

**NOTICE OF MEETING OF THE
CARSON CITY REGIONAL TRANSPORTATION
COMMISSION (RTC)**

Day: Wednesday
Date: October 11, 2023
Time: Begins immediately after the adjournment of the Carson Area Metropolitan Planning Organization meeting that begins at 4:30 p.m.
Location: Community Center, Robert “Bob” Crowell Board Room
851 East William Street
Carson City, Nevada

AGENDA

NOTICE TO PUBLIC:

Members of the public who wish to view the meeting may watch the livestream of the RTC meeting at www.carson.org/granicus and by clicking on “In progress” next to the meeting date, or by tuning in to cable channel 191. Livestream of the meeting is provided solely as a courtesy and convenience to the public. Carson City does not give any assurance or guarantee that the livestream or cable channel access will be reliable. Although all reasonable efforts will be made to provide livestream, unanticipated technical difficulties beyond the control of City staff may delay, interrupt, or render unavailable continuous livestream capability.

The public may provide public comment in advance of a meeting by written submission to the following email address: cmartinovich@carson.org. For inclusion or reference in the minutes of the meeting, your public comment must include your full name and be submitted via email by not later than 3:00 p.m. the day before the meeting. Public comment during a meeting is limited to three minutes for each speaker.

1. Call to Order – Regional Transportation Commission

2. Roll Call

3. Public Comment:**

The public is invited at this time to comment on and discuss any topic that is relevant to, or within the authority of this public body.

4. For Possible Action: Approval of Minutes – September 13, 2023

5. Public Meeting Item(s):

5-A For Possible Action – Discussion and possible action regarding a recommendation to the Board of Supervisors (“Board”) on the 90% design concepts for the East William Street Complete Streets Project (“Project”).

Staff Summary: This Project includes complete street improvements along East William Street between North Carson Street and the I-580/U.S. Highway 50 interchange, including pavement

reconstruction and preservation, utility replacement, safety enhancements, and multi-modal transportation infrastructure. Staff will present the 90% design concepts that have been developed for the corridor based on input and direction from the public, Regional Transportation Commission (“RTC”), Redevelopment Authority Citizen’s Committee (“RACC”), and Board. Staff will also discuss the overall status of the design improvements planned for the corridor.

5-B For Discussion Only – Discussion and presentation regarding proposed updates to the Carson City Public Works Speed Limit Policy and Procedure (“Policy”).

Staff Summary: The Policy sets forth guidelines for establishing and reviewing speed limits and outlines the placement and function of speed limit signs on new and existing roadways within Carson City. Staff will present information related to proposed revisions to the Policy. The methods outlined in the Policy are used as the basis to establish new, and review existing, speed limits on Carson City roads and guide the placement and function of speed limit signs.

6. Non-Action Items:

6-A Transportation Manager’s Report

6-B Street Operations Report

6-C Other comments and reports, which could include:

- Future agenda items
- Status review of additional projects
- Internal communications and administrative matters
- Correspondence to the RTC
- Additional status reports and comments from the RTC
- Additional staff comments and status reports

7. Public Comment:**

The public is invited at this time to comment on any matter that is not specifically included on the agenda as an action item. No action may be taken on a matter raised under this item of the agenda.

8. For Possible Action: To Adjourn

****PUBLIC COMMENT LIMITATIONS** – The RTC will provide at least two public comment periods in compliance with the minimum requirements of the Open Meeting Law prior to adjournment. No action may be taken on a matter raised under public comment unless the item has been specifically included on the agenda as an item upon which action may be taken. **Public comment will be limited to three minutes per speaker to facilitate the efficient conduct of a meeting and to provide reasonable opportunity for comment from all members of the public who wish to speak.** Testimony from a person who is directly involved with an item, such as City staff, an applicant or a party to an administrative hearing or appeal, is not considered public comment and would not be subject to a three-minute time limitation.

Agenda Management Notice - Items on the agenda may be taken out of order; the public body may combine two or more agenda items for consideration; and the public body may remove an item from the agenda or delay discussion relating to an item on the agenda at any time.

Titles of agenda items are intended to identify specific matters. If you desire detailed information concerning any subject matter itemized within this agenda, including copies of the supporting material regarding any of the items listed on the agenda, please contact Christopher Martinovich, Transportation

Manager, in writing at 3505 Butti Way, Carson City, Nevada, 89701 or at cmartinovich@carson.org, or by phone at (775) 887-2355 at least 24 hours in advance.

Notice to persons with disabilities: Members of the public who are disabled and require special assistance or accommodations at the meeting are requested to notify RTC staff in writing at 3505 Butti Way, Carson City, Nevada, 89701 or at cmartinovich@carson.org, or by calling Christopher Martinovich at (775) 887-2355 at least 24 hours in advance of the meeting.

This agenda and backup information are available on the City's website at www.carson.org/agendas and at the office for Carson City Public Works - 3505 Butti Way, Carson City, Nevada, 89701 (775) 887-2355.

This notice has been posted at the following locations:

Carson City Public Works, 3505 Butti Way

Carson City Community Center, 851 E. William St.

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CARSON CITY REGIONAL TRANSPORTATION COMMISSION**Minutes of the September 13, 2023 Meeting****Page 1****DRAFT**

A Regular meeting of the Carson City Regional Transportation Commission (RTC) was scheduled to begin following the adjournment of the Carson Area Metropolitan Planning Organization (CAMPO) meeting (starting at 4:30 p.m.) on Wednesday, September 13, 2023, in the Community Center Robert “Bob” Crowell Boardroom, 851 East William Street, Carson City, Nevada.

PRESENT: Chairperson Lori Bagwell
 Vice Chair Lisa Schuette
 Commissioner Robert “Jim” Dodson
 Commissioner Lucia Maloney
 Commissioner Gregory Novak

STAFF: Darren Schulz, Public Works Director
 Chris Martinovich, Transportation Manager
 Adam Tully, Deputy District Attorney
 Bryan Byrne, Transportation Engineer
 Scott Bohemier, Transportation Planner/analyst
 Rebecca Bustos, Grant Analyst
 Tamar Warren, Senior Deputy Clerk

NOTE: A recording of these proceedings, the commission’s agenda materials, and any written comments or documentation provided to the Clerk, during the meeting, are part of the public record. These materials are available for review, in the Clerk’s Office, during regular business hours. All approved meeting minutes are available at <https://www.carson.org/minutes>.

1. CALL TO ORDER – REGIONAL TRANSPORTATION COMMISSION (RTC)

(5:00:20) – Chairperson Bagwell called the meeting to order at 5:00 p.m.

2. ROLL CALL

(5:00:38) – Roll was called, and a quorum was present.

3. PUBLIC COMMENT

(5:01:10) – Chairperson Bagwell entertained public comment; however, none were forthcoming.

4. FOR POSSIBLE ACTION: APPROVAL OF MINUTES – AUGUST 16, 2023

(5:01:20) – Chairperson Bagwell introduced the item and entertained corrections or a motion.

(5:01:32) – Commissioner Maloney moved to approve the minutes of the August 16, 2023 RTC meeting as presented. The motion was seconded by Commissioner Dodson and carried 5-0-0.

5. PUBLIC MEETING ITEM(S):

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5-A FOR POSSIBLE ACTION – DISCUSSION AND POSSIBLE ACTION REGARDING (1) INTERLOCAL AGREEMENT NO. NM519-23-016 (“AGREEMENT”) FOR THE NEVADA DEPARTMENT OF TRANSPORTATION (“NDOT”) TO PROVIDE TRAFFIC SIGNAL EQUIPMENT (“EQUIPMENT”), AT NO COST, TO THE CARSON CITY REGIONAL TRANSPORTATION COMMISSION (“RTC”) FOR INSTALLATION AT VARIOUS TRAFFIC SIGNALS PRIOR TO DECEMBER 31, 2024; AND (2) AUTHORIZATION FOR THE TRANSPORTATION MANAGER TO EXECUTE THE AGREEMENT AS WELL AS ANY FUTURE AMENDMENTS TO THE AGREEMENT REGARDING CHANGES TO EQUIPMENT MATERIALS, CHANGES TO INSTALLATION LOCATION, AND EXTENSIONS OF TIME.

(5:01:45) – Chairperson Bagwell introduced the item. Vice Chair Schuette read into the record a prepared disclosure statement, advised of no disqualifying conflict of interest, and stated that she would participate in discussion and action. Mr. Martinovich gave background and noted that the traffic signals were being provided by the Nevada Department of Transportation (NDOT) at no cost, adding that Staff would be responsible for installing the equipment at the signals over the course of next year. He also highlighted the following priorities from the Staff Report, incorporated into the record:

- The installation of battery backup systems at traffic signals which are lacking an acceptable system,
- The replacement of end-of-life vehicle detection systems at select locations.
- The replacement of traffic controllers to support increased operational capability and efficiency.

(5:04:20) – Mr. Martinovich stated that the equipment would be installed at signals in Lyon and Douglas Counties as well and would be maintained by Carson City (for a reimbursable fee). Commissioner Dodson was informed that the signals do not have to be on NDOT property. Commissioner Novak inquired about the purchase of spares and Control Systems Operations. Manager James Jacklett explained that they would have a few additional units to be used as spares. Mr. Jacklett also responded to clarifying questions and explained that agenda items 5-B and 5-C would address purchasing battery packs for existing equipment and purchasing vehicle detection equipment. He clarified that 10 intersections would receive the vehicle detection systems because “the scope of work was constructed around the available budget from NDOT.” As for the signals that need repairs, Mr. Jacklett explained that the spare parts would be used to repair and replace what is necessary. There were no public comments. Chairperson Bagwell entertained a motion.

(5:15:05) – Commissioner Maloney moved to approve the Agreement as presented and to authorize the Transportation Manager to execute the Agreement as well as any future amendments to the Agreement regarding changes to Equipment materials, changes to installation location, and extensions of time. The motion was seconded by Commissioner Novak and carried 5-0-0.

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5-B FOR POSSIBLE ACTION – DISCUSSION AND POSSIBLE ACTION REGARDING AUTHORIZATION TO PURCHASE TRAFFIC SIGNAL BATTERY BACKUP EQUIPMENT (“EQUIPMENT”) FROM SIERRA TRANSPORTATION TECHNOLOGIES (“SIERRA”) FOR A NOT-TO-EXCEED AMOUNT OF \$63,190.

(5:15:34) – Chairperson Bagwell introduced the item. Vice Chair Schuette read into the record a prepared disclosure statement, advised of no disqualifying conflict of interest, and stated that she would participate in discussion and action. Mr. Martinovich clarified that this item was to purchase traffic signal battery backup equipment for Carson City-specific traffic signals, adding that each set of replacement batteries would be equipped with a remote battery monitoring system to increase the service life and warranty coverage of the batteries from three to five years. He clarified that the City recycled its batteries. Chair Bagwell was informed that the price outlined in the contract was still valid. There were no public comments; therefore, Chair Bagwell entertained a motion.

(5:18:42) – Commissioner Dodson moved to approve the purchase of the Equipment as presented. The motion was seconded by Vice Chair Schuette and carried 5-0-0.

5-C FOR POSSIBLE ACTION – DISCUSSION AND POSSIBLE ACTION REGARDING AUTHORIZATION TO PURCHASE VEHICLE DETECTION EQUIPMENT (“EQUIPMENT”) FROM ITERIS, INC. (“ITERIS”) FOR A NOT-TO-EXCEED AMOUNT OF \$95,544.00.

(5:19:02) – Chairperson Bagwell introduced the item. Vice Chair Schuette read into the record a prepared disclosure statement, advised of no disqualifying conflict of interest, and stated that she would participate in discussion and action. Mr. Martinovich reviewed the Staff Report, incorporated into the record, and highlighted that the purchased equipment would replace older, aging systems that were beginning to fail. The following three intersection vehicle detection systems would be using the purchased Equipment:

- Carson Street and College Parkway.
- College Parkway and Roop Street.
- College Parkway and Retail Drive.

(5:20:42) – Commissioner Maloney inquired about the budget augmentation and Mr. Martinovich clarified that the augmentation was the result of unspent funds in FY 23 being rolled over to FY 24. Chairperson Bagwell entertained public comments and when none were forthcoming, a motion.

(5:23:25) – Commissioner Maloney moved to approve the purchase of the Equipment as presented. The motion was seconded by Commissioner Dodson and carried 5-0-0.

5-D FOR POSSIBLE ACTION – DISCUSSION AND POSSIBLE ACTION REGARDING (1) COOPERATIVE AGREEMENT NO. PR463-23-063 (“AGREEMENT”)

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BETWEEN THE CARSON CITY REGIONAL TRANSPORTATION COMMISSION (“RTC”) AND THE NEVADA DEPARTMENT OF TRANSPORTATION (“NDOT”) TO FUND THE WESTERN NEVADA SAFE ROUTES TO SCHOOL PROGRAM (“WN-SRTS PROGRAM”) THROUGH SEPTEMBER 30, 2024 IN THE AMOUNT OF \$223,730 COMPRISING \$212,543 IN TRANSPORTATION ALTERNATIVES PROGRAM (“TAP”) FUNDS PLUS THE REQUIRED 5% LOCAL MATCH OF \$11,187, AND (2) AUTHORIZATION FOR THE TRANSPORTATION MANAGER TO EXECUTE THE AGREEMENT AS WELL AS ANY FUTURE AMENDMENTS TO THE AGREEMENT TO REVISE SCOPE OF WORK, TO EXTEND THE TIME OF PERFORMANCE, OR TO APPROVE FUNDING CHANGES NOT EXCEEDING 10% OF THE AGREEMENT AMOUNT.

(5:23:53) – Chairperson Bagwell introduced the item. Mr. Bohemier gave background, presented the Staff Report, which is incorporated into the record, and responded to clarifying questions. Commissioner Novak was informed by Mr. Bohemier that he would be working with school districts to ensure that new schools have the appropriate design and circulation patterns. Chair Bagwell noted that Carson City had been recognized during the last Move with the Mayor Event as a fine example of what other communities must do.” There were no public comments.

(3:29:50) – Vice Chair Schuette moved to approve the Agreement as presented and to authorize the Transportation Manager to execute the Agreement as well as any future amendments to the Agreement to revise the scope of work, to extend the time of performance, or to approve all funding changes not exceeding 10% of the Agreement amount. The motion was seconded by Commissioner Novak.

5-E FOR POSSIBLE ACTION – DISCUSSION AND POSSIBLE ACTION REGARDING (1) AMENDMENT 1 (“AMENDMENT”) TO COOPERATIVE AGREEMENT NO. PR320-21-063 (“AGREEMENT”) BETWEEN THE CARSON CITY REGIONAL TRANSPORTATION COMMISSION (“RTC”) AND THE NEVADA DEPARTMENT OF TRANSPORTATION (“NDOT”) TO REVISE THE SCOPE OF THE EAST 5TH STREET RECONSTRUCTION PROJECT (“PROJECT”), REPLACE A PORTION OF THE PROJECT’S SURFACE TRANSPORTATION BLOCK GRANT (“STBG”) FUNDING WITH HIGHWAY IMPROVEMENT PROGRAM (“HIP”) FUNDING, REVISE THE TOTAL PROJECT FUNDING, EXTEND THE TERMINATION DATE TO JUNE 30, 2027, AND UPDATE THE CONTACT INFORMATION; AND (2) TO AUTHORIZE THE TRANSPORTATION MANAGER TO SIGN THE AMENDMENT.

(5:30:38) – Chairperson Bagwell introduced the item. Mr. Byrne presented the Staff Report and explained that the total estimated construction cost of the Project is \$2,120,000 following revisions to the Project scope. He stated that the Amendment reduces the Project scope by shortening the project limits, replacing \$259,119 in Surface Transportation Block Grant (STBG) funding with an equal amount of Highway Improvement Program (HIP) funding (as requested by NDOT). It also revises the Project costs by decreasing the total federal funding from \$2,366,000 to \$1,382,000,

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updating the local funding outside of the Agreement, extending the termination date of the agreement from June 30, 2026 to June 30, 2027, and updating the contract information for NDOT and Carson City. Chairperson Bagwell was informed that the cost savings would be applied to the Colorado Street project. Mr. Martinovich reminded the Commissioners that they should consider the late material when taking action. Chair Bagwell entertained public comments and when none were forthcoming, a motion.

(5:32:36) – Commissioner Dodson moved to approve the Amendment, as presented in the late material, and to authorize the Transportation Manager to sign the Amendment. The motion was seconded by Commissioner Maloney and carried 5-0-0.

5-F FOR POSSIBLE ACTION – DISCUSSION AND POSSIBLE ACTION REGARDING (1) AMENDMENT 2 (“AMENDMENT”) TO COOPERATIVE AGREEMENT NO. PR135-21-063 (“AGREEMENT”) BETWEEN THE CARSON CITY REGIONAL TRANSPORTATION COMMISSION (“RTC”) AND THE NEVADA DEPARTMENT OF TRANSPORTATION (“NDOT”) FOR THE COLORADO STREET REHABILITATION PROJECT (“PROJECT”) TO INCREASE SURFACE TRANSPORTATION BLOCK GRANT (“STBG”) FUNDING BY \$750,000 FOR A NEW TOTAL OF \$1,491,292, WITH A \$37,494 INCREASE IN THE 5% LOCAL MATCH FOR A NEW TOTAL OF \$78,489; REVISE FUNDS OUTSIDE THE AGREEMENT; EXTEND THE TERMINATION DATE TO JUNE 30, 2027; AND UPDATE THE CONTACT INFORMATION, AND (2) TO AUTHORIZE THE TRANSPORTATION MANAGER TO SIGN THE AMENDMENT.

(5:32:56) – Chairperson Bagwell introduced the item. Mr. Byrne presented the Staff Report which is incorporated into the record. He highlighted the fact that the Amendment would increase STBG funding for the Project, revise the total additional funds outside the Agreement, extend the termination date of the Agreement from June 30, 2026, to June 30, 2027, and update the contract information for NDOT and Carson City. According to Mr. Byrne, the increase in STBG funds for this Project will reduce the local funding obligation, allowing existing local funds to be programmed to other projects. Mr. Martinovich explained that the new Agreement date “is the term of the agreement which allows NDOT to close out all the federal requirements including the audits and all the processes that go into the post-construction activities of the project.” He also clarified that the work on Colorado Street would be done at “the end of October.” There were no public comments. Chair Bagwell entertained a motion.

(5:37:10) – Vice Chair Schuette moved to approve the Amendment, as presented, and to authorize the Transportation Manager to sign the Amendment. The motion was seconded by Commissioner Dodson and carried 5-0-0.

5-G FOR POSSIBLE ACTION – DISCUSSION AND POSSIBLE ACTION REGARDING CONTRACT 24300078 (“CONTRACT”) FOR J-U-B ENGINEERS, INC. (“JUB”) TO PERFORM CIVIL ENGINEERING DESIGN SERVICES FOR ROADWAY

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PROJECTS IN PERFORMANCE DISTRICTS 2, 3, AND 4 (“PROJECT”) FOR A TOTAL NOT TO EXCEED AMOUNT OF \$179,100.

(5:37:27) – Chairperson Bagwell introduced the item. Mr. Byrne presented the Staff Report which is incorporated into the record. He explained that the Project included civil engineering design services for the preservation and reconstruction of various roadways across Carson City located in Performance Districts 2, 3, and 4 based on the Pavement Preservation Plan for Fiscal Years 2024-2028. He also clarified that the District 1 projects were being designed in-house and District 5 projects were “wrapping up.” There were no public comments.

(5:39:46) – Commissioner. Novak moved to approve the contract as presented. The motion was seconded by Commissioner Dodson and carried 5-0-0.

5-H FOR DISCUSSION ONLY – DISCUSSION AND PRESENTATION REGARDING FISCAL YEAR (“FY”) 2023 TRANSPORTATION ACTIVITIES.

(5:40:05) – Chairperson Bagwell introduced the item. Mr. Martinovich presented a summary of FY 2023 transportation activities and accomplishments which closed on June 30, 2023, outlined in the Staff Report, and incorporated into the record. He also responded to clarifying questions. He explained to Commissioner Novak that Carson City did not have a road impact fee like Washoe County. This item was not agendized for action.

6. NON-ACTION ITEMS

6-A TRANSPORTATION MANAGER’S REPORT

(5:47:53) – Mr. Martinovich announced that the Local Roads Funding Workshops were scheduled for October 4, 2023 (in the Robert “Bob” Crowell Boardroom) and October 9, 2023 (at Seeliger Elementary School). He also reported that the Jump Around Carson (JAC) ridership survey would begin on September 11, 2023 and that free rides on JAC buses would be offered on October 7, 2023, in partnership with the City’s Elks’ Lodge as part of their Stand Down Event for veterans. Mr. Martinovich announced the Walk to School Day on October 4, 2023.

6-B STREET OPERATIONS REPORT

(5:50:05) – Mr. Martinovich pointed out that the Staff Report contained both the June and July 2023 Street Operations Reports and responded to clarifying questions. Chairperson Bagwell noted that she had read somewhere that the City would repair potholes when notified by the public. She inquired about the definition of a pothole as she had been receiving many phone calls regarding the item. Mr. Martinovich offered to consult the Street Operations Manager and return with a definition. Mr. Schulz explained the rule of thumb on potholes: “If you drive over with your car, it can cause damage to the suspension, the tire of your car, or if it’s in a crosswalk where you’re walking, you could step in it, fall, trip...that sort of thing.” He also noted it was “not an exact science.” Mr. Schulz clarified that the information had been posted on social media by Staff,

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adding that they couldn't get to the cracks at this time. Chair Bagwell thanked the Street Operations Crews who have been working hard after this year's storms.

(5:54:48) – Commissioner Maloney reported “a piece of missing asphalt in front of the Transit Center on Plaza (street)” and wished to have that paved before snowfall as many seniors walked that street. Mr. Martinovich offered to follow up.

6-C OTHER COMMENTS AND REPORTS, WHICH COULD INCLUDE:

• **FUTURE AGENDA ITEMS**

- Developer agreement related to the Appion Way traffic signal project.

• **STATUS REVIEW OF ADDITIONAL PROJECTS**

(5:56:42) – Mr. Byrne reviewed the Project Status Report incorporated into the record and responded to clarifying questions. Chair Bagwell called the report her “favorite.” She also thanked Mr. Byrne and wished him luck as this was his last RTC meeting.

- **INTERNAL COMMUNICATIONS AND ADMINISTRATIVE MATTERS**
- **CORRESPONDENCE TO THE RTC**
- **ADDITIONAL STATUS REPORTS AND COMMENTS FROM THE RTC**
- **ADDITIONAL STAFF COMMENTS AND STATUS REPORTS**

7. PUBLIC COMMENT

(6:01:28) – Chairperson Bagwell entertained final public comments; however, none were forthcoming.

8. FOR POSSIBLE ACTION: TO ADJOURN

(6:01:37) – Chairperson Bagwell adjourned the meeting at 6:01 p.m.

The Minutes of the September 13, 2023, Carson City Regional Transportation Commission meeting are so approved on this 11th day of October, 2023.

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STAFF REPORT

Report To: The Carson City Regional Transportation Commission (RTC)

Meeting Date: October 11, 2023

Staff Contact: Darren Anderson, Senior Project Manager

Agenda Title: For Possible Action – Discussion and possible action regarding a recommendation to the Board of Supervisors (“Board”) on the 90% design concepts for the East William Street Complete Streets Project (“Project”).

Staff Summary: This Project includes complete street improvements along East William Street between North Carson Street and the I-580/U.S. Highway 50 interchange, including pavement reconstruction and preservation, utility replacement, safety enhancements, and multi-modal transportation infrastructure. Staff will present the 90% design concepts that have been developed for the corridor based on input and direction from the public, Regional Transportation Commission (“RTC”), Redevelopment Authority Citizen’s Committee (“RACC”), and Board. Staff will also discuss the overall status of the design improvements planned for the corridor.

Agenda Action: Formal Action/Motion

Time Requested: 20 Minutes

Proposed Motion

I move to recommend that the Board of Supervisors accept the 90% design concepts.

Previous Action

October 2, 2023 (Item 4A) – Staff presented 90% design concepts for the Project to the RACC.

March 16, 2023 (Item 16A) – The Board approved the Project’s 60% design concepts, which included placing a new crosswalk across East William Street, just west of State Street.

March 8, 2023 (Item 5A) – Staff presented 60% design concepts for the Project to the RTC.

October 20, 2022 (Item 18A) – The Board approved the Project’s 30% design concepts.

October 12, 2022 (Item 5A) – Staff presented 30% design concepts for the Project to the RTC.

October 3, 2022 (Item 4B) – Staff presented 30% design concepts for the Project to the RACC.

July 13, 2022 (Item 5A) – The Carson Area Metropolitan Planning Organization approved the East William Street Complete Streets Feasibility Study.

May 11, 2022 (Item 5A) – The RTC directed staff to advance specified design alternatives for the Project.

Background/Issues & Analysis

The Project is focused on the safety of all transportation modes, infrastructure for alternative modes, efficiency of traffic operations, facilities for people with disabilities, and integration with land-use plans. The Complete Streets vision for East William Street began with the Greening America’s Capitals East William Street Study, completed in 2016. Since that time, staff have been working with environmental and engineering consultants to refine the design. The Project was awarded a highly competitive \$9.3 million RAISE grant, a \$2 million dollar Congressionally Directed Spending grant, and staff are working with NV Energy to cost share the undergrounding of overhead powerlines in portions of the Project.

The 90% design plans have been developed for the corridor using a combination of the input collected from the public, RTC, RACC, and Board. Staff have reviewed possible ways to incorporate pedestrian improvements, connectivity enhancements, and buffered bike lanes into the design. Staff will provide a brief overview of the Project and focus on design elements that have changed between the 60% and 90% design stages. The corridor design was balanced between the input provided, the known corridor needs, and the available funding. This balanced approach will be necessary to distribute the funding to the identified needs.

All final documents for environmental compliance have been sent to the Nevada Department of Transportation (“NDOT”) and the Federal Highway Administration for final review and concurrence. Right-of-way acquisition to obtain temporary and permanent easements for the Project is beginning, with oversight from NDOT.

The following is a tentative schedule of key milestones leading up to final design of the Project:

Design milestones:

- Winter 2023 – Final design
- Spring 2024 – Advertise for bids
- Summer 2024 – Begin construction
- Late 2025/Early 2026 – Construction complete

Community meetings and workshops:

- Jan/Mar 2022 – Survey and Comment Map – **Complete**
- February 1, 3 and 8, 2022 – Open House – **Complete**
- May 3, 2022 – Design Alternates Open House Meeting – **Complete**
- February 7, 2023 – Public Meeting for 60% Design Concepts – **Complete**
- Spring/Summer 2024 – Construction Impacts Workshop Meeting

Direction and comments from the RTC will be incorporated into the East William Complete Streets 100% design.

If you have any questions regarding the East William Complete Streets Project contact Darren Anderson, Senior Project Manager, at danderson@carson.org / 775-283-7584.

Applicable Statute, Code, Policy, Rule or Regulation

N/A

Financial Information

Is there a fiscal impact? Yes No

If yes, account name/number: N/A

Is it currently budgeted? Yes No

Explanation of Fiscal Impact: N/A


Alternatives

N/A

Supporting Material

-Exhibit-1: East William Complete Streets Project PowerPoint Presentation

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CONNECTING

WITH THE CAPITAL



East William Complete Streets Project 90% Update

October 11th, 2023 Regional Transportation Commission
Carson City Community Center

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Project Overview



The map shows a street grid with East William Street highlighted in red. Other streets shown include A St, Beverly Dr, E Long St, Corbett St, and E Robinson St. A green area is labeled 'Sunny LP'.

Today's Presentation

- What We Have Been Up To
- What Has Changed
- Next Steps
- How to Contact the Team

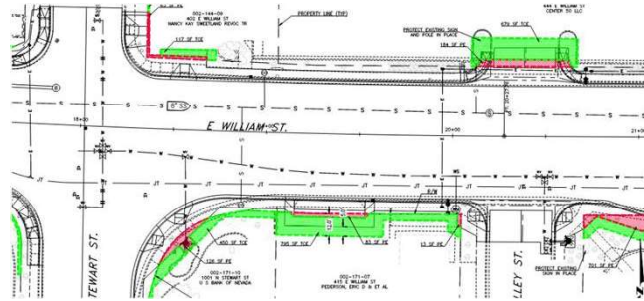
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What We Have Been Up To

- Developed Plans to 90% Design Stage, August 2023
- Obtained NEPA Clearance (Categorical Exclusion), September 2023
- Public Outreach, ongoing
- Began Right-of-Way Negotiation Phase, September 2023



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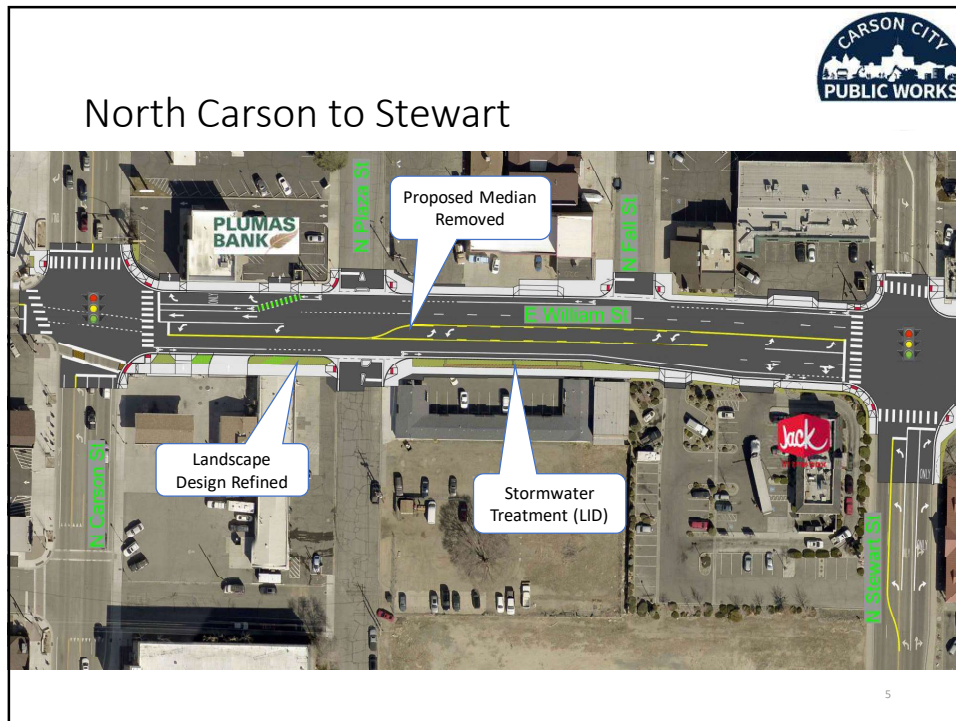


Project Improvements Recap

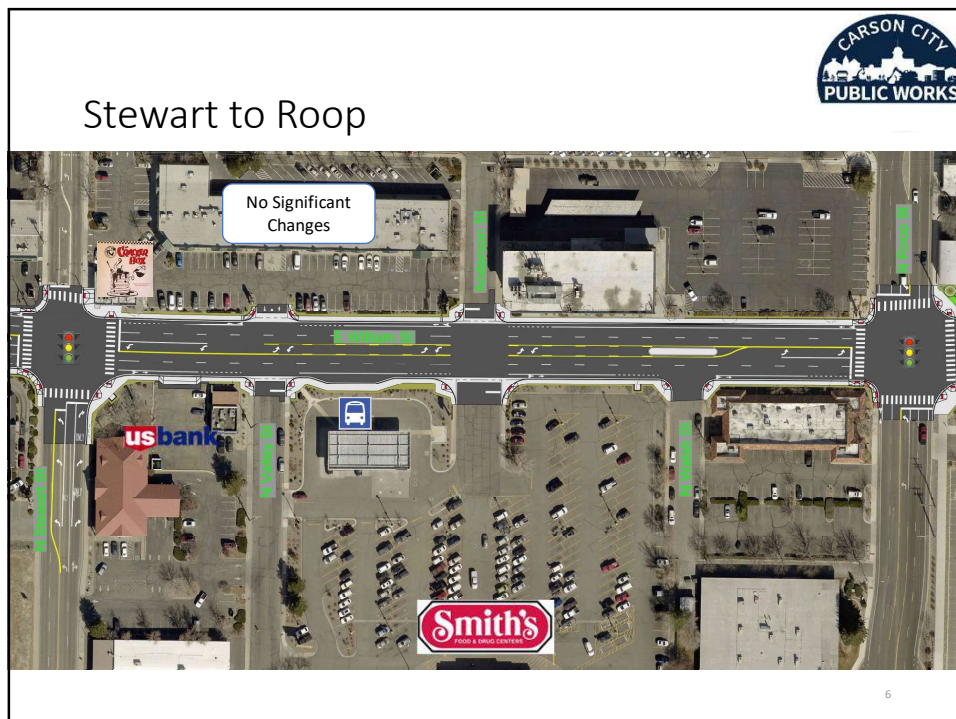
- Reduced to one lane for eastbound traffic from Carson to Stewart
- Bike lanes throughout
- Landscaping and lighting
- Vehicle turning movement changes
- Traffic volume improvements
- Utility improvements
- Electric vehicle charging stations
- Undergrounding of overhead utilities

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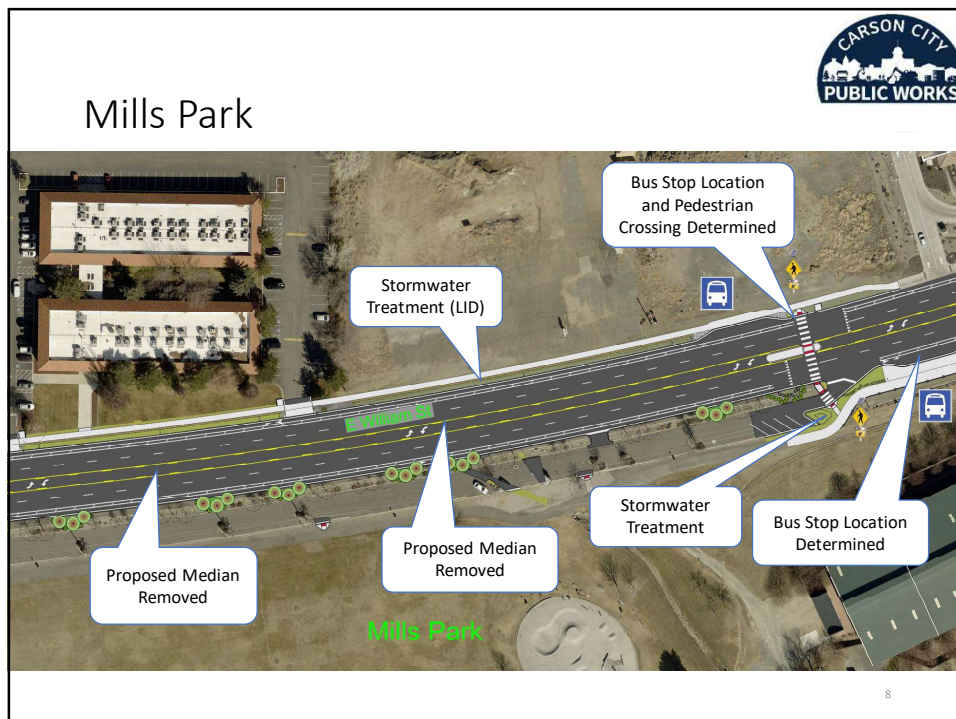
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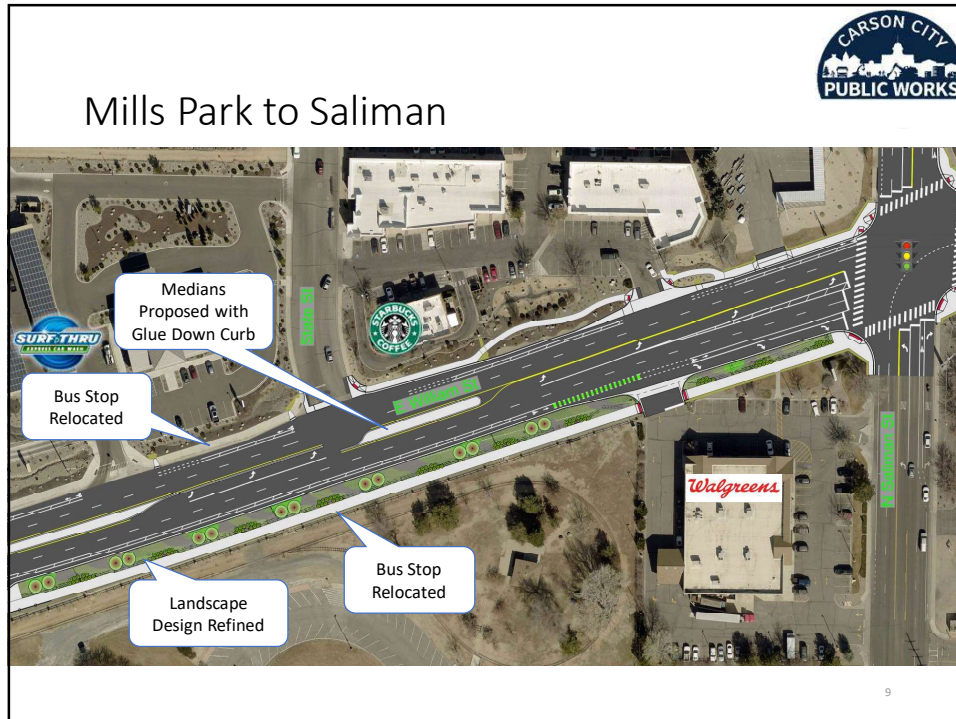
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Landscape Design and Low Impact Development


Downtown Zone
N Carson to Roop

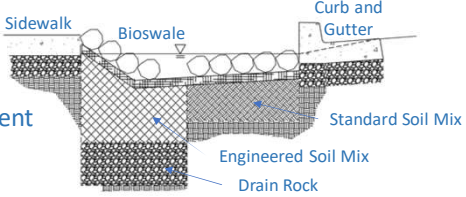


Transitional Zone
Roop to Saliman



NDOT Native Zone
Saliman to I-580





Low Impact Development Bioswales

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Next Steps

- **Design Milestones:**
 - Fall/Winter 2023 – Complete Right-of-Way Negotiations
 - Fall/Winter 2023 – Complete Final Design
 - Winter 2023 - Obtain Notice to Proceed to Construction
 - Spring 2024 – Advertise Project for Bids and Award Project
 - Construction – Start in Summer 2024, Completed Late 2025 / Early 2026

- **Future Board/Committee Meeting:**
 - Award of Construction Contract at Board of Supervisors (Spring 2024)

- **Future Community Meeting:**
 - Construction Impacts Meeting (Spring/Summer 2024)

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Project Communication Tools



www.CarsonProud.com

Text "Carson Proud" to (775) 522-5722

Darren Anderson, PE
Senior Project Manager
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STAFF REPORT

Report To: The Carson City Regional Transportation Commission (RTC)

Meeting Date: October 11, 2023

Staff Contact: Chris Martinovich, Transportation Manager

Agenda Title: For Discussion Only – Discussion and presentation regarding proposed updates to the Carson City Public Works Speed Limit Policy and Procedure (“Policy”).

Staff Summary: The Policy sets forth guidelines for establishing and reviewing speed limits and outlines the placement and function of speed limit signs on new and existing roadways within Carson City. Staff will present information related to proposed revisions to the Policy. The methods outlined in the Policy are used as the basis to establish new, and review existing, speed limits on Carson City roads and guide the placement and function of speed limit signs.

Agenda Action: Other/Presentation

Time Requested: 10 minutes

Proposed Motion

N/A

Background/Issues & Analysis

The establishment of speed limits can be technical, complicated, and often requires a balanced consideration of safety and mobility. The Policy is based on national guidance from the Federal Highway Administration, Manual on Uniform Traffic Control Devices, and National Academy of Science’s Transportation Research Board.

Lower speeds generally result in less severe crashes, while higher speeds improve mobility and get drivers to their destinations quicker. The Policy provides a method for establishing and reviewing speed limits that is safe and consistent across Carson City. The Policy also outlines the use, placement, and function of static and radar speed feedback signs. It is intended to be used by staff to provide a more consistent and transparent method for establishing and reviewing speed limits.

The Policy’s proposed revisions primarily outline the use and functionality of radar speed feedback signs.

Applicable Statute, Code, Policy, Rule or Regulation

CCMC 10.20.010; *see also* Carson City Charter Sec. 2.250; NRS 484A.400.

Financial Information

Is there a fiscal impact? Yes No

If yes, account name/number: N/A

Is it currently budgeted? Yes No

Explanation of Fiscal Impact:

Alternatives

-N/A

Supporting Material

-Exhibit-1: Carson City Public Works Speed Limit Policy - Redline Changes

-Exhibit-2: Speed Limit Policy Presentation

Board Action Taken:

Motion: _____

1) _____

2) _____

Aye/Nay

(Vote Recorded By)



**Carson City Public Works
Speed Limit Policy and Procedure
Effective date: April 28, 2020
Updated: October 11, 2023**

1.0 Purpose:

The purpose of this policy is to set forth guidelines for establishing and reviewing speed limits and speed limit signs on new and existing roadways within Carson City, Nevada.

2.0 Organizations Affected:

This policy is to be used by the Carson City Public Works Department.

3.0 References:

A Policy on Geometric Design of Highways and Streets; AASHTO (~~2011~~2018)

Manual on Uniform Traffic Control Devices (MUTCD); FHWA (2009)

Methods and Practices for Setting Speed Limits: An Informational Report; FHWA (2012)

Speed Concepts: Informational Guide; FHWA (2009)

California Manual for Setting Speed Limits; Caltrans (2019)

NCHRP Report 504 - Design Speed, Operating Speed, and Posted Speed Practices; TRB (2003)

NCHRP Report 855 – An Expanded Functional Classifications System for Highways and Streets; TRB (2018)

Traffic Operations Process Memorandum 2018-01 Operations and Safety Study Process; NDOT (2018)

Access Management Systems and Standards; NDOT (2017)

4.0 Definitions:

AASHTO – American Association of State Highway Transportation Officials

Design Speed – The speed used to determine various geometric design features of the roadway.

FHWA – Federal Highway Administration

85th Percentile Speed – The speed at or below which 85 percent of the traffic is moving, also referred to as Vehicle Operating Speed.

GPS – Global Positioning System

GIS – Geographic Information System

Inferred Design Speed – The maximum speed for which all critical design/speed related criteria are met. May be higher or lower than the design speed.

k-value – An abbreviation for the rate of vertical curvature

MUTCD – Manual of Uniform Traffic Control Devices

NCHRP – National Cooperative Highway Research Program

NDOT – Nevada Department of Transportation

TRB – Transportation Research Board

Speed Limit – The maximum lawful speed, either posted or by statute for a specific road.

Vehicle Pace – An indication of the dispersion of speed. The ten mile per hour range of speeds containing the greatest number of observed speeds based on field measurements.

5.0 Summary of Nevada Law and City Code:

~~NRS 269.195 – Power to regulate vehicular traffic; ordinances; posting informational signs and other devices at school zones and school crossing zones.~~

~~1. Except as otherwise provided in NRS 707.375, in addition to the powers and jurisdiction conferred upon the town boards or boards of county commissioners by this chapter, such boards may: (b) Regulate the speed, parking, stopping, turning and operation of all motor vehicles and other vehicles using the streets and alleys.~~

Carson City Charter, Sec. 2.250 Power of Board: Traffic control.

The Board may, by ordinance, regulate:

1. Except as otherwise provided in NRS 707.375, all vehicular, pedestrian and other traffic within Carson City and provide generally for the public safety on the public streets and rights-of-way.

...

NRS 484A.400 Provisions uniform throughout State; local authority prohibited from enacting certain ordinances; trial for same offense for violation of traffic ordinance prohibited.

...

2. Except as otherwise provided in subsection 3 and unless otherwise provided by specific statute, any local authority may enact by ordinance traffic regulations which cover the same subject matter as the various sections of chapters 484A to 484E, inclusive, of NRS if the provisions of the ordinance are not in conflict with chapters 484A to 484E, inclusive, of NRS, or regulations adopted pursuant thereto. It may also enact by ordinance regulations requiring the registration and licensing of bicycles.

3. A local authority shall not enact an ordinance:

- (a) Governing the registration of vehicles and the licensing of drivers;
- (b) Governing the duties and obligations of persons involved in traffic crashes, other than the duties to stop, render aid and provide necessary information;
- (c) Providing a penalty for an offense for which the penalty prescribed by chapters 484A to 484E, inclusive, of NRS is greater than that imposed for a misdemeanor;
- (d) Providing a criminal penalty for a violation of chapters 484A to 484E, inclusive, of NRS for which the penalty prescribed by those chapters is a civil penalty; or
- (e) Requiring a permit for a vehicle, or to operate a vehicle, on a highway in this State.

...

NRS 484B.600 – Basic rule; ~~additional penalties for violation committed in work zone or pedestrian safety zone or if driver is proximate cause of collision with pedestrian or person riding bicycle, electric bicycle or electric scooter~~; discretion of court to reduce violation in certain circumstances; maximum fine; unlawful act.

1. *It is unlawful for any person to drive or operate a vehicle of any kind or character at:*
 - (a) *A rate of speed greater than is reasonable or proper, having due regard for the traffic, surface and width of the highway, the weather and other highway conditions.*
 - (b) *Such a rate of speed as to endanger the life, limb or property of any person.*
 - (c) *A rate of speed greater than that posted by a public authority for the particular portion of highway being traversed.*

...

NRS 484B.363 – School zone or school crossing zone: Speed limit; designation; signs; U-turn and overtaking another vehicle prohibited; determination of hours in which speed limit is in effect; additional penalty if driver is proximate cause of collision with pedestrian or person riding bicycle, electric bicycle or electric scooter.

1. *A person shall not drive a motor vehicle at a speed in excess of 15 miles per hour in an area designated as a school zone except:*
 - (a) *On a day on which school is not in session;*
 - (b) *During the period from a half hour after school is no longer in operation to a half hour before school is next in operation;*
 - (c) *If the zone is designated by an operational speed limit beacon, during the hours when the pupils of the school are in class and the yellow lights of the speed limit beacon are not flashing in the manner which indicates that the speed limit is in effect; or*

(d) *If the zone is not designated by an operational speed limit beacon, during the times when the sign designating the school zone indicates that the speed limit is not in effect.*

...

5. *The governing body of a local government or the Department of Transportation shall designate school zones and school crossing zones. An area must not be designated as a school zone if imposing a speed limit of 15 miles per hour would be unsafe because of higher speed limits in adjoining areas.*
6. *Each such governing body and the Department shall provide signs to mark the beginning and end of each school zone and school crossing zone which it respectively designates. Each sign marking the beginning of such a zone must include a designation of the hours when the speed limit is in effect or that the speed limit is in effect when children are present.*

...

~~(Refer to NRS for full text of NRS 484B.363.)~~

Carson City Municipal Code 10.20.010 – Basic Rule

It is unlawful for any person to drive or operate a vehicle of any kind or character at:

1. *A rate of speed greater than is reasonable or proper, having due regard for the traffic, surface and width of the highway; or*
2. *Such a rate of speed as to endanger the life, limb or property of any person; or*
3. *A speed in excess of twenty-five (25) miles per hour on or through the highways of Carson City; provided, however, that it shall be unlawful to operate any truck or motor vehicle of a rated load capacity of one and one-half (1.5) tons, or more, upon the streets and alleys of Carson City at a speed in excess of fifteen (15) miles per hour;*
4. *It is unlawful for any person to drive or operate a vehicle of any kind or character at a speed greater than twenty-five (25) miles per hour, on or through the highways of Carson City, unless any such highways are otherwise specifically ordered to be posted at speeds other than twenty-five (25) miles per hour by the public works director, based on a complete engineering and traffic survey for speed zoning.*
5. *A rate of speed greater than that posted by a public authority for the particular portion of highway being traveled in Carson City.*

6.0 Policy and Procedures:

6.1 Background:

The establishment of Speed Limits is often a balance between safety and mobility. The establishment of speed limits requires a rational approach to maintain the confidence of the public. By using a uniform procedure, Carson City can set speed limits that are safe and consistent. The processes outlined by this policy are based on NCHRP and FHWA guidance.

Speed limits are set to inform motorists of appropriate driving speed and to advise them about the maximum reasonable and safe operating speed under favorable conditions. Speeds less than the posted speed limit are expected under certain circumstances such as in conditions of poor visibility, adverse weather, congestion, traffic control warning signs, or the presence of high volumes of bicyclists and pedestrians. Methodologies for setting speed limits are designed to result in recommended speeds that:

- Are related to a crash risk;
- Provide a reasonable basis for enforcement;
- Are fair in the context of traffic law; and
- Are accepted as reasonable by a majority of road users.

Vehicle speeds are selected by individual drivers. Drivers tend to drive at speeds based on the visual scene presented to them. Factors that affect speeds along roadways, and also influence the speed selected by motorists, include:

- Crash frequency and severity;
- Pavement conditions;
- Traffic volume: vehicles, trucks, pedestrians, and bicycles;
- Roadway design elements, including:
 - Road function/classification/purpose;
 - Lane and shoulder width;
 - Horizontal and vertical curves;
 - Roadside characteristics;
 - Slopes and grade;
 - Sight distances;
 - Driveways with restricted visibility;
 - Driveway density and spacing;
 - Rural vs. Urban areas;
- Weather and visibility;
- A vehicle's mechanical condition and characteristics; and
- Driving ability/capabilities.

Each of these factors should be considered when establishing and reviewing the speed of a roadway. Additionally, considering future and anticipated development may avoid multiple changes to the speed limit on a given segment of roadway.

There is no specific rule or national guidance that outlines the selection of factors that affect the establishment of a speed limit. Different methods result in different recommended speed limits. The results of the different methods can also be interpreted differently by individuals and professionals. The methods outlined in this policy as well as the engineering judgement by qualified Carson City staff will be used as the basis to establish and review speeds within Carson City.

6.2 Establishing Speed Limits:

Speed limits along new roadways shall be based on elements from the Safe Systems Approach including designing roads to operate at safe speeds for their intended user. This is accomplished through implementation of athe design speed. The design speed is used to determine the various geometric design features of the roadway. Selection of the a safe design speed for a road shall be done using an engineering analysis and include a review of the functional classification ~~and~~, anticipated road and traffic characteristics, and the functionality and accessibility for venerable road users. for the proposed roadway.

When selecting a design speed, the target operating speed and factors described in Section 6.1 above shall be evaluated. The design speed selected should be consistent with the highest speeds drivers may be reasonably expected to travel on a particular facility (i.e. inclusive of typical vehicle speeds) based on the design elements and functional classification.

Maximum design speeds for different functional classifications shall be as follows:

- Local and Industrial - 30 mph
- Collector streets - 30 mph (urban), 40 mph (rural)
- Arterial streets - 45 mph

Design speeds higher than the maximums listed above shall be selected if the facility is targeted to operate at speeds equal to or greater than the design speed listed because the facility is located in an area with:

- Limited pedestrian and bicycle use;
- No on-street parking;
- No curb and gutter;

- Cross streets spaced at more than 1,320 feet, and
- Driveways spaced at more than 660 feet.

If a design speed of greater than 45 mph is selected, the facility is considered a 'high-speed' facility in accordance with AASHTO and shall be designed to meet those criteria.

The posted speed limit is not the design speed. The posted speed limit is set to represent the average speed (85th percentile speed) most vehicles will typically operate. In most cases, the posted speed limit will be at or 5 ~~-10~~ mph below the design speed for all roadway classifications.

As described earlier, the design speed is used to determine the various geometric design features of the roadway. The AASHTO Green Book recommends using values above the minimum criteria; however, additional research by FHWA indicates that this approach alters the visual perspective of drivers making them more comfortable to travel at higher speeds. Since the design speed is generally above the anticipated posted speed limit, geometric design values selected during the design of a roadway shall be nearest to the maximum or minimum requirements for that design speed, to the extent practicable.

New speed limit signs will be posted with construction of the roadway.

6.3 Review of Existing Speed Limits:

The review and re-evaluation of speed limits may occur on established roadways upon a formal request made to the City, or if the roadway has undergone significant changes since the speed limit was established. A speed study - shall be conducted if there has been:

- Changes to the number of travel lanes;
- Added turning lanes or bicycle lanes;
- Changes to on-street parking or driveway access/spacing;
- Changes in traffic control signalization (including placement of new stop signs or signal timing/coordination);
- Changes in traffic volumes resulting from changes to the surrounding road network or adjacent development; or
- Changes to the severity or frequency of crashes.
- If requested by the Sheriff's office

A speed study is not required for roadways that do not meet the above criteria. If it has been determined that a re-evaluation of the existing speed limits is needed based on

the above criteria, the procedure for conducting a speed study and setting a speed limit is as follows:

- 1) Obtain the Vehicle Operating Speeds, (85th percentile speed and vehicle pace) for the road segment.
 - Vehicle operating speed is measured as a range of 85th percentile speed, or the speeds at which 85 percent of the vehicles operate. The vehicle pace is the ten mile per hour range of speeds containing the greatest number of observed speeds. Both 85th percentile speed and vehicle pace are obtained by conducting spot-speed surveys of free-flowing vehicles at representative locations along the roadway.
 - Review the results of the speed study and compare to the existing posted speed limit. The MUTCD indicates that posted speeds “should be within 5 mph of the 85th percentile speed of free-flowing traffic.”
 - The starting point for setting speed limits on all roadways should be based on results of spot speed studies with adjustments made based on vehicle pace and completion of steps 2 through 6, below.
- 2) Review the geometric design and attempt to determine the design speed, the inferred design speed, or the limiting geometric factors that affect the safety of the roadway.
 - Stopping sight distance, horizontal and vertical geometry, and roadside design are limiting design factors when reviewing a speed limit. If the design speed is not already known, these design factors should be examined to estimate a road’s design speed.
 - In some instances, the existing geometric features may have been designed above or below the minimum or maximum design speed values (e.g. a vertical curve having a k-value greater than the required minimum). This is called the inferred design speed. In these cases, the inferred design speed will be different (higher or lower) than the designated design speed of the road.
 - In general, the speed limit should not be posted above a road’s designated or inferred design speed.
- 3) Review the roadway functional classification, access management, and general roadside site characteristics.
 - This includes a review of the number and spacing of driveways and the existing and planned adjacent development.
 - The concept is to review the roadway’s intended function and how the roadway is meant to operate in its given setting.
- 4) Review the crash data

- Evaluate if a change in speed may alter the frequency and severity of crashes based on a review of the most recent available crash data and crash types.
- 5) Consult with the Carson City Sherriff's Office regarding enforcement.
- Review if changes to the existing speed limit are reasonably enforceable based on experience and knowledge of the area.
- 6) Complete the speed study analysis.
- The roadway's speed limit should be first based on its 85th percentile speed with geometric, safety, and enforcement factors considered and evaluated. The posted speed limit shall be set at the closest 5 mph increment, rounded down. For example:
 - i. If the 85th percentile speed for a location was is found to be 37 mph, then the speed limit would be established at 35 mph since it is the closest 5 mph increment to the 37 mph speed.
 - ii. If the 85th percentile speed for a location was found to be 33 mph, then the speed limit would be established at 30 mph.
 - iii. These speeds may be reduced if justification is provided as part of the engineering study.
 - The speed of the roadway may be set below the 85th percentile speed when geometric or other factors are determined to be a contributing factor as described above, or changes to the character of the roadway are made through the completion of a project. In no case shall the speed limit be set less than 10 mph below the 85th percentile speed.
 - Confirm the existing or set a new speed limit based on the results of the analysis.
 - Speed limits on all roadways, including any changes, shall be approved by the Public Works Director.
 - Upon approval by the Public Works Director that a change is needed, the Transportation Manager will coordinate with streets maintenance staff to replace the sign plaques.
 - When the speed limit is changed on a roadway with approaches to signalized intersections, the clearance interval timing needs to be recalculated and the detection systems may need to be adjusted or modified. Additionally, coordination timing with other signals may need to be adjusted.

6.4 General Considerations:

The procedure and steps outlined in this policy may be altered depending on the nature of the roadways in Carson City. In some cases, the collection of data may be difficult to obtain due to safety concerns, weather conditions, traffic volumes, or the lack of information available for a given segment of road. To the extent practicable, a range of data should be collected at various locations along the roadway to get an accurate representation of the roadway conditions. Locations that differ from normal conditions may be suitable for Special Speed Zones or other advisory speed warning devices.

FHWA has developed a knowledge-based system for recommending speed limits. The tool is called USLIMITS2. This tool may be used to assist in making a speed limit decision, but it is not intended to make the decision on behalf of the engineer or agency.

FHWA research has shown that changes in posted speeds have little effect on operating speeds. A reduction in the speed limit along a roadway facility is not an acceptable method of reducing vehicle speeds.

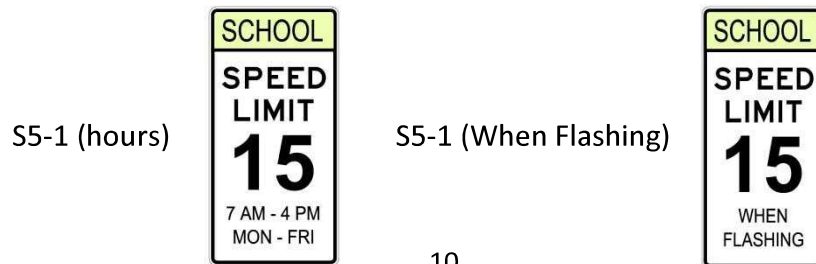
6.5 Special Speed Zones:

The regulatory speed limit sign (R2-1) shall be used when reducing speeds in Special Speed Zones unless described otherwise below.

6.5.1 School Zones

School zones are areas designated by Carson City to establish a safe route to and from school for schoolchildren. The school zone speed limit shall be 15 mph.

The regulatory speed limit sign (S5-1) shall be used to designate the school zone speed limit, and list the period when the speed limit is effect for school zones. An S1-1 sign should be used in advance of each S5-1 sign where practicable. For Carson City, the designated hours of school zones shall be consistent unless beacons are present. Each S5-1 sign shall either list the hours when the school zone speed limit is in effect, or indicate that the limit is in effect with the use of a flashing speed limit beacon, as determined by the Public Works Director. The standard S5-1 signs for these two cases are shown below.



An 'END SCHOOL ZONE' S5-2 sign shall be placed to denote the end of each designated school zone and end of the speed zone restriction.

Additional school assembly signs may be used in school zones as described in Chapter 7 of the MUTCD. All school zone signs shall be permanent and shall have florescent yellow-green backing in compliance with the MUTCD.

6.5.2 Work Zones

Speeds may be reduced in work zones when temporary traffic control devices are in use. Speeds may be reduced to up to 10 mph below the posted speed limit. Reductions greater than 10 mph shall be approved by the Public Works Director.

6.5.3 Pedestrian Safety Zones

Pedestrian Safety Zones are defined by NRS 484B.135. This law allows for governing bodies to designate pedestrian safety zones in certain circumstances. In accordance with Section 5 of the NRS, the City may designate a pedestrian safety zone on a highway if it:

- (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.*

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.

The process for defining the zone includes 3 steps and involves collecting data and defining the crash problem on which the zone will be based, mapping the area, and defining the zone. The steps are as follows:

- 1) Identify the crash problem. 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.
 - Crash data needed to define the zone is available
 - Data is sufficient to produce a stable map, i.e. not spread across a large area

- Pedestrian crashes cluster in some way
- 2) Map or visually show the locations of the crashes in some method. Conduct a visual examination of the resulting map noting any crash clusters. If no clustering is apparent, and the map shows crashes randomly spread, the problem may not be “zonable” for that area. Zones may include individual intersections of a grouping of city blocks. Zones may also be segments of single strip of roadway. NDOT recommends using a target rate of 10 crashes per zone as a minimum starting point, but rates should be adjusted based on the need and the characteristic of the surrounding area.
 - 3) 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.

- $$\text{Efficiency Ratio} = \frac{\% \text{ crashes of interest area}}{\% \text{ area those crashes occur over}}$$

- An efficiency ratio of three to one or higher (i.e., 60% of the crashes of interest in 20% of the land area) will permit the application of countermeasures.
- An efficiency ratio less than two indicates the study area is “non-zonable” and the limits should be reexamined.

Per NRS 484B.135 Section 3, when designating a speed zone, the following signs shall be placed:

- (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.*

Refer to the National Highway Traffic Safety Administration (NHTSA) and NDOT’s process for additional guidance.

6.5.4 Advisory Areas

Advisory Speeds may be required on short or isolated sections of road where existing constraints or other special conditions exist. Examples include tight horizontal curves or localized areas adjacent to high concentrations of pedestrians or pedestrian crossings. In

these instances, the posted regulatory speed limit is not lowered but instead an advisory speed limit sign (W13-1P) and associated warning signs are used.

7.0 Type and Placement of Signs:

7.1 Static Speed Signs:

Static Speed limit signs shall be MUTCD compliant regulatory R2-1 signs, and advisory speed signs shall be W13-1P unless otherwise approved by the Public Works Director.

~~The advisory speed sign~~Advisory speed limits signs shall only be used to supplement a warning sign and shall not be installed as a separate sign installation. Regulatory speed limit signs shall not be placed between the location of the advisory speed sign and the location where the advisory applies.

~~Speed feedback signs or other similar variable message signs may be used in conjunction with regulatory speed limit signs and in special speed zones. Variable feedback signs are used to reduce vehicle speeds by making drivers aware of their speed relative to the posted speed limit. The use of these signs should be limited to locations of elevated or unexpected roadside hazards, or where changes to the existing speed limit have occurred and speeds need to be reduced to enhance safety, e.g. entering a school zone. When considering the use of speed feedback signs, complete a review of the site to identify safety issues where excessive speed is the primary contributing factor and more passive measures, such as warning signs, have proven ineffective at reducing speeds. Consideration shall also be given to the location of the sign including the physical, electrical, and logistical elements required for its operation and maintenance. Excessive use of these signs may lessen their effectiveness. Installation of a speed feedback sign shall be consistent with MUTCD Section 2B.13, "Speed Limit Sign (R2-1)" for changeable message signs.~~

For Pedestrian Safety Zones, refer to NDOT's Operations and Safety Study Process for sign type and placement.

The mounting height, lateral offset, orientation, posts, and mountings of static speed limit signs shall be in accordance with Section 2A of the MUTCD which provides for the standardization of the sign and post installation.

Speed limit signs shall be placed on all industrial, collector, and arterial roadways within Carson City based on the following:

- After intersections with other industrial, collector, or arterial roadways.
- At a point no less than 500-feet prior to a traffic signal.

- At a point where a change in speed is required because of changes to roadway design elements.
- At the beginning and ending points of Special Speed Zones (e.g. school zones).
- At the jurisdictional boundaries where roadways enter Carson City.
- At a spacing as to periodically remind drivers of the roadway’s regulatory speed limit.
- If warranted, as determined by the Public Works Director.

As listed in Carson City Municipal Code Section 10.20.010 – Basic Rule, the speed limit on or through the highways of Carson City is 25 mph unless otherwise posted. Speed limit signs are not required on local streets. However, if one of the following conditions exists, speed limit signs on local roads shall be placed:

- At the locations where a change in speed is required because of changes to the roadway design or design elements.
- At the beginning and ending points of special speed zones (e.g. school zones).
- Along local streets serving as a main or primary access route to a neighborhood or commercial development, and where that local road intersects with a collector or arterial road.
- If warranted, as determined by the Public Works Director.

7.2 Speed Feedback Signs:

Speed feedback signs or other similar variable message signs may be used in conjunction with regulatory speed limit signs and in special speed zones. Variable feedback signs are used to reduce vehicle speeds by making drivers aware of their speed relative to the posted speed limit.

The use of these signs should be limited to locations of ~~elevated~~ unique or unexpected roadside ~~hazards~~ features, or where changes to the existing speed limit ~~have occurred~~ and speeds need to be reduced to enhance safety for both drivers and non-drivers, e.g. entering or within a school zone. Their use is subject to the approval of the Public Works Director.

When considering the use of speed feedback signs, complete a review of the site to identify safety issues where excessive speed is the primary contributing factor and more passive measures, such as warning signs, have proven ineffective at reducing speeds. Consideration shall also be given to the location of the sign including the physical, electrical, and logistical elements required for its operation and maintenance. Excessive use of these signs may lessen their effectiveness.

7.2.1 Design Parameters:

- 1) Installation shall be in conjunction with or in proximity to a Speed Limit sign (standard or school speed zone).
- 2) The radar shall include the legend "YOUR SPEED xx MPH", or similar. The color of the changeable message legend shall be a yellow legend on a black background. The color of the radar sign backing shall be fluorescent yellow-green with black lettering in school zone areas, and white with black lettering in other areas.
- 3) The design and installation of radar signs shall consider communications to Carson City Control Systems for remote communication.
- 4) The installation shall not interfere with the visibility and general effectiveness of any other signs in the area.
- 5) The use of breakaway poles / safety base is preferred when signs are placed adjacent to the roadway or sidewalk.

7.2.2 Feedback Sign Operation:

All radar speed signs shall be programmed for the driver's awareness to operate in accordance with the following:

- 1) Minimum Speed Display: 10 MPH – The sign will not display anything below this threshold.
- 2) Standard Speed Display: Radar signs should visually provide a constant, steady display of the vehicle speed up to the set Violation Speed.
- 3) Violation Speed Display: +4 MPH above the posted speed limit - At or above this speed, the sign will display the vehicle speed while flashing.
- 4) SLOW DOWN Speed Display: At or above this speed, the sign will alternate between a message of 'SLOW DOWN' and the vehicle speed. Alternatively, and depending on the capability of the sign, the sign will continue to display the vehicle speed while flashing.
 - a. Normal Mode: +10 MPH above the posted speed limit
 - b. School Zone Mode: 20 MPH
- 5) High Speed Cut-off: +15 MPH above the posted speed limit. At or above this speed, the sign will display the message of 'SLOW DOWN' or be blank (no display).

Installation of a speed feedback sign shall be consistent with MUTCD Section 2B.13, "Speed Limit Sign (R2-1)" for changeable message signs.

7.3 Sign Locating and Mapping:

All new or changes to existing signs shall be GPS'd for proper location tracking. Each finished product shall be photographed during daylight hours. The photo and the GPS data shall be submitted to the GIS division within 24 hours of completion of the work to be catalogued into the City's Asset Management database.

- END OF POLICY -



Update to the Speed Limit Policy

Carson City Regional Transportation
Commission (RTC)

October 11, 2023



1

Background

- ▶ Policy updated from 2020 version reviewed by RTC
- ▶ Speed limits can be complex and subjective balancing safety with mobility
- ▶ Existing Laws
 - NRS and Carson City Code 10.20.010
 - Unless posted otherwise, the speed limit in Carson City is 25 mph.

2

Establishing a Policy

- ▶ Goal of the policy is to outline a consistent, data driven methodology for Carson City.
- ▶ Recommendations in policy based on multiple sources and best practices.
- ▶ Three main parts to policy:
 - Establishing a Speed Limit for new roads
 - Reviewing Speed Limits on existing roads
 - **Speed Limit Signing – Focus of Today**

3

Summary of Updates

- ▶ Updated Section to reflect changes to State law – NRS 484
- ▶ Updated Section 7.0 of the Policy related to radar speed feedback signs
- ▶ Other misc. updates as noted in redline exhibit.

4

Speed Feedback Signs

- ▶ When and where used:
 - School zones
 - Unexpected or usual road geometry
 - At specific locations when reductions to speed must occur



5

Speed Feedback Signs

- ▶ Operation
 - Minimum Speed to turn on:
 - At 10 MPH
 - Violation Speed (flash):
 - +4 MPH above the speed limit
 - “Slow Down” Message:
 - +10 MPH above the speed limit
 - or
 - At 20 MPH in school zones
 - High-Speed cutoff (Blank):
 - +15 MPH above the speed limit



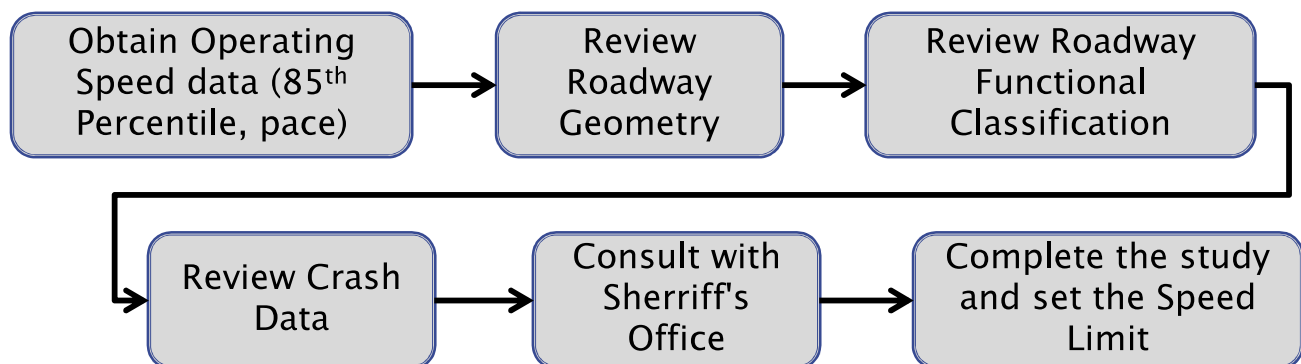
6

Policy for Reviewing Speed Limits

- ▶ When to review the existing Speed Limit
 - Changes to the lane configuration
 - Changes to on-street parking or driveway access
 - Changes in traffic control
 - Changes in volumes
 - Changes to the severity or frequency of crashes

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Process for Review



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Setting the Speed Limit

- ▶ Based on the road's 85th percentile speed with geometric, safety, and enforcement factors used to adjust as appropriate, "Safe Systems Approach".
- ▶ The posted speed limit shall be set at the closest 5 mph increment, rounded down (25, 30, 35, etc.).

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Questions and Discussion

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Carson City Regional Transportation Commission
Item for Commission Information

RTC Meeting Date: October 11, 2023
To: Regional Transportation Commission
From: Greg King, Street Supervisor
Date Prepared: September 21, 2023
Subject Title: Street Operations Activity Report
Staff Summary: Monthly Status Report for the Commission’s Information

**Carson City Public Works, Street Operations Division
Status Report to RTC: Activities of August 2023**

Street Repair and Maintenance

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Crack Seal Operation (blocks of sealant used)	0	410
Street Patching Operation (tons of asphalt)	85	191.5
Pot Holes Repaired	57	67

Tree Care and Maintenance

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Tree Pruning Operations	23	34
Tree Removal	5	5
Tree Replacement	0	0
Tree Care Chemical Treatment (gallons)	0	0
Tree Work for Other Departments	0	0
Weed Abatement Chemical Sprayed (gallons applied)	2318	2,843

Concrete Repair and Maintenance

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Concrete Poured (yards)	47	91
Curb & Gutter (linear feet)	310	512
Sidewalk & Flat Work (sq/ft)	1,606	3,083
Wheel Chair Ramps	0	0
Misc.	0	20

Grading and Shoulder Maintenance

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Dirt Road Work/Misc	0	357
Shoulder Work on Asphalt Roads (feet)	279	1,223
Debris Cleaned	3	3

Storm Water

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Sediment Removed from Ditches (yards)	20	110
Lineal foot of ditch cleared	279	1,165
Pipe Hydro Flushed (linear feet)	148	148

Sweeper Operations

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
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Curb Miles Swept	622.1	1,172
Material Picked Up (yards)	267.5	640
City Parking Lots Swept	0	2

Trucking Bins

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Bins Hauled for Waste Water Treatment Plant (yards)	38	78
Bins Hauled for Sweeping Operation (yards)	60	108
Equipment Transported for other Departments	0	0

Banner and Decorations Activities

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Banner Operations Carson Street	4	8
Changed Lamp Post Banners	0	0
Installed Christmas Decorations	0	0
Removed Christmas Decorations	0	0

Signs and Markings

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Signs Made	1	54
Signs Replaced	3	7
Sign Post Replaced	2	4
Signs Refurbished/Replaced due to Graffiti Damage	0	2
Delineators Replaced	0	0
Cross Walks Painted	30	67
Stop Bars Painted	12	56
Yield Bars Painted	20	32
Right Arrows Painted	0	2
Left Arrows Painted	0	3
Straight Arrows Painted	0	2
Stop (word) Painted	0	0
Only (word) Painted	0	0
Bike Symbol & Arrow	0	0
Install Street, bicycle, and pedestrian counters	7	8
Curb Painted (linear feet)	468	1309

Weather Events

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Snow and Ice Control	0	0
Sand/Salt mixture applied (Yards)	0	0
Brine mixture applied (Gallons)	0	0
Rain Event/Flood Control	0	0
Drainage Inlets Cleared	0	0
Material removed from S/D system	0	0
Wind	0	0