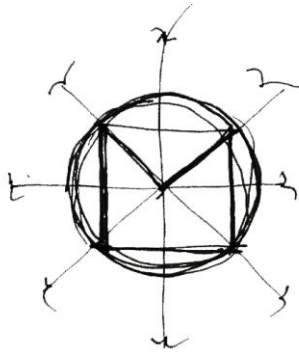**U.S. Department of Transportation - "BEYOND TRAFFIC: THE SMART CITY CHALLENGE"**
Proposal

MONTGOMERY, ALABAMA: CONNECTING MGM with E-TRANSIT

Proposal by:

City of Montgomery
The M – formerly Montgomery Area Transit System
Mobile Studio, Inc.
Auburn University – Community Planning Master's Program

Todd Strange, Mayor
February 4, 2016

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I. MONTGOMERY'S E-TRANSIT VISION

Strategically located on the Alabama River, in the geographic center of Alabama's Black Belt and on the North/South transect from Chicago to Mobile, Montgomery is a S*M*ART City with a tested and vetted commitment to the advancement of civil and human rights in the streets, schools, structures and living systems of the city.

Montgomery has one of the most significant public transit systems in the nation's history and with this competition it could also have one of the most significant public transit systems in the nation's future. Transit equity is defined by Montgomery, Alabama.

Montgomery has transitioned well in the trajectory of American cities throughout the 20th century. The city as a center of peace and human rights has proven to be resilient and shows strong capacity to lead in advancing sustainable urbanism. As the state, federal and judicial center of the State of Alabama, Montgomery sets precedents.

As a university city, with a great diversity of professional programs from the Air Force Air War College to the HBCU Alabama State University, there is a vibrant, well-educated millennial and international population. The proposed E-Transit system upgrades, easy to access and customize, will transform the quality of life in Montgomery for all in measurable ways. The synergy exists between City, civic and business leadership to produce a winning S*M*ART City demonstration that significantly increases safety, mobility, efficiency, and sustainability with climate positive solutions and innovations.

The Montgomery team has the professional capacity to deliver and evaluate the performance of the S*M*ART City demonstration and to produce a replicable model. An evaluative matrix and metric system able to analyze, synthesize and derive projective models from the proposed *M* data network, will be established to identify a suite of DOT strategies for handling the challenges and leapfrogging the mid-sized American city toward 21st century concepts of and approaches to urban mobility, safety, efficiency, employment, sustainability.

The challenge that Montgomery confronts in its pursuit of equitable urbanism and S*M*ART transit is that the historic legacy of inequity and separateness continues to play out in the lives of its citizens through antiquated spatial planning models, transportation infrastructure financing and the presence of a burdened criminal justice system. With a Gini coefficient of 4.7, Montgomery is on par with Mexico City, Guatemala City and Abidjan in terms of equity of access to the prosperity of the city. The challenge is to

provide multiple open pathways of urban mobility that connect community members to each other and networks of opportunity, making public transit an empowering and desirable part of life.

Montgomery's capacity to ensure just access to the equitable city is undeniable. It is committed to advancing the larger goals of sustainable community development through climate-positive solutions and innovations. Most importantly, Montgomery values the fundamental relationship between mobility and work, and the ways that equity of access to mobility and the internet of things can positively transform individuals, neighborhoods and whole cities. As a city that dares to name its first street car the Lightening Route, with the conviction of justice to change the Constitution, Montgomery understands the serious purpose of the S*M*ART City Challenge, and will rise to the occasion to show the world how E-Transit and the DOT can sustain our cities in the 21st century.

The proposal for the City of Montgomery advances the *M* as an integrated e-transit system that encourages car-light and car-free experiences of the City with incentives for all riders/users. The proposal simultaneously enhances the safety, connectivity and convenience of its neighborhood stops and shelters with sensor/beacon technology and Wi-Fi capacity. Three E-commuter campuses will extend the services and capacities of the M-network into the commuting environment, encouraging positive citizen to citizen and citizen to transit engagement and experience.

A new sensor-based M card will connect users with the expanded M data network that will include all real-time traffic and transit data as well as access to the internet of things Montgomery. The proposed M-card and M-data network function in this proposal to collect/ distribute and analyze/synthesize data, respectively. The system will be designed to facilitate SMART transit of all kinds, to improve the experience of its users, and to reward participation making the SMART experience of Montgomery the most desirable.

The analytic framework for the extended M network system wide improvements described in this proposal will align with MAP-21 performance-based decision-making protocols. The increased level of detail and query-ability provided by the distributed sensor technology and user-based input portals proposed for the M will be analyzed across the platforms of existing data management systems to allow greater flexibility and adjustability to current and future initiatives. Scenario modeling can be tested against real time transportation system data, environmental, commuter preferences and work force trends to inform a dynamic transportation planning environment for the city and the region. New, cross sector indices from a wide variety data models will be supported by

the *M* data network and facilitated by the increased capacity of the Montgomery Cyber Connection. Data sets and analytic summaries will be made available to system users via the M app portal and via data sharing screen functions at the e-commuter campuses and at selected SMART Shelters. Citizen engagement and involvement in the decision making process will be facilitated by push notified, city wide citizen challenges to "move the needle" in real time concerning a variety of transportation, environmental and commercial issues.

Implementation and management of the data analytic portion of this project will be administered by the joint efforts of the Director of Planning, the Director of Montgomery County/City unified IT with support from the MCC data administrative unit. Governance, oversight and reporting for this project will be provided by the Montgomery Metropolitan Planning Organization.

II. Mid-sized Capital of the South East

Montgomery Alabama is a mid-sized capital city in the global south with a dense and diverse urban population. Montgomery is home to nationally recognized public and magnet high schools, ten universities and a growing tech and creative sector. College or graduate school enrollment is 31.2%. The median resident age is 34.5. The city demographics include 56.6% African Americans 37.3% Whites 2.2% Asians 3.9% Hispanic or Latinos and 0.2% American Indians or Alaskan Native. These statistics reflect a youthful, international, well-educated population, a key component of a SMART City.

Comprising a land area of 155.38 sq. miles Montgomery has a population of 205,764, occupying on average a ratio of 1289.5 persons/per square mile. Montgomery City's FIPS code is 51000. The percentage of the urbanized area occupied by the 2010 population was 76%. The per capita income was $24,409. The median household income is $43,702 (in 2013 inflation adjusted dollars), the third highest in Alabama. The median home cost is $162,770.

Commuting to work statistics for the City of Montgomery in 2010 reveal an auto-oriented population with great opportunities to increase ridership of public transit, e-commuting, ride-sharing, car-light and car-free pathways. Of workers 16 years of age and over, totaling 90,573 - 84% drove alone in a car truck or van compared to 11.1%   of the population who carpooled. 0.8% of the workforce commuted to work via public transit. 1.8 % walked, bicycled or used other means while 2.3 % worked from home. Mean travel time to work was 19.0 minutes.

Montgomery is the home to the Intellectual and Leadership Center of the U.S. Air Force (Maxwell Air Force Base); and Information Technology Leader for the Department of Defense (Maxwell Gunter Annex). Montgomery has a thriving automotive manufacturing market with the only American Hyundai Motors plant; a vibrant $1.3 million-per-day tourism market and a diverse retail market. The cutting-edge medical community workforce is expanding. And as a growing cyber center, civilian technology jobs are projected (average salary of more than $68,000) to increase 37 percent 2010 to 2020.

III. SMART City Context in MGM

a. Existing public transportation system

The *M,* Montgomery's public transportation system in its current incarnation is described in section 4.4.1 of the Long Range Transportation Plan (LRTP 2040). The *M* is currently owned by City of Montgomery and operated under a management contract with First Transit Group. The M operates16 fixed route lines, a demand-response para-transit system (MAPS) for elderly and disabled citizens, and is in partnership with Commute Smart offering carpool ride share in and between the cities of Montgomery, Mobile, Birmingham and Huntsville. The *M* TransLoc app currently provides riders with real-time traffic and route data. The holistic transit plan for the City of Montgomery currently includes specific provisions for Smart Growth Development, pedestrian and bicycle interfaces, equity and environmental justice.

b. Environment that is conducive to demonstrating proposed strategies

Central Alabama has a unique geographical advantage. As the capital of the State of Alabama, Montgomery Alabama is uniquely poised to capitalize on energy, manufacturing and technological innovations that will characterize the early 21st century. The quality of life in Montgomery is high. Regional connectivity and affordable housing in one of America's emerging centers of business growth is accessible and equitable.

c. Continuity of committed leadership and capacity to carry out the demonstration throughout the period of performance

The stability and longevity of Montgomery's current civic and political leadership is a testament to Montgomery's ability to overcome past divisiveness and eagerly bring forward the best ideas for the region's youth. Alabama is beyond all else committed to the success of their children. Long-term planning for the city and region envision and will deliver urban and regional growth and community development defined by sustainable land-use and efficient, affordable, desirable public e-transit systems.

### d. A commitment to integrating the sharing economy

Montgomery has recently enacted ordinances to facilitate the role of app-driven ride share companies such as Uber and Lyft. Further, the *M* plans to expand the bicycle sharing network in conjunction with multi-modal nodes that integrate public transit and the next generation of shared technology to rewrite the relationship between mobility and

work in the 21st century. Local organizations and social-media based groups such as *Connect MGM* and *Montgomery Capital Cool* create and update open platform networks to connect SMART Montgomery innovators and entrepreneurs via public events and opportunities to collaborate. Citizen-led groups and non-profit organizations promote neighborhood revitalization in partnership with city agencies. The Planning and Development departments promote SMART growth and sharing economy opportunities in the downtown core and across Montgomery's diverse neighborhoods.

e. A clear commitment to making open, machine-readable data accessible, discoverable and usable by the public to fuel entrepreneurship and innovation.

There is no more clear form of commitment that the advancement of Alabama's first cyber city exchange created in partnership between Maxwell Air Force Base, City of Montgomery, Retirement Systems of Alabama and the Universities.
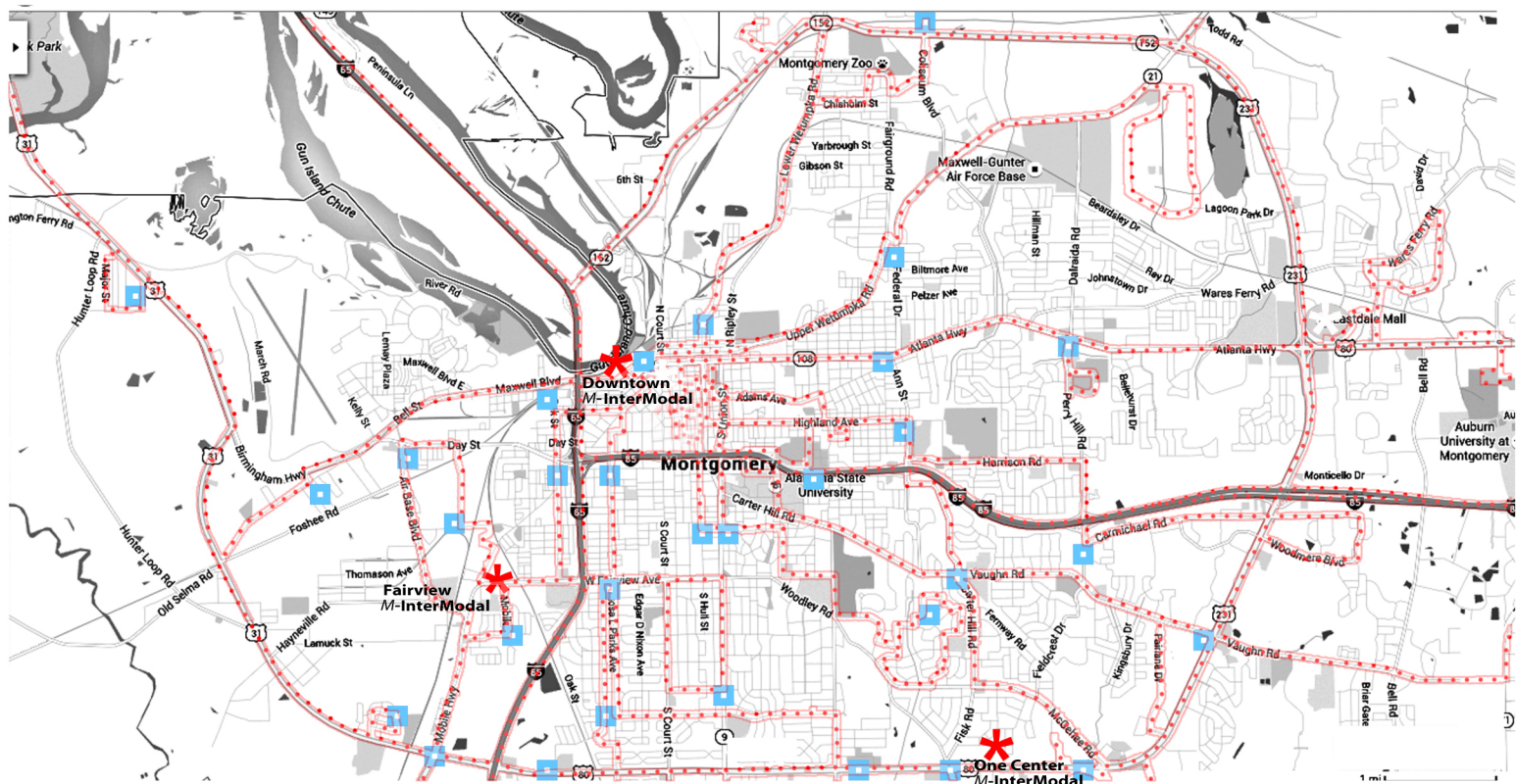
✳ **(3) e-Commuter Campus**	◼ **(25) Smart Shelters**	••••••• **(600) Smart Poles**

V. **Alignment with USDOT Vision Elements**

12 Vision Elements Comprising a SMART City

Vision Element #1:   Urban Automation

Investing in E-Infrastructure (EI)

A. Launching the *M* as a comprehensive transit and e-commuter portal.

B. Implementation of e-commuter campuses at One Center, Fairview Transfer Center and the Intermodal Transportation Facility.

C. Retrofitting existing 25 shelters with rider-friendly SMART M technology interface that interconnects user data with safety, transit, energy, environment, work and urban amenity data networks.

D. Install SMART M pole technology in conjunction with on-going ITS upgrades in order to expand the existing ITS network.

Vision Element #2:   Connected Vehicles

A. V2V and V2I connectivity is facilitated by the *M* data network. (MDN)

B. During the funding period of this opportunity, scheduled bus replacement described in LRTP 2040 (table ES.6) will feature wireless and cellular supported V2V, V2I electric technology.

C. Existing multi-modal stations, and enhanced M shelters will connect bus/pedestrian/vehicle/bicycle/ public and sharing networks and provide renewably-powered charging stations for e-vehicles.

Vision Element #3:   Intelligent, Sensor-Based Infrastructure

A. Expand the capacity of the Traffic Control Center (TCC) to monitor, share and cross-analyze data to inform and improve the overall system and its interface with other MGM networks.

B. Design and implement next generation *M* cards with embedded sensor technology that

increase access to both shared data and wireless infrastructure within the M Data Network. Deploy distributed *M* system sensors across all levels of transit system.

C. Create an awareness campaign to induce cross-platform citizen engagement in e-commuter activities such as: job and educational opportunities, working groups, shared creativity and innovation as well as civic, professional, social and recreational networking within the city.

Vision Element #4:   Urban Analytics

A. Enhanced citizen provided data via the M data network will be made available to all other city/regional and civic agencies for increased equity, efficiency, safety, and data-driven decision making. The *M* data network will be coordinated by the shared Montgomery City and County IT.

B. Increased analytic capacity via the *M* data network will strengthen existing policy and planning frameworks to inform current and future sustainable development and growth initiatives.

C. To achieve the overarching goal and measurable objectives of sustainable growth and development as outlined in the LRTP 2040; data will be analyzed and new projective models will test and monitor the role of e-transit system investments in smart growth. Analytic studies will evaluate the program's successful expansion of access to and participation in expanded transit choices and e-commuter opportunities.

Vision Element #5:   User-Focused Mobility Services and Choices

A. The creation of *M* system e-commuter campuses at (3) three key locations within the existing public transit network will facilitate a new user-focused transportation/work paradigm. Offering computer and software access to *M* users at the e-commuter campuses as well at SMART stops and on wirelessly equipped buses, will encourage greater productivity, reduce peak-transit loads, and provide new opportunities for citizen to citizen and citizen to community interaction.

B. The *M* system commuter campuses and SMART shelters will expand user-focused mobility and choices by connecting directly to bike, car and carpool/vanshare integrated transit networks. The M will further expand current MOD services and offer a more personalized suite of ridership options for elderly and disabled citizens through the new

M smart phone app and S*M*ART card.

C. The system-wide e-transit investments in the *M* will increase car-free and car-light trips thus enhancing the experience of living in, commuting to and visiting the city of Montgomery. Further the M will expand fuel choice at the pump by institutionalizing public transit renewable energy recharging stations for a fleet of public buses and e-vehicle start up businesses.

Vision Element #6:   Urban Delivery and Logistics

A. The open, real-time M system data will be readable by commercial shipping and logistics operations to facilitate greater accuracy and agility in scheduling, delivery, reduced fuel consumption and load-matching.

B. The E-commuter campuses will function as pick-up and delivery hubs for small goods, layering urban delivery and logistics supply chains with public e-transit pathways and business opportunities.

B. The *M* "system of systems" will connect interstate, regional and municipal roadways with enhanced user data to inform land-use planning as it relates directly to regional shipping needs, commuter safety and accident reduction. Energy use and environmental sensors will be deployed across the transportation system, the resulting data will inform climate-positive action plans.

Vision Element #7:   Strategic Business Models and Partnering Opportunities

A. The City of Montgomery SMART City Challenge team represents a long and successful history of robust partnerships between government, public, non-profit, academia/ University, military, and philanthropic organizations, as well as local, statewide, and international cultural institutions, and is thus well-positioned to benefit from the new data-centered capacity of the *M* and business opportunities of the Smart City Challenge.

B. The Montgomery Cyber Connection MCC represents an innovative partnership between state and local government, the military, universities and the private sector. The capacity of the newly opened internet exchange, makes possible the radical increase of partnership opportunities both for the public and private sectors.

C. Partnership with such groups as The Chamber of Commerce, the Downtown

Business Association, the Convention and Visitor's Bureau, and the job-training focused One Center will advance the M as an inter-connective platform for SMART City innovations and entrepreneurial opportunities. Large-scale business partnership opportunities such as with leading tech and energy companies, auto manufacturing, and other climate-positive innovative firms are realizable via the improvements this grant will provide.

Vision Element #8:   Smart Grid, Roadway Electrification, and Electric Vehicles

A. The S*M*ART Montgomery proposal, including E-commuter campuses, SMART Shelters and Safe Stops - connected by a sensor/beacon driven SMART street grid and open M data system is recharged by a distributed system of renewable energy production and re-charging stations.

B. The *M* data management system enables responsive adjustments to real-time load demands and energy production fluctuations.

C. Implementation of non grid-tied renewable power sources for low-load functions of the M such as proximity sensors and beacons will be deployed throughout the system.

Vision Element #9:   Connected, Involved Citizens

A. Live Work Learn opportunities and points of access are ubiquitous throughout the M and communicated through a city-wide multi-media campaign with special emphasis in school, library, community center, university and training center outreach facilities.

B. The M smart card and the app are ID specific and informed by aggregated user data. Increased user-choice, cost-saving and personal development opportunities will be customized to the *M* smart card user. User input data derived from the M smart card and app will provide a platform for system analysis, evaluation and improved performance over time.

C. The establishment of e-commuter campuses at multi-model transit centers adjacent to established businesses and educational facilities will provide a forum for civic engagement and the development of new e-commuter defined industries. Untapped opportunities for collaboration, innovation and entrepreneurial relationships will be fostered via the *M* e-commuter campuses.

Vision Element #10:   Architecture and Standards

A. Montgomery is ideally situated to maintain and extend it's ITS architecture and standards. Interstates 65 and 85 and well as other US and state highways run through Montgomery making ITS an important component to state and federal highway initiatives. Interstate 65 has dynamic travel time and traffic information message boards currently operating within the Montgomery area and the same dynamic message boards will be built along Interstate 85 within the next two years. These technologies along with other advances regionally and statewide create a unique opportunity for the Montgomery Area to be at the forefront of ITS Architecture.

B. The City of Montgomery through its Traffic Engineering department currently operates a Traffic Operations center which can view 300 intersections throughout the City of Montgomery to evaluate traffic flow, signal timing, and potential causes of accidents. It is the desire to incorporate this ability to every signalized intersection in the City of Montgomery. This will be accomplished with the addition of resources to provide more fiber optic cable for the transportation network. The City of Montgomery is also actively investigating the upgrade of street lights to LED staring with the downtown core.

Vision Element #11:   Low-Cost, Efficient, Secure, and Resilient Information and Communications Technology (ICT)

A. The establishment of the Montgomery Cyber Connection, the State's first Internet Exchange puts the Montgomery area at the forefront of affordable, adaptable, efficient, secure and resilient technology. Instead of information being sent from Montgomery to Atlanta only to return to Montgomery, that information whether it be an email, text message, or phone call will now be almost instant. The resulting Internet Exchange will allow companies to transmit data faster and cheaper and those savings will make their way to consumers. More online and cloud storage space will be available as more servers will be added to power the internet exchange.

B. The integration of Maxwell Air Force Base with their security and privacy protocols will make the Internet exchange one that highly values the safeguarding of data, privacy on not just the Internet but physical security of devices and the ITS architecture.

Vision Element #12: Smart Land Use

A. The City of Montgomery is always seeking to use new strategies and practices that advance land uses which encourage the development of a more connected community. Through this effort, Montgomery Downtown Central Business District is concentrating more growth downtown to attract more persons to live, work and play within the CBD. Long Range land use considerations are given to the City as a whole and each council district and neighborhood association are studied to evaluate trends and for making necessary changes to keep each place in Montgomery unique to itself while expanding the range of transportation, employment and housing choices.

VI. Risks and Risk Mitigation

The risks associated with this project are minimal as this project involves providing current users of the system with more access to information without them personally having to input their personal information.

VII. Montgomery Team Partners and Processes

TEAM PARTNERS & KEY STAKEHOLDERS

   The City of Montgomery
   Montgomery Area Chamber of Commerce
   Montgomery Metropolitan Planning Organization
   City of Montgomery Department of Planning
   City of Montgomery Department of Development
   Porch Band of Creek Indians
   MCC, Montgomery Cyber Connection partners including: *United States Air Force Air War College at Maxwell Air Force Base, Retirement Systems of Alabama, Alabama State University, Troy University, and Auburn University Montgomery*
   Hyundai Motor Manufacturing Alabama
   Akamai Technologies
   MOBILE STUDIO
   Downtown Business Association
   Auburn University Community Planning Graduate Program, Department of Political Science, College of Liberal Arts.
   One Center/Blue Ridge Financial
   LAMP Loveless Academic Magnet Program
   H. Council Trenholm State Technical College
   MPACT Montgomery Preparatory Academy for Career Technologies

Tuskegee University Robert R. Taylor School of Architecture and Construction
EAT (Eat Act Transform) South
River Region Food Policy Council
The Wellness Coalition

DEMONSTRATION GOVERNENCE PROCESSES:
The project will be managed and administered by City of Montgomery and the
Montgomery Area Transit System.

Cross- Sector, University/ Research Partnerships

As represented in the list above the MGM S*M*ART CITY team represents a broad cross-
section of stakeholders and partners committed to Sustainable Smart Growth. The
Auburn University Graduate Program in Community Planning has partnered with the
City of Montgomery for over 25 years on a variety of planning and development
initiatives. MOBILE STUDIO, the proposal coordinator of this opportunity, is a
community-based planning and design group that offers points of engagement for Auburn
University MCP and Tuskegee University RTSAC students to connect with the with the
SMART City Challenge.

VIII. Existing Transportation Infrastructure

  a. **Arterial miles**
     Major arterials 150.70 miles
     Interstates 54.76 miles

  b. **Freeway miles**
     US Highways 79.57 miles
     State Highways 72.63 miles

  c. **Transit**
     MATS provides fixed route and paratransit public transportation bus service
     within the municipal city limits of Montgomery, Alabama. The total number
     of service area square miles served is 135 square miles.

     Service Consumption: Annual Passenger Miles (4,339,505) Annual Unlinked
     Passenger Trips (867,901) Average Weekday Unlinked Trips (3,200) Average
     Weekend Unlinked Trips (1,200).

     Service Supplied: Annual Vehicle Revenue Miles (1,331,182) Annual
     Vehicle Revenue Hours (85,602) Vehicles Operated in Maximum Service
     (27).

d. **Shared-use Mobility services**

Commute Smart Montgomery currently offers shared-use mobility services in the form of car pool and van-pool from Birmingham to Montgomery and other areas. This is accomplished through online ride matching.

The Montgomery Chamber of Commerce currently offers a bike share service through a partnership with Regions Bank.

The City of Montgomery is actively pursuing the development of its own bike share program.

e. **Information and Community Technology (ICT)**

MCC, Montgomery Cyber Connection partners including: *United States Air Force Air War College at Maxwell Air Force Base, Retirement Systems of Alabama, Alabama State University, Troy University, and Auburn University Montgomery*

f. **Intelligent Transportation Systems (ITS)**

The City of Montgomery through its Traffic Engineering department currently operates a Traffic Operations center which can view 300 intersections throughout the City of Montgomery to evaluate traffic flow, signal timing, and potential causes of accidents.

g. **Smart Grid Technology**

The City of Montgomery currently offers two free and public electric vehicle charging stations. One is located under the train shed at historic Union Station downtown and another is located at the corner of Commerce St. and Tallapoosa St across from the Renaissance Hotel and Conference Center downtown.

IX. City Data

The City of Montgomery collects various sources of data based upon the need. For the purpose of this demonstration, the ridership of the M is collected per route, that information is then used to determine the frequency of routes. The M also now uses the TransLoc app to give the public access to where each route is located at that time to best plan their route. This technology combined with Traffic Engineering ITS Traffic Management System gives the City of Montgomery travel and ridership data access that can give other departments such as public safety and public works more information about potential improvements to the current transportation system. Partnerships and the collection, management and limitations on sharing of data will be investigated with each

partner as they are added to ensure each partner is satisfied. Therefore each policy or agreement will be on an individual basis.

X. ITS Strategies and Feedback Loops

The City of Montgomery developed an Intelligent Transportation System (ITS) Plan to install a fiber-optic cables network and ITS components to more effectively manage traffic and emergency response. The City in partnership with ALDOT and FHWA, complies with National ITS Architecture. A Montgomery Area ITS Architecture Plan was prepared for ALDOT by consultants in December 2003. ALDOT provides ITS funding that requires an 80/20 or 50/50 (federal/state/local) match for ITS projects. The State, Federal, and local governments also provide project oversight. In FY 2006 a FTA capital grant was awarded in the amount of $47,500 for the development of an automatic vehicle locator system (AVL) for MATS and paratransit software. The system provides for increased efficiency with real time location information for passengers and operations staff to determine next bus arrival times for improved effectiveness, efficiency, safety, and security.

The first goal was to install a fiber-optic infrastructure and upgrade traffic control equipment for an operational closed loop system with communication between ALDOT and the City of Montgomery's Traffic Engineering Department. The key components of the ITS is to:

- Construct a fiber optic network (closed loop system with communication) or purchase and use a wireless technology network,

- Provide real time information on incidents and traffic congestion,

- Provide motorist information via dynamic message signs, internet service providers, TV stations, and other communications methods,

- Adjust traffic signal timing along West, South, and East Boulevards and various other locations as needed to improve traffic flow,

- Manage incidents more efficiently and improve incident response time, and

- Use incident and congestion information to more effectively provide and manage MATS transit service using Global Positioning System (GPS) units on MATS buses.

There are several longer-term proposed ITS infrastructure projects for the Montgomery study area. One such project is for the City of Montgomery's Fire and Rescue Department and Police Department EMS services. The proposed project will allow the EMS to utilize the future ITS infrastructure to monitor traffic for incidents and improve

incident management/response time to more efficiently clear vehicle crashes and traffic-impeding incidents. Other future ITS plans include:

- Installation of dynamic message signs around the perimeter of the cities of Montgomery and Prattville to better inform incoming motorists of existing traffic conditions and incidents.

- Potential creation of a City of Prattville TMC, with installation of ITS Cameras and vehicle detection units.

- Linking all vehicle detection units with ITS to have a live feed back to the TMC's in the area.

- Linking the City of Montgomery downtown signal controllers with either radio or fiber optic cable.

XI. Measurable Goals and Objectives

I.   Launching the *M* as a comprehensive transit and e-commuter portal.
  a. Launching a public awareness campaign to inform the general public and transit riders about the fact that there is e-Transit Technology.

II.   Implementation of e-commuter campuses at One Center, Fairview Ave Transit Station and the Intermodal Transportation Facility.
  a. Fully implement each e-commuter campus at each location and have fully outfitted with e-transit technology.

III.   Retrofitting existing 25 bus shelters with rider-friendly SMART M technology interface that interconnects user data with safety, transit, energy, environment, work and urban amenity data networks.
  a. Fully implement e-transit technology on all 25 exist transit bus shelters for transit riders and the general public.

IV.   Install SMART M pole technology within the scope of complete street standards and on-going upgrades to extend the existing Intelligent Transportation Systems (ITS) network.
  a. Fully implement SMART M pole technology by replacing static low tech/no tech transit bus stop signs with SMART M poles in conjunction with the ITS.

XII. Team Qualifications

The City of Montgomery and MATS has the technical capacity in its management, planning, operations, and maintenance staff to implement the project.
The City of Montgomery and MATS has the legal capacity being a municipal corporation in the State of Alabama and has a fully staffed legal department at the City of Montgomery and legal access at MATS via First Transit Incorporated to implement the project.

The City of Montgomery-MATS has the financial capacity via the City of Montgomery Finance Department and MATS Management and Financial Staff in which to implement the project. The City of Montgomery-MATS presently has FTA Section 5307, 5309, 5310 and 5339 grants with the FTA and manages all grants on a day to day, month to month, and year to year basis in order to fulfill Federal government requirements.

Mobile Studio is an interdisciplinary planning and design studio working across scales of urban and regional development. The principals of the firm have a successful combined 35 years of experience in urban design and public works. Selected past and on-going projects include, the international winning design for the Kaiser Permanente Small Hospital: Big Idea competition with Aditazz, public input facilitation and field studies for the HS2 limited, high speed rail United Kingdom with MADE Center for Place-making, faculty at Auburn University, Master of Community Planning, Dean's Advisory Committee at Tuskegee University Robert R. Taylor School of Architecture and creation of the City of Montgomery Public Art Strategic Plan.

Mobile Studio maintains working relationships with municipal, state and federal agencies, non-profit and private sector firms in the areas of technology, food production, manufacturing, academia, health and wellness and the arts. Mobile Studio has received and successfully administered numerous grants and awards, most recently the inter-agency funded Local Foods: Local Places Made in Macon, Homegrown in Tuskegee initiated by the White House Rural Council and funded by the Delta Regional Authority and the Appalachian Regional Commission and supported by Alabama Department of Economic and Community Affairs.

The Community Planning Master Program was founded at Auburn University in 1979 and has since evolved as the leading program for Urban Design, Small Town and Regional planning in the State of Alabama. Over the years, the Community Planning Program has produced hundreds of small town plans, urban economics and development studies, historic preservation and revitalization plans, transportation and land-use studies, climate change and resilient urbanism plans for cities across the state. The program has a long and well-recognized relationship with the capital city of Montgomery and considers the City a primary teaching and learning lab for sustainable growth and SMART city planning. The program has always worked closely with Architecture, and Landscape Architecture faculty and students both at Auburn and Tuskegee Universities. The current program chair Professor Rebecca Retzlaff PhD. and primary faculty Sweta Byahut PhD. and Jay Mittal PhD bring a strong combined focus in planning for global climate change

and ecological urbanism as well as years of expertise in the professional sectors in Alabama and abroad. The PhD program in Community Planning's Department of Public Administration is a joint program with Auburn University, Montgomery. The program has produced many successful graduates over the years working in state, federal, regional and community planning agencies across Alabama and around the world.

XIII. Matching Funds/In-Kind Support

Matching funds will be provided by the City of Montgomery through its general fund budget.