

### **2040 METROPOLITAN TRANSPORTATION PLAN**

### PINE BLUFF AREA TRANSPORTATION STUDY JEFFERSON COUNTY – PINE BLUFF – WHITE HALL

Prepared by: Southeast Arkansas Regional Planning Commission

In cooperation with: Arkansas State Highway and Transportation Department City of Pine Bluff City of White Hall Jefferson County Federal Highway Administration Federal Transit Administration

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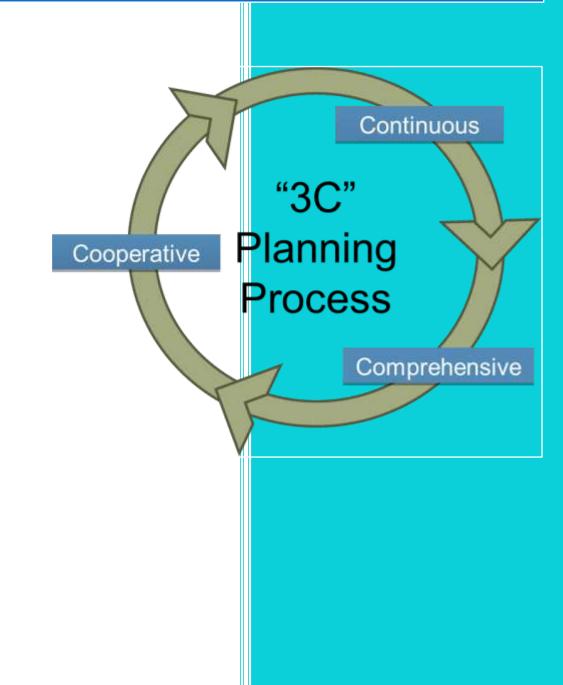
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# SECTION 1 AN REVIEW OF THE TRANSPORTATION PLANING PROCESS



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#### INTRODUCTION

The Pine Bluff Area Transportation Study Area (PBATS) Program was initiated in 1964 in accordance with the Federal Highway Act of 1962. The intent of the program was to provide a network of transportation facilities capable of providing safe, convenient, effective, and efficient movement of goods and persons throughout the urbanized portion of Jefferson County. The Federal-Aid Highway Act of 1962 stated:

After July 1, 1965, the secretary shall not approve under Section 105 of this title any program for projects in any urban area of more than 50,000 populations unless he finds that such projects are based on a continuing comprehensive transportation planning process carried on cooperatively by states and local communities in conformance with objectives stated in this section."

The original participants in the transportation planning process were the City of Pine Bluff, Jefferson County, Arkansas State Highway and Transportation Department, and the Federal Highway Administration, and the original study culminated with the adoption of the recommended 1990 Transportation Plan in April 1969.

The Study Areas have been expanded since the original transportation plan was adopted to reflect the growth in the urbanized area. The City of White Hall became a member of the Study Area shortly after the plan was adopted in 1969. Other participants were included in the planning process in accordance with federal planning requirements. The new members were the Federal Transit Administration and Federal Aviation Administration. Between 1969 and 2010, the transportation plan was updated from time to time to reflect social, economic, and environmental changes affecting the study area.

In 1991, the President signed the Intermodal Surface Transportation Efficiency Act (ISTEA). This reauthorization act dramatically changed the transportation program from one that dealt primarily with roads to one that addresses a variety of transportation programs. ISTEA covered all forms of surface transportation and related interests: roads, bikeways, pedestrian movement, transit, rail, intermodal transportation and related issues, and pipeline transmission lines. In 1995, PBATS Policy Committee adopted the Year 2025 Transportation Plan which addressed the aforementioned items.

Subsequently the Transportation Efficiency Act for the 21<sup>st</sup> Century (TEA-21) was passed in 1998 followed by the passage of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFTEA-LU) in 2005 and eventually leading to the current legislation, Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) which was passed in 2012. Map-21 continued the planning requirements of addressing safety, reducing traffic congestion, improving the efficiency in freight movement and increasing intermodal connectivity. Map-21 also looked to improve performance by establishing a system for performance measures.

#### FACTORS CONSIDERED IN THE PLANNING PROCESS

The Federal Regulations set forth pursuant to MAP-21 require that plans and programs address the eight factors listed below.

- 1. Support the economic vitality of the Metropolitan Areas, especially by enabling global competitiveness, productivity and efficiency;
- 2. Increase the safety of the transportation system for motorized and non-motorized users;
- 3. Increase the security of the transportation system for motorized and non-motorized users;
- 4. Increase the accessibility and mobility options available to people and for freight;
- 5. Protect and enhance the environment, promote energy conservation, and improve 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, for people and freight;
- 7. Promote efficient system management and operation; and
- 8. Emphasize the preservation of the existing transportation system.

Updated transportation planning regulations include Planning Emphasis Areas (PEAs). PEAs are topical areas that FHWA and FTA jointly want States and MPO's to place emphasis on in their planning work programs. The Planning Emphasis Areas include:

- **Models of Regional Planning Cooperation:** These require the promoting of cooperation and coordination across MPO boundaries and across State boundaries where appropriate to ensure a regional approach to transportation planning. Coordination could include links between the transportation plans and programs, corridor studies, projects, data, system performance measures, and targets not only within the MPO area but across MPO boundaries and State boundaries.
- Ladders of Opportunity: Part of the planning process should identify transportation connectivity gaps in access to essential services. Essential services include housing, employment, health care, schools/education, and recreation.

#### • MAP-21 Implementation

- Transition to Performance Based Planning and Programming. Plans should include the development and implementation of a performance management approach to transportation planning and programming.
- Designation and Establishment of Regional Transportation Planning Organizations "RTPO's" (nonmetropolitan areas). The emphasis here is on states to designate RPTO's to conduct transportation planning in nonmetropolitan areas.

- Nonmetropolitan Local Official Consultation (State led). Requires State DOT cooperation with local officials during the statewide transportation planning process.
- Transportation Management Areas (TMAs). This step requires MPO Policy Boards to include representation by providers of public transportation. TMAs are designated following census and Urban Zone designation for areas over 200,000 population.
- Use of Scenario Planning by MPO's. MAP-21 allows MPO's to use scenario planning to improve decision making by providing information to the public and to decision makers on performance outcome tradeoffs of various investment decisions when developing the Metropolitan transportation plan.

#### METROPOLITAN TRANSPORTATION PLAN

Since 1969, Southeast Arkansas Regional Planning Commission (SARPC) has conducted a continuing comprehensive, and cooperative (3-C) transportation planning process for the Pine Bluff-White Hall urban area. This plan, known as the Pine Bluff Area Transportation Study (PBATS) serves as the fiscally constrained Metropolitan Transportation Plan and provides a picture of those transportation improvements that are planned to occur by the year 2040. This plan discusses the transportation planning process, and provides supporting data behind the plan's development.

SARPC has the responsibility to ensure that the 3-C transportation planning process is appropriately conducted and make decisions related to the planning and funding of transportation projects which are proposed to be constructed with federal, state and local funds. For a project to be eligible to receive federal transportation funds it must be included in the Financial Constrained Long-Range Transportation Improvement Program as identified in this Transportation Plan.

The purpose of the PBATS 2040 Metropolitan Transportation Plan is to identify and detail the multi-modal transportation improvements and programs to be carried out within the Transportation Study Area during the plan's timeframe and demonstrate the financial means by which these improvements and programs will be implemented. Prior to the plan's adoption and during its development, public open houses were held to obtain citizen opinions. The plan was then prepared by the staff with the assistance of the technical committee and was then adopted by the Policy Committee of PBATS.

This plan addresses the transportation needs, balancing with environmental issues and quality of life issues in the study area. The PBATS, in order to meet the needs of its citizens and in response to federal requirements, has compiled all of the elements that guide transportation planning in this area in a comprehensive long-range transportation plan.

#### **GOALS AND OBJECTIVES**

The overall purpose of the transportation planning process is to develop a plan that can assist the units of government within the planning area in improving the quality of life for its citizens. The transportation plan provides a framework that the governmental units can use to improve public access to places of employment, shopping, education, recreation, social services, and other destinations throughout the study area. In the planning process it is also important to consider all aspects of the transportation system and all modes of travel. While the modes of transportation that service individual trips are certainly important and a major part of any transportation system, it is also important to consider the types of transportation that are used to deliver the goods and services required to support the quality of life we enjoy. Also, surface transportation modes - roadways, transit, bicycle, pedestrian, and rail - along with air transportation, pipelines, and electrical transmission systems comprise total designed transportation system that fosters the safe and efficient movement of people, goods, and energy, enabling the Study Area to be competitive in today's global market place.

#### GOALS

In developing any plan, the first step is to develop goals acceptable to the general public that lead to solving the problems perceived by the public. The seven overall goals that the transportation planning process has been designed to meet are as follows:

- To develop a balanced, integrated, safe, energy efficient, and environmentally safe overall transportation system that addresses all modes of transportation used to serve the public needs, including active transportation (bicycle and pedestrian), personal vehicles, short- and long-haul freight (truck), public transit, air, water, rail, and pipeline.
- To develop a transportation system that contributes to the enhancement of desirable social, economic, and environmental qualities of the study area.
- To utilize the existing transportation facilities to the fullest extent possible to ensure that all opportunities to interconnect land uses and neighborhoods within the Study Area are available.
- To promote a balanced and sustained economic growth in the Study Area by implementing efficient transportation improvements that allow for the movement of people and freight within and through the study area.
- To develop an intermodal transportation system that will provide equity, choice and opportunity for all citizens, and allow the flow of commodities and goods through the community.
- Preserve the existing transportation system facilities and promote efficient system management and operations of all modes of transportation.
- Utilize available personnel and financial resources efficiently so as to meet the public and private sector transportation needs.

#### **OBJECTIVES**

#### 1. STREETS AND HIGHWAY

Develop an efficient street and highway network capable of providing an appropriate level of service for a variety of transportation modes.

- Develop streets and highways in a manner consistent with the adopted land use plan.
- Increase the connectivity of the existing street network and improve access throughout the Study Area.
- Develop regionally significant streets and highways in a manner which minimizes travel times and distances.
- Develop visually attractive travel corridors.
- Minimize transportation accidents and severity.
- Include sidewalks and bicycle facilities in the design of roadways to accommodate and encourage pedestrian and bicycle travel where appropriate.
- Develop local streets in a manner so as to link one neighborhood with another neighborhood.

#### 2. PUBLIC TRANSPORTATION

Promote a safe, efficient and equitable public transportation system that is accessible to various segments of the population.

- Operate safe and efficient scheduled transit service that minimizes travel time and distance.
- Implement land use strategies that maximize the potential for transit patronage and coverage.
- Establish programs and incentives that encourage transit ridership and ride-sharing.
- Serve the elderly and transit dependent population with convenient transportation to needed services, places of employment and other locations.
- Maximize ADA transit service to the fullest extent possible.
- Maximize transit's coverage area to provide service in the planning area in a feasible manner.
- Recognize and support the transit services provided by human service agencies and private transit operators.
- Facilitate the integration and coordination of different transportation modes by establishing intermodal facilities.

#### 3. PEDESTRIAN AND BICYCLE

Develop a transportation system that integrates pedestrian and bicycle modes of transportation with the vehicle transportation.

- Increase the design sensitivity of specific transportation projects to the needs of pedestrians and bicyclists.
- Improve the transportation system to accommodate pedestrian and bicycle access along roadways through design and facility standards.
- Increase pedestrian and bicycle safety through public awareness programs.
- Provide linkages for pedestrians and/or bicyclists with neighborhoods, employment centers, commercial areas, parks and schools.
- Develop trail facilities where appropriate.
- Develop a funding mechanism to maintain sidewalks, trails and bikeways.
- Develop and implement plans and policies to make bicycling and walking to school a safer and more appealing transportation alternative

#### 4. FREIGHT AND GOODS MOVEMENT

Provide a freight transportation system supporting the movement of goods.

- Develop a transportation system supporting intermodal connectivity that improves access for freight via a network of highways, railroads, airport, and river port.
- Facilitate coordination among transportation modes through the establishment of an intermodal facility.
- Support expansion opportunities at the river port, airport and railroad gravity yard that would attract major cargo facilities.
- Designate safe routes with minimal urban exposure for the transportation of hazardous materials.
- Designate truck routes that minimize exposure to neighborhoods and historic and cultural resources.
- Maintain the airport's ongoing long range planning process.

#### 5. ENVIRONMENT

Develop a transportation system that preserves and enhances the environment.

- Plan and design transportation systems and facilities that preserve and compliment the area's natural features and resources.
- Plan and design transportation systems and facilities that protect and preserve the cultural and historic resources.
- Plan and design transportation facilities that minimize neighborhood disruption.
- Design attractive transportation systems that reinforce the study area standards of appearance.
- Plan and design a transportation system and program that maintain or improve the existing air quality.

#### 6. FINANCIAL

Make transportation capital improvement decisions for transportation modes that make the efficient use of limited financial resources.

- Minimize implementation and operation costs of transportation projects.
- Develop transportation projects that enhance the local and regional economy.
- Implement ITS projects in a timely manner.
- Explore new sources of revenue.

#### 7. SAFETY

Create a mechanism to insure that safety issues are addressed in all the modes of transportation.

- When planning and designing transportation projects insure that all safety features are considered in the process.
- Conduct annual safety audits on all the transportation modes.
- Encourage local governments to implement an on-going maintenance system to address transportation safety issues.
- Promote the use of transportation safety awareness programs.

#### 8. ACCESS MANAGEMENT

Establish a tool that can be used to guide the efficient, safe and economical development of roadway access.

- Limit direct access to major roadways
- Promote intersection hierarchy to provide safety
- Locate signals to favor through movement
- Limit conflict points
- Provide for adequate spacing and location of roadways, median openings, and driveways
- Support access management through land use planning

#### STUDY ORGANIZATION

#### POLICY COMMITTEE

The Policy Committee has the general responsibility for directing and administering the preparation of the comprehensive study and for implementing the continuing planning process with assistance and advice from the Coordinating/Technical Committee and other technical subcommittees. The representatives for the state and federal governments also advise the Coordinating Committee on state and federal policies and regulations.

The Policy Committee's membership during 2015 is as follows:

<u>REPRESENTATIVES</u>	NAME AND TITLE
Jefferson County	Dutch King, County Judge, PBATS Chairman Mandy Alford, Quorum Court Member
Pine Bluff	Debe Hollingsworth, Mayor Bill Brumett, Alderman
White Hall	Noel Foster, Mayor Scott Ray, Alderman
Southeast Arkansas Regional Planning Commission	Ken Smith, Vice-Chairman
Arkansas Highway and Transportation Department	David Henning, District Engineer Paul Simms, MPO Coordinator
Pine Bluff / Jefferson County Port Authority	Lou Ann Nisbett, Alliance Executive Director

Specifically, the Committee's responsibilities are:

- 1. Adopt a long-range transportation plan including priorities for improvement.
- 2. Adopt a Unified Planning Work Program for the continuing planning process.
- 3. Adopt a Four-Year Transportation Improvement Plan
- 4. Adopt a Public Participation Plan.
- 5. Approve an Annual List of Obligated Projects.
- 6. Review estimated cost, work task, and funding as proposed.
- 7. Periodically review the cost of accomplishing the required work and recommend changes as are necessary.
- 8. Review each major phase of the study and direct the technical and/or coordinating

committee as necessary.

- 9. Implement its plans by taking steps to obtain official acceptance of its proposals by the units of government involved and by the people of the area.
- 10. Meet as necessary to review all material pertaining to changing transportation needs in the area and to revise the plan as needed.
- 11. Support and cooperate with other planning agencies in areas of mutual interest such as updating and implementing comprehensive plans, zoning, subdivision design and controls, official maps and capital improvements programs.
- 12. Exercise all other functions necessary to implement the continuing transportation planning process in accordance with Map-21.
- 13. Establish technical committees composed of committee members and other technical personnel involved in transportation within the study area.
- 14. Certifying the planning process is in compliance with the U.S. Department of Transportation's planning regulations.

#### COORDINATING/TECHNICAL COMMITTEE

The general responsibility of the Coordinating/Technical Committee and its subcommittees is to assist the Policy Committee in carrying out the planning program by reviewing and preparing reports and recommendations. Responsibilities of the various subcommittees involved in the overall comprehensive transportation planning process include the analysis of existing and future conditions relating to economic development, population, land use, transportation facilities, travel patterns, land use and development codes, and social, environmental and community value factors. The committee is also responsible for addressing the eight planning points and to address the Performance Emphasis Areas established under MAP-21.

The Technical/Coordinating Committee's membership during 2015 is as follows:

<u>REPRESENTATIVES</u>	NAME AND TITLE
Jefferson County	Jimmy O'Fallon and Angelo Walker, Superintendents, County Road Department
Pine Bluff	Rickey Rhoden, Manager, Street Department Charlina Lacy, Director, Pine Bluff Transit
White Hall	Noel Foster, Mayor Jeff Jones, Street Manager
Arkansas Highway & Transportation Department	Bryan Swinney, District Construction Engineer Antonio Johnson, Transportation Planner
Pine Bluff Airport Commission	Doug Hale, Manager
Intermodal Representatives	Bryan Barnhouse Director of Econ Development, Alliance Rhonda Dishner, Executive Assistant, Alliance
Federal Highway Administration	Valera McDaniel, MPO Coordinator
Office of Emergency Management	Karen Blevins, Coordinator
Area Agency on the Aging	Tony Barr, Transportation Director
Union Pacific Railroad	Vacant
Pine Bluff Police Department	Lt. Robert Roby

#### PUBLIC INVOLVEMENT

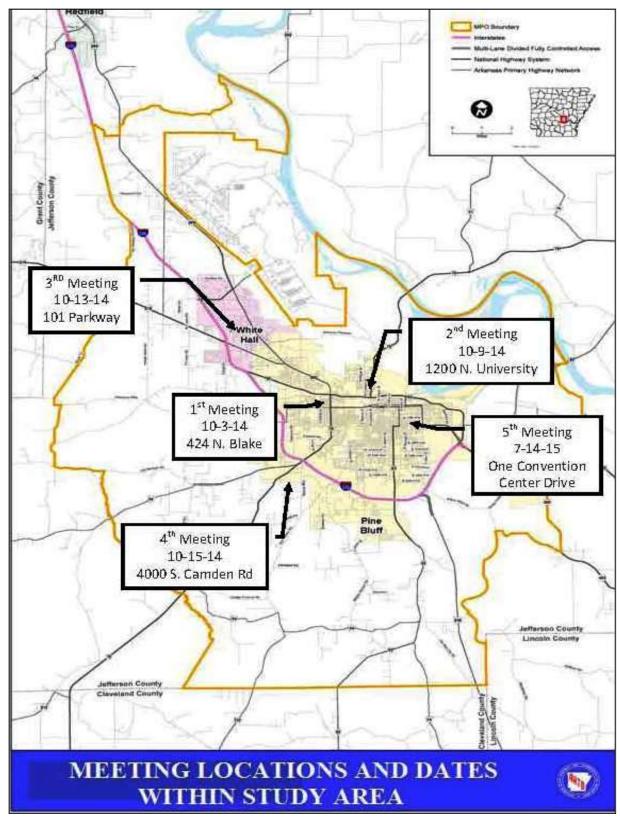
One of the essential elements in the transportation planning process is public involvement. In order to obtain public involvement - i.e. input from citizens, private providers of transportation, other transportation mode representatives, and various interested parties – to assist in planning and developing the Year 2040 Transportation Plan and other planning activities carried on by PBATS Policy Committee, the following public participation process is used:

#### METROPOLITAN TRANSPORTATION PLAN

The Metropolitan Transportation Plan (MTP) must be in place for the PBATS Study Area in order to comply with federal guidelines, and in order to facilitate efficient utilization of transportation resources. The MTP must be updated every five years at a minimum.

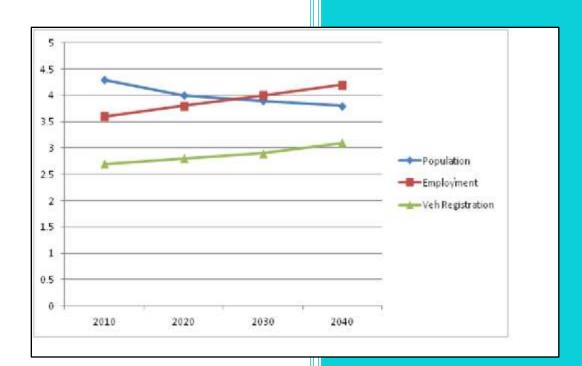
- 1. The Technical Committee met to develop a draft of the MTP elements. (Meeting date: 4-28-15.)
- 2. At a minimum, five open houses will be conducted as part of the development of the Long Range Plan. The first four open houses will be held after the Technical Committee has developed a draft of the MTP elements and the Policy Committee approves the draft of the MTP elements. The fifth open house will be held after a draft MTP document has been completed.
- 3. The first four open houses were held for the public to view the draft MTP elements and to make comments and were held within a two-week period. (Open house dates and locations: 10-02-14 Hestand Stadium; 10-09-14 UAPB; 10-13-14 White Hall; 10-15-14 Watson Chapel.) In an effort to facilitate maximum public involvement, the open houses were held at different locations and times of day. Two of the first four open houses were held in predominately minority neighborhoods/areas.
- 4. Before the first of four open houses to view the MTP element list and before the fifth open house to review the draft MTP document, three display advertisements stating that all surface transportation and transit projects are included were placed in the Pine Bluff Commercial newspaper over a two-week period stating the time, place and purpose of each open house. Similarly, notices were also placed in the White Hall Journal.
- 5. A press release for the first four open houses was sent to the local newspapers and other outlets (radio stations, TV stations and local access cable stations) at least two weeks before the first open house took place and again two weeks before the fifth open house takes place.
- 6. The meeting information described above was placed on the PBATS MPO web site and made available for public viewing at the municipal offices of the Cities of Pine Bluff and White Hall, the Jefferson County Courthouse and UAPB.
- 7. After the fourth open house, the public had thirty days to submit their written comments on the MTP elements for consideration by the Technical Committee and Policy Committee.
- 8. The Technical Committee then reviewed any and all comments received and made revisions to the Long Range Plan elements based on those comments. All plan revisions and comments were submitted to the Policy Committee for its consideration.

- 9. The Policy Committee met to review to address revisions and comments. After the Policy Committee reviewed all comments and approved changes, the MPO prepared a draft MTP document and present it the Technical Committee members for review. Comments were incorporated into the draft document for presentation to the public.
- 10. The fifth open house (was held to give the public an opportunity to review revisions to the MTP elements and make comments on the draft MTP document.
- 11. After the fifth open house(held July 14<sup>th</sup>, 2015 from 5 pm 7 pm at the Pine Bluff Convention Center), the public had thirty days to submit their written comments on the draft MTP document for consideration by the Technical Committee and Policy Committee.
- 12. A sixth open house was held on August 25<sup>th</sup>, 2015 to address the plan and other comments.
- 13. After reviewing and resolving comments received, the Technical Committee will meet to recommend the MTP document to the Policy Committee for approval and the Policy Committee will meet to consider and adopt the MTP.
- 14. When significant written comments are received as a result of the public involvement process that are not addressed in the MTP, a report will be prepared indicating the reason the comments were not addressed. Said report shall be submitted to the Policy Committee for information purposes and filed in the MPO office. The Policy Committee will meet to consider and adopt the MTP.



### MAP 1

# SECTION 2 INVENTORIES AND FORECASTS



Having accurate and reliable information to forecast the factors influencing future transportation needs for the Pine Bluff metropolitan area is critical to developing a useful plan for the development and maintenance of the transportation network. Therefore, it is important to keep abreast of trends regarding land use, socio-economic characteristics of the population, and the condition and users of the transportation system. Furthermore, these trends must be analyzed and projected into the future to form the basis of the assumptions underpinning the transportation planning process.

Elements such as number of dwelling units, occupancy rates, population, number and types of employment, number and types of vehicle registrations, traffic volumes, and environmental factors are monitored annually to identify trends and consequent effects upon the existing and planned transportation systems. In this section the following elements are set forth with summaries and explanations:

- Population: 2010 population and projected population for 2020, 2030, and 2040
- Employment: 2010 employment and projected employment for 2020, 2030, and 2040
- Vehicle Registration: Historical number of registrations and projection for 2040
- Traffic Volumes: Selected locations from 2000, 2004, 2008 and 2013, the most recent year this information is available.

#### POPULATION

Utilizing data from the U.S. Census database along with census tract patterns, the projected population for Jefferson County in the year 2040 is 68,344. The projections used in this Plan were derived from the Arkansas Institute for Economic Advancement at the University of Arkansas at Little Rock (UALR EA), the U.S. Census Fact Finder projections and 2010 census tract patterns. The 2010 Census count for Jefferson County was 77,435. Utilizing the data from the UALR EA projections (which uses Trend Series Extrapolations), Jefferson County is projected to lose population of approximately 303 annually. Using the 2010 Census count as a starting point, the population projections for 2020, 2030, and 2040 were derived by adjusting the projections by historical patterns within each census tract.

YEAR	POPULATION	PERCENTAGE CHANGE
2000 Census	84,278	
2010 Census	77,435	-8.1
2020 Projection	74,404	-3.9
2030 Projection	71,374	-4.1
2040 Projection	68,344	-4.2

### TABLE 1JEFFERSON COUNTY POPULATION

The planning projection for the year 2040 is a decrease of 9,091 persons from the 2010 Census count. The percentage of the population of Jefferson County living within the PBATS study area is estimated to remain consistent at approximately 85 percent through the year 2040. This estimate is based on historical and census tract analysis of the county.

TABLE 2
STUDY AREA POPULATION
AS A PERECENTAGE OF JEFFERSON COUNTY PROJECTED POPULATION

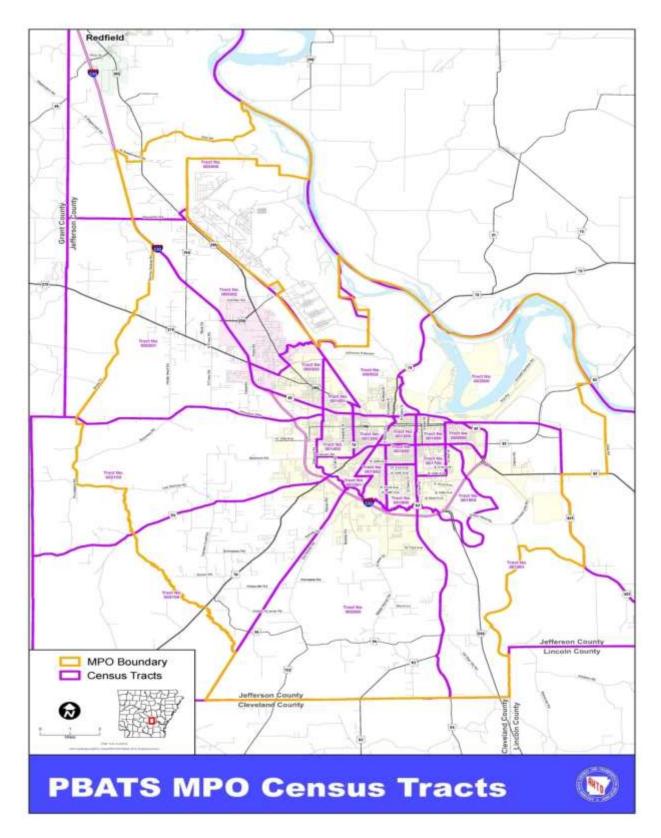
Year	Study Area Population	Jefferson County Population	Percentage of Jefferson County Population
2010	65,463	77,435	84.5
2020	62,871	74,404	84.5
2030	60,311	71,374	84.5
2040	57,751	68,344	84.5

## TABLE 3ESTIMATED POPULATION OF THE STUDY AREA

Census	Actual	Actual	Estimated	Estimated	Estimated
Tract	2000	2010	2020	2030	2040
3.01	3465	3557	3719	3698	3620
3.02	5233	5941	6776	7046	7109
3.03	4427	4051	3778	3550	3348
5.02	4030	3732	3522	3329	3151
9	3440	3158	2955	2781	2625
10	2391	1876	1501	1314	1184
12	3351	2567	2007	1740	1557
13	2784	1775	1154	927	792
14.01	1937	1760	1631	1527	1438
14.02	3228	2716	2328	2104	1933
15.01	4088	3959	3906	3772	3622
15.02	3667	3711	3828	3779	3682
16	4441	3721	3178	2867	2632
17	3505	2707	2130	1853	1661
18	3355	3405	3522	3483	3397
19.01	1613	1695	1810	1819	1794
19.03	1984	2180	2420	2481	2478
20	5786	5612	5548	5364	5153
21.03	5611	5313	5128	4900	4671
21.04	2063	2027	2031	1977	1906
Totals	70,399	65,463	62,871	60,311	57,751

Census tracts 2 and 6 that existed in Jefferson County in the 2000 Census have been absorbed into other Tracts in 2010.

Statistics and data from the 2035 plan continue to hold true in projecting out to the year 2040. The primary areas of growth continue to be toward the south, southwest and northwest in areas along Highways 63, 79 and 270.



## **MAP 2**

#### **EMPLOYMENT**

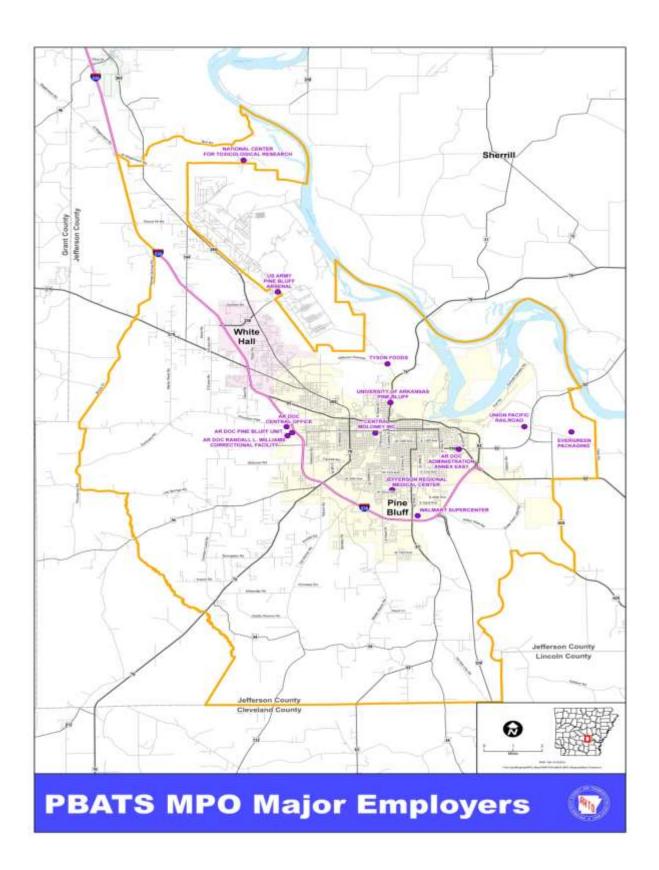
The local economy is another important factor for guiding decisions regarding future transportation infrastructure investments. Pine Bluff has evolved from a regional service center for a largely agricultural economy in the early part of the 20<sup>th</sup> Century. As such, it was a nexus for roads and rail transportation. The Pine Bluff Arsenal was opened in 1941 and led to a diversification of the local economy. Through the next few decades the Pine Bluff area saw additional manufacturing and industrial employment added to the mix. Notable in this period is the construction of the International Paper Plant and the opening of the Pine Bluff River Port and Industrial Park on the Arkansas River. The last three decades have seen the loss of manufacturing jobs and a shift to a more service-oriented local economy, reflecting the larger American economy.

Service sector employment is projected to grow at a higher rate than all others through 2040. The manufacturing component of the Pine Bluff metropolitan economy will continue to grow, but at a slower rate and its share of overall employment is likely to decline. Along with manufacturing, the mining and construction sector, as well as the transportation, communication, and utilities sector are forecast to see some growth. As such, Pine Bluff will continue to be seen as a "blue collar" community. The projections for this plan were derived from Woods and Poole Economics, the U.S. Census and UALR and can be confirmed through the Arkansas Travel Demand Model and United States Labor Statistics.

Overall projected employment for the Metropolitan Planning Area in 2040 is projected to be 43,200. Even though the population is declining, employment is expected to increase based on population increases in the White Hall area, local manufacturers drawing employees from outside the Metropolitan Planning Area, and the probability of population out-migration from Pulaski County to northwestern Jefferson County (Redfield) resulting in this population wanting jobs closer and with easier access to these new residential areas than some areas of Pulaski County.

	200	0	201	0	202	20	203	0	204	0
	TOTAL EMPLOYMENT	PERCENTAGE	EMPLOYMENT	PERCENTAGE	ESIMATED EMPLOYMENT	PERCENTAGE	ESTIMATED EMPLOYMENT	PERCENTAGE	ESTIMATED EMPLOYMENT	PERCENTAGE
Mining and Construction	960	2.7	990	2.7	1,100	2.8	1,180	2.8	1,210	2.8
Manufacturing	8,450	23.4	8,280	22.5	8,530	21.6	8,780	20.9	8,940	20.7
Transportation Communication and Utilities	1,800	5.0	1,800	4.9	1,900	4.8	1,970	4.7	2,030	4.7
Trade	7,240	19.9	7,470	20.3	8,250	20.9	8,900	21.2	9,160	21.2
Finance, Insurance, Real Estate, Banking	1,220	3.3	1,140	3.1	1,150	2.9	1,180	2.8	1,170	2.7
Services	8,370	23.5	9,160	24.9	10,430	26.4	11,270	27.9	12,140	28.1
Government	8,030	22.2	7,960	21.6	8,140	20.6	8,270	19.7	8,550	19.8
TOTAL	36,070		36,800		39,500		42,000		43,200	

TABLE 4TOTAL NON-AGRICULTURAL EMPLOYMENT BY SECTOR 2000-2040



## MAP 3

#### **VEHICLE REGISTRATION**

Although there has been a continued downward population trend in Jefferson County, motor vehicle registration appears to have moved contrary. Based on the latest information obtained from the Arkansas State Highway and Transportation Department's website the 2011 total vehicle registration increased by 1 percent.

Year	Automobile	Other Passenger	Pickups	Other Trucks	Motorcycles	Other Motor	Total Motor
		Cars				Vehicles	Vehicles
1990	36,068	841	14,200	1,852	421	204	53,586
2000	37,658	1,620	15,131	1,302	523	730	56,964
2011	37,478	3,568	12,764	1,439	1,315	884	57,448
*2020	37,853	3,604	12,892	1,453	1,328	893	58,022
*2030	38,042	3,622	12,956	1,460	1,335	897	58,312
*2040	38,137	3,631	12,988	1,464	1,338	899	58,458

### TABLE 5MOTOR VEHICLE REGISTRATION

\*Indicates projections

Of the estimated 58,458 vehicles registered, it is projected 86%, or 50,274 will be located within the Study Area.

#### **TRAFFIC VOLUMES**

Traffic volumes and the rate of change are vital to the design, operation, planning, and implementation of well-functioning transportation systems. Traffic counts are performed by the Arkansas State Highway and Transportation Department in the Study Area. These traffic counts are typically expressed as Average Daily Traffic (ADT). This measures the estimated average daily traffic volume at a location during a year. ADT is commonly used to determine functional classifications of thoroughfares in a network, to identify potential new routes, and to set priorities for improvements to existing routes.

Table 6 shows the ADT at selected locations throughout the Study Area for the years 2005, 2008, 2010, and 2013. Generally, traffic volumes for the Study Area have decreased, which most likely is due to the population loss of the area. A major decline in the ADT on streets in the central part of Pine Bluff and the University Park area north of the Martha Mitchell Expressway have shown marked declines as a result of severe population decline within these areas. I-530

counts fluctuate over the eight-year period, however half of the count locations show an increase in traffic. Streets in the White Hall area show increases as expected due to population growth, and Wal-Mart continues to draw customers, as the part of Olive Street at their entrance has shown increased traffic. Blake Street/Camden Road from Martha Mitchell to Miramar has surprisingly shown a slight increase in ADT.

Street	Location	2013	2010	2008	2005
Apple Street	South of 34th	80	90	90	120
Barraque	East of Bryant	1900	2000	1800	2200
Barraque	at Redbud	2300	2400	2400	2500
Barraque	at Bay Street	580	610	630	610
Barraque	West of Walnut	820	1200	800	1100
Birch	North of Roane	20	30	40	20
Birch	North of Fluker	340	560	570	700
Blake	at 13th Avenue	16000	17000	17000	17000
Blake North (Hwy 365)	North of Martha Mitchell	16000	16000	16000	15900
Blake South (Hwy 79B)	North of Miramar	12000	12000	12000	11900
Blake South (Hwy 79B)	North of 13th	16000	17000	17000	17000
Blake South (Hwy 79B)	South of Martha Mitchell	16000	16000	16000	14600
Blake South (Hwy 29B)	at 3rd Avenue	17000	18000	19000	16500
Bobo Road	South of Old Warren Road	520	680	520	580
Bryant	South of Martha Mitchell	2200	2600	2500	2600
Bryant	South of Barraque	1800	2200	2200	2300
Camden Road	West of Miramar	12000	12000	11000	11500
Camden Road	South of Taft	14000	15000	15000	14900
Camden Road	South of I-530	18000	21000		
Camden Road	Southwest of Winegard Road	7000	8100	7000	7300
Camden Road	South of Wildcat Drive	4100	5400	4600	5000
Camden Road	North of Hidden Lake	7000	8100	7000	7300
Catalpa	North of 10th	350	500	530	730
Catalpa	North of 28th	350	480	460	610
Chalmette Road		1700	1800		
Chapel Heights	South of Biscayne	700	890	920	
Cherry Street	North of West 2nd	2500	2800	3000	3000
Cherry Street	North of West 4th	2300	2800	2800	3200
Cherry Street	North of West 5th	2300	2700	2700	3100
Cherry Street	South of 6th Avenue	3600	4600	4500	5000
Cherry Street	North of 13th	4500	5500	5300	6200
Cherry Street	North of 16th	5000	6000	6000	7300
Cherry Street	South of 25th	5400	5800	5300	5800
Cherry Street	South of 40th	3400	3800	4000	4100
Commerce	South of Martha Mitchell	2500	2700	3000	
Convention Ctr. Dr (Hwy 63B)	South of Martha Mitchell	3600	3800	3600	4000
Convention Ctr. Dr (Hwy 63B)	South of 4th Avenue	4600	4800	4900	5000
Convention Ctr. Dr (Hwy 63B)	South of 5th Avenue	2700	2800	2900	2900
Dollarway Road (Hwy 365)	East of Norman Street	14000	14000	14000	15900

TABLE 6 TRAFFIC VOLUMES

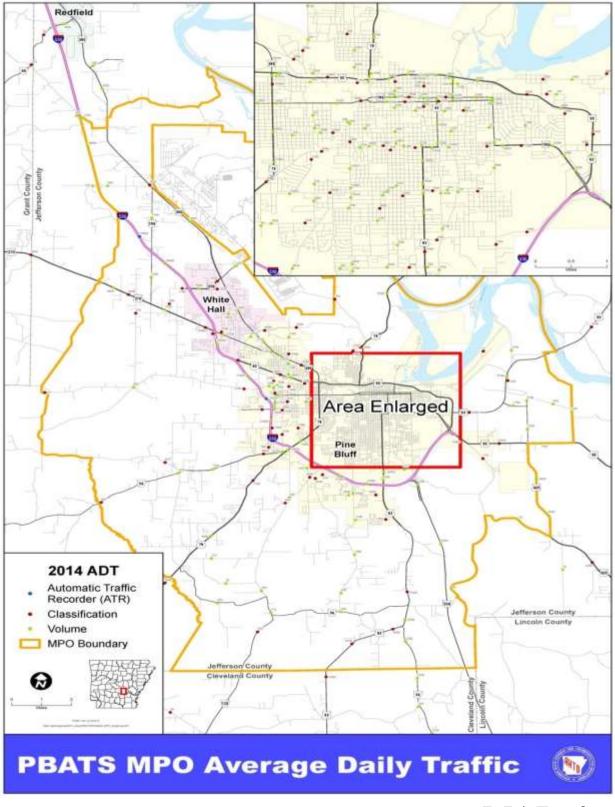
Street	Location	2013	2010	2008	2005
Dollarway Road (Hwy 365)	at School Street	17000	20000		18700
East 2nd Avenue	West of Convention Center Drive	1200	1300	1300	1400
East 4th Avenue	East of Michigan	210	250	260	220
East 4th Avenue	East of Portea	190	140	140	180
East 6th Avenue	East of Main	2500	2800	3100	4100
East 6th Avenue (Hwy 190)	East of Convention Center Drive	1000	1200	1500	1700
East 6th Avenue (Hwy 190)	East of Ohio	2800	2900	3100	6100
East 8th Avenue	East of State	4000	5400	5600	
East 8th Avenue	West of Missouri	3500	4300	4500	
East 13th Avenue	East of Georgia	390	580	590	740
East 27th Avenue	West of Georgia	1000	1200	1200	1200
East 28th Avenue	West of Indiana	620	720	600	640
East 28th Avenue	East of Georgia	720	720	810	880
East 38th Avenue	East of Ohio	1600	1900	1800	1900
East 52nd Avenue	West of Ohio	770	920	990	990
Fairfield Road	at Paper Mill	970	1100	1100	1300
Faucett Road	West of Blake	2300	2600	2300	2300
Franklin Street (Hwy 190)	North of 11th Avenue	1400	1800	1800	3100
Gaddy Koonce Road	West of Railroad	40	90	70	60
Glendale Road	South of Hwy 63	2200	2700	2400	2900
Good Faith Road	South of Railroad	630	770	750	760
Gravel Pit Road	West of I-530	340	560	0	0
Gravel Pit Road	East of 530	420	750	0	0
Grider Field Ladd Road	West of Hwy 425	80	170	170	250
Grider Field Ladd Road	South of Hwy 65 South	710	730	680	870
Hardin Reed Road	South of Hwy 270	640	680	620	650
Harding Avenue (Hwy 190)	East of Ohio	14000	16000	15000	17000
Harding Avenue	West of Wisconsin	13000	15000	14000	16400
Harding Avenue	East of Belmont	13000	12000	13000	15300
Harding Avenue	West of Commerce	8900	10000	9800	11700
Harding Avenue (Hwy 190)	at Pines Mall	7900	9400	9300	10500
Harding Avenue	at Auto Drive	2600			
Hazel Street	South of 10th	760	810	900	550
Hazel Street	South of 14th	7500	8300	8700	8300
Hazel Street	South of Rike (SEARK)	12000	15000	15000	
Hazel Street	South of 26th	12000	14000	15000	14300
Hazel Street	South of 28th	12000	13000	14000	13600
Hazel Street	South of Pine Hill	9700	10000	11000	10600
Hazel Street	South of 46th	9800	10000	11000	11100
Hazel Street	North of Ridgway	6700	7300	7800	7500
Hoadley East	East of Hwy 365	2500	2600	2400	3300
Hoadley West	West of Hwy 365	3900	5500	4600	4100
Holland West	West of I-530	1200	1200	990	1000
Holland West	East of 530	6300	6800	6200	6100
Holland West	West of Hwy 365	2300	1700	1800	2100
Hutchinson	at Industrial Drive	3100	3100	2900	3000

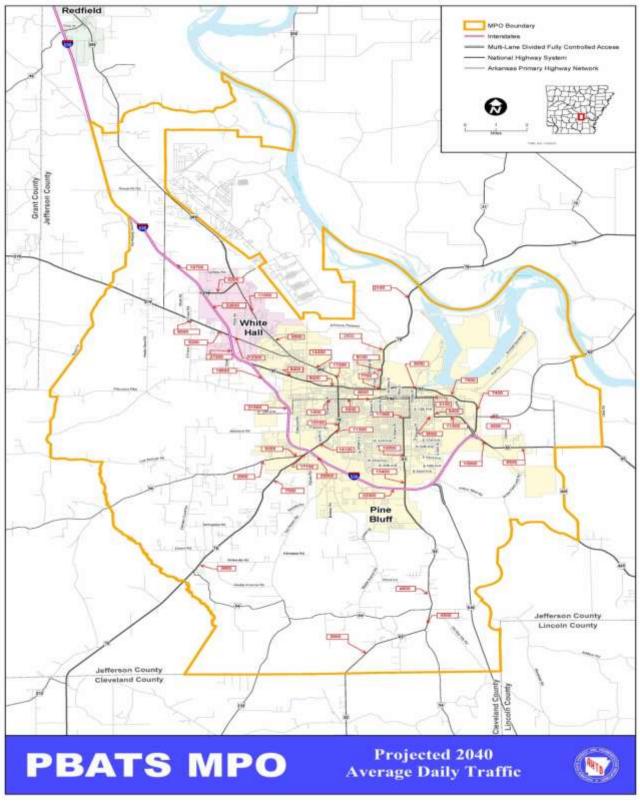
Street	Location	2013	2010	2008	2005
Hutchinson	North of Dollarway	4400	5000	4200	5400
Hutchinson	South of Dollarway	3000	3500	3100	3500
Hutchinson	North of Martha Mitchell	3600	4300	3900	4600
Hutchinson	at W. 2nd Avenue	1700	1800	1900	1820
Hwy 104	North of I-530	2200	2100	2000	2100
Hwy 104	South of I-530	1300	1200	1100	7700
Hwy 270	West of Hwy 104	6700	7100	6100	6900
Hwy 270	East of Hwy 104	7200	7500	6800	8000
Hwy 270	West of I-530	9400	9200	7500	10200
Hwy 270	East of I-530	11000	11000	12000	12500
Hwy 270	at Dew Drop	5100	5000	5500	6200
Hwy 365	North of Hwy 104	3500	3500	3300	3700
Hwy 365	South of Willow Pond	3500	3900	3200	5500
Hwy 365	at Roberts Road	12000	13000	13000	13700
Hwy 365	at Piney Road	10000	11000	11000	11400
Hwy 425	3 Miles South of Hwy 65 South	4600	5300	5000	5000
Hwy 425	1 ½ Mile South of Hwy 65 South	4700	5300	5000	5500
Hwy 54	East of Oakwood Road	9300	11000	11000	11000
Hwy 54	East of Middle Warren Road	530	640	660	540
Hwy 54	West of Brown Cemetery Road	240	340	300	270
Hwy 63	North of Glendale Road	6800	6900	7400	7800
Hwy 63	South of Glendale Road	5000	5600	5100	
Hwy 63	North of Paper Mill Road	4600	4300	4500	4200
Hwy 63	South of Sandy Bayou Road	7900	8700	8400	9500
Hwy 65 South	East of Hwy 81	6800	7000	7000	8200
Hwy 65 South	East of Grider Field Road	13000	14000		15700
Hwy 65 South	East of Mall interchange	15000	16000		18600
Hwy 79	South of Arkansas River	2900	3100	2900	3500
Hwy 79	East of Martha Mitchell	4800	5100	4900	
Hwy 81	North of Chalmette	3800	3700	4100	
I-530	North of Hwy 104	18000	20000	18000	17600
I-530	South of Hwy 104	21000	2200	21000	22400
I-530	North of 270	21000	23000	18000	21300
I-530	South of Hwy 270	29000	30000	25000	
I-530	at North Martha Mitchell Interchange	5800	6300	6200	
I-530	North of Princeton Pike	22000	24000	23000	24600
I-530	South of Princeton Pike	25000	26000	25000	23500
I-530	South of I-530	25000	26000	24000	20800
I-530	Hwy 65 South east	2900	3700		
I-530	West Bound access from mall	5000	5000		
I-530	South of Hwy 79	27000	27000	29000	28900
I-530	Northeast of Ohio Pike	19000	19000	18000	17000
1-530	South of Old Warren Road	29000	30000	29000	25500
1-530	East of Hazel	25000	26000	25000	25100
Jefferson Parkway	West of Hwy 365	6400	6000	6100	6300
Jefferson Parkway	at Industrial Park	5100	5200	5000	5600

Street	Location	2013	2010	2008	2005
Jefferson Parkway	East of Hutchinson	2800	2800	2500	2800
L.A. Prexy Drive	North of Pullen	3200	4100	3300	3400
L.A. Prexy Drive	South of Oliver	2000	2000	2100	
Louis Ramsey Road		1500			
Main Street (Hwy 63B)	South of 5th	3500	4600	4200	5100
Main Street (Hwy 63B)	North of Martin	6100	6500	7000	8400
Main Street (Hwy 63B)	North of Harding Avenue	6500	6900	7000	2700
Main Street	South of 27th	2700	2900	3000	2500
Main Street	South of 36th	2600	2700	2600	2600
Main Street	South of 46th	2000	2000	1900	1600
Market Street	West of Martha Mitchell	2900	2800	2800	3100
Martha Mitchell (Hwy 65B)	East of Hutchinson	8300	8600	8600	10100
Martha Mitchell (Hwy 65B)	West of Hutchinson	7300	7700	7900	7900
Martha Mitchell (Hwy 65B)	East of Blake	13000	13000	13000	14600
Martha Mitchell (Hwy 65B)	West of Willow	13000	14000	14000	14800
Martha Mitchell (Hwy 65B)	East of University	9600	11000	11000	13000
Martha Mitchell (Hwy 65B)	West of Walnut	9600	11000	10000	12700
Martha Mitchell (Hwy 65B)	East of Walnut	9600	11000	11000	12600
Martha Mitchell (Hwy 65B)	at Main Street	9500	11000	11000	11300
Martha Mitchell (Hwy 65B)	West of Convention Center Drive	9200	11000	11000	9600
Martha Mitchell (Hwy 65B)	East of Convention Center Drive	7500	8000	7800	8700
Martha Mitchell (Hwy 65B)	West of Michigan	6500	7300	7100	7700
Martha Mitchell (Hwy 65B)	West of Commerce	6500	7700	8300	8600
Martha Mitchell (Hwy 65B)	North of Market Street	4700	5100	5000	4200
Martha Mitchell (Hwy 65B)	South of Market Street	7000	8100	5700	4000
McFadden Road	North of Williams Road	160	160	190	250
Michigan	North of Martha Mitchell	910	1300	1200	
Middle Warren Road	South of Divoky Road	1300	1600	1500	2100
Middle Warren Road	North of Hwy 54	630	830	770	770
Middle Warren Road	South of Old Warren Road	2000	2400	2100	2100
Middle Warren Road	South of Old Warren Road	2000	2400	2100	2100
Middle Warren Road	South of Divoky Road	1300	1600	1500	2100
Middle Warren Road	North of Weekly	1300	1600	1500	2100
Middle Warren Road	North of Private Wood Drive	630	830	770	770
Miramar	West of Railroad	4800	6200	5800	
Missouri	South of 8th Avenue	850	1400	1100	1500
Monk Road	North of Hwy 270	950	970	1000	880
Myrtle North	North of Rhinehart	3300	3500	3400	
Oakwood Road	South of 13th Avenue	3100	3400	3400	
Oakwood Road	South of Faucett Road	2100	2400	2300	2200
Oakwood Road	North of 15th	3100	3400	3400	
Ohio Street (Hwy 190)	South of 5th Avenue	2400	2600	2700	2500
Ohio Street (Hwy 190)	South of 6th Avenue	4200	4100	4700	4800
Ohio Street (Hwy 190)	North of Harding Avenue	6100	7300	6400	7100
Ohio Street	North of 23rd	3800	4000	4300	4300
Ohio Street	North of 41st	1100	1100	1200	

Street	Location	2013	2010	2008	2005
Old Warren Road	North of Hwy 54	790	1000	910	1000
Old Warren Road	North of Gibbins Road	920	1200	1100	1400
Old Warren Road	North of I-530	5300	6200	6200	6600
Old Warren Road	South of Good Faith Road	2500	2900	2700	
Olive Street (Hwy 63B)	South of 19th	15000	17000	17000	18100
Olive Street (Hwy 63B)	South of 25th	17000	19000	18000	19760
Olive Street (Hwy 63B)	North of 28th	17000	19000	20000	19560
Olive Street (Hwy 63B)	South of 32nd	15000	16000	16000	16600
Olive Street (Hwy 63B)	South of American Legion Drive	15000	16000	16000	16600
Olive Street (Hwy 63B)	South of Greenbriar	13000	14000	13000	13100
Olive Street (Hwy 63B)	North of Main	14000	15000	14000	14000
Olive Street (Hwy 63B)	North of I-530 (Walmart)	12000	13000	12000	11700
Oliver Road	West of University	1500	1800	1500	1300
Port Road	North of Pullen	680	870	1300	1600
Port Road	East of Commerce	1100	1800	2100	2700
Port Road	West of Kansas Street	1900	2000	2400	3100
Princeton Pike	West of I-530	2400	3100	3000	
Princeton Pike	East of I-530	3100	3600		
Pullen West	West of Walnut	2800	3600	2600	3100
Pullen West	East of University	4800	6200	4500	5400
Pullen West	East of Rhinehart	3600	4700	4300	5000
Reeker	West of University	550		880	
Rhinehart	East of Blake	4500	5700	5200	5800
Ridgway Road	West of Olive	3000	3000	3200	2800
Robin Road	North of Hwy 270	4200	4200	4200	3400
Ryburn Road	North of Old Warren Road	930	1000	1100	950
Shannon Road	East of I-530	1200	1300	1300	1400
Sorrells Road	West of Old Warren Road	1000	960	980	1100
Sulphur Springs Road (Hwy 54)	West of Chapel Heights	6100	6800	5000	7000
Sulphur Springs Road (Hwy 54)	West of Temple Road	3800	4600	4600	4800
Taft	South of Faucett Road	1000	1100	1200	
University (Hwy 79B)	North of Martha Mitchell	8400	12000	13000	13400
University (Hwy 79B)	North of Fluker	9200	12000	12000	10800
University (Hwy 79B)	North of Oliver	3700	4200	4900	5300
University	South of Martha Mitchell	8600	11000	12000	13700
Walnut	South of West 2nd	3500	3500	3300	
Walnut	South of West 5th	3800	4100	3900	4400
West 2nd Avenue	at Birch	1400	2000	2200	2200
West 2nd Avenue	at Apple	1800	2100	2200	2200
West 2nd Avenue	West of Walnut	1000	1200	1300	1400
West 2nd Avenue	East of Walnut	1200	1400	1500	1300
West 5th Avenue (Hwy190)	West of Linden	4800	5500	5800	4800
West 5th Avenue (Hwy 190)	East of Oak	3800	4600	4400	4200
West 5th Avenue (Hwy 190)	East of Laurel	3400	4200	3500	4300
West 5th Avenue (Hwy 190)	East of Alabama	1800	1200	1500	3300
West 5th Avenue (Hwy 190)	West of University	4000	7300	7500	8000

Street	Location	2013	2010	2008	2005
		2010	2010	2000	2000
West 6th Avenue (Hwy 190)	East of Franklin	880	1200	970	1100
West 6th Avenue (Hwy 190)	at Pecan	2500	3300	3400	3200
West 6th Avenue (Hwy 190)	East of Chestnut	3600	4000	4600	7600
West 6th Avenue (Hwy 190)	East of Elm	5000	5700	5800	8600
West 6th Avenue (Hwy 190)	East of Mulberry	6200	7200	7800	14500
West 6th Avenue (Hwy 190)	East of Fir (Central Maloney)	8500	6900	7600	7500
West 6th Avenue (Hwy 190)	East of Blake	7100	6800	7500	7800
West 6th Avenue (Hwy 190)	West of Apple	2500	3300	3400	3200
West 8th Avenue	West of Laurel (PBHS)	2500	3200	3000	3500
West 10th Avenue	West of Main	880	1200	2200	810
West 12th Avenue	East of Cypress	270	530	390	350
West 13th Avenue	West of I-530	740	700	630	610
West 13th Avenue	East of I-530	2400	2700		
West 13th Avenue	West of Young	2100	2600	2400	2600
West 13th Avenue	East of Holly	6000	7700	7100	7700
West 13th Avenue	East of Fir	6500	7500	7900	
West Short 13 <sup>th</sup>	East of Juniper	1600	150	170	160
West 16th Avenue	East of Locust	5600	6500	6000	
West 16th Avenue	West of Cedar	5200	6200	6300	6000
West 17th Avenue	East of Maple	6400	7300	7200	7200
West 17th Avenue	East of Mulberry	460	530	670	770
West 27th Avenue	East of Olive	1300	1400	1300	1300
West 27th Avenue	West of Mulberry	5600	6400	5800	6600
West 28th Avenue	East of Poplar	5300	5600	5300	5300
West 28th Avenue	West of Ash	5000	5400	5200	5800
West 28th Avenue	East of Orange	17000	17000		17700
West 28th Avenue	West of Overpass	16000	18000	16000	17600
West 31st Avenue	West of Hazel	3700	4400	4100	4900
West 31st Avenue	West of Locust	2100	2300	2100	2400
West 34th Avenue	East of Apple	2000	2100	1900	1700
West 34th Avenue	West of Catalpa	2200	2300	2000	2000
West 34th Avenue	East of Plum	1000	1300	1000	1100
West 39th Avenue	West of Main	2700	3000	3000	3000
West 46th Avenue	East of Fir	190	260	250	190
West 46th Avenue	East of Olive	600	760	640	410
West 46th Avenue	East of Stevens Drive	4800	4900	5200	3900
West 73rd Avenue	West of Olive	1200	1400	1500	
West 73rd Avenue	West of Hazel	1200	1500	1400	
White Hall Avenue	West of Hwy 365	3600	3900	3400	3600
Wisconsin	North of Washington	1300	2300	2100	2300





## MAP 5



#### SARACEN LANDING

# SECTION 3 HISTORICAL, CULTURAL AND NATURAL RESOURCES



**CRENSHAW SPRINGS** 

#### HISTORICAL, CULTURAL, AND NATURAL RESOURCES

The surface and subsurface geologic resources play a subtle and indirect role in shaping the built environment and transportation infrastructure in the Pine Bluff region. With the exception of some sand and gravel extraction, local geology has over time contributed a scant portion of the economic base of the Study Area. For the most part, there are few distinctive geologic features and formations unique to the Study Area; however, structural geologic hazards in the area have played and will continue to have a role in the on-going development within the boundaries of the Pine Bluff Area Transportation Study Area.

The most critical relationship of geology to the Study Area is expressed through topographic relief. Of key significance is the location of Pine Bluff on the escarpment between the gently rolling coastal plain to the west, the flat alluvial plain to the east, and the dominance of riverside-sculptured features (see Map 2). This setting has provided Pine Bluff with a variety of environmental resources, a widely-based economy, and a resultant diversity in its social characteristics. The geographic and geologic setting has also been the primary determinant in the pattern of growth and development of the Study Area and will continue to do so. The major contradictory topographic parts of the area have resulted in some of the current problems, such as drainage, flood control, and land use.

Environmentally, the narrow, braided streams and the stands of mixed hardwoods and pines on the gently rolling uplands provide an array of habitats for species usually associated with the western portions of Arkansas. To the east, the flat alluvial plain with its broad meandering rivers, numerous oxbow lakes and stands of bottom land hardwoods and wetlands afford conditions suitable for lowland species characteristic of the Mississippi Delta system. This diversity of environs also provide for a wide range of recreational activities and opportunities for the scientific study of natural history within the Study Area. Map 3 illustrates the region's environmentally sensitive and recreational areas.

The dominant physical attributes of Jefferson County and the PBATS area have provided a favorable setting for the development of a complex pre-European culture based on farming, hunting of animals, and gathering of edible plants. These same qualities drew European settlers in the early part of the 19<sup>th</sup> century. The rich soils of the alluvial plain gave the Study Area its first economic footing, namely agriculture with cotton as the principal crop. Many of the early social characteristics of the area developed around this base and, in large part, remain in place today. As the community of Pine Bluff developed, industries associated with timber, paper products, and other wood products grew in response to the abundance of land to the west capable of supporting managed pine forests. This led to an economy supported by the two pillars of agriculture and forestry. In recent years, some previously forested lands harvested for timber or cleared for farming have been replanted with pine trees adding to the region's lumber reserves.

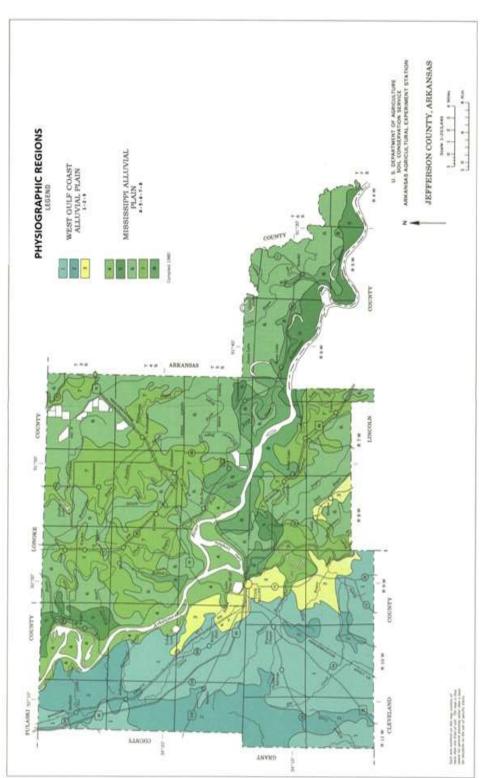
Prior to the Second World War, the regional economy continued to be dominated by the agricultural sector. This changed with the establishment of the Pine Bluff Arsenal northwest of Pine Bluff and an aviation training facility at Grider Field (now named Pine Bluff Regional Airport) east of Pine Bluff. Together, these facilities provided jobs for more than 3,500 local residents.

In the mid-1950's, the St. Louis-Southwestern Railroad built its gravity yards in Pine Bluff. Also, a state-run vocational-technical training school and a regional hospital were built in the city to serve Jefferson County and adjacent counties during the middle years of the 20<sup>th</sup> century.

The Pine Bluff-Jefferson County Port Authority was created in anticipation of the Arkansas River becoming a major inland water transportation corridor into Oklahoma. With the completion of the McClellan-Kerr Arkansas River Navigation System from near Tulsa, Oklahoma to the Mississippi River, the Arkansas River became a major transportation collector in the county and has attracted new industries to the Port of Pine Bluff and the Jefferson Industrial Park, furthering the diversification of the economic base and leading to an increase in population. In 2015 the McClelland-Kerr Arkansas River Navigation System designation was up graded from a "collector" to a "corridor".

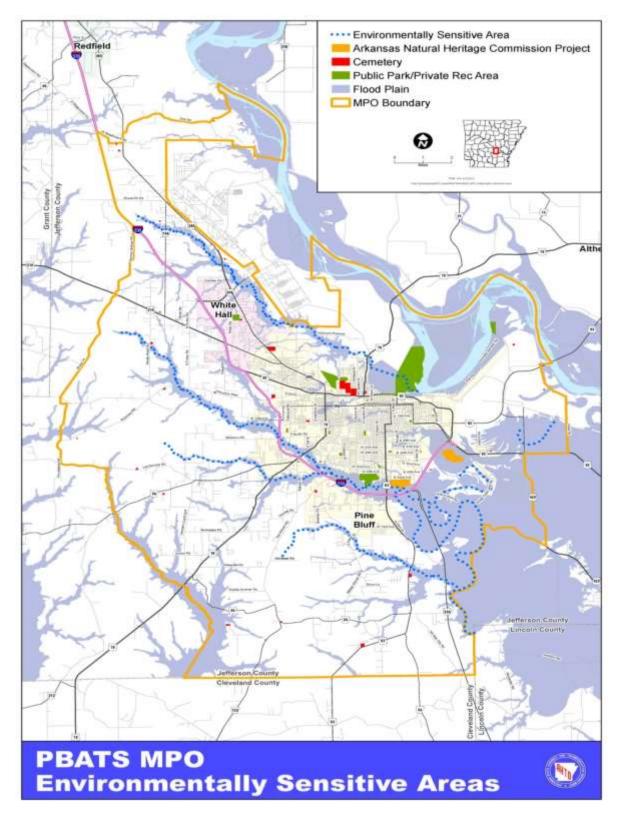
The development of the built environment in the region has generally followed the topography. Most of the earliest settlements were located on the high grounds adjacent to the escarpment and in close proximity to both the alluvial plain and uplands. As the area grew, it spread both westward and eastward; however, poor drainage and chronic flooding have proven to be impediments to development to the east. These same limitations persist within the Study Area and will be a factor in future decisions regarding land use and growth.

Urban growth continues to drive the conversion of the natural resources of plant and animal habitat, forests, and rich soils into urban land. This conversion process is necessary to maintain the viability and well-being of the community. Yet, despite the abundance of land and water resources within the Study Area, the diminishing of these resources affects the quality of our environment and the identity of the area. Therefore, efforts to protect them have been initiated and should be supported. There are a number of environmental, historic, cultural, and aesthetic resources within the Study Area worthy of restoration, preservation, and/or enhancement. These include the University of Arkansas at Pine Bluff, Train Museum, Downtown Pine Bluff, Taylor Field and Saracen Landing. During the development of the 2040 Transportation Plan, a review was conducted of all available documents regarding environmental, historic, cultural, and aesthetically significant resources within the Study Area. These resources were identified and are shown on Map 5. In addition, various transportation links were evaluated in terms of meeting the economic, social, and environmental needs of the community. Utmost care was given to devising a transportation network to adequately serve the community while ensuring the abundant natural and historical resources are preserved and enhanced for the use and enjoyment of future.



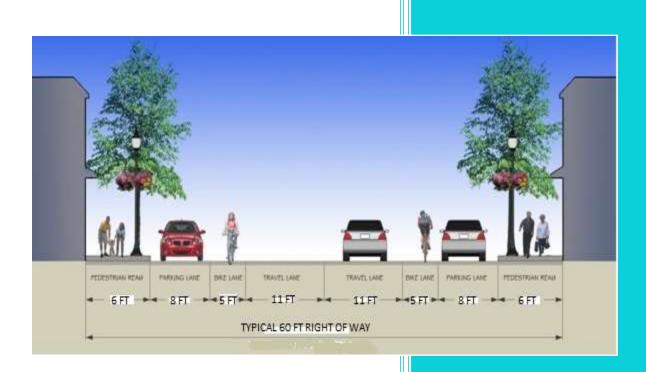
### **PHYSIOGRAPHIC REGIONS**

MAP 6



MAP 7

# SECTION 4 LAND USE, MASTER STREET PLAN AND COMMUNITY CONTROLS



#### BACKGROUND

Because of the relationship between land uses and transportation and in order to provide a comprehensive street system, it is important for transportation planners to be aware of the existing land uses in their metropolitan areas. Within metropolitan areas there can be a number of different population densities. They include areas that are urban, which are largely built up areas containing numerous dwelling units per acre as well as business and retail establishments and industrial uses that support both the urban and suburban populations; suburban areas that contain less residential units per acre and fewer commercial and industrial uses than are usually found in urban areas; and rural areas, which can include large-lot or estate sized residences, farm land, and general undeveloped land.

In many instances existing land uses and development density have dictated the need for certain types of streets and the need for upgrades to the existing streets, while in other cases, the types of streets that exist have dictated the type of land uses and development that occur in the area. For example, an older strip-commercial development may have had its start on a two-lane street or highway, but increased development and associated traffic over the years required widening of the street to three lanes or five lanes. On the other hand, a narrow street that does not connect with many other streets may have little existing development along it, carries very little traffic, and additional development is not expected, so improvements are not required. These two examples show the need for a continuing, cooperative, and comprehensive transportation planning process within the metropolitan area so that 1) existing development will be provided with an adequate street system; 2) future streets will be built in those areas planned for growth and to a standard that will adequately serve the population; 3) population will be guided into the areas with adequate streets; and 4) the street system will provide connectivity to and within urban, suburban, and rural areas and with other metropolitan areas.

Since streets and land uses are so closely correlated, a local government has a right as well as a duty to guide growth and provide for orderly expansions by regulating where residential, commercial, and industrial growth shall occur and how residents and employees can travel from home to job and to other destinations. Cities of the first and second class in Arkansas are empowered by Act 186 of 1957, as amended, to establish a planning commission and planning/extraterritorial areas, prepare and adopt plans for these areas such as land use and master street plans, and develop implementing regulations such as zoning and subdivision regulations. Both Pine Bluff and White Hall have adopted and administer zoning regulations and subdivision regulations in order to influence development of their cities and extraterritorial jurisdictions while protecting the developer, homeowner, and the cities from improper infrastructure and uncontrolled growth. Zoning classifications regulate the type and intensity of development, thereby regulating the activity a development will generate and protecting the existing and proposed transportation facilities from ineffectiveness and overcrowding. Zoning also regulates structure setbacks from a proposed street right-of-way and existing transportation facilities and their eventual improvements. Therefore, adherence to setback requirements assists in the preservation of rights-of-way for future facilities that are contained in a master street plan.

Through the subdivision regulations, proposed facilities shown on the cities' master street plans and on the portion of the Year 2040 Metropolitan Transportation Plan contained in the cities' planning area can be required to be constructed according to proper standards and specifications. Conformity to these standards, and the provisions for the dedication of rights-of-way, enable the cities to control their growth and development while assisting in the implementation of the Metropolitan Transportation Plan.

#### LAND USE WITHIN THE METROPOLITAN PLANNING AREA

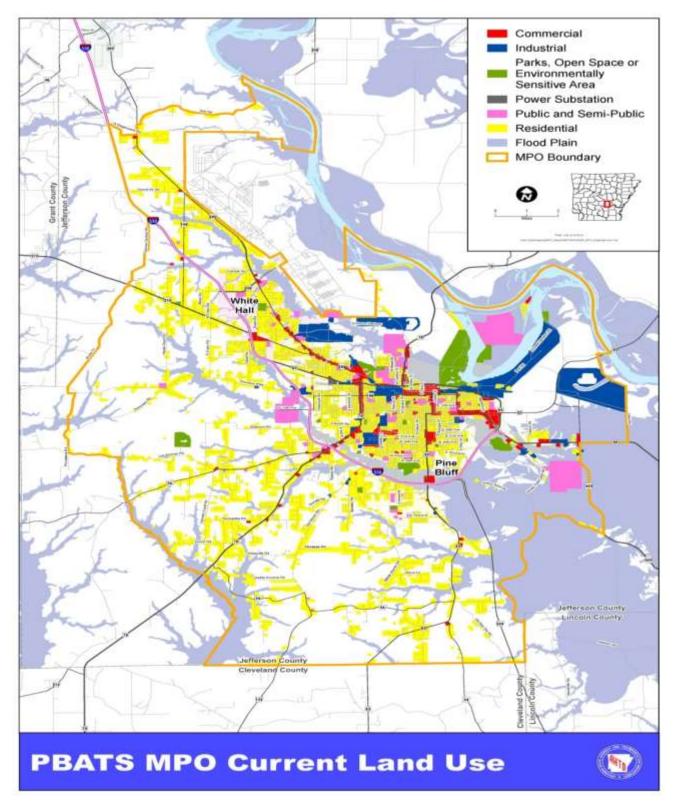
In the past, urban development within the Metropolitan Planning Areas of Pine Bluff, White Hall and portions of Jefferson County have been relatively compact and quite similar to most urban centers in the mid-south region, originally expanding in a uniform concentric form around the central business district. The Arkansas River and its extensive floodplain in the eastern portion of the study area and the Bayou Bartholomew area were once barriers to unlimited growth in the north, south and east portions of the Study Area. Because of these barriers, the development of the study area was bounded by the Arkansas River on the north, the floodplain on the east, Bayou Bartholomew on the south and Oakwood Road and Claud Road on the western boundary. However, completion of Interstate 530 from White Hall through the southern edge of Pine Bluff and around to connect with the Martha Mitchell Expressway has improved access to all areas of the study area. This improved access has had a strong influence on the expansion of low density residential, commercial and industrial developments in the Study Area fringe.

Railroads bisect the central core of the Study Area. Most early industrial development occurred in close proximity to the railroads. However, with the advent of better roads and improvements made in the trucking industry, the trend has been towards disbursing industrial locations throughout the core area. The main industrial areas are located in the Pine Bluff Port area, the Jefferson Industrial Park, and along major arterial and collector roads within the core area.

Scenic areas within the study area, and particularly substantial parts of the Arkansas River and Bayou Bartholomew, should be preserved and enhanced as part of the park system. Neighborhood parks should be developed in conjunction with elementary schools. Public and semi-public uses such as churches, institutions, clubs and golf courses provide the community with necessary open spaces. Where possible, green belt - trail areas need to be set aside that would bisect the residential, commercial and industrial areas.

It has long been a trend within the study area for most growth to occur south and southwest of the Pine Bluff city limits and all around White Hall except to its east (the Pine Bluff Arsenal boundary stops eastern growth in this area). The Year 2040 Transportation Plan was developed partly in relation to existing development and roads, existing travel patterns, and logical road extensions in conjunction with north-south and east-west movement as well as other master plans such as Pine Bluff's Master Sewer Plan. In addition, development is more apt to occur in these areas due to the absence of extensive flood-prone lands and because the soils of the area are more suitable for urban development. Other considerations included anticipated future commercial/industrial development near the Pine Bluff Regional Airport and the I-530/Olive Street intersection, and existing and anticipated future industrial development in the Port of Pine Bluff and Jefferson Industrial Park.

Map 8 shows the current land use of the Study Area.



### **MAP 8**

#### FUNCTIONAL CLASSIFICATIONS

The concept of a functional classification system has been helpful for many years as a management tool in a variety of areas pertaining to highways and roadways. Federal, State and local governments use this tool to assign jurisdictional responsibility, allocate funds, and establish appropriate design standards. A functional classification for highways has been an important part of Federal-aid highway programs for many decades. The National Highway Functional Classification study was mandated by the Congress in the 1968 Federal-Aid Highway Act.

Functional classification is the process by which streets and highways are grouped into classes according to the character of service they are intended to provide. Cities, towns, businesses, farms, homes, schools, recreation areas and other places generate or attract trips. These trips involve movement of vehicles through a network of roads. It becomes necessary to determine how travel movement can be channelized within a limited road network in a logical and efficient manner. Functional classification defines the nature of this channelization process by defining the role that any particular road or street should play in serving the flow of trips through a road network. The heavy travel movements are directly served by major channels, and the lesser trips are channeled into somewhat indirect paths.`

Traffic channelization provides access to property and various levels of travel mobility. Access is a fixed necessary requirement at both ends of any trip. Level of travel mobility refers to riding comfort, freedom from speed changes, and trip travel time. Arterial networks emphasize a high level of mobility for through traffic movements. Local facilities emphasize more on the land access function. Collectors offer a compromise between both functions of land access and mobility.

#### Classification Hierarchy For Urban Areas

Interstates Other Freeways & Expressways (Full or partial control of access) Principal Arterials Other Principal Arterials (No control of access) Minor Arterial Streets Collector Streets Local Streets

The Urban Functional Classification System is updated every ten years. It is based off the Bureau of the Census data.

A plan focuses attention on needs identified by existing conditions as well as on needs that are based upon future demands. In addition, a schedule of improvements can be established based on priorities and the capital improvements program. These priorities may change or new priorities may develop but through a continuing transportation planning process, they can be anticipated and absorbed into the Plan.

The City of Pine Bluff and White Hall have adopted Master Street Plans; however, updates to these plans are often closer to the twenty year range. Therefore both cities tend to look to Southeast Arkansas Regional Planning and the adopted Metropolitan Transportation Plan's Functional Classification section for guidance. The roadways contained in the 2040 Metropolitan Transportation Plan are classified by the way the facility functions in terms of type of traffic carried. Federal (23CFR450.214) regulations require states to develop a statewide transportation plan for all areas of the State. The plan shall:

- Be intermodal (including consideration and provision, as applicable, of elements and connections of and between rail, commercial motor vehicle, waterway, and aviation facilities, particularly with respect to intercity travel) and statewide in scope in order to facilitate the efficient movement of people and goods;
- Be reasonably consistent in time horizon among its elements, but cover a period of at least 20 years;
- Contain, as an element, a plan for bicycle transportation, pedestrian walkways and trails which is appropriately interconnected with other modes;
- Be coordinated with the metropolitan transportation plans required under 23 U.S.C. 134;
- Reference, summarize or contain any applicable short range planning studies, strategic planning and/or policy studies, transportation need studies, management system reports and any statements of policies, goals and objectives regarding issues such as transportation, economic development, housing, social and environmental effects, energy, etc., that were significant to development of the plan; and
- Reference, summarize or contain information on the availability of financial and other resources needed to carry out the plan.

Following are descriptions of the classification of streets as shown on the transportation plans, a cross section diagram of each type, vehicle capacity, right-of-way required, pavement width, recommended vehicle speed, etc.

#### INTERSTATE FREEWAYS

Interstates are the highest classification of Arterials and were designed and constructed with mobility and long-distance travel in mind (Figure 1). Since their inception in the 1950's, the Interstate System has provided a superior network of limited access, divided highways offering high levels of mobility while linking the major urban areas of the United States. Determining the functional classification designation of many roadways can be somewhat subjective, but with the Interstate category of Arterials, there is no ambiguity. Roadways in this functional classification category are officially designated as Interstates by the Secretary of Transportation, and all routes that comprise the Dwight D. Eisenhower National System of Interstate and Defense Highways belong to the Interstate functional classification category and are considered Principal Arterials.

#### **OTHER FREEWAYS & EXPRESSWAYS**

Roadways in this functional classification category look very similar to Interstates (Figure 2). While there can be regional differences in the use of the terms 'freeway' and 'expressway', for the purpose of functional classification the roads in this classification have directional travel lanes, are usually separated by some type of physical barrier, and their access and egress points are limited to on- and off-ramp locations or a very limited number of at-grade intersections. Like Interstates, these roadways are designed and constructed to maximize their mobility function, and abutting land uses are not directly served by them.

#### PRINCIPAL ARTERIALS

These roadways serve major centers of metropolitan areas, provide a high degree of mobility and can also provide mobility through rural areas. Unlike their access controlled counterparts, abutting land uses can be served directly. Forms of access for Other Principal Arterial roadways include driveways to specific parcels and at-grade intersections with other roadways (Figure 3). For the most part, roadways that fall into the top three functional classification categories (Interstate, Other Freeways & Expressways, and Other Principal Arterials) provide similar service in both urban and rural areas. The primary difference is that there are usually multiple Arterial routes serving a particular urban area, radiating out from the urban center to serve the surrounding region. In contrast, an expanse of a rural area of equal size would be served by a single Arterial.

#### MINOR ARTERIALS

Minor Arterials provide service for trips of moderate length, serve geographic areas that are smaller than their higher Arterial counterparts and offer connectivity to the higher Arterial system (Figure 4). In an urban context, they interconnect and augment the higher Arterial system, provide intra-community continuity and may carry local bus routes. In rural settings, Minor Arterials should be identified and spaced at intervals consistent with population density, so that all developed areas are within a reasonable distance of a higher level Arterial. Additionally, Minor Arterials in rural areas are typically designed to provide relatively high overall travel speeds, with minimum interference to through movement. The spacing of Minor Arterial streets may typically vary from 1/8- to 1/2-mile in the central business district (CBD) and 2 to 3 miles in the suburban fringes. Normally, the spacing should not exceed 1 mile in fully developed areas.

#### MAJOR AND MINOR COLLECTORS

Collectors serve a critical role in the roadway network by gathering traffic from Local Roads and funneling them to the Arterial network. Within the context of functional classification, Collectors are broken down into two categories: Major Collectors and Minor Collectors (Figures 5 & 6). Until recently, this division was considered only in the rural environment. Currently, all Collectors, regardless of whether they are within a rural area or an urban area, may be substratified into major and minor categories. The determination of whether a given Collector is a Major or a Minor Collector is frequently one of the biggest challenges in functionally classifying

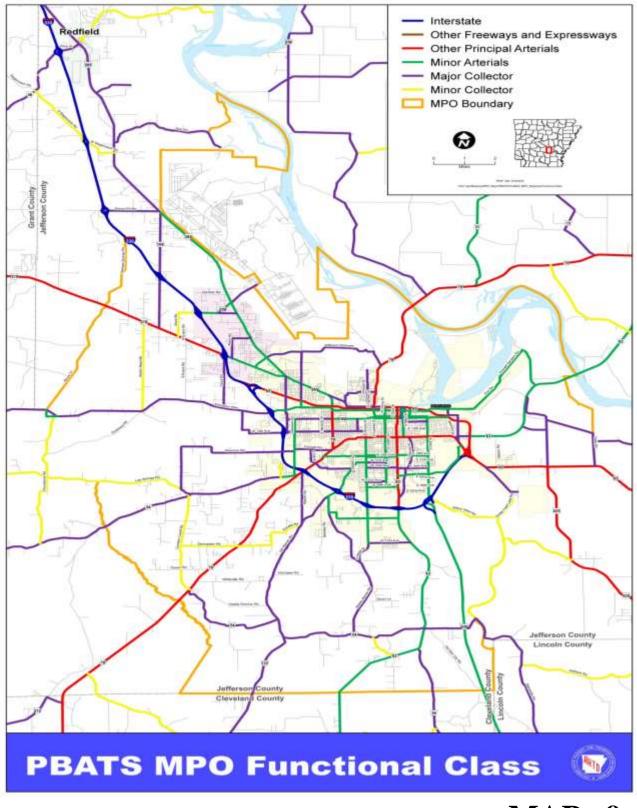
a roadway network. The distinctions between Major Collectors and Minor Collectors are often subtle. Generally, Major Collector routes are longer in length; have lower connecting driveway densities; have higher speed limits; are spaced at greater intervals; have higher annual average traffic volumes; and may have more travel lanes than their Minor Collector counterparts. Careful consideration should be given to these factors when assigning a Major or Minor Collector designation. Overall, the total mileage of Major Collectors is typically lower than the total mileage of Minor Collectors, while the total Collector mileage is typically one-third of the Local roadway network.

#### LOCAL ROADS

Locally classified roads account for the largest percentage of all roadways in terms of mileage. They are not intended for use in long distance travel, except at the origin or destination end of the trip, due to their provision of direct access to abutting land. Bus routes generally do not run on Local Roads. They are often designed to discourage through traffic. As public roads, they should be accessible for public use throughout the year. Local Roads are often classified by default. In other words, once all Arterial and Collector roadways have been identified, all remaining roadways are classified as Local Roads.

#### FUNCTIONAL CLASS CROSS-SECTIONS

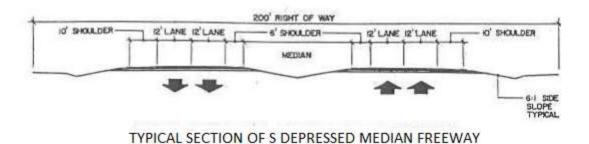
The following cross-sections were developed for each functional class to ensure the orderly growth of the area-wide street network so that it may function properly as envisioned in the 2040 Transportation Plan. Right-of-way and lane widths vary in order to provide sufficient traffic service and safety given the desired travel speeds for each functional class. Minimum cross-sections are ideals for roadways in new locations or widening of existing roadways in areas with development that does not significantly encroach on the recommended right-of-way. In heavily developed areas, reduction of right-of-way and roadway width may be approved on a case by case basis to avoid incurring prohibitive costs and/or undesirable negative impacts. Also, as shown, sidewalks are included in the design of Other Principal Arterials, Minor Arterials, and Collector streets. Sidewalks should be established in new construction and reconstruction of these streets whenever possible. Exceptions to this policy can include excessively disproportionate costs when compared to the need or probable use of the sidewalk or where sparsity of population or severe topographic or natural resource constraints indicate an absence of need.



**MAP** 9

#### FIGURE 1. FREEWAYS

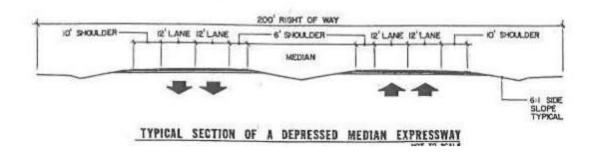
#### PREFERRED WHEN RIGHT OF WAY IS ADEQUATE



Capacity Service Volume	-	71,700 vpd 44,800 vpd (measure of the maximum flow rate under prevailing conditions. Adjusting for prevailing conditions involves adjusting for variations in the following factors: lane width, lateral clearances, free-flow speed, terrain and distribution of vehicle type).
Speed	-	65-70 mph.
Traffic Lanes	-	Four 12 foot lanes; where at-grade intersections occur on
		expressways, right and left turn lanes should be provided.
Parking Lanes	-	None; emergency parking permitted on shoulders.
Shoulders	-	10 foot outside and six foot inside shoulders.
Side Slopes	-	Slopes should not exceed a minimum ratio of 6:1 to a distance of
Ĩ		30 feet from the edge of traffic lanes.
Paved Width	-	80 feet with depressed 18 foot median.
Right-of-Way	-	200 feet; on federally funded and State projects, R/W requirement
C I		will normally be 300 feet, with more at interchanges.
Sidewalks	-	None.
Median	-	24 feet minimum desirable; median is measured between edges of
		opposing traffic lanes.
Frontage Roads	-	Should not be permitted except where existing development needs frontage roads to maintain access. Freeway exit ramps will not intersect frontage roads unless the frontage is one-way in the same direction.

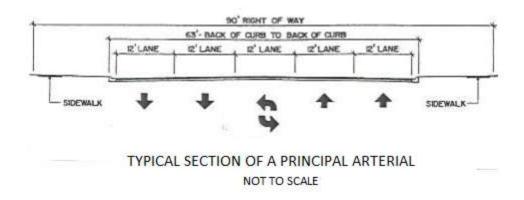
FIGURE 2. OTHER FREEWAYS AND EXPRESSWAYS

#### PREFERRED WHEN RIGHT OF WAY IS ADEQUATE



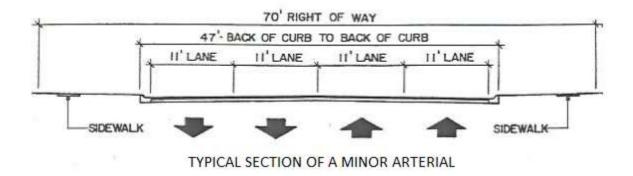
Capacity Service Volume	-	38,000 vpd 28,300 vpd (measure of the maximum flow rate under prevailing conditions. Adjusting for prevailing conditions involves adjusting for variations in the following factors: lane width, lateral clearances, free-flow speed, terrain and distribution of vehicle type).
Speed	-	45-55 mph.
Traffic Lanes	-	Four 12 foot lanes; where at-grade intersections occur on expressways, right and left turn lanes should be provided.
Parking Lanes	-	None; emergency parking permitted on shoulders.
Shoulders	-	10 foot outside and six foot inside shoulders.
Side Slopes	-	Slopes should not exceed a minimum ratio of 6:1 to a distance of 30 feet from the edge of traffic lanes.
Paved Width	-	80 feet with depressed 18 foot median.
Right-of-Way	-	200 feet; on federally funded and State projects, R/W requirement will normally be 300 feet, with more at interchanges.
Sidewalks	-	None.
Median	-	24 feet minimum desirable; median is measured between edges of opposing traffic lanes.
Frontage Roads	-	Should not be permitted except where existing development needs frontage roads to maintain access. Freeway exit ramps will not intersect frontage roads unless the frontage is one-way in the same direction.

#### FIGURE 3. PRINCIPLE ARTERIALS



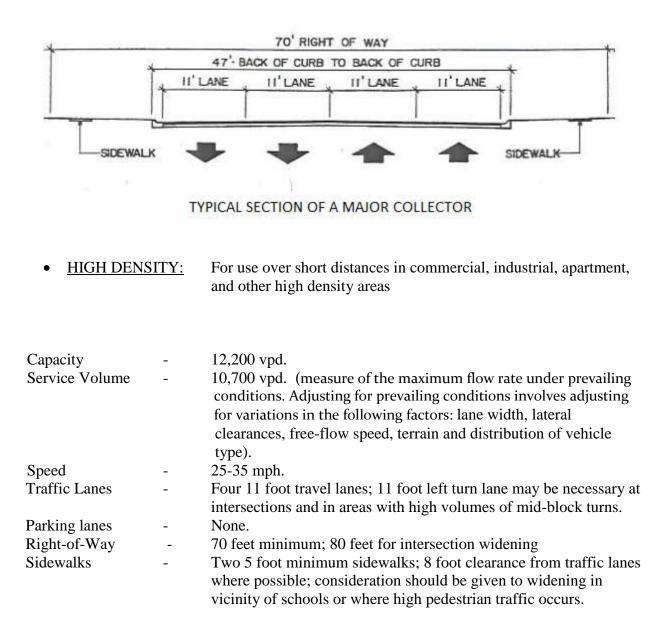
Capacity Service Volume	-	22,800 vpd 17,000 vpd (measure of the maximum flow rate under prevailing conditions. Adjusting for prevailing conditions involves adjusting for variations in the following factors: lane width, lateral clearances, free-flow speed, terrain and distribution of vehicle type).
Speed	-	40-45 mph.
Traffic Lanes	-	Four 12 foot travel lanes; 12 foot left turn bay at intersections where necessary, and a continuous turn lane where there are high volumes of mid-block turns.
Parking Lanes	-	None.
Right-of-Way	-	80 feet minimum; 90 feet for intersection widening and where possible for five lane sections.
Sidewalks	-	Two sidewalks designed in accordance with AHTD Sidewalk Policy.

#### FIGURE 4. MINOR ARTERIALS

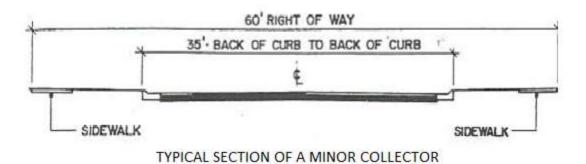


Capacity Service Volume	-	16,300 vpd. 12,200 vpd. (measure of the maximum flow rate under prevailing conditions. Adjusting for prevailing conditions involves adjusting for variations in the following factors: lane width, lateral clearances, free-flow speed, terrain and distribution of vehicle type).
Speed	-	35-40 mph.
Traffic Lanes	-	Four 11 foot travel lanes; 11 foot left turn lane may be necessary at intersections and in areas with high volumes of mid-block turns.
Parking lanes	-	None.
Right-of-Way	-	70 feet minimum; 80 feet for intersection widening and where possible for five lane sections.
Sidewalks	-	Two sidewalks designed in accordance with AHTD Sidewalk Policy.

#### FIGURE 5. MAJOR COLLECTORS



#### FIGURE 6. MINOR COLLECTORS

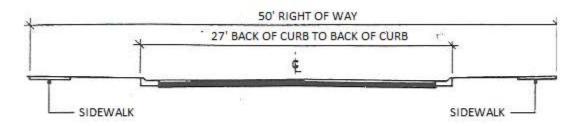


• LOW DENSITY:

For use primarily in residential and other low density area.

Capacity Service Volume	-	6,200 vpd 4,700 vpd. (measure of the maximum flow rate under prevailing conditions. Adjusting for prevailing conditions involves adjusting for variations in the following factors: lane width, lateral clearances, free-flow speed, terrain and distribution of vehicle
Speed	_	type). 25-30 mph.
-	-	1
Traffic Lanes	-	Two 11 foot travel lanes; 10 foot left turn lane at intersections where necessary
Parking lanes	-	10 foot lane provided but not necessarily defined; none when turn lane is provided.
Right-of-Way	-	60 feet.
Sidewalks	-	Two 5 foot minimum sidewalks; 8 foot clearance from traffic lanes where possible; consideration should be given to widening in vicinity of schools or where high pedestrian traffic occurs. Sidewalks will be constructed in accordance to ADA design standards.

#### FIGURE 7 LOCAL STREETS



#### TYPICAL SECTION OF A LOCAL STREET

Capacity	-	<2000 vpd
Service Volume	-	<2000 vpd
Speed	-	25-30 mph.
Traffic Lanes	-	Two 11 foot travel lanes
Parking lanes	-	Due to limited paved area width on street parking is discouraged.
Paved Width	-	27 feet.
Right-of-Way	-	50 feet.
Sidewalks	-	Two 5 foot minimum sidewalks; 3 foot clearance from traffic lanes where possible; consideration should be given to widening in vicinity of schools or where high pedestrian traffic occurs. Sidewalks will be constructed in accordance to ADA design standards.

#### ACCESS MANAGEMENT

#### Definition

Assess management involves the spacing and locations of driveways, median openings and the interconnectivity of different levels of road classifications in order to maintain the access and mobility functions of roadways. The purpose of access standards is to maintain the capacity of roadways while promoting safety. This is accomplished by reducing the number of conflict points.

#### Benefits

Roadways with fewer access points have fewer accidents and maintain roadway capacity thereby reducing the need for additional capital outlay for new roads. Pedestrians and bicyclists also benefit from access management. Ewer curb cuts and driveways offer less conflict points allowing for unimpeded pedestrian and bicycle movements.

#### Principles

The Transportation Research Board (TRB) recommends the following ten principles that should be integrated into access management plan:

- 1. Provide a specialized road system
- 2. Limit access to major roadways
- 3. Promote intersection hierarchy
- 4. Locate signals to favor through movement
- 5. Preserve the functional area of interchanges
- 6. Limit the number of conflict points
- 7. Separate conflict areas
- 8. Remove turning vehicles from through traffic lanes
- 9. Use non-traverse medians to manage left turn movements
- 10. Provide a supporting street and circulation system

#### Plan

The governmental units within the Metropolitan Planning Area should begin the process of developing and adopting a regional access management plan. This plan should address:

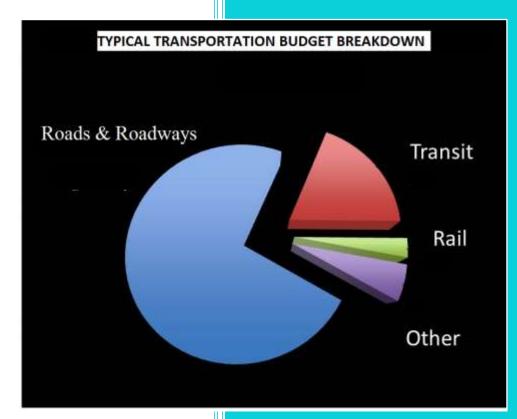
- Policies and standards
- Implementation procedures
- Design standards
- Definitions of road classifications (including rural and frontage roads)
- Driveway spacing guidelines
- Corner clearance standards (visibility at intersections)
- Bike and pedestrian standards
- Shared use paths
- Variance procedures and appeals

Existing corridor conditions:

- Olive Street (Hwy 63) north of I-530 driveway spacing and unlimited left hand turn areas create multiple conflict points resulting in reduced traffic flow and accidents
- Hwy 365 at White Hall Road dual traffic lights within 100 feet of each other restricts the free flow of vehicles on this collector. Realigning streets and reducing to one light would improve vehicle flow in this area
- Highway 365B (formerly Hwy 270) east of I-530 increased development in this area without an adopted Access Management plan has the potential to result in traffic delays and additional conflict points.

## SECTION 5

## THE TRANSPORTATION PLAN



#### CONSTRAINED & UNCONSTRAINED TRANSPORTATION PLAN 2016 – 2040 CAPITAL IMPROVEMENT PROGRAM

#### **OVERVIEW**

In order to have a viable plan that can be used by the public and private sectors as a development guide, an implementation plan that shows which transportation projects will be initiated during a specific time frame must be prepared. The basic elements in preparing and adopting the implementation, or constrained, plan are: (1) determining what transportation links on the Year 2040 Unconstrained Transportation Plan need to be implemented based on expected travel needs and (2) the availability of financial resources to implement the projects.

Through the planning process, the PBATS Policy Committee adopted both the Unconstrained and Constrained Transportation Plans. The Constrained Plan, shown on Map 7, represents the transportation projects the local jurisdictions and the State plan to implement during the next twenty-five years. The plan was developed through public input and technical considerations and is also based on the following concepts:

- <u>Traffic Service</u> What is the perceived level of traffic operating conditions within the Study Area?
- <u>Community Value</u> What role does transportation play not only in meeting the community travel needs but also in meeting social, environmental, historical, and economic requirements?
- <u>Networking Continuity</u> To what degree does the transportation system allow for continuous north-south/east-west traffic movements throughout the study area?
- <u>Functional Classification of Roadways</u> Is the collector and arterial street system adequately spaced over the urban area so that the population is served adequately, and will the streets function as described?
- <u>Use of Existing Facilities</u> Does the proposed plan maximize the usage and effectiveness of the existing transportation system?
- <u>Growth Potential</u> Is the proposed plan compatible with the transportation needs of future development?
- <u>Implementation</u> Are the selected projects necessary to ensure that the community remains a strong and vital place where residents can prosper?

#### FINANCIAL PLAN

A long-range financial plan is necessary to determine what amount of funds may be available to implement transportation improvement projects as identified in the Year 2040 PBATS Constrained Transportation Plan. The Arkansas State Highway and Transportation Department furnished SARPC with the estimated amount of federal funds for the various U.S. Department of Transportation programs that may be available to the PBATS area over the next twenty-five years to implement surface transportation and transit projects. These funds were estimated to grow at the rate of 3 % per year and are shown in Table 7. These funding levels include both federal funds available plus matching funds. At the local jurisdiction level, an evaluation of the two Cities and County transportation revenues from the years 2010 to 2014 was conducted. The evaluation consisted of reviewing revenue collected from the local 3-mill road tax collected, state turn-back money, severance turn-back money and other sources of funds as stated in their yearly audits of their transportation funds. Based on the evaluation, it was determined to use a yearly .5% increase in the revenues received by the Pine Bluff and Jefferson County governments and a 2 % increase in White Hall's revenue instead of the 3 % annual increase used by AHTD. In addition, from reviewing local jurisdiction expenditures for implementing transportation projects over the last twenty years, it appears each local jurisdiction may be able to set aside 5% of their annual transportation budget for expenditures for capital improvement projects. Tables 8 - 10 show the local jurisdiction street revenues and other funding sources and estimated funds available for capital projects.

The Capital Improvements Program presented in Table 11 as the Metropolitan Transportation Improvement Program lists which projects will be implemented during a certain time period and the estimated cost of each project based on the inflated cost figures for the time period the projects are proposed to be implemented. SARPC used AHTD's estimated 1.04 % annual cost of inflation rate for the transportation improvement projects shown in the table with mid-term and late-term projects projected to the mid-year position.. Table 9 shows the funds estimated to be available in relation to the projects listed to ensure the program is constrained. Each jurisdiction is responsible for implementing their own projects as shown in the table.

FEDERAL / STATE									
SOURCE	2016-2020	2021-2030	2031-2040						
NHS	12,095,000	30,276,000	40,688,000						
Bridge	14,376,000	35,985,000	48,361,000						
Interstate Maintenance	7,099,000	36,719,000	54,826,000						
State STP	22,920,000	57,373,000	77,104,000						
State Bridge	2,288,000	5,727,000	7,697,000						
STP Urban Bridge	66,000	166,000	224,000						
STP Urban	755,000	1,889,000	2,539,000						
Safety	3,802,000	9,518,000	12,791,000						
Enhancement (TAP)	812,000	2,032,000	2,731,000						
State Maintenance	16,991,000	42,533,000	57,160,000						
Total	\$ 81,204,000	222,218,000	304,121,000						

#### TABLE 7 ESTIMATED FUNDS AVAILABLE FEDERAL / STATE

#### TABLE 8

#### PINE BLUFF PROJECTED DEDICATED REVENUE AND OTHER SOURCES

YEAR	MILLAGE	HIGHWAY TURNBACK	STATE 1/2 CENT TAX DF&A ESTIMATES	SEVERANCE	OTHER	TOTAL	AVAILABLE 5% FOR CAPITAL EXPENDITURES
2016	522,880	2,090,566	897,919	312,249	275,715	4,099,329	204,966
2010	525,495	2,153,283	897,919	321,616	289,501	4,187,814	209,391
2018	528,122	2,217,882	897,919	331,265	303,976	4,279,164	213,958
2019	530,763	2,284,418	897,919	341,202	319,175	4,373,477	218,674
2020	533,417	2,352,951	897,919	351,439	335,134	4,470,860	223,543
2021	536,084	2,423,539	897,919	361,982	351,890	4,571,414	228,571
2022	538,764	2,496,245	897,919	372,841	369,485	4,675,254	233,763
2023	541,458	2,571,133	897,919	384,026	387,959	4,782,495	239,125
2024	544,165	2,648,267	0	395,547	407,357	3,995,336	199,767
2025	546,886	2,727,715	0	407,414	427,725	4,109,740	205,487
2026	549,621	2,809,546	0	419,636	449,111	4,227,914	211,396
2027	552,369	2,893,833	0	432,225	471,567	4,349,993	217,500
2028	555,131	2,980,648	0	445,192	495,145	4,476,115	223,806
2029	557,906	3,070,067	0	458,548	519,902	4,606,423	230,321
2030	560,696	3,162,169	0	472,304	545,897	4,741,066	237,053
2031	563,499	3,257,034	0	486,473	573,192	4,880,199	244,010
2032	566,317	3,354,745	0	501,067	601,852	5,023,981	251,199
2033	569,148	3,455,388	0	516,099	631,945	5,172,580	258,629
2034	571,994	3,559,049	0	531,582	663,542	5,326,167	266,308
2035	574,854	3,665,821	0	547,530	696,719	5,484,923	274,246
2036	577,728	3,775,795	0	563,956	731,555	5,649,034	282,452
2037	580,617	3,889,069	0	580,874	768,133	5,818,693	290,935
2038	583,520	4,005,741	0	598,301	806,539	5,994,101	299,705
2039	586,438	4,125,913	0	616,250	846,866	6,175,467	308,773
2040	589,370	4,249,691	0	634,737	889,209	6,363,007	318,150

#### TABLE 9

#### WHITE HALL PROJECTED DEDICATED REVENUE AND OTHER SOURCES

YEAR	MILLAGE	HIGHWAY TURNBACK	STATE 1/2 CENT TAX DF&A	SEVERANCE	OTHER	TOTAL	AVAILABLE 5% FOR CAPITAL
		[	ESTIMATES				EXPENDITURES
2016	10,715	356,138	98,430	38,909	25,080	529,272	26,464
2017	109,293	359,699	98,430	44,357	27,588	639,367	31,968
2018	111,479	363,296	98,430	50,567	30,347	654,119	32,706
2019	113,708	366,929	98,430	57,646	33,381	670,094	33,505
2020	115,983	370,598	98,430	65,716	36,720	687,447	34,372
2021	118,302	374,305	98,430	74,917	40,392	706,346	35,317
2022	120,668	378,047	98,430	85,405	44,431	726,981	36,349
2023	123,082	381,828	98,430	97,362	48,874	749,576	37,479
2024	125,543	385,646	0	110,992	53,761	675,942	33,797
2025	128,054	389,503	0	126,531	591,137	703,225	35,161
2026	130,615	393,398	0	144,246	65,051	733,310	36,666
2027	133,228	397,332	0	164,440	71,556	766,556	38,328
2028	135,892	401,305	0	187,461	78,712	803,370	40,169
2029	138,610	405,318	0	213,706	86,583	844,217	42,211
2030	141,382	409,372	0	243,625	95,241	889,620	44,481
2031	144,210	413,465	0	277,732	104,765	940,172	47,009
2032	147,094	417,600	0	316,615	115,242	996,551	49,828
2033	150,036	421,776	0	360,941	126,766	1,059,519	52,976
2034	153,037	425,994	0	411,473	139,443	1,129,947	56,497
2035	156,097	430,254	0	469,079	153,387	1,208,817	60,441
2036	159,219	434,556	0	534,750	168,726	1,297,251	64,863
2037	162,404	438,902	0	609,615	185,598	1,396,519	69,826
2038	165,652	443,291	0	694,961	204,158	1,508,062	75,403
2039	168,965	447,724	0	792,256	224,574	1,633,519	81,676
2040	172,344	452,201	0	903,172	247,031	1,774,748	88,737

#### TABLE 10

#### JEFFERSON COUNTY PROJECTED DEDICATED REVENUE AND OTHER SOURCES

YEAR	MILLAGE	HIGHWAY TURNBACK	STATE 1/2 CENT TAX	SEVERANCE	OTHER	TOTAL	AVAILABLE 5% FOR
			DF&A ESTIMATES				CAPITAL EXPENDITURES
2016	1,409,076	2,133,967	650,482	16,158	100,428	4,310,111	215,506
2010	1,416,685	2,197,986	650,482	16,351	100,420	4,382,735	219,137
2017	1,424,335	2,263,926	650,482	16,548	101,251	4,457,332	222,867
2010	1,432,027	2,331,844	650,482	16,746	102,858	4,533,957	226,698
2010	1,439,760	2,401,799	650,482	16,947	102,681	4,612,669	230,633
2021	1,447,534	2,473,853	650,482	17,151	104,510	4,693,530	234,677
2022	1,455,351	2,548,069	650,482	17,356	105,346	4,776,604	238,830
2023	1,463,210	2,624,511	650,482	17,565	106,189	4,861,957	243,098
2024	1,471,111	2,703,246	0	17,775	107,038	4,299,171	214,959
2025	1,479,055	2,784,343	0	17,989	107,895	4,389,282	219,464
2026	1,487,042	2,867,874	0	18,205	108,758	4,481,878	224,094
2027	1,495,072	2,953,910	0	18,423	109,628	4,577,033	228,852
2028	1,503,146	3,042,527	0	18,644	110,505	4,674,822	233,741
2029	1,511,263	3,133,803	0	18,868	111,389	4,775,322	238,766
2030	1,519,423	3,227,817	0	19,094	112,280	4,878,615	243,931
2031	1,527,628	3,324,652	0	19,323	113,178	4,984,782	249,239
2032	1,535,877	3,424,391	0	19,555	114,084	5,093,908	254,695
2033	1,544,171	3,527,123	0	19,790	114,996	5,206,080	260,304
2034	1,552,510	3,632,937	0	20,027	115,916	5,321,390	266,070
2035	1,560,893	3,741,925	0	20,268	116,844	5,439,929	271,997
2036	1,569,322	3,854,182	0	20,511	117,778	5,561,794	278,090
2037	1,577,796	3,969,808	0	20,757	118,721	5,687,082	284,354
2038	1,586,317	4,088,902	0	21,006	119,670	5,815,895	290,795
2039	1,594,883	4,211,569	0	21,258	120,628	5,948,338	297,417
2040	1,603,495	4,337,916	0	21,513	121,593	6,084,517	304,226

• It should be noted, as depicted in Tables 8 – 10, that the State ½ cent sales tax is set to expire in the year 2023.

#### **CONSTRAINED PLAN**

# TABLE 11LONG RANGE TRANSPORTATION IMPROVEMENT PROGRAM2016 – 2020 CAPITAL IMPROVEMENTS PROGRAM

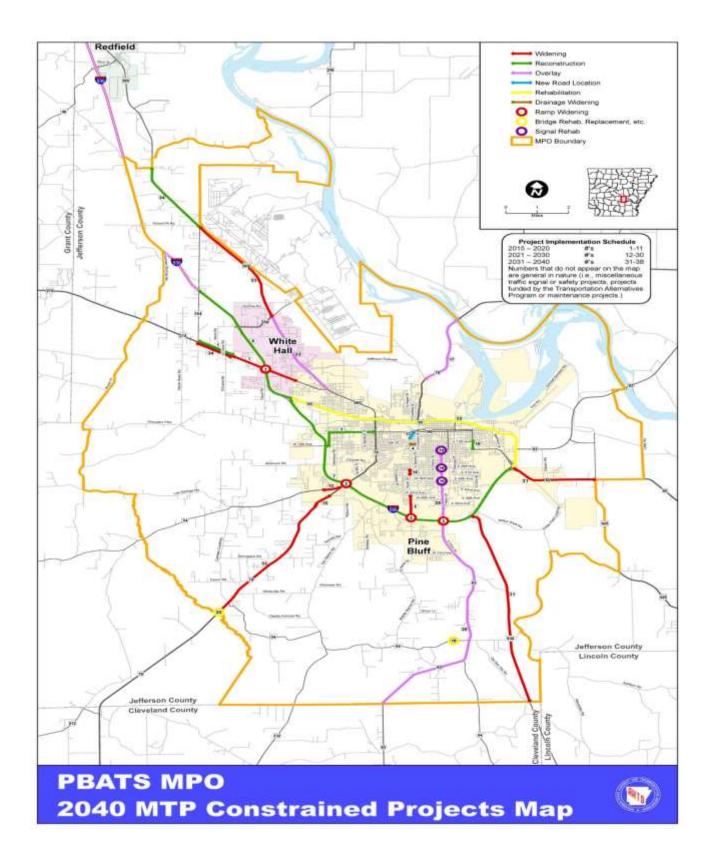
	Description	Project Type	Length (Miles)	Federal Amount	State/Local Amount	Total	Funding Source	Gov. Unit	Comment
1	Hwy 270 & 365 Spur between Hwy 104 & Jefferson Parkway	Reconstruction and Widening	3.5	\$ 10,400,000	\$ 2,600,000	\$ 13,000,000	NHS STP-State	AHTD	Reduce congestion
2	I-530 exit ramps at Intersections with Hazel, Hwys 63, 270 & 79	Widen to 2 lanes	.3	\$ 1,920,000	\$ 480,000	\$ 2,400,000	NHS STP-State	AHTD	Reduce congestion
3	Hwy 190 from I-530 to Franklin, Franklin to 6 <sup>th</sup> , 6 <sup>th</sup> to Hwy 79B	Reconstruction	2.1	\$ 5,200,000	\$ 1,300,000	\$ 6,500,000	STP-State	AHTD	Reconstruction
4	W. 13 <sup>th</sup> from Hazel to Hickory	Widen Drainage	.24	\$O	\$ 420,000	\$ 420,000	Local	Pine Bluff	Reduce congestion Improve drainage
5	Hazel I-530 to 42 <sup>nd</sup>	Widen	1	\$o	\$2,859,000	\$ 2,859,000	Local	Pine Bluff	Economic Development
6	I-530 from Hwy 104 to Hwy 65B	Reconstruction	5.0	\$ 24,000,000	\$ 6,000,000	\$ 30,000,000	Interstate Rehabilitation Program	AHTD	Reconstruction
7	I-530 from Hwy 65B to Hwy 65	Reconstruction	10.1	\$ 36,000,000	\$ 9,000,000	\$ 45,000,000	Interstate Rehabilitation Program	AHTD	Reconstruction
8	Various signal projects	Signalizing intersections on as needed basis		\$ 700,000	\$ 175,000	\$ 875,000	STP-Urban	AHTD Local	Reduce Congestion
9	Transportation Alternatives Program	Variety of projects such as Recreational Trails, Safe Routes To School, etc.		\$ 812,000	\$ 203,000	\$ 1,015,000	TAP	AHTD Local	Local applicants compete for Statewide funds
10	Safety projects	Various projects		\$ 3,802,000	\$ 950,500	\$ 4,752,500	Safety	AHTD	Various safety projects
11	Maintenance	Bridge replace, rehab, reconstruct & resurfacing		<b>\$</b> O	\$ 16,991,000	\$16,991,000	Various	AHTD	Maintenance
	TOTAL COSTS	0		\$ 82,834,000	\$40,978,500	\$ 123,812,500			

	Description	Project	Length	Federal	State/Local	Total	Funding	Gov.	Comment
		Туре	(Miles)	Amount	Amount		Source	Unit	
12	Hwy 54 from Hwy 79 west	Widen	.6	\$ 2,880,000	\$ 720,000	\$ 3,600,000	STP-State	AHTD	Reduce congestion Improve safety
13	Connect Hazel to Hwy 190	New 3 lane construction	.6	\$ O	\$ 3,204,000	\$ 3,204,000	Local	Pine Bluff	Connect Hazel Street to US 79B
14	Hazel from 28 <sup>th</sup> to 31 <sup>st</sup>	Widen to 5 lanes	.25	\$0	\$ 1,730,000	\$ 1,730,000	Local	Pine Bluff	Eliminate traffic bottle neck
15	Hwy 79 from Oakridge Dr to City limits	Widen	1.0	\$ 6,320,000	\$ 1,580,000	\$ 7,900,000	NHS	AHTD	Reduce congestion
16	Hwy 190 from 11 <sup>th</sup> Avenue to Harding Ave	Reconstruction	0.4	\$ 1,861,600`	\$ 465,400	\$ 2,327,000	STP-State	AHTD	Reduce congestion Safety
17	Hwy 79B from McFadden Rd to Arkansas River	Overlay	2.8	\$ 1,360,000	\$ 340,000	\$ 1,700,000	NHS	AHTD	Overlay
18	Hwy 54 Bridge (.5 mile West of Hwy 63)	Bridge Rehab, Replacement		\$ 160,000	\$ 40,000	\$ 200,000	State- Bridge	AHTD	Repair/Replace deficient bridge
19	Hwy 63 (Olive St) Signal rehab at 34 <sup>th</sup> , 28 <sup>th</sup> , 27 <sup>th</sup> , & 17th	Signalization rehab		\$ 800,000	\$ 200,000	\$ 1,000,000	STP-State	AHTD	Signalization Intersection rehab
20	Hwy 79 Big Creek Bridge Replace / Rehab	Bridge Rehab, Replacement		\$ 1,200,000	\$ 300,000	\$ 1,500,000	NHS	AHTD	Repair/Replace deficient bridge
21	Hwy 65 from I-530 to Hwy 425	Widen to add shoulders /overlay	2.8	\$ 4,480,000	\$1,120,000	\$ 5,600,000	NHS	AHTD	Safety
22	Hwy 365 from Hwy 365 Spur to Hwy 256	Overlay		\$ 800,000	\$ 200,000	\$ 1,000,000	STP-State	AHTD	Overlay
23	Hwy 365 from Hwy 256 to Hwy 104	Widen to add center turn lane	4.5	\$12,720,000`	\$ 3,180,000	\$ 15,900,000	STP-State	AHTD	Overlay
24	Hwy 365 (Hwy 104 to PBATS boundary)	Reconstruction	3	\$ 1,280,000	\$ 320,000	\$ 1,600,000	STP-State	AHTD	Overlay
25	Hwy 63B from I-530 to Main St	Overlay	3.9	\$2,400,000	\$ 4,600,000	\$ 3,000,000	STP-State	AHTD	Overlay
26	Hwy 63 from I-530 to Cleveland Cty Line	Overlay	9.3	\$ 5,680,000	\$ 1,420,000	\$ 7,100,000	STP-State	AHTD	Overlay
27	Various signal projects	Signalizing intersections on as needed basis		\$1,100,000	\$ 275,000	\$ 1,375,000	STP-State	State Local	Reduce Congestion
28	Transportation Alternatives Program projects	Variety of projects such as Recreational Trails, Safe Routes To School, etc.		\$ 2,032,000	\$ 508,000	\$ 2,540,000	ТАР	State Local	Local applicants compete for Statewide funds
29	Safety projects	Various projects		\$9,520,000	\$2,380,000	\$11,900,000	Safety	AHTD	Various safety projects
30	Maintenance	Bridge replace, rehab, reconstruct & resurfacing		\$0	\$42,533,000	\$42,533,000	Various	State	Maintenance
	TOTAL COSTS	Ť		\$ 54,593,600	\$ 65,115,400	\$115,709,000			

Table 122021 – 2030 CAPITAL IMPROVEMENTS PROGRAM

	Description	Project Type	Length (Miles)	Federal Amount	State/Local Amount	Total	Funding Source	Gov. Unit	Comment
31	I-530 from Bypass to Cleveland County Line	Widen from 2 to 4 lanes	8.0	\$ 71,200,000	\$ 17,800,000	\$ 89,000,000	NHS STP-State	AHTD	Interstate connection
32	Hwy 65B (Martha Mitchell)	Rehabilitation	8.9	\$ 71,200,000	\$ 17,800,000	\$ 89,000,000	NHS	AHTD	Reconstruction
33	Hwy 79 from Pine Bluff City limits to PBATS boundary	Widen from 2 to 4 lanes	5.7	\$ 39,440,000	\$ 9,860,000	\$ 49,300,000	NHS	AHTD	Reduce congestion
34	Hwy 270 from Sandy Acres Rd to Hwy 104	Widen to 5 lanes	1.3	\$10,000,000	\$2,500,000	\$12,500,000	NHS	AHTD	Reduce congestion
		Signalizing					STP	State	Reduce
35	Various signal projects	intersections on as needed basis		\$ 2,540,000	\$ 635,000	\$ 3,175,000	Urban	Local	Congestion
36	Transportation Alternatives Program projects	Variety of projects such as Recreational Trails, Safe Routes To School, etc.		\$ <b>2</b> ,740,000	\$685,000	\$3,425,000	ТАР	State Local	Local applicants compete for Statewide funds
37	Safety projects	Various projects		\$12,800,000	\$3,200,000	\$16,000,000	Safety	AHTD	Various safety projects
38	Maintenance	Bridge replace, rehab, reconstruct & resurfacing		\$0	\$57,160,000	\$57,160,000	Various	State	Maintenance
	TOTAL COSTS			\$ 209,920,000	\$ 109,640,000	\$ 319,560,000			

### Table 132031 – 2040 CAPITAL IMPROVEMENTS PROGRAM



### **MAP 10**

#### THE UNCONSTRAINED PLAN

The Year 2040 Unconstrained Transportation Plan is the optimum plan that would serve the Study Area transportation needs through the year 2040 and beyond. The Unconstrained Plan is integrated with the land use plan to ensure that when development does occur in any location within the Study Area, that the land use areas will have appropriate transportation linkages. By considering the relationship between the types and intensity of the land uses and the generation of traffic movements between them, the Transportation Plan, in conjunction with the land use plan, will shape the pattern of urban development, improve the livability of the region, and allow for the complete use of transportation facilities.

The Year 2040 Unconstrained Transportation Plan has not changed dramatically from the first Pine Bluff Area Transportation Plan adopted in 1969 for the year 1990 and its revisions. The 1990 plan was based on travel needs of the 1990 population and employment as projected using figures from 1940 through the mid-1960's. During that period, the Pine Bluff area population tripled. Since 1970, the Pine Bluff area has experienced an out-migration of population. Within the Study Area itself, there has been a shift in population from the core of the city to the fringe areas. The Study Area has been expanded outward from the original study area to reflect this movement by the population. Generally, the arterial streets within the Unconstrained Plan have been spaced at approximately one-mile intervals within the Study Area. Collector streets have been located as nearly as possible to the mid-point between the arterials using existing streets where possible to provide for connections between the local street system and the arterial street pattern.

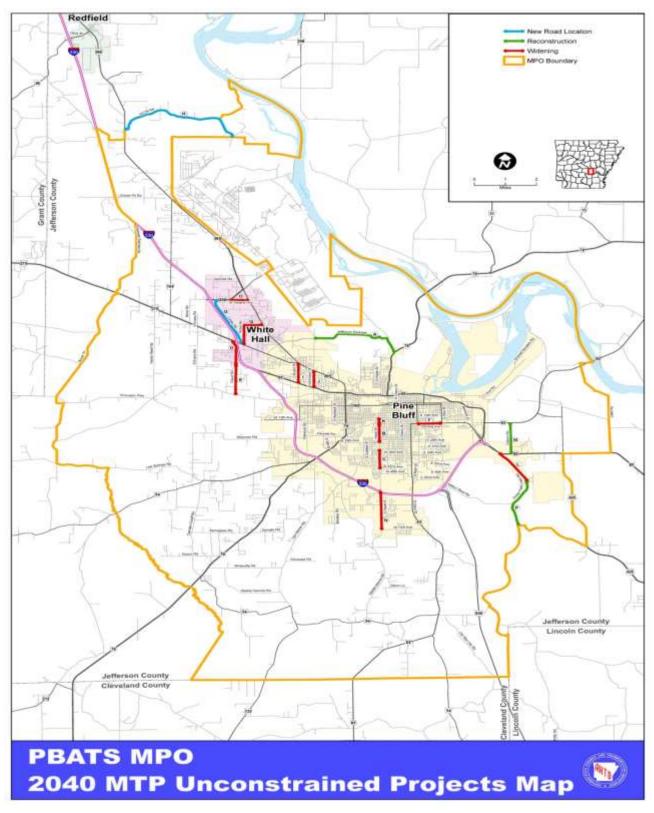
The transportation links on the PBATS Unconstrained Transportation Plan that are within the Cities of Pine Bluff and White Hall planning areas are designated transportation links on each cities' respective Master Street Plan. City Master Street Plans are recognized under Act 186 of 1957, as amended, to the Arkansas State Statutes and are the instruments used by the cities to preserve future rights-of-ways for the major street system. The State Statute states that Master Street Plans shall include the general location of streets and highways to be reserved for future public acquisitions and that they may provide for the removal, relocation, widening, narrowing, vacation, abandonment, change of use, or extension of any public way. The Cities of Pine Bluff and White Hall, through their subdivision regulations adopted under this state statute, require persons subdividing their property to make the appropriate road dedications and improvements as shown on their master street plan.

The following projects are projects that are needed in the Study Area, however, with the exception of Highway 980 (Grider Field – Ladd Road), all projects are local projects, and there are insufficient STP-Urban funds as well as matching funds to complete these projects with this type of funding. There is a possibility that Hazel Street between 13<sup>th</sup> and 17<sup>th</sup> Avenues could be funded with CDBG funds.

	TABLE 14 UNCONSTRAINED PROJECTS							
DESCRIPTION	TYPE OF PROJECT	LENGTH (Miles)	TOTAL (in 2020 \$)	SOURCE	GOV. UNIT	COMMENT		
efferson Parkway /	Reconstruction	3.0	\$4,934,744	State Aid-	Jefferson	This facility will improve east-west traffic f		

## TADIE 14

DESCRIPTION	PROJECT	(infites)	(In 2020 \$)	SOURCE	UNII	COMMENT
A. Jefferson Parkway / McFadden Road between Hutchinson St. and U.S. 79B	Reconstruction and jog elimination	3.0	\$4,934,744	State Aid- Local	Jefferson	This facility will improve east-west traffic flow in the northern part of urban area and provide better access to the industrial park.
<b>B.</b> Hazel Street between 17 <sup>th</sup> and 28 <sup>th</sup> Avenues	Widen to 5 lanes	.8	\$5,173,000	STP-Local	Pine Bluff	This project will eliminate a traffic bottle- neck by providing for a better north-south traffic movement.
<b>C.</b> Hazel Street between 31 <sup>st</sup> and 42 <sup>nd</sup> Avenues	Widen to 5 lanes	1.0	\$6,152,000	STP-Local	Pine Bluff	This project will reduce traffic congestion on Hazel Street.
<b>D.</b> Claude Road between U.S. 270 and the City Limits	Widen to 3 lanes	.6	\$2,724,000	STP-Local	White Hall	This project will reduce traffic congestion.
E. Claude Road between the City Limits and Princeton Pike	Widen to 3 lanes	1.5	\$3,652,000	State Aid- Local	Jefferson County	This project in conjunction with the other Claude Road project will reduce traffic congestion.
F. Harding Avenue between Main and Ohio Streets	Widen to 5 lanes	0.4	\$2,461,000	STP-Local	Pine Bluff	This project will improve east-west traffic flow on a heavily used street.
G. Caney Road between S. H. 365 and S.H. 256	New road location	2.0	\$4,803,000	STP-Local	White Hall	This facility will act like a frontage road for I-530.
H. NCTR Road	New road location	4.0	\$7,764,000	State Aid- Local	Jefferson	This project will provide better access to and aid in economic development for the Bi-plex facility.
I. Bryant Street between Dollarway Road and Martha	Widen to 3 lanes	.8	\$3,632,000	STP-Local	Pine Bluff	This project will reduce traffic congestions.
J. Hutchinson Street Between Dollarway Road and Martha Mitchell Expressway	Widen to 3 lanes	.7	\$3,178,000	STP-Local	Pine Bluff	This project will reduce traffic congestion and provide better access to Jefferson Park Industrial Park.
K. Hazel Street between 13 <sup>th</sup> and 17 <sup>th</sup> Avenues	Widen to 3 lanes	.25	\$1,135,000	CDBG	Pine Bluff	This project will further the goal of connecting Hazel Street with U.S. 79B (University).
L. Grider Field-Ladd Road from U.S. 65 south to Airport entrance (Highway 980)	New road location to 3 lanes and widening to 3 lanes	1.3	\$5,132,000	STP-Local	Pine Bluff	Intermodal Connection
M. Osborn Road	Reconstruction	1.2	\$4,737,000	STP-Local	Pine Bluff	Intermodal Connection
N. Hazel Street between I-530 and 73 <sup>rd</sup> Avenue	Widen to 3- lanes	1.1	\$4,994,000	STP-Local	Pine Bluff	This project will improve access in the growth area place taking in the south central area of the study area.
O. West Holland between S.H. 365 and S.H. 256	Widen to 4 lanes	.6	\$3,514,000	STP-Local	White Hall	This facility is the shortest route between I-530 and S.H 365 and is heavily used.
P. Griderfield-Ladd Road from airport entrance to Gibb Anderson Road	Reconstruction	1.8	\$5,922,000	State-Aid Local	Jefferson County	This facility provides access to I-69 Connector.
Q. Robin Street / White Hall Road between S.H. 365 and S.H. 365B	Widen to 3 lanes	.6	\$2,724,000	STP-Local	White Hall	This facility will improve the north-south and east-west traffic movement in the core area of White Hall.



**MAP 11** 

#### TRANSPORTATION ALTERNATIVES PROGRAM INFORMATION

It is expected that eligible entities within the Study Area will apply for Transportation Alternative Program (TAP) funds which includes Recreational Trails and Safe Route to Schools (SRTS) grants administered by the Arkansas State Highway and Transportation Department.

The Transportation Alternatives Program is funded under MAP-21, Moving Ahead for Progress in the 21<sup>st</sup> Century Act. The TAP fund is reserved in the amount equal to 2 percent of the total authorized from the Highway Account of the Highway Trust Fund for Federal-aid highways each year. This program provides funding for programs and projects defined as transportation alternatives and include such items as Transportation Enhancements, Recreational Trails and Safe Routes to Schools. TAP funding is gained through a competitive process and is reviewed by appropriate advisory committees. TAP is a reimbursement-type grant program. The program provides for an 80% federal share and 20% non-federal share for each project. Eligible applicants include: city and county governments, state agencies, other governmental bodies created under state law (i.e. river authorities, planning districts), federal land managers (i.e. U.S. Forest Service, Corps of Engineers), and private 501(c)(3) organizations.

Federal funds can only be used for project construction. Costs associated with preliminary engineering, environmental documentation, right-of-way and utility adjustments and construction inspection are the responsibility of the eligible sponsor. Plans that include the design for structural components (pedestrian bridges, scenic overlooks, etc) must be stamped by a Registered Professional Engineer. Funding limits are set at a maximum of \$ 500,000 per project. There is no minimum amount set except in the case of a project containing infrastructure components. Projects such as these have a minimum \$ 20,000 limit.

TAP funds may be used for:

- Construction of on-road and off-road trail facilities for pedestrians and bicyclist
- Construction of infrastructure related projects that provide safe routes to access daily needs
- Conversion of abandoned railroad corridors for trails
- Construction of turnouts, overlooks and other viewing areas
- Community improvement activities such as:
  - Inventory, control or removal of outdoor advertising
  - o Historic preservation of historic transportation facilities
  - Vegetation management practices in right-of-ways to improve roadway safety
  - Archeological activities relating to impacts of an eligible transportation project
- Environmental mitigation activity
  - To address storm water runoff
  - Reduce vehicle induced wildlife mortality
- Construction of boulevards
- Recreational Trails Program eligible activities
- Safe Routes to School eligible activities.

#### **OTHER TRANSPORTATION PROJECTS**

The evaluation of local revenues also included an analysis of the cost of each transportation improvement project implemented on the local level by local jurisdictions in order to ascertain what amount of local revenue can reasonably be set aside for transportation projects. The majority of revenues for disbursements in the road and street funds for the local jurisdictions are used for routine maintenance, purchases of capital equipment, and to match federal aid road projects. Due to the taxation constraints placed on local jurisdictions, it is difficult to find available financial resources for implementation of local transportation improvement projects.

# SECTION 6 TRANPORTATION MODES





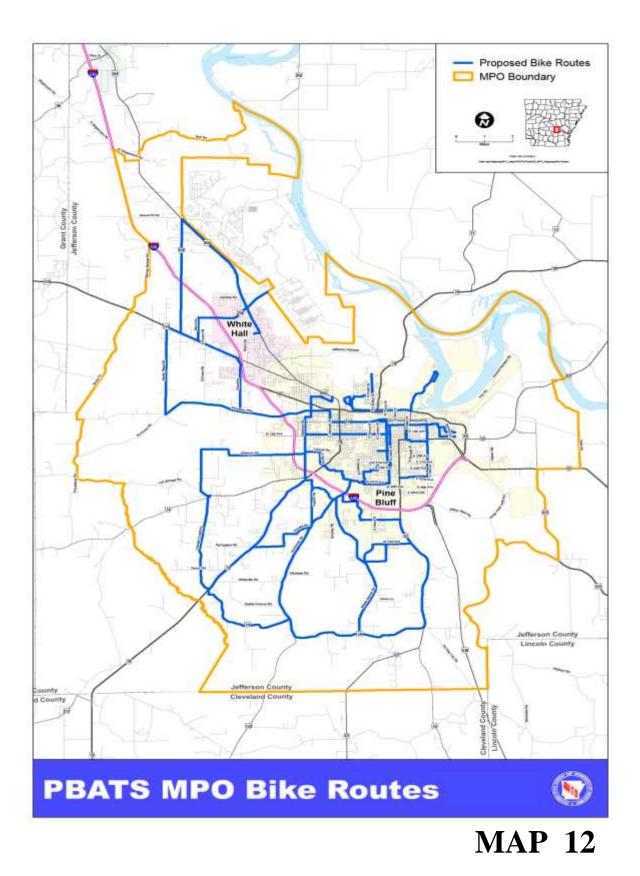
#### BICYCLES

Bicycles are becoming more and more prevalent in the urban landscape and it is necessary that local jurisdictions plan for and promote the use of bicycles as an alternate transportation mode for everyday transportation needs. The Metropolitan Planning Area has not had a concerted effort in planning bike routes and bikeways or an organization of bicycle groups or planned bicycle education. For this reason, the MPO has adopted a Bicycle Plan, included herein by reference, which will serve as the "hub" of the bicycle planning program by setting forth goals,



objectives and strategies to promote increased bicycle usage providing short-term and long-term recommendations for implementing a variety of "spokes", or sub-plans. These subplans, which will become a part of the bicycle plan when they are adopted by the Policy Committee, will implement a number of bicycle plan elements, such as public participation and outreach, education for the bicyclists as well as law enforcement, bike lane and bike route development along with

street inventories and mapping, and other elements to further the use of bicycles for transportation as well as recreation. Information concerning users, signage and route options is provided. The Bicycle Plan can be found at <u>www.searpc.com</u>, Map 13 identifies the bike routes as adopted



Transit service plays an important role in providing a means of travel for those without means and those who use transit as an alternative mode of transportation. The City of Pine Bluff has a rich history of transit service which began in the 1880's. In 1974, the city purchased a privately owned bus company, and since that time, has operated the bus service as a city department. In 2014, approximately 80,865 transit trips were taken.

Pine Bluff Transit (PBT) operates eight fixed routes, and the peak hour fixed route bus fleet is four. The operating schedule is from 6:00 a.m. to 6:00 p.m. Monday through Friday. PBT also operates a paratransit system for those persons with disabilities. The service area for both types of services covers 80% of the City of Pine Bluff's land area. The only area not within the service area is the Watson Chapel area. According to the Pine Bluff Transit Development Plan, transit service will be extended to this area in the middle years of the twenty five year planning period.

The Transit Development (TDP) was last updated in 1985 and indicates future expansion of services offered by PBT. It remains the basis for PBT's vision. The TDP has been reviewed and updated a number of times since its publication and recent reviews found to still be applicable for the next 20 years. The TDP sets forth recommendations that primarily address three issues: expansion of existing fixed routes, coordination of services, and alternative transit services. The following is a brief description of each of these issues:

- *Fixed Route Service*. The plan calls for a partial realignment and expansion of the fixed route system. The expansion of the service would be based on two concepts: customer demand and providing service to those who have no other means of transportation. Based on this issue, bus routes are reviewed at least annually for any necessary adjustments.
- *Coordination of Services.* The plan calls for the coordination of all transit services offered by PBT and the social service organizations within the study area. It

recommends that a transit organizational structure be developed and implemented to direct the implementation of the transit services and for the actual transit operations and scheduling to be done by an independent transit board having representatives from all transit providers. Once this has been accomplished, the next step calls for the creation of a Regional Transit Authority which would be responsible for transit services and where all the



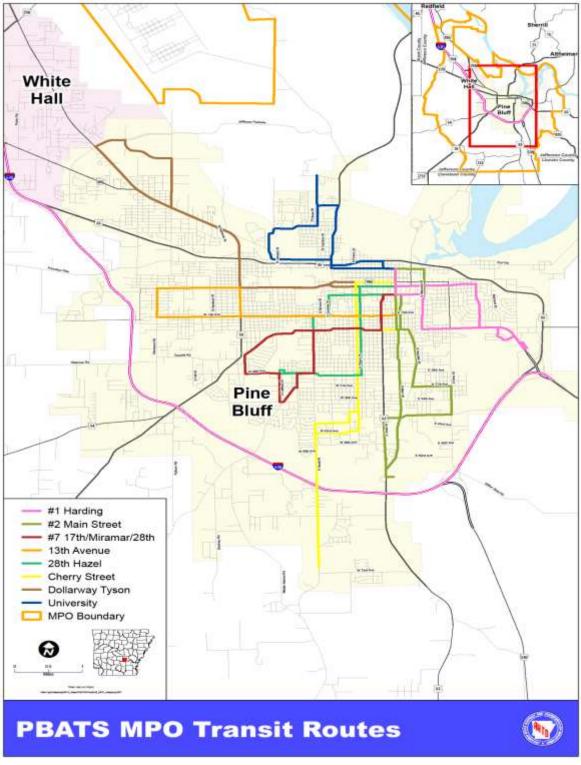
entities involved would contract with the Authority to provide transit service. This

issue has been partially implemented through the development of the Jefferson County Transportation Coordination Plan.

Alternative Transit Service. This issue is directly related to fixed route service. The plan states that alternative services should be considered as opposed to fixed route service. The three types of services that are recommended for evaluation are the dial-a-ride service, route deviation service, and point-to-point deviation service. This issue has been partially implemented through PBT's establishment of paratransit service (origin to destination service for persons who are certified under the Americans with Disabilities Act (ADA)).

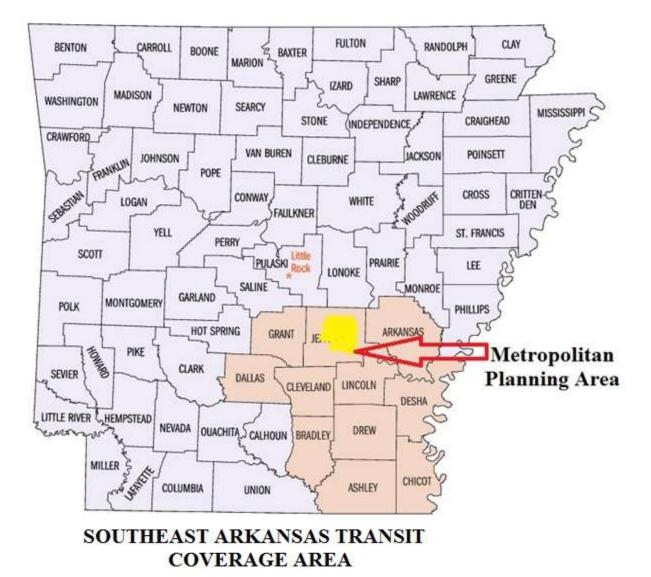
During the twenty five year planning period, PBT will have to replace buses within its bus fleet for both fixed route service and ADA paratransit service and construct a central transfer facility to ensure the safety of its patrons, provide basic passenger amenities, and assist in bus scheduling. Past commitments to support public transit, projected local financial resources of the city, and assistance from the federal government has enabled Pine Bluff to construct an administrative/maintenance facility and upgrade its bus fleet and services. In fact, the administrative/maintenance facility has been recently refurbished and buses are being replaced in a timely manner. However, continual upgrade of the fleet and development of a central transfer facility where one currently does not exist are essential to improving the quality of transit service. Constructing a central transfer facility south of 4<sup>th</sup> Avenue is still a PBT goal and will result in fuel cost savings and reduce delays. While there are currently no immediate plans for development of the facility, it is a part of the visioning process of the downtown area. Developing the transfer facility in the Central Business District will assist the City in its revitalization efforts in the downtown area through either new construction or refurbishment of an older structure and by making it a multi-modal facility that can be used not only by local bus patrons but by pedestrians, bicyclists, taxis, electric cars, and regional and cross-country buses.

In order to continue the transit program, the city will have to continue to rely on federal government programs for Federal Transit Administration (FTA) Section 5307 and 5339 to maintain the transit program. The federal government provides eighty percent (80%) of the funds needed to purchase capital equipment and reimburses Pine Bluff Transit with fifty percent (50%) of its net operating loss. With continued federal assistance, the City of Pine Bluff should be able to continue to upgrade transit service in accordance with the Transit Development Plan and implement those projects identified in the Public Transportation Capital Improvements Program.



**MAP 13** 

In addition to PBT, other transit services aided by the federal government also operate in the Metropolitan Planning area . In 1993, Southeast Arkansas Area Agency on Aging began an FTA Section 5311 Rural Transit Program which services a ten county area including Jefferson County. The Section 5311 Program provides federal funding assistance to rural public transit agencies in the same way the FTA Section 5307 Program does for the urban public transit agencies. The Area Agency's administrative/ maintenance facility is located in the City of Pine Bluff, and some of the Rural Transit Program's routes bisect and have route termini within the City. At this time, neither the Cities of Pine Bluff and White Hall nor Jefferson County has committed any funds for Section 5311 rural transit service.



**MAP 14** 

Another transit program that has provided federal assistance in the MPO planning area is the FTA Section 5310 Program. This program assists public and private non-profit organizations in purchasing capital equipment for transit services that are provided to the elderly or disabled. Through this program, the federal government provides 80% of the funds needed to purchase capital equipment such as vans; the recipient agency must provide the 20% matching funds as well as provide transportation services to their target populations. A review of past years' annual elements of the Transportation Improvement Program for the Metropolitan Planning area has shown that an average of three 5310 transit vehicle are requested on a yearly basis. If this federal assistance continues, seventy-five vehicles should be available to public and private non-profit organizations over the next twenty-five years for the purpose of providing transportation services to the elderly and disabled or other eligible clientele. These vehicles have been listed in the Capital Improvements Program.

A transit program that could aid in the construction and development of the PBT downtown transfer facility is the Section 5339 Bus and Bus Facilities program. This is a capital only program, and funds are limited to capital projects to replace, rehabilitate, and purchase buses and bus related equipment, and to construct bus related facilities. Eligible recipients are designated recipients and States that operate or allocate funding to fixed-route bus operators. It is up to the State to determine the distribution method for section 5339 funds among small urbanized areas such as the Pine Bluff – White Hall Urbanized Area. Eligible sub-recipients include public agencies or private nonprofit organizations engaged in public transportation, including those providing services open to a segment of the general public, as defined by age, disability, or low income. Projects must be included in a federally-approved Statewide Transportation Improvement Program (STIP) to be eligible to receive these program funds.

#### PUBLIC TRANSPORTATION CAPITAL IMPROVEMENT PROGRAM

The following Public Transportation Capital Improvement Program (Table 13) was developed based on the assumption that the City of Pine Bluff and the federal government continue to fund the public transit program at the same levels that they have in the past. The City of Pine Bluff has been funding the transit program through its general fund since it took over the operation of the transit system in the early 1970's. The City general funding sources consist of money received through property taxes, sales taxes, and various other sources. It does not appear that there will be a lack of funds in the future for the city to continue its support of the transit system, however, it is difficult to project what actions the federal government will take concerning its funding levels for local transit projects over the next twenty five year period. If the federal government continues to fund the transit program at the level it has in the past, PBT will be able to implement the transit services stated in this plan.

In addition to capital improvement and operating assistance funding, MAP-21 regulations will or already do require transit providers such as PBT to develop and implement safety programs and asset management plans. MAP-21 grants FTA the authority to establish and enforce a new comprehensive framework to oversee the safety of public transportation throughout the United States (Section 5329). This framework includes important new safety provisions for bus-only operators. FTA has developed a public transportation safety certification training program that applies to transit grantees regardless of mode. The program is for federal and state employees or

other personnel who conduct audits as well as employees of public transportation agencies responsible for safety oversight. Also, all recipients of FTA funding will develop an agency safety plan and certify that the plan meets FTA requirements. At a minimum, these plans must include: Strategies for identifying risks and minimizing exposure to hazards; an adequately trained safety officer to report directly to the general manager or equivalent; and performance targets based on the safety performance criteria above, and; a staff training program. For recipients receiving 5311 funds, the plan may be drafted and certified by the recipient or the state. For recipients receiving 5307 funds, FTA must issue a rule designating the small public transportation providers or systems that may have their safety plans drafted or certified by the state. The goal of improved transit asset management (Section 5326) is to implement a strategic approach for assessing needs and prioritizing investments for bringing the nation's public transit systems into a state of good repair. FTA will establish a national transit asset management system that will require grantees to develop transit asset management plans that include capital asset inventories, condition assessments, and investment prioritization. Each recipient of FTA formula funding will be required to report on the condition of their system, performance targets, and progress towards meeting those targets. MPOs and states are required to coordinate their performance targets with the targets for state of good repair set by grant recipients.

TABLE 15 PUBLIC TRANSPORTATION CAPITAL IMPROVEMENT PROGRAM							
2016 - 2020							
Description	Federal	Local	Governmental	Comment			
			Unit				
Operating Assistance	\$1,880,835	\$1,880,835	Pine Bluff				
Capital - Preventive	\$1,094,304	\$218,861	Pine Bluff				
Maintenance							
Capial - Paratransit	\$341,970	\$68,394	Pine Bluff				
Service							
Capital - Planning	\$102,591	\$20,518	Pine Bluff				
Capital - Buses & Bus							
Related Equipment	\$582,890	\$116,578	Pine Bluff				
				Projects approved			
Section 5310 Vehicles	\$161,140	\$32,228	Non-Profit Agencie	by AHTD			
Section 5311 - Operating,	\$14,850,000	\$18,333,000	Southeat Arkansas	Projects approved			
Administrative, Capital *			Transit (SEAT)	by AHTD			
**Section 5339 - Bus & Bus	\$2,866,933	\$573,387	Pine Bluff	Projects approved			
Facilities			SEAT	by AHTD			

\*SEAT operates a public transit system within the Metropolitan Planning area.

\*\*Amount represents annual allocation to AHTD. Projects may be selected within the Metropolitan Planning area .

TABLE 15 (continued)							
PUBLIC TRANSPORTATION							
CAPITAL IMPROVEMENT PROGRAM 2021 - 2030							
							Description
			Unit				
Operating Assistance	\$5,464,156	\$5,464,156	Pine Bluff				
Capital - Preventive	\$3,179,146	\$635,829	Pine Bluff				
Maintenance							
Capial - Paratransit	\$993,483	\$198,697	Pine Bluff				
Service							
Capital - Planning	\$298,045	\$59,609	Pine Bluff				
Capital - Buses & Bus							
Related Equipment	\$1,065,780	\$213,156	Pine Bluff				
				Projects approved			
Section 5310 Vehicles	\$3,694,579	\$738,916	Non-Profit Agencie	by AHTD			
Section 5311 - Operating,	\$34,047,722	\$42,034,224	Southeat Arkansas	Projects approved			
Administrative, Capital *			Transit (SEAT)	by AHTD			
**Section 5339 - Bus & Bus	\$7,183,347	\$1,436,670	Pine Bluff	Projects approved			
Facilities			SEAT	by AHTD			

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\*SEAT operates a public transit system within the Metropolitan Planning area. \*\*Amount represents annual allocation to AHTD. Projects may be selected within the Metropolitan Planning area .

TABLE 15 (continued)							
PUBLIC TRANSPORTATION CAPITAL IMPROVEMENT PROGRAM							
Description	Federal	Local	Governmental	Comment			
			Unit				
Operating Assistance	\$15,269,709	\$15,269,709	Pine Bluff				
Capital - Preventive	\$8,884,195	\$1,776,839	Pine Bluff				
Maintenance							
Capial - Paratransit	\$2,776,311	\$555,262	Pine Bluff				
Service							
Capital - Planning	\$832,893	\$166,579	Pine Bluff				
Capital - Buses & Bus							
Related Equipment	\$1,065,780	\$213,156	Pine Bluff				
				Projects approved			
Section 5310 Vehicles	\$4,965,205	\$993,041	Non-Profit Agencie	by AHTD			
Section 5311 - Operating,	\$45,757,291	\$56,490,482	Southeat Arkansas	Projects approved			
Administrative, Capital *			Transit (SEAT)	by AHTD			
**Section 5339 - Bus & Bus	\$9,653,818	\$1,930,763	Pine Bluff	Projects approved			
Facilities			SEAT	by AHTD			

\*SEAT operates a public transit system within the Metropolitan Planning area. \*\*Amount represents annual allocation to AHTD. Projects may be selected within the Metropolitan Planning area

Intermodal management planning is an important aspect of the Pine Bluff area transportation system, particularly in how it affects the economic well-being of the Study Area. The objective of intermodal management planning is to improve and implement a transportation system that protects the public sector while ensuring that urban goods movement and the transportation modes used to move these goods remain competitive in the free market system. An integrated, intermodal transportation system that provides for the transporting of goods and people through a quick, high quality, cost efficient means will protect the public welfare and safety in a competitive atmosphere. Accordingly, a comprehensive and coordinated intermodal management plan will improve the decisions made by the private and public transportation providers located or operating in the Pine Bluff Study Area.

The Pine Bluff Area Transportation Study area is unique in that it is one of the smallest urbanized areas required by the 1962 Federal Highway Act to have an established transportation planning process while serving as one of the major intermodal transportation hubs for goods movement in the south central region of the United States. The following are descriptions of the different transportation modes that have facilities and provide services in the Pine Bluff Study Area.

### AIRPORTS

Pine Bluff Regional Airport (PBRA) at Grider Field is a municipal and area-wide airport established in 1941 as a U.S. Army Flight Training School. After World War II, Pine Bluff gradually turned the airport into a commercial airport facility. Today's Pine Bluff Regional Airport is a 800+-acre facility consisting of a large terminal and restaurant, FAA weather monitoring equipment, private corporate hangars, fixed-base operators offering fuel and avionics services, a fire station, and aviation museum. PBRA serves as the only



ILS-equipped, jet capable airport in southeast Arkansas. The airport provides a bad-weather alternative for pilots going to Warren, Fordyce, Star City, and Monticello.

Pine Bluff Regional Airport is located on U.S. Highway 65 near U.S. Highway 425 and serves as a general aviation facility. Corporate users include Tyson Foods, Jefferson Regional Medical Center, the Pine Bluff Arsenal, the Arkansas Department of Corrections, and Union Pacific Railroad. The FAA trains its own pilots at the Airport. The City of Pine Bluff has established the Pine Bluff Aviation Commission to operate and manage the facilities. Funding is derived from fuel sales, user leases, and City general appropriations. In 1999, the Airport Commission of the City of Pine Bluff adopted the Pine Bluff Municipal Airport Master Plan - 2000 to 2020 that has since been updated to the 2006-2030 Plan. This Plan addresses the following issues: airfield (runways, taxi-ways, navigation aids, etc.), support facilities (hangers, aircraft and auto parking, etc.), major roadway access, and future industrial development of airport property.

As part of the Master Airport Plan, the Airport Commission worked with the City of Pine Bluff and the Southeast Arkansas Regional Planning Commission in developing a long range plan to develop a 400 acre light industrial park on the airport property.

The following table is the Long-Range Capital Improvement Program as stated in the Airport master Plan 2006 – 2030.

# TABLE 16AIRPORT MASTER PLAN 2016 – 2040: CAPITAL IMPROVEMENT PROGRAM

	2016 - 2020	
1.	Industrial Park Development	\$3,550,000
2.	Property Acquisition – South of Existing Airport	\$350,500
3. Airfield Development and the extensions of one of the runways to 8,000 feet in length		\$1,500,000
	Total	\$5,400,500
	2021 - 2040	
1.	Industrial Park Development	\$4,500,000
2.	Construction of Warehouses/Hangars	\$3,500,000
	Total	\$8,000,000

To implement the capital improvements listed in Table 14, a number of funding sources will be utilized. These sources include the Federal Aviation Administration, the Arkansas Economic Development Commission, funds generated by the Airport Commission, and funds from the City of Pine Bluff and Jefferson County.

#### PINE BLUFF-JEFFERSON COUNTY PORT AUTHORITY/PORT OF PINE BLUFF

The Port Authority was created in 1961, and the port facility and industrial park opened river barge service on the Arkansas River in 1970. The present harbor was constructed as part of the McClellan-Kerr Arkansas River navigation System and is a major slackwater harbor along the Arkansas River. Year-round channel depth is nine (9) feet. The Port Authority leases the twenty-acre public terminal to a private firm which operates the facility for general public use. The Public Terminal offers barge loading and unloading, in-transit warehouse, and bulk storage.

Special facilities at the harbor fleeting service offer barge fleeting, barge cleaning, emergency repairs, pumps,3 towboat servicing and repairs, and crane service. Numerous common and contract carrier barge lines are certified to serve Pine Bluff. The Port of Pine Bluff currently contains a 372acre Harbor Industrial District. Major commodities handled by the public



port last year included: aluminum T bars, aluminum coils, potash, steel coils, steel wire rods, urea, vermiculite, cotton seed hulls, paper, rice, soybeans, wheat and milo.

The U.S. Army Corps of Engineers published a study in 1985 titled "Pine Bluff Harbor Expansion Feasibility Report." This report indicates what port facilities will be needed in the Pine Bluff Urban Area within the next fifty years. It also addresses economic, social, and environmental impacts and calls for the expansion of the port facility north of Saint Marie Park along Lake Langhoffer in two phases. Phase One of the plan calls for expanding the port facility to meet the urban area navigation needs through the present year. Expansion is currently being pursued. Phase Two expansion will meet the urban area needs until 2040.

In May of 2015, The Department of Transportation officially changed the Marine Highway designation of the "M-40" McClellan-Kerr Arkansas River Navigation System (MKARNS) from a "Connector" to a "Corridor". This designation has the potential to increase traffic in the Harbor Port District.

#### RAILROADS

The Study Area is served by the Union Pacific Railroad (UP) which operates a Class I line haul railroad through the area. In 1997, UP merged with the Southern Pacific Railroad which also provided rail service to the Study Area. When the merger took place, UP granted trackage rights and sold some trackage to the Burlington Northern Railroad (BN) so competition would still be preserved for customers. UP and BN have a reciprocal switch agreement so both railroads can serve Pine Bluff rail customers. UP currently does the switching for local BN traffic, with the BN typically operating two to four trains a day through Pine Bluff. The UP operates approximately forty trains per day through Pine Bluff.

The tracks enter Pine Bluff from four directions. One track enters the Metropolitan Planning area from the northeast across the Arkansas River to the gravity yard (switching yard) located east of the Central Business District (CBD) and south of Lake Langhoffer. The second track enters the Metropolitan Planning area from the east and continues to the CBD. The third track enters the Metropolitan Planning area from the southwest and continues in a northeasterly direction until it reaches Plum Street and 4<sup>th</sup> Avenue. The track then continues along 4<sup>th</sup> Avenue until it exits the gravity yard. The fourth set of tracks enters the Metropolitan Planning area from the northwest directly along the Pine Bluff Arsenal boundary to the vicinity of Plum Street and



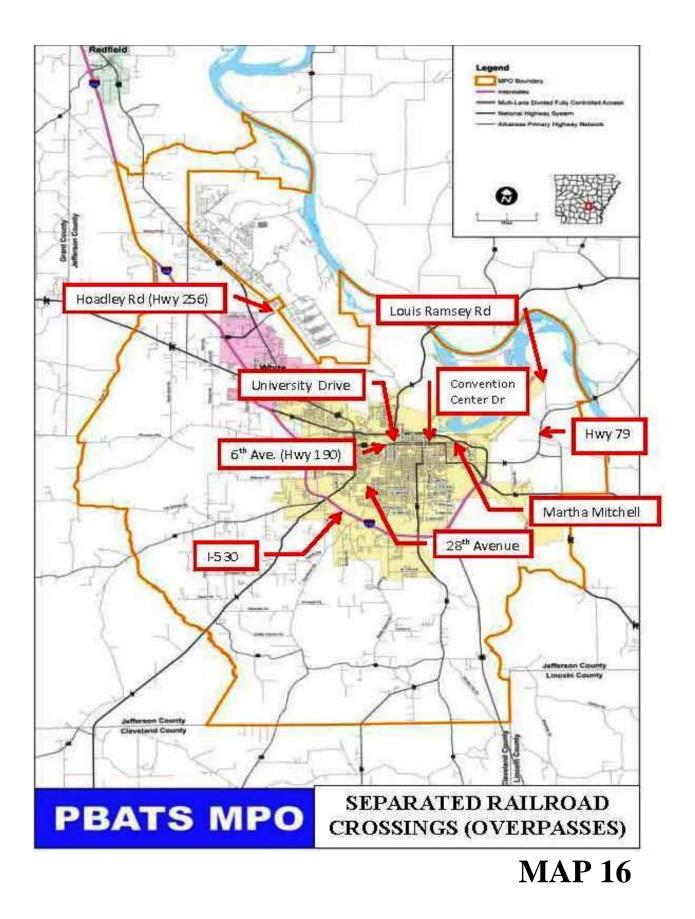
then continues along 4<sup>th</sup> Avenue to the gravity yard.

There are nine gradeseparated crossings in the Study Area: Highways 63 and 79 east of Pine Bluff ; Highway 65B (Martha Mitchell Expressway) in two locations Highway 63B and Convention Center Drive; University Drive; Highway 190 (6<sup>th</sup>

Avenue); Highway 256 (hoadley Road); 28<sup>th</sup> Avenue and I-530. All of the railroad overpasses have sufficient clearance for double stack containers on flat bed cars. There are only eight atgrade railroad crossings that are not protected with flashing lights and gates. In the late 1970's and 1980's Pine Bluff participated in a Railroad Demonstration Grant Program that resulted in the construction of the Plum Street and Convention Center Drive overpasses and the closing of a number of local street at-grade railroad crossings.

The Union Pacific Railroad gravity "hump" yard is located approximately two miles east of the CBD and is adjacent to the Pine Bluff Industrial River Port. The yard provides classification switching of rail cars, operating twenty-four hours a day every day of the year. Not only are long-haul freight trains made up at the yard, local trains that serve local businesses and industries also operate from the yard.

Grunderson Wheel Service operates a railroad wheel repair business and General Electric operates a locomotive repair shop for UP. Both operations are located in the rail yard area. Both the Jefferson Industrial Park and the Pine Bluff Industrial Port are served by UP main line service.



#### PIPELINES

Pipelines carry gas, oil and other liquids that are essential to supplying our nation with power resources to insure the economic well-being of our Nation. Compared to other modes of transportation the pipelines have a remarkable safety record. They are Center-Point Energy Pipeline and Center-Point Energy/Mississippi River Transmission. A Kinder Morgan pipeline provides natural gas to the International Paper Plant. This pipeline enters the Planning Area's northwest corner and runs in a southeastern direction to the International Paper Plant north of U.S. Highway 425. The Center-Point Energy/Mississippi River Transmission mail line runs east/west through the Planning area and the Center-Point Energy/Mississippi River Transmission mail line runs north/south through the Study Area.

At the present time there are no plans to either upgrade the pipelines or to construct new major lines. Of most concern in the planning process is to insure that the safety issues are addressed. In developing the long-range plan, efforts were made to reduce surface transportation and urban land uses conflicts with crossings and proximity major pipelines.



Pipelines within Planning Area

#### INTERMODAL RECOMMENDATIONS

- Maintenance and upgrading of roads: An asphalt overlay maintenance program should be developed that will address the maintenance problems associated with the roads providing access to the Port and railroad facilities. Michigan Street between the Martha Mitchell Expressway and Port Road and Port Road from the Martha Mitchell Expressway to Emmett Sanders Road need to be upgraded to provide a smooth traveling surface.
- 2. Street-railroad crossing improvements: A street-railroad crossing improvement program needs to be established for the purpose of insuring that the remaining unprotected street crossings will be gated. The following is a list of those unprotected street-railroad crossings:
  - Gaddy-Koonce Road
  - Hutchinson Street
  - Dixie Wood Drive
  - Stark Gate Road
  - Port Road
- 3. An intermodal authority that links the Port, railroads, and trucking services facility has been proposed to boost the economy. Pine Bluff is unique in that the Port and railroad facilities are so closely located and there is available land area to expand both facilities. From a local perspective, an intermodal authority and facility could boost the economy. Two primary issues should be studied, potential uses/costs associated with implementation and the operation and construction of such a facility. In a market-oriented transportation program, the service must be accepted and used by shippers, and the quality and cost of services of each mode of transportation must be competitive.

#### TRUCK MOVEMENTS

Truck movement is a key element of the overall intermodal transportation process. The extensive road network in the Study Area gives trucks a distinctive advantage in choosing the routes taken to connect directly to origin and destination locations. They have a tremendous effect on all segments of the economic, social, and environmental characteristics of the community. For instance, truck movements have made it possible for some manufacturers that once depended on rail service to locate far from rail lines. This in turn impacts the entire community through truck trips occurring over roads not designed for trucks, trucks traveling through residential neighborhoods, etc. It is also understood that without truck movements in and through our communities, we could not enjoy the convenient access to goods and services that we have today.

In order to better understand truck movements and their resulting roles and impacts in the overall intermodal transportation process, certain data must be obtained and evaluated. This data includes trip origins and destinations (external-external, external-internal, and various types of internal-internal), type and travel characteristics of the commodities transported, and trip frequency. Currently, only a limited amount of data is available regarding these elements. This

plan addresses the general locations of truck trip generation and the transportation network linking these locations to other types of transportation facilities and to important geographic sites in the Study Area.

Within the Study Area, there are 13 motor freight common carriers, five terminals, three local drayage companies, and a number of independent trucking companies of which most haul material resources (logs and gravel) and agricultural commodities, poultry, and livestock. The trucking companies are dispersed throughout the study area.

Truck trip generation location areas are the Jefferson Industrial Park area, Pine Bluff Port Industrial Park/railroad yards, and the West 6th Avenue area. Following is a brief description of each area.

<u>Jefferson Industrial Park Area:</u> This general area is adjacent to Jefferson Parkway and McFadden Road, which is located between Dollarway Road (U.S. Highway 365) and U.S. Highway 79 north. The Industrial Park itself contains approximately 750 acres. In and near the Park area are fifteen business that generate a number of semi-truck trips; there are also three other manufacturers located in this area that generate a number of semi-truck trips. The majority of land in the area has not been developed. Development has begun on a wood pellet processing plant at the northwest corner of Hutchinson Street and Jefferson Parkway. Projections indicate and average of 100 trucks per day once operations begin in mid 2016.

#### Pine Bluff Port and Railroad



This area is adjacent to Port Road and Emmett Sanders Road and lies east of Michigan Street. There are approximately twenty-five businesses and industries in the area that generate a number of semi-truck trips.

<u>West 6th Avenue Area</u>: This is the area adjacent to 6th Avenue that is located between Plum Street and Blake Street (U. S. Highway 79). There are approximately twenty businesses which generate semi-truck trips including the household mover's offices/warehouse facilities. Also located within the study area are two smaller industrial parks and a number of businesses such as wholesalers and distributors, grocery stores, etc. each of which generate truck trips.

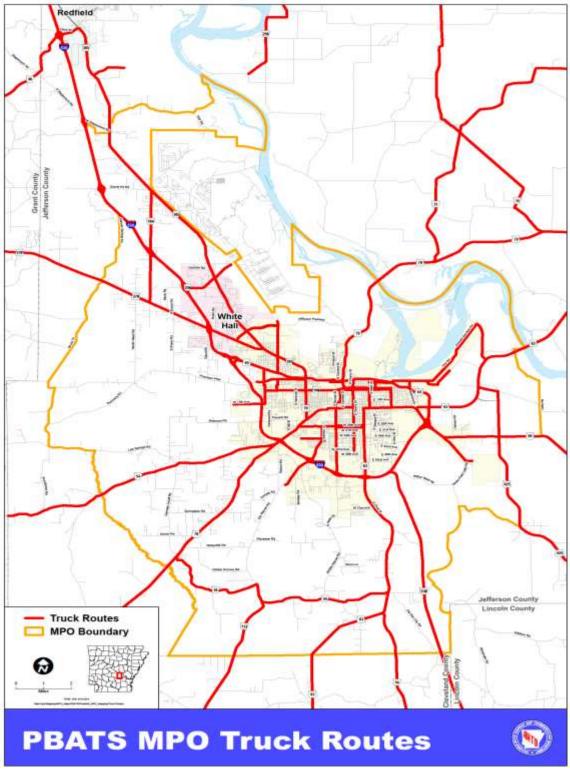
The Truck Route Map (Map 18) identifies the routes within the study area that have been designated as truck routes. While these routes provide adequate access to the commercial and industrial land uses within the area, pavement conditions, drainage, turning radii at intersections, lane widths, signage, and local regulations and policies are also important aspects that affect the

efficient movement of semi-trucks along the truck routes. The majority of transportation construction projects listed on the twenty-five year Transportation Improvement Program plan are located on truck routes. It is important that when designing these projects, careful consideration is given to the design standards for semi-truck movement. The following recommendations are related to truck movement policy that will aid in improving the efficiency of truck and other vehicle movement within the Study Area. These policies should be implemented in conjunction with the twenty-five year Transportation Improvement Program.

- POLICIES: REVIEW EXISTING LOCAL ORDINANCES AND POLICIES THAT AFFECT TRUCK MOVEMENTS TO ASSURE THAT MOVEMENT OF TRAFFIC CAN BE BETTER MANAGED.
  - 1. <u>Zoning Ordinance</u>. Conduct a review of the local jurisdictions' Ordinances to determine that adequate provisions exist which address adequate on-site truck loading and unloading. This should also be reviewed when considering zoning changes.
  - 2. <u>Curb-Cut Ordinance and Policy</u>: Conduct a review of the local jurisdictions' Ordinances and policies concerning curb-cuts. It is essential that the driveway entrances used by semi-trucks and other large vehicles to access a given facility are wide enough to accommodate turning movements from and to the street without disrupting on-street traffic.
  - 3. <u>Street Construction Standards</u>: Conduct a review of the local jurisdictions' Subdivision Regulations and policies concerning construction standards of streets. Road construction standards for collector and arterial streets as well as local streets that service commercial and industrial land uses need to be designed to sustain the weight of semi-trucks.
  - 4. <u>Truck Route Ordinance Text</u>: Conduct a review of the local jurisdictions' existing truck route ordinance and ordinance texts. The City of Pine Bluff adopted a Truck Route Ordinance in the mid 1960's, however, the text has not been revised since that time. The City of White Hall and Jefferson County do not currently have a truck route ordinance and should consider adopting one. Areas that should be addressed are: designation of routes, determination of route criteria, and time of on-street deliveries, on-street parking duration and limitations, special purpose route designations, and posting of maintenance bond, weight limits, and enforcement.
  - 5. <u>Truck Route Ordinance Map</u>: The City of White Hall and Jefferson County should consider adopting a Truck Route Map. The City of Pine Bluff has an adopted Truck Route Map and has amended it from time to time to reflect changes that have occurred within the City.
  - 6. <u>*Truck Route Management Plan</u></u>: A report on the condition of the streets on the truck route map(s) should be prepared and recommendations made for low cost</u>*

roadway improvement projects, maintenance projects, or traffic flow management projects that can be implemented to improve the truck route system.

7. <u>Conduct a signage survey</u>: A signage survey needs to be conducted to determine what type of directional signs need to be installed indicating truck routes, major industrial and commercial areas, and governmental, school and other community facilities that generate truck trips.



**MAP 17** 

#### INTELLIGENT TRANSPORTATION SYSTEMS

The major goals of the Intelligent Transportation System (ITS) program is to manage and operate the nation's regional transportation systems more efficiently to reduce congestion and enhance emergency responses through the use of advanced technologies and new governmental and institutional integration. The main methods of creating an ITS are the focusing on technology in developing informational and communication systems for cars, trucks, buses, and trains so that the managers and operators can make better decisions for the transportation system. The ITS Architecture or framework, describes the overall regional plan for the systems integration. The Deployment Plan describes the implementation process and anticipated timetable.

The U.S. Department of Transportation has identified nine (ITS) components that can be integrated into the planning process. They are to be used as a platform for using new technology to better manage travel movements in and throughout the region and nation. Over the next twenty-five years, the following seven components are seen as being applicable to the Study Area Transportation System:

- <u>Traffic Signal Control Systems</u> Provide for the control and coordination of traffic signals, the monitoring of traffic, and the monitoring of hardware and software malfunctions.
- <u>Freeway Management Systems</u> Provide for the following on a limited access: facilities surveillance and incident detection, signalized ramp control, information dissemination, incident management, land use control, and coordination/integration with all appropriate local governments that are in the study area.
- <u>Transit Management System</u> Provides for the following: transit vehicle tracking, demand-responsive operations, passenger and fare management, land use control, and coordination/integration with all appropriate local governments that are in the study area.
- <u>Regional Multi-modal Travel Information System</u> Provides emergency evacuation route information, traveler advisor functions, and special events information.
- <u>Emergency Management System</u> Provides for the integration and coordination of appropriate emergency agencies (law enforcement agencies, fire departments, and E 911) with respect to the transportation infrastructure. Detection and response of incidents, as well as real-time traffic information for timely dispatch of personnel, are emphasized.
- <u>Incident Management Program</u> Provides for the detection and verification of roadway incidents, appropriate response to incidents, site traffic management, incident clearance and motorist information.
- <u>Rail Grade Crossing Warning System</u> Provides for the implementation of technologies, which increase roadway and rail safety for at-grand crossings throughout the Study Area.

#### **ITS RECOMMENDATIONS**

<u>Short Range Period</u> – The ITS program has been a very important element in the PBATS planning process because of the U.S. Army program to eliminate the hazardous chemical

ingredients for weapons at the Pine Bluff Arsenal. The Chemical Stockpile Emergency Preparedness Program (CSEPP) established and identified evacuation routes through the Study Area in case there is an emergency at the Arsenal. The PBATS planning program coordinated with the CSEPP planning program to ensure that safe and efficient evacuation routes form the Arsenal and all locations within the Study Area to safe areas located outside of the safety zone area were available. Though the Chemical Stockpile at the Arsenal has been removed, this element remains in place.

The first step in developing a Regional ITS Architecture and Deployment Plan is to identify the stakeholders. The stakeholders participate in identifying the components of ITS as they anticipate utilizing in both the near future and over the next 25 years. The components and the level of interconnectivity needed are established in the ITS Architecture. Components must be identified in the Architecture to be eligible for Federal funding. Like the Metropolitan Transportation Plan, the ITS Architecture is a living document and must be reviewed and updated as necessary.

<u>Intermediate Range Period</u> – Once the architecture is developed, a list of projects can be developed and intergovernmental agreements can be prepared where needed. This will be based on the appropriate time period to implement ITS projects.

#### PEDESTRIAN MOVEMENTS

The PBATS Study Area is a low density urban area that is vehicle oriented and where few people use pedestrian trips to carry out their daily activities. The major emphasis of pedestrian planning in the PBATS area should focus on the type of pedestrian trips that normally begin and end from the end of a vehicular trip. Nevertheless, an overall pedestrian circulation network should be considered in the planning process, particularly in those areas identified under 'New Subdivisions' and 'Arterial and Collector Streets' below. With the increased awareness of environmental issues and the trend toward neighborhood revitalization, there is a need to consider long range pedestrian plans that link neighborhoods with other neighborhoods and commercial developments. Local pedestrian circulation plans for key areas such as the CBD and the University of Arkansas at Pine Bluff should also be studied.

However, in order to implement any type of pedestrian plan, the public must be convinced that there is a real and perceived need for sidewalk projects, something that has been lacking in the Study Area over the past several years. The last subdivision constructed in Pine Bluff that had sidewalks installed was Belmont Subdivision which was constructed in the 1960's. In the City of White Hall, there are no sidewalks on any of the streets. There was once an approved subdivision that utilized a natural pedestrian-way located between the rear lot lines of a tiered block, however, many of the lots were replatted and the pedestrian-way was abandoned.

A detailed pedestrian planning process should be started. In the process of developing and implementing a pedestrian plan and projects there are six key components that need to be considered to insure that the pedestrians will use the pedestrian facilities. They are as follows: design standards, directness, continuity, street and roadway crossing, security, and visual interest and amenity.

- <u>Design Standards</u>: Determine the proper design standard used for the intended use for pedestrians. For example: wider sidewalks and trails are needed in the areas that generate pedestrian trips such as stadium, event center, and CBD areas. Determine if sidewalks and trails should be designed to discourage other forms of transportation to use the trail. The other consideration in the design standards relate to overall design in terms of the security and visual amenity aspects relating to pedestrian use of the sidewalks and trails.
- <u>Directness</u>: Distance is critical to walking trips except for nature trails or trails designed for exercise and such. Pedestrian trips are no different than vehicle trips. How well the pedestrian system connects trip origins and destinations to such places as school, bus stops, parks, commercial places, or other activity-generating places is paramount to the usage of the system.
- <u>Continuity</u>: Continuity is a measure of completeness of the sidewalk or trail system which means that there are no missing segments.
- <u>Street and Road Crossing</u>: Street crossings pose a problem for pedestrian systems because of the conflict with automobiles, especially at crossings along major road systems. Pedestrian

street crossings that promote the safety of the pedestrian is one of the most important considerations in designing or improving a pedestrian system.

- <u>Security</u>: Pedestrians will not use sidewalks or trails if they do not feel they are safe and secure. Some of the questions that must be answered concerning security of a pedestrian system include: is the system separated from vehicles, are there street lights, and are there visual impairments along the sidewalks and trails.
- <u>Visual Interest and Amenity</u>: This deals with promoting pedestrians to use the sidewalks and trails. The more aesthetically appealing the pedestrian system is, the more it will be used. This can be done by installing flower planters, benches, water fountains and other amenities as well as locating parts of the system along pleasant urban streets or natural areas.

PBATS has established a list of both Short Range and Long Range Transportation Projects that local governments should consider implementing.

- Develop a sidewalk program to construct sidewalks that would serve the pedestrian needs of the schools within the Study Area.
- Develop a sidewalk program to construct sidewalks that would serve the student needs of the University of Arkansas at Pine Bluff and Southeast Arkansas College.
- Install ADA sidewalk improvements along the existing sidewalks system.
- Inventory the sidewalk needs of the Central Business District (CBD) primarily for condition and repair.
- Address the sidewalk needs along the commercial and industrial transportation corridors.
- Develop and implement a maintenance program to address the existing sidewalk system.
- Prepare an ordinance to require sidewalks for new developments.

Because of the lack of pedestrian-ways and sidewalks within the Study Area, it has been recommended in the past that an initial pedestrian plan identify transportation management system types of projects that are directed towards improving safety of children walking to and from school. Two years ago a Safe Routes to School (SRTS) Plan was developed for the elementary and middle schools in the City of Pine Bluff. The three primary purposes of the national SRTS program include:

- To enable and encourage children, including those with disabilities, to walk and bicycle to school.
- To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy, active lifestyle and community from an early age.
- To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools.

It must be remembered that with the implementation of an SRTS program, children will not be the only ones using the new pedestrian system. For instance, the initial Pine Bluff SRTS

implementation will eventually connect two neighborhood schools (Robert F. Morehead Middle School, left, is one of the schools) with a part of the Lake Saracen Trail System, thus connecting a neighborhood with a major Pine Bluff recreational facility. Lake Saracen has a number of amenities that appeal to all ages including a fishing pier spanning Brumps Bayou that



will eventually connect with an on-street trail to Lake Saracen Pavilion as well as connecting with a new sidewalk along Highway 79 that will connect with the Lake Saracen Trail on its northern end.

Other focal points of pedestrian movement planning in the PBATS Study Area should be directed towards the following areas:

- **Central Business District/Urban Core Area.** The existing pedestrian walkways should be maintained. Emphasis should be placed on making the pedestrian ways accessible to all persons. Installing amenities that give the pedestrian a perception of well-being and safety and that will promote a willingness to use the walkways should be an objective. Pedestrian crosswalks need to be installed on Main Street at the 4<sup>th</sup> Avenue rail crossing.
- New Commercial and Multifamily Residential Developments. A pedestrian walkway system should be designed and incorporated into new commercial developments and new multi-family construction. Emphasis should be placed on separating pedestrian movements from vehicular movements and providing pedestrian walkways to the developments' perimeters.
- **New Subdivisions.** Pedestrian walkways should be required in all subdivisions receiving approval from local entities. The walkway systems should be designed so as to reduce pedestrian-vehicular conflict where possible and to foster effective pedestrian movement that links different land uses as would a vehicular transportation network.
- Arterial and Collector Streets. Pedestrian walkways should be installed along those arterial and collector streets where there is evidence of pedestrian movement.
- **Pedestrian Transportation Safety Management (T.S.M.) Projects.** Pedestrian movement projects that are safety oriented and which can be implemented at a low capital cost should be installed. Such improvements include pavement crossing markings, signing, curb cuts, etc.

Agencies within the Metropolitan Planning Area should begin conversations to bring their vision in line with other progressive cities by reviewing and adopting a "Complete Streets" policy. Complete streets are considered streets for everyone and are developed by designing components that enable pedestrian use, biking, transit as well as vehicle mobility. By incorporating the components of complete streets into their plans the region within the study area will become safer and more user friendly which in turn helps foster neighborhood development.



#### **PEDESTRIAN TRAILS**

There are two pedestrian trails within the Study Area, the Bayou Bartholomew Trail and the Lake Saracen Trail.

• Lake Saracen Trail, a cooperative effort between the Arkansas Game and Fish Commission, the City of Pine Bluff, and Jefferson County, is a pedestrian trail that is planned to run from near the Lake Saracen Pavilion, which is located north of the Martha Mitchell Expressway

(U. S. 65B) across from the Jefferson County Courthouse, north and west to U.S. Highway 79 North, and eventually south and east back to the Pavilion. Construction of the trail began in 2009 and is nearing completion. The trail consists of a 1 <sup>3</sup>/<sub>4</sub> mile trail along the east and north levees of the Lake and a pedestrian bridge that spans the Lake's spillway and extends the trail to Golden Lion Park and U.S. Highway 79. These trails provide a direct pedestrian access that connects the Central



Business District (CBD) with Highway 79 (University Avenue), north of the University of Arkansas at Pine Bluff (UAPB). From this point a newly constructed sidewalk continues south on University Avenue, eventually to the Martha Mitchell Expressway, but in the meantime connects to the Lake Saracen trail via a new sidewalk on King Street that returns the pedestrian back to the Lake Saracen. At the end of King Street at Lake Saracen, a fishing pier has been constructed that spans Brumps Bayou and eventually will connect with an on-street trail back to Lake Saracen Pavilion. When complete, the trail will be about five miles long.

- Bayou Bartholomew Nature Trail is located adjacent to the Bayou Bartholomew and north I-530. It is a loop trail approximately two miles in length and can be accessed by Hazel Street just north of the north ramp of I-530. It was constructed in 2002 by the Bartholomew Alliance, Inc., a nonprofit organization whose interest is to protect the natural environment of Bayou Bartholomew. Funds to construct the trail were obtained through the U. S. Department of Transportation's Trail Grant Program. This trail is the first phase of the proposed Bayou Bartholomew trail that would extend from Olive Street (U.S. 63) to Oakwood Road. The trail when constructed would be approximately five miles in length.
- Another trail system, just in the beginning planning stages, would be developed within the rights-of-way of Entergy Transmission lines which traverse throughout the study area. The rights-of-way are very wide and very long and would provide not only a good location for a pedestrian trail but could also be implemented as a bicycle trail that would allow bicyclists with a way to travel around the study area without having to share the route with motor vehicles.



# LAKE SARACEN TRAIL MAP - 18

#### TRANSPORTATION ALTERNATIVES PROGRAM

The Transportation Alternatives Program (TAP) was authorized under MAP-21 and provides funding for programs and projects defined as transportation alternatives, replacing the funding from pre-MAP-21 programs including Transportation Enhancements, Recreational Trails (RTP), and Safe Routes to School (SRTS), wrapping them into a single funding source.

Project sponsors apply for TAP program funds through a competitive process with the applications being reviewed by one of three different advisory committees: the TAP Advisory Committee (TAPAC), the Safe Routes to School Advisory Committee (SRTSAC) or the Arkansas Recreational Trails Advisory Committee (ARTAC). Applications for transportation enhancement-type projects will be forwarded to the TAPAC. Applications for Safe Routes to Schools projects will be forwarded to the SRTSAC and applications for Recreational Trails projects will be forwarded to the ARTAC.

The Transportation Alternatives Program (TAP) is a reimbursement-type grant program. The program provides for an 80 percent federal share, and a 20 percent match will be required from the eligible sponsor. Use of in-kind match is not permitted for TAP projects. The 20 percent match must be in cash. In-kind match will be permitted for RTP projects.

Federal funds provided can only be used for project construction, except that SRTS funds can be used for public awareness and outreach, student sessions on safety, health, and the environment, staff training, and traffic education and enforcement. Costs associated with preliminary engineering, environmental documentation, right-of-way and utility adjustments, and construction inspection will be the responsibility of the eligible sponsor.

Plans which include the design of structural components, such as pedestrian bridges, tunnels, or scenic overlooks, must be stamped by a Registered Professional Engineer. Plans which include the design of only non-structural components, such as concrete sidewalks or paved trails, must be stamped by a Registered Professional Engineer or a Licensed Architect. Plans which include the design of only non-infrastructure components will not require either.

There will be no minimum requested funding amount on projects containing only noninfrastructure components; projects containing infrastructure components will have a minimum requested funding amount of \$20,000; and all TAP and RTP projects will have a maximum requested funding amount of \$500,000.

TAP funds may be used for the following:

- Construction of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation.
- Construction of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.

- Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users.
- Construction of turnouts, overlooks, and viewing areas.
- Community improvement activities, including:
  - inventory, control, or removal of outdoor advertising.
  - historic preservation and rehabilitation of historic transportation facilities.
  - vegetation management practices in transportation rights-of-way to improve.
  - roadway safety, prevent against invasive species, and provide erosion control.
  - archaeological activities relating to impacts from implementation of an eligible transportation project.
- Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to:
  - address water management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff.
  - reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats.
- Construction of boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.
- Recreational Trails Program eligible activities.
- Safe Routes to School eligible activities.

Applications for TAP funds will be accepted from the following:

- local governments, including city and county governments
- regional transportation authorities
- transit agencies
- natural resource or public land agencies
- school districts, local education agencies, or schools
- tribal governments
- any other local or regional governmental entity with responsibility for oversight of transportation or recreational trails

Under TAP, nonprofits are not eligible as direct grant recipients of TAP funds. Nonprofits may partner with any eligible entity on an eligible TAP project. For TAP and RTP projects, any eligible sponsor that is within the state will be allowed to apply for funds.

The Transportation Alternatives Program is one option that cities and counties can use to provide for pedestrian and/or bikeway projects and other improvement projects that are not considered high priority. Most times, budget constraints limit cities and counties to providing maintenance on existing streets and implementing a few new street projects that are necessary to improve access and traffic flow of automobiles and trucks. Pedestrian and bicycle ways or streetscapetype projects may not even be considered in light of more pressing street needs. However, in terms of quality of life and livability, many times these type projects are the most rewarding.

### SOCIAL EQUITY AND ENVIRONMENTAL JUSTICE

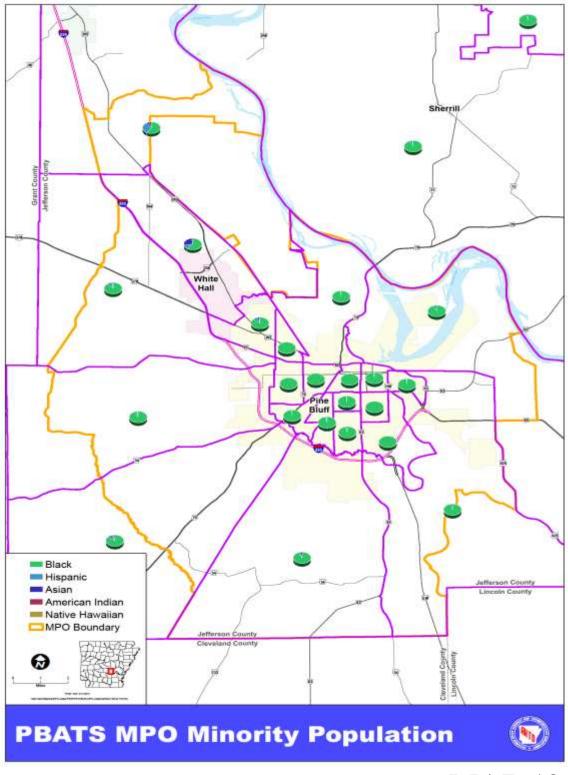
Title VI of the 1964 Civil Rights Act states that "No person in the United States shall, on the grounds of race, color, or National Origin, be excluded from participating in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance". Social equity and environmental justice issues need to be addressed to insure that public expenditures on transportation projects benefit all segments of the community in terms of meeting the 1964 Civil Rights Act. Therefore, within the Long Range and Short Range Planning process, PBATS must insure that all segments of the community and individuals within the Study Area have equal opportunities to participate in determining what transportation projects will be implemented and where the projects will be located.

PBATS has an extensive public participation plan, whereby five open houses are held during development of the long range transportation plan. One of the open houses is held during public events, such as the Livestock and Rodeo and/or Earth Day Expo, and at least two of the open houses are held in minority areas. These open houses are broadly advertised prior to the open house through large ads placed in the local newspaper, sending a press release to the local newspaper and radio stations, placing flyers at local government offices, and placing a notification on the SARPC website. In addition, the public is notified through newspaper notices and a notice on the SARPC website of the availability to review and provide public comment and input on the PBATS Unified Planning Work Program and the Transportation Improvement Program. The press is also notified of all PBATS Policy and Technical Committee meetings.

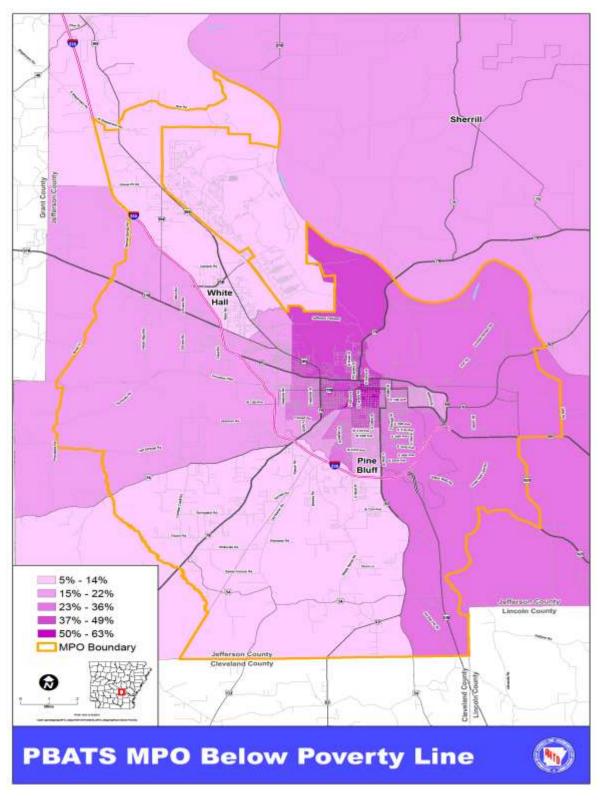
Since the population of the PBATS urban area is comprised largely by minority residents – in the Year 2010 African American individuals comprised 55% of Jefferson County and 75% of Pine Bluff - most transportation projects will benefit a large segment of the minority community. With current budget constraints affecting local project implementation, there have been few local transportation projects implemented. Most local street projects, other than maintenance and overlay, have been accomplished by the Pine Bluff Economic and Community Development Department through their Community Development program that benefits low and moderate income areas, usually with high minority populations. Maintenance and overlay projects are accomplished on an as-need basis.

Areas where steps need to be taken to ensure equitable distribution of benefits and adverse environmental impacts of transportation projects and programs are:

- Criterion to evaluate equality of transportation services should be made.
- A continuous evaluation of the distribution of transportation projects should be made so all segments of the community share in the social, economic, and environmental benefits of the projects.



**MAP 19** 



## **MAP 20**

## ACCIDENTS

Accidents are a result of many factors ranging from inattentive drivers to visual obstructions. Accidents occur on all types of roads and under all types of conditions. Many accidents occur at intersections or along congested roadways. A number of accidents may be reduced by implementing various type of low-cost, short-range projects such as making changes to the traffic signals, improved road striping, or eliminating visual obstructions at intersections. The study area traffic corridors that had the highest number of accidents are University Drive from the Martha Mitchell Expressway to Oliver Drive and Blake Street from the Martha Mitchell to Bay Street.

<u>Traffic Corridors</u>: An evaluation of each major traffic corridor will be conducted every four years. The objectives of each evaluation are:

- 1. Monitor the traffic accident reports filed along the major corridors.
- 2. Evaluate pavement makings and signs along the roadway as well as the signalized intersections.
- 3. Conduct a field check of the intersections that have experienced more than four accidents over a year's time to determine what improvements may be made to reduce the number of accidents at the intersections.

<u>Top 25 Accident Locations</u>: An evaluation of the top 25 accidents locations will be conducted annually. The objectives of each evaluation are:

- 1. Review the accident reports of each location.
- 2. Conduct a field check of the intersections to determine what improvements may be made to reduce the number of accidents at each location.

## CONGESTION AND CONGESTION MANAGEMENT

Highway capacity is a measure of the roadway's ability to accommodate traffic flow. As traffic increases beyond the capacity of a road, the result is congestion. Congestion is costly in terms of time delays, accidents, and air pollution.

Congestion can be reduced either by increasing roadway capacity or reducing the number of vehicles using the roadway. Capacity can be increased by building new roads or increasing the number of travel lanes on existing roadways, but either of these alternatives is very costly, and usually takes many years of planning, funding, and construction. Another method of reducing congestion is implementing Transportation System Management (TSM) projects to improve the efficiency of the existing roadways so its capacity can be increased. TSM projects are far less costly than building new roads and widening existing roads, can be funded and implemented more quickly, and frequently reduce traffic accidents. They also aid in pushing back the time frame of implementing long-range transportation improvements. Additionally, utilization of public transit can aid in the reduction of congestion.

Examples of TSM projects include:

- Adoption of curb cut policies which encourage the use of joint driveway access and which regulate driveway spacing.
- Improvements to traffic signalization.
- Elimination of road jogs.
- Improvements in intersection alignments and turning radius.
- Creation of center turn lanes, channelization, median control, and various other pavement markings.



TSM projects can be implemented to improve traffic flow on both those roads identified on the Transportation Plan and on local streets. They are considered short-range projects that can be implemented on an on-going basis, similar to a routine maintenance

program. As an example, the City of Pine Bluff has implemented a TSM program of upgrading the traffic signals on an on-going basis.

## Congestion Location Overview

At the present time, there are no roads within the Study Area that experience long-term congestion problems with the possible exception of Harding Avenue located between Main Street and Ohio Street. There are a number of roads that experience short-term morning and evening congestion, especially during the school year. Although the PBATS area will experience only a small growth in population over the next twenty-five years, the vehicle miles and travel growth rate will continue to out-pace the population growth rate. The following is a list of roadway locations where congestion occurs at various times of the day.

- 1. Harding Avenue: Between Olive Street and Ohio Street
- 2. University Avenue: Between Saracen Avenue and 3rd Avenue
- 3. Sulphur springs Road: Between Chapel Heights Drive and Camden Road
- 4. Martha Mitchell: Between Blake Street and Walnut Street
- 5. Blake Street/Dollarway Road: Between 4<sup>th</sup> Avenue and Hutchinson Street
- 6. Hazel Street: Between 17<sup>th</sup> Avenue and 31<sup>st</sup> Avenue
- 7. Olive Street: Between 23<sup>rd</sup> Avenue and 30<sup>th</sup> Avenue
- 8. 28th Avenue: Between Hazel Street and Catalpa Street

In addition, there are a number of street intersections that experience congestion at selected times of the day, such as the intersection of Olive Street and 39<sup>th</sup> Avenue, Blake Street and 6<sup>th</sup> Avenue, University Drive and 6<sup>th</sup> Avenue, and the off-ramps of I-530.

Even with the construction of projects identified in the Transportation Improvement Program of the Year 2040 Transportation Plan, congestion will continue to increase on the roadway system. Without using a computer modeling program to distribute future trips over the existing street network, it is difficult to determine which streets will be at or above capacity. However, in order to determine where capacity problems may occur in the future, an evaluation of the proposed Land Use Plan and Unconstrained Transportation Plan was conducted in conjunction with the monitoring of urban development trends that have been taking place. Although there has been little urban growth occurring in the PBATS study area, the following trends have been recognized:

- There has been an out-migration of population from the center core area of the City of Pine Bluff to the urban fringe areas of the City and to White Hall. The fringe area can generally be defined as that area from Old Warren Road to Sulphur Springs Road and the State Highway 104 corridor.
- There has been very little in-fill of residential, commercial, or industrial land uses within the core area.
- The residential development taking place in the fringe area can be described as large lot development (two acres or more) located on existing roads, and which has not required the development of collector roads as identified on the Unconstrained Plan.

Based on the development trends that have been occurring in conjunction with the implementation of those projects identified in the Transportation Improvement Plan, it appears that 1) travel mileage will increase over the existing roadways, and 2) construction of a collector street system as identified in the Unconstrained Plan to service the needs of residents will lag behind the travel mileage expected.

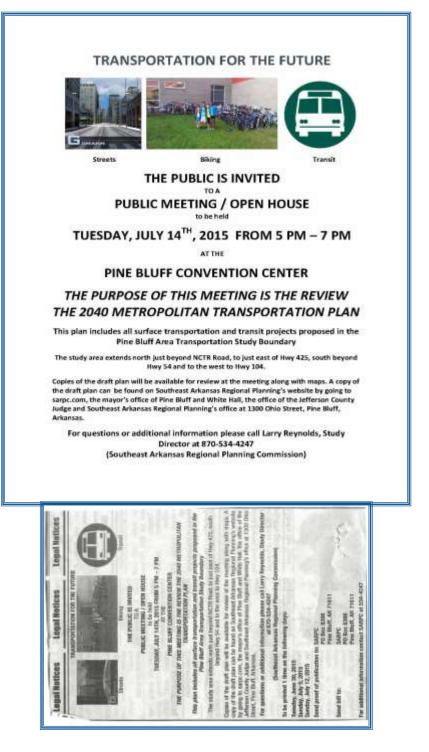
## **APPENDIX A**

- **ADT (Average Daily Traffic)** is the annualized average 24-hour volume of vehicles at a given point or section of highway.
- **Complete Streets -** are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work.
- **Constrained Plan** road improvement financial plan that includes the overall balancing of expected revenues with estimated costs
- **Department of Transportation (DOT)** is the federal Cabinet department of the U.S. Government concerned with transportation. It was established by an act of Congress on October 15, 1966, and began operation on April 1, 1967. It is governed by the United States Secretary of Transportation.
- **Federal Aviation Administration (FAA) -** is the national aviation authority of the United States. An agency of the United States Department of Transportation, it has authority to regulate and oversee all aspects of American civil aviation
- **Federal Highway Administration (FHWA)** is a division of the United States Department of Transportation that specializes in highway transportation. The agency's major activities are grouped into two "programs," the Federal-aid Highway Program and the Federal Lands Highway Program.
- **Federal Transit Administration (FTA)** is an agency within the United States Department of Transportation (DOT) that provides financial and technical assistance to local public transportation systems. The FTA is one of ten modal administrations within the DOT.
- **Functional Classification -** is the process by which streets and highways are grouped into classes, or systems, according to the character of traffic service that they are intended to provide. For additional information see page 41 of this document.
- MAP-21 (Moving Ahead for Progress in the 21st Century Act) is a funding and authorization bill to govern United States federal surface transportation spending. It was passed by Congress on June 29, 2012.
- McClellan-Kerr Arkansas River Navigation System (MKARNS) is part of the inland waterway system originating at the Tulsa Port of Catoosa and running southeast through Oklahoma and Arkansas to the Mississippi River
- Metropolitan Planning Area see Urbanized Area.

- Metropolitan Planning Organization (MPO) is a transportation policy-making body made up of representatives from local government and transportation agencies with authority and responsibility in metropolitan planning areas. Federal legislation passed in the early 1970s required the formation of an MPO for any urbanized area (UA) with a population greater than 50,000. MPOs were created in order to ensure that existing and future expenditures for transportation projects and programs were based on a continuing, cooperative and comprehensive (3-C) planning process. Federal funding for transportation projects and programs is channeled through the MPO.
- Metropolitan Transportation Plan (MTP) also known as a Long Range Transportation Plan is a long-range transportation plan for the metropolitan area covering a planning horizon of at least twenty years that fosters (1) mobility and access for people and goods, (2) efficient system performance and preservation, and (3) good quality of life. Updates to the plan are required every 5 years.
- **PEA's (Planning Emphasis Areas) -** are planning topical areas that the government wants to place emphasis on as the State DOTs and the MPOs develop their respective planning work programs. A more detailed list of the PEA's can be found on page 3 of this document.
- **Pine Bluff Area Transportation Study (PBATS)** is the name of the Metropolitan Transportation Plan for the Pine Bluff urbanized area. This area includes Pine Bluff, White Hall and parts of Jefferson County.
- Southeast Arkansas Regional Planning Commission (SARPC) is a local council of governments that provides planning and technical services to Pine Bluff, White Hall, Jefferson County and the other cities within the county. SARPC was established in 1964 in accordance with the Arkansas State Statute on Metropolitan Planning. SARPC serves as the MPO for the Pine Bluff Area Transportation Study.
- **Transportation Research Board (TRB) -** is a division of the United States National Research Council, which serves as an independent adviser to the President of the United States of America, the Congress and federal agencies on scientific and technical questions of national importance.
- **Unconstrained Plan** is a list of projects deemed necessary and/or desired within the MPA where a financial plan is not included and means of funding have not been identified.
- **Urbanized area -** a location characterized by high human population density. In the U.S. urbanized areas are defined by the U.S. Census Bureau. The urbanized area for the Pine Bluff-White Hall area is identified in Map 1.

VPD (Volume Per Day) - see ADT.

## **APPENDIX B – Advertisements and Notices**



## TRANSPORTATION FOR THE FUTURE Skirg PUBLIC MEETINGS / OPEN HOUSE will be held during the Month of October 2004 concerning the : Pine Bluff - White Hall Metropolitan Transportation Plan Public input is requested on the future transportation plans for your Metropolitan area. Provide your input in matters concerning: -Traffic flow -Streets and Highways -Congestion -Bike and Pedestrian Trails -Transit -Rails and Freight 2<sup>rd</sup> mtg Thursday October 9<sup>th</sup>, 2014 3pm - 5pm UAPB, Hathaway Fine Arts Bidg, 1200 North University, Pine Bluff, AR 3rd mtg Monday October 13, 2014 4:30 pm - 6:15 pm White Hall City Hall, 101 Parkway Drive, White Hall, AB 4th mtg Wednesday October 15, 2014 4pm - 6pm Watson Chapel High School Gym Lobby, 4000 S. Camden Road, Pine Bluff, AR If you have any questions, please contact the Southeast Arkansas Regional Planning Commission at 870-534-4247.

### TRANSPORTATION FOR THE FUTURE



Sking

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## PUBLIC MEETIINGS / OPEN HOUSE will be held

during the Manth of October 2014 concerning the :

Pine Bluff - White Hall Metropolitan Transportation Plan

Public input is requested on the future transportation plans for your Metropolitan area.

> Provide your input in matters concerning: -Traffic flow -Streets and Highways -Congestion -Bike and Pedestrian Trails -Transit -Rails and Freight

1" of a minimum 4 meetings will be held: Thursday, October 2, 2014 at Hestand Stadium during the Southeast Arkansas Livestock and Rodeo From 10-12:00 noon



**APPENDIX C – SURVEY** 

#### Pine Bluff – White Hall Transportation Survey

All questions are optional; however, the more detailed information provided, the better understanding of our areas future needs and expectations.

#### DEMOGRAPHICS

Gender:

Male

	ma	

o Pine Bluff o White Hall o In Jefferson County o Outside Jefferson County	o Under 15 o 15-19 o 20-24 o 25-29 o 30-34 o 35-39 o 40-44 o 45-49 o 50-54 o 55-59 o 60-64 o 65 and older
o White Hall o In Jefferson County	o 20-24 o 25-29 o 30-34 o 35-39 o 40-44 o 45-49 o 50-54 o 55-59 o 60-64
o In Jefferson County	o 20-24 o 25-29 o 30-34 o 35-39 o 40-44 o 45-49 o 50-54 o 55-59 o 60-64
o In Jefferson County	o 25-29 o 30-34 o 35-39 o 40-44 o 45-49 o 50-54 o 55-59 o 60-64
	o 30-34 o 35-39 o 40-44 o 45-49 o 50-54 o 55-59 o 60-64
	o 40-44 o 45-49 o 50-54 o 55-59 o 60-64
o Outside Jefferson County	o 45-49 o 50-54 o 55-59 o 60-64
	o 50-54 o 55-59 o 60-64
	o 55-59 o 60-64
	o 60-64
	o 65 and older
o Hispanic or Latino ive o Other :	
al Planning <u>www.sear</u>	pc.com 870-534-4247

#### CONGESTION

Efficient transportation systems affect quality of life and economic growth.

How do YOU define congestion?

#### How do you commute?

What is the primary means you use to get to work or school?

o Automobile	o Moto	rcycle	o Bicycle	o Walking	o Public Bus
o Carpool / shared	rides	o Taxi	o Other:		

#### Rate the overall rate of congestion:

Overall congestion: o Very Bad o Poor o Fair o Good

#### Rate the reasons for congestion or traffic jams:

	Strongly Disagree	Disagree	l don't't Know	Agree	Strongly Agree
Accidents	o	o	o	o	o
Too many vehicles	0	0	o	0	o
Road design / turn lanes	o	o	o	0	o
Signal timing / speed limits	o	o	o	0	o
Driver behavior	o	o	o	о	o
Major employers, schools or shopping area	o	o	o	0	o

Other : \_\_\_\_\_

Please describe problem areas (intersection of, in front of etc.)

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870-534-4247

## Rate how often you see the following safety issues:

		Once or	Once or	At least	
		Twice a	Twice a	once a	
	Never	Year	Month	week	Daily
Speeding	o	o	o	o	o
Crowded Roads	0	0	0	0	0
Red Light Running/Other violation	s o	0	o	o	o
Driver Behavior	o	0	o	o	0
Road conditions (maintenance)	o	0	0	0	0
Road Design	o	0	o	0	0
Turning Hazards	0	o	o	o	o
Obstructions at Intersections	o	o	0	0	0

Are you familiar with a traffic design called a "Roundabout" ?

## o Yes o No

Have you ever used a "Roundabout" ? o Yes o No

List any areas that are traffic concerns you see.

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870-534-4247

### **BICYCLE AND PEDESTRIAN**

#### Rate how often you currently do any of the following:

	Never	Once or Twice a year	Once or Twice a month	At least once a week	Daily
Bicycle to work	o	o	o	o	o
Bicycle to school	0	o	o	o	0
Bicycle to go shopping	o	o	o	o	0
Bicycle for fun or exercise	0	o	o	o	0
Walk to work	o	o	o	0	o
Walk to school	0	o	0	0	0
Walk to go shopping	o	o	o	o	0
Hiking for fun	0	0	o	0	0
Use bike lanes on streets	o	o	o	o	o

I would use a bicycle if there were bike lanes or routes:

	Never	Once or Twice a year	Once or Twice a month	At least once a week	Daily
Ride to work	o	o	o	o	o
Ride to school	0	o	0	0	o
Ride to go shopping	o	o	o	o	o
Ride for fun or exercise	o	0	o	o	o

#### I would walk to work, school or shopping if there were sidewalks, footpaths or nearby trails:

	Never	Once or Twice a year	Once or Twice a month	At least once a week	Daily
Walk to work	0	o	0	0	0
Walk to school	0	o	o	o	o
Walk to go shopping	o	o	0	0	o
Walk for fun or exercise	0	o	o	0	o

What prevents you from riding a bike or walking?

Southeast Arkansas Regional Planning

www.searpc.com

870-534-4247

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PUB		ιан	NNI

	nsit in Pine Bluff or White	e Hall?	O Yes	οN	o
Which have you used?	O Pine Bluff Transit	o SEAT	8		
low many times do you	use public transit ?				
O Never	02				
O Daily					
O Weekly					
O Monthly					
use public transit to get	to:				
O Work					
O School					
O Recreation					
O Shopping					
0 Other :					
What prevents you from	using public transit?				
O Not familiar with w	here the bus travels				
O Bus does not come	frequently enough				
O Bus does not run w	hen I need it				
O No bus runs in my	area (Note area:			)	Ľ.
O I can't afford it					
O Other :					
Nould you be interested o Yes o N	l in seeing Pine Bluff Tra lo	nsit expar	nd into V	Vhite I	Hall?
	e you to use Pine Bluff Tr	ansit or SE	EAT?		1
What would encourage					

#### RAIL AND AIR TRAVEL

Are you familiar with Amtrak?

o Yes o No

Have you ever ridden on Amtrak or other passenger rail? o Yes o No

The State of Arkansas is currently working on a State-wide Passenger Rail Plan. One route has an Amtrak connection between Little Rock and Pine Bluff. If this happens:

Would you ride Amtrak if a station is located here? o Yes o No

How often would you ride? o Daily o Weekly o Monthly o Annually

What purpose would consider riding Amtrak?

o Work o Shopping o Pleasure o School o Other

Comments:

#### AIRPORT

e you familiar wi	th the services offered at (	Grider Field? o Yes	o No
/hen you fly, whic	ch airport do you fly into /	out of:	
Grider Field	o Little Rock	o Memphis	
UMMARY			
ow did you find o	out about this open house	/ workshop?	
Newspaper articl	e o Newspaper notice	website a Word of ma	uth a Elver
		o website o word of mo	uti o riyei
Do you have any	suggestions on improving		

## Appendix D

## 2040 Metropolitan Transportation Plan PBATS Open House Public Comments

A total of six public hearings were held during the study development process. In addition public comments were requested and welcomed on Southeast Arkansas Regional Planning's website where the draft plan was posted.

The following represents the hearing dates, location and attendance:

October 2, 2014 Hestand Stadium (County Fair) - 13
 October 9, 2014 UAPB - 12
 October 13, 2014 White Hall City Hall - 5
 October 15, 2014 Watson Chapel School - 3
 July 14, 2015 Pine Bluff Convention Center - 10
 August 25, 2015 Pine Bluff City Hall - 6

Comments received:

# a. Road improvements needed on west side of town, particularly 6<sup>th</sup> Avenue west of Blake (Mays).

This item is addressed as project #3 in the Constrained Plan and identified as "Hwy 190".

Accordingly the Highway Department has already completed and adopted a recommendation for

this section of roads.

# b. There is a lack of a connected north - south path (road) through central Pine Bluff (Alexander).

Project #13 would complete a north – south roadway through central Pine Bluff. This would involve extending Hazel Street from 13<sup>th</sup> Avenue to Highway 190 (6<sup>th</sup> Avenue). The result would be a north – south passage from south Pine Bluff past the University of Arkansas Pine Bluff campus.

## c. Highway 270 needs widening (Foster).

Project #1 in the Constrained Plan. This project would widen and make improvements to Highway 270 from Jefferson Parkway to Sandy Acres. Development in this area continues with the opening of a regional auto dealership and multiple restaurants. The project has already been assigned a Highway Department Job number and depending on funding should be realized within the next year or two.

## **RESOLUTION**

## ADOPTION OF PBATS 2040 METROPOLITAN TRANSPORTATION PLAN

WHEREAS, The Policy Committee was established for the purpose of providing policy guidance for the Pine Bluff Area

Transportation Study (PBATS) planning process; and

WHEREAS, the Policy Committee has met to discuss the PBATS 2040

Metropolitan Transportation Plan for the area.

NOW, THEREFORE BE IT RESOLVED THAT, the Policy Committee hereby

adopts the recommended PBATS 2040 Metropolitan

Transportation Plan.

PASSED AND APPROVED THIS 18th DAY OF SEPTEMBER, 2015.

Dutch King, Chairman

Larry Reynolds, Study Director

## Amendments

Amendments # 1 & 2 Adopted 5-5-2016

## 2040 PINE BLUFF AREA TRANSPORTATION PLAN PROPOSED AMENDMENT 1 & 2

Federally funded projects that are included in the Transportation Improvement Plan (TIP) must also be included in the Metropolitan Transportation Plan. The 2040 MTP covers the years 2016-2040; whereas the current TIP covers 2016-2020. Projects in the MTP are categorized in three increments: 1 - 1<sup>st</sup> 5 years (2016-2020), 2 – next 10 years (2021-2030) and 3 – last 10 years (2031-2040). In some instances, sometimes due to funding circumstances, projects in the TIP do not coordinate with the MTP. Thus, amendments are needed.

The following pages represent proposed changes to the PBATS 2040 MTP. Changes are noted by the following:

- 1. **Red ink** represents a change in the funding amount and or wording.
- 2. Yellow highlight indicates that a project has been deleted or moved to another time frame.
- 3. Green highlight indicates that a project has been added to the table's time frame.
- 4. Blue highlight indicates that a new project has been added. This occurs only when a project was not previously included in any other time frame.

## CONSTRAINED PLAN

# Table 11Long Range Transportation Improvement Program2016-2020 Capital Improvement Program

Description	Project	Length	Federal	State/Local	Total	Funding	Gov.	Comment
	Туре	(Miles)	Amount \$	Amount S	S	Source	Unit	
Hwy 270 & 365 Spur	Major					NHPP		Reduce
between Hwy 104 &	Widening	4.59	12,000,000	3,000,000	15,000,000	State	AHTD	Comngestion
Jefferson Parkway								
I-530 exit ramps at								Reduce
intersections with	Widen to	0.3	1,920,000	480,000	2,400,000	NHS	AHTD	Congestion
Hzel, Hwys 63, 270	two lanes					STP - State		(Generic)
& 79								
Hwy 190 from I-530 to	System					STBGP		
Franklin, Franklin to	Preservation	2.09	2,800,000	700,000	3,500,000	State	AHTD	Reconstruction
6th, 6thn to Blake								
W. 13th from Hazel	Widen	0.24	0	420,000	420,000	Local	Pine	Reduce congestion
to Hickory	Drainage						Bluff	Improve drainage
Hazel from I-530	Widen	1	0	2,859,000	2,859,000	Local	Pine	Economic
to 42nd							Bluff	Development
I-530 from Hwy 104	Reconstruction	5	0	23,000,000	23,000,000	State	AHTD	Reconstruction
to Hwy 65B						Bond		
I-530 from Hwy 65B	Reconstruction	11.75	27,000,000	3,000,000	30,000,000	NHPP-IRP		Reconstruction
to Hwy 65B						NFP	AHTD	
						State		
Hwy 79 from Oakridge	Widen	2.38	4,400,000	1,100,000	5,500,000	NHPP	AHTD	Reduce
Dr. to city limits Hwy 190 from 11th						State		Congestion
Ave	Reconstruction	0.39	1,360,000	340,000	1,700,000	STBGP	AHTD	Reconstruction
to Harding Avenue						State		
I-530 Access	New		4,000,000	1,000,000	5,000,000	NFP	State	
Improvements	Location					State		
Various Signal Projects	Signalizing		700,000	175,000	875,000	STP Urban	AHTD	(Generic)
-	Intersections							
Transportation	Various, Trails,		812,000	203,000	1,015,000	ТАР	AHTD	(Generic)
Alternative Program	Safe Routes						Local	
Safety Projects	Various		3,802,000	950,500	4,752,500	Safety	AHTD	(Generic)
	Projects							
Maintenance	Bridge replace		0	16,991,000	16,991,000	Various	AHTD	(Generic)
	resurfacing							

Total Costs	58,794,000	54,218,500	112 012 500		
Total Costs	58,794,000	54,218,500	113,012,500		

## CONSTRAINED PLAN

Table 12
Long Range Transportation Improvement Program
2016-2020 Capital Improvement Program

		1	5-2020 Capital I	1	0			
Description	Project	Length	Federal	State/Local	Total	Funding	Gov.	Comment
	Туре	(Miles)	Amount \$	Amount S	S	Source	Unit	
Hwy 54 from Hwy 79	Widen	0.6	2,880,000	700,000	3,580,000	STP	AHTD	Reduce Congestion
west						State		Improve Safety
Connect Hazel to	New lane	0.6	0	3,204,000	3,204,000	Local	Pine	Connect Hazel ti
Hwy 190	construction						Bluff	US 79 B
Hazel from 28th to	Widen to five	0.25	0	1,730,000	1,730,000	Local	Pine	Eliminate traffic
31st	lanes						Bluff	bottle neck
Hwy 79 from Oakridge	Widen	2.38	4,400,000	1,100,000	5,500,000	NHPP	AHTD	Reduce
Dr. to city limits						State		Congestion
Hwy 190 from 11th								
Ave	Reconstruction	0.39	1,360,000	340,000	1,700,000	STBGP	AHTD	Reconstruction
to Harding Avenue						State		
Hwy 79B from								
McFadden	Overlay	2.8	1,360,000	340,000	1,700,000	NHS	AHTD	Overlay
Rd to Arkansas River								
Hwy 54 Bridge (.5	Dridee Debeb		100.000	40.000	200,000	Chata		Deneis Denless
mile	Bridge Rehab		160,000	40,000	200,000	State	AHTD	Repair Replace
West of Hwy 63) Hwy 63 (Olive St)	Replacement					Bridge		Deficient bridge
Signal	Signalization		800,000	200,000	1,000,000	STP	AHTD	Signalization
rehab at 34th, 28th,	Signalization		000,000	200,000	1,000,000	511	AITE	Signalization
27th	rehab					State		Intersection Rehab
and 17th								
Hwy 79 Big Creek								
Bridge	Bridge Rehab		1,200,000	300,000	1,500,000	NHS	AHTD	Repair Replace
Replace/Rehab	Replacement							Deficient bridge
Hwy 65 from I-530 to	Widen to add	2.8	4,480,000	1,120,000	5,600,000	NHS	AHTD	Safety
Hwy 425	shoulder/overlay							
Hwy 365 from Hwy								
365	Overlay		800,000	200,000	1,000,000	STP	AHTD	Overlay
Spur to Hwy 256						State		
Hwy 365 from Hwy								
256	Widen to add	4.5	12,720,000	3,180,000	15,900,000	STP	AHTD	Overlay
to Hwy 104	center turn lane					State		
Hwy 365 (Hwy 104 to	Reconstruction	3	1,280,000	320,000	1,600,000	STP	AHTD	Overlay
PBATS boundary)						State		
Hwy 63B from I-530	Overlay	3.9	2,400,000	600,000	3,000,000	STP	AHTD	Overlay
to Main Street						State		
Hwy 63 from I-530 to	Overlay	9.3	5,680,000	1,420,000	7,100,000	STP	AHTD	Overlay
Cleveland Cty line						State		
Various Signal								
Projects	Signalizing		1,100,000	275,000	1,375,000	STP	State	Reduce
	Intersections					State	Local	Congestion
Transportation	Various, Trails,		2,032,000	508,000	2,540,000	ТАР	State	Local applicants
Alternative Program	Safe Routes						Local	compete for funds
		+	0 500 000		11.000.000			
Safety Projects	Various		9,520,000	2,380,000	11,900,000	Safety	AHTD	Various safety
	Projects	ļ						projects
Maintenance	Bridge replace		0	42,533,000	42,533,000	Various	State	Maintenance
	resurfacing							
W. 13th from Hazel	Widen	0.24	0	420,000	420,000	Local	Pine	Reduce congestion
to Hickory	Drainage	0.24	0	420,000	420,000	Local	Bluff	Improve drainage
Hazel from I-530	Widen	1	0	2,859,000	2,859,000	Local	Pine	Economic
Hazer 1101111-550	widen	1	0	2,059,000	2,659,000	LUCAI	Pine	Economic

to 42nd							Bluff	De
Total Costs			52,172,000	63,769,000	15,941,000			
				TABLE 1	5			
			PU	BLIC TRANSPC	RTATIO	DN		
							1	
			•	2016-202				
Descriptio	n	Federal	Local	Governmental		Comn	nent	
				Unit				
Operating Assistand	ce	1,804,000	1,804,000	Pine Bluff				
Capital Preventive I	Maint	1,239,000	308,000	Pine Bluff				
Capital Parartransit	Service	365,000	91,000	Pine Bluff				
Capital Rolling Stoc	k	254,000	65,000	Pine Bluff				
Capital Planning		70,000	20,000	Pine Bluff				
Consolidated Plann	ing MPO	490,000	124,000	Pine Bluff				
Section 5310 Vehicl	es	161,140	32,228	Nonprofit agenci	es Proje	cts appro	ved by AH	HTD
Section 5311 Operat	ting,	14,850,000	18,333,000	Southeast Arkans	as Proje	cts appro	ved by AH	ITD
Administrative, C	Capital*			Transit (SEAT)				
**Section 5339 Bus	& Bus	2,866,933	573,387	Pine Bluff	Proje	cts appro	ved by AH	ITD
<b>Related Facilities</b>				SEAT				
* SEAT operates a p	ublic transi	t agency wit	hin the Met	ropolitan Planning	g Area			
**Amount represer	nts annual a	llocation to	AHTD. Proje	cts may be selected	ed within	the		
Metropolitan Plar	nning Area.							

Amendment # 3 Adopted 7-23-2018

## MTP 2040 Amendment 3

Performance Measures and Project List Revision

This document reflects an amendment (Amendment 3) to the 2040 Metropolitan Transportation Plan (MTP) which includes a report on the applicable performance measures as well as the Transportation Improvement Plan (TIP) project list. The MTP has been amended to include all statewide generic projects which are reflected in the FY 2019-2022 STIP, including but not limited to IRP Debt Service; Various Project Development Activities; Various Roadway System Preservation Projects; Various Bridge Preservation, Rehabilitation and Replacement Projects; Various Safety Improvement Projects; Various Signal and Intersection Improvement Projects; Various Transportation Alternative Program Projects; and other Programs, Services and Activities. The funding estimates for the MTP period FY 2016-2020 have not changed. The previous MTP project list has been revised to include all the newly approved projects for TIP (short term) period. Specified local and statewide funding sources are listed in the attached FY 2019-2022 project list draft.

## Performance Based Planning

Federal Legislation outlined in both MAP-21 and the 2015 FAST Act stipulate that all State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) are required to incorporate performance measures in the transportation planning process to maintain receipt of federal planning funds. The purpose of enacting performance-based planning is to allow for the identification and correction of challenges to the existing surface transportation system. All DOTs and MPOs must establish performance targets to address the given national performance goals / measures outlined by the Federal Highway Administration (FHWA), and work to meet those targets through the selection of significant transportation improvement projects. The Pine Bluff Area Transportation Study intends to fulfill the federal requirements regarding the establishment of performance targets by collecting, analyzing, and monitoring available data to aid in the recommendation and / or selection of transportation improvement projects by the PBATS Policy Board that could help enhance overall safety, functionality, connectivity, and accessibility of the regional transportation system. Such processes and projects regarding the listed performance goal measures will be documented in all PBATS long and short-term transportation plans. The MTP shall include to the maximum extent practicable, a discussion of the performance measures and targets used in assessing the performance of the transportation system (Ref: 23 CFR 450.324(f) (3)). The MPO has adopted the State Targets (Resolution #5-2017) and will work to develop the required system evaluation report (Ref: CFR  $_{450.324}(f)$  (4)) and include it in the MTP document.



Safety

Safety was the first of the seven national performance goals to be implemented. Safety performance-based planning requirements began May 27, 2018 for MPOs. Rather than setting safety targets, the PBATS policy board has elected to support ArDOT's safety targets as published in the Strategic Highway Safety Plan (HSIP)<sup>1</sup>. In 2017, and pursuant to 23 USC 148, ArDOT developed its Strategic Highway Safety Plan (SHSP)<sup>2</sup>, which established safety performance targets for Arkansas. The SHSP integrates the four "E's" - engineering, education, enforcement, and emergency services. It is a performance based, data-driven, comprehensive plan that establishes statewide goals, on=objectives, and strategies to address safety in Arkansas. ArDOT worked with various stakeholders, including PBATS, as part of its target setting process. The targets established in the SHSP address the five safety performance measures determined to significantly reduce the number and rate of fatalities and serious injury crashes, including non-motorized, on all public roads. ArDOT develops annual performance targets to support the SHSP goals in accordance with federal legislation. Safety projects included within the TIP / STIP were identified through a datadriven process and are in conformance with the HSIP requirements. The data-driven process includes:

- Evaluation of the safety performance of an area
- Identification of appropriate countermeasures that would address one or more SHSP primary emphasis area
- Determination of benefits vs. cost

The projects are intended to have a positive effect on the State's highway safety performance, moving toward achievement of the performance goals outlined in the SHSP. Project evaluation is conducted annually through the HSIP report.<sup>3</sup>

Federally mandated performance measures are:

- Number of fatalities
- Rate of Fatalities
- Number of Serious Injuries
- Rate of Serious Injuries
- Number of non-motorized fatalities and serious injuries

## Transit Asset Management

Transit Asset Management (TAM) is the next federal performance measure set to be implemented by MPOs in October 2018. The TAM requires that all public transportation capital assets (equipment, facilities and infrastructure) within the MPO area, as well as throughout the state, be inventoried and monitored to achieve and maintain a "state of good repair," which will help improve safety and increase the reliability and performance of the current transit system. ArDOT is in the process of developing a Statewide Transit Asset Management Plan for all rural transit agencies around the state. A similar transit asset management framework is being used to develop the urban transit asset management plans except for Rock Region Metro (RRM). The transit asset management plans will assist transit agencies in identifying rolling stock, equipment and facility needs based on the identified performance targets. Pine Bluff Transit (PBT) is responsible for the development and implementation of the Transit Asset Management Plan (TAM), the PBATS MPO will assist and provide support to all efforts made by PBT and the State of Arkansas to accomplish the TAM target that will be outlined in the plan. Rather than setting Transit Asset Management Targets, the PBATS policy board has elected to support to support the transit agencies TAM once decided on by the local agencies. <sup>4</sup>

Federally mandated performance measure is: Useful Life Benchmark (ULB)

3 https://safety.fhwa.dot.gov/hsip/reports/pdf/2017/ar.pdf 4 Resolution attached

## Infrastructure Condition (PM2)

Pavement and Bridge Condition Measures are to be established by MPOs in November 2018. Currently, the PBATS staff is in the process of determining whether to support the targets set by ArDOT<sup>5</sup>. ArDOT's goal is to maintain the highway system in the best possible condition with the amount of funding available. To maintain the highway system, ArDOT has developed the Transportation Asset Management Plan (TAMP)<sup>6</sup> compliant with 23 CFR 515. The TAMP is risk-based and describes how ArDOT is managing assets using TAM principles. Utilizing the life-cycle planning information, the TAMP assists ArDOT in identifying the right projects at the right time to reduce the overall cost of assets while maintaining a safe and efficient system.

Federally mandated performance measures are:

- Percent of Interstate pavements in Good condition
- Percent of Interstate pavements in Poor condition
- Percent of non-interstate NHS pavements in Good condition
- Percent of non-interstate NHS pavements in Poor condition
- Percent of NHS bridges by deck area classified in Good condition
- Percent of NHS bridges by deck area classified in Poor condition

## System Reliability

System Reliability Measures are to be established by MPOs in November 2018. Currently, the PBATS staff is in the process of determining whether to support the targets set by ArDOT<sup>7</sup>. System reliability on the Interstate and non-interstate NHS is assessed using FHWA's National Performance Management Research Data Set (NPMRDS)) for travel time reliability and freight movement. Travel time reliability is defined as the ration of the longer travel time (80<sup>th</sup> percentile) to a normal travel time (50<sup>th</sup> percentile). Roadway segments that have a travel time reliability greater than 1.5 are considered unreliable. Freight reliability is based on the truck travel time reliability index that is defined as the 95<sup>th</sup> percentile truck travel time divided by the 50<sup>th</sup> percentile truck travel time. Federally mandated performance measures are:

- Percent of person-miles traveled on the Interstate that are reliable
- Percent of person-miles traveled on the non-Interstate NHD that are reliable
- Truck travel time reliability on the Interstate System
- Annual hours of peak hour excessive delay per capita (only applicable in the WMATS)
- Percent non-single occupancy vehicle travel (only applicable in the WMATS)
- On-Road Mobile Source Emission (only applicable in the WMATS)

5 See attached pavement and bridge condition targets / methodology

6 http://www.tamptemplate.org/tamp/037\_arkansasdot/

7 See attached system reliability targets / methodology

Proposed MTP Project list amendments

Currently there are no proposed projects that were not previously proposed in the 2040 Metropolitan Transportation Plan.

					,					
Job / Item Number	County	Route	Termini / Name	Type Work	Length	Estimated Cost (x \$1,000)	Agency Carrying Out The Project	FFY	TIP Area	A P H N
020661 Additional fu	Jefferson	I-530 ed through	I-530 Access Impvts (Pine Bluff) P.E. partnering to provide access improvements fo	Project Development	0.00 opment.	5,000 -Total 4,000 -NHFP 1,000 - State	State	2019	PBATS	x
020584	Jefferson	54	Sandy Bayou Str. & Apprs. (S)	Strs. & Apprs.	0.00	800 -Total 640 -NHPP BR 160 -State	State	2019	PBATS	x
020588	Jefferson	190 e Bluff to a	11 <sup>th</sup> Avenue – Harding Avenue (Hwy 190) (Pine Bluff) S ssume ownership of Highway 190 through tow		.39	1,700 -Total 1,360 -STBGP 340 -State	State	2020	PBATS	x
020626	Jefferson	270 & 365S	Hwy 104 – Hwy. 365 (S)	Major Widening	4.59	15,000 -Total 12,000 -NHPP 3,000 -State	State	2020	PBATS	x
020615	Jefferson	79	Pine Bluff - South (S)	Major Widening	2.38	5,500 -Total 4,400 -STBGP 1,100 -State	State	2021	PBATS	x
020628	Jefferson	190	I-530 - Hwy 79B (Franklin Street & 6th Avenue) (S)	Reconstruction	2.09	3,500 -Total 2,800 -STBGP 700 -State	State	2021	PBATS	x
02X013	project. City of Pi Jefferson	ne Bluff to 65	assume ownership of Highway 190 through tov I-530 – Hwy 425 (Resurface and Shoulder)	Minor Widening	s 020628 and 2.50	020588 3,700 -Total 2,950 -NHPP 740 -State	State	2022	PBATS	x

## FY 2019-2022 TRANSPORTATION IMPROVEMENT PROGRAM HIGHWAY AND ROAD PROJECTS

#### PINE BLUFF AREA TRANSPORTATION STUDY TRANSPORTATION IMPROVEMENT PROGRAM 2019 - 2022

Job / Barr Namber	County	Route	Tarrini / Narsa	Type Work	Estimated Cost (x \$1,000)	Carrying Out The Project	Let Year	TIP Area
113FTA	Statewide		Bus and Bus Facilities < 200,000 (Capital Rolling Stack/Support Equipment)	Transit	852 - Total 692 - FTA 5339 172 - Local	Lenal	2019	ALL
114FTA	Statewide		Sus and Bus Facilities - Runal Arses (Capital Rolling Stock/Support Equipment)	Transit	4,375 - Total 3,508 - FTA 5330 875 - Local	Local	2019	ALL
1 19FTA	Statewide		Safety Oversight	Transit	295 - Total 236 - FTA 5329 59 - Local	Land	2019	ALL
110FTA	Statowide		Statewide Plenning Program	Transit	149 -Tatal 119 -FTA 5304 30 -Local	Local	2019	ALL
HIPFTA	Statewide		Services and Individuals with Disabilities - State Administration	Transit	257 - Tetal 287 - FTA 5310	Local	2019	ALL
118FTA	Statewide		Services and Individuals with Disabilities - Railing Stask	Transit	3.024 - Total 2.419 - FTA 5310 605 - Local	Local	2019	ALL
110FTA	Statuevicke		Rusel Transit - State Admin	Trank	1,291 - Tetal 1,291 - FTA 5311	Local	2019	ALL
120FTA	Statewide		Rusal Transit - Project Admin	Transe	2,770 - Tatal 2,236 - FTA 5311 554 - Local	Local	2019	ALL
121FTA	Statewide		Russi Tomit - Capital - Support Espigment/PM	Tranit	263 - Total 210 - FTA 5311 53 - Local	Local	2019	ALL
122FTA	Statewide		Rusal Transit - Capital - Intercity	Transit	1,355 -Tatal 1,084 -FTA 5311 271 -Local	Local	2019	AL
123FTA	Statewide		Rutel Transit - Operating - Rutel	Transit	14,005 -Tetal 7,000 -FTA 5311 7,000 -Local	Local	2019	AL
124FTA	Statewide		Russi Toensit - Operating - Intensity	Tranit	2,214 - Tatal 1,107 - FTA 5311 1,107 - Local	Local	2019	ALL
125FTA	Statewide		Rural Transit - RTAP	Transit	220 - Total 220 - FTA 5311	Local	2019	ALL.
200PTF	Statewide		Public Transit Trust Fand	Turvit	4,000 - Tatal 4,000 - State	Local	2019	ALL
201TLS	Statewide		Tranzianan	Tranit	775 -Tatel 775 -Local	Local	2019	ALL
202HUA	Statuwide		HUA	Transit	348 -Tatel 348 -State	Local	2019	ALL.

## PINE BLUFF AREA TRANSPORTATION STUDY TRANSPORTATION IMPROVEMENT PROGRAM 2019 – 2022

Job / Hern Number	Courty	Route	Termini / Name	Type Work	Estimated Cost (s \$1,000)	Carrying Out The Project	Let Year	Tip Area
PETCON	Jefferson		Operating Acceleration	Trent	750 - Total 375 -FTA 5307 375 -Lecal	L, ec.al	2019	PBATS
PET002	Jafferson		Capital - Preventive Maintenance	Transit	253 -Total 202 -FTA 5307 51 -Local	Local	2019	PBATS
PBT003	Jefferson		Capital - Paratransit Service	Transit	150 -Total 120 -FTA 5307 30 -Local	Local	2019	PBATS
PST004	Jefferson		Capital - Rolling Stock/Support Equipment	Travsit	50 -Total 40 #TA 530? 10 -Leeal	Lenal	2019	PBATS
PBT005	Jeffettan		Capital - Planning	Tuesit	25 -Total 20 -FTA 5317 5 -Local	Local	2019	PBATS
PBT006	Jefferson		Consolidated Planning Program (MPD)	Transit	129 -Total 103 -#TA 5305 26 -Local	Leist	2019	PBATS

#### PINE BLUFF AREA TRANSPORTATION STUDY TRANSPORTATION IMPROVEMENT PROGRAM 2019 - 2022

							APPENDENCE T	TROMPA
Job J Itemi Number	County	Reste	Toersini / Nanse	Type Work	Estimated Cost (x \$1,000)	Carrying Out The Project	Let Year	TPAna
113FTA	Statewide		Bus and Bus Faultites < 200,000 (Capital Railing Stack/Support Equipment)	Transt	885 -Tatal 724 -FTA 5339 178 -Local	Local	2020	ALL
194FTA	Statewide		Bun and Bus Facilities - Rural Ansas (Copital Rolling Stack/Support Equipment)	Tunst	4,375 -Total 3,580 -FTA 5339 875 -Local	Local	2020	MUL
115FTA	Statewide		Safety Oversight	Transk	301 -Total 241 -FTA 5329 60 -Local	Lacal	2020	ALL
1 HEFTA	Statewide		Statewide Planning Program	Tassit	152 - Tatal 122 - FTA 5354 30 - Local	Lasal	2020	ALL
117FTA	Statewide		Seniors and Individuals with Disabilities - State Administration	Transit	274 -Tatul 274 -FTA 5310	Local	2020	ALL
118FTA	Statowida		Seniors and Individuals with Disabilities - Rolling Stack	Tianit	3.883-Tatal 2.466-FTA 5310 817-Local	Local	2020	ALL
t 18FTA	Statemicle		Rund Transit - State Admin	Transt	1,317-Total 1,317-FTA 5311	Local	2020	ALL
129FTA	Statewarde		Rund Transt - Project Admin	Tunsk	3,529 - Total 2,616 -FTA 5311 704 - Local	Losal	2020	ALL
121514	Statewide		Rural Transit - Copital - Support Equipment/PM	Transt	268 -Total 214 -FTA 5311 54 -Local	Local	2020	ALL
122FTA	Statewide		Rurol Transit - Capital - Interrity	Transk	888 -Total 558 -FTA 5311 138 -Local	Local	2020	ALL
TEOFTA	Statowide		Rural Transit - Operating - Raral	Transt	14,280-Tatal 7,140-FTA 5311 7,140-Local	Local	2020	AUL
134FTA	Statowido		Rural Transit - Operating - Intervity	Transk	2,258-Tatal 1,129-FTA 5311 1,129-Local	Local	2020	ALL
125FTA	Statemete		Rund Transit - RTAP	Tanit	224 - Tatal 224 - FTA 5311	Lacal	2020	ALL
200211	Statewade		Public Transit Trait Fand	Transk	4,000 -Total 4,000 -State	Lacel	2020	W.L
20171.8	Statemicke		Translague	Traniž	775-Tatal 775-Local	Lapel	2020	ALL
202HUA	Statewide		HUA	Transt	348 - Tatul 348 - State	Local	2020	ALL.

## PINE BLUFF AREA TRANSPORTATION STUDY TRANSPORTATION IMPROVEMENT PROGRAM 2019 – 2022

Jeb/Bern Namber	County	Roote	Tarrini / Name	Type Work	Estimated Coat (x \$1,000)	Canying Out The Project	Let Year	Tip Area
PETERI	Jefferson		Operating Assistance	Transit	785-Total 383-FTA 5387 383-Local	Local	2020	PBATS
PBTI02	Jefferson		Capital - Preventive Maintenance	Transit	258 -Total 205 -FTA 1387 52 -Local	Local	2020	PBATS
PETERS	Jafferson		Copital - Panatransit Service	Tomit	153 -Total 122 -FTA 5307 31 -Local	Local	2020	PBATS
PBT064	Jefferson		Capital - Rolling Stock/Support Equipment	Tunit	51-Total 41-FTA 5307 10-Local	Local	2020	PBATS
987865	Jeffenson		Capital-Planning	Tranit	25 - Total 20 - FTA 5307 5 -Leval	Local	2020	PBATS
PETDOS	Jefferson		Controlidated Planning Program (MPO)	Transk	131 -Total 105 -FTA 5305 25 -Local	Local	2020	PBATS

## PINE BLUFF AREA TRANSPORTATION STUDY TRANSPORTATION IMPROVEMENT PROGRAM 2019 - 2022

TPAn	Let Year	Carrying Out The Project	Estimated Cost (x \$1,000)	Type Wink	Terrini/Mare	Route	Courty	Job / Herr: Wander
ALL	2021	Local	897 -Total 718 -FTA 5339 179 -Local	Transit	Bun and Bun Facilities < 200,000 (Cepital Rolling Stock/Support Equipment)		Statewide	HISFTA
ALL	2821	Local	4.375 - Total 3.500 - FTA 5339 875 - Local	Transit	Bux and Bux Facilities – Recal Areas (Capital Rolling Stock/Support Equipment)		Statewide	114FTA
ALL	2021	Local	307 - Total 246 - FTA 5329 61 - Local	Transk	Safety Oversight		Statewide	115FTA
ALL	2021	Local	155 - Total 124 - FTA 5304 31 - Local	Transit	Statawide Planning Program		Statawich	HIEFTA
ALL	2021	Local	279 - Total 270 - FTA 5310	Transit	Seniors and Individuals with Disabilities - State Administration		Statewide	117FTA
ALL	2021	Local	3.145 - Total 2.516 - FTA 5310 829 - Local	Tranet	Seniors and Individuals with Disabilities - Rolling Stock		Statewick	11BFTA
ALL	2021	Local	1,343 - Total 1,343 - FTA - \$311	Transit	Runal Tsansit – State Admin		Statewick	119FTA
ALL	2021	Local	3.590 -Total 2.872 -FTA 5311 718 -Local	Transit	Rural Transit – Project Admin		Statewick	120F7A
ALL	2021	Local	274 - Total 219 - FTA 5311 55 - Local	Transt	Rural Transit - Capital - Support Equipment PM		Statewide	121FTA
ALL	2021	Local	702 -Total 562 -FTA 5311 140 -Lecal	Transt	Runai Transit – Capital - Intercity		Statewide	122FTA
ALL	2021	Local	14,555 -Total 7,283 -FTA 5211 7,283 -Local	Transit	Rural Transit - Operating - Rural		Statewide	123FTA
ALL	2621	Local	2,304-Total 1,152 -FTA 5311 1,152 -Lacal	Transit	Rural Transit - Operating - Intercity		Statewide	124F7A
ALL	2021	Locel	229 -Total 229 -FTA 5311	Transit	Runal Tomot - RTAP		Statewick	12SFTA
ALL	2021	Locel	4,000 - Total 4,000 - State	Transt	Pable Transit Trust Fund		Statewale	200PTF
ALL	2021	Local	775 -Totai 775 -Local	Transit	Translease		Statewide	201TLS
ALL	2021	Local	345 -Total 345 -State	Transit	HUA		Statewide	202HJA
-		-				-		

## PINE BLUFF AREA TRANSPORTATION STUDY TRANSPORTATION IMPROVEMENT PROGRAM 2019 – 2022

Job / Item Number	Geanty	Raste	Terrsini / Name	Type Work	Estimated Cost (x \$1,000)	Carrying Out The Project	Let Year	TIP Area
P81001	Jefferson		Operating Assistance	Tranet	780 -Tetal 360 -FTA 5307 360 -Local	Local	2021	PBATS
P87002	Jefferson		Capital - Preventive Maintenance	Transit	263 - Tetal 210 - FTA 5307 53 - Local	Lena	2821	PBATS
P81003	Jaffanson		Capital - Paratraneit Service	Transit	156 - Total 125 - FTA 5307 31 - Local	Local	2021	PEATS
PBT004	Jaffanson		Capital - Rolling Stock/Support Equipment	Transit	53 - Tetal 42 - FTA 5307 11 - Local	Local	2821	PBATS
993384	Jeffenson		Capital - Planning	Transit	26 - Tetal 21 -#1A 5307 5 - Local	Local	2821	PBATS
P81006	Jaffarson		Consolidated Planning Program (MPC)	Transit	134 - Tabal 107 - FTA 5305 27 - Lacel	Local	8021	PBATS

#### PINE BLUFF AREA TRANSPORTATION STUDY TRANSPORTATION IMPROVEMENT PROGRAM 2019-2022

Job / Item Number	Courty	Reade	Termini / Name	Type Wark	Entrovised Cost (x \$1,000)	Carrying Out The Project	Let Year	TIP Jose
113FTA	Statewide		Bas and Bas Facilities < 200,000 (Capital Rolling Stock/Support Equipment)	Transt	915 - Total 732 -FTA 5338 183 -Local	Local	2022	ALL
114FTA	Statewide		Bus and Bus Facilities - Rural Areas (Copital Rolling Stock/Support Equipment)	Transt	4,375 -Tetal 3,500 -FTA 3339 875 -Lecal	Local	2022	ALL
115FTA	Statewide		Safety Dversight	Transit	314-Total 251-FTA 5328 63-Local	Local	2022	ALL
110FTA	Statewide		Stalewide Planning Program	Transit	159 - Total 127 - FTA 5384 32 - Lacal	Local	2022	ALL
117FTA	Statewide		Seniors and Individuals with Disabilities - State Administration	Transit	285 - Total 285 - FTA 5310	Local	2027	ALL
118FTA	Statewide		Seniors and individuals with Disabilities – Rolling Stock	Transit	1,208 -Total 2,568 -FTA 5310 642 -Locati	Local	2022	ALL
119FTA	Statewide		Rural Tronsit - State Admin	Transit	1,370 -Tetal 1,370 -FTA 5311	Local	2022	ALL
120FTA	Statewide		Rural Transit – Project Admin	Tratest	2,661-Tetal 2,929-FTA 5311 732-Local	Local	2022	ALL
121FTA	Statewide		Rural Transit - Capital - Support Equipment PM	Transit	279 - Total 223 - FTA 5311 56 - Local	Local	2022	ALL
122FTA	Statewide		Rural Transit - Capital - Intensity	Trand	716-Total 573-FTA 5311 143-Local	Local	2022	ALL
123FTA	Stotewide		Rural Transit - Operating - Rural	Transit	14,858 -Total 7,428 -FTA 5311 7,428 -Local	Local	2022	ALL
124FTA	Statewide		Rural Transit - Operating - Intercity	Transit	2.390 -Total 1.175 -FTA 5311 1.175 -Local	Local	2022	ALL
125FTA	Statewide		Rutel Transit - RTAP	Transt	233 - Telal 233 - FTA 5311	Local	2022	ALL
200.PTF	Statewide		Public Transit Trust Fund	Transf	4.000 - Total 4.000 - State	Local	2022	ALL
2017LS	Statewide		Toroduau	Transit	775-Total 775-Local	Local	2022	ALL
202HUA	Statewide		HUA	Tranit	345 -Total 345 -State	Local	2022	ALL

## PINE BLUFF AREA TRANSPORTATION STUDY TRANSPORTATION IMPROVEMENT PROGRAM 2019-2022

County	Route	Terrini/ Name	Type Work	Estimated Cost (x \$1,000)	Carrying Out The Project	Let Year	Tip Area	Tip Anna
PBT001	Jefferson		Operating Assistance	Transit	798 - Total 398 - FTA 5307 398 - Local	Local	2022	PBATS
P81002	Jeffersan		Copital - Preventive Maintenance	Transt	208 - Total 214 - FTA 5307 54 - Local	Local	2922	PBATS
PBT003	Jefforses		Capital - Paratransit Service	Transit	159 -Total 127 -FTA 5307 32 -Local	Local	2022	PBATS
PST004	affectet		Capital - Rolling Stack/Support Equipment	Transit	53 -Total 42 -FTA 5380 11 -Local	Local	2022	PBATS
PBT005	Jefferson		Capital - Planning	Tonst	26 -Total 21 -FTA 5367 5 -Lacal	Local	2022	PBATS
PBT008	Affecta		Consolidated Planning Program (MPO)	Transit	136-Total 108-FTA 5385 27-Local	Local	2022	PBATS

# PINE BLUFF AREA TRANSPORTATION STUDY RESOLUTION # 3 - 2017

A RESOLUTION BY THE POLICY BOARD OF THE PINE BLUFF AREA TRANSPORTATION STUDY (PBATS) APPROVING PARTICIPATION IN ARKANSAS' STATEWIDE TRANSIT ASSET MANAGEMENT (TAM) PLAN, AND CONCURRING IN PERFORMANCE TARGETS APPLICABLE TO PBATS PUBLIC TRANSIT PROVIDERS RESULTING THEREFROM

- WHEREAS, pursuant to the Fixing America's Surface Transportation (FAST ) Act, the Federal Transit Administration (FTA) has promulgated rules to establish a system to monitor and manage public transportation assets to improve safety and increase reliability and performance, and to establish performance measures through a Transit Asset Management (TAM) Plan; and
- WHEREAS, in lieu of establishing their own TAM Plans, Pine Bluff Transit (PBT) and Southeast Arkansas Transportation (SEAT) have agreed to participate in the Arkansas' Transit Asset Management Plan Targets, and to seek to meet or exceed the performance targets contained in the TAM Plan; and
- WHEREAS, pursuant to its responsibilities as the Metropolitan Planning Organization (MPO) for the region, PBATS must agree with such statewide plan participation, concur in the performance targets, and agree such targets as being applicable to the Pine Bluff Area region.
- NOW, THEREFORE, BE IT RESOLVED by the Policy Board of the Pine Bluff MPO that:
- SECTION 1: The participation of Pine Bluff Transit and Southeast Arkansas Transportation in Arkansas' Transit Asset Management (TAM) Plan Targets is hereby authorized and approved.
- SECTION 2: PBATS MPO concurs in the performance targets resulting from said TAM Plan, and accepts such targets as being applicable to public transit providers in the Pine Bluff, Arkansas region.
- SECTION 3: Pursuant to Federal requirements PBATS shall use performance measures in considering future funding allocations to transit providers in the Pine Bluff, Arkansas region.

Passed and Approved on this 4th day of May 2017.

Ken Smith, Policy Board Chairman Pine Bluff Metropolitan Planning Organization

I hereby certify that this resolution was adopted by the Pine Bluff MPO in regular session on May 4th, 2017.

Larry Re(nolds/Sudy Director Pine Bluff Metropolitan Planning Organization

# PINE BLUFF AREA TRANSPORTATION STUDY

# RESOLUTION #5-2017

# A RESOLUTION IN SUPPORT OF THE SAFETY PERFORMANCE TARGETS OF THE ARKANSAS DEPARTMENT OF TRANSPORTATION (ArDOT)

- WHEREAS, the Fixing America's Surface Transportation (FAST) Act, continues MAP-21's overall performance management approach, within which States invest resources in projects that collectively will make progress toward national goals; and
- WHEREAS, pursuant to 23 USC 148, ArDOT has prepared a Highway Safety Improvement Program (HSIP) Annual Report and has established 2018 HSIP targets for each of the five safety performance measures for the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads;
  - Number of Fatalities
  - Rate of Fatalities
  - · Number of Serious Injuries
  - Rate of Serious Injuries
  - Number of Non-Motorized Fatalities and Serious Injuries 149 and
- 555 1.660 per 100 million Vehicle Miles Traveled 3,470
- 10.419 per 100 million Vehicle Miles Traveled
- WHEREAS, pursuant to 23 CFR Section 490.105, the MPO's shall establish targets no later than 180 days after the respective State DOT's establish their targets, and the MPO's have the option of either agreeing to plan and program projects so that they contribute toward the accomplishment of the relevant State DOT targets for each performance measure, setting their own targets for each performance measure, or a mix of both options.

THEREFORE, BE IT RESOLVED that the Policy Board of the Pine Bluff Area Transportation Study (MPO) has chosen to support all of the State's safety performance targets for 2018, and agrees to plan and program projects in support of these targets.

Passed and Approved on the 2nd day of November, 2017.

Ken Smith, Policy Board Chairman

Pine Bluff Metropolitan Planning Organization Southeast Arkansas Regional Planning Commission ATTEST

Larry Reynolds) Study Director PBATS MPO 5/9/2018

#### TARGET SETTING

# PAVEMENTS PERFORMANCE MEASURES



In accordance with 23 CFR 490, the Federal Highway Administration (FHWA) established performance measures for State Departments of Transportation (DOTs) to use in managing pavement performance on the National Highway System (NHS). The following is a list of the required performance measures for pavements.

Performance Measures	
Percent of Interstate pavements in Good condition	
Percent of Interstate pavements in Poor condition	
Percent of non-Interstate NHS pavements in Good condition	
Percent of non-Interstate NHS pavements in Poor condition	

#### CONDITION BASED PERFORMANCE MEASURES

#### **Data Collection Requirements:**

- Starting January 1, 2018, pavement data collected on the Interstate must include International Roughness Index (IRI), percent cracking, rutting, and faulting. This data must be reported in the Highway Performance Monitoring System (HPMS) by April 15, 2019. This data will be gathered and re-submitted every year on a full extent basis.
- The same requirements become effective for non-Interstate NHS pavement data beginning January 1, 2020 with a HPMS report date of June 15, 2021. This data will be gathered and resubmitted at least every two years on a full extent basis.

#### **Pavement Condition Determination:**

Asphalt Pavement	Jointed Concrete Pavement (JCP)	Continuously Reinforced Concrete Pavement (CRCP)
IRI	IRI	IRI
Rutting	Faulting	-
Cracking %	Cracking %	Cracking %

- Good: All measures are in good condition
- Poor: 2 or more measures are in poor condition
- Fair: Everything else

#### 5/9/2018

#### **Pavement Condition Thresholds:**

	Good	Fair	Poor
IRI (inches/mile)	<95	95-170	>170
Rutting (inches)	<0.20	0.20-0.40	>0.40
Faulting (inches)	<0.10	0.10-0.15	>0.15
Cracking (%)	<5	5-20 (asphalt) 5-15 (JCP) 5-10 (CRCP)	>20 (asphalt) >15 (JCP) >10 (CRCP)

#### TARGET SETTING REQUIREMENTS

#### State DOTs:

- Must establish targets, regardless of ownership, for the full extent of the Interstate and non-Interstate NHS.
- Must establish statewide 2- and 4-year targets for the non-Interstate NHS and 4-year targets for the Interstates by <u>May 20, 2018</u> and report targets by October 1, 2018 in the Baseline Performance Period Report.
- May adjust 4-year targets at the Mid Performance Period Progress Report (October 1, 2020).
- State DOTs shall coordinate with relevant MPOs on the selection of targets to ensure consistency, to the maximum extent practicable.

#### Metropolitan Planning Organizations (MPOs):

- Shall support the relevant State DOT 4-year target or establish their own within 180 days after the State DOT target is established.
- Shall report their established targets to their respective State DOT in a manner that is documented and mutually agreed upon by both parties.
- Shall report baseline condition/performance and progress toward the achievement of their targets in the system performance report in the metropolitan transportation plan.

#### Other Information:

- State DOT targets should be determined from asset management analyses and procedures. The targets reflect investment strategies that aim to achieve a state of good repair over the life cycle of assets at minimum practicable cost.
- The minimum acceptable condition for interstate pavements is no more than 5% in poor condition. FHWA will make this determination using the data in HPMS by June 15 of each year. Any State DOT that does not meet the minimum condition will be required to obligate a portion of its National Highway Preservation Program (NHPP) and Surface Transportation Program (STP) funds to address interstate pavement conditions. The first assessment will occur in June 2019.

# METHODOLOGY

The Current Condition and 2- and 4-Year Pavement Performance Targets for the non-Interstate NHS pavements were developed in accordance with the methodology presented in Appendix C of FHWA

#### 5/9/2018

Computation Procedure for the Pavement Condition Measures (FHWA-HIF-18-022) for use during the "transition" period. This methodology was also used to establish the Current Condition for Interstate pavements in Arkansas. Based on the Discussion of Section 490.105(e)(7) Phase-in Requirements for Interstate Pavement Measures the 4-Year Pavement Performance Target for Arkansas' Interstate pavements was estimated. Factors that were taken into consideration as part of this estimation included the calculated Current Condition, Interstate projects that are anticipated to be completed by 2021, estimated deterioration rates for Interstate pavements, and the anticipated level of available funding.

Performance Rating	
	Current'
Percent of Interstate pavements in Good condition	77%
Percent of Interstate pavements in Poor condition	4%
Percent of non-Interstate NHS pavements in Good condition	52%
Percent of non-Interstate NHS pavements in Poor condition	8%
* Condition rating based on ARDOT's 2017 HPMS pavement dataset.	

# TARGETS

The proposed targets are not intended to be "aspirational", but rather reflect a "realistic" approach to minimizing deterioration of the existing pavements on the Interstate and non-Interstate NHS in an environment where available resources are less than optimal. The targets represent what is attainable if the strategies and funding estimates in the Transportation Asset Management Plan (TAMP) are implemented.

Performance Targets		
	2-year	4-year
Percent of Interstate pavements in Good condition	N/A	79%
Percent of Interstate pavements in Poor condition	N/A	5%
Percent of non-Interstate NHS pavements in Good condition	48%	44%
Percent of non-Interstate NHS pavements in Poor condition	10%	12%

5/10/2018

# BRIDGE PERFORMANCE MEASURES



In accordance with 23 CFR 490, the Federal Highway Administration (FHWA) established performance measures for State Departments of Transportation (DOTs) to use in managing bridge performance on the National Highway System (NHS). The following is a list of the required performance measures for bridges.

Performance Measures	
Percent of NHS bridges by deck area classified as Good condition	
Percent of NHS bridges by deck area classified as Poor condition	

#### CONDITION BASED PERFORMANCE MEASURES

- Measures are based on deck area.
- The classification is based on National Bridge Inventory (NBI) condition ratings for deck, superstructure, substructure, and bridge length culverts.
- · Condition is determined by the lowest rating of deck, superstructure, substructure, or culvert.
  - If the lowest rating is greater than or equal to 7, the structure is classified as good.
    - If it is less than or equal to 4, the classification is poor.
    - Structures rated below 7 but above 4 will be classified as fair.
- Deck area is computed using structure length, and deck width or approach roadway width (for bridge length culverts).

# TARGET SETTING REQUIREMENTS

State DOTs:

- Must establish targets for all bridges carrying the NHS, which includes on-ramps and off-ramps connected to the NHS, and bridges carrying the NHS that cross a State border, regardless of ownership.
- Must establish statewide 2- and 4-year targets by <u>May 20, 2018</u> and report targets by October 1, 2018 in the Baseline Performance Period Report.
- May adjust 4-year targets at the Mid Performance Period Progress Report (October 1, 2020).
- State DOTs shall coordinate with relevant MPOs on the selection of targets to ensure consistency, to the maximum extent practicable.

#### 5/10/2018

#### Metropolitan Planning Organizations (MPOs):

- Shall support the relevant State DOT 4-year target or establish their own within 180 days after the State DOT target is established.
- Shall report their established targets to their respective State DOT in a manner that is documented and mutually agreed upon by both parties.
- Shall report baseline condition/performance and progress toward the achievement of their targets in the system performance report in the metropolitan transportation plan.

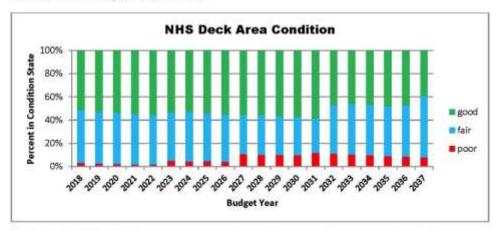
#### Other Information:

- State DOT targets should be determined from asset management analyses and procedures. The targets reflect investment strategies that aim to achieve a state of good repair over the life cycle of assets at minimum practicable cost.
- If for three consecutive years more than 10% of a State DOT's NHS bridges total deck area is classified as Poor, the State DOT must obligate and set aside National Highway Performance Program (NHPP) funds to eligible bridge projects on the NHS.

#### METHODOLOGY

In order to develop the performance targets, a bridge model is required to forecast future conditions based on anticipated funding. In October of 2015, Heavy Bridge Maintenance (HBM) entered into an agreement to use Deighton's dTIMS software as ARDOT's bridge modeling platform<sup>1</sup>.

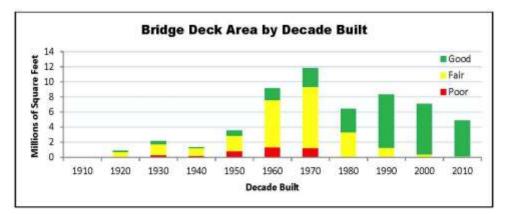
Based on a \$90-million budget for all state-owned bridges, the model provides a 20-year condition forecast<sup>2</sup> for NHS bridges as shown below:



<sup>1</sup>While the model is still being refined, the projections seem reasonable and the proposed performance targets are based on those projections. <sup>2</sup>The bridge model does not consider the additional funding made available for the 30 Crossing project. The 30 Crossing project will address over one percent of the poor deck area currently in the NHS bridges.

#### 5/10/2018

As shown in the 20-year condition forecast chart, the poor deck area is currently at 3.3 percent while the good deck area is at 51.3 percent. There is a jump in percent poor deck area in 10 years. This jump can be explained by the large inventory of bridges that were built in the 1960s and 1970s (as shown in the following figure) and will reach the end of their 50-year design life within the next 10 years. With additional planned model calibration, the jump may be less severe. However, additional deck area could be rated poor earlier than year 2027.



# TARGETS

The proposed targets are not intended to be "aspirational", but rather reflect a "realistic" approach to minimizing deterioration of the existing bridge infrastructure in an environment where available resources are less than optimal. The targets represent what is attainable if the strategies and funding estimates in the Transportation Asset Management Plan (TAMP) are implemented.

Performance Targets		
	2-year	4-year
Percent of NHS bridges by deck area classified as Good condition	50%	50%
Percent of NHS bridges by deck area classified as Poor condition	4%	6%

It should be noted that the shift toward bridge preservation in the last couple of years should enabled the Department to stay below 10 percent of NHS bridges classified as poor for the state-wide bridge inventory at the anticipated 90-million funding level according to the model. Future model calibrations will allow better performance forecasting, which would enable ARDOT to make adjustments in funding and/or strategies to stay below the penalty threshold for NHS bridges.

# TARGET SETTING TRAVEL TIME RELIABILITY PERFORMANCE MEASURES



In accordance with 23 CFR 490, the Federal Highway Administration (FHWA) established performance measures for State Departments of Transportation (DOTs) to use in assessing system performance on the Interstate and non-Interstate National Highway System (NHS). The following is a list of the required performance measures for travel time reliability.

Performance Measures	
Percent of Person-Miles Traveled on the Interstate that are Reliable	
Percent of Person-Miles Traveled on the non-Interstate NHS that are Reliable	

#### **CONDITION BASED PERFORMANCE MEASURES**

- Measures are based on the Level of Travel Time Reliability (LOTTR) which is defined as the ratio
  of the longer travel time (80<sup>th</sup> percentile) to a "normal" travel time (50<sup>th</sup> percentile) using data
  from FHWA's National Performance Management Research Data Set (NPMRDS) or equivalent.
- A LOTTR will be calculated for each of the following time periods for each segment of highway, known as a Traffic Message Channel (TMC):
  - o 6:00 AM-10:00 AM Weekday
  - o 10:00 AM-4:00 PM Weekday
  - 4:00 PM-8:00 PM Weekday
  - 6:00 AM-8:00 PM Weekends
- If any one of the four time periods has a LOTTR above 1.5, then the TMC will be considered unreliable.
- All TMCs will have their length multiplied by the average daily traffic and a vehicle occupancy factor of 1.7 (released by FHWA on 4/27/2018) to determine the person-miles traveled on that TMC. Then the reliable TMCs will be summed and divided by the total person-miles traveled.

#### TARGET SETTING REQUIREMENTS

State DOTs:

- Must establish targets for the Interstate and non-Interstate NHS.
- Must establish statewide 2- and 4-year targets by <u>May 20, 2018</u> and report targets by October 1, 2018 in the Baseline Performance Period Report.
- May adjust 4-year targets at the Mid Performance Period Progress Report (October 1, 2020).
- State DOTs shall coordinate with relevant MPOs on the selection of targets to ensure consistency, to the maximum extent practicable.

#### Metropolitan Planning Organizations (MPOs):

- Shall support the relevant State DOT 4-year target or establish their own targets within 180 days after the State DOT target is established.
- Shall report their established targets to their respective State DOT in a manner that is documented and mutually agreed upon by both parties.
- Shall report baseline condition/performance and progress toward the achievement of their targets in the system performance report in the metropolitan transportation plan.

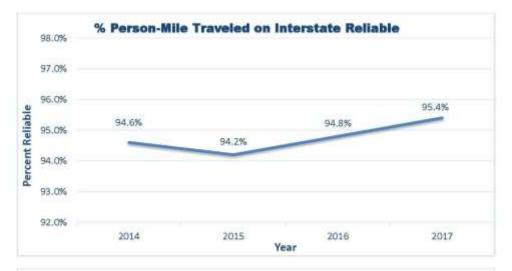
#### Other information

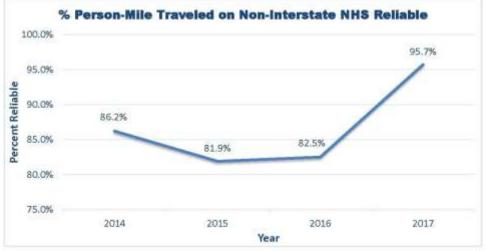
- FHWA began introducing the NPMRDS provided by HERE in August 2013. The data was considered largely as raw probe data.
- In February 2017, FHWA switched the NPMRDS vendor from HERE to INRIX. Due to different data processing approaches by the vendors, there are inconsistencies in the NPMRDS.
- State DOT targets will be set based on four years of data (2014-2017) and only one year of data (2017) from the current vendor.
- As of March 2018, nationally there is 93 percent data coverage for Interstates and 53 percent for non-Interstate NHS.
- Population growth and increasing travels will affect travel time reliability, particularly in fast growing urban areas.
- A large construction program on the Interstate system could result in multiple major workzones. This scenario would have an effect on the reliability on the Interstates and non-Interstate routes.
- Arkansas is part a pooled fund project organized by AASHTO and led by the Rhode Island DOT to
  provide technical assistance for transportation performance management. As a member,
  Arkansas has direct access to the NPMRDS Analytics portal through the Regional Integrated
  Transportation Information System (RITIS) hosted by the University of Maryland.
- If FHWA determines that a state DOT has not made significant progress toward achieving the target, the State DOT shall document the actions it will take to achieve the NHS travel time targets. There is no financial penalty for not meeting the proposed targets.

# METHODOLOGY

In order to develop the performance targets, the current and past travel time reliability conditions were reviewed for Interstates and non-Interstate NHS. As shown on the figures on the next page, travel times on Arkansas' Interstates and non-Interstate NHS are largely considered reliable. However, without additional historical data, setting 2- and 4-year targets is difficult. Due to the data variation between vendors, historical trend was not considered appropriate for target setting.

After the review of the travel time reliability condition for 2014-2017, targets were developed by first identifying significant construction projects located on the Interstate and non-Interstate NHS systems. These project limits were identified and all TMCs within the project limits were considered unreliable to account for the workzones. For large construction projects, additional TMCs located near the project or on logical diversion routes were also considered unreliable. To account for the growth of traffic, TMCs located in urban areas that are currently reliable but have a LOTTR of 1.4 or greater (and no improvements planned) were considered unreliable as well.





# TARGETS

The proposed targets are not intended to be "aspirational", but rather reflect a "realistic" approach to understanding system reliability in an environment where available resources are less than optimal and various additional factors could affect travel such as the economy, trade policies, population growth, and land development patterns.

The proposed targets reflect a best estimate to account for major construction projects, anticipated traffic growth, data quality and availability, and other uncertainties.

Performance Targets		
	2-year	4-year
Percent of Person-Miles Traveled on the Interstate that are Reliable	91%	89%
Percent of Person-Miles Traveled on the non-Interstate NHS that are Reliable		90%

#### Metropolitan Planning Organizations (MPOs):

- Shall support the relevant State DOT 4-year target or establish their own targets within 180 days
  after the State DOT target is established.
- Shall report their established targets to their respective State DOT in a manner that is documented and mutually agreed upon by both parties.
- Shall report baseline condition/performance and progress toward the achievement of their targets in the system performance report in the metropolitan transportation plan.

#### Other Information:

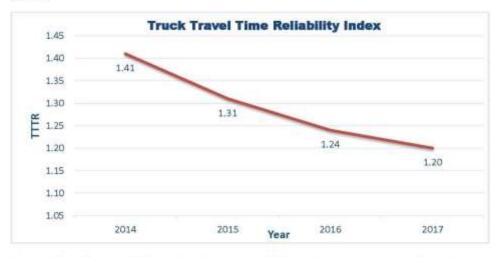
- FHWA began introducing the NPMRDS provided by HERE in August 2013. The data was
  considered largely as raw probe data.
- In February 2017, FHWA switched the NPMRDS vendor from HERE to INRIX. The change in vendor resulted in inconsistencies due to the different approaches in data processing.
- As of March 2018, nationally there is 85 percent freight probe data coverage for Interstates.
- Population growth and increasing travel will affect travel time reliability, particularly in fast growing urban areas.
- Urban congestion often affects freight reliability. For example, twenty of the highest 40 TTTR segments in Arkansas are located on urban Interstates where very little truck traffic exists.
- Arkansas is part a pooled fund project organized by AASHTO and led by the Rhode Island DOT to
  provide technical assistance for transportation performance management. As a member,
  Arkansas has direct access to the NPMRDS Analytics portal through the Regional Integrated
  Transportation Information System (RITIS) hosted by the University of Maryland.
- If FHWA determines that a state DOT has not made significant progress toward achieving the target, the State DOT shall include as part of the next performance target report an identification of significant freight trends, needs, and issues within the State as well as a description of the freight policies and strategies and an inventory of truck freight bottlenecks. There is no financial penalty for not meeting the proposed targets.

#### METHODOLOGY

In order to develop the performance targets, the current and past truck travel time reliability was reviewed for the Interstate system. As shown on the figure on the next page, truck travel times on Arkansas' Interstates are largely considered reliable. However, without additional historical data, setting 2- and 4-year targets is difficult. Due to the data variation between vendors, historical trend was not considered appropriate for target setting.

After the review of the travel time reliability condition for 2014-2017, targets were developed by first identifying significant construction projects located on the Interstates. All TMCs within the anticipated project limits were assigned an assumed TTTR of 5 to account for a potential decrease in reliability for those segments during construction. TTTR of 5 represents the travel time on the worst day of the week

is five times greater than the travel time on an average day. Based on a freight trend analysis (Arkansas State Freight Plan, 2017), it is anticipated that the freight growth by truck will increase by 44 percent by 2040. To account for the anticipated growth, the maximum TTTR for each TMC was increased by five percent.



It is anticipated with additional data becoming available and analytics continuously to improve, estimates would become more refined in the future.

# TARGETS

The proposed targets are not intended to be "aspirational", but rather reflect a "realistic" approach to understanding system reliability in an environment where available resources are less than optimal and various additional factors could affect freight movement such as the economy, trade policies, population growth, and land development patterns.

The proposed targets reflect a best estimate to account for major construction projects, anticipated freight growth, data quality and availability, and other uncertainties.

Performance Targets		
	2-year	4-year
Truck Travel Time Reliability on the Interstate System	1.45	1.52