



LTAP news

How to Streamline Contracting for Livability Projects Receiving both FHWA and HUD Funding

Sharon Love, FHWA WA Division Office Environmental PM

In 2010 the US Department of Housing and Urban Development (HUD), the US Department of Transportation (DOT), and the Environmental Protection Agency (EPA) created the Partnership for Sustainable Communities www.sustainablecommunities.gov which works to support the following livability principles:

- Provide more transportation choices.
- Promote equitable, affordable housing.
- Enhance economic competitiveness.
- Support existing communities.
- Coordinate and leverage federal policies and investment.
- Value communities and neighborhoods.



Special Experimental Project (SEP) No. 14 combines HUD and FHWA financing to improve livability in this neighborhood in the city of Sultan, WA. Learn more about this project at:

www.gpo.gov/fdsys/pkg/FR-2010-06-25/pdf/2010-15438.pdf.

Photo courtesy of the City of Sultan.

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In order to coordinate and leverage federal policies and investment, the Partnership has worked to identify regulatory barriers in the implementation of projects that enhance livability. One such barrier is the different contracting requirements for Federal Highway Administration and Housing and Urban Development which can create complications for jurisdictions receiving funding from both agencies.

In the past when a local agency project has received funding from both FHWA and HUD, the differences in contracting rules have necessitated splitting the projects up into phases so that only one set of federal rules applies to each contract. For projects such as trail construction this has been fairly simple to accomplish by breaking the project up into phases.

The City of Sultan received both FHWA and HUD funding for a project to reconstruct Alder Avenue. This \$860,000 project will construct approximately 1,250 linear feet of utility and road improvements on Alder Avenue, between 5th Street and 8th Street. The project includes replacement of the existing sanitary sewer system, replacement of curb and gutter, upgrading of curb ramps, and full pavement reconstruction on Alder Avenue. The project will also include new sidewalk which will fill a gap in the existing sidewalk system.

Because the sewer work that is being funded by HUD is included in the roadway reconstruction being funded by FHWA, this project did not lend itself to phasing. WSDOT and FHWA decided to pursue the combination of this work into one construction contract.

In the June 25, 2010 edition of the Federal Register, FHWA published the Notice: “Livability Initiative Under Special Experimental Project (SEP) No. 14” (www.gpo.gov/fdsys/pkg/FR-2010-06-25/pdf/2010-15438.pdf). The Notice announced FHWA’s decision to permit States to request SEP-14 approval for contracting practices intended to enhance livability and sustainability as part of any project that is to be jointly funded.

The notice allows FHWA requirements to be waived so that the project can comply with training, employment, and contracting requirements of HUD’s Section 3, to the greatest extent feasible. The purpose of the experiment is to gauge the extent to which HUD funding may be used for highway projects, the effects on competition whenever HUD’s economic opportunity requirements are used on a joint FHWA/HUD project, and the extent to which the alignment of FHWA and HUD requirements further livability.

In particular, SEP-14 is intended to permit a State DOT or Local Public Agency to experiment with the use of both FHWA and HUD funding, finding sources in the same construction contract. These funding types would ordinarily be incompatible under a single contract; HUD’s Section 3 requires that preferential hiring be afforded to those individuals living in the project area, but FHWA regulations prohibit preferential hiring. However, for contracts approved under FHWA’s SEP-14 program, the prohibition on hiring preferences would be waived to accommodate only Section 3 requirements.

WSDOT’s Local Programs Office prepared a work plan which was reviewed by the FHWA WA Division Office and submitted to FHWA HQ for approval. This particular exemption has only been used successfully twice before; once in Louisiana and once in Pennsylvania. After a couple of rounds of revisions, the plan was approved. The three approved work plans and more information about this initiative can be found on the FHWA website at: www.fhwa.dot.gov/construction/cqit/sep14livability.cfm.

For the City of Sultan project, using a single contract will save approximately \$94,000. This savings is derived mostly in mobilization, contract documents, traffic control, and inspection. The work plan also describes how the project promotes livability. The project principally benefits low- and moderate-income people by enhancing mobility and connections for transit users and pedestrians. The project improves access to community transit busses and improves access to and from the City's senior center and The Galway Bay senior apartment complex.

The project furthers the goals of the DOT, HUD, and EPA Sustainable Communities Partnership by:

- providing more transportation choices,
- enhancing walking and transit,
- supporting existing communities,
- providing more sustainable infrastructure and better access to transit,
- investing in healthy, safe, and walkable neighborhoods,
- improving the walkability of the neighborhood,
- ensuring a continued supply of healthy drinking water, and
- reducing the health risks associated with sewer backups.

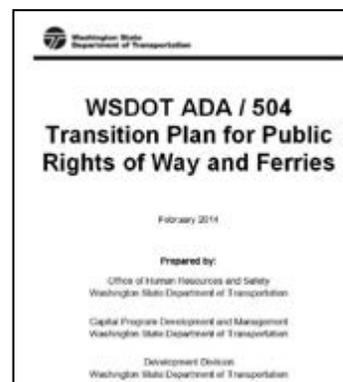
WSDOT will need to prepare a report to FHWA HQ that includes information about how the bids compared to similar projects in the WSDOT Northwest Region during the past federal fiscal year. The reporting will also describe any issues that arose due to the combination of federal funding sources and how those issues were resolved.

Please contact WSDOT Local Programs if you have a project which could benefit from the use of the SEP-14 Livability Initiative.

WSDOT ADA/504 Transition Plan

By Patty Allison

The Washington State Department of Transportation (WSDOT) understands the vital role it plays in ensuring tangible and meaningful, equal access for people with disabilities in their communities. WSDOT's ADA/504 Transition Plan for Public Rights of Way and Ferries (updated in January 2014) is a living document which endeavors to incorporate the kind of flexibility necessary to incorporate both existing and future physical and programmatic accessibility needs for people with disabilities.



What's New?

This ADA/504 Transition Plan update includes the addition of pedestrian facilities within the Public Rights of Way. WSDOT began a statewide inventory in 2009 in order to identify the physical obstacles of pedestrian facilities within its jurisdiction that limit accessibility within public rights of way. Initially, the inventory included intersections, park and rides, and ferry terminals on state routes outside of incorporated cities. Next, the department inventoried all interchanges on state routes and interstates with the exception of the greater Seattle area.

ADA Feature Location Type	Total Known Pedestrian Needs	Feature Type Collected	Remaining to be Collected	Percentage Collected
Interchanges	579	542	37	94%
Non-Freeway Intersections	1,373	1,003	370	73%
Sidewalks	200 miles	132 miles	68 miles	66%
Shared-Use Paths	69 miles	5 miles	64 miles	8%

Local Agency Partnerships

WSDOT Local Programs Engineers will coordinate with local agencies and communities to identify and address pedestrian, including ADA, needs on WSDOT projects within their jurisdictions. With this outreach our goal is to allow the agencies adequate time to identify needs and seek any needed funding if they are interested in partnering to address needed pedestrian accessibility improvements during WSDOT's projects.

Local agencies that have WSDOT projects programmed for design and construction in their areas will be contacted through an instructional letter over the next few months.

Public Involvement

Another requirement of this process is to allow public comment on the self-evaluation results and draft Transition Plan. WSDOT will seek to validate the self evaluation findings and solicit input from the public on particular problem issues to be addressed through the Transition Plan. This plan, in draft form, will be

posted online at www.wsdot.wa.gov/accessibility. Notifications soliciting public input will also be made via email, notice on the WSDOT website, and through a comprehensive statewide news release. Additionally, the agency will be hosting public meetings with stakeholders from around the state, beginning in Spring 2014.

Prioritization and Compliance Strategy

While WSDOT recognizes that other pedestrian features need to be made accessible for people with disabilities, WSDOT Executives have chosen, at this time, to focus the majority of its ADA compliance program on either the installation of new curb ramps or correcting deficiencies to existing curb ramps. Curb ramps are vital in providing a safe and viable means of accessing pedestrian facilities for the overall population.



The reason for this initial compliance strategy is two-fold:

1. WSDOT's assessment of the pedestrian facilities within the public right of way indicated that curb ramps, due to the number of them, were in the greatest need of rehabilitation or installation; and
2. The data also revealed locations where A) a curb ramp is missing on one side of the crossing or B) a curb ramp is missing on both sides of the crossing.

WSDOT is embarking on a targeted and strategic prioritization methodology to achieve ADA compliance. This approach will enhance ADA coordination with local agencies and improvements that benefit all pedestrians by targeting geographic locations with high pedestrian generators (medical facilities, schools, community services, shopping, etc.).

This new approach to the ADA program will accelerate the progress of ADA compliance over the traditional project-by-project approach. This new program will focus on high- and medium-priority curb ramps. Low-priority features will be addressed after all high- and medium-priority ADA locations have been addressed.

As many roadways are converting hot mix asphalt (HMA) to chip seals, the pace of ADA curb ramp improvements through the paving program is slowing significantly. High- and medium-priority ADA curb ramp retrofits will continue to be included in pavement preservation projects or completed preceding the projects. However, WSDOT's stand-alone ADA program will accelerate the progress of ADA compliance.

Stand-alone ADA curb ramp retrofits will also focus on high- and medium-priority curb ramp deficiencies, but will be done in strategic and targeted geographic locations. Where practicable, these stand-alone projects will be combined with other programmed projects to improve efficiencies.

Consistent with FHWA guidance, the Department will continue addressing curb ramps on traditional capital transportation projects to the maximum extent feasible. WSDOT's ten-year investment plan includes funding to bring all curb ramps within its right of way into compliance within the ten-year timeframe.



For local agency coordination contact:

Local agencies having 50 or more employees are required to have a transition plan to bring all of their public facilities into ADA Compliance. For more information about ADA transition plans visit our [“Complying with Americans with Disabilities Act \(ADA\): Planning, Design, and Construction Resources for Local Agencies” web page](#), read the [Local Agency Guidelines \(LAG\) Chapter 29](#), or contact your region [Local Programs Engineer](#).

For questions about the WSDOT ADA/504 Transition Plan for Public Rights of Way and Ferries contact:

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Research Note

Media Filter Drain: Modified Design Evaluation and Existing Design Longevity Evaluation

From the WSDOT Research Office

February 2014

Disclaimer: The contents of this report reflect the views of the author(s), who is (are) responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Washington State Department of Transportation and the U.S. Department of Transportation, Federal Highway Administration. This report does not constitute a standard, specification or regulation.



Media filter drain sections.

Background

A media filter drain (MFD) is a stormwater best management practice with gravel, vegetated, and media sections. The media section is made up of crushed aggregate, perlite, gypsum and dolomite and has either a free draining toe or an underdrain. One of the many benefits of MFDs is the effective removal of dissolved zinc and copper from roadway runoff.

The Problem

Many MFDs are in use today, but the initial research on MFDs did not evaluate its potential life past ten years. One portion of this project (Existing Design Longevity Evaluation) determined if media from existing MFDs remain effective beyond 10 years to avoid costly, premature replacements. Currently, WSDOT has over 40 linear miles of MFDs in use. At an estimated cost of \$50.00 per foot, the cost to replace them is about \$10.5 million dollars. WSDOT estimates that if the replacement time for the existing media filter drains are extended from 10 years to 25 years, then the anticipated cost savings is at least \$15 million over a 25 year period.

The existing design includes use of an aggregate gradation that is no longer readily available (old design). A more readily available and economical aggregate gradation has a slightly lower percent of finer material (new design). The other part of the project was to evaluate the effectiveness of the new design with respect to the old design (Modified Design Evaluation).

What We Did

Existing Design Longevity Evaluation

For this part, we obtained *existing* media filter mix from two field applications. Site A has been in operation for 12 years and Site B had been in operation for five years. We placed the existing media in columns in the laboratory and accelerated aging by consecutively infiltrating into the columns simulated stormwater solutions adding very high dissolved zinc and copper concentrations. Periodically the columns were tested for performance with simulated stormwater applications with concentrations more typical of roadway runoff. We also placed some of the existing media from both sites in other columns and added a thin layer of supercharged media (additional perlite, gypsum and dolomite), and then performed a series of accelerated aging tests on these columns to preliminarily look into possible rejuvenation techniques. In all cases, the influent and effluent were tested for dissolved zinc and copper.

Modified Design Evaluation

We placed freshly prepared new design media in columns and freshly prepared old design media in other columns and infiltrated these columns with simulated stormwater with metal concentrations in the ranges found in roadway runoff. In addition, we also prepared columns with new design media and accelerated metals aging with periodic performance testing similar to the methods used on the existing media in the first part. In all cases, the influent and effluent were tested for dissolved zinc and copper.

What We Learned

Existing Design Longevity Evaluation

Accelerated aging tested on existing media from sites in Washington state indicated that the media may have extended lives past 25 and 18 years for the media from Sites A and B, respectively. Site factors such as prior filtration might impact the media's life expectancy and further research may hone in on maintenance requirements and the media's life expectancy. The parallel study using a thin layer of supercharged media on Site B existing media appears promising for rejuvenation.



Photo of the laboratory column setup.

Modified Design Evaluation

Findings from laboratory research performed on columns filled with new media versus columns filled with old media indicate that the new media initially has similar removal efficiencies as the old media for large storm events. Accelerated aging of the new media indicates that removal efficiency for dissolved zinc and copper of the new media remained viable for at least 15 years.

What the Researcher's Recommend

Based on the results of this research, we recommend that WSDOT use either the old or the new media mix for MFDs depending on availability and favorable cost. Additional pretreatment via filtration prior to infiltration into the MFD may also prove useful. In addition, we propose that the replacement time be extended well past the initial ten year evaluation.

We propose that research continue in two phases. The next phase (Phase II) would extend the laboratory work, and the subsequent phase (Phase III) would provide for field evaluations. For the Phase II project, it would be beneficial to continue the accelerated aging event sequences on both the new and the existing media in order to determine how long media filter drains remain viable. This Phase II project might also include further evaluation of simple rehabilitation techniques as originally proposed in Phase I once a failure point has been reached. The Phase III project might include developing simple field inspection protocols and tests for evaluating efficacy of existing MFDs and field test would enable WSDOT to verify the functionality of MFDs over time and also include evaluating the surrounding conditions of the MFD, determining whether there is adequate filtration prior to infiltration or if enhancements might increase the life of the MFD.

Summary of Implementation

MFD designs which have a range of applicable aggregate gradations will be useful and economical for WSDOT based on the local or regional availability of aggregate in the area. This research expands both the applicable design criteria and the anticipated life expectancies of the media filter drain, particularly for applications where dissolved zinc or copper are metals of concern. In addition, there would also be cost savings for all new MFDs installed if the replacement times are extended to 25 years or more. MFDs are currently in use by other states, counties and cities.

Contact Information

Report Number and Title

WA-RD 822.1 Media Filter Drain:
Modified Design Evaluation and Existing Design
Longevity Evaluation

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\$20,000 Federal
\$60,000 Pactrans



Media filter drain at Site A.



Modified filter drain at Site B.

New Roadway Marking Materials for a Dynamic World

By WSDOT HQ Traffic Design and Operations Group

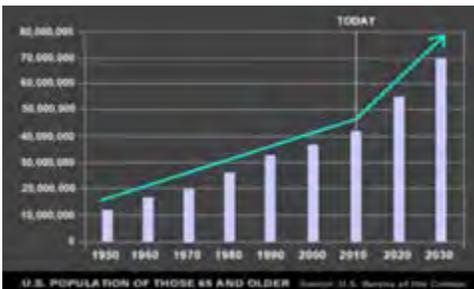
New Beads and Faster Drying Paint

Pavement makings have traditionally consisted of standard road paint and glass beads. However, paint can take a while to dry on cool, humid, or windless days and reflective glass bead material used with road paint was difficult to see at night when the road was wet. A new state contract (# 02513) is now available for local governments to purchase beads that work well at night when wet and a product that dries paint faster.

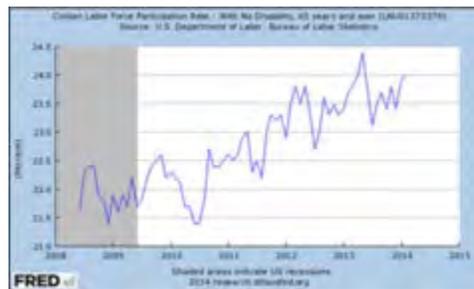
Reason for the New Materials

The US Bureau of the Census reports that by 2020, there will be over 50 million drivers aged 65 or older and more of them are working longer. This equates to about one in five drivers!

Trend line for Older Americans



Trend Line for Older Workers/Commuters



As we age, our eyes tend to deteriorate considerably, which means it becomes more difficult to adjust to varying light conditions. This affects the ability of older drivers to see well during twilight or darkness.

But people aren't the only ones trying to see the road. Vehicles too, are beginning to need roadway markings due to manufacturers' wide-spread adoption of such technologies as lane keeping, lane assist, adaptive cruise control, and stability control.



Toyota

WSDOT understands the challenges of changing demographics and technologies as well as the benefits of more positive all-weather roadway guidance, day and night, wet and dry. However, for much of recorded automotive history, roadway marking materials have not been very visible to anyone during rainy nights. The reason is that traditional glass beads applied during striping jobs couldn't be designed to function well in wet weather conditions.

The roadway marking industry has responded to this confluence of issues with new and effective products. These new beads can be used with many striping materials (paint, methyl methacrylate, or thermoplastic) and they can aid drivers and vehicle sensing equipment with more detectable wet night roadway markings and stripes.



Although these marking materials have been available for a few years, they haven't been available to state or local agencies via state purchasing contracts. That changes this year.

New State Materials Contract – Available to Local Agencies

Local agencies can now purchase wet weather retroreflective roadway marking beads via the new Department of Enterprise Services roadway marking materials contract. This contract also includes the ability to purchase paint drying agents which allows for a longer maintenance season and painting activities during longer parts of the day. For contact information, visit:

<https://fortress.wa.gov/ga/apps/ContractSearch/ContractSummary.aspx?c=02513>

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Ref:

[https://research.stlouisfed.org/fred2/graph/?s\[1\]\[id\]=LNU01375379](https://research.stlouisfed.org/fred2/graph/?s[1][id]=LNU01375379)
<http://www.census.gov/>

Development and Evaluation of the ALERT System

By Victor Lund, PE Traffic Engineer St. Louis County, Minnesota and Taek Kwon, Ph.D. Electrical Engineering Professor University of Minnesota Duluth with Husam Ismail, Research Assistant University of Minnesota Duluth

Rural, two-way stop controlled intersections present a significant challenge for traffic safety. For the ten year period of 2002 to 2011 in Minnesota, 43 percent of all intersection crashes occurred at unsignalized intersections. However, for this same period, 65 percent of fatal and serious injury intersection crashes occurred at unsignalized intersections. Rural, two-way stop intersections accounted for 76 percent of these fatal and serious injury intersection crashes at unsignalized intersections. Right-angle type crashes accounted for the largest percentage, by crash type, of these fatal and serious injury crashes at rural, two-way stop intersections. The problem is clear. The focus of intersection safety needs to address right-angle crashes at rural, two-way stop intersections (1). Research in Minnesota suggests that approximately 60 percent of right-angle crashes at rural intersections involved a driver that came to a stop and then pulled out in front of a vehicle on the major road whereas 26 percent of these crashes involved a driver running the STOP sign (2). This suggests the focus should be to assist drivers on the minor road in judging appropriate gaps.

An emerging technology to treat rural, two-way stop intersections, is a new rural intersection conflict warning system based on Intelligent Transportation Systems (ITS). In Minnesota, the Local Road Research Board (LRRB) funded a research project to design and implement a rural intersection conflict warning system in the field. Named the ALERT System (Advanced LED WaRning System for rural InTersections), it aggressively adopts recent ITS technologies and utilizes solar powered renewable energy, LED integrated signs, non-intrusive vehicle detection, and wireless communications between the devices. The goal of the project was to improve intersection safety, utilize “off-the-shelf technology”, and create a low cost system that is easy to install, operate and maintain by local agencies.



The ALERT System was installed at a rural, two-way stop intersection near Duluth, Minnesota in 2012. The speed limit on both roads was 55 mph. The Annual Average Daily Traffic (AADT) was 970 vehicles per day for the major road and 570 vehicles per day for the minor road. The ALERT System layout, as shown in the diagram below, was composed of three dynamic flashing warning signs, two dynamic flashing STOP signs, and six detectors.

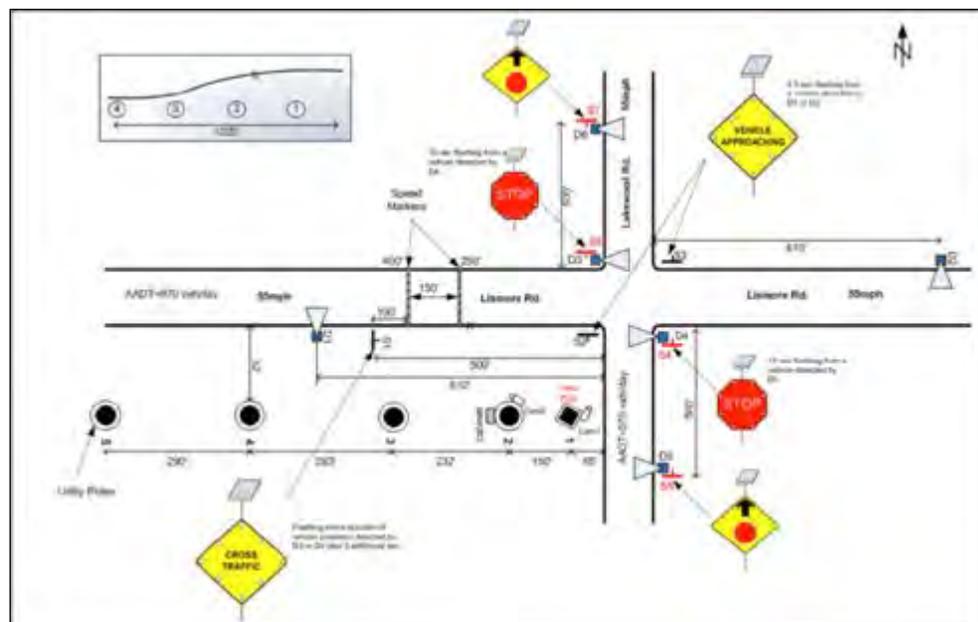
On the minor road, a vehicle was first detected at the stop ahead warning sign. This detection activated the flashing STOP sign for a fixed time period based upon the typical deceleration of a vehicle to a stop condition. Once the vehicle arrived at the STOP sign, another detector activated the flashing CROSS TRAFFIC warning sign for the entire time the vehicle was detected at the STOP sign. On the major road, a vehicle approaching the intersection was detected and activated the flashing VEHICLE APPROACHING warning signs for a fixed time period based upon the typical time for that vehicle on the major road to arrive and pass through the intersection.

Crash data was not used in the analysis because there were no reported crashes in the before period. Instead, the research analyzed four surrogate metrics. The first was vehicle speeds on the major road. Second was the wait time for vehicles on the minor road at the STOP sign. Third was the percentage of roll-throughs for vehicles on the stop-controlled minor road. And fourth, a mail-in survey of local residents. Video cameras were used to observe and measure driver behavior on the major road and at the intersection. Video data was collected for 42 days before the ALERT System was installed and 259 days after the installation.

ALERT System Layout Diagram

Analysis for speed, wait time and roll-throughs were all analyzed during conflict and non-conflict times. A conflict was defined as when a vehicle was stopped on the minor road at the STOP sign and a vehicle on the major road was approaching the intersection. A non-conflict was defined as the absence of either a vehicle stopped on the minor road at the STOP sign or a vehicle on the major road approaching the intersection, but not both.

The speed analysis was used as a surrogate measure of a driver's recognition of a potential conflict at the intersection ahead due to a vehicle stopped on the minor road at the STOP sign. A decrease in these vehicle speeds is assumed to correlate to an improvement in conflict recognition whereby the driver attempted to increase the amount of time in



which to perform a successful evasive maneuver if necessary. The average vehicle speed on the major road near the intersection before the system was installed was 52.0 mph, after it dropped to 48.7 mph during a period of conflict and 51.6 mph during non-conflict times. This means the ALERT System was able to reduce the average speed of vehicles on the major road approaching the intersection by 3.3 mph (52.0 mph to 48.7 mph) during a conflict.

A wait time analysis was used to determine if there was a change in the amount of time that a driver was stopped on the minor road at the STOP sign when there was a vehicle on the major road approaching the intersection. A longer wait time during a conflict was assumed to correlate to an improvement in gap recognition. The average wait time before the ALERT System was installed was 2.0 seconds. After the installation, the average wait time was 2.5 seconds during non-conflict periods and 3.9 seconds during conflict periods. This means the ALERT System was able to increase the wait time for a driver stopped on the minor road at the STOP sign when there was a vehicle on the major road approaching the intersection by 1.9 seconds (2.0 seconds to 3.9 seconds).

The roll-through analysis considered all three turning movements of vehicles stopped on the minor road at the STOP sign and then proceeding into the intersection. A stop was defined as a vehicle that came to a complete stop as well as those that came to a “rolling stop”. All other vehicles were defined as a roll-through. This analysis was used to assess whether the ALERT System had a negative effect on a driver’s compliance with the STOP sign during non-conflict periods and, conversely, if drivers had a better recognition of an unacceptable gap during conflict periods. If the percentage of roll-throughs increased during non-conflict periods, it was assumed to correlate to drivers using the ALERT System as a de-facto traffic signal. Conversely, a reduction in the percentage of roll-throughs during conflict periods is also assumed to correlate to an improvement in gap recognition. Before the ALERT System was installed, the percentage of roll-throughs for all vehicle movements from the minor road was 28 percent. After the ALERT System was installed, the percent of roll-throughs was 16 percent during non-conflict periods and one percent during conflict periods. Roll-throughs were nearly eliminated during conflict periods. The largest percent of roll-throughs during the non-conflict period occurred for right-turn movements and the least percent occurred for through movements (a flip from the before period). There effectively was no difference in the percent of roll-throughs during conflict periods by the type of turning movement.

Finally, a mail-in survey was sent to residents living within a two mile radius of the study intersection. A total of 206 surveys were sent out and a total of 119 were returned for a 58 percent response rate. The first question asked how often they use the intersection. The majority of respondents (47 percent) stated two times per day. The second question was broken into four statements and asked the respondent

	Statement Strongly Agree	Total Agree	Positive	Strongly Disagree	Disagree	Total Negative
The warning system is easy to understand	55%	39%	94%	5%	1%	6%
The warning system improved the safety of the intersection.	56%	36%	92%	1%	7%	8%
The vehicle activated Blinker STOP signs obtain my attention	70%	28%	98%	1%	1%	2%
The warning system could be used at other intersections	53%	38%	91%	5%	4%	9%

to assess how strongly they agreed or disagreed. See the following table for the results. In the final question, a cumulative response of 87 percent ranked the effectiveness of the system as “Excellent” (52 percent) or “Good” (35 percent).

In conclusion, the evidence suggests this system was able to effect a positive change in driver behavior for both the major road and minor road during a conflict. In the NCHRP Report 500, Volume 5, which lists safety strategies for unsignalized intersections, two of the safety strategies are assisting drivers on the minor road in judging appropriate gaps and reducing the operating speed of vehicles on the major road. It appears the ALERT System was able to accomplish both of these objectives. However, it should be cautioned that there are still questions and concerns surrounding the behavior of drivers on the minor road when there is no conflict with a vehicle on the major road. It appears drivers are blending the sign definitions of the Manual on Uniform Traffic Control Devices whereby the driver treats the STOP sign as a warning sign and the VEHICLE APPROACHING warning sign as a regulatory sign. In effect, during non-conflict periods, drivers appear to treat the system as a de-facto traffic signal. However, even in the worst case scenario during non-conflict periods, the roll-through percentage is lower than before the ALERT System was installed (16 percent versus 28 percent). It is recommended that future human factors research be performed on this observed phenomenon.

For further reading, the full research report can be accessed from the Minnesota LRRB website at: www.lrrb.org. The report is expected to be published on this website by spring 2014. A video summarizing this research project is available for viewing at mntransportationresearch.org.

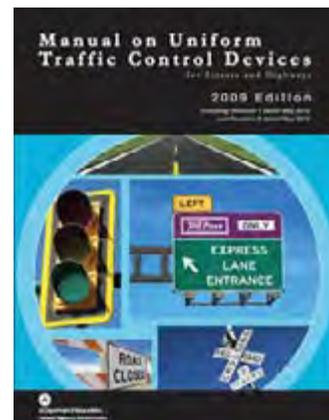
References

1. 2011 Minnesota Intersection Green Sheets. www.dot.state.mn.us/stateaid/trafficsafety.html. Accessed on January 21, 2014.
2. Harder, K. Bloomfield, J. and Chihak, B. 2003. Reducing Crashes at Controlled Rural Intersections. Minnesota Department of Transportation Report Number 2003-15.

When Should Your Agency Update its Traffic Control Devices?

By Susan Bowe, P.E., WSDOT Highways and Local Programs Traffic Services

The goal of the Manual on Uniform Traffic Control Devices is to improve traffic control devices nationally to increase the safety of roadway users and workers in the roadway. To do this, the MUTCD establishes standards every agency must follow, along with guidance, option, and support statements, all defined below. The MUTCD requires that agencies upgrade their traffic control devices continuously over time. It states that when a device is damaged beyond repair, an agency must replace it as soon as possible with a device that meets current standards¹. Agencies must replace other devices systematically. Agencies can think of this as replacing devices system-wide in a planned way on an ongoing basis.



2009 MUTCD (with Revisions 1 and 2 incorporated) Photo from FHWA

Definitions from the 2009 MUTCD

- **Standard** – A statement of required, mandatory, or specifically prohibitive practice regarding a traffic control device.
- **Guidance** – A statement of recommended, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate.
- **Option** – A statement of practice that is a permissive condition and carries no requirement or recommendation.

Because of budgetary, construction and maintenance programs, and political realities, it takes time for all the agencies in the country to update non-compliant devices to the standards. Time can turn quickly from years to decades so there is a list of dates in the MUTCD by which local and state agencies are required to replace certain existing traffic control devices that do not meet current standards. These are called target compliance dates and are shown on page 19.

Whether or not there is a target compliance date, agencies still need to update their traffic control devices systematically. An agency with non-compliant devices has more risk. Someone could get seriously injured or killed in a collision where a non-conforming device may have been a causal factor. According to Don Petersen, FHWA WA Division's Safety & Geometric Design Engineer with FHWA's Washington state division, "If the traffic control device was not updated and there was no plan for it to be updated, the responsible agency is at greater risk during a tort claim." Also, although rare, if devices are neglected over the years with no plan for replacement, the agency could lose federal funding. Further, if an agency does not upgrade devices on a regular basis but instead hopes to make changes as the target compliance date approaches, they can have problems finding the budget to make the changes or they might miss the date. If they miss the date, they have no protection from the MUTCD to use during a tort claim.

¹ There are two exceptions to this. If a traffic control device is missing or is not in working order, it can be replaced with a device that does not meet current standards if:

- It will be installed amongst other devices that also do not meet current standards, and/or
- The device will be updated in a timely manner to meet current standards.

What is an agency supposed to do? Plan and budget. Most agencies have the easiest time upgrading non-compliance traffic control devices if they plan and budget for the work as part of their regular maintenance, operations, and construction activities. If agencies address non-compliant devices systematically starting now, they will reduce their risk and make their roadways, and the nation's roadways, gradually safer over time.

Did You Know???

When local and state agencies, the Federal Highway Administration, or other partners across the country find an error in the MUTCD, FHWA acknowledges the errors on a list of known errors ([PDF 57 kb](#), [HTML](#)). And when they find sections that need clarification, FHWA issues [official interpretations](#), after considering the application and meaning of the traffic control device in question. Official interpretations from the past year include:

Signs

- Signing for Priced Managed Lane without Transponder Requirement ([HTML](#), [PDF 2.9 MB](#)) on November 20, 2013
- Radar Speed Feedback Signs ([HTML](#), [PDF 386 KB](#)) on October 22, 2013

Pavement Markings

- Application of Colored Pavement ([HTML](#), [PDF 2.8 MB](#)) on August 15, 2013

Traffic Signals

- Rectangular Rapid Flashing Beacons (RRFB) Flashing Extensions and Delays ([HTML](#), [PDF 731 KB](#)) on October 22, 2013
- Definition of Dimming ([HTML](#), [PDF 627 KB](#)) on October 9, 2013

Bicycle Facilities

- Pavement Markings for Designated Bicycle Routes ([HTML](#), [PDF 628 KB](#)) on April 18, 2014
- Clarification of the Interim Approval for the Optional Use of a Bicycle Signal Face (IA-16) ([HTML](#), [PDF 1.3 MB](#)) on February 12, 2014

The procedure for requesting an Official Interpretation can be found here:

mutcd.fhwa.dot.gov/resources/interpretations/index.htm

WSDOT Local Programs Traffic Services can assist local agencies with questions about the 2009 MUTCD, as modified by WAC 468-95. Please contact Susan Bowe, P.E., at 360-705-7380 or susan.bowe@wsdot.wa.gov.

Target Compliance Dates

in the 2009 MUTCD (with Revisions 1 and 2 incorporated)

Compliance Dates that Apply to Local Agencies

Dates that have passed

- Have all workers within the right-of-way, including emergency responders, wear high-visibility safety apparel. Section 6D.03. **December 31, 2011.**
- Have all flaggers within the right-of-way, including law enforcement personnel, wear high-visibility safety apparel. Section 6E.02. **December 31, 2011.**
- Have all adult crossing guards within the right-of-way, including law enforcement personnel, wear high-visibility safety apparel. Section 7D.04. **December 31, 2011.**
- Have crashworthy supports for all signs on roads with a speed limit of 50 mph or higher. Section 2A.19. **June 17, 2013.**

Upcoming Dates

- Develop and use an assessment or management method to maintain minimum or higher sign retroreflectivity levels for all regulatory and warning signs. This does not include signs with brown or blue backgrounds. Section 2A.08. **June 14, 2014.**
- Meet requirements for yellow change and all red clearance intervals at all traffic signals. Section 4D.26. **June 13, 2017 or with signal retiming, whichever happens first.**
- Meet requirements for pedestrian change intervals at all traffic signals. Section 4E.06. **June 13, 2017 or with signal retiming, whichever happens first.**
- Meet requirements for the number and location of all One Way signs. Section 2B.40. **December 31, 2019.**
- Meet requirements for horizontal alignment signs on all freeways and expressways, and on all arterials and collectors with an Average Annual Daily Traffic above 1,000. Sections 2C.06-2C.14. **December 31, 2019.**
- Meet requirements to use specific plaques for all left-hand exits. Sections 2E.31, 2E.33, and 2E.36. **December 31, 2014.**
- Have a retroreflective strip on all Crossbuck sign supports at passive railroad grade crossings and on the back of all Crossbuck signs at active and passive crossings. Sections 8B.03 and 8B.04. **December 31, 2019.**
- Supplement Crossbuck signs with Stop or Yield signs at passive railroad grade crossings. Section 8B.04. **December 31, 2019.**

WSDOT Receives T2 Grant for Local Agency Training Workshops on Right of Way

by Dawn Fletcher, Local Agency & Consultant Reviewer, WSDOT Real Estate Services Office

In January WSDOT received just enough T2 funds from FHWA for a long overdue statewide Local Agency Training Workshop. The training workshops were offered to all Local Agency and Consultant staff in Washington, and held at six different locations across the state between March 11th and April 24th. The speakers included national and state experts in right of acquisition and right of way plans.

Approximately 225 people from 89 different organizations participated in the training workshops at six locations across the State of Washington. Training workshop topics included:

Local Agency Program and Policy Updates

- FHWA Local Agency Program Review
- State of the Program and Compliance & Levels of Involvement
- Administrative Offer Summary (AOS) Policy Change
- Approved Procedures
- “J” Agreements
- LAG Manual Updates
- LPA/ROW Resources Webpage

ROW Certification

- FHWA ROW Certification Process Review
- Sufficient Property Rights
- Fee, Easement or Permit
- Early Acquisition

ROW Plans

- Complying with Requirements of LAG 25.4 – Funds for Right of Way

Consultant Oversight

- Agency's Responsibility for Oversight of Consultants Performing ROW Activities

Words from Local Agency Coordinator(s)

- Common Certification Issues
- Real Estate Funding Estimates
- Surviving the Dreaded File Review
- Diaries
- Administrative Settlements

Although, these types of training workshops have been held regularly in the past, it had been several years since one had been offered. Participant feedback was overwhelmingly clear; the training workshops were a success, and they are needed more often! WSDOT staff is currently in the process of preparing a training workshop evaluation report in support of obtaining a secure funding source for ongoing, regularly scheduled events.

A copy of the presentation materials (with notes) can be found in the May 2014 Announcements on our website at: www.wsdot.wa.gov/RealEstate/LPAROW.htm

WSDOT Debuts New Right of Way Resource Web Page for Local Agencies & Consultants

by Dawn Fletcher, Local Agency & Consultant Reviewer, WSDOT Real Estate Services Office

On March 11, 2014, at the Local Agency Training Workshop held at the Southwest Region Headquarters, Washington State Department of Transportation (WSDOT) provided a preview of a new right of way web page devoted specifically to Local Agencies and Consultants. The purpose of the webpage is to share right of way related information regarding recent developments in the Local Agency arena in Washington State. It also serves as a “one stop” web page, with links to Local Programs, WSDOT Real Estate Services, Approved Appraiser List, LAG Manual, Right of Way Manual, Local Agency Forms, NHI Courses, as well as Sections for Announcements, Clarification & Guidance, and Important Documents.

Local Agency Coordinators (LACs) frequently contact the Real Estate Services Office seeking clarification and guidance on issues pertaining to a specific local agency project. Although a response is provided to the LAC and the local agency, it typically doesn't go any further. Unless the guidance is important and/or new, it is included as an agenda item to be discussed amongst the LACs at the statewide monthly LAC meetings. With the launch of the new webpage, clarification and guidance provided on specific topics will be posted and available for others to read. Recent guidance published includes:

- Relocation Appeal Procedure Guidance Update
- Paying for Appraisals of Donated Property
- FHWA's Position on Moving Marijuana
- 23 CFR 710.403(e) – Sale of Lease of Excess Real Property

It is also recommended that Local Agencies and Consultants use the LPA forms link to download forms to ensure they are using the most recent version.

In the first three months since its inception, the aptly titled “LPA/ROW Resources” webpage has had 508 page views! The address of WSDOT's new webpage is: www.wsdot.wa.gov/RealEstate/LPAROW.htm

WSDOT Local Agency Coordinators for Right of Way:

Region	Coordinators	Phone
Eastern	Stephanie Golly/Steve Goss	(509) 324-6277 / (509) 324-6283
North Central	Farzan Farivar	(509) 667-2933
South Central	Terri Brown	(509) 577-1656
Southwest	Mike Stricker	(360) 905-2149
Northwest	Tom Boyd	(206) 440-4205
Olympic	Paul Lovgren	(360) 704-3259



IACC

INFRASTRUCTURE ASSISTANCE
COORDINATING COUNCIL

2014 IACC Conference

Together We Build Infrastructure

SAVE THE DATE!

September 30 - October 2, 2014

*Wenatchee
Convention Center*

*****Now accepting 2014 award nominations.*****

*Look for registration to open this summer.

Sponsorship opportunities are available.

For more information, contact: Betsy Gabel
360.725.2759 or betsy.gabel@commerce.wa.gov
www.infracfunding.wa.gov

SAVE THE DATE



2014 Pacific Northwest Bridge Maintenance Conference
All Hands on Deck - Maintaining a State of Good Repair
Tuesday 10/14/2014 - Thursday 10/16/2014

Red Lion Hotel on the River - Jantzen Beach
909 North Hayden Island Drive
Portland, Oregon 97217

Key Benefits of the 2014 Conference:

- Become better equipped and prepared to perform assigned tasks by being exposed to lessons learned from others
- Become more efficient in the area of bridge maintenance
- Become more productive by using assigned resources wisely
- Ensure a higher level of On-the-Job Safety and
- Ensure a higher level of environmental awareness
- Increase communication skill set by formulating and delivering presentations
- Increase knowledge of effective bridge maintenance strategies and/or activities

Who Should Attend:

Local, state, federal, and other agency bridge owners involved in bridge maintenance activities. Staff members may include:

- Bridge maintenance crews
- Bridge maintenance managers and superintendents
- Bridge maintenance planners, programmers, and analysts
- Bridge and maintenance inspectors
- Bridge designers
- Bridge product exhibitors

16 PDH's are earned by attending this conference

Title VI Notice to Public

It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin, or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinators, George Laue at (509) 324-6018 or Jonté Sulton at (360) 705-7082.

Americans with Disabilities Act (ADA) Information

This material can be made available in an alternate format by emailing the WSDOT Diversity/ADA Compliance Team at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA (4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.