

Illinois Interchange



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RECYCLING/RECLAIMING A SAVINGS SPREE

Chicago reuses to the max on famous shopping mile

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North Michigan Avenue, the center of Chicago’s shopping district and affectionately referred to as the “Magnificent Mile,” got even more magnificent last year with a new coat of “green” pavement laid down in November by the Chicago Department of Transportation (CDOT). The environmentally green asphalt-pavement surface includes three recycled construction materials—*asphalt shingles (RAS)*, *asphalt pavement (RAP)* and *ground-tire rubber (GTR)*. This unique combination of materials took CDOT to a new level in pavement recycling.

Rather than opt for a conventional dense-graded asphalt overlay, the CDOT team elected to keep pushing the recycling envelope on this high-profile project. That decision shaped the scope and resulted in a showcase project for Chicago.

The fast-tracked project was complete in time for the Magnificent



Mile Lights Festival parade held in November, which has become an annual precursor to the busy holiday shopping season. Given a short schedule, a limited budget and an exclusive address, this high-profile project was deemed a success by all stakeholders.

A Magnificent way

The recycling statistics for this medium-sized 12-block project are impressive. Using conservative estimates, the Magnificent Mile project incorporated:

- Recycled shingles torn from the roofs of 130 houses;

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Please pass this on to other interested parties in your office.



Illinois Department of Transportation
Bureau of Local Roads and Streets



Federal Highway Administration

SUMMARY OF MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY (MAP-21)

Bill Highlights

- Moving Ahead for Progress in the 21st Century (MAP-21) reauthorizes the Federal-aid highway program at the Congressional Budget Office's baseline level—equal to current funding levels plus inflation—for two fiscal years.
- MAP-21 consolidates the number of Federal programs by two-thirds, from about 90 programs down to less than 30, to focus resources on key national goals and reduce duplicative programs.
- Eliminates earmarks.
- Expedites project delivery while protecting the environment.
- Creates a new title called “America Fast Forward,” which strengthens the Transportation Infrastructure Finance and Innovation Program (TIFIA) program to leverage federal dollars further than they have been stretched before.
- Consolidates certain programs into a focused freight program to improve the movement of goods.

Authorizations and Programs

MAP-21 continues to provide the majority of Federal-aid highway funds to the states through core programs. However, the core highway programs have been reduced from seven to five, as follows:

- **National Highway Performance Program [New core program]** – This section consolidates existing programs (the Interstate Maintenance, National Highway System, and Highway Bridge programs) to create a single new program, which will provide increased flexibility, while guiding state and local investments to maintain and improve the conditions and performance of the National Highway System (NHS). This program will eliminate the barriers between existing programs that limit states' flexibility to address the most vital needs for highways and bridges and holds states accountable for improving outcomes and using tax dollars efficiently.
- **Transportation Mobility Program [New core program]** – This program replaces the current Surface Transportation Program, but retains the same structure, goals and flexibility to allow states and metropolitan areas to invest in the projects that fit their unique needs and priorities. It also gives a broad eligibility of surface transportation projects that can be constructed. Activities that previously received dedicated funding in SAFETEA-LU, but are being consolidated under MAP-21, will be retained as eligible activities under the Transportation Mobility Program.
- **National Freight Network Program [New core program]** – Our nation's economic health depends on a transportation system that provides for reliable and timely goods movements. Unfortunately, the condition and capacity of the highway system has failed to keep up with the growth in freight movement and is hampering the ability of businesses to efficiently transport goods due to congestion. MAP-21 addresses the need to improve goods movement by consolidating existing programs into a new focused freight program that provides funds to the states by formula for projects to improve regional and national freight movements on highways, including freight intermodal connectors.
- **Congestion Mitigation and Air Quality Improvement Program [Existing core program]** The Congestion Mitigation and Air Quality Improvement (CMAQ) Program provides funds to states for transportation projects designed to reduce traffic congestion and improve air quality. MAP-21 improves the existing CMAQ program by including particulate matter as one of the pollutants addressed, and by requiring a performance plan in large metropolitan areas to ensure that CMAQ funds are being used to improve air quality and congestion in those regions. Reforms the Transportation Enhancements program with more flexibility granted to the states on the use of the funds within the program.
- **Highway Safety Improvement Program [Existing core program]** – MAP-21 builds on the successful Highway Safety Improvement Program (HSIP). MAP-21 substantially increases the amount of funding for this program because of the strong results it has achieved in reducing fatalities. Under HSIP, states must develop and implement a safety plan that identifies highway safety programs and a strategy to address them.
- **Transportation Infrastructure Finance and Innovation Program (TIFIA)** – The TIFIA program provides direct loans, loan guarantees, and lines of credit to surface transportation projects at favorable terms. TIFIA will leverage private and other non-federal investment in transportation improvements.

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MAP-21 from page 2

Included in the “America Fast Forward” title of MAP-21 will be provisions that build upon the success of the TIFIA program. MAP-21 modifies the TIFIA program by increasing funding for the program to \$1 billion per year, by increasing the maximum share of project costs from 33 percent to 49 percent, by allowing TIFIA to be used to support a related set of projects, and by setting aside funding for projects in rural areas at more favorable terms.

- **Projects of National and Regional Significance Program** – This bill authorizes a program to fund major projects of national and regional significance which meet rigorous criteria and eligibility requirements. This program authorizes for appropriation \$1 billion in Fiscal Year 2013.
- **Federal Lands and Tribal Transportation Highways Programs** – MAP-21 consolidates the existing program structure by creating a new Federal lands and tribal transportation program. The bill maintains funding for maintenance and construction of roads and bridges that are vital to the federal lands of this country.
- **Territorial and Puerto Rico Highways Program** – This program provides funds to the U.S. territories and Puerto Rico to construct and maintain highway, bridge, and tunnel projects.

- **Administrative Expenses** – Funds the general administrative operations of the Federal Highway Administration.
- **Emergency Relief** – Provides funds to states to repair highways and bridges damaged by natural disasters.
- **Highway Bridge and Tunnel Inventory and Inspection Standards** – Improves the existing highway bridge inspection program and authorizes a national tunnel inspection program to ensure the safety of our nation’s bridges and tunnels.

Performance Management

- **Performance Measures and Targets in MAP-21**
The bill establishes an outcome-driven approach that tracks performance and will hold states and metropolitan planning organizations accountable for improving the conditions and performance of their transportation assets.
- **State and Metropolitan Transportation Planning**
MAP-21 improves statewide and metropolitan planning processes to incorporate a more comprehensive performance-based approach to decision making. Utilizing performance targets will assist states and metropolitan areas in targeting limited resources on projects that will improve the condition and performance of their transportation assets.

Acceleration of Project Delivery

MAP-21 includes program reforms designed to reduce project delivery time and costs while protecting the environment. Examples of improvements include: expanding the use of innovative contracting methods; creating dispute resolution procedures; allowing for early right-of-way acquisitions; reducing bureaucratic hurdles for projects with no significant environmental impact; encouraging early coordination between relevant agencies to avoid delays later in the review process; and accelerating project delivery decisions within specified deadlines.

Research and Education

- **Transportation Research Programs** – MAP-21 funds research and development, technology deployment, training and education, intelligent transportation system (ITS), and university transportation center activities to further innovation in transportation research. The primary research areas include: improving highway safety and infrastructure integrity; strengthening transportation planning and environmental decision-making; reducing congestion, improving highway operations; and enhancing freight productivity.



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- Recycled tire rubber from 2,200 discarded passenger car tires; and
- 24 truckloads of recycled asphalt pavement.

This stretch of North Michigan Avenue had not had a facelift since 2004, when the curb lanes were resurfaced. When the underlying base was investigated, the conditions were extremely inconsistent. Typically, CDOT would have performed resurfacing utilizing traditional binder and surface courses based on high-stability dense-graded Superpave mixes.

The inconsistencies with the underlying sub-base conditions and the limited time and budget for the work caused the city to rethink its plan. CDOT worked with materials consultant S.T.A.T.E. Testing to determine the best course of action. A stone-matrix asphalt (SMA) mix design constructed in a single 2-in. lift was chosen for this application because of its strength and durability. The single lift operation also reduced working days and limited traffic disruption.

From a green perspective, the high asphalt cement (binder) content of an SMA offers the opportunity to include a high amount of recycled binder. The mix design was developed by S.T.A.T.E. Testing, which worked with the general contractor, Arrow Road Construction, to develop a mix that consisted of ingredients already in use in the Chicago area. The combination was, however, unique to the Michigan Avenue project. The mix consisted of the following:

74% Quartzite aggregate, which provided strength, low absorption and high friction; 15% fractionated RAP (FRAP), which provided the majority of the fine aggregate in the mix.



Arrow Road Construction processed its FRAP to a minus 3/8-in. size. The FRAP contributed about 1% of the 6% total binder content required in the mix; 7.5% RAS. Southwind RAS Co. provided the processed reclaimed post-consumer (tear-off) shingles, which were sized smaller than a 3/8-in. sieve. The 26% asphalt content in the RAS provided almost 2% of the total binder required in the mix; 3.3% GTR modified asphalt binder. Seneca Petroleum, a local producer, provided the terminal-blended GTR-modified binder. GTR-modified binder is an economical replacement for the polymer-modified PG binders that are more commonly used in Illinois. Because of its stiffness, GTR binder prevents draindown in mixes where fibers would otherwise be required. The base liquid for the Michigan Avenue SMA was PG 58-28, and when blended with 12% GTR, the final binder grade is considered equivalent to a polymer-modified PG 70-28.

A return to SMA

SMA has become the mix of choice for high-volume expressways in the Chicago area. A structure of strong coarse aggregate and stiff asphalt binder makes a mix that is resistant to rutting and very durable. Its relatively high cost, however, has limited use

on non-truck arterial routes in Chicago. With 11 different bus routes running through the project limits, the city had a perfect opportunity to test the durability of this particular SMA.

“Whenever I’m asked to make a recommendation on a particular mix design for CDOT, I like to go back to the history of what has worked in the past,” said Jay Behnke of S.T.A.T.E. Testing, the creator of the concept and final design used on the project. “I went back to the successful North Avenue Bridge SMA overlay and South Michigan Avenue SMA bus pads. Both projects used SMA as the basic design but neither had structures and street returns to contend with during placement. This mix had to be more forgiving with all of the associated hand work. I think the stickiness of the GTR and the stiffness of the RAS worked extremely well together, limiting segregation.” In order to ensure that the mix produced met the design, Arrow Road produced several test runs of the material at its Mount Prospect, Ill., plant. “I think the team effort by all parties and the city’s willingness to listen to our concerns and work with us made for a successful end result,” said John Healy, president of Arrow Road Construction.

More of the binder

The combination of recycled FRAP and RAS provided 45%, by weight, of the 6% asphalt binder in this mix. By traditional standards, this is a very high percentage.

Until very recently, most asphalt-paving specifications limited the contribution of binder from recycled material to less than 25% of the total asphalt binder. There are reasons for this restriction. The most basic is that

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the amount of recycled material that could be physically incorporated into the mix was limited by the thermal transfer efficiency of the aggregate dryer and mixer and the capacity of the RAP feeder. Also, there is consensus “conventional wisdom” that too much recycled binder “pre-ages” the mix, making it susceptible to premature cracking and reducing its useful life.

The concept of limited binder replacement is under question. The recent rise in asphalt cement costs and the availability of new recycled ingredients provide justification to take another look at the binder restrictions.

A holiday rush

This Michigan Avenue project provided another challenge to turn green theory into greener streets. There are multiple story lines in a project like this, including the urban working conditions, green objectives and tight schedules.

Night paving is commonly required in high-traffic locations. But urban streets provide more night-paving challenges than do expressways. Urban streets include intersections, turn lanes, signal loops, pavement markings, curb ramps, utility structures and pedestrians—lots and lots of pedestrians at all hours of the day and night.

In the case of Michigan Avenue, there also are commercial and retail businesses, residences and hotels to consider. With the impending holiday season, there also was a push by the local businesses and the Greater North Michigan Avenue Association to get holiday plantings, decorations and displays in place. Much of that work occurs at night.

Night or day, attention to scheduling and coordination is essential to all successful construction projects. Pablo Martinez from V3 Cos., the resident engineer, and Bulent Agar, CDOT’s construction manager for the project, attest to the complications associated with scheduling such a fast-tracked, unique and high-profile project.

“The scheduling and coordination of this project between the various city agencies, traveling public and the local businesses was a monumental task. It definitely helped that the local businesses were receptive to the project and the local alderman’s office really helped us to get the word out and to coordinate with all parties impacted by the work,” said Agar. In addition to the challenges of working in a highly congested area, the contractor also had to react to a few unforeseen obstacles and permit restrictions during the construction. “Arrow Road was spot-on with the schedule, put forth a great effort under difficult conditions and was responsive to the city and community’s needs,” said Agar.

This was an accelerated project from the beginning. Not on the original design schedule for 2011, a decision to move forward was not reached until late August. Construction permits were issued and structure adjustments began on Sept. 28; milling was completed on Oct. 19; paving was finished on Oct. 22, with loop detectors and striping substantially completed on Nov. 14.

To accommodate the businesses, hotels and residential buildings, as well as the highly sensitive traffic on this corridor, work-hour/noise restrictions were placed. Milling, paving, pavement-marking installation and detector-loop installation operations (more than 500 ft of signal detector loops were installed at 30 locations)

were limited to nighttime hours between 8 p.m. and 6 a.m. Utility structure adjustment, as well as curb-and-gutter and sidewalk installation, was limited to daytime operations between 9 a.m. and 3 p.m. No work was allowed between Friday afternoon at 3 p.m. and Monday morning at 9 a.m.

The major portion of the work included milling 2 in. of deteriorated dense-graded asphalt overlay and placing a single 2-in. lift (3,500 tons) of SMA inlay for a 12-block length of Michigan Avenue. At the north end of the project, where Michigan Avenue becomes “inner” Lake Shore Drive, a more traditional Superpave surface mix was used.

The project included a “trackless” prime coat. The city’s recent trials showed improved bonding of the new asphalt surface vs. the traditional emulsion prime.

A total of 103 utility structures were adjusted during daytime hours, prior to milling operations, thereby minimizing the disruptive work required between milling and paving operations. The pavement around the structures was removed, the structures were adjusted and the surrounding pavement was replaced with rapid-setting calcium aluminate cement concrete mix provided by Chicago-based Henry Frerk & Sons in mobile concrete mixers. The concrete achieved strengths of 3,200 psi in four hours, allowing the restricted lanes to be fully reopened to traffic at the end of the work day.

Crosswalks on the new pavement were installed according to the city’s new “continental” standard, utilizing a 24-in.-wide white line at 4-ft centers, 10 ft wide. This new standard increases the visibility of the cross-

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walks, which is critical due to the large volume of pedestrian traffic.

Going deeper into green

Since the mid-2000s, CDOT has aggressively pursued green-paving technology. In multiple combinations, the department has incorporated waste shingles, scrap tires and mountains of old asphalt pavement into their paving programs. They also have been an Illinois leader in pursuing pervious paving surfaces and warm-mix asphalt (WMA).

CDOT is cooperating with the

Illinois Department of Transportation and the Illinois Tollway to experiment with and evaluate several green technologies. The evaluations look at individual recycle options and combinations. Other projects being evaluated include different FRAP components, pervious pavements, WMA and softer grades of PG binder. Traditional pavement research is time-consuming, drawn out by lab work, peer review, publishing, etc. The almost simultaneous appearance of FRAP, RAS and WMA have pressured highway agencies to use shorter research time frames. One way to evaluate higher binder replacement is

to just build the pavement and measure the effects.

The use of recycled ingredients has the potential to lower costs and improve quality. Lower costs are a natural part of competitive bidding, as contractors choose to use recycled material in their mixes. The Michigan Avenue project was successful in getting this high-recycle mix on the street. The new street surface is expected to withstand years of Chicago's four-season weather while looking good for the thousands of people who work, shop and live on the Magnificent Mile.

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)



The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was signed into law on August 10, 2005, established the Highway Safety Improvement Program (HSIP) as a core Federal-aid program. The overall purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads through the implementation of infrastructure-related highway safety improvements.

The specific provisions pertaining to the HSIP, are defined in Section 1401 of SAFETEA-LU, which amended Section 148 of Title 23, *United States Code* (23 USC 148) to incorporate these provisions. These requirements include the development of **Strategic highway Safety**

Plans (SHSPs), in consultation with other key State and local highway safety stakeholders, and a number of reporting requirements.

As part of the HSIP, \$220 million is set aside each fiscal year for the **Railway-Highway Crossings Program** (23 USC 130). These funds provide for the elimination of hazards and the installation of protective devices at public railway-highway crossings. Also as part of the HSIP, a new **High Risk Rural Roads Program** was established that provides funding for construction and operational improvements on rural major or minor collectors or rural local roads. Additional information on these programs can be found by clicking the links below.

To ensure that the HSIP is carried

out in an organized, systematic manner where the greatest benefits are achieved, a formalized HSIP process has been established that consists of three major components: planning, implementation and evaluation.

These requirements can be found under <http://edocket.access.gpo.gov/2008/pdf/E8-30168.pdf> [89.8 KB].



- General HSIP Information
- Strategic Highway Safety Plan
- Policy and Guidance
- Data and Analysis Tools
- High Risk Rural Roads Program
- Highway-Rail Grade Crossings
- Transparency Reports (5 percent)
- Transportation Safety Planning (TSP)
- HSIP Resources (Check here for new resources!)
 - Publications
 - Highway Safety Peer-to-Peer Programs
 - Training

FHWA LAUNCHES NEW ROUND OF EVERY DAY COUNTS INNOVATIONS

The Federal Highway Administration has rolled out a new set of innovative technologies and processes under its Every Day Counts initiative that can help shorten the time needed to get highway projects finished and open to the public.

For the next two years, FHWA will work with transportation agencies and the design and construction industries to deploy the 13 innovations, which range from construction management techniques to paving machinery that uses GPS technology to build higher-quality, longer-lasting roads.

Every Day Counts, which began in 2010, is achieving significant results on the first round of technologies the initiative promoted. Every state transportation agency has applied one or more of the technologies, and many are now widely used. More than 40 states, for example, have used the Safety EdgeSM, a paving technique that tapers the roadway edge to allow drivers who drift off the road to return safely.

To promote EDC2, FHWA has formed teams of experts to help highway stakeholders across the country deploy the following technologies and processes:

Programmatic agreements, also part of the first round of Every Day Counts, establish streamlined approaches for handling routine environmental requirements. In EDC2, some of the newly developed agreements will be applied in additional states or expanded to include regions. The emphasis will be on continuing to increase the efficiency and effectiveness of the highway development process while maintaining appropri-

ate consideration of the environment.

FHWA has developed a three-pronged strategy to help local public agencies navigate the complexities of the Federal-Aid Highway Program. These **strategies for locally administered Federal-Aid projects** include certification and qualification-type programs, indefinite delivery–indefinite quantity consultant contracts and stakeholder committees. Using these strategies can reduce the amount of oversight states need to provide and make it easier for local agencies to follow federal regulations and guidelines.

Although **3D modeling technology** has been widely used in other industries, its potential to increase productivity and efficiency in highway construction is just now being realized. GPS-enabled construction equipment, for example, can run all day and night with guidance from 3D model data and achieve accurate grades on the first pass, reducing waste and improving resource use.

GRS-IBS technology uses layers of compacted granular fill and fabric sheets of geotextile reinforcement to provide bridge support.

With 3D modeling software, project teams can connect virtually to collaborate on designs throughout the design and construction phases. Intelligent compaction can improve pavement quality and accelerate project delivery.

Diverging diamond interchange design enhances safety by reducing conflict points on interchanges. Intelligent compaction is a modern approach to compaction of pavement materials, an important construction process that enhances pavement qual-

ity and performance. IC uses special vibratory rollers equipped with accelerometers, an integrated measurement system, GPS-based mapping and an onboard computer reporting system. Using IC can accelerate project delivery as well as improve quality.

Accelerated bridge construction technologies allow highway agencies to replace bridges faster, more safely and sometimes at lower cost. Three ABC technologies being promoted under EDC2 are prefabricated bridge elements and systems, in which structures or components are built off-site and moved into place in a matter of hours; slide-in bridge construction, in which a bridge is built next to an existing structure and slid into place after the old bridge is removed; and the geosynthetic reinforced soil integrated bridge system, which uses geosynthetic reinforcement and granular soils as a composite material to build enhanced abutments and approach embankments.

The design-build project delivery method allows the design and construction phases of a project to be combined in one contract, which can dramatically accelerate project completion over the traditional design-bid-build process, in which design and construction occur sequentially. In design-build, a highway agency identifies what it wants constructed, accepts bids and selects a contractor to assume the risk and responsibility for both the design and construction phases.

In the **construction manager–general** contractor process, the project owner hires a contractor to

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NEW ONLINE RESOURCE HELPS LOCAL GOVERNMENT DELIVER FEDERAL-AID PROJECTS

Local public agencies (LPAs)—mostly counties, cities and towns—own and operate the vast majority of the nation’s highway system. The nation’s local roads network comprises about 3 million miles, or nearly 75 percent, of the overall system, and more than half of the bridges. Local public agencies build and maintain the local roads network using a variety of funding sources, including the Federal-aid Highway Program. Every year LPAs administer about \$7 billion in Federal-aid projects, which can range from short sidewalks and bike-pedestrian facilities to pavement overlays and bridges.

When LPAs receive Federal-aid funding, they begin a process of working closely with their respective state department of transportation (state DOT) to meet all Federal-aid requirements, such as environmental reviews, civil rights compliance, right-of-way acquisitions, safety, and construction and contract administration. Understanding Federal-aid requirements is critical to the successful delivery of federally funded projects at the local level. Non-compliance can lead to project delays and LPAs not receiving timely Federal-aid reimbursements.

To help LPAs meet their Federal-aid requirements, the Federal Highway Administration (FHWA) recently launch a new information-sharing initiative, called Federal-aid Essentials for Local Public Agencies, that offers an abundance of information about key aspects of the Federal-aid program on a single public website.

The Federal-aid Essentials website features a resource library of more than 80 informational videos

Federal-aid Essentials for Local Public Agencies

and related materials. The videos focus on a single topic in the most critical areas of Federal-aid. The videos are relatively short at less than 10 minutes long, professionally narrated in non-technical language, and supported with engaging graphics and animation that give viewers the most essential content. The videos can be viewed in any sequence from any computer or mobile device with Internet access.

When users first enter the Federal-aid Essentials website at www.fhwa.dot.gov/federal-aidessentials, they will be greeted with a brief introductory video about the Federal-aid Essentials initiative and how to navigate the Web site. From there, users will have access to the resource library via a convenient drop-down menu that presents seven categories of video modules:

- Federal-aid Program Overview
- Civil Rights
- Environment
- Finance

- Right of Way
- Product Development
- Project Construction and Contract Administration

After choosing a category, a menu of video modules for the specific category appears next to the video viewing screen. Users simply click on the desired video title and the presentation begins. On the same page, users have access to a wealth of companion materials, including a written, printable script of each video, the applicable Code of Federal Regulations, helpful reference information, and links to additional online resources. Another function allows users to give feedback on a particular video, the full resource library and the website itself.

If users have questions about a particular video’s content or about the Federal-aid program in general, they can click on a State Resources

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provide feedback during the design phase. Once the design phase is complete, the contractor and project owner negotiate a price for the construction contract. This process enables the contractor to offer suggestions during the design phase on innovation use and best practices and enables the project owner to make informed decisions on costs and scheduling.

The use of **alternative technical concepts** gives contractors the opportunity to propose innovative, cost-effective solutions that are equal to or better than the state's design and construction criteria. This contracting approach promotes competition and allows highway agencies to choose design and construction solutions that offer the best value.

High-friction surface treatment is a pavement technology that dramatically reduces crashes, injuries and fatalities. It involves applying high-quality aggregate with friction values far exceeding conventional pavement friction to existing or

potential high-crash areas to help motorists maintain better control in dry and wet driving conditions.

Several innovative geometric intersection and interchange designs are now available that reduce or move crossover, or conflict, points in intersections, increasing safety for motorists, pedestrians and bicyclists. Roundabouts, diverging diamond interchanges and intersections with displaced left-turns or variations on U-turns are among the alternatives to traditional designs EDC2 is promoting.

While most map-building applications at federal, state and local transportation agencies are housed internally, a new **geospatial data collaboration initiative** uses cloud-based geographic information system services to improve data sharing within agencies and among project delivery stakeholders. Collaborative analyses and rapid updating of shared maps will lead to faster consensus building and improved decision support.

The EDC2 **quality environmental documentation initiative** is designed to promote recommenda-

tions to improve the quality and reduce the size of National Environmental Policy Act documents developed for construction projects. The initiative will help make NEPA documents more effective in disclosing the information used in making project decisions to the public and participating agencies. That, in turn, will help project proponents accelerate project delivery and achieve better environmental outcomes.

Crashes, disabled vehicles and road debris create unsafe driving conditions and cause about 25 percent of all traffic delays. A **first responder training initiative** will offer the first national, multidisciplinary traffic incident management process and training program. The initiative will promote shared understanding of the requirements for safe and quick clearance of traffic incidents, prompt and open communications, and motorist and responder safeguards. For more information on the EDC2 initiatives and to view a Web conference, go to www.fhwa.dot.gov/everydaycounts/edctwo/index.cfm.

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button on the main page and gain access to a list of useful information, including individual state and FHWA local office LPA coordinator contacts and web links to state DOTs, state LPA manuals, local technical assistance program (LTAP) centers, and other helpful online resources. A drop-down menu on the main page, titled "I want to know about..." helps users find information quickly and conveniently about common Federal-aid topics. The site is regularly updated and new features added to meet state DOT and LPA needs and requests.

Since the modules are available anywhere there is Internet access, they can be used in a multitude of settings on any Internet-ready device. They can be shown at meetings, viewed in one's office or viewed on a job site using a laptop computer or mobile device. A project team can access the videos on a minute's notice anytime, anywhere for discussion with stakeholders and partners. After viewing the videos, viewers acquire enough knowledge to know what questions to ask their state DOT counterparts, what appropriate technical terminology to use, and how and where to get additional assistance. State DOTs and LPAs also can use

the videos to augment training at the local level. The Federal-aid Essentials website helps LPAs understand their Federal-aid requirements as they pursue better, faster and smarter ways of delivering the Federal-aid program at the local level.

You can read more about the Federal-aid Essentials initiative in FHWA's Public Roads magazine at <http://www.fhwa.dot.gov/publications/publicroads/12septoct/03.cfm>.

For more information on this initiative, please e-mail the Federal-aid Essentials for Local Public Agencies program at LPA-feedback@dot.gov.

Engineer Way Rd

STREET NAME SIGN SIZE

Compliance with MUTCD Sign Size Requirements

In the last edition of the Illinois Interchange, the Technology Transfer Center included an article concerning street name sign compliance based on changes in the 2009 Manual on Uniform Traffic Control Devices (MUTCD). While the article was accurate as to what is required, it is important to note that MUTCD Section 2A.11 Dimensions allows the following:

“The sign dimensions prescribed in the sign size tables in the various Parts and Chapters in this Manual and in the “Standard Highway Signs and Markings” book (see Section 1A.11) shall be used unless engineering judgment determines that other sizes are appropriate. Except as provided in Paragraph 3, where engineering judgment determines that sizes smaller than the prescribed dimensions are appropriate for use, the sign dimensions shall not be less than the minimum dimensions specified in this Manual.”

Therefore, for street name signs, if a local public agency (LPA) desires to use a sign blank that is less than 12 inches high for 6 inch/ 4.5 inch mixed case lettering, a LPA must document the engineering judgment used. Please see the following figure depicting some street name signs using different font, panel size, and borders.

See page 11 for photos

GAME CHANGER THE ECONOMY

DAVID LAWRY, PE, DIRECTOR OF VILLAGE OPERATIONS, WAUCONDA, ILL.

Many people consider lower property values, wages, and pensions a temporary condition that will improve as the world's economy recovers. But not David Lawry.

“I see these adjustments as more permanent with long-lasting effects,” he says. “Staffs will have to work longer and harder and need to find innovative ways to meet the needs of their communities.”

Lawry offers two justifications for his conclusion:

- With technology enabling employees to work further from their office, employers are maintaining service levels with less head count.

- More public-private and public-public partnerships are taking place to share and reduce costs. Instead of reducing staffing and services or raising taxes, consider other ways of enhancing efficiencies. Residents, or example, aren't just customers; they're also potential partners.

“Examples are community beautification, snow clearing, fall leaf collection, brush pick up, yardwaste collection, and solid waste collection,” Lawry says. “All were at one time provided solely by the municipality, but are now shared with the community in some form to reduce costs.”

(This article is a portion of an article reprinted from a larger article published by Public Works magazine, a Hanley Wood LLC publication.)



Prior to his current position as operations director for the Village of Wauconda, Ill., David Lawry, PE, served as the public services director for the nearby city of Elgin for 14 years. He also served as Elgin's public works director for three years and as a civil engineer for seven years. Lawry is a former member of the APWA National Board of Directors, and served in all the officer positions of the APWA Chicago Metro Chapter at both the branch and chapter levels. Photo: APWA



Sign Style A



Sign Style

A

B

C

D

E

F

A - 12" High Sign Blank; 6" Upper Case (UC) / 4.5" Lower Case (LC); with Border; D-Series Font

B - 10" High Sign Blank; 6" UC / 4.5" LC; with Border; D-Series Font

C - 9" High Sign Blank; 6" UC / 4.5" LC; with Border; D-Series Font

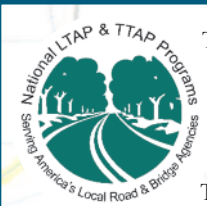
D - 9" High Sign Blank; 6" UC / 4.5" LC; without Border; D-Series Font

E - 9" High Sign Blank; 6" UC / 4.5" LC; without Border; B-Series Font

F - 8" High Sign Blank; 4" UC / 3" LC; with Border; B-Series Font



Sign Style F



The Technology Transfer (T2) Program is a nationwide effort financed jointly by the Federal Highway Administration and individual state departments of transportation. Its purpose is to transfer the latest state-of-the-art technology in the areas of roads and bridges by translating the technology into terms understood by local and state highway or transportation personnel.

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