



**REGIONAL TRANSPORTATION COMMISSION
TECHNICAL ADVISORY COMMITTEE
MEETING AGENDA**

**Wednesday, December 4, 2019 at 9:00 am
Regional Transportation Commission
1st Floor Conference Room
1105 Terminal Way, Reno NV 89502**

I. The RTC 1st Floor Conference Room is accessible to individuals with disabilities. Requests for auxiliary aids to assist individuals with disabilities should be made with as much advance notice as possible. For those requiring hearing or speech assistance, contact Relay Nevada at 1.800.326.6868 (TTY, VCO or HCO). Requests for supporting documents and all other requests should be directed to RTC Metropolitan Planning at 775-348-0480. Supporting documents may also be found on the RTC website: www.rtcwashoe.com.

II. The Technical Advisory Committee (TAC) has a standing item for accepting public comment on topics relevant to the RTC TAC that are not included on the agenda. No action may be taken on a matter raised under this item of the agenda until the matter itself has been specifically included on an agenda as an item upon which action will be taken. For specific items on the TAC agenda, public comment will be taken at the time the item is discussed. Individuals providing public comment will be limited to three minutes. Individuals acting as a spokesperson for a group may request additional time. Attempts to present public input in a disruptive manner will not be allowed. Remarks will be addressed to the TAC as a whole and not to individual members.

III. The TAC may combine two or more agenda items for consideration and/or may remove an item from the agenda or delay discussion relating to an item on the agenda at any time.

ITEM 1 Approval of Agenda (*For Possible Action*)

ITEM 2 Public Comment - *please read paragraph II near the top of this page*

ITEM 3 Approval of the November 6, 2019 Meeting Minutes (*For Possible Action*)

ITEM 4 Recommend approval of the proposed Amendment No. 1 to the FFY 2020-2024 Regional Transportation Improvement Plan (RTIP) (*For Possible Action*)

ITEM 5 Acknowledge receipt of a report on the feasibility study for the Arlington Avenue Bridges Replacement Project (*For Possible Action*)

ITEM 6 Acknowledge receipt of a report on the Lemmon Drive Capacity Project (*For Possible Action*)

ITEM 7 Acknowledge receipt of a report on Pedestrian Safety Zones and signalized pedestrian crossings (*For Possible Action*)

ITEM 8 Acknowledge receipt of a report on an update of the 2050 Regional Transportation Plan (RTP) development (*For Possible Action*)

ITEM 9 Development Updates (*Informational Only*)

ITEM 10 Member Items

- | | |
|-------------------|---------------------------------------|
| a) City of Reno | b) Reno-Tahoe Airport Authority |
| c) City of Sparks | d) FHWA |
| e) Washoe County | f) Air Quality Management Div. (AQMD) |
| g) NDOT | h) TMRPA |
| i) WCSD | j) Reno-Sparks Indian Colony (RSIC) |

ITEM 11 Agenda Items for Future TAC Meetings (*For Possible Action*)

ITEM 12 RTC Staff Items (*Informational Only*)

ITEM 13 Public Comment - *please read paragraph II near the top of this page*

ITEM 14 Adjournment (*For Possible Action*)

The Committee **may** take action on any item noted for possible action

**REGIONAL TRANSPORTATION COMMISSION
TECHNICAL ADVISORY COMMITTEE**

Meeting Minutes

Wednesday, November 6, 2019

Attendees

Daniel Inouye	Washoe County Health District-Air Quality Management Division
Mitchell Fink	City of Reno, Public Works
Arlo Stockham	City of Reno Community Development
Chris Tolley	Truckee Meadows Regional Planning Agency
Chair, Amber Sosa	City of Sparks, Engineering Services
Lissa Butterfield	Reno-Tahoe Airport Authority
Kevin Verre	Nevada Department of Transportation
Richard Oujevoulk	Nevada Department of Transportation District II
Julee Olander	Washoe County Community Services
Mike Boster	Washoe County School District
Scott Carey	Reno-Sparks Indian Colony
Enos Han	FHWA

RTC Staff

Amy Cummings	Dan Doenges
Xuan Wang	Brian Stewart
David Carr	Julie Masterpool
Ranjini Zuckerman	Jacqueline Maldonado

Guests

Stephanie Chen, WCHD

The Committee met in the First Floor Conference Room, 1105 Terminal Way, Reno, Nevada. The meeting was called to order at 9:00 a.m. by the chair, Amber Sosa.

ITEM 1. APPROVAL OF AGENDA

The agenda was approved with Item 4. on the agenda moved after Item 5. on the agenda.

ITEM 2. PUBLIC COMMENT

There were no comments.

ITEM 3. APPROVAL OF THE SEPTEMBER 4, 2019 MEETING MINUTES

The minutes of the TAC meeting September 4, 2019, meeting minutes were approved as submitted.

Item 4. on the agenda was moved after Item 5. on the agenda.

ITEM 5. ACKNOWLEDGE RECEIPT OF A REPORT ON THE DRAFT 2050 REGIONAL TRANSPORTATION PLAN (RTP) DEVELOPMENT SCHEDULE *(Item 5. on the agenda was moved before Item 4. on the agenda).*

Amy Cummings, RTC Deputy Executive Director/Director of Planning briefed the committee on the draft 2050 RTP Development Schedule. There will be items every month about the draft 2050 RTP at the advisory committee meetings. She handed out a copy of the RTC staff report for November 15, 2019, RTC Board meeting. A discussion continued on the 2020 Consensus Forecast.

Richard Oujevouk, NDOT asked about the RTP development schedule and the 2020 Consensus Forecast availability. Amy Cummings, RTC Deputy Executive Director/Director of Planning stated the results will be available in 2021 which, the current data for the Consensus Forecast is currently being used and she also stated the spring data will be used for the traffic model analysis system.

Arlo Stockham, City of Reno asked about the draft 2050 RTP development schedule and the coordination between all of the various committees, agency working groups. Amy Cummings RTC Deputy Executive Director/Director of Planning stated all the jurisdiction meetings, committee meetings and the RTP Agency Working Group for review and comment will be the RTP meetings most informational group. Chris Tolley, TMRPA also asked about the coordination timeframe and including the Regional Planning Commission meetings and other boards. Amy stated the December January timeframe for the Visioning Forum early next year for the governing boards. A discussion continued on calendar schedules for all of the jurisdictions and boards included in the RTP committees, meetings, forums and workshops. Scott Carey asked about the community planning workshops, she stated three will be planned and the visioning forums starting in January. He commended the format of the workshops from the previous RTP and he gave a comment on behalf of Reno-Sparks Indian Colony (RSIC) for participating and networking on the North Valleys connector study. There was a discussion on the motions to approve the agenda item.

Arlo Stockham, City of Reno made a motion to recommend approval of the acknowledged receipt of a report on the Draft 2050 Regional Transportation Plan (RTP) Development Schedule.

Dan Inouye, WCHD-AQ seconded.

The motion carried unanimously.

ITEM 4. ACKNOWLEDGE RECEIPT OF A REPORT ON THE SOUTH MEADOWS MULTIMODAL TRANSPORTATION STUDY *(Item 4. on the agenda was moved after Item 5. on the agenda).*

Xuan Wang, RTC Projector Manager for the RTC South Meadows Multimodal Transportation Study gave a presentation. A copy of the PowerPoint Presentation is on file at the RTC Metropolitan Planning Department. The draft study will be completed next month and the final study will be completed early next year. She stated the survey summary had over a thousand participants. Arlo Stockham, City of Reno asked about the presentation and comments for the draft report given. She stated to go to the RTC website for the presentation and that continuous comments will be accepted for the survey on the study. A discussion continued on the survey summary presentation.

Lissa Butterfield, RTAA, asked if the proposed improvement on Virginia Street recommends six lanes between I-580 Interchange and Longely Lane. Xuan Wang, RTC Project Manager, stated that there would be two extra lanes on each direction, Dan Doenges, RTC Planning Manager, stated the extra north bound lane coming from the freeway would turn into a right turn only at Longely Lane. A discussion continued on the project improvements and Richard Oujevolk, NDOT, asked about Geiger Grade Road improvements and Xuan Wang, stated the Geiger Grade improvements are in the RTP. A discussion continued on the study.

Chris Tolley, TMRPA made a motion to acknowledged receipt of a presentation on the South Meadows Multimodal Transportation Study.

Arlo Stockham, City of Reno seconded.

The motion carried unanimously.

Item 5. on the agenda was moved before Item 4. on the agenda.

ITEM 6. DEVELOPMENT UPDATES

Arlo Stockham, City of Reno gave updates on the developments in the Stonegate which, is in its 1st. Phase and West Verdi of Reno which, will go to the Planning Commission in December.

Amber Sosa, City of Sparks gave upcoming updates for the City of Sparks development in the north of Sparks and downtown Sparks.

Julee Olander, Washoe County gave updates to the Silver Hills approval from the board of commissioners.

ITEM 7. MEMBER ITEMS

Enos Han, FHWA mentioned Federal funding, and a resolution on Nov 21st and another continued resolution sometime in February and March.

Dan Inouye, WCHD-AQ updated the committee on the air quality preliminary data shown in the summertime and he mentioned also that he had a presentation with environmental students at UNR about the U-pass.

Kevin Verre, NDOT, updated the committee on the refinement of the One Nevada Plan and the I-11 study. A discussion continued on the project plans and other projects from the committee and RTC staff.

Chris Tolley, TMRPA updated the committee on the adopted TMRPA Regional Plan and he announced a special task force for their working group for GIS data. He announced the Silver Hills and Daybreak review of applications for developments. Dan Doenges, RTC Planning Manager asked if the task force is a multi-jurisdictional and Chris Tolley, TMRPA stated that it is similar to the RPGB working group in the jurisdictions and the entities—RTC. A discussion continued.

Mike Boster, WCSD announced schools under construction:

- Arrow Creek Road school and Thomas Creek Road, Bowhatch elementary school in Spanish Springs which, will be open next year in August 2020.
- South Meadows and Rio Wrangler between Veterans and Damonte Ranch elementary school in 2021/2022.
- Wild Creek school and Cold Springs elementary school open in 2022.

Mike Boster, WCSD stated at Wooster high school, a high school student was struck and the safe routes to school (SRTS) teams are partnering for gaps in their programs.

Scott Carey, RSIC updated the committee on continued I-80 express coordination with NDOT and he mentioned that NDOT and RSIC received the APA Chapter awarded for outstanding project coordination on the Spaghetti Bowl EIS and the Tribal Council Colony is moving forward with a land use plan for Hungry Valley. He announced that this is his last meeting with the RTC TAC and that he accepted a job position at the Division State Plan in Carson City. He stated Scott Nebesky, RSIC will replace him at the next meeting.

ITEM 8. AGENDA ITEMS FOR FUTURE TAC MEETINGS

There were no items given.

ITEM 9. RTC STAFF ITEMS

Julie Masterpool, RTC Engineering gave a staff item on upcoming impact fee developments and improvement plans in Sparks.

Brian Stewart, RTC Director of Engineering gave a presentation on the requested speed limit changes on the SEC north of South Meadows to Greg Street with the new signals on Pembroke Drive and Miraloma, a discussion continued on the requested speed limit in the SEC project area.

ITEM 10. PUBLIC COMMENT

There were no comments given.

ITEM 11. ADJOURNMENT

The meeting adjourned at 10:03 a.m.

Draft



REGIONAL TRANSPORTATION COMMISSION

Metropolitan Planning • Public Transportation & Operations • Engineering & Construction

Metropolitan Planning Organization of Washoe County, Nevada

December 4, 2019

AGENDA ITEM 4

TO: Technical Advisory Committee

FROM: Daniel Doenges, PTP, RSP
Planning Manager

**SUBJECT: FFY 2020-2024 Regional Transportation Improvement Plan (RTIP)
Amendment No. 1**

RECOMMENDATION

Recommend approval of the proposed Amendment No. 1 to the FFY 2020-2024 Regional Transportation Improvement Plan (RTIP).

SUMMARY

RTC staff is proposing Amendment No. 1 to the RTIP due to a proposed change by the Nevada Department of Transportation (NDOT) of the funding source for the Spaghetti Bowl Express (SBX) project. The project is currently programmed with approximately \$162,000,000 using state, local, Surface Transportation Block Grant (STBG), and National Highway Performance Program (NHPP) funds. However, NDOT is proposing to replace all federal funds with state funds and to increase the amount of funding for the project. An air quality analysis for the proposed amendment is not required as the change is to the funding source of an existing project that has already been determined to meet transportation conformity.

The public comment period for the amendment is scheduled to begin on November 27, and will close on December 19. A public hearing will be held at the RTC Board meeting on December 20.

Attachment

Agenda Item 4 ATTACHMENT

<i>State TIP ID</i>	WA20180043	<i>MPO/TIP</i>	RTC Washoe 20-03	<i>Local ID</i>		<i>Total Cost</i>	\$223,005,000
<i>Lead Agency</i>	Nevada DOT	<i>Contact</i>	Jenica Keller (775)888-7592	<i>NDOT</i>	District 2	<i>County</i>	WASHOE
<i>Project Type</i>	Rd Improvement	<i>Air Quality</i>	Non-Exempt	<i>TCM</i>	Yes	<i>Construction</i>	2020 start
<i>Project Name</i>	I 580 Improvements South of Spaghetti Bowl						
<i>Project Limits</i>	At From I 80 To Mill Street Interchange of Distance (mile) 1.27 Begin: 24.47 End: 25.74						
<i>Description</i>	Reconfigure Wells Ave Entrance to EB I 80. Widen EB I 80 to SB I 580 Ramp to 2 lanes. Widen I 580 SB to 3 lanes. Rehab/Replace 7 Bridges. Add sound walls.						

Phase	Fund Source	Prior	FY2020	FY2021	FY2022	FY2023	FY2024	Future	Total
PE	State Gas Tax	\$11,005,000	-	-	-	-	-	-	\$11,005,000
	<i>Total Preliminary Engineering</i>	\$11,005,000	-	-	-	-	-	-	\$11,005,000
ROW	State Gas Tax	\$12,000,000	-	-	-	-	-	-	\$12,000,000
	<i>Total Right of Way</i>	\$12,000,000	-	-	-	-	-	-	\$12,000,000
CON	Local Fund	-	\$30,000,000	-	-	-	-	-	\$30,000,000
CON	NDOT Bond	-	\$100,000,000	-	-	-	-	-	\$100,000,000
CON	State Gas Tax	-	\$70,000,000	-	-	-	-	-	\$70,000,000
	<i>Total Construction</i>	-	\$200,000,000	-	-	-	-	-	\$200,000,000
	<i>Total Programmed</i>	\$23,005,000	\$200,000,000	-	-	-	-	-	\$223,005,000

Version History

<i>TIP Document</i>		<i>MPO Approval</i>	<i>State Approval</i>	<i>FHWA Approval</i>	<i>FTA Approval</i>
19-00	Adoption 2019-2023	08/17/2018	09/17/2018	09/19/2018	09/18/2018
20-00	Adoption 2020-2024	09/20/2019	09/30/2019	10/21/2019	10/07/2019
20-03	Amendment 2020-2024	<i>Pending</i>	<i>Pending</i>	<i>Pending</i>	N/A

Current Change Reason

SCHEDULE / FUNDING / SCOPE - Positive change in cost over \$5 Million and greater than twenty percent (20%) of the estimated dollar amount of the project is requested and/or anticipated.

Funding Change(s):

Total project cost increased from \$162,000,000 to \$223,005,000



REGIONAL TRANSPORTATION COMMISSION

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December 4, 2019

AGENDA ITEM 5

TO: Technical Advisory Committee

FROM: Judy Tortelli, P.E.
Project Manager

SUBJECT: Arlington Avenue Bridges Replacement Project

RECOMMENDATION

Acknowledge receipt of a report on the feasibility study for the Arlington Avenue Bridges Replacement Project.

SUMMARY

The RTC is currently working on a feasibility study for the Arlington Avenue Bridges Replacement Project. The project limits are from West First Street to Island Avenue. The RTC is seeking funding for this project from the Federal Highway Administration (FHWA) for the construction cost of the project; therefore a process is required to provide a bridge structure type and aesthetic package to carry forward into a National Environmental Policy Act (NEPA) clearance and final design.

The Arlington Avenue bridges were built in the 1930's and have served the community of Reno and provided access to Wingfield Park for nearly a century. The park, the Truckee River, and the surrounding area have evolved over that time, and the Arlington Avenue bridges have been widened, repaired, and modified in ways that met the needs of the community at the time. However, the bridges are showing signs of wear resulting from the variety of modifications made, their age, and the repeated exposure to flood events.

In 2009, the City of Reno completed the TRAction Visioning Project which served as a component of the Truckee River Flood Management Project's (TRFMP) master plan to provide improved safety along the Truckee River Corridor. The TRAction Project was partially a result of the 1997 and 2005 flood events and focused on looking for the best solutions for improved flood protection in downtown Reno. The two Arlington Avenue Bridges were analyzed as part of the TRAction Project.

The TRAction Visioning report suggested that the Arlington Avenue Bridges be replaced so they can better meet the flood conveyance needs, but the report cautioned that the reconstruction of the structures would be complicated by the need to ensure pedestrian access. Two bridge options were

considered as part of the TRAction Report; replacement with two new structures using a slightly higher deck elevation to keep flood waters in the channel; and replacement with a single structure spanning over the river and Wingfield Park allowing pedestrians to pass under the bridge. Constraints and impacts associated with these two alternatives were not developed in great detail.

The RTC Feasibility Study aims to pick up where the TRAction report ended by evaluating options to ensure continued public safety, to meet the needs of the community, and to provide additional flood conveyance for the Truckee River. RTC intends to take a Planning and Environmental Linkages (PEL) approach to the Project to help inform decision-making, engage the public and stakeholders, and streamline the future NEPA process.

Alternative concepts will be developed for the two Arlington Avenue bridges and analyzed based on their ability to:

- meet the project's Purpose and Need,
- minimize impacts to right of way, the river, and surrounding properties,
- provide access to the park,
- achieve required flood conveyance criteria.

The alternatives will also be analyzed based on cost and the level of support received from project stakeholders. The alternative(s) that best meets the needs of the Project will be advanced for NEPA clearance and design.

The RTC and City of Reno staff have worked together to develop a process to complete the feasibility study which has been modeled after the Virginia Street Bridge Project where FHWA funding was also used. This proposed process utilizes documented decisions using the Nevada Department of Transportation (NDOT) and FHWA, PEL checklist. The goal of the proposed process is to provide a bridge structure and aesthetic package to carry forward into a NEPA clearance and final design.

The PEL approach to the Project will help inform decision-making, engage the public and stakeholders, and streamline the future NEPA process. Following the PEL process ensures there has been appropriate outreach and coordination with local and resource agencies, and the public. The PEL process needs to be robust enough and involve enough opportunities for input that any planning products or decisions made can be used for NEPA without having to fully revisit that product or decision.



REGIONAL TRANSPORTATION COMMISSION

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December 4, 2019

AGENDA ITEM 6

TO: Technical Advisory Committee

FROM: Dale Keller, P.E.
Engineer II/Project Manager

SUBJECT: Lemmon Drive Capacity Project

RECOMMENDATION

Acknowledge receipt of a report on the Lemmon Drive Capacity Project.

SUMMARY

Staff will provide an update on the Lemmon Drive Capacity Project. The project includes widening Lemmon Drive from US 395 to Military Road from four lanes to six lanes and widening Lemmon Drive from Fleetwood Drive to Chickadee Drive from two lanes to four lanes. Professional engineering services are underway with Jacobs Engineering Group, Inc. The existing conditions investigation is ongoing and preliminary engineering begins in early 2020. The RTC is working closely with Washoe County and the City of Reno to coordinate nearby regional improvements adjacent to Swan Lake.



REGIONAL TRANSPORTATION COMMISSION

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December 4, 2019

AGENDA ITEM 7

TO: Technical Advisory Committee

FROM: Rebecca Kapuler
Senior Technical Planner

Andrew Jayankura, P.E., PTOE
Engineer II

SUBJECT: Pedestrian Safety Zones/Signalized Pedestrian Crossings

RECOMMENDATION

Acknowledge receipt of a report on Pedestrian Safety Zones and signalized pedestrian crossings.

SUMMARY

In response to requests from the Citizens Multimodal Advisory Committee, staff will provide information on Pedestrian Safety Zones and considerations for signalized pedestrian crossings. During the 2015 Nevada Legislature, Senate Bill 144 was introduced and passed authorizing certain governing bodies and the Nevada Department of Transportation (NDOT) to designate Pedestrian Safety Zones in certain circumstances. The policy for Pedestrian Safety Zones was established by NDOT – Traffic Operations Division.

Once established, the safety zone must be signed appropriately for all road users including motorists, pedestrians and bicyclists as a “Pedestrian Safety Zone.” A Pedestrian Safety Zone can carry a fine for traffic violations up to double the standard amount.

To date, there a Pedestrian Safety Zone has not been established in Nevada. The policy is currently under review with NDOT in order to streamline the process. NDOT Safety Division is working with the Reno Police Department and NDOT Traffic Operations to simplify the established policy and implement the first Pedestrian Safety Zone in Northern Nevada. Staff will update TAC and CMAC once the new process has been adopted.

Staff will also provide information on considerations for pedestrian crossing at signalized roadway intersections, including how pedestrian crossing signals are phased with vehicle signals. The RTC, along with partnering local agencies, have been retiming traffic signals in the Truckee Meadows. With just a little over 400 traffic signals, all traffic signals in the region are retimed on a three year basis, with a goal of a third of the signals updated each year. Over the last three years, as each

signal is retimed, the pedestrian signal timing is updated to current standards. For all signals, the City of Reno, Sparks and Washoe County adopted the “Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways.”

Both the Cities of Reno and Sparks can employ the Leading Pedestrian Interval (LPI) feature with the walk sign initiated prior to the onset of the green light. LPI's are only employed in Reno/Sparks if there is limited sight visibility where drivers can't see pedestrians crossing (typically a building blocks their view). Due to the difficulty to phase this feature with typical signal timing, and an increase in delay for vehicles, it is not widely employed. The City of Sparks can also employ the feature where the flashing yellow signal arrow can be disabled when a pedestrian button is pressed. This will eliminate any left-turning conflicts with crossing pedestrians. It is also not widely employed due to increase delay for vehicles.

Attachments

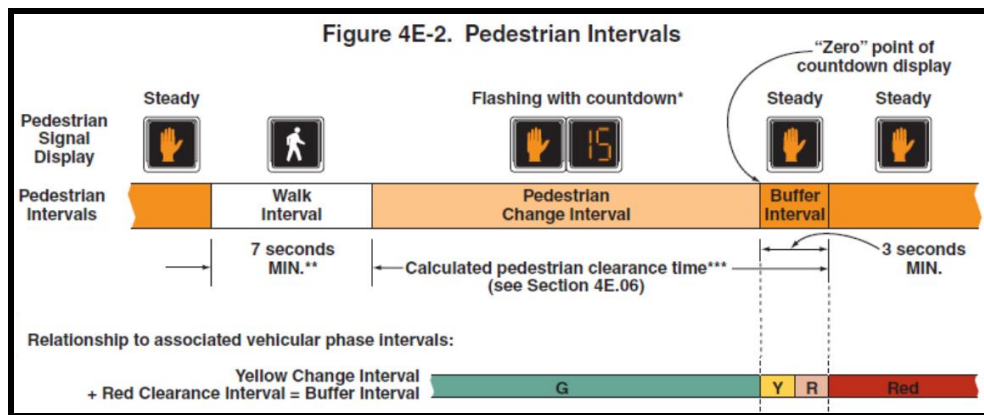
Signalized Pedestrian Crossing Information Sheet

The RTC, along with partnering local agencies, have been retiming traffic signals in the Truckee Meadows. With just a little over 400 traffic signals, all traffic signals in the region are retimed on a three year basis, with a goal of a third of the signals updated each year. Over the last three years, as each signal is retimed, the pedestrian signal timing is updated to current standards. Below are details of the standard used to time the pedestrian signals, and two special features that are/can be used at some intersections to enhance safety.

Standard

For all signals, the City of Reno, Sparks and Washoe County adopted the “Manual on Uniform Traffic Control Devices for Streets and Highways”, (published by the Federal Highway Administration (FHWA)) to install and maintain all traffic control devices on all public streets. <https://mutcd.fhwa.dot.gov/>

Under section 4E.06 (page 497) gives the standard to assume the pedestrian crossing speed of 3.5ft/s, sidewalk ramp to ramp, to calculate the pedestrian clearance time. The picture shows the relationship between the calculated ramp to ramp crossing time (pedestrian clearance time) and the traffic signal state (green, yellow, and red). As of December 2019, nearly 300 signals have been updated with the last 100 to be completed by end of January.



Special Feature #1

Both the Cities of Reno and Sparks can employ the “Leading Pedestrian Interval” (LPI) feature with the walk sign initiated prior to the onset of the green light. A video explaining the operation can be watched at this link <https://vimeo.com/12796930>.

There are three signals in the region that has this feature employed, and they are:

- Virginia St @ Liberty St – South side crossing (crossing Virginia St.)
- Virginia St @ 1st St – North side crossing (crossing Virginia St.)
- Stead Blvd @ Silver Lake – East side crossing (crossing Silver Lake)

LPI’s are only employed in Reno/Sparks if there is limited sight visibility where drivers can’t see pedestrians crossing (typically a building blocks their view). Due to the difficulty to phase this feature with typical signal timing, and an increase in delay for vehicles, it is not widely employed. We try to achieve a fair balance between the two.

Special Feature #2

The City of Sparks can also employ the feature where the flashing yellow signal arrow can be disabled when a pedestrian button is pressed. This will eliminate any left-turning conflicts with crossing pedestrians.

There is one signal in Sparks that has this feature employed, and it is:

- Los Altos Pkwy @ Ion Dr – North and South side crossing (crossing Ion Dr.)

This is employed due to heavy foot traffic during the start and release of Sepulveda Elementary School. This is not widely employed due to delays for left-turns.

Appendix E. Pedestrian Safety Zones

I. Purpose

This Appendix provides additional details to the operations and safety study process for designation of Pedestrian Safety Zones on a State Highway as authorized under SB No. 144 of the 78th (2015) Nevada Legislature. A consistent approach to the investigation is imperative.

II. Background

A. SB No. 144 added a new section to NRS 484B.135 specifying the provisions of the bill and amended other sections of NRS 484B to conform thereto. The bill authorizes “certain governing bodies and the Department of Transportation to designate pedestrian safety zones in certain circumstances; providing for enhanced penalties for certain traffic violations in pedestrian safety zones; revising provisions relating to vehicles and pedestrians in certain crosswalks and intersections; prohibiting a driver from making a U-turn or passing another vehicle in a school zone or a school crossing zone in certain circumstances; and providing other matters properly pertaining thereto.”

B. The bill provides, in part:

1. Subsection 3 - A governmental entity that designates a pedestrian safety zone shall cause to be erected:

- (a) *A sign located before the beginning of the pedestrian safety zone which provides notice that higher fines may apply in pedestrian safety zones;*
- (b) *A sign to mark the beginning of the pedestrian safety zone; and*
- (c) *A sign to mark the end of the pedestrian safety zone.*

2. Subsection 5 - The governing body of a local government or the Department of Transportation may designate a pedestrian safety zone on a Local or State Highway if the governing body or the Department of Transportation:

- (a) *Makes findings as to the necessity and appropriateness of a pedestrian safety zone, including, without limitation, any circumstances on or near a highway which make an area of the highway dangerous for pedestrians; and*
- (b) *Complies with the requirements of subsection 3 and NRS 484A.430 and 484A.440.*

C. The National Highway Traffic Safety Administration (NHTSA) and the Federal Highway Administration (FHWA) developed procedures for defining pedestrian safety zones. The NHTSA zone process provides a systematic method for targeting pedestrian safety improvements in a cost-effective manner. It involves defining relatively small geographic areas, or zones, where a relatively large proportion of the problem occurs. Once defined, a countermeasure program is applied in selected zones, targeting the locations with the biggest crash problems. Information contained within this study process are based on NHTSA’s *Zone Guide for Pedestrian Safety, December 2008*.

- 1. Communities can efficiently concentrate pedestrian safety improvements by carefully selecting where they are applied. To do this, small land areas (or zones) need to be identified where these improvements will reach many pedestrians whose crash risks is to be reduced.
- 2. The aim of zoning is to achieve the highest possible efficiency, which is expressed as the ratio of the percent of the problem addressed to the percent of land area

covered. A ratio of 3 to 1 or more is the target and suggests that the zone process will yield a meaningful benefit.

III. Process

- A. Upon receipt of a request for designation of a pedestrian safety zone on a State Highway, at the discretion of the Chief Traffic Operations Engineer, the Traffic Operations Division as the point of contact, will assist Traffic Safety Engineering in the development of a study plan. Technical assistance in development or execution of the study plan may be requested, as needed, from NDOT Traffic Operations, Traffic Safety Engineering, Traffic Information, or others.
- B. NDOT will be working in collaboration with the local government entities to designate a pedestrian safety zone limits and the signages, in accordance with the law.
- C. A pedestrian safety zone shall be established based on documented pedestrian safety issues or concerns. The limits of the zone shall be as short as possible; however, at a minimum shall extend one intersection on all sides of the pedestrian safety issue. Reference Pedestrian Safety Zone figure included herein.
- D. A pedestrian safety zone may be designated as a component of a comprehensive pedestrian safety treatment system for a temporary basis. Such designation shall comply with all other guidelines contained herein and shall be removed at the conclusion of the event.
- E. Defining the zone is a 4 steps process that involves selecting the crash problem on which the zone will be based, ensuring availability of needed data, map the area and define the zone.
 1. Select the crash problem. Pick the pedestrian crash problem that the study intends to address. The crash problem is often directed towards a specific age group or status of the victim. In order to ensure a reasonably stable measure, a minimum of five year's crash records should be available for establishing pedestrian safety zones. A zone approach is appropriate when **all** of the following conditions exist.
 - (a) *Crash data needed to define the zone is available*
 - (b) *Data is sufficient to produce a stable map*
 - (c) *Pedestrian crashes cluster in some way*
 2. Map the pedestrian crashes either manually or by computerized mapping system like geographic information system (GIS). A large map of the area is required, and entry of any data subsets of interest must be planned prior to the start of the mapping. For example, if crash types are of interest, some method such as color coding would be needed to differentiate different crash types of interest. Separate maps might be needed to display different subsets of data.
 3. Define the zone by visual examination of the resulting map noting any crash clusters. If no clustering is apparent, the map shows crashes randomly spread, the problem may not be "zonable" for that area. Search first for circular zones, then search for linear zones, and then examine the zones and determine if their shapes need refinement.
 - (a) *A circular zone with radius of one-mile is easy to work with. Research shows most pedestrian crashes occur within one mile of the victim's home or work place and a land area of one-mile radius (just over three square miles) is a manageable area in which to concentrate program activities. Use a target rate of 10 crashes per zone as a minimum starting point.*

Agenda Item 7 ATTACHMENT

- (b) *A linear zone should also be considered since most crash reduction programs include activities that can be applied to road segments. Examine maps for high frequencies of pedestrian crashes that occur along a single strip of roadway. For an annual crash rate on the order of 200, those roadway segments where six or more crashes occur in a two-mile segment should be identified as linear zones. This rate can be adjusted as necessary if the annual crash rate being examined is higher.*
 - (c) *The defined circular and linear zones should be examined to determine if efficiency might be improved if they were merged or their shape changed. It may be wise to reduce the size of a circular zone or change its shape if most of the events within it cluster near the center.*
4. Calculate efficiency measure and select final zone. The percentage of both crashes and land area covered should be calculated in order to determine program coverage efficiency. If the ratio of the percent of the problem addressed to the percent of the land area covered in the zone is much less than three, the zone may need to be reexamined to try to improve efficiency.
- (a) *Efficiency Ratio = $\frac{\% \text{ crashes of interest area}}{\% \text{ area those crashes occur over}}$*
 - (b) *An efficiency ratio of three to one or higher (i.e., 60% of the crashes of interest in 20% of the jurisdiction's land area) will permit the application of unique countermeasures within the zone that would be prohibitively expensive if deployed regularly.*
 - (c) *An efficiency ratio less than two indicates the study area is "non-zonable".*
- F. Any resulting authorization related to designation of a pedestrian safety zone on a State Highway will be at the sole discretion of NDOT.
- IV. NDOT Approval
- A. Upon conclusion of the pedestrian safety zone study, a memo will be prepared, detailing the recommended zone locations for the Traffic Operations Chief's review and approval. The approval will identify next steps required of the requesting party, if applicable (e.g. permit application, request for environmental review/clearance).
 - B. Approval by NDOT does not constitute environmental clearance or right-of-way verification for the installation of the traffic signs.
 - C. Approval by NDOT does not obligate NDOT to construct a pedestrian safety zone.
- V. Implementation
- A. The pedestrian safety zone installation must be completed within one year of the date of NDOT approval or issuance of a permit, if applicable.
 - B. For requests that are Development / Permit driven, the requesting party will be responsible for the pedestrian safety zone installation and for submitting a new permit application if the zone is not constructed within one year of the date of NDOT approval. All information will be reviewed based on conditions existing at the time of review and may result in denial of the permit.
 - C. For other requests, the District Traffic Engineer or Engineering Services Manager will initiate the appropriate work orders to install pedestrian safety zone signs, and implement recommended pedestrian safety zones.
 - D. NDOT Traffic Operations Division will prepare sign details and specifications for the signs specified in the law. Refer to Ped Safety Zone Signs figure included herein.

Agenda Item 7 ATTACHMENT

- E. Once implemented, the District Traffic Engineer or Engineering Services Manager will notify the responsible law enforcement agencies for their awareness of a newly designated Pedestrian Safety Zone.
- F. NDOT Traffic Operations and Safety Engineering Divisions will coordinate with stakeholders to monitor crash reduction of pedestrian safety zones and adjust/remove zones as necessary.



REGIONAL TRANSPORTATION COMMISSION

Metropolitan Planning • Public Transportation & Operations • Engineering & Construction

Metropolitan Planning Organization of Washoe County, Nevada

December 4, 2019

AGENDA ITEM 8

TO: Technical Advisory Committee

FROM: Amy Cummings, AICP, LEED AP
Director of Planning/Deputy Executive Director

SUBJECT: **2050 Regional Transportation Plan (RTP)**

RECOMMENDATION

Acknowledge receipt of a report on an update of the 2050 Regional Transportation Plan (RTP) development.

SUMMARY

Staff will provide an update on the progress of the development of the 2050 RTP. Staff will provide information received with preliminary meetings with the local jurisdictions as well as updates on initial data analysis efforts.