

BICYCLE PEDESTRIAN COORDINATING COMMITTEE

10:00 a.m., Tuesday, August 27, 2013
City of Cape Coral Annex, Room A200
815 Nicholas Parkway E., Cape Coral
239-244-2220



AGENDA

Call to Order/Roll Call

- 1) *Approval of the June 25, 2013 BPCC Meeting Minutes

New Business

- 2) Project Update on the New Lee MPO Bike Ped Project Prioritization Process (Ron Gogoi)
 - 2.1. Review and Discussion on Introductions and Scope Review
 - 2.2. Review of Federal Funding Changes
 - 2.3. Assessment of Federal Funding Changes
 - 2.4. Assessment of Existing Prioritization and Funding Process
 - 2.5. Discussion on Goals for the Project
 - 2.6. Next Steps

Old Business

- 3) Update on the Bicycle Pedestrian Safety Action Plan (Don Scott)

Other Business

- 4) Public and Member Comments on Items not on the Agenda
- 5) Local Government Reports on Bicycle Pedestrian Related Projects
- 6) LeeTran Report
- 7) FDOT Report
- 8) Announcements
- 9) Information and Distribution Items

Adjournment

* Action Items + May Require Action

All meetings of the Lee County Metropolitan Planning Organization (MPO) are open to the public. In accordance with the Americans with Disabilities Act, any person requiring special accommodations to participate in this meeting should contact Mr. Ron Gogoi at the Lee MPO 48 hours prior to the meeting by calling (239) 244-2220; if you are hearing or speech impaired call (800) 955-8770 Voice / (800) 955-8771 TDD. Or, e-mail rgogoi@leempo.com.

The MPO's planning process is conducted in accordance with Title VI of the Civil Rights Act of 1964 and related statutes. Any person or beneficiary who believes he or she has been discriminated against because of race, color, religion, sex, age, national origin, disability or familial status may file a complaint with the Florida Department of Transportation District One Title VI Coordinator Robin Parrish at (863) 519-2675, or by writing her at P.O. Box 1249, Bartow, Florida 33831.

**MINUTES OF THE LEE COUNTY MPO BICYCLE PEDESTRIAN
COORDINATING COMMITTEE**

Held on June 25, 2013

The meeting of the Bicycle Pedestrian Coordinating Committee was held on June 25, 2013 at the City of Cape Coral Annex, Room A200, 815 Nicholas Parkway East, Cape Coral.

Those in attendance included:

Linda Carter	CAC
Patricia Young	At-Large Member
Dan Moser	Injury Prevention Coalition
Mike Tisch	Lee County DOT
Jason Lamey	Lee County Parks and Recreation
Mike Tisch	Lee County DOT
Dawn Huff	Lee County School District
Josh Overmyer	Town of Fort Myers Beach
Jeff Davis	City of Bonita Springs
Simone Behr	Visitors Convention Bureau
Avelino Cancel	City of Fort Myers
Stacey Ravey	Collier Transportation Planning

Others in attendance included Don Scott, Ron Gogoi and Brian Raimondo with the Lee County MPO; and Gary Gasperini with the City of Cape Coral

CALL TO ORDER

Chairman Moser called the meeting to order at 10:00 am.

The attendees introduced themselves. Mr. Gogoi announced that a quorum was present.

APPROVAL OF MINUTES

AGENDA ITEM #1 – APPROVAL OF THE June 25, 2013 BPCC MEETING MINUTES

MOTION BY MR. DAVIS TO APPROVE THE JUNE 25, 2013 BPCC MEETING MINUTES. SECONDED BY MS. YOUNG. MOTION CARRIED UNANIMOUSLY.

AGENDA ITEM #2 - PUBLIC COMMENTS ON ITEMS ON THE AGENDA

None.

NEW BUSINESS

AGENDA ITEM #3 – BIKE TOURISM

Committee member Simone Behr provided an update on the tourism activities that they are doing through the Visitors Convention Bureau website to promote bike tourism in Lee County. She brought attention to the VCB's consumer web site where they added a completely new section under hiking and biking which has information on the history of Florida Mud Cutters, hiking trails, links to various maps, list of bicycle rental facilities, etc. The information on rental facilities is crucial for visitors as 75% of the visitors come to Lee County by air. She mentioned that VCB has an office in Frankfurt, and their press releases always highlight the Lee County bike amenities. She mentioned about the Guest First free class for hospitality industry employees that empowers a customer service person in a hotel, and helps the front desk employees become knowledgeable in the area attractions, including bike riding etc. There is a section on events where anyone can go and post all sorts of events including biking events. Volunteers at the airport use the MPO bike maps for providing information to visitors, before letting them have a copy.

Ms. Carter suggested displaying accessible bicycle pedestrian amenities prominently on the web site, and Mr. Moser asked whether the posted events could be sorted down by activities and Ms. Behr said she would look into it.

AGENDA ITEM #4 – UPDATE ON BICYCLE PEDESTRIAN SAFETY ACTION PLAN

Mr. Scott stated that staff was trying to address the comments on the draft bicycle pedestrian safety action plan and reported that the MPO's Citizens Advisory Committee critiqued the plan and that it suggested there should be an emphasis on the implementation side as well, and that the Plan should not just focus on the planning side. The CAC recommended identifying and analyzing the 10 worse crash intersections and recommend improvements. He reported that FDOT and FHWA will host a 2 day training course together on bike ped safety action plans during the end of Summer/beginning Fall either in Sarasota or in this area, and that he had shared some of the concerns that came through this exercise with the District Secretary. Mr. Moser suggested that crash data should not be the sole criterion for identifying the 10 worst intersections, because bicyclists and pedestrians avoid certain intersections because they are dangerous and the number of crashes may not reflect how bad they are. He used the intersection of US 41 and Six Mile Cypress Parkway/Gladiolus as an example.

AGENDA ITEM #5 – DISCUSSION ON DESIGN SPECIFICATIONS FOR MARKED AND SIGNED BIKE LANES COUNTYWIDE

Mr. Gogoi reported that FDOT's design standards for Bicycle Lanes have changed. The new spacing requirements for pavement marking symbols is $\frac{1}{4}$ of a mile on roadways with posted speeds less than 45 mph and $\frac{1}{2}$ a mile with speeds of 45 mph or greater. No distinction is made between urban and rural sections. The new standards are referenced in FDOT's current Plans Preparation Manual. The old spacing was 600 ft. in urban sections and $\frac{1}{4}$ of a mile in rural sections which is the same as recommended in the latest edition of the Florida Green Book. In addition, the new standards do not call for any bike lane signs. FDOT is now using the new design guidelines in all new

construction and 3R projects on state highways in Lee County. Discussion ensued on inconsistency in application of design guidelines within state highways, as well as application of design guidelines within roadways maintained and owned by the same local government jurisdiction. There is also inconsistency in design guidelines among the local government jurisdictions.

Mr. Moser suggested a presentation from ITE on current design standard guidelines for local governments and that he stated he would look into it.

AGENDA ITEM #6 – LEE COUNTY BICYCLE PEDESTRIAN APP PROPOSAL

Mr. Tisch gave a presentation on a Lee County Bicycle Pedestrian App Proposal. He stated that the County Bicycle Pedestrian Advisory Committee recommended moving ahead with the development of the app. The County has funds committed towards the design and production of the app, but would not mind partnering with other agencies and organizations to share some of the cost. The MPO developed bicycle map will provide the basis of the app and it offers a lot of possibilities including the ability to pull up routes matching the skill and experience of a rider. A comment was provided that it should show the locations of bike rental facilities.

AGENDA ITEM #7 – DISCUSSION ON THE MPO NOTIFICATION OF NEW/UPGRADED BICYCLE PEDESTRIAN FACILITIES BY LOCAL GOVERNMENT JURISDICTIONS

Mr. Gogoi stated that the MPO would like to be notified in a timely manner about bicycle pedestrian projects completed by the local governments, so that the MPO could keep track of all such projects by mileage and year. This would be especially useful during the compilation of the year ending MPO bike ped reports, and also for calculation of performance measures. Mr. Tisch suggested the end of the federal fiscal year which would be September 30th.

OTHER BUSINESS

AGENDA ITEM #8 – PUBLIC AND MEMBER COMMENTS ON ITEMS NOT ON THE AGENDA

None

AGENDA ITEM #9 – LOCAL GOVERNMENT REPORTS ON BICYCLE PEDESTRIAN RELATED PROJECTS

Mr. Gasperini mentioned about a few projects under development in the City of Cape Coral while Mr. Davis reported that the bids for Shangri-La extension to Imperial Parkway would come out soon. The project includes paved shoulders and a sidewalk on one side. He also reported the status on the Bonita Trail.

AGENDA ITEM #10 – LEETRAN REPORT

None.

AGENDA ITEM #11 – FDOT REPORT

Ms. Nagy asked and received clarification that she could work directly with staff on the state bike lane design standard inconsistencies. She reported that FDOT was holding a workshop at the German American Club on the Pine Island Road widening from Chiquita Boulevard to Burnt Store Road.

AGENDA ITEM #12 – ANNOUNCEMENTS

None.

AGENDA ITEM #13 – INFORMATION AND DISTRIBUTION ITEMS

None.

ADJOURNMENT

The meeting was adjourned at 12:00 P.M.

PROJECT UPDATE ON THE NEW LEE MPO BIKE PED PROJECT PRIORITIZATION PROCESS

RECOMMENDED ACTION Consultant will provide a presentation followed by discussion and input.

The project to overhaul the Lee MPO's current Bike Ped Project prioritization process is currently under way. As part of this project, the MPO's consultants Alta Planning & Design, and Jacobs have interviewed staff from local government agencies, MPO, FDOT and bicycle pedestrian advocacy representatives to get input on current project selection and prioritization process and how to improve it. To get a better understanding of the MPO prioritization process, the consultants have also examined MAP 21 and MPO funding available to implement the bicycle pedestrian projects, the Safe Route to School Program and how they feed into our project prioritization process. The Consultant has also reviewed the FDOT's Local Agency Program requirements as they apply to the implementing local governments.

At the August 27th BPC meeting, the consultant will present their initial findings, the next steps, and facilitate a discussion on the topics listed in the agenda under this item to get input and direction on moving forward with the project.

UPDATE ON THE BICYCLE PEDESTRIAN SAFETY ACTION PLAN

RECOMMENDED ACTION Review and make recommendations on the proposed Bicycle Pedestrian Safety Action Plan implementation activities.

Based on the recommendations and discussions from previous Committee meetings, staff has identified the first step implementation activities and is seeking input on several different items to begin implementing those activities.

- **Implementing Safety Improvements** - One of the recommendations from the CAC was to start with identifying the top ten intersections for bicycle and pedestrian crashes and then implement solutions that serve as the demonstration projects for Action Items 8, 9, 10, 11, 12, and 13 on the Action Items list (see attached section from the Bicycle Pedestrian Safety Action Plan). The review of those intersections will start with the scheduling of Road Safety Audits that are focused on Bicycle and Pedestrian issues. The MPO will use one of its General Planning Consultants to work with the CTST and other stakeholders to facilitate, provide recommendations, and put together a report on the reviews. To determine the list of potential intersections, the crash data was analyzed by Tindale Oliver to identify the top crash locations around the County which is listed below. In addition, we have also received some recommendations on intersections and corridors which have been added to the list for the Committee's consideration. Staff is seeking input on this list to get it down to about ten locations that we would start with:

- Old US 41 and Bonita Beach Rd
- SR 78 and Ixora Dr
- SR 78 and US 41
- Lee Blvd and Gunnery Rd
- US 41 and Sanibel Blvd
- Del Prado Blvd and Veterans Pkwy
- Santa Barbara Blvd and SE 24th St
- US 41 and Six Mile Cypress Pkwy
- San Carlos Blvd and Gladiolus Dr
- Hancock Bridge Pkwy and Orange Grove Blvd
- Business 41 and Mariana Ave
- SR 80 and Marsh Ave

- SR 80 and Fairfax Dr
- SR 80 and Polk St
- US 41 and Pondella Rd
- Daniels Parkway and Treeline Ave
- SR 78 and Santa Barbara Blvd
- SR 82 and Highlands Ave
- US 41 and Jamaica Bay Blvd
- Hancock Bridge Pkwy and Orange River Blvd
- US 41 and Maravilla Ln
- US 41 and Hanson St
- Estero and Crescent St
- Estero and Lenell Rd
- Colonial Blvd and Six Mile Cypress Parkway
- College Pkwy
- Cypress Lake Dr
- Pondella Rd

- **Crash Data Analysis** – The bicycle and pedestrian fatalities will be reported by the MPO on an ongoing basis using the daily reports and coordinating with Lee County on their data collection activities. The MPO will also analyze and report the fatalities and serious injuries from the University of Florida Signal Four Analytics Crash System on a quarterly basis to help determine focus areas and any recent trends we should be aware of. The quarterly reports will be presented at the BPC meetings for review and input.

Each year, an end of year analysis will be done to report the results and to compare them to the Action Plan Goals. The end of year reports will be presented to all of the Committee's and the MPO Board. In addition to the crash analysis, the end of year report will also include a progress report on the Action Plan items, the facilities that have been built over the last year and recommendations to incorporate in the Action Plan implementation section based on the data analysis. The crash data analysis will include updating the maps and graphics that will be included in the implementation section showing where the crashes occurred, graphs of how we compare to state and national averages and any trends/conditions that would help to update action items or to develop new ones.

- **Enforcement Activities** – The Action Item list included statements on going after grants for overtime enforcement activities. From staff's discussion on this item, the addition of funding for overtime is not dealing with the problem, which is a shortage of staffing to do the enforcement activities (and there are plenty of other overtime opportunities). Staff asked about using the funding to hire officers that would conduct the enforcement activities but the caveat is that the agency would be required

to keep them on long term and currently the budgets do not make this a reality. At this point staff is recommending that the implementation section include a kick-off/coordination meeting scheduled by December to identify a corridor specific enforcement activity. The focus would be on one corridor to show some positive results that might give us some momentum to increase this in the future. This should also touch on safety issues that affect drivers, bicyclists and pedestrian such as right turn on red without stopping or speeding. From the data analysis that was done previously, this should be on US 41, SR 78 (Pine Island Road), Colonial Boulevard or Del Prado Boulevard as a starting point. In addition, the coordination meeting should be an opportunity for staff to get additional information on what enforcement activities are currently being done and how effective have they been at solving some of the issues that have been identified in the Plan.

- **Press Kit** – A press kit will be developed by the MPO, with the assistance of its partners, by the beginning of season.
- **Bicycle, Pedestrian and Safety Improvements Funding to Supplement Resurfacing Projects** – In conjunction with the development of priorities this year, the MPO will identify a portion of the box funds that will be used to supplement resurfacing projects similar to how the Polk MPO handles this process.
- **Design Manual for Living Streets** – Several of the action items refer to the possibility of adopting a Design Manual for Living Streets. Staff has attached the *Introduction from the Los Angeles County Design Manual for Living Streets* for the Committee to get some background on this document for further input on including this as an implementation item.

Action Items

The following table below presents Action Items with expanded key details including the **lead agency/partner** expected to champion each action, the estimated **amount of time** required to complete or significantly address the action, a potential suggested **funding source**, and an **estimated cost** if applicable. Full descriptions of each action item were presented on pages 7—9.

	Short Description	Lead Agencies/Partners	Estimated Time Frame	Funding Source	Estimated Cost
1	Develop a Press Kit.	Lee County MPO and law enforcement agencies with support from other stakeholders	Within One Year	In-house and grant funded	\$5,000 initially + Minor maintenance
2	Develop an education outreach campaign.	FDOT, Lee County MPO, O'Connell Alive Just Drive, Cape Coral BikePed, BikeWalkLee, and Injury Prevention Coalition	Within One Year	FDOT/CTST support	\$300,000
3	Re-energize and empower the Lee Community Traffic Safety Team (CTST).	FDOT, CTST, with support from MPO and participation from all stakeholders	Within One Year & Ongoing	In-house	N/A
4	Establish a Process for Crash Data Reporting and Distribution.	LeeDOT, FDOT, CTST, MPO, with support from all stakeholders	Within One Year & Ongoing	In-house with possible additional support (board approval)	Minimal initially + possible additional support
5	Measure progress on an annual basis.	Lee County MPO	Within One Year & Ongoing	In-house task	Minimal
6	Undertake Bicycle & Pedestrian Road Safety Audits (RSA) on high-crash corridors.	FDOT, CTST, Lee County MPO with participation and support from all stakeholder agencies	Within One Year & Ongoing	Requires board approval	Up to \$15,000 per corridor
7	Implement a strong law enforcement program.	Lee County MPO, FDOT, Law Enforcement Agencies	Within One Year & Ongoing	FDOT	Varies
8	Provide free bicycle lights for stakeholders to distribute.	Lee County MPO, FDOT, Law Enforcement Agencies	Within One Year & Ongoing	CTST & local agencies	Minimal cost per light
9	Adopt design standards for right-turn channelization.	Lee County, City of Fort Myers, City of Cape Coral, FDOT	Within Two Years	In-house	Minimal
10	Revise design standards for arterial intersection design.	Lee County, City of Fort Myers, City of Cape Coral	Within Two Years	In-house	Minimal
11	Develop and utilize project design review checklist.	Lee County MPO, Lee County, City of Fort Myers, City of Cape Coral, FDOT	Within Two Years	MPO	\$15,000
12	Develop a policy for pedestrian signal accomodation at signalized intersections	Lee County, City of Fort Myers, City of Cape Coral, FDOT	Within Five Years & Ongoing	In-house task	Minimal
13	Adopt design standards for pedestrian crossings at transit stops.	Lee County MPO, LeeTran, FDOT	Within Five Years	In-house task	N/A
14	Implement enhanced safety/design techniques on high-crash corridors.	Lee County, City of Fort Myers, City of Cape Coral	Within Five Years	In-house	Minimal
15	Identify potential corridors for "road diets."	FDOT, Lee County, City of Fort Myers	Within Five Years & Ongoing	In-house	Minimal
16	Incorporate pedestrian and bicycle design improvements into 3R.	Lee County, City of Fort Myers, City of Cape Coral, FDOT	Within Five Years & Ongoing	Requires board approval	Minimum of \$200,000 annually
17	Engage judiciary in the safety discussion.	Lee County MPO, O'Connell Alive Just Drive, Cape Coral BikePed, BikeWalkLee, and Injury Prevention Coalition	Within Five Years & Ongoing	Local activist groups	Minimal
18	Review all previously created bicycle/pedestrian plans to incorporate a safety component.	Lee County MPO, Lee County, City of Fort Myers, City of Cape Coral	Within 5 Years & Ongoing	In-house	Minimal

1. INTRODUCTION

CONTEXT	1-1
LEGAL STANDING OF STREET MANUALS	1-1
AASHTO Green Book	1-2
California Highway Design Manual	1-2
Local Street Manuals	1-3
MUTCD	1-5
California Fire Code	1-6
California Streets and Highways Code and California Vehicle Code	1-7
PURPOSE OF THE MANUAL	1-7
HOW TO USE THE MANUAL	1-8
ADOPTION AND IMPLEMENTATION	1-10
HOW THIS MANUAL WAS CREATED	1-10

CONTEXT

A growing number of communities are discovering the value of their streets as important public spaces for many aspects of daily life. People want streets that are safe to cross or walk along, offer places to meet people, link healthy neighborhoods, and have a vibrant mix of retail. More people are enjoying the value of farmers' markets, street festivals, and gathering places. And more people want to be able to walk and ride bicycles in their neighborhoods.



Lively street (Credit: Ryan Snyder)

People from a wide variety of backgrounds are forming partnerships with schools, health agencies, neighborhood associations, environmental organizations, and other groups in asking their city councils to create streets and neighborhoods that fit this vision.

As a result, an increasing number of cities are looking to modify the way they design their streets. They are often stifled by standards and guidelines that prevent them from making the changes they seek. Some want to modify their standards and manuals, but don't know how, or don't have the resources. This manual presents an opportunity to these communities to design their streets for health, safety, livability, sustainability, and more. It also provides a template that can be adopted to replace existing manuals. The sponsors of this manual make it freely available to any community that wants to use all or any part of it. This manual may be modified, customized, or expanded upon at the pleasure of the end user. We hope that by making it widely available, many more communities will fulfill their dreams in making and remaking their streets valuable public space that serves many needs.

LEGAL STANDING OF STREET MANUALS

Local jurisdictions generally follow some established standards for designing streets. Much confusion exists as to what they must follow, what is merely guidance, when they can adopt their own standards, and when they can use designs that differ from existing standards. The text below untangles the myriad of accepted design documents. It is critical for cities and counties to understand how adopting this manual meshes with other standards and guides. The most important of those standards and guides are the following:

- The American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets* (the "Green Book")

- The California *Highway Design Manual*
- Local manuals or street design standards
- The *Manual on Uniform Traffic Control Devices* (MUTCD)
- The California Fire Code
- The California Streets and Highways Code and California Vehicle Code

A discussion of the federal-aid roadway classification system helps to frame the requirements of each of these documents. Local governments that wish to use certain federal funds must use a street classification system based on arterials, collectors, and local streets. These funds are for streets and roads that are on the federal-aid system. Only arterials and certain collector streets are on this system. In Chapter 3, “Street Networks and Classifications,” this manual recommends an alternative system. To maintain access to these federal funds, local jurisdictions can use both systems. The federal aid system encourages cities to designate more of these larger streets, and to concentrate modifications along these larger streets. Nevertheless, for the purposes of understanding design standards and guides, this is the existing system of street classification for federal funding.

AASHTO GREEN BOOK

The Green Book provides guidance for designing geometric alignment, street width, lane width, shoulder width, medians, and other street features. The Green Book applies only to streets and roads that are part of the National Highway System (NHS). These are Interstate Freeways, principal routes connecting to them, and roads important to strategic defense. These streets and roads comprise about 14 percent of all federal-aid roadway miles in California, and about 4 percent of all roadway miles (Urgo, J., Wilensky, M., and Weissman, S., *Moving Beyond Prevailing Street Design Standards*, The Center for Law, Energy, and the Environment at the Berkeley Law School, 2010). Although the Green Book’s application is limited to these streets, some cities apply its recommendations to all streets.

Further, the Green Book provides guidance that cities often unnecessarily treat as standards. The Green Book encourages flexibility in design within certain parameters, as evidenced by the AASHTO publication *A Guide to Achieving Flexibility in Highway Design*. For example, 10-foot lanes, which cities often shun out of concerns of deviating from standards, are well within AASHTO guidelines.

CALIFORNIA HIGHWAY DESIGN MANUAL

The California *Highway Design Manual* (HDM) applies only to State Highways and bikeways within local jurisdictions. If cities deviate from the minimum widths and geometric criteria for bikeways spelled out in Chapter 1000 they are advised to follow the exemption process or experimental process as applicable. The HDM does not establish legal standards for designing local streets. However, like the Green Book, some cities apply HDM guidance to all streets.

As of the writing of this manual, Caltrans is in the process of revising the HDM to meet Caltrans' commitment to Complete Streets in Deputy Directive 64-R1.

LOCAL STREET MANUALS

Local jurisdictions follow the Green Book, the HDM, or design guidance from organizations such as the Institute of Transportation Engineers (ITE) out of liability concerns. Neither federal nor state law mandates adoption or adherence to these guides. However, municipalities often adopt them to protect themselves from lawsuits. Further, many don't have the resources to develop their own standards and practices, so they adopt those in the Green Book, the HDM, or another previously adopted manual, or those of other cities,

A question often posed by plaintiffs' attorneys in traffic-related crashes is, "Did they follow established or prevailing designs, standards, and guidance?" If the attorneys can prove that the local jurisdiction deviated from these, they enhance their chances of winning a judgment against the jurisdiction. Therefore, protection from liability is paramount.

Cities are authorized to adopt or modify their own practices, standards, and guidelines that may reflect differences from the Green Book and the HDM. If these changes generally fall within the range of acceptable practice allowed by nationally recognized design standards, the adopting agencies are protected from liability to the same extent they would be if they applied the Green Book or the HDM. Most changes to streets discussed in this manual fall within the range of the guidelines or recommended practices of nationally recognized organizations such as AASHTO, ITE, Urban Land Institute (ULI), and Congress for the New Urbanism (CNU).

Working within previously established regional guidelines generally should result in a design that is protected from liability. The Green Book and the HDM are silent on many design features, and do not consider the needs within unique contexts. In these cases, cities can develop their own guidelines and standards and incorporate international equivalents or practices from other cities. Cities may adopt the guidance in this manual, which compiles best practices in creating living streets. This manual could, in effect, become the legal prevailing standard by which liability would be assessed.

Cities can also utilize designs that fall outside the ranges specified by nationally accepted guidelines and standards, but these practices can potentially increase liability unless done with great care. When agencies elect to utilize designs that fall outside the guidelines of nationally recognized documents, they need to use additional care to ensure they do not expose themselves to liability.

To minimize liability, local jurisdictions either need to adopt their own standards (which should be based on rationale or evidence of reasonableness), or they can conduct an experimental project. When conducting an experimental project, agencies need to show that they are using the best information that is reasonably available to them at the time,

document why they are doing what they are doing, use a logical process, and monitor the results and modify accordingly. This is because the agency may be required in the future to show that its design is reasonable, and the agency may not be able to cite a nationally published guideline or recommendation to support its local action. Often, these experimental projects are conducted because the design engineer has reason to believe that the new or evolved design will be safer or otherwise more effective for some purpose than if the project had prevailing standards and guides been used. These reasons or rationales are based on engineering judgment and should be documented to further minimize exposure to liability.

Unless otherwise noted, everything in this manual can readily be adopted and incorporated without fear of increased liability. In addition, this manual carries the credibility of the many top-level experts who produced it.

In some cases, AASHTO design guidelines may not provide information on innovative or experimental treatments that have shown great promise in early experiments and applications. Since AASHTO is a design guide, agencies have some flexibility to use designs that fall outside the boundaries of the AASHTO guide. Deviation from the range of designs provided in the AASHTO guide requires agencies to use greater care and diligence to document their justification, precautions, and determination to deviate from the guidelines. In California, the precautions to establish “design immunity” should be followed. These include consideration/analysis and approval by a registered engineer qualified to sign the plans, and certification by the city council or reviewing body clearly indicating the agency’s intent. This process documents the engineering judgment that went into the design.

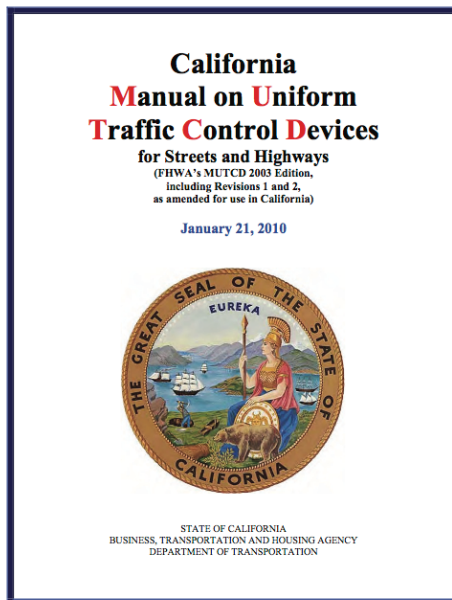
Many cities today use various traffic calming measures to slow traffic and to improve neighborhood livability. Traffic calming measures are not traffic control devices and therefore the state exercises no jurisdiction over them.

Local agencies may currently use many other reports and documents to guide their roadway design and transportation planning. Other documents provide valuable procedure and reference data, but they do not set standards. They can be referred to and defined as standards by local agencies, but the local authority often has the flexibility to selectively endorse, modify, or define how these informational documents can be used or incorporated into its engineering and planning processes. Also, newer versions of these documents have additional information that can conflict with the local historical approach.

The expected results of the design approaches presented in this document are generally intended to improve safety and/or livability. As a result, implementation of these features should generally reduce liability and lawsuits. There is no way to prevent all collisions or lawsuits, but adopting policies, guidelines, and standards and doing experimental projects with reasonable precautions is a defensible approach.

MUTCD

The MUTCD provides standards and guidance for the application of all allowed traffic control devices including roadway markings, traffic signs, and signals. The Federal Highway Administration oversees application of the MUTCD. California cities must follow the California MUTCD, which generally mirrors the federal MUTCD, but not always.



The rules and requirements for the use of traffic control devices are different than for street design criteria. Local agencies have limited flexibility to deviate from the provisions of the California MUTCD in the use of traffic control devices due to the relationship between the MUTCD and state law. The California MUTCD does provide flexibility within its general provisions for items such as application of standard traffic control devices, use of custom signs for unique situations, traffic sign sizes, and sign placement specifics. In contrast, agencies do not generally have the flexibility to develop signs that are similar in purpose to signs within the

manual while using different colors, shapes, or legends. Agencies are also not authorized to establish traffic regulations that are not specifically allowed or are in conflict with state law. The provisions of the California MUTCD and related state laws thus make it difficult to deploy new traffic control devices in California. This can result in complications, especially in the areas of speed management, pedestrian crossings, and bikeway treatments.

The State of California and the Federal Highway Administration have procedures that allow local agencies to experiment with traffic control devices that are not included in the current MUTCD. Such demonstrations are not difficult to obtain from the Federal Highway Administration for testing of new devices, especially as they relate to pedestrian and bicycle facilities, but the requesting agency must agree to conduct adequate before-and-after studies, submit frequent reports on the performance of the experimental device, and remove the device if early results are not promising. The State process can be more difficult for obtaining approval. Federal approval must be obtained first. The California Traffic Control Devices Committee advises Caltrans, which must then agree to allow the experiment to be conducted and determine that the experiment is not in conflict with State law. Once approval is granted for the experiment, the city has been given some legal immunity from liability suits. Since the California Vehicle Code is written to mirror the MUTCD, provisions within the Vehicle Code may not allow the experiment to proceed. The need to modify the Vehicle Code can complicate obtaining State permission to experiment.

Both the federal and California MUTCD are amended through experimentation. After one or more experiments have shown benefit, the new devices are sometimes adopted

into these manuals. In California, the Vehicle Code must be changed first if the Vehicle Code prevents use of the new device.

The federal MUTCD and California MUTCD establish warrants for the use of some traffic control devices. For example, stop signs, traffic signals, and flashing beacons are expected to meet minimum thresholds before application. These thresholds include such criteria as number of vehicles, number of pedestrians or other uses, distance to other devices, crash history, and more. These warrants often prevent local engineers from applying devices that, in their opinion, may improve safety. For example, trail and/or pedestrian crossings of busy, high-speed, wide arterial streets may need signals for user safety, but they may not meet the warrants.

As with street design guidelines, cities may establish their own warrants or modify those suggested by the California MUTCD to suit their context in order to use some traffic control devices. In special circumstances that deviate from their own warrants, cities need to document their reasons for the exception. For example, they may say the trail crossings or school crossings qualify for certain traffic control devices.

CALIFORNIA FIRE CODE

The California Fire Code can impede street design in limited circumstances. The state legislature has adopted the National Fire Code. The National Fire Code is written by a private agency and has no official legal standing unless states or municipalities adopt it, as has been done in California. The primary barrier caused by this adoption is the requirement for a minimum of 20 feet of an unobstructed clear path on streets. To comply with this, streets with on-street parking on both sides must be at least 34 feet wide. This prevents municipalities from designing “skinny” and “yield” streets to slow cars and to make the streets safer, less land consumptive and more hospitable to pedestrians and bicyclists.

There are ways around this requirement. If the local jurisdiction takes measures such as installing sprinklers and adding extra fire hydrants, or the adjacent buildings are built with fire retardant materials, it may be able to get the local fire department to agree to the exception.

Alternatively, the state legislature could repeal its adoption of the 20-foot clear path requirement due to

- The arbitrary and unresearched nature of the provision
- The safety problems associated with the resulting excessively wide streets
- The contradiction that this provision causes with properly researched guidelines and standards by ITE, CNU, AASHTO, and others for streets under 34 feet wide
- The potential liability that the 20-foot clear provision creates for designers who maintain, modify, or design streets that do not provide 20-foot clear paths

It is likely that the state legislature was unaware of these issues when it adopted the code in its entirety.

CALIFORNIA STREETS AND HIGHWAYS CODE AND CALIFORNIA VEHICLE CODE

The California Streets and Highways Code and the California Vehicle Code include laws that must be followed in street design. These are embodied in the California MUTCD. Changes to the Streets and Highways Code and the Vehicle Code may cause the California MUTCD to change.



PURPOSE OF THE MANUAL

Municipalities depend on street manuals for guidance to design their streets, to retrofit and to modify existing streets with new development, and when new subdivisions are built. Along with land use planning, street manuals play a large role in determining urban form. Street manuals, in effect, serve as the “DNA” of streets. As such, they help to determine how walkable and bicycle-friendly neighborhoods and communities are, how conducive cities are to transit use, and how livable communities become.

The manuals that many jurisdictions use today embody principles based on moving motor vehicle traffic as the primary role of streets. The result is many wide, high-speed streets that move cars but compromise other important community goals and work against present day community needs. Common direct outcomes of existing manuals include the following:

- Streets that are nerve-racking and not safe for pedestrians to cross
- Streets that are not safe to bicycle on
- Streets that encourage high speeds
- Streets that are not safe for the motorists they are designed to serve
- Narrow sidewalks that are not comfortable to walk along
- Inconvenient street crossings for people in wheelchairs
- Unsightly and uninviting streets
- Auto-oriented land uses that are uninviting and intimidating to people walking, biking, and using transit
- Street water runoff systems that funnel rainwater to



*Narrow and obstructed sidewalk
(Credit: Ryan Snyder)*



*Narrow and obstructed sidewalk
(Credit: Ryan Snyder)*

*Unsightly and uninviting street
(Credit: Ryan Snyder)*

the storm drains and directly to waterways

- Poor selection of street trees, if any
- Excessive exposed hardscape leading to a rise in summer temperatures – the heat-island effect

These indirectly cause a number of problems for communities, including the following:

- Obesity from inactive life styles
- Rising rates of diabetes, heart disease, cancer, and other negative health outcomes of sedentary lifestyles
- Senior citizens being trapped inside a small neighborhood because they can't cross streets
- Children becoming overweight, unnecessary neighborhood congestion, and air pollution around schools, all due to children being driven to school rather than walking
- Unnecessary driving for short trips
- Overconsumption of energy
- Unnecessary emission of global warming gases
- Economic hardship and recession when energy prices rise
- Streets that don't support neighborhood retail
- Neighborhoods that lack livability
- Polluted waterways
- Underground water aquifers drying up
- Dehydrated streetscapes causing unnecessary importation of water for landscaping
- Uplifted sidewalks



*Uplifted sidewalk
(Credit: Ryan Snyder)*

This manual is based on complete streets principles that design streets for people of all ages and physical abilities and accommodate all travel modes. The manual goes beyond complete streets to living streets. Living streets principles embody complete streets and also include consideration of other issues related to economic vibrancy, equity, environmental sustainability, aesthetics, and more. This manual offers another way to design streets and provides guidance for those municipalities that decide to adopt these principles. The result will be more livable neighborhoods with healthier residents due to opportunities for active transportation (walking and cycling).

HOW TO USE THE MANUAL

Since many municipalities lack the resources to undertake a major revision of their manuals, this model manual offers a template for local jurisdictions to begin updating existing manuals. Cities may use this manual in any way that helps them update their

current practices, including adopting the entire manual and inserting the city's name into the text. They may also choose to adopt certain chapters in full or in part.

Many cities will likely want to customize the manual for their own context and streets. They may adopt some chapters as written and modify others, or amend this manual by providing more in-depth guidance on selected topics, or adding new components not included here.



Complete street: Santa Barbara, CA (Credit: Ryan Snyder)

California cities can use this manual to assist them with new requirements of the California Complete Streets Act mandating that new circulation elements of general plans be based on complete streets principles. The manual helps cities comply with the law and implement these principles. Any city that adopts complete streets principles may also use the manual as a key component of implementation.

Similarly, Los Angeles County cities must comply with a Regional Water Quality Board mandate to reduce the amount of



stormwater runoff by

Untreated runoff (Credit: Ryan Snyder)

retaining more water on site. This manual introduces new stormwater (herein referred to as "streetwater") management techniques in order to comply with this requirement. Implementing these techniques will reduce runoff into rivers, streams, and the ocean while recharging underground water supplies. Many jurisdictions across the U.S. need to adopt sustainable stormwater management practices to retain water on site as a water conservation measure, as well as to reduce pollution in their watersheds and lakes or oceans.

This manual is available to any city or local jurisdiction in Los Angeles County, or anywhere in the U.S., that wishes to adopt or use it. The manual is offered in a MS Word format to allow customization. The manual's sponsors ask cities using it to do two things:

1. Keep the acknowledgements pages to recognize the people whose contribution made this manual possible and to carry the credibility of the authors with the document
2. Inform the manual's sponsors (via means described in the acknowledgements) that they have used the manual so the sponsors can track jurisdictions benefitting from it

ADOPTION AND IMPLEMENTATION

This manual is suitable for adoption by local and regional agencies to guide planning and design of streets. This adoption process allows agencies to indicate that the features and provisions of the plan are applicable for use by the adopting agency. This is a necessary first step in properly incorporating the provisions of the street manual. However, agencies will have to take additional steps to ensure that their implementation practices are modified to reflect the recommendations of this manual.

Local agencies will likely need to review their stepwise approach to street design through all stages of the process, from advance planning through preliminary design and construction. Critical points will include project identification, preliminary cost estimates for funding, and a multi-disciplinary approach to preparation of design drawings.

During adoption, as well as after adoption, local jurisdictions will need to ensure that their various city departments are all operating with the same practices. These include agencies such as but not limited to public works, traffic engineering, transportation planning, street services, maintenance, signal operations, street lighting, planning, redevelopment, fire, and other departments.

HOW THIS MANUAL WAS CREATED

This manual is a project of the Los Angeles County Department of Public Health. The department funded the production of this manual through a federal Communities Putting Prevention to Work grant to expand opportunities for people to bicycle and walk as an obesity prevention effort. The Luskin Center for Innovation at the University of California, Los Angeles, funded Chapter 11, "Streetscape Ecosystem," to address environmental sustainability issues related to streets.

A team including many of the top street designers in the U.S. produced this manual. The team comprised experts from traffic engineering, transportation planning, land use planning, architecture, landscape architecture, public health, sociology, and other backgrounds. The



team also included experts serving in leadership roles for the following national and local organizations:

- AARP Public Policy Institute
- American Society of Landscape Architects
- Association of Pedestrian and Bicycle Professionals
- California Department of Health Services
- California Strategic Growth Council
- City of Long Beach
- City of Los Angeles Planning Department
- Council for Watershed Health
- Congress for the New Urbanism
- Federal Highway Administration
- Green Los Angeles Coalition
- Institute of Transportation Engineers
- Los Angeles Chapter of the American Institute of Architects
- Los Angeles County Department of Public Health
- National Complete Streets Coalition
- Project for Public Spaces
- Safe Routes to School National Partnership
- Smart Growth America
- UCLA Luskin Center for Innovation
- US Access Board
- Walkable and Livable Communities Institute

Manual authors at charrette (Credit: Dan Burden)

The multidisciplinary nature of this team created concepts for streets that reflect viewpoints from various perspectives and lenses.