



TRAVEL-LOG

Volume XXIII, Issue I

Spring 2012

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Message from the Director - Earl "Rusty" Lee, Ph.D.

It's hard to believe summer is already here. It has been an incredibly busy first few months of 2012 with 23 courses given or hosted, with nearly 800 attendees. As the summer months represent your busiest months for maintenance and construction, Matt and I are ready to help you any way we can. We have submitted our plans for the next year to DelDOT and FHWA for approval and expect to be hosting a large number of events. We intend to do updated training on retroreflectivity and ADA. We hope to be able to offer simulator based training for municipal snowplow operators. Matt and I had a chance to get the simulator experience when it was at Cecil County last year and it's an extremely valuable piece of training. Watch the website for

more details.

One item I want to stress. While we were doing the MUTCD training this past winter, an announcement was made which said the compliance dates for many of the new requirements were on hold and under review. Well, the Federal compliance dates have been resolved and DelDOT is preparing their changes to the Delaware MUTCD based on those decisions (complete article on page 10). Just remember, delaying or removing these dates does not release a municipality from compliance. The Delaware MUTCD is Delaware Law. If you are replacing a sign for any reason then the new sign must be compliant with the manual. Lack of compliance dates does not change your tort liability

exposure.

The focus for our group this summer is asset management. Our largest asset management project is completing the UD campus asset inventory. In addition, we have inquiries from two towns requesting assistance in setting up programs. These programs go beyond pavement to include signs, ramps, markings and any asset of importance to the municipality. Also, a re-write of the Pavement Management Guide for Elected Officials is underway and will roll out this fall along with a new pavement management software.

Lots in the works. Keep an eye on your email and the website.

Delaware T² Center Hosts Highway Safety Manual Training

After a year of searching and planning, the T² Center was able to host three days of great training related to the Highway Safety Manual, thanks to the FHWA Resource Center, and in particular, to Hillary Isebrands, P.E., who led the sessions.

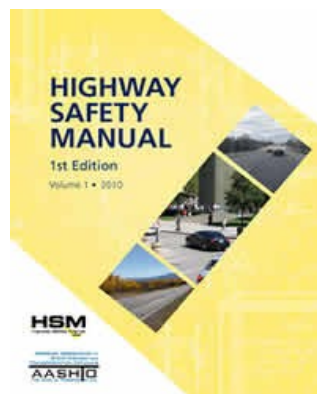
For the first two days, Hillary was joined by John McFadden (FHWA Baltimore) to present "HSM Lite," an overview that serves to demystify the HSM and relate it to transportation planners, designers, and project managers,

even if their primary role is not in safety. These two sessions were attended by a wide array

of DelDOT and municipal personnel and generated great discussions and questions.

On Day 3, Hillary tailored an HSM Practitioners Guide to some specific sites in Delaware and a similarly diverse group learned how the HSM could be applied to project decision making.

We are grateful to Hillary and the Resource Center for making HSM training available to Delaware in a format that was targeted to our specific needs at this time.



ITE Student Chapter Competes in Third Annual Regional Traffic Bowl



From left, Coach Elisa Kropat, Lauren Lobo, Sara Patterson, Mindy Laybourne, and ITE Advisor Rusty Lee

The University of Delaware was well represented at the Third Annual Traffic Bowl held during the annual meeting of the Mid Colonial District of ITE, April 26, 2012 in Lancaster, PA.

The team of Lauren Lobo, Sara Patterson and Mindy Laybourne was coached this year by Elisa Kropat, member of the prior two district championship team. UD and Villanova sent

teams for the third consecutive year and Penn State sent a team for the first time.

The Traffic Bowl is a Jeopardy style competition with categories including ITE history, MUTCD, Highway Design, and even local Lancaster facts.

The opening round saw Penn State defeat Villanova by a fairly wide margin. Round two saw UD and Penn State stare each other down through an extremely close match, ending in a tie. The final round of UD

vs. Villanova saw UD come out victorious, but with the overall winner based on total points scored, Penn State was crowned the District Champion.

Penn State will now represent the Mid Colonial District at the ITE International Traffic Bowl in Atlanta, GA this summer. We wish them the very best.

Enterprise Flasher Donates Safety Vests for UD Interns

Enterprise Flasher has shown its commitment to the safety culture once again by donating thirty ANSI Class 3 safety vests to the Delaware T² Center for use with students engaging in data collection and other work within the public right of way.

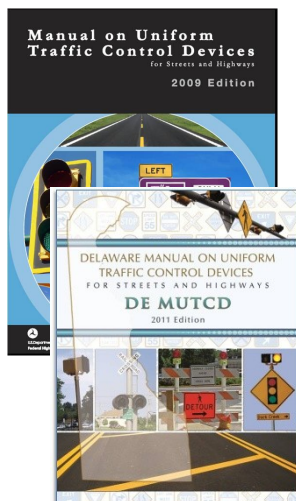
Each year, undergraduate and graduate students are placed in the field for a variety of activities, usually associated with research or data collec-

tion. While much of their activity goes on behind the curb and largely away from the dangers of the travel way, providing them with high visibility protective equipment (including hard hats where appropriate) helps ensure that safety is an intuitive reflex for them as they prepare to enter the transportation field.

Typical activities for these students include vehicle and pedestrian counts, roadway

safety audits, or asset inventory of signs, sidewalk curb ramps, and other items. Of course, other activities, such as pavement distress identifications, and inspection of pavement markings, heighten the safety concerns, so once again, the reflex to don a retroreflective safety vest is a great instinct to develop early on.

Our thanks again to Enterprise Flasher, our great partner in safety.



T² Center Completes Local MUTCD Training

In December, January, and March, the Delaware T² Center took a new set of free educational workshops on the road to help local road owners better understand the Delaware Manual on Uniform Traffic Control Devices.

The three, half-day sessions focused on an introduction, the Part 1 General information, Signs (Part 2), Pavement Markings (Part 3), and Temporary Traffic Controls

(Part 6). Each set of sessions were offered in Newark, Lewes, and Dover to reduce the wear and tear on local government officials.

The sessions were broadly attended by municipal managers and street personnel, parks personnel, the Delaware River & Bay Authority, and the Delaware Department of Transportation. With an audience of such differing perspectives and challenges, great questions and

discussions ensued, improving the value of the sessions for everyone.

Whether you attended the sessions or not, the Delaware T² Center is here if you have specific MUTCD (or other transportation) questions. One-on-one assistance is free to Delaware local agencies, so contact Matt Carter, the Municipal Engineering Circuit Rider, at (302) 831-7236 or matheu@udel.edu.

Federal Highway Administration's EDC Exchanges in DE

When FHWA rolled out their Every Day Counts (EDC) initiative in 2010, it wasn't immediately clear to states and local governments how to use the program. Based on a notion of "Thinking Inside the Box," the purpose of the program is to foster innovation through the use of off the shelf, established technology and administrative processes, with the end goal of reducing project delivery time. As EDC matures, the program is being expanded to foster cooperation and discussion among state, county and local governments. One of the key elements of this expanded program is the EDC Exchange.

EDC-Exchange is a regularly scheduled series of "dynamic webinars". The in-person learning sessions describe effective project development and delivery practices, tools, and "market ready" technologies that local transportation agencies can immediately add to their toolbox. National subject matter experts from FHWA, state DOTs, local governments, and the private sector provide information and materials, and facilitate discussions designed specifically for the local transportation managers.

In December, the first of the series covered project delivery by the Construction Manager/General Contractor (CM/GC) process. Described as the middle ground between Design – Bid – Build and Design – Build, CM/GC is a process used in many states to reduce project costs, shorten project delivery time while retaining high levels of project owner involvement in project design. The local portion of the program, where the Delaware community discussed the content they had just seen and

heard, prompted many ideas for how CM/GC could be used, in whole, or in part, here in Delaware, the obstacles that might exist, and how they could be resolved.

The second EDC Exchange occurred in February and focused on Geosynthetic Reinforced Soil Integrated Bridge Systems. The majority of the bridges in the country are small, single-span bridges that are commonly found on rural and local roads. With limited resources available, transportation agencies must find innovative, cost-effective solutions to meet these demands and GRS-IBS has been shown to be an effective tool. To date, the GRS-IBS has been predominately constructed on the local road system with local forces supplying the labor. For the counties utilizing this technology, the result is a lower cost bridge alternative, with savings up to 60%, that can be constructed in as little as two weeks. The session highlighted examples to demonstrate the successful use of the GRS-IBS and the resulting local discussions were robust, since DelDOT is planning to carry out its first such project in the next year.

The April EDC Exchange dealt with Flexibility in Right of Way acquisition. Navigating the "Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970," (Uniform Act) is one activity that can affect not only the delivery of the transportation facility but frustrate project owners, designers, and impacted property owners - but it doesn't need to be that way! The Uniform Act provides several tools that can often be applied, saving considerable time, money, and frustration. For example, appraisals are not always required in or-

der to comply with Federal regulations, and incentive payments can be a cost effective way to expedite the acquisition and relocation process and ease these very personal impacts to property owners? The toolbox of ideas within the Uniform Act was discussed in the local portion of the program relative to some limitations in Delaware's own processes. But once again, the local discussion renewed the creative process for how these ROW tools could be used to expedite schedules and save project funds.

Upcoming EDC Exchanges include In Lieu Fees and Mitigation Banking for environmental issues (June) and Adaptive Signal Control (August).

The invited audience for Delaware is typically about 30 people and include representatives from FHWA, DelDOT, the contractor and consultant communities, as well as representatives of some of our larger communities. Keeping the group at this size provides for better discussions and an ability to develop a plan of action to raise awareness of this approach across Delaware. The T² center will then further disseminate the information through town and association meetings, this newsletter, and local workshops.

More information on the EDC Program and the EDC Exchange webinars can be found at <http://www.fhwa.dot.gov/everydaycounts/>.



The GRS-IBS approach, as shown here, will be used soon in Delaware with the hope of demonstrating a faster and less expensive means of small bridge replacement.

The EDC Exchanges have proven to be great at generating discussion in Delaware around ideas that may not have been otherwise considered.

Pedestrian Accessibility: Where Does Your Community Stand?



The Americans With Disabilities Act (ADA) challenges the transportation community and after 22 years, it is still surrounded by myth and mystery for some.

Ron Eck and Patrick Gomez originally developed this ADA summary (as it applies to our world) for WV's LTAP and granted us permission to reprint it here.

By Ron Eck, WV LTAP and Patrick Gomez, Federal Highway Administration (FHWA). [Reprinted with permission from WV LTAP - Country Roads and City Streets, Spring 2012, Volume 27, No. 1. Photographs are from the Designing Pedestrian Facilities for Accessibility training materials.]

INTRODUCTION

As we conduct "Designing for Accessibility" training around the country, a common question we hear is, "Why do I need to install curb ramps? There are no disabled individuals in my community/neighborhood." Our response is that we encourage the questioner to think again. Most likely the reason they do not see individuals with disabilities on their streets is that it is simply too difficult to get around. The reality is that persons with disabilities are also part of the population for which we should be designing, constructing and maintaining our built environment. According to 2000 Census data, 20 percent of the U.S. population over age 15 has a disability. According to the National Council on Disabilities, there are three times as many people with severe visual disabilities as there are wheelchair users. The Council also estimates that 70 percent of the country's population will eventually have a temporary or permanent disability that makes climbing stairs impossible.

BACKGROUND

Requirements for providing accessible facilities date back to 1968 when the Architectural Barriers Act (ABA) required that buildings and on-site facilities designed and constructed with Federal funds comply with Accessible Design Standards. Section 504 of the Rehabilitation Act of 1973 prohibited discrimination in programs and activities funded with Federal funds (including curb ramps on Federal-aid projects).

AMERICANS WITH DISABILITIES ACT (ADA) BACKGROUND

In 1990, the Americans with Disabilities Act (ADA) became law. The ADA is a civil rights law that prohibits discrimination against persons with disabilities in all aspects of life. The ADA applies to all entities (public and private) regardless of funding source. Similar to the ABA, the ADA primarily pertains to buildings.

Title II of the ADA applies to all programs, services and activities provided or made

available by public entities (state and local governments) or any of their agencies. Like Title VI of the Civil Rights Act of 1964 that prohibits discrimination on the basis of race, color and national origin, the Federal-Aid Highway Act of 1973, among its many provisions, prohibits discrimination on the basis of sex (gender). The ADA seeks to ensure nondiscrimination, but on the basis of disability. All governmental activities of public entities are covered, even if they are carried out by contractors. Similar to other nondiscrimination laws, the scope of Title II coverage extends to the entire operations of a public entity, including its programs, services and activities. As clarified in *Barden vs. City of Sacramento*, sidewalks/pedestrian facilities are considered a "program" of a public entity.

ADA TITLE II

ADA Title II regulations contain implementation requirements. The requirements of ADA apply to all public entities or agencies, regardless of size. Local governments with 50 or more employees are required to:

- Designate an ADA coordinator;
- Develop and post an ADA policy statement;
- Develop and post grievance and complaint procedures;
- Complete a self-evaluation of policies, services, communications, programs and activities relative to the accessibility requirements of the ADA; and
- Develop a transition plan (when structural changes to existing facilities are necessary in order to make a program, service or activity accessible).

This includes pedestrian facilities in the public rights-of-way managed by a local government entity, namely, sidewalks, pedestrian paths, curb ramps, street crossings, driveway crossings, crosswalks, median crossings, public transit stops and pedestrian activated signal systems. If these requirements are not met, in addition to the risk of complaints and lawsuits, there is the risk of losing federal financial assistance.

Please remember that entities with less than 50 employees are still required to ensure that their programs, services and activities are

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Pedestrian Accessibility: Where Does Your Community Stand?

(Continued from page 4)
accessible to persons with disabilities. They are just not subject to some of the same formal administrative requirements (designating an ADA coordinator and developing a transition plan)—although it would be in their best interest to do something similar. The obligation to have some planning method to make facilities ADA-accessible is required for all public entities.

TRANSITION PLANS

Self-evaluations and transition plans have been required of Federal-aid recipients since enactment of Section 504 in 1973. This was reiterated when the ADA was enacted in 1990. Transition plans are required to cover all facilities under an agency's control, that is, those listed in the previous paragraph.

PROGRAM ACCESS PLAN

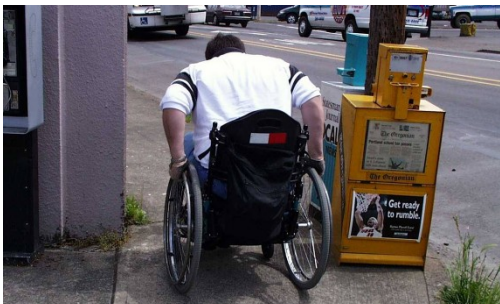
The Transition Plan is derived from the results of an entity's self-evaluation, i.e., an inventory of its public rights-of-way facilities. Agencies are then required to develop a Program Access Plan, which can be called a Transition Plan, to address any deficiencies.

The Plan is intended to:

- 1) Identify physical obstacles that limit the accessibility of facilities to individuals with disabilities,
- 2) Describe the methods to be used to make the facilities accessible, and
- 3) Provide a schedule for making these access modifications.

As a tool for the local government to use, the Transition Plan should be a living document, monitored and updated as necessary, until all modifications have been completed.

Development of a Transition Plan requires public involvement—it is particularly important to reach out to persons with disabilities and/or with organizations representing persons with disabilities.



Getting input from people who use the system is important in setting priorities. A copy of the Plan must be made available for public inspection.

The Transition Plan should consist of the following elements:

- Identify and list physical barriers (that limit accessibility) and their location (e.g., lack of a curb ramp at NE corner of 3rd and Maple)
- Describe in detail the methods the entity will use to remove these barriers and make the facilities accessible (e.g., construct two parallel curb ramps)
- Provide a schedule for making the access modifications (e.g., by June 30, 2012)
- Provide a yearly schedule if the Transition Plan is more than one year long
- Name/position of the official who is responsible for implementing the Transition Plan (e.g., the Public Works Director or Street Supervisor)
- A record of the opportunity given to the disabled community and other interested parties to participate in the development of the plan

Note that a primary emphasis is that the jurisdiction must have curb ramps in good condition. Curb ramps are the minimum level of accessibility.

In addition to these items, it is important to include an estimated cost of the modification. This is important for budgeting purposes. Modifications/projects associated with the Transition Plan are to be incorporated into transportation improvement plans/comprehensive plans for purposes of prioritizing projects and funding decisions. Therefore, it is critical that local agencies ensure that those individuals with approval/programming authority (e.g., city council) are kept abreast of the entity's Section 504/ADA legal requirements and those projects identified/committed to in the Transition Plan. Having and using a Transition Plan is also defensible in the event a complaint is filed.

NEW PROJECTS

All new projects, regardless of funding sources, must include pedestrian elements that

(Continued on page 6)



Examples of community Transition Plans can be found at:

<http://www.bellevuewa.gov/accessibility-reports.htm>

<http://www.scribd.com/doc/21193230/City-of-Rancho-Cordova-ADA-Transition-Plan-Final>



Pedestrian Accessibility: Where Does Your Community Stand?

All new projects require compliance with accessibility design guidelines established by the U.S. Access Board.

(Continued from page 5)

are consistent with ADA guidelines. The most immediate source of funds is to incorporate the improvements into existing programmed construction/reconstruction projects and into programmed maintenance work. Potential sources of funding for accessibility improvements also include: Safe Routes to School Program, Recreational Trail Program, State and Community Traffic Safety Program and Transportation Enhancement Activities Program.

In small jurisdictions, staffing and funding for inventory efforts are always a challenge. Some communities have reported using summer interns for self-evaluation activities on public rights-of-way. Others prioritize the process by looking at high-pedestrian areas first. This way, even if a complete inventory cannot be undertaken, those areas that will be most utilized (e.g., a busy intersection) are addressed.

PRIORITIZING IMPROVEMENTS

Prioritization of improvements can be based on a number of factors. **Generally, priority should be given to transportation facilities and public places such as:**

- Government offices (e.g., bill payment offices, permitting/licensing offices and public meeting rooms)
- Downtown business districts
- Medical facilities
- School zones

- Residential areas

Other places that you may want to place at the top of your list for evaluation include: rest areas, parks and shared use trails.

Be sure to consider the following in your prioritization process:

- Citizen requests or complaints regarding inaccessible locations
- Population density
- Presence of a disabled population
- Cost

Early Transition Plans tended to focus on buildings and on-site parking lots and walkways and often did not include an entity's public right-of-way facilities. It is important that local agencies ensure that their self-evaluations/ Transition Plans are up-to-date and incorporate public right-of-way facilities within their jurisdiction.

TRANSITION PLAN ELEMENTS

Transition Plan elements should include:

- Curb Ramps (required)
- Sidewalks
- Parking Lots
- Pedestrian Signals
- Bus Stops (including the path of travel to the bus stop)
- Paved Shared Use Trails (unpaved trails are considered recreational trails)
- Parks/Recreational Facilities

NEW CONSTRUCTION COMPLIANCE

The Federal Highway Administration (FHWA) is responsible for monitoring state and local agency compliance with Section 504/ADA requirements. The increased number of ADA complaints and lawsuits around the country has necessitated FHWA's renewed emphasis in this area. Under Title II, new construction is expected to provide the highest level of accessibility, free from barriers. Altered portions of facilities must meet new construction guidelines to the maximum extent feasible. When one requirement is technically infeasible, other design specifications must still

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Pedestrian Accessibility: Where Does Your Community Stand?

(Continued from page 6)

be met. Technical infeasibility applies only to structural conditions, such as an adjacent building, not to economic constraints.

ALTERATIONS

Similar to new construction, each facility altered by or on behalf of a public entity must be readily accessible and usable by persons with disabilities (if the alteration commenced after January 26, 1992). Two notable precedent-setting court cases have directly impacted how state and local governments address ADA and alterations which may affect the public right-of-way. In *Kinney v. Yerusalim* (Pennsylvania DOT), the court's conclusion was that roadway resurfacing is an alteration, which triggers the requirement for curb ramp installations/retrofits. In *Barden v. the City of Sacramento*, the court's conclusion was that sidewalks are a "program" under ADA and resulted in a requirement for the City of Sacramento to annually dedicate 20 percent of its overall transportation budget to provide compliant curb ramps and to remove access barriers in the pedestrian rights-of-way for which the City has responsibility or authority (includes sidewalks, curb ramps, crosswalks and pathways). A key point to remember is that curb ramps are usable only if the sidewalk is also accessible.

MAINTENANCE

For existing facilities, entities are required to provide a basic level of usability. There is often a misunderstanding of what this means. For a facility that is not otherwise being altered, the minimum requirement for achieving program accessibility is the installation of curb ramps. However, an entity is also responsible under the ADA for maintenance of its facilities. Therefore, a sidewalk or paved shared use trail that is not adequately maintained (such as heaving slabs due to tree roots) becomes unusable to persons with disabilities in spite of good curb ramps. Structural modifications needed to make existing facilities accessible for persons with disabilities must be identified in an entity's Transition Plan.

The requirement that facilities are readily accessible to and usable by persons with disabilities extends to pedestrian facilities that are in disrepair, as well as blocked/restricted



access due to obstructions (such as overgrown landscaping, street furniture, utilities, construction activities and snow accumulation). In the case of construction activities that block or restrict the use of pedestrian facilities, a temporary alternate route must be provided. The temporary route must be detectable and include accessibility features (such as curb ramps). The affected route must provide a warning alerting pedestrians to the construction and alternate route. Cones and construction tape are not adequate to warn persons with visual disabilities of the route closure and path guidance to temporary routes. Rather, a continuous detectable edging should be provided throughout the length of the project. One example would be chain link fencing with a continuous bottom rail, which would be detectable by individuals using a white cane or accompanied by a guide dog. Chapter 6 of the Manual on Uniform Traffic Control Devices provides useful information on temporary traffic control (including maintaining accessibility) and includes various examples of detectable edging.

ROLES OF ADAAG AND PROWAG

The ADA Accessibility Guidelines (ADAAG) were developed primarily for buildings and on-site facilities. While they address certain features common to public sidewalks, further guidance is necessary to add conditions that are unique to the public right-of-way.

(Continued on page 8)

There are few times when roadway construction can proceed without triggering the need to upgrade the sidewalk or other associated pedestrian pathways. Any project beyond the most basic of routine maintenance should examine the need for ADA upgrades.

Pedestrian Accessibility: Where Does Your Community Stand?

The Delaware T² Center plans to offer the “Designing Pedestrian Facilities for Accessibility” workshop as a two day session, once it becomes clearer that PROWAG will be finalized.

(Continued from page 7)

The Public Right-of-Way Accessibility Guidelines (PROWAG), applicable to new construction and alterations, were originally intended to supplement the ADAAG, providing standards specific to the public rights-of-way. More recently, it was decided that the PROWAG will be a stand-alone document.

The PROWAG are currently in the rulemaking process. These guidelines become enforceable when they are adopted by the standard setting agency, in this case the United States Department of Justice (USDOJ). In the interim, the ADAAG represent current accessibility standards for buildings and on-site facilities.

However, FHWA policy is that sidewalk and street crossings should generally use the PROWAG as a best practice as it is a reasonable source for public right-of-way issues not governed by ADAAG standards.

Issues in draft PROWAG not adequately addressed in ADAAG are:

- Pedestrian Access Route
- Curb Ramps (more design options)
- Detectable Warnings
- Crosswalks
- Accessible Pedestrian Signals (APS)
- On-Street Parking
- Roundabouts

While the draft Public Right-of-Way Accessibility Guidelines are not standards until adopted by the US Department of Justice and the US Department of Transportation, they are currently recommended best practices that should be followed for areas not fully addressed by the present ADAAG standards. Further, the Draft Guidelines are consistent with the ADA's requirement that all new facilities (and altered facilities to the maximum extent

feasible) be designed and constructed to be accessible to and usable by people with disabilities.

STATUS OF YOUR JURISDICTION'S PLAN

Does your jurisdiction have a Transition Plan? Is it up-to-date? Even if a Plan is not required, does your jurisdiction have a planning method for making facilities ADA-accessible? We recognize that each responsible agency will have to tailor an approach for developing, updating and implementing a Transition Plan based on its own needs and available resources and that the level of detail and content of the plan will vary and be presented in a format that will be the most beneficial for the agency. Technical resources to assist in this process are identified below. The WV LTAP also offers a one-day training workshop, *Designing Pedestrian Facilities for Accessibility*, which discusses the technical details of the issues identified in the bullet list in the previous section. Please contact the Center for more details.



RESOURCES

Federal Highway Administration Office of Civil Rights, Questions and Answers About ADA and Section 504. http://www.fhwa.dot.gov/civilrights/programs/ada_sect504qa.htm

Federal Highway Administration, *Designing Sidewalks and Trails for Access Part 2*, 2001. <http://www.fhwa.dot.gov/environment/sidewalk2>
Jacobs Engineering Group, *ADA Transition Plans: A Guide to Best Management Practices*, National Cooperative Highway Research Program Project Number 20-7 (232). Transportation Research Board, Washington, DC, May 2009.

Public Rights-of-Way Access Advisory Committee, *Accessible Public Rights-of-Way, Planning and Designing for Alterations*. <http://access-board.gov/prowac/alterations/guide.htm>

U.S. Access Board, *ADA and ABA Accessibility Guidelines for Buildings and Facilities*. Published in the Federal Register July 23, 2004 and amended August 5, 2005. <http://www.access-board.gov/ada-aba/final.cfm>

U.S. Access Board, *Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way*. Published in the Federal Register on July 26, 2011. <http://www.access-board.gov/PROWAC/nprm.htm>

U.S. Department of Justice, *ADA Best Practices Toolkit for State and Local Governments*. <http://www.ada.gov/pcatoolkit/toolkitmain.htm>

U.S. Department Of Justice, *The Americans With Disabilities Act, Title II Technical Assistance Manual, Covering State and Local Government Programs and Services*. November 1993. <http://www.ada.gov/taman2.html>

Recent Student Field Trips

University of Delaware
Students at DelDOT's
Materials and Research
Laboratory in Dover

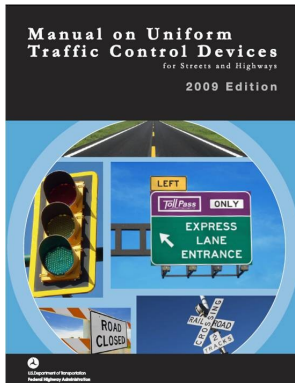


UD Engineering
Students at (from upper
left) the SR1/1-95
Interchange
construction, Woodrow
Wilson Bridge project,
Elkton Road corridor
upgrade, New Jersey
Turnpike 6to9
Widening



The T² Center organizes and supports many student field trips each semester to operational centers, construction sites, labs, and maintenance facilities. While these are sometimes associated with specific academic classes, most trips are centered around student groups from professional associations like ITE, ASHE, ASCE, etc. These excursions are very instructive to students as they decide how to focus in engineering and they are an important part of our workforce development charge.

MUTCD Update - New Regulatory Rulings Finalized



The Federal Highway Administration (FHWA) has completed its rulemaking process on two fronts for the Manual on Uniform Traffic Control Devices (MUTCD) and issued Revision 1 (dealing with Engineering Judgment) and Revision 2 (dealing with compliance deadlines) to the Federal MUTCD.

Both of these changes can be potentially significant to roadway agencies but neither are the “get out of jail free” card they might first appear. If anything, these changes arguably increase your responsibilities and should be incorporated into your program with care. Let’s look very briefly at each one.

Revision 1 deals primarily with Section 1A.09 Engineering Study and Engineering Judgment; it restores language that was removed in the revisions

that became the 2009 Edition of the MUTCD. Specifically, it added the following Guidance statements. *The decision to use a particular device at a particular location should be made on the basis of either an engineering study or the application of engineering judgment. Thus, while this Manual provides Standards, Guidance, and Options for design and applications of traffic control devices, this Manual should not be considered a substitute for engineering judgment. Engineering judgment should be exercised in the selection and application of traffic control devices, as well as in the location and design of roads and streets that the devices complement.*

This is welcome language for many in the profession, but it should not be interpreted as an agency’s ability to deviate from the Standards, Guidance, and Options of the MUTCD by casual measures or anecdotal information. Indeed, Section 1A.13 defines Engineering Study and Engineering Judgment and it should be further noted that in the State of Delaware, you must be a licensed Professional Engineer to practice engineering (“Delaware Professional Engineers Act,” Delaware Code, Title 24, Chapter 28). Revision 2 primarily affects Table I-2 Target Compliance Dates Established by

the FHWA. Those who attended the Delaware T² Center MUTCD training workshops over the last few months will notice a significant change in Table I-2 (see below) - 46 of the 58 compliance dates listed previously have been eliminated. Any date that has expired, but is no longer shown in the table, is no longer applicable. Conformance is therefore achieved through systematic upgrading for those particular provisions (“programmatic changes”). Dates that have already expired, but are still listed in the table, are still in effect.

See the changes to the Federal MUTCD at <http://mutcd.fhwa.dot.gov/>.

Remember with regard to both these revisions that Delaware has its own MUTCD that has not yet been changed for these new revisions. DelDOT will be reviewing these revisions and take action with the Delaware MUTCD as appropriate, so stay tuned here and at the DelDOT website for those changes and interpretations: www.mutcd.deldot.gov.

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2009 Edition - Revision 2

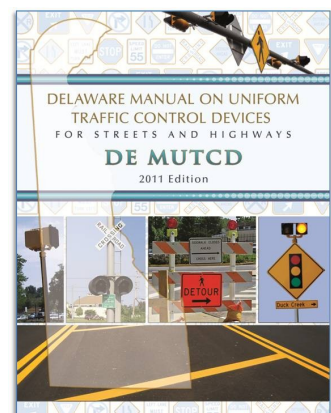
Table I-2. Target Compliance Dates Established by the FHWA

2009 MUTCD Section Number(s)	2009 MUTCD Section Title	Specific Provision	Compliance Date
2A.08	Maintaining Minimum Retroreflectivity	Implementation and continued use of an assessment or management method that is designed to maintain regulatory and warning sign retroreflectivity at or above the established minimum levels (see Paragraph 2)	2 years from the effective date of this revision of the 2009 MUTCD*
2A.19	Lateral Offset	Crashworthiness of sign supports on roads with posted speed limit of 50 mph or higher (see Paragraph 2)	January 17, 2013 (date established in the 2009 MUTCD)
2B.40	ONE WAY Signs (R6-1, R6-2)	New requirements in the 2009 MUTCD for the number and locations of ONE WAY signs (see Paragraphs 4, 9, and 10)	December 31, 2019
2C.06 through 2C.14	Horizontal Alignment Warning Signs	Revised requirements in the 2009 MUTCD regarding the use of various horizontal alignment signs (see Table 2C-5)	December 31, 2019
2E.31, 2E.33, and 2E.36	Plaques for Left-Hand Exits	New requirement in the 2009 MUTCD to use E1-5aP and E1-5bP plaques for left-hand exits	December 31, 2014
4D.26	Yellow Change and Red Clearance Intervals	New requirement in the 2009 MUTCD that durations of yellow change and red clearance intervals shall be determined using engineering practices (see Paragraphs 3 and 6)	5 years from the effective date of this revision of the 2009 MUTCD, or when timing adjustments are made to the individual intersection and/or corridor, whichever occurs first
4E.06	Pedestrian Intervals and Signal Phases	New requirement in the 2009 MUTCD that the pedestrian change interval shall not extend into the red clearance interval and shall be followed by a buffer interval of at least 3 seconds (see Paragraph 4)	5 years from the effective date of this revision of the 2009 MUTCD, or when timing adjustments are made to the individual intersection and/or corridor, whichever occurs first
6D.03**	Worker Safety Considerations	New requirement in the 2009 MUTCD that all workers within the right-of-way shall wear high-visibility apparel (see Paragraphs 4, 6, and 7)	December 31, 2011
6E.02**	High-Visibility Safety Apparel	New requirement in the 2009 MUTCD that all flaggers within the right-of-way shall wear high-visibility apparel	December 31, 2011
7D.04**	Uniform of Adult Crossing Guards	New requirement in the 2009 MUTCD for high-visibility apparel for adult crossing guards	December 31, 2011
8B.03, 8B.04	Grade Crossing (Crossbuck) Signs and Supports	Retroreflective strip on Crossbuck sign and support (see Paragraph 7 in Section 8B.03 and Paragraphs 15 and 18 in Section 8B.04)	December 31, 2019
8B.04	Crossbuck Assemblies with YIELD or STOP Signs at Passive Grade Crossings	New requirement in the 2009 MUTCD for the use of STOP or YIELD signs with Crossbuck signs at passive grade crossings	December 31, 2019

* Types of signs other than regulatory or warning are to be added to an agency's management or assessment method as resources allow.

** MUTCD requirement is a result of a legislative mandate.

Note: All compliance dates that were previously published in Table I-2 of the 2009 MUTCD and that do not appear in this revised table have been eliminated.



Rev. 2

Upcoming Events

The T² Center is currently planning the following upcoming events. Others will follow. We will announce exact dates, locations, and other information as we finalize details. Monitor our website for up to the minute details and registration.

- Adapting Cities to Climate Change : June 6, 2012; Newark, Delaware
- Urban Drainage Design: FHWA-NHI-135027; June 12-14, 2012; Kent Polytech
- Flagger Certification Training: Fall and Winter 2012 - Date and Location TBA
- Sign Retroreflectivity: Fall 2012 - Date and Location TBA
- Designing Pedestrian Facilities for Access (ADA): Fall 2012 - Date and Location TBA
- Introduction to Pavement Management: Winter 2012 - Date and Location TBA
- Winter Maintenance Training: Fall 2012 - Date and Location TBA
- Asset Management: Winter 2012 - Date and Location TBA



T² Center Request Form

Your feedback and interests help us increase the T² Center's effectiveness, so please complete and return this form or email us—all compliments, criticisms, and ideas are welcome!

_____ Please add my name to the T² Travel-Log subscription list—subscriptions are free

_____ I have an idea for a future T² newsletter article
Topic: _____

_____ I volunteer to author this article—please contact me

_____ Please consider these topics for future training sessions
Topic: _____

Topic: _____

Topic: _____

_____ I would like to learn more about the T² Center and how its free services can assist my municipality or agency—please contact me
Name: _____

Agency: _____

Address: _____

email: _____

Please return this form to:

Delaware T² Center, Delaware Center for Transportation
360 DuPont Hall, University of Delaware, Newark, DE 19716

**Care to
contribute an
article? Just let
us know by
filling out this
form or
emailing us.**

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[http://www.ce.udel.edu/
dct/T2.html](http://www.ce.udel.edu/dct/T2.html)



Helping to Bridge your Transportation Gaps

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 interchange the latest state-of-the-art technology into terms understood by local and state highway or transportation personnel. The Delaware T² Center Travel-Log is published semi-annually by the Delaware Technology Transfer Center at the University of Delaware. T² Center articles also appear semi-annually in the Trans-Search - the newsletter of the Delaware Center for Transportation. Any opinions, findings conclusions or recommendations presented in this newsletter are those of the authors and do not necessarily reflect views of the University of Delaware, Delaware Department of Transportation, or the Federal Highway Administration. Any product mentioned in the newsletter is for information purposes only and should not be considered a product endorsement.



Delaware T² Center



The Delaware T² Center is a member of the National Local Technical Assistance Program (LTAP) Association

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