Interim Report for the Secretary of Transportation

Prepared by Burk-Kleinpeter, Inc.

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This is an interim report subject to revisions by

the Secretary of Transportation
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This is the interim report for the Complete Streets Work Group, prepared by Burk-Kleinpeter, Inc. The development of this interim report was based on a series of four Work Group meetings which occurred between August 1, 2009 and December 31, 2009. This interim report was prepared for the Secretary of Transportation to submit to the Senate and House Committees on transportation, highways and public works no later than January 31, 2009. The Department of Transportation and Development convened this Work Group in response to the request of Senate Concurrent Resolution 110.

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Definitions

Access Management - The systematic control of the location, spacing, design and operation of driveways, median openings, and street connections of roadways.

Accessible - Describes a facility in the public right-of-way that complies with this part.

American with Disabilities Act of 1990 (ADA) - Federal law prohibiting discrimination against people with disabilities. Requires public entities and public accommodations to provide accessible accommodations for people with disabilities.

American with Disabilities Act Accessibility Guidelines (ADAAG) - provides scoping and technical specifications for new construction and alterations undertaken by entities covered by the ADA.

Bicycle - Typically defined as a human powered vehicle with two tandem wheels but this may be expanded to include vehicles with three wheels (tricycle), four wheels (quadricyle) or a single wheel (unicycle). Note, this definition should not be expanded to include motorized mobility aids or travel devices such as Segways.

Bicycle accommodation - Designing and managing the transportation network to expand travel opportunities for bicyclists by minimizing potential travel disruptions and maximizing safety. Bicycle accommodations may include facilities for the exclusive or semi-exclusive use of bicycles, such as bicycle lanes, bicycle paths, shared use paths, marked shared lanes (sharrows); as well as other interventions to make a transportation network or facility safer or friendlier for bicycle users. Examples of accommodations include installing drainage grates in a bicycle-friendly direction or avoiding chipsealed surfaces.

Bicycle facility - A physical facility provided for the exclusive or semi-exclusive use of bicycles. Examples of bicycle facilities include shared roadways (no bikeway designation), marked shared roadways, bikeways (bicycle lanes, bicycle paths, shared use paths), and end of trip facilities (bicycle parking and storage facilities).

Bicycle lane - Part of the roadway, adjacent to the travel lane, designated by striping, signing, and pavement markings for the preferential or exclusive use by bicycles. and usually electric mobility aid users.

Bicycle parking facility - Any facility for the storage of bicycles to protect against theft and damage. Short-term bicycle parking facilities allows the frame and both wheels of the bicycle to be locked, but do not provide accessory and component security or weather protection. Long-term bicycle parking facilities provide a high degree of security and protection from weather and are intended for situations where the bicycle is left unattended for longer periods of time, such as transit stops, places of employment, schools, apartments and condominium complexes.
**COMPLETE STREETS WORK GROUP**  
**LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT**

**Bicycle paths** - A public way, separated by grade or other physical barrier from motor traffic, that is designated by official signs or markings for use by persons riding bicycles. Also see shared use path.

**Bicycle route system** - A system of bikeways that provide continuous routing through a community or urban area.

**Bicycle route** - A roadway shared by both bicycles and other forms of transportation which has been designated as a preferred route for bicycle use by the means of signs or pavement markings.

**Bicycle transportation system** - A group of individual transportation accommodations implemented and designed for exclusive or shared use by cyclists which form a network or link between designated points within a community or region.

**Bikeway** - Any road, street, path or way which in some manner is specifically designated or intended for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes. Examples include bicycle lanes, bicycle paths (or shared use paths), signed shared roadways, and bicycle routes.

**Context Sensitive Solutions** - A collaborative approach to decision making whereby transportation solutions are developed to fit within the character or constraints presented by their surroundings. These can address a wide range of identified community needs including cultural and historic preservation, community growth and sustainability, access, cohesion, aesthetics, safety, mobility, and cost effectiveness.

**Cross walks** - Any portion of a roadway at an intersection or elsewhere that is distinctly indicated for pedestrian crossing lines or other pavement markings applied to a roadway surface. Cross walks may vary based on context and potential designs include the ladder-style, traditional, diagonal, staggered continental styles.

**Marked Shared Roadway** - See sharrow.

**Mobility aids** - A device, usable in and outdoors, by individuals to allow them to ambulate independently. In most instances, these are prescribed by a physician for a medical condition that affects the user's ability to ambulate independently. Mobility aids include those powered by electricity (electric mobility aid or scooter) or by human power (wheelchair).

**Pedestrian** - Any person afoot or utilizing a mobility aid.

**Pedestrian accommodation** - Designing and managing the transportation network to expand travel opportunities for pedestrians by minimizing potential travel disruptions and maximizing safety. Accommodations may include dedicated pedestrian facilities, such as sidewalks and crosswalks; facilities for the semi-exclusive use of pedestrians, such as a shoulder; or other design features to increase the safety of a facility for a pedestrian, including signage, pedestrian signals (automatic or demand actuated), and other actions, such as retiming signals or reducing crossing width..
Right-of-way (1) - A general term denoting certain lands, properties or interest therein, usually in the form of a strip, acquired for or devoted to transportation purposes. This term usually applies to roadways, as well as adjacent areas devoted to pedestrian, bicycling, drainage or access control uses.

Right of way (2) - The right of one vehicle or pedestrian to proceed in a lawful manner in preference to another vehicle or pedestrian approaching under such circumstances of direction, speed and proximity as to give rise to danger of collision unless one grants precedence to the other.

Roadway - The portion of the highway, including shoulders, intended for vehicular use.

Road diet - A technique whereby the cross section of an existing roadway is reduced to achieve systematic improvements. Typical measures applied in the road diet include a reduction in the number of travel lanes, travel lane width or introduction of space shared with or reserved for other non-vehicular uses. Intended goals may include a reduction in rear end collisions, a reduction in speeding, or to create space for additional uses, such as parking, bicycle lanes, wider sidewalks etc.

Routine accommodation - The policy of accommodating bicycling and walking as a routine part of planning, designing, constructing, operating, and maintaining highways.

School zone - A specific segment of roadway within a designated distance of a school site that is marked by signs indicating a reduced speed limit during certain hours, usually around student arrival and dismissal.

Sidewalk - The portion of a roadway right-of-way designed for preferential or exclusive use by pedestrians. Sidewalks may be located adjacent to the curb or separated from the travel way by landscaping or buffer to increase the safety or comfort of their use.

Shared Lane Pavement Marking - See sharrow.

Sharrow - Bicycle symbols that are placed in the travel lane indicating that motorists should expect to see and share the lane with bicycles. Unlike bicycle lanes, they do not demarcate space for the exclusive use of bicyclists. Motorists may drive on sharrows; whereas, motorists may not drive on bicycle lanes, except when necessary during turning movements.

Shared Roadway (Shared Lane) - A roadway which is open to both bicycle and motor vehicle travel, including those containing no bicycle designation.

Shared use path/trail - A facility physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, mobility aid users, and other non-motorized users.

Shoulder - The portion of a highway, whether paved or unpaved, contiguous to the outside travel lane that is primarily used as an accommodation for stopped vehicles, emergency uses, as lateral support of base and surface courses of a roadway, or for use by pedestrians, mobility aid users, and bicyclists when other accommodations are not available.
Traveled way - The portion of the roadway for the movement of vehicles, exclusive of shoulders.

Unpaved path - Unfinished paths typically created using stone or sand and not surfaced with asphalt or finished with Portland cement concrete.

Walkways - Formal surface which supports the act of walking. Includes sidewalk, trails, paths, stairs, ramps, passageways,
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Executive Summary
Complete Streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a Complete Street. They are designed to balance safety and convenience for everyone using the road. Complete Streets are not “one size fits all” design solutions. The components of a Complete Street will vary based on the context of the roadway, so a Complete Street in an urban area will look quite different from a Complete Street in a rural area.

During the 2009 Louisiana State Legislative Session, a resolution was passed requesting the Louisiana Department of Transportation and Development (LDOTD) convene a Work Group to study the development of a Complete Streets policy for Louisiana. This interim report summarizes the findings of that Work Group effort.

Having a Complete Streets policy is not something that is easily quantifiable. However, the benefits of a Complete Streets policy may include:

- Reduced pedestrian and bicycle injury and fatality rates.
- Increased mobility and safety for children.
- Improved mobility for people with disabilities.
- Increased mobility and independence for older Americans.
- Active transportation is increased, resulting in reductions in rates of obesity, type 2 diabetes and heart disease.
- Reduced emissions, supporting environmental policies and goals
- Support local economic development efforts.
- Lower household transportation costs.

During the course of the Work Group’s study, concerns about impediments to a Complete Streets policy were identified, including issues related to cost, maintenance and liability, to name a few. Overall, the findings of the Work Group are that despite these valid concerns, a Complete Streets policy for Louisiana is not only feasible, but if implemented properly, can improve the conditions that lead to these concerns.

The following policy statement was developed by the Complete Streets Work Group, with participation from a wide cross section of LDOTD representatives, for the Secretary of Transportation’s consideration for adoption as an administrative policy of the Department:
This policy will create a comprehensive, integrated, connected transportation network for Louisiana that balances access, mobility, health and safety needs of motorists, transit users, bicyclists, and pedestrians of all ages and abilities, which includes users of wheelchairs and mobility aids. It ensures a fully integrated transportation system, by planning, funding, designing, constructing, managing, and maintaining a complete and multi-modal network that achieves and sustains mobility, while encouraging and safely accommodating pedestrians, bicyclists, and transit users.

The LDOTD will provide the leadership to implement this policy on all transportation projects that involve federal or state funding or approval. LDOTD recognizes the need for interdisciplinary coordination to effectively develop, operate, and maintain bicycle and pedestrian networks. LDOTD will work with Metropolitan Planning Organizations (MPOs), transit agencies, parishes, municipalities and other stakeholders to do the same. This includes early coordination to identify whether a reconstruction or new construction project will impact a route identified on a local plan. LDOTD will offer internal and external training opportunities and other resource tools on in the following areas: engineering, education, enforcement, encouragement, and evaluation.

Provisions for all users will be integrated into the project development process for the entirety of all projects through design features, using Context Sensitive Solutions (CSS).

- On all new and reconstruction roadway projects that serve adjacent areas with existing or reasonably foreseeable future development or transit service, LDOTD will plan, fund and design sidewalks and other pedestrian facilities. The appropriate facility type will be determined by the context of the roadway.

- On all new and reconstruction roadway projects, LDOTD will provide bicycle accommodations appropriate to the context of the roadway - in urban and suburban areas, bicycle lanes are the preferred bikeway facility type on arterials and collectors. The provision of a paved shoulder of sufficient width, a shared use trail or a marked shared lane may also suffice, depending on context.

All projects shall consider the impact that improvements will have on safety for all users and make all reasonable attempts to mitigate negative impacts on non-motorized modes. Restricting non-motorized access should not be considered as an appropriate strategy with the exception of those limited access facilities where pedestrians and bicyclists are prohibited. LDOTD will strive to ensure projects do not become barriers to pedestrians, bicyclists, and transit users by providing appropriate safe crossings, providing corridor continuity, and ensuring transportation projects comply with the current accessibility guidelines.

There are conditions where it is generally inappropriate to provide bicycle and pedestrian facilities. These instances include:
1. Facilities, such as interstates, where bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the same transportation corridor.

2. The cost of providing bicycle and pedestrian facilities would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent (20%) of the cost of the project.

3. Other factors where there is a demonstrated absence of need or prudence. For example, in rural areas or undeveloped areas where future development is not anticipated, sidewalks and designated bikeways will generally not be provided.

4. On projects that are preservation only, LDOTD will only consider improvements that do not require right-of-way acquisition, utility relocation, or major construction to provide bicycle or pedestrian accommodations, such as relocating or enclosing roadside drainage. Retrofits such as narrowing lanes, restriping and other means of providing improved bicycle and pedestrian access shall be considered on preservation projects. When an identified need or candidate requires right-of-way acquisition, utility relocation, or major construction, LDOTD will work with local government to identify funding for the identified need as a separate project.

5. Maintenance for sidewalks and bicycle paths outside the limits of the curb or shoulder will be the responsibility of the local jurisdiction. Maintenance agreements will be required as a provision of the entire project.

Exceptions for not accommodating bicyclists, pedestrians and transit users in accordance with this policy will require the approval of the LDOTD Chief Engineer. For exceptions on Federal-aid highway (FHWA) projects, concurrence from the Federal Highway Administration must also be obtained. For exceptions in an urbanized area, concurrence from the MPO must also be obtained.

When an MPO or local jurisdiction is not in agreement with LDOTD’s accommodation for bicyclists or pedestrians, they can introduce a formal appeal by means of a resolution adopted by the local governing body or board. The resolution must be submitted to the Chief Engineer for review and consideration prior to the final design approval.

Facilities will be designed and constructed in accordance with current applicable laws and regulations, using best practices and guidance from the following, but not limited to: LDOTD guidelines and manuals, American Association of State Highway and Transportation Officials (AASHTO) publications, the Manual on Uniform Traffic Control
Devices (MUTCD), the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and the Public Rights-of-Ways Accessibility Guidelines (PROWAG).

LDOTD recognizes that a well-planned and designed transportation system that is responsive to its context and meets the needs of its users is the result of thoughtful planning and engineering. LDOTD further recognizes the need to provide a framework for evaluation and a targeted strategy for the implementation steps identified. To this end, LDOTD will work with a diverse group of stakeholders, including transportation professionals, advocates, and others, as appropriate, to continue to support and steer the implementation efforts both internal and external to LDOTD.

To implement this policy, the Work Group participants recommended the following priority actions:

- Establish procedure for adoption of policy, including signing, identifying date effective and effective phase of project development.
- Begin internal communication about the Complete Streets Policy, how it will be incorporated into the project development process, and begin internal training effort.
- Using the implementation actions identified in the body of this report, develop a detailed implementation strategy, including tasks to be completed within 1 year, 3 years and 5 years. Performance measures should be included in this strategy.
- Continue to foster the relationships between public health organizations, advocates and transportation professionals by convening a permanent Complete Streets Advisory Committee (CSAC) or Bicycle and Pedestrian Advisory Committee (BPAC), which meets quarterly, to support and steer the implementation process.
Introduction

What are Complete Streets?
Complete Streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a complete street. Complete Streets does not necessarily mean, “All Modes, All Roads,” rather the goal is to develop a balanced transportation system that is inclusive of transportation users of all types, ages and abilities. Complete Streets are not revolutionary; the concept is based on the widely accepted principal that bicyclists and pedestrians of all types are present on all highways and transportation facilities where they are permitted.

What Does a Complete Street Look Like?
Complete Streets are not “one size fits all” design solutions. A Complete Street might include sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible transit stops, frequent and well-maintained crossing opportunities, median islands, accessible pedestrian signals, curb extensions, and more. Complete Streets are designed to balance safety and convenience for everyone using the road. The components of a Complete Street will vary based on the rural, suburban, or urban context of the roadway.

Defining Complete Streets
The term “Complete Streets” was first used by America Bikes in 2003 as part of their effort to amend the U.S. transportation law.¹ As of the writing of this report, The National Complete Streets Coalition had reported that 110 jurisdictions across the United States have adopted Complete Streets policies. Of these, there were fifteen state policies that were a combination of laws, resolutions and internal policies.²

² Six of the fifteen policies are internal policies according to AARP’s, “Planning Complete Streets for an Aging America” Report, May 2009 and the National Complete Streets Coalition’s website: http://www.completestreets.org/.
Of the fifteen state policies, only one uses the term “Complete Streets” within its text. Most policies adopted after 2004 go beyond strictly referencing only bicycle and pedestrian users, but specify, “All users” or “All users regardless of age and ability” or they specifically call out transit users or people with disabilities. It should be noted however, that many expert sources agree that there are a number of earlier policies, which reference only bicycling and pedestrians, that are also considered to be Complete Streets policies, as the accepted definition of pedestrian includes users of mobility aids and is not age-specific.\(^3\)

The language of Complete Streets, though fundamentally rooted in what was initially referred to as “Routine Accommodation” is considered by some to be preferable as it conveys a more active message: \textit{that streets are not complete until they are safe for all users}. Though the language of Complete Streets continues to evolve through advocacy efforts, many experts agree that fundamental principals can be found in federal guidance issued in 2000 and 2008.

The Federal Highway Administration (FHWA)’s \textit{2000 Policy Statement on Integrating Bicycle and Walking into Transportation Infrastructure} established the following guidance:

- "Due consideration" of bicycle and pedestrian needs should include, at a minimum, a presumption that bicyclists and pedestrians will be accommodated in the design of new and improved transportation facilities.
- To varying extents, bicyclists and pedestrians will be present on all highways and transportation facilities where they are permitted and it is clearly the intent of TEA-21 that all new and improved transportation facilities be planned, designed and constructed with this fact in mind.
- The decision not to accommodate [bicyclists and pedestrians] should be the exception rather than the rule.

Even prior to the above mentioned policy, the Federal Highway Administrator had written that "We expect every transportation agency to make accommodation for bicycling and walking a \textit{routine part} of their planning, design, construction, operations and maintenance activities.”

The three exceptions that are commonly found in Complete Streets policies also originated in this FHWA policy statement, though in this instance the exceptions are specific to urbanized areas. The policy sets up different guidance for the use of shoulders in rural areas. This accounts for some of the variations to the exceptions seen in other state policies.

- Bicycle and pedestrian ways shall be established in \textit{new construction and reconstruction projects} in all urbanized areas unless one or more of the following conditions are met:

\(^3\) Publications by AARP, the National Complete Streets Coalition, and the Alliance for Biking and Walking (formerly Thunderhead Alliance) all include model policies which fit this description.
Bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.

The cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent of the cost of the larger transportation project.

Where sparsity of population or other factors indicate an absence of need.

In 2008, FHWA issued Guidance on Bicycle and Pedestrian Provisions of Federal Transportation Legislation. This guidance reiterated earlier intentions, that “SAFETEA-LU confirmed and continued the principle in Federal surface transportation law that the safe accommodation of non-motorized users shall be considered during the planning, development, and construction of all Federal-aid transportation projects and programs. To varying extents, bicyclists and pedestrians will be present on all highways and transportation facilities where they are permitted and it is clearly the intent of Federal surface transportation law that all new and improved transportation facilities be planned, designed, and constructed with this fact in mind.”

Furthermore, it discussed the incorporation of bicycle and pedestrian facilities as ‘incidental’ costs to be part of all projects, and provided an explanation of the flexibility of federal funding, noting that, “Federal surface transportation law provides tremendous flexibility to States and MPOs to fund bicycle and pedestrian improvements from a wide variety of programs. Virtually all the major transportation funding programs can be used for bicycle and pedestrian-related projects.”

Costs and Benefits of Complete Streets
Many of the benefits of Complete Streets are difficult to quantify, because they deal with issues related to quality of life, and project costs and benefits will vary tremendously on a project by project basis, as well as based on the level to which the transportation agency is already meeting the needs of these user groups. Research on the health and safety benefits of Complete Streets is becoming more widely available. The following section outlines basic discussion points for Complete Streets in terms of their costs, benefits, and funding issues.

Benefits of Complete Streets

Improve Safety

Dangerous by Design, a report by Transportation for America and the Surface Transportation Policy Partnership released in November, 2009, noted that the comprehensive cost for each traffic death at $4.1 million. Multiplying that number by the 107 pedestrian fatalities that occurred on state highways in Louisiana in 2007 results in an approximately $438.7 million cost. While a Complete Streets policy for Louisiana won’t reduce the number of pedestrian crashes to zero, designing for bicycles and pedestrians

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5 Transportation for America, Dangerous by Design, November 2009.
has been found to reduce the risk of pedestrian crashes by as much as 28%, according to a 2003 Transportation Research Board Report.\(^6\) Even a modest 10% reduction in pedestrian crashes annually in Louisiana could result in a savings of $451 million. Louisiana spent approximately 0.8% of $26.3 billion of their federal transportation dollars on pedestrian projects from FY 2005 through FY2008, or approximately $5.26 million per year.\(^7\) This would indicate that there is a cost savings, however subjective, that would be realized by designing and constructing roadways that are safer for pedestrians, thereby reducing the number of pedestrian fatalities and injuries on state roads.

**Mobility and Safety for Children**

Pedestrian injury is the third leading cause of death by unintentional injury for children under age 15, and as a result many children end up as automobile passengers, missing out on opportunities for independence and physical activity.\(^8\) The Centers for Disease Control and Prevention and other health organizations attribute the rising obesity rate in children, in large part, on their dependence on motorized transportation and missed opportunities for active transportation.\(^9\)

**Mobility for Disabled Americans**

Rough or incomplete sidewalks, a lack of curb ramps, and WALK signs that only work for the sighted are several examples of barriers that people with disabilities experience when attempting to use the transportation system. Many paratransit trips are necessary not because of the severity of an individual’s disability or their distance to a transit stop, but because of barriers between an individual’s origin/destination and transit stop and inaccessible transit stops. A study of paratransit use in Houston found that 50% of paratransit users lived within 2 blocks of a transit stop.\(^10\) In Louisiana, the weighted average operating expense for a paratransit trip was $56.06 as compared to $3.77 for a regular bus trip.\(^11\) Shifting just a small portion of these trips as a result of improved access to transit stops would result in a substantial cost savings to transit providers across the state.

**Mobility for Older Americans**

Complete Streets enable older Americans to retain their independence and maintain an active lifestyle. The number of seniors will increase by 70%, and 18% of the population will be 65 or older by 2025. AARP reports that both men and women are likely to live beyond the time that they can drive safely, by

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6 King, Michael, Pedestrian Safety through a Raised Median and Redesigned Intersections. TRB 2003 Paper 03-3135.
7 Transportation for America, Dangerous by Design, November 2009.
8 Transportation for America, Dangerous by Design, November 2009.
10 No similar study was available for Louisiana or a city within Louisiana.
11 2007 National Transit Database results for Baton Rouge, New Orleans, Jefferson, Lafayette, Shreveport, Alexandria and Monroe. http://www.ntdprogram.gov/ntdprogram/cs?action=profileSrc. Weighted averages represent the above seven systems and do not include rural transit. Note that New Orleans Regional Transit Authority reports substantially higher costs per trip than other systems, and represents approximately 40% of all trips identified.
about seven years for men and ten years for women. Complete Streets can address barriers which contribute to a loss of independence, help decrease isolation and potential health decline.\(^{12}\)

**Promote Active Living**

Active transportation, such as walking and bicycling, are a key component of combating the nation’s obesity epidemic. According to the Centers for Disease Control and Prevention, more than two-thirds of U.S. adults are overweight and are at an increased risk for heart disease, stroke, type 2 diabetes, and some types of cancers. The CDC estimates that if 10% of American adults began a regular walking program, it would result in a $5.6 billion savings nationally in costs associated with battling heart disease.\(^{13}\)

**Support Environmental Policies Aimed at Reducing Emissions**

The 2001 National Household Transportation Survey found that 28% of all metropolitan trips are one mile or less, yet 65% of trips less than one mile are made by automobile. Shifting a percentage of these shorter trips to transit, walking, or biking results in an emissions reduction which can have notable results for an urbanized area. The Baton Rouge Urbanized Area is currently designated by Environmental Protection Agency as an ozone non-attainment area; this designation triggers costly actions at both the state and regional level and hurdles for transportation planning, including suspension of road projects that increase capacity. Complete Streets can help the state and Metropolitan Planning Organizations (MPOs) meet their attainment goals.

**Support Economic Development**

Creating opportunities for transit, walking and biking has been shown to result in improved economic conditions for communities. Homeowners are often willing to pay more to live in walkable communities, where complete streets increase property values. Business owners have found both increased sales and increases in ‘shopping locally’ following improvements to walking and biking infrastructure. The following points illustrate some profound economic benefits that communities have seen as a result of these investments:

- A study of 15 metropolitan areas found that houses in communities with above average walkability command on average, $4,000 to $34,000 over similar areas with average levels of walkability.\(^{14}\)

- Sixty-six percent of merchants located in the Mission District of San Francisco believed that bicycle lanes had a positive impact on their business or sales.\(^{15}\)

- Results of Portland, OR surveys found that bike-friendliness was a factor in 62% of respondent’s decision to move there and 78% of people’s decision to visit there.\(^{16}\)

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A North Carolina study has found that a $6.7 million investment in bicycle infrastructure over a ten year period in the northern Outer Banks has resulted in substantial economic benefits of approximately $60 million annually.\textsuperscript{17}

**Lower Household Transportation Costs**

According to the 2000 Census, 12% of households in Louisiana did not have access to an automobile.\textsuperscript{18} In the same period, the state recorded the second highest rate of poverty (15.8%) nationally, and the fourth lowest median household income ($32,566), nationally.\textsuperscript{19} Many Louisianans simply can’t afford to drive and others would benefit from transferring one one-mile trip a day to walking – a savings of $200 per year. Americans spend an average of 18 cents of every dollar on transportation, with the poorest fifth of American families spending twice this amount.\textsuperscript{20}

**Costs of Complete Streets and Funding Considerations**

A common concern that agencies encounter when considering a Complete Streets policy is the expectation that additional costs will be incurred. There are two arguments that are often made with regard to the cost issue:

- First, the idea of ‘extra costs’ being incurred with Complete Streets is synonymous with the idea that facilities for walking and biking are ‘extra amenities’ rather than integral components of the transportation system which are necessary to ensure safe and convenient access for bicyclists, transit users and pedestrians of all ages and abilities. Regardless of one’s perspective, it is clear that these are legitimate users of the transportation system with the right to safe mobility and access.

- Second, if transportation agencies were already designing Complete Streets all of the time, there would be no demand for such policies. There will be instances where including certain types of pedestrian, transit or bicycle facilities will raise the overall cost of the project, however, there are also instances where costs savings can occur (more on this to follow). The degree to which additional costs will be incurred is directly related to the degree to which the transportation agency is already meeting the needs of these user groups - LDOTD already does design and include all of these types of facilities in many circumstances when they are needed. A Complete Streets policy would provide greater clarity and guidance as to what is appropriate from situation to situation, and would ensure consistent application.

Another issue which commonly arises during discussions of Complete Streets policies is the concept of a dedicated source of funding for these projects, as virtually all transportation agencies have more project


\textsuperscript{18} U.S. Bureau of the Census, 2000. SF-3 sample data. Combined owner occupied and renter occupied units.

\textsuperscript{19} U.S. Bureau of the Census, 20000. SF-3 sample data.

\textsuperscript{20} Transportation for America, *Dangerous by Design*, November 2009.
needs than available funding. Federal guidance following Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) provided direction that the incorporation of bicycle and pedestrian facilities as “incidental” costs to be part of all projects. This guidance provided an explanation of the tremendous flexibility of federal funding with regard to bicycle and pedestrian improvements. Virtually all major federal transportation funding programs can be used for bicycle and pedestrian facilities and projects. Since the passage of SAFETEA-LU in 2005, there has been a 30% increase in total transportation funds to states. At $1.13 per person, Louisiana is currently under the national average of bicycle and pedestrian spending of $1.46 per person. This equates to 0.8% of total federal funds spent on bicycle and pedestrian projects, despite the statistic that 11.4% of traffic deaths were pedestrians.  

Complete Streets can be low cost, no cost or provide a cost savings

Inevitably, there will be times when bicycle and pedestrian accommodations will increase the cost of a project, particularly when additional right-of-way will be required. FHWA established the following guidance for exceptions when, “the cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent of the cost of the larger transportation project.”

As well as there are times when an increase in cost could occur, there are also times when Complete Streets can save money as well. Part of this savings is realized by taking a different approach to projects as a whole – shifting away from vehicle throughput and looking at how a proposed project will improve how the road functions as a whole, rather than strictly focusing on automobile throughput.

When replacing drainage grates, using bicycle-friendly grates, or grates with bars that are perpendicular to bicycle tires is one way to make a road safer for bicyclists.

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22 Surface Transportation Policy Partnership and Transportation for America, Dangerous by Design (no date).
There are a number of no-cost solutions that taking a Complete Streets approach can identify. One example is installation of bicycle-friendly drainage grates, or simply installing drainage grates in a bicycle-friendly direction when replacing them. This no cost decision prevents bicyclists from being thrown from their bicycle when wheels become trapped, or from swerving into traffic to avoid the grate.

Another no-cost solution is retiming of traffic signals to give pedestrians enough time to cross. This comes as a trade off with the amount of time vehicular traffic waits, so combining this solution with bulb outs or median islands is another alternative. Providing count-down signals when upgrading signals is a low cost solution (approximately $2,000 per intersection) which has been found to reduce pedestrian injury collisions by 52% at pilot locations.\textsuperscript{24}

The ‘Road Diet’ is an example of a low cost solution which has been employed across the US that has generated benefits for all modes of transportation, and resulted in reduced rear-end collision and reduced rates of driving over the speed limit. One road diet in Clear Lake, Iowa saw a reduction in crashes of 65% and aggressive speeding reduced by 52%. The classic road diet takes a four lane section and converts it to one lane in either direction with a median/turn lane and uses the extra space for on-street parking, bike lanes, or sidewalks. This strategy can be employed at the time of an overlay (preservation project), often requiring little additional capital costs other than striping.\textsuperscript{25}

Complete Streets are not a mandate for retrofit – the intention is to avoid the excessive costs of going back and retrofitting sidewalks or paths after a roadway or bridge is constructed by doing it properly the first time. An often cited example is of a bridge near Cary, Illinois which was constructed without a safe way for bikes or pedestrians to cross. After several deaths occurred, the family of a teenager killed on the bridge successfully sued and the state department of transportation had to go back and retrofit the bridge by adding a side path to the span at a cost of $800,000.\textsuperscript{26}

\textsuperscript{24} Institute of Transportation Engineers, ITE Journal, 2006. Pedestrian Countdown Signals: Experience with an Extensive Pilot Installation.

\textsuperscript{25} Rosales, Jennifer, Road Diet Handbook. September 2006.

\textsuperscript{26} National Complete Streets Coalition, Complete Streets Introductory Presentation. http://www.slideshare.net/CompleteStreets/complete-streets-presentation.
Common Concerns Related to Complete Streets

Liability Exposure

Note: This is not a Legal Opinion. Please see Appendix 4 of Louisiana Statewide Bicycle and Pedestrian Master Plan for a more detailed explanation of Liability Exposure Issues.

One concern expressed is whether or not a Complete Streets policy would increase a transportation agency’s exposure to liability. People regularly walk and bike along and across Louisiana’s state roads wherever they are allowed, and various policy statements of AASHTO, the MUTCD, FHWA and the LDOTD make it clear that it is the responsibility of LDOTD to provide reasonably safe accommodations for these pedestrians and bicyclists. By providing well planned and well designed pedestrian and bicycle accommodations and facilities, transportation agencies should not generally increase their liability. In many cases, liability exposure should be reduced by demonstrating a systematic way to improve safety for these users. However, transportation agencies may increase their exposure to liability if they do not plan and design facilities using appropriate state and national guidelines, standards and directives.

Maintenance Concerns

A second concern raised in many places across the United States upon adoption of Complete Streets policies is the issue of maintenance burden. A number of states, like Louisiana, have existing policies in place which pass the responsibility of maintenance to local governments for various aspects of non-motorized transportation infrastructure.\(^27\) There is variability in application, from states where local jurisdictions have very little maintenance responsibility for pedestrian or bicycle infrastructure to states where a great deal of responsibility is shifted to the local.

In Louisiana, existing policy suggests that sidewalk maintenance is the responsibility of the local jurisdiction, if they ask for the facility, or if federal aid monies are used for the project. Sidewalks may also be included in a project at the discretion of the Chief Engineer for ‘safety reasons’, though in this instance it is not made clear where the responsibility for maintenance lies.\(^28\) The Complete Streets concept would suggest that safety is always a reason to include sidewalks and other facilities that make it safer for non-motorized transportation users, and thus, the appropriate facility type should always be an engineering decision. However, the policy recommendation of the Work Group allows for an opportunity for local governments and MPOs to appeal the decision of the Chief Engineer. This appeal process would apply if either the local government or MPO was of the opinion that the proposed facility is not needed, if they are unable to meet the maintenance burden, or if it does not go far enough to address the safety needs of the non-motorized transportation users.

Furthermore, in Louisiana, local jurisdictions have been known to pass the burden of maintenance for sidewalks along to the adjacent property owner, regardless of whether they are adjacent to state, parish

\(^27\) Discussions with several state bicycle and pedestrian coordinators, September through October.

\(^28\) EDSMII.2.1.10: Requirement for Construction of Pedestrian Sidewalk Facilities, Louisiana Department of Transportation and Development.

or city owned roadways. Jefferson Parish is an example of a parish government with very clear and specific development regulations related to sidewalk responsibility.  

Completing the Streets in Louisiana

**Louisiana’s Efforts to Complete their Streets**

**Louisiana Statewide Bicycle and Pedestrian Plan, 2009**
Throughout 2008 and 2009, the LDOTD was engaged in an update to their 1998 Bicycle and Pedestrian Plan. This planning process included extensive public participation, interviews with LDOTD staff, and worked with an advisory committee comprised of advocates, agencies, and MPOs. The plan is based on Complete Streets principals and establishes policy, planning, and implementation strategies to fully incorporate bicycling and walking into Louisiana’s transportation network by planning and designing roadways that accommodate bicycling and walking.

**Senate Concurrent Resolution 110**
Senate Concurrent Resolution 110 was passed during the 2009 Legislative Session, requesting the formation of a Complete Streets Work Group to be convened by the LDOTD to develop a statewide policy on the design and construction of thoroughfares that maximize use by all Louisianans whether they choose to bike, walk, ride transit or drive a car. SCR 110 established the twenty-three member organizations of the Work Group and a timeline in which to develop their policy and associated undertakings.

**How do the Bicycle and Pedestrian Plan and SCR 110 fit together?**
While the State Bicycle and Pedestrian plan fundamentally develops policy, planning, and implementation strategies for Complete Streets at the state-level, the advocacy community expressed a desire for a clear mandate for Complete Streets and greater assurance at high levels within the Department that the policies developed would be implemented. Because the bicycle and pedestrian plan was in the process of review when the resolution was first being developed, the concept of the Work Group emerged. Fundamentally, there are few differences between the outcomes of the State Bicycle and Pedestrian Plan and the Complete Streets Policy document other than the following:

- The Complete Streets policy is intended for formal adoption by the Secretary of Transportation, whereas the Bicycle and Pedestrian plan used similar language within a planning document.
- The Complete Streets policy conveys a more active message, though in practice, most recommended changes to Department procedures are the same or similar.
- The exceptions criteria have been simplified in the Complete Streets policy; they require approval by the Chief Engineer; and set up a formal appeals process for municipalities.
- The creation of the Complete Streets Work Group has created and built on a growing synergy between advocates engaged in a variety of related fields – public health, obesity prevention, advocacy for the elderly and for people with disabilities, and the education community, to strengthen and support the on-going efforts of LDOTD through actions beyond those of the
The efforts of this “Complete Streets Work Group Advocacy Sub-committee” will continue beyond the life of the SCR Work Group to this end.

**Louisiana’s Complete Streets Policy Statement**

The following policy statement was developed by the Complete Streets Work Group, a multi-disciplinary committee convened by the LDOTD to develop a Complete Streets policy and implementation actions for Louisiana in fulfillment of Senate Concurrent Resolution 110 of the 2009 State Legislative Session. The Work Group developed the following policy language for the Secretary of Transportation’s consideration for adoption as an administrative Complete Streets policy for Louisiana.

This policy will create a comprehensive, integrated, connected transportation network for Louisiana that balances access, mobility, health and safety needs of motorists, transit users, bicyclists, and pedestrians of all ages and abilities, which includes users of wheelchairs and mobility aids. It ensures a fully integrated transportation system, by planning, funding, designing, constructing, managing, and maintaining a complete and multi-modal network that achieves and sustains mobility, while encouraging and safely accommodating pedestrians, bicyclists, and transit users.

The Louisiana Department of Transportation and Development (LDOTD) will provide the leadership to implement this policy on all transportation projects that involve federal or state funding or approval. LDOTD recognizes the need for interdisciplinary coordination to effectively develop, operate, and maintain bicycle and pedestrian networks. LDOTD will work with metropolitan planning organizations (MPOs), transit agencies, parishes, municipalities and other stakeholders to do the same. This includes early coordination to identify whether a reconstruction or new construction project will impact a route identified on a local plan. LDOTD will offer internal and external training opportunities and other resource tools on in the following areas: engineering, education, enforcement, encouragement, and evaluation.

Provisions for all users will be integrated into the project development process for the entirety of all projects through design features, using Context Sensitive Solutions (CSS).

- On all new and reconstruction roadway projects that serve adjacent areas with existing or reasonably foreseeable future development or transit service, LDOTD will plan, fund and design sidewalks and other pedestrian facilities. The appropriate facility type will be determined by the context of the roadway.

- On all new and reconstruction roadway projects, LDOTD will provide bicycle accommodations appropriate to the context of the roadway - in urban and suburban areas, bicycle lanes are the preferred bikeway facility type on arterials and collectors. The provision of a paved shoulder of sufficient width, a shared use trail or a marked shared lane may also suffice, depending on context.
All projects shall consider the impact that improvements will have on safety for all users and make all reasonable attempts to mitigate negative impacts on non-motorized modes. Restricting non-motorized access should not be considered as an appropriate strategy with the exception of those limited access facilities where pedestrians and bicyclists are prohibited. LDOTD will strive to ensure projects do not become barriers to pedestrians, bicyclists, and transit users by providing appropriate safe crossings, providing corridor continuity, and ensuring transportation projects comply with the current accessibility guidelines.

There are conditions where it is generally inappropriate to provide bicycle and pedestrian facilities. These instances include:

1. Facilities, such as interstates, where bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the same transportation corridor.

2. The cost of providing bicycle and pedestrian facilities would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent (20%) of the cost of the project.

3. Other factors where there is a demonstrated absence of need or prudence. For example, in rural areas or undeveloped areas where future development is not anticipated, sidewalks and designated bikeways will generally not be provided.

4. On projects that are preservation only, LDOTD will only consider improvements that do not require right-of-way acquisition, utility relocation, or major construction to provide bicycle or pedestrian accommodations, such as relocating or enclosing roadside drainage. Retrofits such as narrowing lanes, restriping and other means of providing improved bicycle and pedestrian access shall be considered on preservation projects. When an identified need or candidate requires right-of-way acquisition, utility relocation, or major construction, LDOTD will work with local government to identify funding for the identified need as a separate project.

5. Maintenance for sidewalks and bicycle paths outside the limits of the curb or shoulder will be the responsibility of the local jurisdiction. Maintenance agreements will be required as a provision of the entire project.

Exceptions for not accommodating bicyclists, pedestrians and transit users in accordance with this policy will require the approval of the LDOTD Chief Engineer. For exceptions on Federal-aid highway (FHWA) projects, concurrence from the Federal
Highway Administration must also be obtained. For exceptions in an urbanized area, concurrence from the MPO must also be obtained.

When an MPO or local jurisdiction is not in agreement with LDOTD’s accommodation for bicyclists or pedestrians, they can introduce a formal appeal by means of a resolution adopted by the local governing body or board. The resolution must be submitted to the Chief Engineer for review and consideration prior to the final design approval.

Facilities will be designed and constructed in accordance with current applicable laws and regulations, using best practices and guidance from the following, but not limited to: LDOTD guidelines and manuals, American Association of State Highway and Transportation Officials (AASHTO) publications, the Manual on Uniform Traffic Control Devices (MUTCD), the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and the Public Rights-of-Ways Accessibility Guidelines (PROWAG).

LDOTD recognizes that a well-planned and designed transportation system that is responsive to its context and meets the needs of its users is the result of thoughtful planning and engineering. LDOTD further recognizes the need to provide a framework for evaluation and a targeted strategy for the implementation steps identified. To this end, LDOTD will work with a diverse group of stakeholders, including transportation professionals, advocates, and others, as appropriate, to continue to support and steer the implementation efforts both internal and external to LDOTD.

Implementing Complete Streets in Louisiana – A Very Long Road

For most transportation agencies, fully implementing Complete Streets means a fundamental shift in previous procedures and assumptions, as engineers have been trained to maximize automobile throughput. However it is important to consider the strides already taken to shift gears. Several relevant examples in Louisiana include work LDOTD is already undertaking with regard to Context Sensitive Solutions, Access Management, and ADA Accessibility. Additionally, LDOTD does currently include pedestrian and even some bicycle facilities in many projects – despite not having a consistent policy for always doing so.

Responsibility for Implementation

Implementation of Complete Streets in Louisiana will start with the formal adoption of the policy statement by the Secretary of Transportation. From that point forward, a comprehensive implementation strategy should be established and reviewed annually, using the actions identified by the Bicycle and Pedestrian Plan and the Work Group processes. The implementation of a Complete Streets policy will be the responsibility of many individuals and departments, and can involve others outside of LDOTD, as well.

Oftentimes, a Bicycle and Pedestrian Advisory Committee (BPAC) will be established to serve a variety of supportive roles to a transportation agency’s implementation effort. It can serve in an advisory or steering capacity and do some or all of the following:
To provide technical and political support for decisions made

To coordinate with partner agencies

To assist with implementation actions outside of the scope of the Department

To advise on a strategic plan for implementation on an annual or quarterly basis, as well as to review performance measures to inform the ongoing steering process

The actual role of an advisory committee is determined by its enabling mechanism. A study for the Virginia Transportation Research Council identified that twenty-eight states have such committees, of which eleven were created by law. Of the twenty-two states without a BPAC, five maintained a formal ongoing relationship with a statewide bicycle or pedestrian advisory group and six maintained an informal relationship with some type of advocacy organization or individuals, leaving just eleven states with no relationship to advocacy organizations or individuals.30

**Actions for Implementation**

The following are not a comprehensive implementation strategy, but a list of actions for implementation to be incorporated into a comprehensive strategy following policy adoption. The actions necessary for implementation have been divided into two categories, Administrative Implementation Strategies, which are actions that the Department can put into practice and Other Tools for Furthering Complete Streets in Louisiana, which are actions which can be taken by other organizations or through collaborative efforts with outside partners.31

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31 Note: The strategies for implementation are based primarily on those identified in the Statewide Bicycle and Pedestrian Plan.
Restructure the Procedures

“Restructuring the Procedures” to ensure that all users are fully integrated into all stages of project development means either integrating or creating new processes by which projects are developed. The following are examples of Implementation Actions that involve ‘Restructuring the Procedures’:

- Include consideration of appropriate pedestrian and bicycle accommodations during project scoping.
- In reconstruction projects, upgrade existing sidewalks and ramps, and include crossing improvements as appropriate.
- In preservation projects, upgrade ramps and include crossing treatments, as appropriate.
- Develop a program to upgrade pedestrian infrastructure on transit routes to include accessible sidewalks and crossing treatments.
- Fund the analysis, planning and design of infrastructure improvements to address problem areas and reduce crashes and injuries.
- Adopt Bicycle, Transit, and Pedestrian Checklist for use during appropriate project development stages.
- Work with partner agencies to develop and implement targeted encouragement and education programs that seek to increase levels of walking and bicycling. Encourage the participation of non-governmental organizations in areas including health care, health insurance providers, and economic development.
• Ensure all new pedestrian facilities installed by the Department will comply with the Americans with Disabilities Act Accessibility Guidelines, specifically the Public Rights-of-Way Accessibility Guidelines issued in 2005.

• Existing pedestrian facilities on roadways will be brought into ADA compliance during preservation and reconstruction projects.

• Develop and implement consistent policies for marking crosswalks and providing pedestrian signals.

• Develop Formal Procedure for Exceptions being approved by LDOTD Chief Engineer.

• Coordinate with Local Government and MPO for consistency with local planning efforts.

• Annually identify corridors and intersections with disproportionate number of pedestrian & bicycle crashes and injuries.

• Solicit the views of pedestrian and bicycle groups as part of Solicitation of Views during environmental processes.

• Utilize bicycle level-of-service analysis techniques to determine the appropriate level of bicycle accommodation on a roadway.

• Provide a pedestrian phase at all signalized intersections with high pedestrian volumes. Provide push button activation at all other signals.

• Stage 0 and Environmental Checklists to refer to pedestrian and bicycle accommodation checklist.

• Include LDOTD Bicycle and Pedestrian coordinator in project initiation meeting, and build staff accordingly. This includes having road design staff at headquarters and at every district office with an expertise in designing on-road bicycle facilities.

• On a project specific basis, when improvements are being considered to intersections or corridors, include bicycle and pedestrian counting as part of traffic counting requirements.

• When developing project alternatives, include conceptual development of walking, transit, and biking accommodations.

• Monitor maintenance needs and program repairs on an annual basis.

• Incorporate bicycle and pedestrian safety considerations into other safety projects and ensure that safety projects improve safety for all modes.

• Upgrade existing pedestrian and bicycle facilities to meet current standards as part of all reconstruction transportation projects.
Design standards of bikeways and bicycle accommodations will be based on the most current available national guidelines and best practices.

Design standards of sidewalks and pedestrian accommodations will be based on the most current available national guidelines and best practices.

Require the collection and analysis of pedestrian and bicycle related data as a part of the Traffic Impact Analysis requirement in the LDOTD driveway permitting and access management program. Require the provision of appropriate pedestrian bicycle facilities as a condition of approval.

**Rewrite the Manuals**

“Rewriting the Design Manuals” means developing new guidance for the design of facilities. The USDOT encourages a re-write of the primary design manual for every transportation agency, with the creation of a separate bicycle/pedestrian manual as an interim step. Guidance for the development of such manuals should reflect best practices from, but not limited to:

When rewriting the design guidance, the following actions are recommended:

- New bridges and bridge reconstruction projects shall accommodate bicycles and pedestrians where walking and bicycling is not specifically prohibited. Note: The specific type of accommodation will be determined based on the type of roadway and type of bicycle and pedestrian accommodations provided on the bridge approaches, however the presence of bicycle and pedestrian facilities on the approaches will not be a prerequisite for the provisions of bicycle and pedestrian facilities on the bridge. Accommodations will typically include bike lanes or shoulders, and sidewalks on both sides of the bridge. Bicycle and pedestrian facilities may be separated from the adjacent traffic by a barrier on longer bridges that carry high speed traffic.

- Reduce travel speeds on urban and suburban collectors and select arterials that serve pedestrians and bicyclists through setting of appropriate design speed which take into account the needs of all users. Geometric design will be the primary tool to set appropriate speeds.

- Provide bike lanes or paved shoulders where adequate space exists, as they are the preferred facilities on major roadways. Bike lanes are preferred on urban and suburban roadways, and paved shoulders are preferred on rural roadways.

- Determine appropriate facilities for context (Rural, Suburban, Urban).

- Provide staggered continental marked crosswalks at all four legs of signalized intersections.

- Provide appropriate crossings at uncontrolled locations that utilize design measures to improve pedestrian safety, particularly those on roadways with three or more travel lanes. Note: In designing these locations, the Department will follow guidance issued by the Federal Highway
Administration (Safety of Marked and Unmarked Crosswalks at Uncontrolled Intersections, FHWA 2003, and Memorandum regarding Interim Approval for Rectangular Rapid Flashing Beacons dated July 16, 2008).

- Provide bicycle detection at actuated traffic signals, where appropriate.
- Plans shall include provisions for the protection and maintenance of pedestrian and bicycle traffic during construction.
- Avoid using rumble strips on shoulders used by bicyclists unless there is a minimum clear path of 4 feet from the rumble strip to the outside edge of the paved shoulder, or 5 feet to the adjacent guardrail, curb or other obstacle. Gaps (12-foot gap every 40 to 60 feet) in the rumble strip should be provided to accommodate left turn and merging movements, and to enable bicyclists to avoid debris in the shoulder and to pass other bicyclists.
- Avoid chip-sealed surfaces where possible on roadways that are either designated as bicycle routes, or are frequently used by bicyclists.
- At T-intersections where a bypass lane is provided to facilitate left turns, provide a minimum 5-foot shoulder in order to facilitate safe bicycle passage.
- Provide appropriate pedestrian accommodations on all projects whether or not sidewalks are provided. Note: The absence of a sidewalk is not the determining factor as to whether pedestrians will be present and other pedestrian accommodations, including crossings, landings and accessible ramps, should be provided. Intersection improvement projects in areas with existing or planned development should include pedestrian accommodations whether or not sidewalks are present.
- Work with partner agencies to include the appropriate laws and principles for safely sharing the road with pedestrians and bicyclists as a part of driver education manuals, classes and license testing procedures.
- Require the provision of appropriate pedestrian bicycle facilities as a condition of approval.
- Update the Road Design Manual and English Design Standards to reflect current national guidelines and best practices and provide appropriate guidance to staff.
- Provide countdown pedestrian signal heads at signalized intersections. The minimum width of sidewalks installed by the Department is to be 5’. Wider sidewalks may be appropriate in areas with higher pedestrian volumes. The assumption is that a minimum of a 5’ grass buffer will be provided between the sidewalk and the adjacent roadway, however a wider buffer will be provided where possible on higher speed roadways such as urban arterials.
- Allow greater flexibility to design projects that better meet the needs of all travelers.
• Use the following methods to retrofit bike lanes (or paved shoulders) on urban and suburban roadways (road diet techniques):
  
  o Reducing travel lane widths – lane widths may be reduced per the flexibility defined in AASHTO’s Policy on the Geometric Design of Highways and Streets and based on engineering judgment.
  
  o Reducing the number of travel lanes – a traffic analysis may be done on roadways with excess capacity to determine if they are candidates for this treatment.
  
  o Reconfiguring or reducing on-street parking – this method is a last resort, as changes to parking are often opposed by adjacent landowners.

• Provide appropriate bicycle compatible features (i.e. bicycle safe drainage grates, placement of rumble strips, type of expansion joints, etc) on all projects whether or not officially designated as bikeways.

• Ensure crosswalks that are marked at uncontrolled locations be staggered continental crosswalk markings.

Retrain the Planners and Engineers
One LDOTD employee participating in the Work Group meetings noted that the Department doesn’t change directions like a speed boat; it changes direction like an Ocean Liner: a few degrees at a time. Retraining of staff is an essential component of changing the direction of the Department. Steps such as making the staff aware of the new policy coming from high level officials within the organization should not be overlooked. Other actions associated with the “Retraining of the Planners and Engineers” are:

• Assign a pedestrian and bicycle liaison at each district office to help ensure that the recommendations of this plan are fully implemented in each district.

• Train staff and consultants to plan and design for walking and bicycling.

• Require training in Complete Streets as pre-requisite or requirement of design contracts.

• Provide training opportunities to MPO staff, parishes and municipalities in Complete Streets.

Retool Measures to Track Outcomes
Finally, performance measures are important to put in place in order to track outcomes and see how implementation is working. Examples of performance measures to collect include the following:

• Monitor pedestrian and bicycle crash data on an annual basis.

• Annually identify the following measures during routine inventory process:
  
  o Portion of streets dedicated to non-motorized traffic
The Department’s bicycle and pedestrian coordinator will collect and disseminate an annual report of bicycle and pedestrian activities, including activities of the Department’s District Offices and addressing progress toward the goals of this plan.

- Require the collection and analysis of pedestrian and bicycle related data as a part of the Traffic Impact Analysis requirement in the LDOTD driveway permitting and access management program. Require the provision of appropriate pedestrian bicycle facilities as a condition of approval.

- Develop an action plan to that identifies deficiencies in current pedestrian and bicycle facilities and programs improvements.

- Annually report on the data to measure progress towards achieving the goals of the Complete Streets Policy. Note: Data should include walking and bicycling mode splits and crash and injury rates.

- Confirm evidence of Complete Streets application in all state and federally funded projects included in MPO TIPS and Plans for urbanized areas.

- Monitor the frequency and quality of non-motorized education and training programs.

- Include identification of walking and bicycling needs when developing statement of Purpose and Need.

**Other Tools for Advancing Complete Streets in Louisiana**

While the above mentioned items focused on actions that the Department can undertake to implement Complete Streets, there are other actions which are more appropriate to be conducted by partner agencies, advocates and others.

**Legislative Strategies**

The Complete Streets Work Group has discussed Legislative Strategies in two contexts. One context is the development of Complete Streets Legislation – or a Complete Streets Law. At the time of the Interim Draft Report, the LDOTD was planning on adopting the Complete Streets Policy developed by the Work Group as an administrative policy. The second context for Legislation is updating the Revised Statutes to be more supportive of Complete Streets, by removing language that is a hindrance, by adding language that would provide for safer travel for all users of the transportation system. Below are a few examples of legislative changes to support Complete Streets: *See Appendix A: Technical Memorandum entitled, “Louisiana Revised Statutes: Support and Hindrance for Complete Streets” for more detail.*
• Cease the requirement for the LDOTD to “find and declare construction is necessary in the public interest and will contribute to the safety of bicyclists and the motoring public” before constructing a bicycle path by revising Louisiana revised statute (RS) 48:21.

• Add a penalty for improper opening or leaving open of vehicle door that can interfere with other roadway users.

• Require lighting devices for mobility aids after dark rather than banning their use after dark by revising RS 32:197.

• Require questions about sharing the road with all modes of transportation, including transit and non-motorized modes (pedestrians and bicycles), on the drivers exam by revising RS 17:270.

Partnerships, Coordination and Resources for Local Governments
There are other activities which state agencies, advocacy groups, local governments and Metropolitan Planning Organizations can undertake to further Complete Streets.

• Promote Complete Streets Program as a means of helping MPOs meet regional Air Quality Conformity Objectives by allowing CMAQ funds to be used to fund non-motorized transportation projects.

• Work with legislature to create funding stream for local Complete Streets Policy/Plan development.

• Work with partner agencies and jurisdictions to actively promote land use and development principles that contribute to a safe and comfortable walking and bicycling environment.

• Work with Legislature to remove any language from state statutes that conflict with Complete Streets, and to develop language that is more supportive of Complete Streets.

• Work with Legislature to establish formal state bicycle and pedestrian advisory committee.

• Identify organization to develop comprehensive effort to fund and administer public education programs. Examples:
  - Donation on state tax form
  - Share the Road License Plate

• Secure and program safety spending for pedestrians and bicyclists at a level recognizing the high percentage of fatalities and serious injuries that these modes comprise.

• Work with local governments and private developers to ensure that sidewalk and pedestrian accommodations are provided.
• Where appropriate, work with local governments to ensure future maintenance of sidewalk network.

• Encourage local and partner agencies and jurisdictions to use or adopt Complete Streets Policies.

• Work with partner agencies, including MPOs and local governments to support the use of innovative and state of the art bicycle facilities when appropriate.

• Identify Complete Streets Liaisons to walk projects through project development as examples while comprehensive training program commences.

• Work with Department of Public Safety and legislature to mandate vehicular responsibilities pertaining to interactions with bicyclists and pedestrians in Drivers Education and Drivers License training.

• Work with partners to identify common behavioral and environmental factors that contribute to crashes and injuries and educate the public on increasing bicycling and pedestrian safety.

• Develop comprehensive publicity campaign to heighten awareness of Complete Streets efforts by Department, both internally and externally. Examples of publicity strategies include: Website overhaul, Distribution of documents, Reports on progress.

• Convene a statewide pedestrian and bicycle advisory committee to provide advice and recommendations on an ongoing basis. Note: The committee should include individuals and/or organizations representing public health, persons with disabilities, transit providers and riders, children, senior citizens, parks and recreation, schools, the environment, tourism and the business community.

• Identify key transit locations which would benefit from Complete Streets improvements. Work with MPOs, transit agencies and local governments to develop and identify funding sources for the projects.
Appendix A: Legislative Strategies to Support Complete Streets
Complete Streets Work Group

Louisiana Department of Transportation and Development

Technical Memorandum

To: Brian Parsons

From: Burk-Kleinpeter, Inc.

Subject: Louisiana Revised Statutes: Support and Hindrance for Complete Streets

Date: November 2009

Overview

While the Louisiana Department of Transportation and Development (LDOTD) is committed to developing an internal Complete Streets policy, the responsibility for implementation is shared between various agencies and organizations. To foster the Complete Streets Work Group vision, “to create a comprehensive, integrated, connected transportation network for Louisiana that balances access, mobility, and safety needs of motorists, transit users, bicyclists, and pedestrians of all ages and abilities,” the State of Louisiana must overcome administrative, legislative, and cultural barriers. The LDOTD internal policy is the first step, not the total package. While the LDOTD can restructure procedures, rewrite design manuals, retrain planners and engineers, and retool measures to track outcomes, other tools are needed to advance Complete Streets throughout Louisiana.

This memo assesses how state laws can support Complete Streets. The Louisiana Revised Statutes (RS) are reviewed to identify how current state law can support and hinder Complete Streets policy implementation. In addition, potentially supportive statutes are proposed that may help further a Complete Streets policy.

Louisiana Revised Statutes

Support for Complete Streets

The existing revised statutes include language that supports Complete Streets principles. For example, the LDOTD, municipalities, and parishes may fund bicycle paths and the LDOTD shall recommend construction standards and provide a uniform system of marking bicycle paths (RS 48:163.1). Most of the supporting revised statutes relate to system users.

1. Pedestrians have the right-of-way in cross walks and on sidewalks (RS 32:212 and RS 32:219). When crossing at locations other than cross walks pedestrians must yield the right-of-way to all vehicles. Pedestrians must use marked cross walks when they are located between adjacent
intersections with operating traffic-control signals (RS 32:213). Pedestrians walking along a highway must walk on the left side of the highway or its shoulder, facing traffic (RS 32:211).

2. **Mobility aids operators** have the same rights as an able-bodied pedestrian to use streets, sidewalks, and walkways. During daylight hours they can also use road and streets with a posted speed limit of twenty-five miles per hour (mph) or less, marked bicycles paths or designated bicycle lanes, within residential subdivisions, and on any street or road necessary to cross because of physical barriers (RS 32:206).

3. **Bicyclists** are granted all of the rights and shall be subject to all the duties applicable to the driver of a vehicle (RS 32:194). The Department may also construct bicycle paths (RS 32:163.1, RS 48:21).

4. **Motorists.** Several revised statutes direct motorist interactions with pedestrians, mobility aid operators, and bicyclists. Drivers must exercise due caution to avoid collisions with pedestrians and exercise precaution upon observing confused or incapacitated persons upon the highway (RS 32:214). Drivers must take necessary precautions to avoid injuring or endangering pedestrians guided by a guide dog, carrying a white cane, or utilizing a wheelchair or motorized wheelchair for transportation who are crossing or attempting to cross a public street, highway, or near an intersection or crosswalk (RS 32:217). During the 2009 Regular Legislative Session, two additional laws were passed to guide motorists and protect bicyclists. The harassment of bicyclists is prohibited (RS 32:201) and, at least three feet of clearance must be provided when a driver is passing a bicyclist (RS 32:76.1).

Hindrance for Complete Streets

The Revised Statutes include language that may hinder the implementation of Complete Streets principles. Some language may be refined or added to the revised statutes to improve the implementation.

1. **Funding** While the LADOTD may fund bicycle paths, the Department is limited to using 1% of the funds appropriated to the transportation trust fund for bicycle paths (RS 48:163.1). The term bicycle paths is not defined so it is not clear if this funding limitation applies only to separate bicycle paths or to bicycle facilities including bicycle paths, bicycle lanes and shared lanes. Depending on the definition of bicycle paths, whether or not it encompasses facilities in addition to bicycle paths, this funding limitation may be contrary to Complete Streets principles. Complete Streets principles call for bicycle facilities to be planned and funded as a part of every project rather than be treated as a separately funded transportation project.

2. **Burden of Proof** The function of the LDOTD is defined in RS 48:21. The section indicates that the department may construct and maintain bicycle paths within the right of way of any state highway but requires the Department to “find and declare construction is necessary in the public interest and will contribute to the safety of bicyclists and the motoring public.” This language conflicts with Complete Streets principles. According to these Complete Streets
principles, accommodating all users and providing bicycles facilities is the standard. If facilities are not provided the Department should demonstrate that the absence of bicycle facilities is in the public interest. In Complete Streets policies, exceptions are specific and typically require a high level of approval.

3. **Definitions** As described in the above section on funding, some terms relating to pedestrian and bicycle infrastructure are not defined. Definitions are provided at the beginning of each Title. Title 32 Motor Vehicles and Traffic Regulations refers to but does not define wheelchairs (sections 217, 401), bicycle paths (sections 197, 199, 206, 300.2), and bicycle lanes (section 206). Electric mobility aids are defined in 32:206, Subpart G-1 rather than at the beginning of Title 32. Title 48 Roads, Bridges, and Ferries refers to but does not define bicycle paths (section 21, 163.1). Definitions at the beginning of these titles for these vehicles and facilities may improve clarity and confirm that the state of Louisiana considers non-motorized users (bicycles and pedestrians) a part of the transportation system. Proposed terms for definition include: wheelchairs, electric mobility aids, bike lane, bike path, sharrows, bicycle parking, different types of cross walks (ladder-style, traditional, diagonal style), and any other terms that help explain provisions made for bicycles and pedestrians.

4. **Rights and Responsibilities of Roadway Users** Language about operating bicycles and electric mobility aids may be improved. Currently, bicycle users are required to use paths, not roadways, when they are provided adjacent to a roadway (RS 32:197). Exceptions might be added to this statute for situations in which the user may need to move out of a path. These situations may range from making a left turn to maneuvering around debris in a path. The operation of mobility aids is restricted to daylight hours in several locations (RS 32:206). Like the rest of the population, mobility aid operators may need to travel after dark. Concerns about sufficient visibility can be address by requiring lighting rather than banning use after sunset. This would treat electric mobility aid users similarly to bicyclists (RS 32: 329). Mobility aid users are also hindered by RS 32:3002 which allows parishes and municipal governing authorities to limit or prohibit the use of mobility devices without providing examples of situations when or reasoning for the limitation. There is conflict in the language about the streets on which electric mobility aids might be operated and the mobility aids maximum speed. RS 32:300.2 allows mobility aids to be operated on streets with a maximum posted speed limit up to thirty-five mph. while RS 206 allows the maximum posted speed limit up to twenty-five mph. RS 32:300.2 restricts the mobility aid to a speed of fifteen mph while RS 32:206 restricts mobility aids to twenty mph.

5. **Drivers License and Training** Requirements for driver education and drivers license examination are found in the revised statutes, RS 32:408 and RS 17:270, respectively. Driver education for children includes specific training on railroad and highway grade crossing safety, on sharing the road with motorcycles and tractor-trailer trucks, as well as instruction on organ and tissue donation. Additional training on sharing the road with transit, pedestrians, and bicycles or all modes, including non-motorized users. For the driver license examination, at least two of the thirty required questions must relate to railroad and highway grade crossing safety.
The language also specifies that questions about sharing the road with motorcycles and tractor/trailer trucks be included. To reinforce the Complete Streets principles that roadways and the transportation system should accommodate all modes, a specified number of questions could be added about properly sharing the road with pedestrians and bicycles. In Germany and the Netherlands, two countries well known for high rates of walking and bicycling with low rates of collisions, driver training emphasizes protecting against collisions with pedestrians and cyclists. This knowledge is tested during the driver license examination.¹

**ADDITIONAL STATUTES FOR CONSIDERATION**

Additional revised statutes may further the implementation of Complete Streets. These proposals are developed after reviewing and considering Oregon’s Revised Statutes (ORS) related to pedestrians and bicycles. Oregon’s statutes were also considered in the 2005 Metropolitan Bicycle and Pedestrian Plan.

Oregon is considered a leader in the adoption and implementation of Complete Streets policies. The first Complete Streets legislation was adopted by the state nearly forty years ago. In 1971, ORS 366.514 became law and directed that “footpaths and bicycle trails, including curb cuts or ramps shall be provided wherever a highway, road or street is being constructed, reconstructed or relocated.” Many laws have subsequently been adopted that support bicycling and walking as modes of transportation. These laws inform the below proposals:

1. **A Complete Streets Advisory Committee** This group would act as a liaison between public and the Louisiana Department of Transportation. In 1973, the adoption of ORS 366.112 created the Oregon Bicycle Advisory Committee (OBAC). OBAC later became the Oregon Bicycle and Pedestrian Advisory Committee (OBPAC) when its role in pedestrian issues was officially recognized. The Committee solicits public input and advises ODOT regulation of bicycle and pedestrian traffic as well as infrastructure that supports these modes.

2. **Additional Clarification of the Rights/Responsibilities of Roadway Users** Explicit laws about the rights and responsibilities for different modes of transportation can protect roadway users.

   a. **Penalty for improper opening or leaving open of vehicle door** Open automobile doors can interfere with other roadway users. If the door is in the path of an automobile accident it can lead to a collision. A door that swings open in the path of a bicycle can lead to a serious injury or fatality. In Oregon, if an occupant in a vehicle opens a door in the path of traffic (including bicycles), or leaves open a door for longer than necessary to load or unload passengers they can be penalized with a Class D traffic infraction (ORS 811.490).

b. **Clarify vehicle interface with bicycle lanes**  
Bicycle lanes are designed as a space separated from adjacent roadway by a white stripe for bicyclists and usually electric mobility aid users. Definition of this facility and laws protecting its use can ensure this space retains the intent of its original design, to be an area dedicated for the use of bicyclists and electric mobility aids. Bicycle lanes are defined in Oregon’s Revised Statutes. Further, in Oregon, by law, motor vehicles must yield to a bicycle, electric assisted bicycle, electric personal assistive mobility device, moped, motor assisted scooter, or motorized wheelchair using a bicycle lane (ORS 811.050). Instances when motor vehicles may operate on a bicycle lane are also specified. A motorized vehicle may operate on bicycle lanes to (1) make a turn, (2) enter or leave an alley, private road, or driveway, and (3) as required in the course of official duty (ORS 811.440).

c. **Penalty for Vehicle assault of bicyclists or pedestrians**  
This may encourage driver awareness and deter reckless driving around bicyclists or pedestrians. Oregon adopted a penalty for the vehicular assault of bicycles or pedestrians. Drivers are penalized if they recklessly operate a vehicle upon a highway which results in the contact with and injury a bicyclists or pedestrian (ORS 811.060).

3. **Share the Road License Plate**  
An option to obtain a share the road license plate would enable residents to express their support of Complete Streets principles on a daily basis. Like special prestige license plates, a royalty fee can be charged for the license plate. This funding could be used to further the implementation of Complete Streets Policies. A share the road license plate was approved by the Oregon State Legislature in 2007.

**CONCLUSION**

The Louisiana Revised Statutes can help further implementation of Complete Streets principals. While there is existing language that supports Complete Streets, some language may hinder implementation. A legislative effort to refine existing and propose additional laws can complement the LADOTD’s internal Complete Streets policy.