TRAFFIC ENGINEERING COMMITTEE AGENDA

REGULAR MEETING

UKIAH CIVIC CENTER
Conference Room No. 3
300 Seminary Avenue
Ukiah, California 95482

TUESDAY, NOVEMBER 12, 2013
3:00 P.M.

1. CALL TO ORDER:
Baxter, Seanor, Whitaker, Kageyama, Lampi, Taylor, Jordan

2. APPROVAL OF MINUTES: October 15, 2013

3. AUDIENCE COMMENTS ON NON-AGENDA ITEMS:
The Traffic Engineering Committee welcomes input from the audience. In order for everyone to be heard, please limit your comments to three (3) minutes per person and not more than 10 minutes per subject. The Brown Act regulations do not allow action to be taken on non-agenda items.

4. OLD BUSINESS:
a. Discussion and Possible Action Regarding Advanced Crosswalk Yield Lines at the Intersection of South State Street and Luce Avenue Agenda Item (Report Attached)

5. NEW BUSINESS:
None

6. COMMITTEE MEMBER REPORTS:

7. MISCELLANEOUS ITEMS:

8. ADJOURNMENT:

Please be advised that the City needs to be notified 72 hours in advance of a meeting if any specific accommodations or interpreter services are needed in order for you to attend. The City complies with ADA requirements and will attempt to reasonably accommodate individuals with disabilities upon request.

I hereby certify under penalty of perjury under the laws of the State of California that the foregoing agenda was posted on the bulletin board at the main entrance of the City of Ukiah City Hall, located at 300 Seminary Avenue, Ukiah, California, not less than 72 hours prior to the meeting set forth on this agenda.

Dated this 8th day of November, 2013
Jarod Thiele, Recording Secretary
TRAFFIC ENGINEERING COMMITTEE MINUTES
October 15, 2013
Minutes

MEMBERS PRESENT
Dan Baxter, MTA Vice - Chair
Ben Kageyama, Staff
Trent Taylor, UPD
Jerry Whitaker, Staff
Rick Seanor, Staff

OTHERS PRESENT
Jessica Stull-Otto

MEMBERS ABSENT
Kim Jordan, Staff
John Lampa, Public Representative

STAFF PRESENT

1. CALL TO ORDER
The Traffic Engineering Committee meeting was called to order by Vice Chair Baxter at 3:05 p.m. in
Conference Room No. 3, Ukiah Civic Center, 300 Seminary Avenue, Ukiah, California.

2. APPROVAL OF MINUTES – August 20, 2013
M/S Taylor/Whitaker to approve August 20, 2013 minutes, as submitted. Motion carried by an all AYE
voice vote of the members present.

3. AUDIENCE COMMENTS ON NON-AGENDA ITEMS

4. OLD BUSINESS
4a. Discuss and Provide Comment on Draft Complete Streets Policy (Report Attached)

The Traffic Engineering Committee (TEC) referenced to page 1 of the policy document and talked about
the definition of the term, ‘cyclovia.’

Member Seanor:
- In 2012, City Council had a presentation and discussion about the topic ‘complete streets’ and
what this means to the community. Since that time Councilmember Rodin spent a significant
amount of time creating the ‘Complete Streets Policy of the City of Ukiah’ with assistance from
City staff and public members. The policy document raised some concerns by the City
Engineering Department about why the TEC was not included as a participant in the process and
the possible effect the document may have on street maintenance.
- City Council reviewed the policy document at the regular July 17, 2012 meeting and referred it
back to the TEC for review and input.
- Related to the ‘Complete Streets Policy,’ the City already has other documents/processes in
place such as the Bicycle and Pedestrian Master Plan that are used to analyze projects and/or to
seek grant funding. There is a bike plan through Mendocino County Office of Government
(MCOG) that specifically addresses bicycle routes in the City and throughout the County. Also,
when cities receive funding from Caltrans for road projects, Caltrans passes a complete streets
policy onto the cities. As such, the City has to follow a complete streets policy when it receives
grant funding from Caltrans for street-related projects. This essentially means, we have to look at
whether there are adequate and/or up-to-standard ADA ramps on street corners for sidewalks,
acceptable accommodations for bicycle routes and other such accommodations required in the
‘Complete Streets Policy.’
- Supports not changing the current process by not adopting a policy that could possibly impact the
City financially and unable to properly maintain City streets. The City of Ukiah as well as other
jurisdictions in the area suffer because they have very little maintenance dollars to maintain
streets.
• Recommends focusing on being able to provide for an adequate maintenance levels for maintaining City streets first by utilizing the dollars available wisely without doing/committing to maintenance projects that are beyond the scope of what the City can realistically and/or economically afford.
• Lastly, to address the ‘Complete Streets Policy’ many if not most City streets have very little traffic so there is no really no issue concerning bicyclists being able to ride on them. Related to City streets, there are bicycle facilities on some of the routes Member Seanor identified some of the streets having such facilities. Accordingly, there are existing bicycle/pedestrian facilities ‘pretty much everywhere in town.’ While there are a few places on streets where gaps exist between sidewalks, most streets have sidewalks.
• Is inclined to support continuing on with the present process of reviewing/evaluating improvement projects for City streets.
• Is requesting the TEC comment on the proposed document.

Vice Chair Baxter:
• It appears Councilmember Rodin is of the opinion having a ‘Complete Streets Policy’ is a good idea.
• The County in addition to the State has a ‘Complete Streets Policy’ that staff can use for reference purposes when seeking grant funding for street improvement projects and essentially sees no need to add yet another layer and/or duplicate a process that already works that may also create more work for staff and unnecessary costs to the City.
• The TEC can support staff’s recommendation and that is to comment on the draft Complete Streets Policy.

Member Kageyama:
• Referenced the ‘Evaluation’ section of the policy document and is of the opinion the Public Works Department performs biennial evaluations of how well the streets and transportation network of the City are serving each category of users by collecting baseline data and collection follow-up data on a regular basis. Also, evaluation of projects is performed when an opportunity exists to improve pedestrian access involving crosswalks, ADA compliance issues, bulbouts, and/or some other street-related improvement matter that would benefit an area.
• Is of the opinion, City Public Works staff is already to a large degree looking at projects and ways of making a street project more of a ‘complete street.’
• Does not have a problem with what is being asked for in principle with regard to the proposed policy document.
• Finds the language in the document rather vague; As written, the document will create the need for some paper work on the part of City staff, particularly with regard to what is required in the ‘Exemptions’ section that says the department head must provide a written explanation of why accommodations for all modes of transportation were not included or necessary for a project that is subject to independent review by the City Manager. With this and what is required in the ‘Evaluation’ section will create ongoing paperwork for City staff that is time consuming and essentially unnecessary; when staff already analyzes/evaluates every street project for completeness.

Member Taylor:
• It may be the recommendation of TEC should be since City staff is already meeting the requirements outlined in the proposed ‘Complete Streets Policy’ that adding a new policy requiring more reporting about what is already being done is basically a waste of time.

Jessica Stull-Otto:
• Works for the County Public Health Department.
• Related to the comments that processes contained in the draft Complete Streets Policy are already being done, is concerned about what happens when present City staff leaves?
• The idea of a policy is for the good work/processes currently being done to successfully continue into the future.
Has questions related to the 'Exemptions' section of the draft policy document and with having to write an explanation of why accommodations are not to be included or necessary with regard to street improvements. It may be the written evaluation needs to be further clarified as to how the process can effectively be accomplished where the process is simplified and made less burdensome to staff.

The intent of the policy document is to make certain the process related to street improvements is working and to fix it where it is not. As such, understands the concept of reviewing plans and policies to make necessary changes/improvements where needed and to make certain the intended purpose is being done. Appreciates the interest in not adding yet another thing for staff to do.

Is it possible to simplify the draft document and/or make it a checklist to better serve its intended purpose?

**Member Seanor:**

It is possible to simplify the document. However, we already have a Bicycle and Pedestrian Master Plan, as well as the Regional Bikeway Plan that MCOG has and other documents that staff follows regarding street improvement projects. Having a Complete Streets Policy in the mix of documents that places an extra requirement of evaluating streets for all modes of transportation could actually limit how much the City can afford to do in the way of improvements. If it becomes necessary to do some projects that may be more expensive in order to fulfill the requirements of this policy then this could restrict our maintenance abilities. The problem Public Works has with regard to the streets department is to be able to effectively maintain City streets. Any work done on pavement is very expensive. We are struggling with not having the funding necessary to sometimes do basic maintenance so if at the same time another policy places additional requirements, this can limit our ability to maintain City streets because the policy says we have to do something else. Again, when the City gets funding through Caltrans, Caltrans has its own Complete Streets Policy that is passed onto us and other cities for improvement projects. When the City receives funding from Caltrans, we have to follow their complete streets policy. What has occurred typically in the past for a street project, is we have to look at the ADA ramps and upgrade those to meet the acceptable standards. This can be a challenge in itself because over the years there have been incremental changes in ADA standards that require an upgrade to ramps. Something may be built one year according to one standard and then the standard changes the next year such that the City is not in compliance with those standards. Therefore, is leery of having a policy that is going to say the City has to have an evaluation for all of these requirements when we already have the Bicycle and Pedestrian Master Plan in place. This plan will be updated in the near future by a consultant.

**Member Kageyama:**

Exemptions would be handled on a case-by-case basis. A biennial evaluation would also be required for the draft Complete Street Policy.

**Jessica Stull-Otto:**

Understands Sue Barton from public health was working on this project and has left.

She is stepping into Ms. Barton's place to continue the process.

Recalls a public discussion at a TEC meeting about the issue of routine maintenance such that the language in the policy document can be changed so that some evaluation does not trigger a larger project.

**Member Whitaker:**

It is his understanding that after a certain dollar amount it triggers specific requirements that must be met to be in compliance with the standards.

**Jessica Stull-Otto:**

The aforementioned scenario may pertain if the cost is 20% or more of the projected cost amount and if this is the case then the associated requirements could be exempted.
Requested clarification that the discussion is about a maintenance project that is really small and inexpensive.

Member Whitaker:
- For example, what could occur is if work is being done to an intersection and the site does not have ADA ramps where the work being done can trigger further work associated with the intended street maintenance and improvements by having to provide for ADA ramps. At this point, this is when the job cost becomes too high for City work crews to do in-house and has to go out to bid for a contractor to do.
- As the City Streets Supervisor, his cost threshold limit per job is a maximum $40,000. After this amount, if the job cost exceeds this amount it must be contracted out to complete.
- The intent is to keep job costs down so the work can be done in-house as much as possible.

Jessica Stull-Otto:
- How does the above-referenced scenario fit with the 20% over cost and can the associated requirements then be exempted? If the project triggered ADA accessible ramps would the ramps be part of the 20% over cost or just increase the cost of the entire project?

Member Whitaker:
- It would likely increase the cost of the whole project. Whether or not the cost was increased by 20% would not be known until a cost estimate was done.
- What is of concern is if once a project is started and where it was later determined that other requirements were necessary this could drive the costs to exceed what City crews can do in-house and this is a problem.

Member Kageyama:
- Pavement work is not just for vehicles, but rather for other modes of transportation, such as bicycles.

There was discussion concerning certain types of street improvements that include ‘sharrow’ striping that could encompass more street users.

Member Seantor noted the City is working with a consultant to complete the Safe Route to School Plan.

Jessica Stull-Otto:
- How are the existing plans that staff uses related to maintenance communicated in the plans? For example, do the plans list/address maintenance items that can be incorporated for complete street projects?
- Is it possible related to maintenance that the plans document what might be a small project could actually trigger a large project? How is this aspect documented/communicated in the plans?
- Would not want a policy in place that essentially triggers larger projects. However, it would be a good thing if the policy incorporates(addresses smaller scale maintenance items for projects. Are those identified and who would identify them? How would they be communicated in making sure that information is related to maintenance so that when work is done no other additional work has to follow.
- The intent of a complete streets policy is to make certain maintenance projects are designed for everyone to enable safe access for all users of all ages and abilities, i.e., pedestrians, bicyclists, motorists and public transportation.

Member Seantor:
- Member Whitaker is the City’s Streets Supervisor and he reviews plans for projects.
- Even though some projects appear to be simple at the beginning this may not always be the case. For instance, if the project is Caltrans funded, the design aspect must still be considered by an engineer even if it is just a striping project. Contractors typically do the striping of streets because a special truck is necessary.
Jessica Stull-Otto:
- Stripping is an important aspect of street maintenance.
- Related to the threshold of when it is necessary to go out to bid for a contractor, would like to see this amount clearly documented.
- Concern is that once existing staff has left the City, the good work being done presently can carry on. This is the ‘beauty’ of a policy because the information would be represented in this document, but only if it is done in a manner that does not actually prevent staff from doing the good work that is currently being done.

Brief discussion concerning what constitutes forced accounting and work that needs to be done as the result of an emergency situation.

Member Whitaker:
- Confirmed the threshold amount per project is $40,000. He cannot do any work over $40,000.
- Emergency work is different from forced accounting.

Member Seanor:
- Briefly addressed the topic of constructing an ADA ramp and noted if such a ramp is non-existing and work needs to be done from ‘scratch’ the cost could be anywhere from $5,000 to $10,000.

5. NEW BUSINESS
5a. Discussion and Possible Action Regarding Request for Eight Additional Speed Limit Signs along West Mill Street

Member Seanor gave a staff report and noted:
- Public Works staff has received a request for eight additional speed limit signs along West Mill Street from a group called the Residents for Enforcement of Residential Speed ((RERS)).
- West Mill Street from McPeak Street to Main Street satisfies the California Vehicle Code definition of a residence district and therefore, has a prima facie speed limit of 25 mph.
- In addition, an Engineering and Traffic (Speed Zone) Survey was completed under the direction of a California licensed professional traffic engineer for W. Mill Street on April 30, 2012. This survey confirmed the posted 25 mph speed zone on W. Mill Street.
- W. Mill Street is technically classified as a collector and therefore, does see a larger volume of traffic than a local street. This street picks up the tributary area from the west side of Ukiah.
- W. Mill Street is approximately 25 feet in width and approximately 2,000 feet in length between McPeak Street and South Oak Street with parking allowed on both sides of the street. Vehicles parking in this manner tend to create traffic calming as vehicles slow down when negotiating narrow stretches of the street where the cars are parked on both sides.
- There are four existing 25 mph speed limit signs posted on W. Mill Street at different locations.
- Staff observed the Ukiah Police Department speed radar trailer is in use on W. Mill Street for westbound traffic. This device is a good tool to remind drivers of the speed compared to the posted speed zone.
- Offered the following recommendations: 1) Continue to utilize the Police Department speed radar trailer. 2) Recommend W. Mill Street for the Police Department’s ‘Directed Enforcement Program.’ 3) Take no action. 4) Refer to staff for further analysis. 5) Post additional signs.
- Notification of this meeting was sent to the group requesting the eight additional speed limit signs.

TEC:
- W. Mill Street has four existing signs. Questioned where eight additional signs would be posted?
- What initiated this discussion is that some people from this neighborhood group put up signs to address speeding. It is illegal for a neighborhood group to post its own traffic control devices.
- The speed limit in any residential area is 25 mph.

TEC consensus:
- Deny the request for additional signs on W. Mill Street.
• Continue to utilize the Police Department speed radar trailer and include W. Mill Street for the Police Department’s ‘Directed Enforcement Program.’

Member Seanor:
• When a speed survey is conducted data has to be collected from 100 vehicles from both directions of traffic and analyzed. The results conclude that people tend to drive in and around the posted speed limit. If not, this is reason to look at either increasing or decreasing the speed limit.
• Also, the engineer conducting the speed limit surveys for the City, observed people tend to drive the posted speed limits.

MS: Taylor/Whitaker to deny the request for additional signs and continue to utilize the Police Department speed radar trailer when available and utilize the ‘Directed Enforcement Program’ as much as possible. Motion carried by an all AYE voice vote of the members present.

6. COMMITTEE MEMBER REPORTS
Member Seanor:
• The TEC has a vacant seat. Steve Turner served on the TEC for many years and had to resign because he now resides in the County.

Vice Chair Baxter:
• On Thursday, October 17, MTA will have a Chamber of Commerce open house in the shop/garage structure on the MTA site from 5:00 to 7:00 p.m.

7. MISCELLANEOUS ITEMS

8. ADJOURNMENT
There being no further business, the meeting adjourned at 3:59 p.m.

______________________________
Cathy Elawady, Recording Secretary
CITY OF UKIAH
MEMORANDUM

DATE: November 12, 2013

TO: Traffic Engineering Committee

FROM: Ben Kageyama, Senior Civil Engineer

SUBJECT: Discussion and Possible Action Regarding Advanced Crosswalk Yield Lines at the Intersection of South State Street and Luce Avenue Agenda Item 4a.

REQUEST: Staff is requesting reconsideration by the Traffic Engineering Committee for the possible installation of advanced crosswalk yield lines for the existing crosswalk at South State Street and Luce Avenue.

DISCUSSION: On August 20, 2013, the Traffic Engineering Committee previously discussed this item and directed staff to consider installing the advanced crosswalk yield lines at the intersection of South State Street and Freitas Avenue instead of Luce Avenue as originally proposed (see attachments). Member Taylor indicated that the Freitas Avenue intersection has more pedestrians than at Luce Avenue and would be a better location for this installation. Staff agrees there may be more pedestrians at Freitas Avenue, and the existing crosswalk could benefit from installing advanced yield lines. However, the east side of the crosswalk does not currently have a curb ramp, and staff does not recommend upgrading the crosswalk with advanced yield lines without also installing a new ADA compliant curb ramp. The Luce Avenue crosswalk currently already has curb ramps on both sides of the street. Since this initial installation of advanced yield lines is considered a test case to monitor the effectiveness of the yield lines, and so as to avoid further delay to beginning this trial period, staff recommends proceeding with its installation at the originally proposed Luce Avenue intersection. Meanwhile, Public Works will plan to install a curb ramp at Freitas Avenue as time allows. Additional advanced yield lines may be considered for TEC approval at Freitas Avenue or other locations if deemed to be effective.

RECOMMENDATION: Staff is submitting this report for review and discussion by the TEC. Staff has provided the following options for consideration:

1. Approve the request to install advanced crosswalk yield lines and signs at the South State Street and Luce Avenue intersection.
2. Install flexible crosswalk signage similar to other locations on State Street
3. Take no action.
4. Refer to staff for further analysis.

cc: file
Figure 3B-17. Examples of Yield Lines at Unsignalized Midblock Crosswalks

A - Two-way roadway

B - One-way roadway

Note: If Stop Here for Pedestrians signs are used instead of Yield Here to Pedestrians signs, stop lines shall be used instead of yield lines.

Legend
⇒ Direction of travel
Figure 3B-16. Recommended Yield Line Layouts

(a) Minimum Dimensions
- Base: 12 inches
- Height: 18 inches

(b) Maximum Dimensions
- Base: 24 inches
- Height: 36 inches

Notes:
Triangle height is equal to 1.5 times the base dimension.
Yield lines may be smaller than suggested when installed on much narrower, slow-speed facilities such as shared-use paths.

Figure 3B-16 (CA). Recommended Yield Line Layouts

Series of white isosceles triangles
Figure 2B-1. STOP and YIELD Signs and Plaques

Figure 2B-2. Unsignalized Pedestrian Crosswalk Signs

* The legend STATE LAW is optional. A fluorescent yellow-green background color may be used instead of yellow for this sign.
Standard:

03 If raised pavement markers are used to substitute for broken line markings, a group of three to five markers equally spaced at a distance no greater than \( N/8 \) (see Section 3B.14) shall be used. If \( N \) is other than 40 feet, the markers shall be equally spaced over the line segment length (at 1/2 points for three markers, at 1/3 points for four markers, and at 1/4 points for five markers). At least one retroreflective or internally illuminated marker per group shall be used or a retroreflective or internally illuminated marker shall be installed midway in each gap between successive groups of non-retroreflective markers.

04 When raised pavement markers substitute for solid line markings, the markers shall be equally spaced at no greater than \( N/4 \), with retroreflective or internally illuminated units at a spacing no greater than \( N/2 \).

05 The widths and patterns of raised pavement markers shall conform to the details shown in Figures 3A-101(CA) through 3A-112(CA). See Section 3A.06.

Guidance:

05 Raised pavement markers should not substitute for right-hand edge line markings unless an engineering study or engineering judgment indicates the benefits of enhanced delineation of a curve or other location would outweigh possible impacts on bicycles using the shoulder, and the spacing of raised pavement markers on the right-hand edge line is close enough to avoid misinterpretation as a broken line during wet night conditions.

Standard:

06 When raised pavement markers substitute for dotted lines, they shall be spaced at no greater than \( N/4 \), with not less than one raised pavement marker per dotted line segment. At least one raised marker every \( N \) shall be retroreflective or internally illuminated.

Option:

07 When substituting for wide lines, raised pavement markers may be placed laterally adjacent to each other to simulate the width of the line.

Standard:

08 If used on State highways, internally-illuminated raised pavement markers shall be installed by an encroachment permit and include a maintenance agreement as a provision of the permit for the service life of the markers.

Section 3B.15 Transverse Markings

Standard:

01 Transverse markings, which include shoulder markings, word and symbol markings, arrows, stop lines, yield lines, crosswalk lines, speed measurement markings, speed reduction markings, speed hump markings, parking space markings, and others, shall be white unless otherwise provided in this Manual.

01a Crosswalk markings near schools shall be yellow. Refer to CVC 21368 and Part 7.

Guidance:

02 Because of the low approach angle at which pavement markings are viewed, transverse lines should be proportioned to provide visibility at least equal to that of longitudinal lines.

Support:

03 Refer to Department of Transportation’s Standard Plans for pavement marking letters, numerals and symbols. See Section 1A.11 for information regarding this publication.

Section 3B.16 Stop and Yield Lines

Guidance:

01 Stop lines should be used to indicate the point behind which vehicles are required to stop in compliance with a traffic control signal.

Option:

02 Stop lines may be used to indicate the point behind which vehicles are required to stop in compliance with a STOP (R-1-1) sign, a Stop Here For Pedestrians (R-1-5b or R-1-5c) sign, or some other traffic control device that requires vehicles to stop, except YIELD signs that are not associated with passive grade crossings.

03 Yield lines may be used to indicate the point behind which vehicles are required to yield in compliance with a YIELD (R-1-2) sign or a Yield Here To Pedestrians (R-1-5 or R-1-5a) sign.
Standard:
06 Except as provided in Section 8B.28, stop lines shall not be used at locations where drivers are required to yield in compliance with a YIELD (R1-2) sign or a Yield Here To Pedestrians (R1-5 or R1-5a) sign or at locations on uncontrolled approaches where drivers are required by State law to yield to pedestrians.
07 Yield lines shall not be used at locations where drivers are required to stop in compliance with a STOP (R1-1) sign, a Stop Here For Pedestrians (R1-5b or R1-5e) sign, a traffic control signal, or some other traffic control device.
08 Stop lines shall consist of solid white lines extending across approach lanes to indicate the point at which the stop is intended or required to be made.
09 Yield lines (see Figure 3B-16B-16(CA)) shall consist of a row of solid white isosceles triangles pointing toward approaching vehicles extending across approach lanes to indicate the point at which the yield is intended or required to be made.

Guidance:
09 Stop lines should be 12 to 24 inches wide.
10 The individual triangles comprising the yield line should have a base of 12 to 24 inches wide and a height equal to 1.5 times the base. The space between the triangles should be 3 to 12 inches.
11 If used, stop and yield lines should be placed a minimum of 4 feet in advance of the nearest crosswalk line at controlled intersections, except for yield lines at roundabouts as provided for in Section 3C.04 and at midblock crosswalks. In the absence of a marked crosswalk, the stop line or yield line should be placed at the desired stopping or yielding point, but should not be placed more than 30 feet or less than 4 feet from the nearest edge of the intersecting traveled way.
12 Stop lines at midblock signalized locations should be placed at least 40 feet in advance of the nearest signal indication (see Section 4D.14).
13 If yield or stop lines are used at a crosswalk that crosses an uncontrolled multi-lane approach, the yield lines or stop lines should be placed 20 to 50 feet in advance of the nearest crosswalk line, and parking should be prohibited in the area between the yield or stop line and the crosswalk (see Figure 3B-17).

Standard:
13 If yield (stop) lines are used at a crosswalk that crosses an uncontrolled multi-lane approach, Yield Here To (Stop Here For) Pedestrians (R1-5 series) signs (see Section 2B.11) shall be used.

Guidance:
14 Yield (stop) lines and Yield Here To (Stop Here For) Pedestrians signs should not be used in advance of crosswalks that cross an approach to or departure from a roundabout.

Support:
15 When drivers yield or stop too close to crosswalks that cross uncontrolled multi-lane approaches, they place pedestrians at risk by blocking other drivers' views of pedestrians and by blocking pedestrians' views of vehicles approaching in the other lanes.

Option:
16 Stop and yield lines may be staggered longitudinally on a lane-by-lane basis (see Drawing D of Figure 3B-13).

Support:
17 Staggered stop lines and staggered yield lines can improve the driver's view of pedestrians, provide better sight distance for turning vehicles, and increase the turning radius for left-turning vehicles.
18 Section 8B.28 contains information regarding the use of stop lines and yield lines at grade crossings.

Support:
19 As defined in CVC 377, a "limit line" is a solid white line not less than 12 inch nor more than 24 inch wide, extending across a roadway or any portion thereof to indicate the point at which traffic is required to stop in compliance with legal requirements.

Standard:
20 For all purposes, limit line(s) as defined per CVC 377 shall mean stop line(s).
21 A limit line shall be placed in conjunction with STOP (R1-1) signs on paved approaches, except where marked crosswalk exists.

Guidance:
22 If a sidewalk exists, the limit line should be placed in advance of an unmarked crosswalk area.
Section 3B.17 Do Not Block Intersection Markings

Support:
0 Refer to CVC 22526 for entering intersection, rail crossing or marked crosswalk.

Option:
0 Do Not Block Intersection markings may be used to mark the edges of an intersection area that is in close proximity to a signalized intersection, railroad crossing, or other nearby traffic control that might cause vehicles to stop within the intersection and impede other traffic entering the intersection. If authorized by law, Do Not Block Intersection markings with appropriate signs may also be used at other locations.

Standard:
0 If used, Do Not Block Intersection markings (see Figure 3B-18 3B-18(CA)) shall consist of one of the following alternatives:
   A. Wide solid white lines that outline the intersection area that vehicles must not block;
   B. Wide solid white lines that outline the intersection area that vehicles must not block and a white word message such as DO NOT BLOCK or KEEP CLEAR;
   C. Wide solid white lines that outline the intersection area that vehicles must not block and white cross-hatching within the intersection area, or
   D. A white word message, such as DO NOT BLOCK or KEEP CLEAR, within the intersection area that vehicles must not block.

0 Do Not Block Intersection markings shall be accompanied by one or more DO NOT BLOCK INTERSECTION (DRIVEWAY) (CROSSING) (R10-7) signs (see Section 2B.53), one or more DO NOT STOP ON TRACKS (R8-8) signs (see Section 8B.09), or one or more similar signs.

Section 3B.18 Crosswalk Markings

Support:
0 Crosswalk markings provide guidance for pedestrians who are crossing roadways by defining and delineating paths on approaches to and within signalized intersections, and on approaches to other intersections where traffic stops.
0 In conjunction with signs and other measures, crosswalk markings help to alert road users of a designated pedestrian crossing point across roadways at locations that are not controlled by traffic control signals or STOP or YIELD signs.
0 At non-intersection locations, crosswalk markings legally establish the crosswalk.

Standard:
0 When crosswalk lines are used, they shall consist of solid white lines that mark the crosswalk. They shall not be less than 6 12 inches or greater than 24 inches in width.

Guidance:
0 If transverse lines are used to mark a crosswalk, the gap between the lines should not be less than 6 feet. If diagonal or longitudinal lines are used without transverse lines to mark a crosswalk, the crosswalk should be not less than 6 feet wide.