

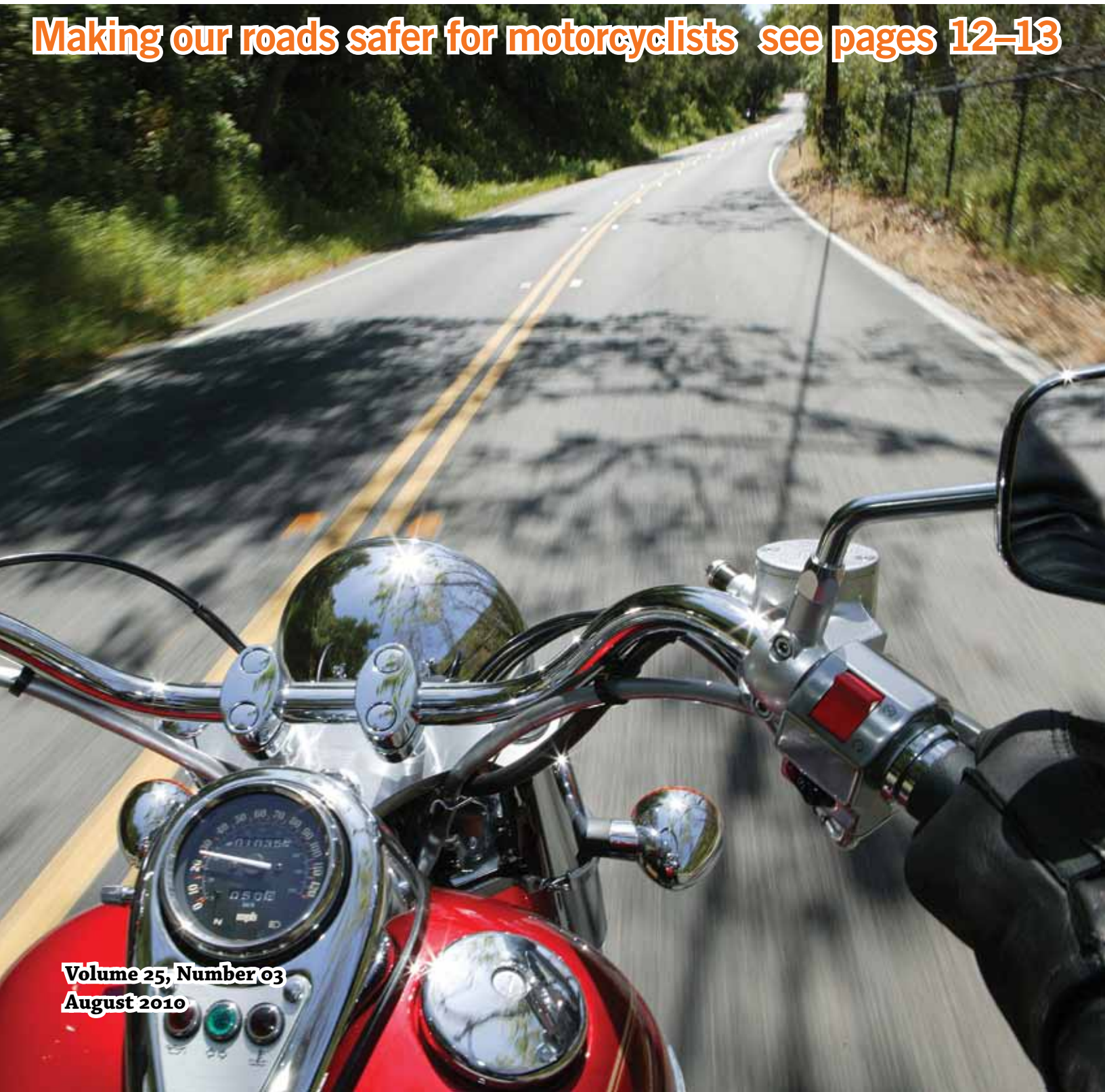
Technology Transfer Quarterly

Florida's Traffic Engineering and Safety Workforce Training Update



Florida Transportation Technology Transfer Center

Making our roads safer for motorcyclists see pages 12-13



**Volume 25, Number 03
August 2010**



Florida Transportation Technology Transfer Center

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Train Your Agency Personnel for Free with these Transportation Safety Courses

Qualifying local agency personnel can receive tuition waivers to attend or host one or more of the following courses:

- Low Cost Safety Improvements for Rural Roads
- Intersection Safety
- Road Safety Audits (RSAs) for Local Governments

Course sessions are being scheduled through September 30, 2010. Please contact David Page at 352.273.1685 to see if your agency qualifies for this assistance. Visit t2ctt.ce.ufl.edu and click on "Training" for course listings and information. These opportunities have been made possible by a grant from the Florida Department of Transportation Safety Office. ■■■

Florida Technology Transfer Quarterly

Established 1984

Voice	352.392.2371
Workshop Registration	EXT. 31670
Workshop Development	EXT. 31685
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Florida Technology Transfer Quarterly, published by the Florida Transportation Technology Transfer (T²) Center at the University of Florida, Department of Civil and Coastal Engineering, facilitates information exchange relating to roads, bridges, general surface transportation and safety.

Our programs are sponsored through partnerships between the Florida Department of Transportation and the Federal Highway Administration and include the Local Technical Assistance Program (LTAP), Safety Circuit Rider Program (SCR), the Product Demonstration Showcase Program (PDS), the Pedestrian/Bicycling Safety Resource Center, and the Center for Transportation Training (CTT) which offers Construction Training Qualification Program (CTQP) courses.

Interested parties may receive this publication at no cost by completing and returning the FaxBack form on the inside back cover. Newsletter content and accuracy is the exclusive responsibility of the Florida T² Center.

Circulation: 16,628



Win a Free Work Zone Equipment Package

just by attending select transportation safety courses

Thanks to a grant from the Federal Highway Administration (FHWA), one lucky local public agency will win a work zone equipment package worth more than \$2,100*. For every local public agency employee who attends one or more of the following courses held through September 2010, the agency will receive one entry into the drawing.

- Low Cost Safety Improvements for Rural Roads
- Intersection Safety
- Road Safety Audits for Local Governments

Sign five up and have five attend and get five chances. Sign 20 up and attend and get 20 chances!

Plus, qualifying local agency personnel can also receive free tuition to attend or host one or more of the courses. Attendance at these courses can be via our new Distance Learning option or at a live presentation.

Please contact David Page at 352.273.1685 to see if your local agency qualifies for tuition waivers. Visit t2ctt.ce.ufl.edu and click on "Training" for course dates, information, to register for training and for a chance to win! The tuition waiver opportunities have been made possible by a grant from the Florida Department of Transportation Safety Office.

Agencies attending will also receive a free copy of the following FHWA course PowerPoint presentations to share with their agency personnel:

- Safety at Signalized Intersections
- Safety at Unsignalized Intersections
- Safety Aspects of Roundabouts
- Red-Light Running
- Intersection Safety

*The work zone equipment includes over 80 pieces of equipment: 36" traffic cones, stop/slow paddles, 48" signs: (Flagger, Road Work Ahead, One Lane Road Ahead, End Road Work), Class II vests, ball caps, and sign stands! The drawing will be held later this fall and the winner will be announced in the November issue of this publication. ■■■

Put the Brakes on Fatalities Day 10th Anniversary Scheduled for 10-10-10

On October 10, 2010, the national Put the Brakes on Fatalities Day (PBFD) Campaign will celebrate its 10th anniversary. This year's theme is distracted driving.

Visit www.brakesonfatalities.org for more information. ■■■

Spotlight on Larry Hagen, T² Instructor



Many agency personnel are familiar with Larry Hagen as he is one of our Florida T² Center's Safety Circuit Riders and a part-time instructor. His duties as a Safety Circuit Rider include assisting agencies to help them reduce the frequency and severity of roadway crashes

by helping identify roadway segments needing safety improvements and providing suggestions to implement those changes. He also produced a Traffic Safety CD that has been widely distributed and used throughout Florida and shared with every state in the country. The CD proved so popular that he is working on an updated version that will be available later this fall.

Larry completed graduate work in transportation engineering at the University of Florida. His professional career includes serving in the public, private, and academic sectors. Larry has held positions in the Florida Department of Transportation (FDOT), county government, small and large consulting firms, and as a researcher and teaching professor of graduate and undergraduate engineering students. He continues to work as a consultant in "a very large one-man firm," as he states (Larry is one very large man, and he is the firm). He currently is working on a number of projects for FDOT which further enhances his knowledge in the areas of traffic operations, traffic safety, traffic incident management, road safety audits, intelligent transportation systems, impact assessment, and much more. Larry has been teaching for the T² Center for nearly 20 years. His vast and diverse career allows him to draw on his past and current work experience to help the students he teaches. Workshops that Larry teaches for the T² Center include:

- Safe Mobility for Life
- Low-Cost Safety Improvements
- Traffic Engineering Fundamentals
- Road Safety Audits for Local Governments
- Road Safety Assessments for CTSTS
- Advanced MOT and Advanced Refresher
- Intermediate MOT and Intermediate Refresher
- Retroreflectivity

Larry's passion for learning, teaching and the profession continue to drive him to give back, as an instructor and expert. When teaching workshops for T², he strives to bring a lot of the fun into the learning so that the learning experience is more memorable and enjoyable. He often finds that he learns a lot from the class participants that can then be shared at future workshops. When not consulting or teaching, he can be found on his farm where he and his family raise chickens and cows and grow a wide variety of crops. ■■■

FACERS Awards

The Florida Association of County Engineers and Road Superintendents (FACERS) recognizes excellent service in Florida's public works agencies. The FACERS awards are the most prestigious professional recognition in Florida for public works and transportation personnel. Visit www.facers.org for more information.

Nominees are not required to be a FACERS member.

FACERS Public Works Employee of the Year

Jim Proce, Public Works Director

City of Palm Bay

In 1981, the City of Palm Bay hired Jim Proce to perform surveying and drafting/design. He worked up through the ranks, gaining invaluable experience and understanding of what it takes to run a very successful organization. He became the Public Works Director in 2003 and has built one of the most dynamic public works departments in the Southeast.

His involvement and sincerity with his community, both on the job and off, have earned him the trust of the community and



▲ Jim Proce, City of Palm Bay Public Works Director, receives the FACERS Public Works Employee of the Year award from FACERS President Danielle Slaterpryce.

Collier County was awarded the FACERS Team Project of the Year. Left to right:

Purchasing/General Service Director Steve Carnell, Commissioner Frank Halas, Project Manager Margaret Bishop, PE, Principal Project Manager Eugene Calvert, PE, PBS&J Senior Project Engineer Michael Ryan, PE, and FACERS President Danielle Slaterpryce. ▶

Photo credit: FACERS member, Brian Barnes, Charlotte County



coworkers. He and other public works employees even perform as the "RoadKiLL" Band each year at the Annual Holiday Parade and other community events.

A significant strength is Jim's desire to take on any challenge and not only achieve, but exceed the goal. The public works projects completed in 2009 under Jim's guidance reflect this strength. Recent projects include the Jupiter Blvd Bridge replacement, the Malabar Road pipe repairs, sidewalk installations and intersections improvement, ARRA resurfacing projects, a drainage structure inventory and replacement cost analysis (\$16.5 million), a joint signal timing project, and a Right-of-Way Maintenance Program previously performed by contractors. He procured a fleet loaner vehicle which reduced mileage reimbursements over \$1,000 in three months and his department obtained military surplus vehicles to replace fire brush trucks. In addition, he utilized the Energy Price Risk Management Strategy (EPRMS) to hedge the fuel budget against volatile prices. He planned a new sign program to replace all regulatory and warning signs (over 26,000 sign faces), helped implement a signal timing project and annual signal preventative maintenance schedule.

Jim's formula for success: "Listen - this is the hard part for most of us. Provide quick answers, even if the answer is no. Share whatever information I have, even if it gets me yelled at. Explain things explicitly in common terms - most folks have tunnel vision and are only looking at their perspective. Relentless follow up — always do what I say I will do. And if all else fails, smile — even if it hurts!"

Jim's devotion to the citizens and employees of City of Palm Bay is unparalleled and he always goes the extra mile. Jim, thank you and congratulations on a job well done and being named FACERS Public Works Employee of the Year!

FACERS Team Project of the Year

Project: Freedom Park – Gordon River Water Quality Park

Team Leader: Margaret Bishop PE, Senior Project Manager Collier County Transportation Services Division

Stormwater Management

Team: Collier County Stormwater Management, Collier County Parks and Recreation,

Conservation Collier, South Florida Water Management District, Florida Communities Trust, Kraft Construction Company, Inc., CH2M Hill, PBS&J

Naples Bay's ecosystem has experienced increased pollution ▮

due to extensive land development, fertilizers and pesticides. Development also caused an increase in stormwater runoff, resulting in flooding within the Gordon River Basin. Growth and pollution presented major challenges to Collier County's stormwater network, requiring innovative new solutions and improvements to accommodate the region's needs.

The county created Freedom Park, a 50-acre water quality treatment park, to help reduce harmful pollutants from street runoff from entering Naples Bay and the Gulf of Mexico and to alleviate flooding problems. Reducing peak flows and duration resulting from storm events in the basin also improved water quality, wetland habitat, and groundwater recharge. Based on the application of an interconnected system of multi-depth ponds, polishing marshes, and wetlands, the man-made park functions as a natural filtration system similar to the Everglades.

The park also provides a number of passive recreational, educational, and habitat protectoral uses. An on-site research center hosts educational programs about the water quality park as well as the protection of the habitat and species.

The park combines wetlands, habitats, trails, boardwalks, observation piers, and extensive landscaping within the passive setting and intrigues and educates nature enthusiasts. It provides opportunities for viewing and appreciating the wildlife, lakes, and wetlands, as well as the unique techniques for stormwater management, including cascading ponds to provide littoral shelves to increase wildlife habitats. The wetland and mangrove swamp areas are appropriate for listed species, including American Alligator, Limpkin, White Ibis, Snowy Egret, Tricolored Heron, Wood Stork and Little Blue Heron. The upland habitats support Gopher Tortoise, American Bald Eagle, Big Cypress Fox Squirrel and Eastern Indigo Snake.

The project, the first of its kind for Collier County, was paid for by grant funds to help with stormwater runoff by using lakes to naturally filter the water, which furthers Collier County's objective of creating a natural linkage and resource for recreational pathways. The project allows for development of an area without damaging the ecological nature of the system, preserving and enhancing a natural wetland area and implements a means so people and nature can co-exist.

The Freedom Memorial, a tribute to our Armed Forces, law enforcement, firefighters, emergency medical personnel and civilians who perished during the September 11, 2001 terrorist attacks, is located at the park.

Future phases include the application of Aquifer Storage Recovery (ASR) technology to provide a non-potable water supply for landscape irrigation, and possibly a mitigation bank for water quality and wetland impacts from future area construction projects. Treatment wetlands and ASR water recharge facilities will provide multiple benefits, including water quality improvements, aquifer recharge, the creation and maintenance of undeveloped "green space" within urban areas, wildlife habitat, and passive recreational opportunities for the community.

Congratulations, Collier County for receiving the FACERS Team award!

Juan Lopez, Hillsborough County Right-of-Way Management Office Manager, receives the FACERS Urban Engineer of the Year Award from FACERS President Danielle Slaterpryce.

FACERS Urban Engineer of the Year

Juan Lopez, Manager

Right-of-Way Management Office

Transportation Maintenance Division

Hillsborough County Public Works Department

Juan Lopez manages the Right-of-Way Management Office for Hillsborough County's Public Works Department and the Transportation Maintenance Division. He is an engineer with over 20 years of experience in managing Capital Improvement Projects, maintenance projects, Maintenance of Traffic, and utility coordination. Juan is actively involved in all operations including meeting with the citizens, utilities, county agencies, and media to ensure public safety.

With 1,100 square miles and 850,000 citizens residing in the unincorporated Hillsborough County, the Division has a large inventory of assets and public infrastructure to maintain. The mission of the Right-of-Way Management Office is to permit and inspect all work being conducted in the county's rights-of-way.

The office issues approximately 3,600 Use and Temporary Traffic Control permits each year and performs approximately 11,000 inspections which are conducted with a staff of 27. Juan and his staff ensure that government agencies, private vendors, contractors, and utilities are working safely and to standard in Hillsborough County's maintained rights-of-way. In the past six years, work zone crashes have decreased by approximately 30%.

Juan has been innovative with scheduling and staffing to reduce operating costs, and still maintain a high level of inspection capability. Thorough and careful follow-up by inspecting at least three to four times per permit ensures that the traveling public is safe, that the work is conducted to industry standards, and that the rights-of-way are restored to previous or better conditions. The Division has saved approximately \$1.5 million in rights-of-way restoration dollars.

Juan's "hands-on" leadership has been instrumental in seeing that each job is completed correctly and that the asset inventory that Transportation Maintenance Division maintains is protected.

Juan Lopez's accomplishments illustrate his commitment and dedication to public service. Congratulations, Juan, for being named the FACERS Urban Engineer of the Year!



New at the T² Media Center

Our Media Center offers more than 7,000 publications, 1,000 videos, and 175 CDS for loan. To request any of the items on these pages, please mark the items you want to borrow and fax with the FaxBack form on the inside back cover to 352.392.3224. Descriptions can be found on our website: t2ctt.ce.ufl.edu where you can also request a full catalog on CD, or browse the electronic catalog. Call 352.392.9537 EXT. 1544 for assistance.

New Publications

- Validating the Fatigue Endurance Limit for Hot Mix Asphalt**
NCHRP646.01 TRB
- Mixing and Compaction Temperatures of Asphalt Binders in Hot-Mix Asphalt**
NCHRP648.01 TRB

- Monitoring Scour Critical Bridges**
N-SYN396.01 TRB
- New Approaches to Ecological Surveys**
N-SYN400.01 TRB
- Motorcycle Helmet Use and Head and Facial Injuries**
P8217.01 FHWA
- Local Roads Matter!**
P8311.01 NACE
- Displaced Left-Turn Intersection**
P8312.01 FHWA
- Restricted Crossing U-Turn Intersection**
P8313.01 FHWA
- Including People with Disabilities in Coordinated Transportation Plan**
P8315.01 EASTER SEALS
- Project ACTION in Action: Meeting the Transportation Needs of Students with Disabilities**
P8317.01 EASTER SEALS
- Safety Evaluation of Improved Curve Delineation**
P8320.01 FHWA
- Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes - Volume 1**
P8332.01 FHWA
- Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes - Volume 2**
P8334.01 FHWA
- Corrosion/Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes**
P8333.01 FHWA

- Preventing First-Time DWI Offenses**
P8341.01 NHTSA
- Regional Traffic Signal Operations Programs: An Overview**
P8342.01 FHWA
- Geospatial Analysis of Rural Motor Vehicle Traffic Fatalities**
P8343.01 NHTSA
- Signalized Intersection Flashing Mode Operation and Flashing Beacons**
P8344.01
- Travel Time Reliability Modeling for Florida**
P8346.01 UNIVERSITY OF FLORIDA
- A Domestic Scan of Congestion Pricing and Managed Lanes**
P8347.01 FHWA
- Federal Highway Administration Focus States Initiative: Traffic Incident Management Performance Measures Final Report**
P8348.01 FHWA
- Bicycling and Walking in the United States 2010**
P8352.01 ALLIANCE FOR BIKING AND WALKING
- Safety Evaluation of Flashing Beacons at Stop-Controlled Intersections**
P8357.01 FHWA
- Work Zone Mobility and Safety Self Assessment: 2009 National Report**
P8360.01 FHWA
- Implementing the High Risk Rural Roads Program**
P8364.01 FHWA

- A Domestic Scan of Congestion Pricing and Managed Lanes**
P8385.01 FHWA
- Guide for Review and Assessment of Local Mobility Plans**
P8386.01 FDOT
- Estimating Soft Costs for Major Public Transportation Fixed Guideway Projects**
TCRP138.01 TRB
- Preventative Maintenance Intervals for Transit Buses**
TCRP-SYN81.01 TRB
- Bituminous Materials and Mixtures 2009 Vol. 2**
TRB2127.01 TRB
- Intelligent Transportation Systems and Vehicle Highway Automation**
TRB2129.01 TRB
- Travel Behavior Vol. 2**
TRB2135.01 TRB
- Statistical Methods**
TRB2136.01 TRB
- Human Performance, Information Systems, Simulation, and Visualization**
TRB2138.01 TRB
- Nanotechnology in Cement and Concrete Vol.1**
TRB2141.01 TRB
- Nanotechnology in Cement and Concrete Vol.2**
TRB2142.01 TRB

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Free Materials for Safety Activities from the Florida Pedestrian and Bicycling Safety Resource Center

Order pedestrian and bicycling materials to enhance your organization's ped/bike events and educational activities to teach safe walking and bicycling practices. Materials are free to qualifying organizations.

Visit www.pedbikesrc.ce.ufl.edu for a list of new items, descriptions, illustrations and ordering information. Our current inventory includes:

Wristlets and Arm Wraps:

Be Safe Be Seen Wristlets
Arm Wraps

Punch Cards:

Walk - n - Roll To School

Posters:

Pedestrian Poster: Caution (Spanish)
Bicyclist Poster (Spanish)
Pedestrian Poster: Crosswalks and Signals (Spanish)
Pedestrian Poster: Sidewalks (Spanish)
Pedestrian Poster: Intoxicated (Spanish)

Bookmarks:

I'm A Safe Walker
Top Ten Rules of Bicycle Safety
Wear Your Helmet

Activity Books, Comic Books and Paint Sheets:

Walk 'n Roll Activity Book (English and Spanish)
I'm Safe - On My Bike (English and Spanish)
I'm Safe! Walk With Me Activity Sticker Book (English and Spanish)
Sprocket Man Comic Book (English and Spanish)
Pedestrian Paint Sheets (English and Spanish)
Bicycle Paint Sheets (English and Spanish)

Stickers:

Walking School Bus

Pamphlets, Booklets and Brochures:

Bicycle Safety
Bicycle Safety: What Every Parent Should Know
Parent's Guide - Child Safety on Your Street
Crosswalk Safety
How To Fit & Wear Your Bicycle Helmet
Kids Physical Activity
Road Riders Are Drivers
Stepping Out

Flyers, Checklists and Tip Sheets:

Easy Steps to Properly Fit a Bicycle

Helmet
Know the Rules - Going To & From School (English and Spanish)
Road Riders Are Drivers
Laws for Bicyclists Sharing the Roadway
Neighborhood Safety
Tips for Parents and Other Adults for Teaching Pedestrian Safety to Children
Tips for Walking Safely to School
Bikeability Checklist
Peligro en el Camino (Spanish)

Toolkits:

Safe Ways to School Toolkit

Videos (DVDs):

Pedestrian Law Enforcement Training
I'm Safe - Walk With Me
I'm Safe - On Wheels
Disney's Safety Hits Volume 1
Disney's Safety Hits Volume 2 -available for loan only
Elementary School Helmet Safety Program
Step to Safety with ASIMO

Videos (VHS):

Bike 'n Ped Driver Ed
Middle School Helmet Safety Program
Courtesy Promotes Safety

CDS:

Bicycle Safer Journey
Safer Journey
Walk Smart & Bike Smart

Questionnaires:

Walkability Survey

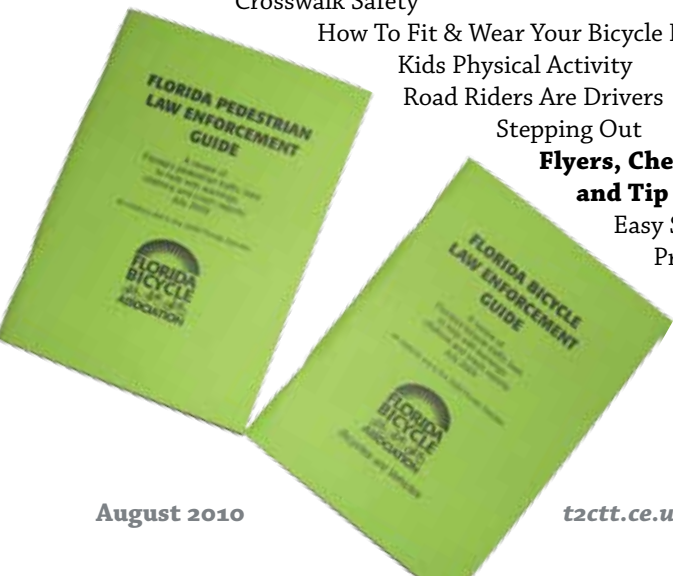
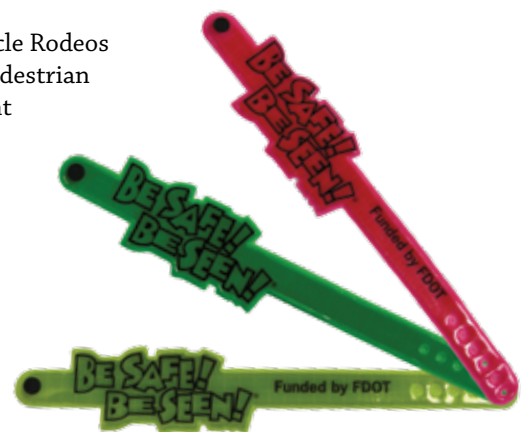
Reports:

Pedestrian Safety Guide for Transit Agencies
A Resident's Guide for Creating Safe and Walkable Communities
How to Develop a Pedestrian Safety Action Plan
How To Fit & Wear Your Bicycle Helmet

Books:

The Guide to Bicycle Rodeos
Florida Bicycle/Pedestrian Law Enforcement Guide
Florida Bicycling Street Smarts
Laws for Pedestrians
Teacher's Guide - Walk With Me

Zipper Pulls



The Power of Good Communication

If I Had a Dollar...

By J. Scott Herring, PE, Director, Engineering Services Dept, Nassau County Board of County Commissioners, FL From NACE News, March-April 2010

If I had a dollar for every time I complained about the county engineer, (before I became one, that is!) I would probably be retired now. I have spent the majority of my career in Florida in what we call *the dark side*, better known as *Maintenance*. For some reason or another, it just seems that county engineers and road & bridge managers just can't get along. Road & bridge managers complain that engineers don't get out in the field enough, and Engineers complain that road & bridge managers are just looking at a quick and dirty way to solve the problem. Well, now that I have been both, I can tell you that both points of view are correct. I have discovered in my career that the further you advance in the organization, the less you get out of the office and see the real world. We are all worried about responding to our elected officials, citizen demands, falling budgets and all the other stresses that come with the job. However, I can tell you that it is important to work with the Road & Bridge people because they are the ones *stuck* maintaining what we design, and when we don't take maintenance into account, it just makes their life more difficult. How many times has someone designed a sidewalk for a roadway and put the sidewalk six inches to one foot from the right-of-way line? Well, if that is where the sidewalk is constructed, how does somebody not only maintain, but repair the sidewalk when necessary, and not get on private property? How often has the back slope of the ditch been designed to be steeper than the front slope? And don't even get me started on ditch bottoms or the top of banks for lakes! Someone has to get out there and cut the grass, pick up the trash and repair things when they break! Also, you engineers seem to forget about maintenance when it comes to guardrail installation and fences. Do you have any idea how much fun it is to weed-eat around guardrail posts and along fences? Remember that when you save a dollar on the construction costs, you may be requiring spending several dollars on the maintenance part, but if that's not your budget, it is not foremost on your mind. Believe it or not, the members of *the dark side* are just as interested in saving money as you are. And if they can come up with an idea that will work for both, and help with their maintenance, it will be a win-win situation. When there is a problem with the road, ditch, storm sewer, fence, etc. in the future, it will be the maintenance guys that will have to deal with the problems. And yes, it can be prevented. Bring the maintenance guys in at the project kick off meeting so they can let you know what type of problems they already have in the area. Let them review the 60%, 90% and 100% plans for what they will have to deal with in the future. Believe me, a constructability review will save everyone time and most importantly, money in the long run. And, it will keep the Road & Bridge Manager from saying "If I had a dollar..."

The above article is a perfect example of pointing to the need to improve communication. It is **all** about **communication**, building a working relationship with others and working together to benefit the public!

Communication can lead to more efficient problem solving and even more. It is a key to success. A perfect example of effective communication is Florida's Community Traffic Safety Teams (CTSTS).

Back in the early 1990s the CTSTS began as discussion forums to solve local traffic safety problems. There were a lot of turf wars back then, people from different organizations were asked to *work together* and that didn't always set so well. Over time, everyone came to realize that a problem was everybody's problem, finger pointing didn't help solve the problem, talking about solutions and helping fix the problems did, and the earlier the better. Today's CTSTS now provide a culture and environment that promotes communication and the problem solving that is so vital to determine the best approach and to solve the problem.

Communication, information exchange and problem solving are benefits of participating in a CTST and professional organizations such as the Florida Association of County Engineers and Road Superintendents (FACERS), the American Public Works Association (APWA) and the Florida Section of the Institute of Transportation Engineers (FSITE). Among the many benefits of membership are that these groups provide similar forums, both face to face and via email listservs, to discuss, discover and share solutions to their local agency problems. These and similar groups provide opportunities for personnel to meet others with similar job duties and **communicate** with them. In this day of ►



dwindling budgets and having to do more, the investment of membership and participation pays great dividends, well beyond the cost of membership and time to participate.

Right now to help agencies out and to show them that it is time and money well spent, at least three organizations are offering membership incentives. FACERS is offering a free year of membership. APWA is offering half price through the end of the year. FSITE has a membership category for a total of \$17. Bottom line? Join, get involved, bring your questions and get them answered. The communication links grow and your value to your agency will too! You have common goals, objectives, and interests so what are you waiting for? ■■■

For more information:

CTSTS: www.dot.state.fl.us/safety/CTST/ctst.shtm

FACERS: www.facers.org

APWA: www.apwa.net/Documents/membership/MEM_Never-BeenMemFlyer.pdf

FSITE: www.floridasectionite.org/member.html

Only a few opportunities remain to attend this free training

Safe Mobility for Life Program

Planning and Designing for our Aging Population

The Safe Mobility for Life Program (SM4L) course is Florida-specific and was developed for planners, designers and engineers. It is based on the Federal Highway Administration's (FHWA) Highway Design Handbook for Older Drivers and Pedestrians.

Florida's population is aging rapidly and by 2020, one in four residents will be 65 or older, and half of them will be 75 or older. The Florida Department of Transportation (FDOT) developed a strategic plan and one-day course designed to raise awareness of problems associated with mature drivers. The course presents options and alternative solutions to the planning, design, and operation of Florida roadways and associated facilities for today and the future.

Topics include:

- mature driver risk
- the FDOT initiative
- issues facing mature drivers
- tools that support new roadway development
- features to improve safety and mobility for older road users
- tools available to retrofit existing roadways
- best practices for pedestrian safety features
- community success stories
- resources available to educate and assist mature drivers in Florida
- partnership opportunities

Remaining 2010 training opportunities:

Date	Location
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Aug 30	Ocoee
Sept 9	Sarasota
Sept 30	DeLand
Nov 18	Cape Coral

Register online at t2ctt.ce.ufl.edu or call 352.273.1670. ■■■



Federal Highway Administration Proposes Revision of Rules to Make Roadway Markings Brighter

To further improve roadway safety by making pavement markings brighter and easier to see, the Federal Highway Administration is proposing first-ever standards for maintaining the reflectivity of centerlines, lane lines and edge lines on all roads used by the public. Currently these regulations propose significant pavement markings requirements for local roads with no allocated funding. Comments are due on August 20, 2010.

View the full release and link to comments page at www.fhwa.dot.gov/pressroom/fhwa1008.htm ■■■

Essentials of a Good Road

Paved and Unpaved

Here are basic tips to help maintain and keep your roads in good condition.

Keep water away from the road

Drainage cannot be overemphasized in road construction and maintenance. Water affects the entire serviceability of a road. Too much water in the base material weakens the road. Water allowed to remain on top of a gravel or black topped road weakens the surface and, combined with traffic, causes potholes and cracking. If improperly channeled, water causes soil erosion and a breakdown of pavement edges.

The presence of water in roads is nothing but trouble. A good surface drainage system is the best way to lessen water damage on a road. Proper surface drainage prevents water from infiltrating the pavement surface and removes water from the driving lanes in a constant thin sheet to the side ditches, which carries the water away from the roadway.

A surface drainage system has four main components: road crown, shoulders, ditches, and culverts.

- The road crown, or superelevation of the road surface, drains water off the road surface.
- Shoulders are an extension of the road surface and allow for the continued flow of water to the ditches.
- Ditches are used to carry water away from the roadway. They need to be kept clean and protected from erosion. Water left in the ditch can sometimes leak back into the base. Water collected and carried in the ditch has to be directed away from the roadway at frequent intervals, sometimes using culvert pipe.
- Culverts usually channel water from one side of the road to the other, helping to control the flow of water and slowing it down to reduce erosion.

Road managers are guided by the principles that water runs downhill, that water needs outlets at the bottom of all grades, and that puddles mean problems.

Build on a firm foundation

A highway wears out from the top, but it falls apart from the bottom. This is another way of saying that the road base determines the service-life of a road. The base supports everything above it, including traffic. Without adequate support, the road will deteriorate rapidly. A good road requires a suitable foundation composed of stable material. A road material is stable if it has negligible soil settlement with a change in moisture content and does not deform excessively under repeated loads whether the material is wet or dry.

Use the best soils available

The supply of natural, good quality soils and aggregates is beginning to disappear. Blended or crushed gravel is a more expensive alternative. The quality of soils used by a road manager often depends on local availability and budget. In deciding what is available, consider the long-term consequences of using lower quality material. Using inferior base material may require excessive maintenance during the road's life and, perhaps, expensive rehabilitation. The adage "pay me now or pay me later" applies to

road building.

Compact soils well

The denser the material is, the stronger it is. When soil is improperly compacted, future traffic loads or changes in moisture content can cause settling and failure of the roadway. Compaction is achieved by pressing soil particles together, which expels some of the air from the mass, making the material denser. Well-graded soils having a fairly even distribution of particle sizes will compact more easily than poorly graded soils that have mostly one particle size. Crushed or angular particles will compact to a more stable condition than rounded particles of similar size. A certain amount of moisture is necessary for good compaction.

Build for traffic loads and traffic volumes

A road built to serve residential traffic will break down when it starts carrying a number of large trucks. Road managers know that roads, like bridges, should be designed with the expected traffic type and volume in mind. A rule of thumb is to design a road to accommodate the largest vehicles that will use the road under normal operation. If in doubt, design the road for the largest piece of equipment that maintains it in all kinds of weather. Road managers can get information and guidance from their state transportation agencies about the type and thickness of pavement mixes to apply to a gravel road. Generally speaking, a low volume road with some truck traffic may provide good services with a chip seal or sand seal. As traffic volumes and weights increase, cold-mix asphalt and hot-mix asphalt pavement may be better alternatives.

Pave only roads that are ready

Some agencies make the mistake of paving over a road that is not properly prepared in their haste to get rid of another dusty gravel road. The result may be a complete waste of money. Paving will not cure the other problems that the gravel road may have. It still must be built of well compacted layers of free draining soil, be able to carry expected traffic loads, and be able to drain well. The cost of rebuilding a mistake is much higher than not making the mistake and doing it right the first time.

Build from the bottom up

A road that has a poor base and poor drainage cannot be adequately improved with a top dressing of gravel or new pavement. It may be necessary, in some cases, to dig out the old road, put in new materials, and build up the road in layers. Before doing anything to correct a road surface problem, road managers should take into consideration what is causing the problem underneath. Improper drainage, insufficient depth of base, or poor quality gravel may be the culprit. These should be corrected before spending money on the surface.

Protect your investment

Roads and bridges need regular maintenance to keep them from deteriorating. The increased weight and frequency of traffic on roads, combined with adverse weather conditions, means an increased rate of road and street deterioration. Regular road and bridge maintenance preserves our road investment and prevents costly major rehabilitation later on. ▮

Maintenance activities include:

- Roadway surfaces: blading and shaping, patching, resurfacing; dust control
- Drainage: cleaning and repairing culverts and ditches
- Roadside: cutting bushes, trees, and grass; repair and prevention of roadside erosion
- Bridges: clearing channels; repair of rails, decks, and structure; cleaning and painting
- Traffic services: sign maintenance; cutting vegetation to maintain visibility
- Special projects: restoration or improvements; emergency work such as removing slides, repairing washouts, and repairing retaining walls.

Keep good records

Road managers know their roads like the back of their hands. Most of them are walking history books when it comes to the roads they manage every day. This knowledge is of little use, however, when the road manager is ill, moves, or retires. Good record keeping makes roadwork much easier for everybody. It is easier to formulate budgets and to show the citizens a plan for roadwork. Recording which type of work was done on roads or bridges, when, and what materials were used can help a lot in making decisions later on. Agencies can start by conducting an inventory of all roads and bridges, listing length, width, surface types, culverts, problem areas, and other attributes. Placing these items into a GIS helps. Next comes listing and prioritizing needed improvements, putting a price tag on them, and taking care of a few problems each year.

Adapted with permission from the National Association of County Engineers (NACE) from www.naco.org ■■■

Free Technical Assistance and More

The Local and Rural Road Safety Peer to Peer Safety Program (LRR P2P) has been established by the Federal Highway Administration Office of Safety to provide some technical assistance for local and rural transportation agencies to help resolve their roadway safety problems and reduce fatalities and injuries.

The LRR P2P is a free, volunteer-oriented program that provides access to road safety information, knowledge and resources needed to address local road safety issues. Peer assistance is obtained through phone calls, email exchanges, general instruction and/or site visits, depending on the agency's needs. The local and rural road safety experts volunteer their time and guidance to help identify locations needing attention, on low cost safety improvements that can be installed quickly, and on possible funding options so safety improvements can be implemented. Visit safety.fhwa.dot.gov/local_rural/training/fhwas10014/ for more information and to contact the P2P coordinator. ■■■

A Pedestrian Safety Action Plan to Improve Safety in Tampa Bay Area

The Florida Department of Transportation (FDOT) District 7 (D7) has received National Highway Traffic Safety Administration (NHTSA) funding to implement a Pedestrian Safety Action Plan for both Hillsborough and Pinellas counties. A three pronged approach will incorporate elements of enforcement, education and engineering, working together to decrease injuries and fatalities for pedestrians and to increase the safety of all road users in D7.

Funds will help pay for an enforcement campaign and an educational outreach campaign to take pedestrian safety messages into the neighborhoods by presenting short PowerPoint presentations and providing handouts on pedestrian safety tips. The enforcement campaign will focus on directing the pedestrians to be safe, be seen, be predictable, to cross where the markings and countdown signals are in place and will also focus on motorists who are not yielding to the pedestrians as they cross. Enforcement agencies will hand out tip cards and backpacks to increase awareness.

Partners also include transit agencies in Hillsborough, Pasco and Pinellas counties that will have pedestrian safety message ads placed in all buses. The ads will rotate every two months. In addition, 1,500 school buses in Hillsborough County will also carry the safety messages. A multi-media campaign will expand the educational outreach later this summer.

Safety funding will also assist with engineering efforts that include the placement of high intensity crosswalk pavement markings throughout D7.

For more information, contact Jeanette Rouse, Community Traffic Safety Team (CTST) Program Manager, at jeanette.rouse@dot.state.fl.us or 813.975.6256. ■■■

NHI Webinar Recording Now Available

Bicycle and Pedestrian Facilities in Constrained ROWs

The recording of the May 2009 presentation of Integrating Bicycle and Pedestrian Facilities in Constrained Rights-of-Way (ROWs) is now available from the National Highway Institute (NHI). The webinar included highlights of NHI's Bicycle and Pedestrian Facility Design courses, recent federal and state operational research, and the Transportation Research Board Highway Capacity Committee's decisions that allow agencies to use reliable methods for accommodating multiple modes of transportation in constrained ROWs. Connect to the recording at

admin.na3.acrobat.com/_a55098539/p60766174/ ■■■

Improving Roadway Safety for Motorcycle Riders

Motorcycle safety is a concern to all road users. Motorcyclists often are forced to use more of the travel lane or even swerve unpredictably in order to avoid hazards, increasing their chance of crashing.

A step in decreasing the ever increasing motorcycle crash rates and resulting injuries and fatalities is to design, construct and maintain roads to reduce hazards and increase safety for these vulnerable road users.

Below are some tips to improve roadway safety for motorcycles.

Road Geometry, Signs and Markings

- Design with motorcycle maneuvering in mind. Curves are the leading location for motorcycle crashes. Half of motorcycle fatalities are related to road curves. When possible, design roads with fewer curves.
- Use additional signs and markings. If other vehicles are involved in the crash, drivers report not seeing the motorcyclist in time to take corrective action. The use of signs and pavement markings can provide a clearer, more consistent message to warn motorcyclists of curves and other unexpected road geometry.
- Consider installing motorcyclist hazard warning signs. Signage targeted toward motorcyclists can warn of conditions that are especially hazardous for riders. Examples include uneven pavement surfaces and rumble strips.



- Install Safety Edges. Untapered vertical shoulder drop-offs are even more dangerous for motorcycles than for other vehicles. Adopting a standard contract specification requiring a 30-35° angle asphalt wedge along each side of the roadway in all construction and resurfacing projects is a simple and cost-effective way to improve pavement edge safety. For more on the Safety Edge, visit safety.fhwa.dot.gov/roadway_dept/pavement/safedge/fhwasao9023/

Guardrails and Cable Barriers

- Place guardrail and cable barriers as far from travel way as practical. Guardrails and cable barriers prevent vehicles from crossing medians and going into oncoming traffic. However, they are unsafe for motorcycles. Nearly half of all motorcycle guardrail collisions result in fatalities.

Visibility and Sight Distance

- Increase sight distance and stopping sight distance (SSD), whenever possible, to improve safety. Motorcycles are less visible to most motorists due to their size. Sight distance is the length of roadway that a driver can see ahead. SSD is the minimum sight distance required to stop a vehicle on wet pavement after seeing an object without hitting it. Distances are set by American Association of State Highway and Transportation Officials (AASHTO). Engineers use SSD to determine the minimum length of vertical curves and minimum radii of horizontal curves. SSD is meant for cars but not for other vehicles, including motorcycles. Visit baystateroads.eot.state.ma.us/technotes/35_stopping_sight_distance.pdf for more information on SSD as well as refer to AASHTO's publication, A Policy on Geometric Design of Highways and Streets
- Ensure visibility of signs and roadway markings. Keep in mind that many motorcycles only have one head lamp for illumination. Apply retroreflective material to guardrails, cable barrier posts and other potential obstructions to increase visibility at night.

Skid-Resistant Surfaces

- Examine pavement for skid resistance during road maintenance. Older pavements often lose skid resistance quality. Grind, overlay, or apply a surface treatment to increase skid resistance and specify pavement surfaces with adequate pavement friction.
- Examine the friction characteristics of asphalt sealants, roadway markings, intersection markings, and metal road surface apparatus. Thermoplastics, especially used for broad, horizontal intersection lines, can create slippery surfaces for motorcycles trying to stop at intersections. Metal road surface components—either temporary or permanent—offer limited traction in many cases, and, when wet, are difficult to see.

Work Zones

Work zones are especially dangerous for motorcyclists.

- Post specific warnings for motorcycles. Place warning signs for grooved pavement, uneven pavement such as from milling operations, bumps, ▮



potholes, edge drop-offs, and other hazards. Edge traps prevent a motorcycle's front wheel from moving side-to-side. Even a small edge trap may result in a crash.

- Use steel construction plates of an adequate size and with a skid resistant surface. Plates can be slippery when wet. Recess plates to avoid creating an edge trap.
- Use weighted work zone devices to prevent them from being blown into the travel lane. Many signs, cones, and barrels have a heavy rubber ring on the bottom. Use a second weighted ring in dangerous locations.
- Check work zones regularly to ensure correct placement of safety devices and that the zone is free of debris in the travel way.

Pavement Maintenance

- Remove debris and fluid spills quickly and thoroughly. Tires, vehicle parts, accumulated vegetation, other debris and fluid spills become hazards. Sand along coastal roads poses greater hazards to motorcycles than to larger vehicles. Debris can deflect a motorcycle's wheel or hit the motorcyclist. Fluid spills and loose materials can easily cause loss of traction. Loose materials are also common with certain types of treatments such as seal coating where liquid asphalt is applied over pavement and gravel is spread over liquid asphalt.
- Reduce uneven road surfaces. Parallel paving lane joints, parallel grids on bridges, steel plates, milled surfaces and other uneven roadway surfaces can be especially hazardous for

motorcycles.

- Milling machines produce a coarse surface with longitudinal grooves. The coarse material may cause a motorcycle to lose traction. Grooves can create an edge trap. Edge traps often occur during paving operations. Current highway standards permit pavement edges of up to 1.5 inches without tapering.
- Patch potholes promptly. Potholes are more dangerous to motorcycles than to larger vehicles.
- Always post warning signs and repair potholes as soon as possible. Installing an effective drainage system and crack seal can help prevent potholes.
- Require tidy crack repairs. A motorcycle's traction can be seriously compromised by "tar snakes", excess asphalt or other sealants used for crack repair. Crack sealing is an effective pavement treatment however, it becomes slick during warm weather.

Assess Motorcycle Safety

- Use Road Safety Audits to assess safety. Visit t2ctt.ce.ufl.edu for a list of Road Safety Audit courses or call David Page at 352.273.1685.
- Obtain motorcycle crash data. Use crash reports to decide which areas need improvements. Make a list of improvement needs, prioritize the list, and take action.

Article adapted with permission from KUTC Newsletter Winter 2009, "Are your roads "easy riding" for motorcycles?", UNH T² Center, Road Business, Spring 2007, Vol. 22, No. 1 "Design Guidelines for Motorcycle Safety", and 2007 FHWA Brochure, Roadway Safety for Motorcycles. ■■■

Upcoming Workshops

through 2010

For a list of all courses or to register, visit our website at t2ctt.ce.ufl.edu or for T² workshops, email t2workshops@ce.ufl.edu or call 352.273.1670 and for CTT and CTQP courses, email ctt@ce.ufl.edu or call 352.273.1669. We look forward to serving you.

Asphalt Paving Level 1

August 2, 2010 West Palm Beach
September 28, 2010 Gainesville

Asphalt Paving Level 2

August 3 - 5, 2010 West Palm Beach
September 29 - October 1, 2010 Gainesville

Asphalt Plant Level 1

August 18 - 20, 2010 Gainesville
September 13 - 15, 2010 Miami

Asphalt Plant Level 2

August 17 - 19, 2010 Chipley

Concrete Batch Plant Operator

August 9, 2010 Orlando

FDOT Concrete Field Inspector Specification

August 12 - 13, 2010 Orlando

Earthwork Construction Inspection Level 1

August 23 - 24, 2010 Davie
September 20 - 21, 2010 Orlando

Earthwork Construction Inspection Level 2

August 25 - 26, 2010 Davie
September 22 - 23, 2010 Orlando

Drilled Shaft Inspection

August 30 - September 1, 2010 Clear-water

Pile Driving Inspection

September 27 - 29, 2010 Jacksonville

Advanced Maintenance of Traffic

August 3 - 5, 2010 Gibsonton
August 4 - 6, 2010 Pompano Beach
September 8 - 10, 2010 Gainesville
September 15 - 17, 2010 Orlando
October 5 - 7, 2010 Gibsonton
October 20 - 22, 2010 Pompano Beach
November 3 - 5, 2010 Naples
November 17 - 19, 2010 Orlando
December 8 - 10, 2010 Pompano Beach

Advanced Maintenance of Traffic - Refresher

August 2, 2010 Gibsonton
August 3, 2010 Pompano Beach
September 7, 2010 Gainesville
September 10, 2010 Orlando
October 4, 2010 Gibsonton
October 19, 2010 Pompano Beach
November 2, 2010 Naples
November 12, 2010 Orlando
December 7, 2010 Pompano Beach

Intermediate Maintenance of Traffic

August 4 - 5, 2010 Cape Coral
August 11 - 12, 2010 Naples
August 25 - 26, 2010 Naples
September 1 - 2, 2010 Gainesville
September 22 - 23, 2010 Saint Petersburg
November 17 - 18, 2010 Saint Petersburg

Intermediate Maintenance of Traffic Refresher

August 3, 2010 Cape Coral
August 31, 2010 Gainesville
September 2, 2010 Naples
September 21, 2010 Saint Petersburg
November 16, 2010 Saint Petersburg

Pilot/Escort Flagging Training

August 12, 2010 Gainesville
August 24, 2010 Fort Myers
September 11, 2010 Tallahassee
September 21, 2010 Orlando

Final Estimates Level 1

September 8, 2010 West Palm Beach

Final Estimates Level 2

September 9 - 10, 2010 West Palm Beach

QC Manager

August 10 - 11, 2010 Orlando

Safe Mobility for Life Program: Planning and Designing for our Aging Population

August 30, 2010 Ocoee
September 9, 2010 Sarasota
September 30, 2010 DeLand
November 18, 2010 Cape Coral

Florida escort rules changed February 1, 2010

Florida Administrative Code rules for escorting over dimensional loads have been updated and are effective February 1, 2010. View the changes and the final rule at ftrules.org and type "14-26.012" into the "By Rule Number" search box.



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Upcoming Workshops

For the dates and locations of these upcoming workshops, see page 14.

Asphalt Paving Level 1

2 Classes

Asphalt Paving Level 2

2 Classes

Asphalt Plant Level 1

2 Classes

Asphalt Plant Level 2

1 Class

Concrete Batch Plant Operator

1 Class

FDOT Concrete Field Inspector Specification

1 Class

Earthwork Construction Inspection Level 1

2 Classes

Earthwork Construction Inspection Level 2

2 Classes

Drilled Shaft Inspection

1 Class

Pile Driving Inspection

1 Class

Advanced Maintenance of Traffic

9 Classes

Advanced Maintenance of Traffic - Refresher

9 Classes

Intermediate Maintenance of Traffic

6 Classes

Intermediate Maintenance of Traffic Refresher

5 Classes

Pilot/Escort Flagging Training

4 Classes

Final Estimates Level 1

1 Class

Final Estimates Level 2

1 Class

QC Manager

1 Class

Safe Mobility for Life Program: Planning and Designing for our Aging Population

4 Classes