--	Bridge Replacement	$36,569,833
Study Area		Various	Various	Overlay	--	State Funded	$34,131,844
Study Area		Various	Various	Maintenance		State Funded	$60,949,721
Study Area		Various	Various	Enhancements	--	STPENH	$12,189,944
Study Area		Various	Various	Safety Projects	--	Various	$6,094,972
						Stage II Program, Estimated Total Cost	**$667,777,333**

*Potential Funding Sources:
TIF – Tax Increment Financing
PID – Public Improvement District
ARRA – American Recovery and Reinvestment Act
STP>200K – Federal Surface Transportation Program funds allocated to metropolitan areas with population greater than 200,000
STP Flex – STP funds apportioned to states and administered by the State DOT
STPENH – Enhancement Program
NHS – National Highway System
IM – Interstate Maintenance
State Aid – Mississippi State Aid Program

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2035

Figure 6-4

Stage II (2016-2025) Projects

Legend

Improvement

- Widen Add Lanes
- New Roadway
- Center Turn Lane
- Interchange Improvement

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

WilburSmith Associates

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TRANSPORTATION PLAN
2035

Figure 6-5

Stage II Volume/Capacity

Legend

Volume/Capacity

- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2025 Volumes

75000 37500 18750

0 3 6 9

Miles

Stage II Network

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

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URBANIZED AREA MPO
TRANSPORTATION PLAN
2035

Figure 6-6
Stage II Volume/Capacity
Downtown Jackson

Legend

Volume/Capacity
- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2025 Volumes

75000 37500 18750

0 .33 .67 1

Miles

Stage II Network

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

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1.6.3.4 Stage III (2026-2035)

Stage III is planned for improvement in the years 2026 to 2035 as shown in Table 6-4. The planned improvements in Stage III are projected to cost **$536.4 million** and represent improvements consisting of intersection improvements, roadway widening, new roadway construction, new bridge construction, bridge replacements, roadway maintenance, enhancements, and corridor preservation projects. Stage III projects are shown in Figure 6-7.

2035 link Volume/Capacity (VOC) map with Stage I, Stage II, and Stage III projects is shown in Figure 6-8 and Figure 6-9.

Table 6-4
Jackson Urbanized Area MTP 2035
Staged Improvement Program
Stage III (2026-2035)

County	Project #	Route	Location	Improvement	Length (miles)	Funding Source*	Stage III Est. Cost
Hinds	206	I-55	Lakeland Dr to Rankin County Line	Widen to 8 Lanes	3.36	NHS	$37,445,874
Hinds	201	Beasley Rd	State St to I-55	Widen to 5 lanes	0.60	STP>200K	$3,269,084
Hinds	202	Bullard St	Boling Dr to Woodrow Wilson Dr	Reconstruct 4-lane divided	1.20	STP>200K	$6,538,169
Madison	327	I-55	Green Acres Rd	New Interchange	--	NHS	$30,461,922
Madison	131	US 51	Weisenberger Rd to Tisdale Rd	Widen to 5 lanes	2.38	STP Flex	$16,494,016
Madison	329	Hoy Rd	Rice Rd to N Old Canton Rd	Widen to 5 lanes	1.12	STP>200K	$6,092,384
Madison	230	Rice Rd	US 51 to Old Canton Rd	Widen to 5 lanes	1.56	STP>200K	$10,847,416
Madison	231	Ridgewood Rd	US 51 to Centre St	Widen to 5 lanes	0.65	STP>200K	$4,606,437
Madison	232	South Wheatley St	Lake Harbour Dr to County Line Rd	Widen to 5 lanes	1.01	STP>200K	$7,058,250
Madison	234	Weisenberger Rd	Gluckstadt Rd to US 51	Widen to 5 lanes	0.79	STP>200K	$5,498,005
Rankin	369	I-20	@ Trickham Bridge Rd	New Interchange	--	NHS	$30,461,922
Rankin	271	MS 468 (Pearl)	S Pearson Rd to MS 475	Widen to 4 lanes	2.80	STP Flex	$19,465,911
Rankin	167	MS 475	Old Brandon Rd to I-20	Widen to 6 lanes	1.33	STP Flex	$9,510,063
Rankin	364	Church St	Main St to Erlich Rd	Widen to 4 lanes	1.16	STP>200K	$8,024,116
Rankin	370	Old Brandon Rd	MS 475 to Crossgates Blvd	Widen to 4 lanes	2.00	STP>200K	$13,819,311
Rankin	366	Greenfield Rd	MS 468 to MS 18	Widen to 4 lanes	3.22	STP>200K	$22,289,211
Rankin	265	Pearson Rd	Whitfield Rd (MS 468) to E Harper St	Widen to 4 lanes	1.67	STP>200K	$11,590,390

Table 6-4
Jackson Urbanized Area MTP 2035
Staged Improvement Program
Stage III (2026-2035)

County	Project #	Route	Location	Improvement	Length (miles)	Funding Source*	Stage III Est. Cost
Rankin	272	MS 18	Greenfield Rd to Star Rd	Widen to 4 lanes	3.50	STP Flex	$24,220,943
Rankin	263	MS 18	Star Rd to Mohr Rd	Widen to 4 lanes	3.42	STP Flex	$23,775,158
Hinds/ Rankin	270	US 80	State St to Pearson Rd	Widen to 6 Lanes	2.42	STP Flex	$19,317,316
Hinds/ Rankin	305/365	Siwell Rd/Florence-Byram Rd	I-55 to Cleary Rd	Reconstruct as 4-lane toll road	5.25	Tolls	$42,852,494
Study Area		Various	Various	Bridge Replacements	--	Bridge Replacement	$44,578,422
Study Area		Various	Various	Overlay	--	State Funded	$41,606,527
Study Area		Various	Various	Maintenance	--	State Funded	$74,297,370
Study Area		Various	Various	Enhancements	--	STPENH	$14,859,474
Study Area		Various	Various	Safety Projects	--	Various	$7,429,737
						Stage III Program, Estimated Total Cost	**$536,409,922**

*Potential Funding Sources:
TIF – Tax Increment Financing
PID – Public Improvement District
ARRA – American Recovery and Reinvestment Act
STP>200K – Federal Surface Transportation Program funds allocated to metropolitan areas with population greater than 200,000
STP Flex – STP funds apportioned to states and administered by the State DOT
STPENH – Enhancement Program
NHS – National Highway System; IM – Interstate Maintenance; State Aid – Mississippi State Aid Program

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TRANSPORTATION PLAN
2035

Figure 6-7

Stage III (2026-2035) Projects

Legend

Improvement
- Widen Add Lanes
- New Roadway
- New Interchange

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

WilburSmith Associates

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TRANSPORTATION PLAN
2035

Figure 6-8

Stage III Volume/Capacity

Legend

Volume/Capacity

- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2035 Volumes

75000 37500 18750

0 3 6 9

Miles

Stage III Network

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

WilburSmith

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TRANSPORTATION PLAN
2035

Figure 6-9
Stage III Volume/Capacity
Downtown Jackson

Legend

Volume/Capacity
- 0.00 to 0.25
- 0.25 to 0.50
- 0.50 to 0.75
- 0.75 to 1.00
- 1.00 to 10.00

2035 Volumes

75000 37500 18750

0 .33 .67 1

Miles

Stage III Network

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

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In Association With:

WilburSmith Associates

1.6.3.5 Vision Plan / Unfunded Needs

The previous sections have addressed Stages 1, 2, and 3's transportation improvements with identified funding sources; however, there are many other transportation improvements that are needed. The Vision Plan identifies those necessary but unfunded transportation improvements.

The funded transportation improvements represent the best combination of transportation improvements within available funding to address existing transportation deficiencies. The remaining unfunded transportation improvements are no less important or effective; they just cannot be accommodated within the financially constrained budget.

Delayed funding for a transportation improvement project may be the result of the project's size, cost, design complexity, acquisition difficulties, jurisdictional concerns, and/or environmental concerns. A project may be delayed because its efficiency is minimized until other projects are completed or it does not alleviate existing transportation deficiencies that will only be exacerbated over time.

The remaining unfunded transportation improvements are included in the Vision Plan so that they can be a constant reminder of future needs and annually re-analyzed to determine if adjustments or changes are needed. The extent and distribution of the network improvements included in the Vision Plan are depicted in Figure 6-10 and the vision projects are shown in the Table 6-5. Funding and implementation of the Vision Plan will have tremendous impact on the transportation network of the community. As the community continues to grow and re-define itself, regular and routine review of the Vision Plan is necessary to respond to changes.

Table 6-5
Jackson Urbanized Area MTP 2035
Vision Needs

County	Project #	Route	Location	Improvement	Length (miles)	2010 Est. Cost
Hinds	409	Byram Town Center Blvd	Byram Pkwy to Terry Rd	New 4 Lane	0.32	$2,150,000
Hinds	411	Gary Dr Ext	Gary Rd to Henderson Rd Ext	New 4 Lane	0.78	$5,315,000
Hinds	410	Gary Rd Ext	Terry Rd to Jackson Freeway	New 4 Lane	0.48	$3,275,000
Hinds	404	Greenway Pkwy	Jackson West Pkwy to Robinson Rd Ext	New 4 Lane, Widen to 4 Lanes	2.90	$19,800,000
Hinds	408	Henderson Rd Ext	Siwell Rd to Byram Pkwy	New 4 Lane	1.31	$9,000,000
Hinds	407	Jackson Freeway SW	I-55 to I-20	New Freeway	21.57	$324,000,000
Hinds	402	Jackson West Pkwy	Clinton Blvd to McRaven Rd	New 4 Lane	3.16	$21,500,000
Hinds	403	Jackson West Pkwy	I-20	New Interchange	0.97	$20,500,000
Hinds	405	Metrocenter South Pkwy	Lynch St to Robinson Rd Ext	New 4 Lane and bridge over I-20	0.60	$9,850,000
Hinds	401	Williamson Rd	Pinehaven Rd to Arrow Dr	New 4 Lane	1.87	$12,750,000
Hinds	412	Methodist Home Rd	I-220 to Northside Dr	Widen to 4 Lanes	1.00	$4,700,000
Hinds	413	I-220	Methodist Home Rd	New Interchange	--	$20,500,000
Hinds/ Rankin	406	Jackson Freeway SE	US 49 to I-55	New Freeway	12.41	$186,000,000
Madison	321	East Sowell Rd	N Old Canton Rd to MS 43	New 4 Lane	2.51	$17,100,000
Madison	322	Endris Rd Extension	N Old Canton Rd to Rankin Rd	New 4 Lane	4.65	$31,700,000
Madison	324	Green Acres Rd	US 51 to King Ranch Rd	Widen to 4 Lanes	1.74	$8,100,000

Table 6-5
Jackson Urbanized Area MTP 2035
Vision Needs

County	Project #	Route	Location	Improvement	Length (miles)	2010 Est. Cost
Madison	323	Green Acres Rd Extension	US 51 to MS 16	New 4 Lane	3.69	$25,100,000
Madison	325	Green Acres Rd Extension	King Ranch Rd to Heindl Rd	New 4 Lane	2.00	$13,600,000
Madison	326	Hart Rd	Rankin Rd to MS 16	Widen to 4 Lanes	2.73	$12,750,000
Madison	431	Welch Farms Rd	MS 463 to Madison Ave	New 4 Lane	0.70	$4,800,000
Madison	432	Steed St Ext	Sunnybrook Rd to Wheatley St	New 3 Lane	0.50	$950,000
Rankin	461	US 49 Spur	US 49 to I-20	New Freeway	9.71	$145,750,000
Rankin	170	Main St (MS 469 - Florence)	Old Hwy 49 to US 49	Widen to 5 lanes	0.50	$2,400,000
Rankin	368	MS 475	I-20 to MS 468	Widen to 6 lanes	2.50	$14,500,000
Rankin	172	Old Hwy 49	US 80 to US 49	Widen to 4 lanes	2.77	$12,900,000
Rankin	266	Pearson Rd-Monterey Rd	East Harper St to US 49	Widen to 4 lanes	2.24	$10,450,000
Rankin	268	Trickham Bridge Rd	Paige McDill Rd to US 80	Widen to 5 lanes	1.84	$8,600,000
Rankin	462	Farmington Rd Ext	Old Fannin Rd to MS 25	New 2 Lane	3.50	$17,500,000
Rankin	463	N Flowood Dr Ext	MS 468 to MS 475	New 4 Lane	0.90	$6,125,000
Rankin	464	Petros Rd	Pearson Rd to MS 469 w/Interchange at US 49 Spur	New 4 Lane	5.30	$56,500,000
Rankin/ Madison	433	MS 43 Relocation	MS 25 to I-55	New Freeway	17.53	$263,000,000
				Unfunded Needs, Estimated Total Cost		**$1,291,165,000**

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2035

Figure 6-10

Vision Projects

Legend

Improvement

- Widen Add Lanes
- New Roadway
- New Freeway
- New Interchange

Source: NSI

N W E S

Prepared For:

MDOT Mississippi Department of Transportation

CMPDD

Prepared By:

NEEL-SCHAFFER Solutions you can build upon

In Association With:

WilburSmith Associates

1.6.3.6 Summary of Plan Costs and Revenue

Table 6-6 summarizes the project costs and forecast State and Federal revenues for implementing the Plan.

Table 6-6
Jackson Urbanized Area MTP 2035
Staged Improvement Program Summary *
2011 – 2035

	Stage I 2011 - 2015	Stage II 2016 - 2025	Stage III 2026 - 2035	Total 2011 - 2035
Estimated Project Costs				
Estimated Cost of All Projects	$1,162,053,892	$667,777,333	$537,152,895	$2,366,984,120
Estimated Cost of State & Federal Projects	$383,906,052	$413,068,449	$494,300,401	$1,291,274,902
Estimated State & Federal Funding Availability	$221,536,648	$477,551,526	$527,513,981	$1,226,602,154
			Vision Needs	**$1,181,040,000**
			Total Needs Plan	**$3,548,024,120**

* : Annual Inflation Factors - 2% on Project Cost, 1% on Funding Availability

1.6.4 Financial Constraint

The anticipated State and Federal street and highway funding for the plan period (2011 – 2035) was calculated to be $1.227 billion. The estimated total cost of the State and Federal funded street and highway improvements as identified in the staged improvement program of the plan is $1.297 billion. Although the cost of the projects is more than the forecast funding, it is within acceptable limits of over programming. Therefore, the Jackson Urbanized Area MTP 2035 is financially constrained.

Appendix

Appendix A

Glossary

Glossary

3-C Process – Comprehensive, Cooperative and Continuing Urban Transportation Planning

ADT – Average Daily Traffic

CBD – Central Business District

CAC – Citizen Advisory Committee

Demo – Federal Demonstration Fund

FHWA – Federal Highway Administration

FTA – Federal Transit Administration

GIS – Geographic Information System

HCM – Highway Capacity Manual

ISTEA – Intermodal Surface Transportation Efficiency Act of 1991

ITC – Intermodal Technical Committee

ITS – Intelligent Transportation System

JATRAN – Jackson Transit System

LADOTD – Louisiana Department of Transportation and Development

MDOT – Mississippi Department of Transportation

MPO – Metropolitan Planning Organization

MPPC – Metropolitan Planning Policy Committee

MTP – Metropolitan Transportation Plan

MULTIPlan – Mississippi Statewide Transportation Plan

NHS – National Highway System

NSI – Neel-Schaffer, Inc.

SAFETEA-LU – The Safe, Accountable, Flexible, Efficient Transportation Equity Act – Legacy For Users

SIC – Standard Industrial Classification

STP – Surface Transportation Program

TEA-21 – Transportation Equity Act for the 21st Century

TIP – Transportation Improvement Program

TRANPLAN – Transportation Planning Computer Modeling Software

TransCAD – Transportation Planning Computer Modeling Software

VOC – Volume/Capacity

Appendix B

CONSIDERATION AND RESPONSE TO INPUT RECEIVED DURING THE DEVELOPMENT OF THE LONG-RANGE TRANSPORTATION PLAN

APPENDIX B

VOLUME I: STREETS AND HIGHWAYS PLAN:

2035 JACKSON URBANIZED AREA TRANSPORTATION PLAN

CONSIDERATION AND RESPONSE TO INPUT RECEIVED

DURING THE DEVELOPMENT OF THE LONG-RANGE TRANSPORTATION PLAN

Section 450.316 (a) (1) (vi) of the final Federal Highway Administration and Federal Transit Administration transportation planning regulations that became effective March 16, 2007, require that the MPO demonstrate "—explicit consideration and response to public input received ***during the development*** (emphasis added) of the metropolitan (urbanized area) transportation plan and the TIP—." Section 105 of the ***Participation Plan for the Jackson Metropolitan Area Transportation Planning Process***, adopted March 27, 2008, states that the MPO will use the following strategies and procedures to accomplish this:

105.01 **Urbanized Area Transportation Plan**:

(a) Initial Public Hearings for Plan Updates: Long-range Urbanized Area Transportation Plans must be updated every five years in air quality attainment areas such as the Jackson Metropolitan Planning Area. Public hearings will be held ***at the beginning*** of the plan update process to seek input regarding what the general public and other stakeholders consider to be the greatest needs of the area. A ***written record*** of all comments will be made at this initial public hearing to insure that a response is made through plan development to the input received.

(b) Public Hearings on Draft Plan: In accordance with Section 450.316 (a) (2) of the final rule: "When significant written and oral comments are received on the ***draft*** (emphasis added) metropolitan (urbanized) transportation plan and TIP (including financial plans) as a result of the participation process in this section or the interagency process required under the EPA transportation conformity regulations (40 CFR, Part 93), a summary, analysis, and report on the disposition of comments shall be made as part of the final metropolitan transportation plan and TIP."

Accordingly, following completion of the draft long-range urbanized area plan, the MPO will hold public hearings (as many as needed) to receive comments on the draft. The MPO will produce a report containing a summary, analysis and disposition of the comments received at the hearings on the draft plan. This report will be incorporated into the final plan.

(c) Public Hearing on the Final Plan: In accordance with Section 450.316 (a) (1) (viii) of the final rule, "if the final metropolitan (urbanized) transportation plan or TIP differs significantly from the version that was made available for public comment by the MPO and raises new material issues which interested parties could not reasonably have foreseen from the public involvement efforts", then the MPO will provide an additional opportunity for public comment.

INITIAL PUBLIC HEARING ON PLAN UPDATE :

In accordance with paragraph 105.01 (a) of the adopted ***Participation Plan***, a public meeting, in combination with a joint meeting of the Metropolitan Planning Organization (MPO), Intermodal Technical Committee, and Stakeholders Committee was held on April 7, 2010. The District formally began an update of the Long-Range Transportation Plan (LRTP) in February, 2010, in cooperation with the Mississippi Department of Transportation (MDOT) and the other Metropolitan Planning Organizations in the state, including the Hattiesburg MPO and the Gulf Coast MPO.

The advertised meeting began at 5:00 P. M. and concluded at 7:00 P. M., with a brief formal presentation by the District staff at 5:30 P. M. Participants were requested to complete a questionnaire that included four questions regarding transportation planning and needs of the area. One of the questions requested participants to list the most important transportation projects in the Jackson Urbanized Area, and to be specific about the need for an improvement. The following is a summary of the responses received and the MPO's consideration and response to that input:

1. Comment: Extend Reunion Parkway to I-55 interchange and to Galleria Parkway (in Madison): Response: This project is included in Stage I (2011-2015) of Volume I, the Streets and Highways Plan.

2. Comment: Widen Mississippi Highway 463 to four lanes to Reunion subdivision (in Madison County): Response: This project is included in Stage I (2011-2015) of Volume I, the Streets and Highways Plan.

3. Comment: Completion of a multiuse (bicycle and pedestrian) trail from Clinton to the Reservoir: Response: This project is under construction by the Natchez Trace Parkway.

4. Comment: Improve sidewalks in Hinds County: Response: Volume III, Bicycle and Pedestrian Facilities Plan, proposes multi-use facilities in Hinds County.

5. Comment: Funding and construction of East Brandon Bypass: Response: This project is included in Stage I (2011-2015) of Volume I, the Streets and Highways Plan.

6. Comment: Widen Interstate 55-South to six lanes (add a lane in each direction) to Crystal Springs: Response: This project is included in Stage II (2016-2025) of Volume I, the Streets and Highways Plan.

7. Comment: Construct another interchange on Interstate 55 south of Byram: Response: Due to Federal financial constraints, this project, although greatly needed, is included in the Vision Needs of Volume I, the Streets and Highways Plan. The estimated cost of completing the new interchange and connecting roadways to U. S. 49 and I-55 is $186,000,000, for which funds are not projected to be available during the period covered by the Plan. However, if a source of funding can be identified, the project can be moved up in priority.

8. Comment: Widen Mississippi Highway 22 from Edwards to Canton: Response: The traffic simulation model used in developing the plan did not indicate sufficient travel demand on this highway to justify widening it.

9. Comment: Widen Interstate 20 to six lanes (add a lane in each direction) to Vicksburg: Response: Part of this project is included in Stage II (2016-2025) of Volume I, the Streets and Highways Plan. Widening of I-20 to six lanes from Mississippi Highway 18 to Clinton-Raymond Road is included in that Stage. The traffic simulation model did not indicate sufficient travel demand on I-20 beyond this point to justify widening it to six lanes.

10. Comment: “Implement a comprehensive transportation plan in conjunction with a rezoning effort to address population growth and land use in a manner that would actually require less roads and lessen dependence on the car”: Response: The District is working with counties and municipalities in the Jackson area in the development of Comprehensive Plans that propose higher density residential development in selected areas that could accommodate new urbanist principles: that is, living in close proximity to places of work to allow commuting on foot or by bicycle.

PUBLIC HEARINGS ON DRAFT PLAN:

In accordance with Section 101.01 of the adopted ***Participation Plan***, three county-wide summit meetings designed to inform citizens regarding the draft LRTP were held before a formal hearing was held on the draft plan. These summit meetings were held on February 22, February 23 and February 24 at the CMPDD office building (Hinds County), in the Rankin County Board of Supervisors Board Room, and the Madison County Board of Supervisors Board Room respectively. The following is a summary of the input received at those summit meetings and
MPO's consideration and response to that input:

1. Comment: Terry Road in South Jackson through Byram needs additional lanes and signals. Medgar Evers/Hwy 49 needs total rework, drainage, signs: Response: Terry Road runs parallel to Interstate 55-South, which is proposed for widening to six lanes from I-20 to the Copiah County Line in Stage II (2016-2025) of Volume I, the Streets and Highways Plan. This improvement should negate the need to widen Terry Road.

2. Comment: More emphasis on planning for public transit and adequate funding for it; this need will grow with the population growth; public transit can relieve traffic congestion: Response: Chapter 6 of Volume II, the Regional Transit Plan depicts the support or lack of support (including financial support) for transit service outside the City of Jackson on the part of twelve (12) elected officials ("stakeholders") interviewed by CMPDD and Neel-Schaffer, Inc. personnel during the preparation of the LRTP. In general, there was little support or interest in obtaining public transit service to those communities outside of Jackson.

3. Comment: Create an expressway to connect the Jackson Airport in Pearl to Downtown Jackson: Response: The "Airport Parkway" is included in Stage I (2011-2015) of Volume I, the Streets and Highways Plan to run from I-55 in downtown Jackson to Mississippi Highways 475 and 25 as a four/ six lane new roadway.

4. Comment: Need rail and light rail. Express routes into the City of Jackson downtown and shuttle smaller buses to move people to other locations: Flowood, Ridgeland, Madison, Clinton. (In) 6:00 a.m. 7:00 a.m. 8:00 a.m. (out) 4:00 p.m. 5:00 p.m. 6:00 p.m.: Response: See response under number 2 above.

5. Comment: Four-lane Yandell Road – Old 51 to 43; add East-West Corridor south Madison County; also, "total repair of Yandell Road from U. S. 51 to Mississippi Highway 43: Response: The widening/ realignment of Yandell Road from I-55 to North Old Canton Road is proposed in Stage II (2016-2025) of Volume I, the Streets and Highways Plan. This will provide and improved east-west corridor in south Madison County.

6. Comment: "Do we have a regional transportation authority? Do we need one? Does the plan speak to this issue?": Response: Chapter 7 of Volume II, the Regional Transit Plan, includes the short-term recommendation that a study of the formation of a regional transit authority be conducted by the District "around the MPO Board" (see Executive Summary, page II-2 in that volume).

PUBLIC HEARING, JOINT INTERMODAL TECHNICAL COMMITTEE/ TRANSPORTATION STAKEHOLDERS COMMITTEE MEETING ON DRAFT PLAN

On March 23, 2011, a joint Intermodal Technical Committee/ Transportation Stakeholders Committee meeting and public hearing were held to obtain further comments regarding the draft LRTP. The following verbal comments were received, and the MPO's response to that comment is indicated:

1. Comment: Mike McCollum, Public Works Director for the City of Ridgeland, said that Highland Colony Parkway was in desperate need of resurfacing. Mr. McCollum said this would fit in line with the public request for improving roadway conditions. Response: The MPO board has established a policy of not utilizing Federal Surface Transportation Program (STP) funds for resurfacing (overlay) projects, except for small municipalities (under 3,500 population). However, these funds have been utilized for pavement reconstruction projects.

2. Comments: Scott Crawford, a disabled citizen, said that he was providing more detailed written comments; however, he was concerned with the lack of communication between writers of the plan and the City of Jackson regarding transit improvements. Mr. Crawford encouraged more planning and funding to implement ADA improvements in Jackson to accommodate disabled persons. Jan Larsen, a member of the Stakeholders Committee asked what research was being conducted to provide better access for the disabled. Response: Corinne Fox, Planning and Development Director with the City of Jackson responded to both comments: She stated that all JATRAN buses are now equipped with wheelchair lifts on the fixed route and demand response system. In addition, an inventory of roadways in need of sidewalk and curb improvements is being compiled to improve accessibility by the disabled. However, Ms. Fox said funding for the improvements creates a big obstacle.

3. Comment: Ms. Beulah Carter, a citizen, asked about expanding JATRAN services to other areas outside of Jackson. Response: Mr. Smith said the Regional Transit Plan included results of survey conducted with local officials throughout the MPO regarding this matter. At this time, there is little support for providing local funds in areas outside of Jackson to support transit services.

4. Comment: Jan Larsen, Stakeholders Committee member, asked if recommendations in the 2035 Transportation Plan were flexible to allow agencies to pursue special funding measures for transit improvements. Response: Mr. Smith said the plan was flexible to allow these requests and he would support efforts to pursue special funding.

WRITTEN COMMENTS RECEIVED AT MARCH 23, 2011 HEARING AND MPO STAFF RESPONSES:

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WRITTEN COMMENTS RECEIVED AT MARCH 23, 2011 HEARING AND MPO STAFF RESPONSES:

1. Comment: "Eubanks Creek needs to be fixed. It negates (when it floods) a shopping-living area—Meadowbrook and State St." Response: The draft LRTP does not address flooding issues.

2. Comment: "Appreciate that expansion will be done to reduce flow on the main highways."Response: Addressing traffic capacity problems—both current and projected—is one of the main purposes of the plan.

3. Comments (from 2 participants): "How can we improve this effort to engage the public?":Send emails to: LIFE, ASCCD, DRMS, ARC, Brain Injury Association, NFB and VA Medical Center Response: The MPO staff already sends notices of meetings, etc. to some of these organizations, but will add the others to our Stakeholders Committee.

MISSISSIPPI DEPARTMENT OF TRANSPORTATION COMMENTS:

VOLUME I: STREETS AND HIGHWAYS PLAN:

1. Comment: The acronym MTP is used on page 1-2 and others before it is specified as to what it represents. Please define the acronym before using it. Response: The words "metropolitan transportation planning" are used on page 2; the MTP acronym does not appear in the latest edition of Volume I on page 2.

2. Comment: All maps throughout the volumes would be easier read and understood if they were larger. This could be accomplished by using the Landscape Format. Response: MDOT's comment will be forwarded to the consultant for final printing of the document.

3. Comment: The Intelligent Transportation Systems (ITS) sections show possibilities but do not give any direction on what would be best or could be expected. The ITS Architecture is a short range plan for what is expected for the ITS. The Long Range Transportation Plan is a 20 year, long range, plan. That is, what do we need and expect the ITS to be in 20 years. The need is not to be told the problems or that ITS could help resolve the problems. Instead the need is to know how ITS can help and what can be expected of the ITS to provide within the next 20 years. Response: The references to ITS in Volume I are simply general descriptions of ITS technology and not intended to include specific references as to where or when those technologies should be applied. Volume IV, Congestion Management Process lists locations and dates for the application of ITS strategies where the highest levels of congestion were identified through the MPO's Congestion Management Process. These proposed strategies appear in Chapter IV, beginning on page IV-83.

VOLUME V: TRANSPORTATION SAFETY, SECURITY AND ENVIRONMENTAL MITIGATION ANALYSIS:

1. Comment: All maps throughout the volumes would be easier read and understandd if they were larger. This could be accomplished by using the Landscape Format. Response: MDOT's comment will be forwarded to the consultant for final printing of the document.

2. Comment: Page 2-3 Integration of Intelligent Transportation Systems (ITS) the MPO does not need to be told that it supports the ITS, and that a study should be made. This is the responsibility of **this study**, to determine and give direction for how the ITS will reduce congestion, make transportation safer and more efficient. Response: Again, see Volume IV, Chapter 4, Proposed Congestion Reduction Strategies, which proposes the use of ITS strategies to those roadways where the highest levels of congestion were detected by the MPO staff using selected criteria. By reducing congestion, roadways will become safer and more efficient.