Local Road Safety Program

Projects Selected for 2008/2009 Funding

The Local Road Safety Program (LRSP) Project Selection Committee met on December 18, 2008 to finalize eligible projects for the 2008/2009 funding cycle. Out of sixteen applications received, nine were found to be eligible and were approved.

In addition to the projects selected from applications submitted by local agencies, the LRSP Project Selection Committee approved 55 intersections for standardized packages of low cost safety improvements. In addition, 38 road segments were identified for evaluation for countermeasures to prevent and/or mitigate roadway departures. The intersection and roadway departure projects were identified based on a systematic statewide analysis of local road crash data conducted by LTAP and the LRSP project team. The goal of this system-wide approach is to reduce the potential for crashes and the subsequent injuries and fatalities using lower cost improvements at large numbers of potential high crash or serious crash locations. Locations or segments meeting the criteria were first identified and then evaluated during an on-site visit. Local agencies were also encouraged to nominate intersections for inclusion in the program, and all of these locations were evaluated for inclusion. More details on this systematic approach to reducing the risk for crashes is included below.

Statewide Local Intersection Improvement Program

The data indicated that the populated parishes and major metropolitan areas exhibited relatively large numbers of intersection crashes. It was determined that these more populated areas would consume the majority of the resources allotted to the intersection improvement program for this year, and spot improvements could actually interfere with ongoing local programs. As a result, the decision was made to exclude these areas from the preliminary analysis and to invite these more populated areas to particip-
By Bill King, P.E.
Asphalt Research Engineer
Louisiana Transportation Research Center

Louisiana Transportation Research Center’s (LTRC’s) asphalt materials research group is evaluating a new mixture intended to serve as a viable cost-effective alternative for the reconstruction of Louisiana’s low volume roadways. The Asphalt Treated Aggregate Mixture (ATAM) consists of an aggregate base with added asphalt and was originally intended to be used as a base mixture. It was developed at the request of contractors and Louisiana Department of Transportation and Development (LADOTD) personnel seeking a low-cost option. The ATAM is comprised of 75 percent #610 Stone Base and 25 percent washed sand and is mixed with three percent asphalt cement. LTRC is conducting a research project that includes an extensive laboratory evaluation as well as a comprehensive field performance evaluation. The laboratory investigation began in 2007, and many of the mixtures have demonstrated a great deal of promise thus far. Results from actual field projects will be forthcoming. The project is headed by principal investigator Dr. Louay Mohammad, who is assisted by Dr. Munir Nazzal and Bill King.

In the first phase of research, more than 10 different aggregate sources were tested in laboratory experiments. Experimental laboratory samples were subjected to performance tests intended to gauge strength, stability, durability, and other factors relating to the mixture and its individual components. Laboratory evaluations of the ATAM have shown positive results when compared with the performance of conventional mixes. Structurally, the ATAM is an ideal base material, sufficient to allow for the reduction of typical base thickness by at least 50 percent, and can speed up construction and provide greater smoothness in both concrete and asphalt pavements. However, many evaluations have shown a reduction in resistance to moisture damage. Based on the laboratory results, specifications have been developed for the implementation of research in actual roadway projects. In the second phase of research, long term field performance will be monitored and compared to the experimental laboratory results.

Completed Construction Projects

The first field project was constructed in February 2008 on Louisiana Highway 3127 near Convent. It consisted of placing a one mile experimental test lane with 2-in. thick ATAM on a 10-ft. wide shoulder. Barriere Construction Company, LLC served as the contractor for the project. The project is unique in that results from the one mile section of ATAM will also be compared with a one mile section of conventional Superpave Level I shoulder mix with 30 percent recycled asphalt.

A second project was constructed on U.S. Highway 425 near Rayville. Diamond B Construction placed a 3½-in. thick, 10 foot shoulder to match the surface grade.

A third project was constructed on US 190 near Opelousas. Prairie Contractors placed a 4-in. lift on the 10-ft. eastbound shoulder and a 2-in. lift on the 10-ft. westbound shoulder. Each shoulder was then overlayed with a Level II Superpave shoulder mix.
The fourth project was constructed on a new south-bound alignment of US 165 just south of Monroe. The first lift of 10-ft. shoulder was placed 3-in. thick, and a second 2-in. thick lift of surface layer was placed.

All projects have been successfully placed and will be evaluated over the next several years.

LTRC’s asphalt materials section is continuing to promote the ATAM concept for use on low volume roads in all of the districts. District design engineers have already shown interest in utilizing the technique in an effort to maximize and expand their available budget. ATAM will likely be tested and evaluated using LTRC’s accelerated loading facility (ALF) device. The ALF test will be able to confirm the strength of the material in a relatively short period of time by imparting thousands of truck axle loads on pavement built with ATAM.

For more information on the ATAM concept, contact Bill King at 225-767-9129, or email billking@dotd.la.gov.

Local Bridges Benefit from Redistribution of Funds

The message from Gary Pentek of LADOTD’s Off System Bridge Program is for local bridge owners to complete all project requirements as soon as possible once a bridge is accepted into the Off System Program for future funding. In 2008, a redistribution of obligated DOTD funds resulted in some additional dollars for the Off System Bridge Program.

The additional $9 million resulted in seven more bridge projects being added to the regular program of $13 million. The selected projects met all permitting and right-of-way requirements for immediate implementation upon receipt of the funds. Pentek stressed that there is no assurance that future redistributions or reallocations will result in additional funds for the Off System Bridge Program.

Funds in excess of the baseline funding program are up for competition among the many other transportation infrastructure needs in Louisiana. However, should such a windfall occur in the future, local projects that meet all requirements, including the often time consuming right-of-way acquisition, will be in the best position to selected into the funding cycle. Pentek also indicated that new projects will be accepted into the 2009-2010 program.

New bridge projects had not been accepted for several years because of the backlog of projects and limited funding.
LA Receives Federal Funds for Road Safety

On August 27, 2008, the United States Department of Transportation (US DOT) announced that 14 states, 3 counties, and 2 parishes competed for and were selected to receive $14.7 million in Rural Safety Innovation Program (RSIP) funds to improve safety on rural roads. LADOTD, in cooperation with parish personnel, submitted a number of applications, three of which were selected for funding. Louisiana received more funds than any other state that applied for this program. The funding sources for the program limited the types of projects and locations that would be considered. Over $9 million of the total funds available came from the US DOT Delta Region Transportation Development Program, which has specific eligibility requirements down to the state, county or parish, and type of road. The remainder of the funds had to be applied to projects that met the requirements of the US DOT's Intelligent Transportation Systems (ITS) Program. The time frame for submittal of the grant application from state or local agencies to the Federal Highway Administration (FHWA) was extremely tight due to the federal budget year constraints and the timing of the funding decisions.

The stringent project requirements resulted in the application process becoming quite a challenge. The Louisiana LTAP held a workshop in May 2008 to explain the requirements and opportunities to the local agencies. While Louisiana was one of seven states eligible under the Delta Region program, not all parishes were eligible, and most locally owned roads did not meet the criteria. While disappointed that many locally owned roads would not be eligible, LTAP was able to offer the LRSP project application process as an alternative.

The DOTD Highway Safety Office and the LA FHWA Division Office worked together to submit alternate applications for projects that would be eligible. Subsequently, LADOTD was awarded $3.6 million for three projects:

<table>
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<th>Project Description</th>
<th>Funding Amount</th>
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<tr>
<td>Roadway departure action plan (Rapides Parish)</td>
<td>$1,140,943</td>
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<tr>
<td>Roadway departure action plan (Grant Parish)</td>
<td>$597,954</td>
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<tr>
<td>Statewide Rural intersection safety implementation plan</td>
<td>$1,925,983</td>
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The statewide project will fund low cost safety improvements at 104 signalized and stop-controlled rural intersections that had a significant crash history as identified in the Louisiana Intersection Safety Action Plan. The other two projects will fund roadway departure countermeasures on rural state roads in both Rapides and Grant Parishes. Both Rapides and Grant Parishes applied for funds for their local roads in the first round of the RSIP grant application process and were chosen by the US DOT to apply for the second phase of the grant process. During the second phase of the RSIP, it was determined the roads submitted by the parishes for improvements were not eligible for federal-aid funding. Therefore, LADOTD, with the support of parish officials in both Grant and Rapides Parishes, identified rural, federal-aid roads that would be eligible for RSIP funds and had a significant crash history. As part of Phase II of the RSIP, LADOTD submitted two roadway departure crash reduction pilot projects for the parishes, which will begin the implementation of the Louisiana Roadway Departure Action Plan, available late this year.

While the eligibility requirements for the RSIP limited the inclusion of local roads, the LRSP will begin a greater focus on local rural roads in 2009. The LRSP, administered through LTAP, has initiated a system-based Roadway Departure Action Plan for the local roads. The LRSP has conducted a statewide data analysis to identify roads with higher than anticipated crash numbers and will be conducting site visits in conjunction with local agencies beginning in January 2009.
pate in a special workshop. This workshop will pro-
vide resources to assist interested parishes and
municipalities to prepare individualized intersection
action plans to address the road safety issues in their
areas in a more systematic and effective way. This
workshop is scheduled for March 10–12, 2009 at the
TTEC building in Baton Rouge. Invitations will be
sent, but any local representative interested in
attending this workshop is encouraged to contact
LTAP at 225-767-9184 or 227-767-9717 for more infor-
mation.

Upgrades to recommended non-signalized intersec-
tions include regulatory and warning signs with
flashing beacons, dual stop signs, and other warning
signs. Signalized intersections will include signal
backplates and visors, and non-MUTCD compliant
signal heads will be replaced. Preliminary engineer-
ing calculations to estimate the potential for crash
reduction at these intersections indicate that signifi-
cant reductions can be realized from these improve-
ment packages. The LRSP will be tracking the crash
data after the improvements are installed.
Intersection improvements identified by the LRSP as
part of this analysis will be included in the 2008/2009
funding program if the local road authority agrees to
participate.

Roadway Departure Countermeasures

Selected corridors and road segments are being visit-
ed by the LRSP engineers in order to determine pos-
sible countermeasures for roadway departures. Such
countermeasures may include curve signing
upgrades, installation of rumble strips, delineators,
and possible centerline and edgeline striping. All 64
parishes were included in this analysis.

The roadway departures were separated into two
types—spots and sections. It was very difficult to
identify the exact location of the crashes in many
cases, and since roadway departures are generally
random in nature, corridors or sections were identi-
fied. Road agencies are encouraged to review their
road systems for the crash segments or locations for
possible inclusion in the program. Please contact
Spencer Boatner at 225-767-9717 for more informa-
tion and to schedule a site visit. As mentioned previ-
ously, the statewide crash data is often incomplete
on local roads, and there is a high likelihood that
some locations will not be identified by the LRSP,
but local agencies will have this information.
Roadway departure improvements will also be fund-
ed 100 percent with no match required.

LRSP 2008/2009 Recommended for Funds

Town of Vinton
Variable Message Boards

St. Bernard Parish
Temporary Traffic Control Equipment

City of Kaplan
Speed Limit Trailers

City of Eunice
Speed Limit Trailers

City of Shreveport
Traffic Signal Power Backup Generators

Lafayette Consolidated Government
Dulles Drive at Domingue Road Roundabout

Ascension Parish
Churchpoint Road at Roddy Road Roundabout

City of Central
Curve Safety Improvements

City of New Orleans
Crosswalk Improvements

Cont. on page 8
New DOTD EDSM Refines Roadway Medians

By Jody Colvin
LADOTD Traffic Engineering

In an effort to maintain the public investment and improve safety and efficiency of the state highway system, LADOTD has redefined its policy on roadway medians with the recent release of Engineering Directive and Standards Manual (EDSM) IV.2.1.4, entitled Multi Lane Roadways and Median Openings. This new policy sets the design standard for median types, median spacing, and median openings on all state highways with four or more through lanes.

The most significant change is the elimination of the two-way-left-turn-lane (TWLTL). Multiple studies have shown that for a multilane roadway with an average daily traffic of 10,000 or more vehicles per day, a non-traversable median will have fewer crashes when compared to both an undivided roadway and a TWLTL. The non-traversable median is safer because it physically separates opposing traffic and limits conflicts between left turners. The median allows for a safe haven for left turning vehicles, and the driver only has to worry about traffic being clear in one direction of travel before turning.

This new policy will result in a reduced number of median openings for divided highways. Each median opening is a location where crashes can occur, resulting in reduced efficiency and safety. By reducing the frequency of these locations, the number of potential crashes can be reduced, which translates to a driver having fewer areas on which to concentrate. Thus, reducing the number of median openings will increase the efficiency and safety of Louisiana’s roadways.

On roadways where medians are to be constructed, the policy requires one-half mile spacing between median openings as well as the use of U-turn median openings and right in/right out driveways. It is important to note that the policy will not negatively impact property owners along highways. Studies have shown that making a U-turn at a median opening to get to the opposite side of a busy highway is about 25 percent safer than a direct left turn from a side street or other access point (Safe Access is Good for Business, FHWA). In addition, a full access median opening has the potential for 32 crashes, whereas a right-in/right-out driveway only has the potential for five crashes. While a U-turn and a right in/right out driveway may result in slightly longer trips, the trips will be much safer.

For existing roadways with medians, the new EDSM requires median openings to be spaced at least one-quarter mile apart and be redesigned as a partial median opening (allowing lefts from the mainline but not from the minor street or driveway). The median opening located within one-half mile of a signalized intersection requires a study to determine whether or not vehicles using the median openings interfere with the operation(s) of the signal(s).

On existing roadways with medians, a permit requesting a full access median opening will require a traffic impact study since allowing median openings will create potential crash locations where none previously existed. Road designers need to be very cautious about where and how new conflict points are added. It is LADOTD’s duty to protect the traveling public. The goal is not to make it more difficult for people to access side streets and driveways but to make the highway safer, which in the end will make it easier for the public to get around.

Overall, this policy will help increase and protect the existing capacity of Louisiana’s highway system resulting in benefits to the highway users as well as property owners along the highway. By taking a proactive position, LADOTD is moving toward a better, safer, and more efficient tomorrow.
Since 2004, the Louisiana Emergency Response Network (LERN) has functioned as an agency within the Louisiana Department of Health and Hospitals. LERN’s primary mission is to create a statewide network to provide coordination of Emergency Medical Services (EMS) and hospitals for all Louisiana citizens suffering significant trauma.

The system goes far beyond local emergency management systems, which show data on which hospitals are diverting patients transported by ambulance because of lack of bed space or staff. The system now also gives real-time information on each hospital’s resources from open beds to the physicians and specialists available. LERN ensures that those patients have timely access to life-saving, emergency surgical definitive care.

LERN designed the network based on their research of successful systems from other states having the same demographic, geographic, and available healthcare resources. The resulting plan established a network of LERN Call Centers (LCCs) to handle communications for the coordination of immediate movement of critically injured to the closest hospital with the life saving services each patient needs. Additionally, as part of its mission and design, the LCCs provide coordination of patient movement to definitive care during man-made or natural disasters.

LERN opened its first local Call Center in January 2008. The LERN Pilot Project created a network between the LSU Shreveport Level I Trauma Center, EMS agencies, and local area hospitals serving nine parishes in Northwest Louisiana. The Pilot Project is coordinating movement of critical trauma patients from the scene and local area hospitals based on established transfer protocols. The Pilot Project allows LERN to test its communications procedures, informational efforts with participating healthcare providers, and the effectiveness of the network.

According to statistics, prior to the LERN Call Center operations, it took an average of 2½ to 3 hours for similar patients to access definitive surgical intervention. Therefore, the LERN Call Center Pilot Project demonstrated the ability to reduce that time by 2 hours, greatly increasing the patient’s access to definitive care and improved outcomes.

Of the 22 patients the LERN Call Center served, 12 were involved in motor vehicle accidents on rural roads and highways. The LERN Pilot Project shows great promise to significantly decrease the death and disability for motor vehicle crashes in areas with limited definitive care healthcare resources.

While regional emergency medical communities regions have created their own systems of communication to better serve patients, LERN cuts out the need for emergency responders or hospitals to shop around for services or beds saving valuable time that could make a big impact on a patient’s outcome. With one call to a LERN call center, a first responder or hospital can find the closest hospital with the services needed for the patient. The LERN Call Center is staffed by paramedics 24 hours a day, seven days a week.

LERN will soon expand LCC operations to other parishes as healthcare providers evaluate the results of the LERN Pilot Project and the network provides services in those areas.
Upcoming Events

**Construction Inspection for Local Agencies**
- February 16 – Ruston, LA
- February 17 – Sulphur, LA
- February 18 – Baton Rouge, LA
- February 19 – Metairie, LA

**LTAP Intersection Safety Workshop for Priority Parishes**
- March 10 – 12, 2009
- TTEC Building
- Baton Rouge, LA

**Safety for Emergency Responders**
- April 21 – Sulphur, LA
- April 22 – Rayne, LA
- April 23 – Baton Rouge, LA
- April 28 – Madisonville, LA
- April 29 – Metairie, LA
- May 12 – Bossier City, LA
- May 13 – Monroe, LA
- May 14 – Alexandria, LA

**National Work Zone Awareness Week**
- April 6 – 10, 2009

**National Public Works Week**
- May 17 – 23, 2009

**Louisiana Highway Safety Commission Click-It-Or-Ticket Campaign**
- May 17 – 30, 2009

**Need Technical Help? Contact LTAP**

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<tr>
<td>225-767-9117</td>
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<td>800-595-4722 (in state)</td>
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<td>225-767-9156 (fax)</td>
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<td><a href="http://www.ltrc.lsu.edu/ltap/cu.html">www.ltrc.lsu.edu/ltap/cu.html</a></td>
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<td>Dr. Marie B. Walsh, Director</td>
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<tr>
<td>David McFarland, Teaching Associate</td>
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<tr>
<td>Robert Breaux, Office Manager</td>
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<td>Spencer Boatner, Local Road Safety (contractor)</td>
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<td>T.J. Dunlevy, Graduate Student</td>
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**Publication Statement**

*Technology Exchange* is published quarterly by the Louisiana Transportation Research Center. It is the newsletter of the Louisiana Local Technical Assistance Program. Any findings, conclusions, or recommendations presented in this newsletter are those of the authors and do not necessarily reflect those of LSU, LADOTD, or FHWA.

**Newsletter Staff**

*Jenny Speights*, Public Information Director | *Jenny Gilbert*, Editor
*T.J. Dunlevy*, Student Worker | *T.J. Dunlevy*, Publisher

The Louisiana Local Technical Assistance Program was established at the Louisiana Transportation Research Center on the LSU campus in 1986. The purpose of the center is to provide technical materials, information, and training to help local government agencies in Louisiana maintain and improve their roads and bridges in a cost effective manner. To accomplish this purpose, we publish a quarterly newsletter; conduct seminars, workshops, and mini-workshops covering various aspects of road and transportation issues; provide a lending library service of audio/visual programs; provide technical assistance through phone and mail-in requests relating to transportation technology; and undertake special projects of interest to municipalities in Louisiana. LTAP also coordinates the Louisiana Local Road Safety Program.

**LRSP, cont. from page 5**

A good starting point to improving safety in your community is to review your crash data. If your municipality needs crash data or crash data analysis on your roads, please contact Spencer Boatner at 225-767-9717 or email SpencerBoatner@dotd.la.gov. The LRSP engineers will be able to assist you in identifying any problem areas you may have and possible countermeasures that can be implemented.