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

Day: Wednesday
Date: November 14, 2018
Time: Begins immediately after the adjournment of the Carson Area Metropolitan Planning Organization meeting that begins at 4:30 p.m.
Location: Community Center, Sierra Room, 851 East William Street, Carson City, Nevada

AGENDA

AGENDA NOTES: The Regional Transportation Commission is pleased to make reasonable accommodations for members of the public who are disabled and wish to attend the meeting. If special arrangements for the meeting are necessary, please notify Regional Transportation Commission staff in writing at 3505 Butti Way, Carson City, Nevada, 89701, or call Lucia Maloney at (775) 887-2355 at least 24 hours in advance.

For more information or for copies of the supporting material regarding any of the items listed on the agenda, please contact Lucia Maloney, Transportation Manager, at (775) 887-2355. Additionally, the agenda with all supporting material is posted under "Agendas & Minutes" at www.carson.org/agendas, or is available upon request at 3505 Butti Way, Carson City, Nevada, 89701.

1. ROLL CALL AND DETERMINATION OF A QUORUM

2. AGENDA MANAGEMENT NOTICE: The Chair may take items on the agenda out of order; combine two or more agenda items for consideration; and/or remove an item from the agenda or delay discussion relating to an item on the agenda at any time.

3. DISCLOSURES: Any member of the RTC Board may inform the Chair of his or her intent to make a disclosure of a conflict of interest on any item appearing on the agenda or on any matter relating to the RTC's official business. Such disclosures must also be made at such time the specific agenda item is introduced.

4. PUBLIC COMMENT: Members of the public who wish to address the RTC may approach the podium and speak on any matter relevant to or within the authority of RTC. Comments are limited to three minutes per person per topic. If your item requires extended discussion, please request the Chair to calendar the matter for a future RTC meeting. No action may be taken upon 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 may be taken.

5. APPROVAL OF MINUTES:

5-A (For Possible Action) October 10, 2018 Draft Minutes

6. PUBLIC MEETING ITEM(S):

6-A (For Possible Action) To recommend to the Board of Supervisors acceptance of the 30% design of the South Carson Complete Streets Project.

Staff Summary: The Carson City project manager and design consultants will present the 30% design for the South Carson Complete Streets Project.

6-B (For Information Only) Information on the status of right-of-way relinquishments and land transfers between Carson City and the Nevada Department of Transportation (NDOT) for portions of South Carson Street, the frontage roads, Snyder Avenue and related surplus parcels along the IR 580 corridor.

Staff Summary: In August 2017, NDOT opened Phase 2B-3 of the Carson City Freeway extending the link between Reno and Carson City. In 2016 Carson City entered into Highway Agreement No. R386-04-002 with NDOT where Carson City agreed to take ownership of right-of-way on South Carson Street, the frontage roads, Snyder Avenue, and additional surplus parcels. Staff will provide an update on the status of these relinquishments.

6-C (For Possible Action) To authorize the Transportation Manager to execute an Interlocal Cooperative Agreement with Tahoe Transportation District, Douglas County, and the Regional Transportation Commission of Washoe County to facilitate the provision of intercity bus service substantially in the form of the agreement presented to the RTC.

Staff Summary: An Interlocal Cooperative Agreement was originally executed in October 2011. The purpose of the agreement is to provide for Tahoe Transportation District's (TTD) operation of the Lake & Valley Express routes that connect Carson City and the Carson Valley to the Lake Tahoe Basin. TTD is solely responsible for the operation and funding of the transit service. The RTC is responsible for maintenance of TTD bus stops within Carson City. The current Agreement is substantially different from the one presented at the July 11, 2018 RTC meeting in that it adds the Regional Transportation Commission of Washoe County and reflects changes to the transit service operated by TTD.

6-D (For Information Only) Information on Jump Around Carson's Federal Transit Administration grant funding.

Staff Summary: The Jump Around Carson (JAC) transit system is primarily funded by Federal Transit Administration (FTA) grants. Staff will provide detail about the funding sources, grant balances, and the Transit Fund budget.

7. INTERNAL COMMUNICATIONS AND ADMINISTRATIVE MATTERS (Non-Action Items):

7-A Transportation Manager's Report
7-B Street Operations Activity Report
7-C Project Status Report
7-D Future Agenda Items

8. BOARD COMMENTS (For Information Only): Status reports and comments from the members of the RTC Board.

9. This agenda has been posted at the following locations on Thursday, November 8, 2018, before 5:00 p.m.:

City Hall, 201 North Carson Street
Community Center, Sierra Room, 851 East William Street
Carson City Library, Carson City Library, 900 North Roop Street
Carson City Public Works, 3505 Butti Way
Carson City Planning Division, 108 E. Proctor Street
Nevada Department of Transportation, 1263 S. Stewart Street, Carson City
City Website: www.carson.org/agendas
State Website: https://notice.nv.gov

10. The Next Meeting is Tentatively Scheduled: 4:30 p.m., Wednesday, December 12, 2018, at the Sierra Room - Community Center, 851 East William Street.

11. PUBLIC COMMENT: Members of the public who wish to address the RTC Board may approach the podium and speak on any matter relevant to or within the authority of RTC. Comments are limited to three minutes per person per topic. If your item requires extended discussion, please request the Chair to calendar the matter for a future RTC meeting. No action may be taken upon 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 may be taken.

12. ADJOURNMENT (For Possible Action)

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CARSON CITY REGIONAL TRANSPORTATION COMMISSION
Minutes of the October 10, 2018 Meeting
 DRAFT

A regular meeting of the Carson City Regional Transportation Commission was scheduled to begin following adjournment of the Carson Area Metropolitan Planning Organization meeting on Wednesday, October 10, 2018 in the Community Center Sierra Room, 851 East William Street, Carson City, Nevada.

PRESENT: Chairperson Brad Bonkowski
Vice Chairperson Lori Bagwell
Commissioner Mark Kimbrough
Commissioner Greg Stedfield

STAFF: Lucia Maloney, Transportation Manager
Graham Dollarhide, Transit Coordinator
Hailey Lang, Transportation Planner
Karissa Moffett, Bicycle and Pedestrian Coordinator
Iris Yowell, Deputy District Attorney
Kathleen King, Chief 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.

1. CALL TO ORDER AND DETERMINATION OF A QUORUM (5:10:47) - Chairperson Bonkowski called the meeting to order at 5:10 p.m. Ms. King called the roll; a quorum was present. Commissioner Macquarie was absent.

2. AGENDA MANAGEMENT NOTICE (5:11:20) - Chairperson Bonkowski entertained modifications to the agenda; however, none were forthcoming.

3. DISCLOSURES (5:11:35) - Chairperson Bonkowski entertained disclosures; however, none were forthcoming.

4. PUBLIC COMMENT (5:11:41) - Chairperson Bonkowski entertained public comment; however, none was forthcoming.

5. ACTION ON APPROVAL OF MINUTES - September 12, 2018 (5:11:59) - Chairperson Bonkowski introduced this item, and entertained a motion. **Commissioner Kimbrough moved to approve the minutes, as presented. Vice Chairperson Bagwell seconded the motion. Motion carried 4-0.**

6. PUBLIC MEETING ITEMS:

6(A) POSSIBLE ACTION TO ACCEPT DONATIONS FROM THE ROTARY CLUB OF CARSON CITY AND APMFG FABRICATORS, INC. FOR THE PURCHASE OF FIVE BUS SHELTERS FOR THE JUMP AROUND CARSON TRANSIT SYSTEM, AND TO AUTHORIZE THE CHAIR TO SIGN LETTERS OF ACCEPTANCE FOR THE DONATIONS (5:12:18) - Chairperson Bonkowski introduced this item, and Mr. Dollarhide presented the agenda materials. Chairperson Bonkowski invited Carson City Rotary Club representatives to speak; however, they declined.

Chairperson Bonkowski thanked the Carson City Rotary Club and APMFG Fabricators, Inc. Mr. Dollarhide responded to questions of clarification. Ms. Maloney commended Mr. Dollarhide on coordinating the partnership with the Rotary Club and APMFG Fabricators, Inc.

Chairperson Bonkowski entertained additional questions or comments of the commissioners and, when none were forthcoming, requested the Rotary Club representatives to convey the commission's appreciation. Chairperson Bonkowski entertained a motion. **Commissioner Kimbrough moved to accept donations from the Rotary Club of Carson City and APMFG Fabricators, Inc. for the purchase of five bus shelters for the Jump Around Carson Transit System, and to authorize the Chair to sign letters of acceptance for the donations. Vice Chairperson Bagwell seconded the motion.** Chairperson Bonkowski entertained discussion on the motion and, when none was forthcoming, called for a vote. **Motion carried 4-0.**

6(B) INFORMATION ON THE JUMP AROUND CARSON FEDERAL FISCAL YEAR 2019 - 2022 TRANSIT ASSET MANAGEMENT PLAN (5:18:14) - Chairperson Bonkowski introduced this item, and Mr. Dollarhide presented the agenda materials. Chairperson Bonkowski entertained questions or comments of the commissioners and of the public; however, none were forthcoming.

6(C) INFORMATION ON THE ANNUAL AVERAGE TRAFFIC COUNTS COLLECTED BY THE NEVADA DEPARTMENT OF TRANSPORTATION (5:20:17) - Chairperson Bonkowski introduced this item, and Ms. Maloney presented the agenda materials. Ms. Maloney introduced NDOT Transportation Planner / Analyst Mark Wooster, who provided additional detail. Mr. Wooster and Ms. Maloney responded to questions of clarification, and discussion followed. Chairperson Bonkowski thanked Mr. Wooster and Ms. Maloney for their presentation.

6(D) POSSIBLE ACTION TO APPROVE THE SUBMISSION OF A RECREATIONAL TRAILS PROGRAM GRANT APPLICATION BY THE PUBLIC WORKS DEPARTMENT FOR THE LINEAR DITCH MULTI-USE PATH CROSSING PROJECT AT SALIMAN ROAD (5:31:29) - Chairperson Bonkowski introduced this item, and Ms. Maloney presented the agenda materials. Commissioner Kimbrough advised that he is very familiar with this portion of the multi-use path. "... it goes up to Governor's Field and it dumps you on the roadway. It doesn't go anywhere and it's really dangerous ... So I'm hoping maybe somehow you can work with Carson City to get them into Governor's Field or something that ends that because now we're encouraging more people to use that linear trail which is exciting ... but that's a really bad piece where it just dumps you right on to Roop with no markings or anything. All of a sudden, you're there. So, just something to put on the list. ... I think it's even more important now that we address that somehow with Parks." Ms. Maloney acknowledged the importance and assured Commissioner Kimbrough that the matter "has been on the list ..." Ms. Maloney advised of having had "several discussions, including [that she and Public Works Department Director Darren] Schulz ... have met with NDOT staff regarding a connection across ... the parking lot ... and then how we would get it next to Governor's Field and connect so we have this whole trail system. The status of the next ... stage of that would be we're looking at it as a separate project but also related to the South Carson Street Project and how Stewart Street comes in and how we connect the trail from Stewart Street across over to Governor's Field over to this crossing for this grant application."

Chairperson Bonkowski entertained public comment and, when none was forthcoming, a motion. **Vice Chairperson Bagwell moved to approve the submission of a Recreational Trails Program Grant**

application, by the Public Works Department, for the linear ditch multi-use path crossing project at Saliman Road. Commissioner Kimbrough seconded the motion. Chairperson Bonkowski entertained discussion on the motion and, when none was forthcoming, called for a vote. **Motion carried 4-0.**

7. INTERNAL COMMUNICATIONS AND ADMINISTRATIVE MATTERS

7(A) TRANSPORTATION MANAGER'S REPORT (5:35:47) - Chairperson Bonkowski introduced this item, and Ms. Maloney presented her report. Chairperson Bonkowski entertained questions or comments; however, none were forthcoming.

7(B) STREET OPERATIONS ACTIVITY REPORT (5:37:59) - Chairperson Bonkowski introduced this item, and Ms. Maloney requested input of the commissioners on the format and contents of the report. Following a brief discussion, Chairperson Bonkowski entertained additional questions or comments; however, none were forthcoming.

7(C) PROJECT STATUS REPORT (5:41:40) - Chairperson Bonkowski introduced this item. Ms. Maloney presented the report which was included in the agenda materials, and responded to questions of clarification. Chairperson Bonkowski entertained questions or comments of the commissioners; however, none were forthcoming.

7(D) FUTURE AGENDA ITEMS (5:47:58) - Chairperson Bonkowski introduced this item, and Ms. Maloney reviewed the tentative agenda for the November commission meeting.

8. COMMISSIONER COMMENTS (5:49:10) - Chairperson Bonkowski entertained commissioner comments; however, none were forthcoming.

9. AGENDA POSTING INFORMATION

10. THE NEXT MEETING IS TENTATIVELY SCHEDULED for Wednesday, November 14, 2018 in the Community Center Sierra Room, 851 East William Street (5:50:21) - Chairperson Bonkowski read this information into the record.

11. PUBLIC COMMENT (5:50:31) - Chairperson Bonkowski entertained public comment; however, none was forthcoming.

12. ACTION ON ADJOURNMENT (5:50:44) - Chairperson Bonkowski adjourned the meeting at 5:50 p.m.

The Minutes of the October 10, 2018 Carson City Regional Transportation Commission meeting are so approved this _____ day of November, 2018.

_____
BRAD BONKOWSKI, Chair

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STAFF REPORT

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

Meeting Date: November 14, 2018

Staff Contact: Dan Stucky, City Engineer (dstucky@carson.org)

Agenda Title: (For Possible Action) To recommend to the Board of Supervisors acceptance of the 30% design of the South Carson Complete Streets Project.

Staff Summary: The Carson City project manager and design consultants will present the 30% design for the South Carson Complete Streets Project.

Agenda Action: Formal Action/Motion **Time Requested:** 30 minutes

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Proposed Motion

Move to recommend to the Board of Supervisors acceptance of the 30% design of the South Carson Complete Streets Project.

Previous Action

June 14, 2017 – The RTC approved the South Carson Street Conceptual Complete Streets Study

Background/Issues & Analysis

On June 14, 2017, the RTC approved the South Carson Street Conceptual Complete Streets Study. The study incorporated extensive public outreach and industry best practices to develop conceptual designs. The recommended design in the study has documented support from the businesses and property owners along the corridor as well as bicycle and pedestrian advocates.

In the spring of 2018, Carson City was awarded a Transportation Investment Generating Economic Recovery (TIGER) grant for $7.6 million. The highly competitive TIGER grant was awarded by the United States Department of Transportation, which described the project as an important investment in Carson City's infrastructure with a focus to improve pedestrian safety and mobility in the area, and enhance commercial and business access.

Carson City staff contracted with Traffic Works, an independent traffic engineering firm, to conduct an Intersection Alternatives Evaluation in June 2018. The evaluation was designed to be an objective assessment of intersection control alternatives for South Carson Street through the entire project corridor, with particular emphasis on the Sonoma Street and Stewart Street Intersections. The primary purposes of the evaluation were to:

- Determine if a roundabout is significantly advantageous at Sonoma Street, or not;
- Review prior studies and provide input on the appropriateness of locations considered for roundabouts;
- Identify the best options for traffic management, business access, and future intersection improvements.

The evaluation concluded that the South Carson Street at Stewart Street intersection is the most reasonable for a roundabout at the current time, considering existing right-of-way, capacity to support a future connection to S. Curry Street, its good location relative to the coordinated signal system, and that this intersection may serve as a gateway feature to the revitalized downtown area.

Carson City staff conducted a field tour during the weeks of October 15 and October 22 of 2018 to visit the businesses along the project corridor. Staff provided an overview of the project and project schedule, gathered feedback, and discussed various communication tools for the public to stay connected during the design and construction process.

The South Carson Complete Streets Project plans to convert the large South Carson Street corridor into more productive uses that facilitate comfortable, convenient, and safe travel for pedestrians and cyclists; improve access to abutting businesses; spur private investment in this important and vibrant commercial corridor; increase driver safety; and prepare Carson City for future Smart City advancements. The project limits are from the intersection of South Carson Street and 5th Street, south to the intersection of South Carson Street and I-580/US 50. The project includes pedestrian safety measures, ADA-compliant sidewalks and curb ramps, narrowed travel lanes, a buffered multi-use path, dedicated bicycle facilities, a roundabout, critical improvements to stormwater infrastructure, improved business access, public art, lighting fixtures, new signals, upgrades to the water and sewer systems, and fiber optic communications improvements that will complete the City's core communications ring. Construction is anticipated to start near the end of 2019. Public Works staff will provide a presentation and be available to answer questions.

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

- November/December of 2018 – Carson City Board of Supervisors (BOS) and Redevelopment Authority of Carson City (RACC) meetings: Review and comment on "30%" project design.
- December 11, 2018 – Public meeting to provide general overview of the project
- January/February of 2019 – RTC, BOS, and RACC meetings: Review and comment on "60%" project design.
- February 2019 – Public workshop meeting to discuss project specifics and conduct survey
- April/May of 2019 – RTC, BOS, and RACC meetings: Review and comment on "90%" project design.
- June 2019 – Complete project design

If you have any questions regarding the South Carson Complete Streets Project, you can contact Tom Grundy, Senior Project Manager, at tgrundy@carson.org/283-7081 or Dan Stucky, City Engineer, at dstucky@carson.org/283-7084.

Applicable Statute, Code, Policy, Rule or Regulation
N/A

Financial Information
Is there a fiscal impact? ☐ Yes ☒ No

If yes, account name/number:

Is it currently budgeted? ☐ Yes ☐ No

Explanation of Fiscal Impact: N/A

Alternatives
N/A

Supporting Material
-Exhibit-1: South Carson Street Intersection Alternatives Evaluation

Board Action Taken:

Motion: _____ 1) _____ Aye/Nay
2) _____ _____
_____
_____
_____

_____
(Vote Recorded By)

Traffic Engineering, Transportation Planning, & Forensic Services

July 6, 2018

Ms. Lucia Maloney
Transportation Manager
Carson City
Public Works Department
3505 Butti Way
Carson City, NV 89701

South Carson Street Intersection Alternatives Evaluation

Dear Ms. Maloney,

At Carson City's request, Traffic Works has completed an objective assessment of intersection control alternatives for South Carson Street generally between US 50/I-580 and 5th Street, with particular emphasis on the Sonoma Street and Stewart Street intersections. The primary purposes of this study are to:

- determine if a roundabout is significantly advantageous at Sonoma Street, or not
- review prior studies and provide input on the appropriateness of locations considered for roundabouts
- identify the best options for traffic management, business access, and future intersection improvements

EVALUATION OF A ROUNDABOUT AT SONOMA STREET

We understand a two-lane roundabout has been proposed at the Sonoma Street/S. Carson Street intersection (see **Attachment A**) based on a notion that it is too difficult for drivers to turn left from Sonoma Street onto S. Carson Street and therefore drivers are avoiding the intersection. This reasoning assumes that drivers are forced out of direction or disrupted in some fashion and that a roundabout would resolve the perceived issues by making side-street movements easier. The following sections present current traffic volumes, future volume projections, operations analysis, and other relevant points to determine whether or not there is justification for a roundabout at Sonoma Street based on travel demand or other factors.

Observed Demand for Left-turn Movements from Sonoma Street

Review of the roadway network and existing development pattern indicates there are multiple options for neighborhood residents east of S. Carson Street, surrounding Sonoma Street, to make westbound to southbound left-turn movements to South Carson Street. The existing options are Colorado Street, Sonoma Street, and Koontz Lane which is signalized. The existing roadway network and current intersection controls are shown on **Figures 1 and 2**, attached.

New intersection turning movement counts were conducted at the Colorado Street, Sonoma Street, and Koontz Lane intersections with S. Carson Street on Wednesday, January 10, 2018, approximately five months after completion and opening of the Carson Freeway. Public schools were in regular session during the data collection. These traffic volumes are believed to reflect the new normalized traffic conditions in the study area. The existing turn movement count data and recently collected daily traffic volumes (by NDOT) are also shown on **Figures 1 and 2**, attached.

It is important to note that the westbound to southbound left-turn volumes at Colorado Street and Sonoma Street are essentially the same and that both locations have left-turn volumes that are not tremendously lower than those at Koontz Lane. The count data demonstrates there is not any notable diversion of traffic away from the Sonoma Street/S. Carson Street intersection to either Colorado Street or Koontz Lane.

Planning Analysis Demand for Left-turn Movements from Sonoma Street

A planning level trip assignment analysis was performed as a second check to determine whether or not drivers significantly avoid the westbound to southbound left-turn movement at Sonoma Street/South Carson Street. This method considers the number of homes in the adjacent neighborhood that would likely use the Sonoma Street intersection to/from the south because it is the shortest or fastest travel route. **Figure 3** illustrates the neighborhood area that would be expected to make a left-turn from Sonoma Street.

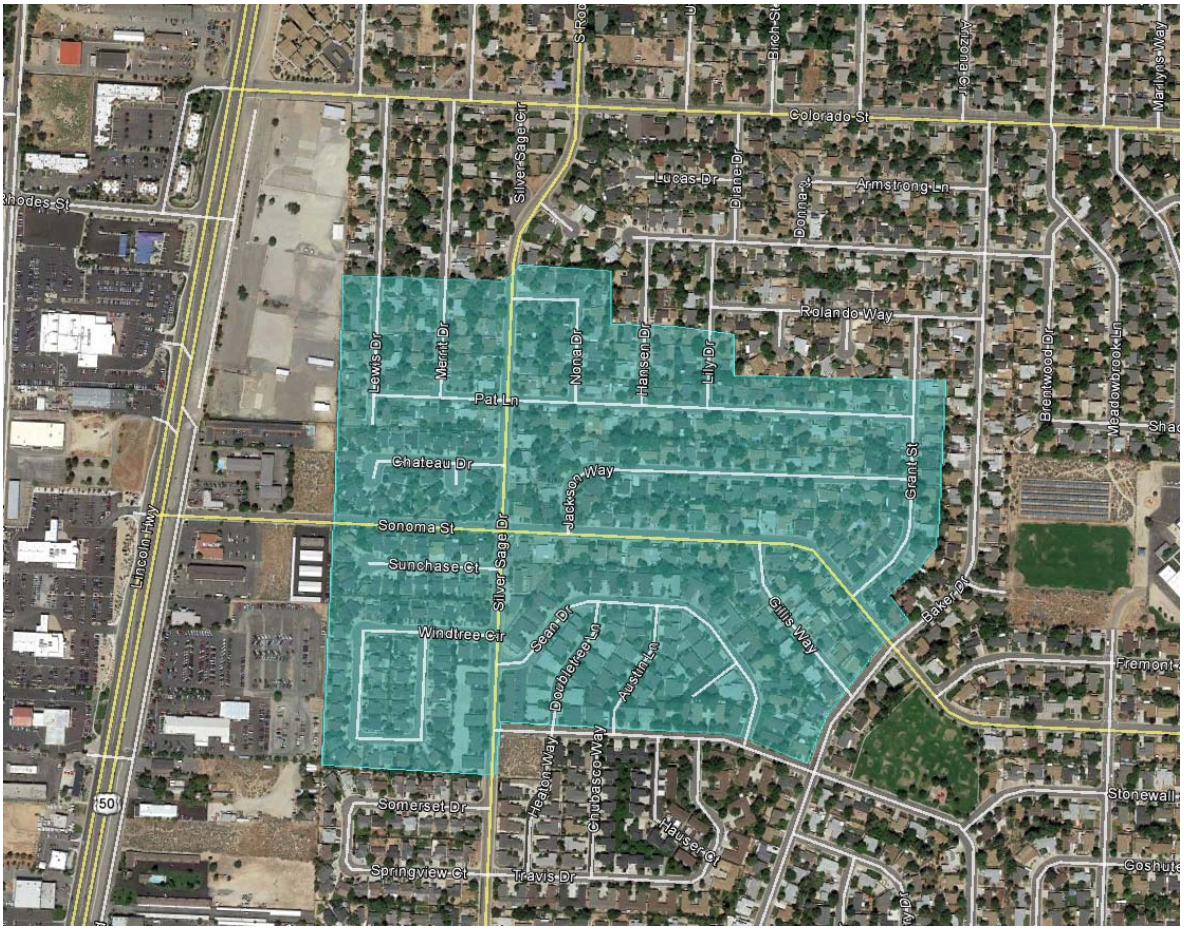


Figure 3. Area Contributing to Demand for Left-turns at Sonoma Street

The contributing area includes approximately 403 single family homes, 36 quadraplex apartment units, and 21,500 square feet of general office space. The number of trips to/from this area were estimated using standard ITE trip generation rates and are shown in **Table 1**.

Table 1. Trip Generation for Contributing Area

Land Use	AM Peak Hour Trips			PM Peak Hour Trips		
	Entry	***Exit***	***Total***	***Entry***	***Exit***	***Total***
403 Units Single Family	76	226	302	256	151	407
36 Units Quadraplex Apartments	4	14	18	14	8	22
21,500 Sq. Ft. General Office	29	4	33	5	27	32
TOTAL	***109***	***244***	***353***	***275***	***186***	***461***

It is estimated that 70% of the traffic from the contributing area would use S. Carson Street and the 30% remainder would travel north/east to/from Fairview Drive. Traffic patterns along S. Carson Street show that 60% of trips are to/from the north from the study area and 40% of trips are to/from the south during both the AM and PM peak hours. The three most probable paths for trips from the neighborhood to the south are:

- Sonoma Street to Carson Street (estimated at 20%)
- Silver Sage Drive to Koontz Street to Carson Street (estimated at 10%)
- Baker Drive to Koontz Street to Carson Street (estimated at 10%)

The AM peak hour has the highest number of exiting trips (244) and therefore presents the scenario that would have the highest volumes. Theoretical left-turn demand from Sonoma Street to S. Carson Street from the contributing area is calculated as follows:

244 exiting trips x 70% to S. Carson St. x 20% to the south via Sonoma = 34 left-turn movements

The existing AM left-turn volume from Sonoma Street, determined through the January turn movement counts, is 11 movements which is not considerably different than the theoretical demand. It is important to note that Koontz Lane has only 51 westbound to southbound left-turn movements at S. Carson Street in the AM peak hour.

The theoretical planning analysis indicates there is not likely any notable diversion of traffic from Sonoma Street to either Colorado Street or Koontz Lane.

Operational Factors of Left-turn Movements from Sonoma Street

Level of service (LOS) analysis was performed for the Sonoma Street/South Carson Street intersection to gauge whether or not left turn movements from Sonoma Street are difficult to make during the peak traffic periods. Based on the January intersection volumes, the westbound approach on Sonoma Street currently

operates at LOS C with 17.5 seconds of delay in the AM peak hour and LOS C with 19.5 seconds of delay during the PM peak hour. The calculations are provided in the Attachments.

At level of service C during the peak traffic conditions, there is no reason to believe a significant number of drivers avoid this intersection. Capacity improvements are typically not justified under these operating conditions.

Demand for Northbound to Southbound U-turn Movements

We understand that a roundabout was also considered as a way to ease U-turn movements on S. Carson Street for better access to adjacent businesses. However, the preferred concept includes a two-way left-turn lane on S. Carson Street throughout the majority of the project limits, including in the Sonoma Street vicinity. There would be no real demand for U-turn movements at Sonoma Street with a two-way left-turn lane provided throughout the corridor, since drivers could directly access the business driveways from the center lane.

Bicycle & Pedestrian Movements at Sonoma Street

The concept of a roundabout has been presented as an option for improving bicycle and pedestrian access in the Sonoma Street portion of the corridor, including introducing pedestrian movements across S. Carson Street.

Overall, this is a poor justification for a roundabout since multi-lane roundabouts are not the best intersection type for bicycle travel. Pedestrian crossings at multi-lane approaches and departures at roundabouts require Rectangular Rapid Flashing Beacons (RRFB), edge-lit signs, or signalization to accommodate the sight impaired. Pedestrian and bicycle volumes are currently low in the study area as a whole, including at Sonoma Street. The land uses on the west side of S. Carson Street in this immediate area are primarily auto dealerships. It is difficult to describe why a very high cost pedestrian crossing treatment (roundabout) would be needed at Sonoma Street in particular when that location will likely continue to have low pedestrian crossing demand. A multi-lane roundabout is not advisable for the purposes of improving pedestrian and bicycle movements at the Sonoma Street/Carson Street intersection.

Future Traffic Operations

It is important to consider whether or not a roundabout, or other intersection improvements, may be needed at the Sonoma Street/S. Carson Street intersection in the future due to regional traffic volume increases.

Future (2040) traffic volumes were obtained from the Carson Area Metropolitan Planning Organization (CAMPO) region travel demand model. The model shows essentially no growth on S. Carson Street through the 2040 horizon year. However, to provide a conservative analysis, future year intersection operations were performed using a 10% total growth over the existing traffic volumes. Calculations were performed to compare a roundabout, traffic signal, and side-street STOP control with a center turn lane that would enable 2-stage left-turn maneuvers from Sonoma Street, and the results are presented in **Table 2**. The detailed calculation sheets are provided in the **Attachments**.

Table 2. 2040 Intersection Level of Service Comparison

2040 FUTURE CONDITIONS

AM Peak	CARSON ST. Northbound		CARSON ST. Southbound		DRIVEWAY Eastbound		SONOMA ST. Westbound		Overall	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
4 Lane Side Street Stop w/ 2 Stage Left Turn	0.14	A	0.63	A	20.22	C	**18.02**	**C**	-	-
Roundabout	9	A	6.9	A	5.5	A	10.9	B	8.4	A
Traffic Signal	4.94	A	4.18	A	6.98	A	7.87	A	4.9	A

PM Peak	Northbound		Southbound		Eastbound		Westbound		Overall	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
4 Lane Side Street Stop w/ 2 Stage Left Turn	0.04	A	0.59	A	46.72	E	**18.89**	**C**	-	-
Roundabout	12.1	B	16.4	B	11.1	B	9.1	A	14.3	B
Traffic Signal	7.1	A	7.3	A	14.19	B	15.49	B	7.6	A

The operations analysis shows that side-street STOP control will provide LOS C operations on the Sonoma Street approach during the AM and PM peak hours for the foreseeable future. A roundabout or traffic signal would provide LOS A or B operations overall but neither are justified when the side street functions at LOS C. A roundabout is not justified at Sonoma Street since side-street STOP control will provide acceptable operations in the future.

Consideration of Future Development Access in the Immediate Area

The portion of Carson City east of South Carson Street, south of Fairview Drive, north of Koontz Lane, and west of I-580 ("the study area") is essentially fully developed. The one notable exception is a large vacant property on the east side of South Carson Street extending south from Colorado Street nearly to Sonoma Street. This property is referred to as the "Armory Site" and is owned by the Nevada Division of State Lands. While the parcel appears ideal for a commercial or mixed-use development, there are no official development plans for the property at this time and the ultimate use(s) are undefined. It should be noted that redevelopment of this property is not included in the land use assumptions within the CAMPO travel demand model.

Two relevant points can be made with regard to future development activity in the study area:

- Traffic volumes are not likely to increase on Sonoma Street in any substantial way as the contributing area is already built out, therefore Sonoma Street would not serve future development/redevelopment
- Traffic volumes are most likely to increase in association with the Armory Site (opposite Rhodes Street) and to a lesser extent in the area west of South Carson Street also served by Rhodes Street

Both points suggest that the Rhodes Street/ South Carson Street will be a key intersection related to serving future development/redevelopment efforts. Investment in the Rhodes Street intersection, which serves both the east and west sides of South Carson Street, would present significantly greater benefits to redevelopment and overall access and circulation than improvements at Sonoma Street.

The City should anticipate and plan for major intersection improvements at the Rhodes Street intersection.

Planning Level Costs

In general, construction costs for multilane roundabouts retrofit into an existing street environment are estimated at $1.5M to $2.0M, not including right-of-way acquisition. Total roundabout costs could potentially reach $2.5M at the Sonoma Street/S. Carson Street location given the adjacent commercial properties, some of which could potentially be impacted.

In comparison, new traffic signal systems typically cost on the order of $500,000. The distance that interconnect communication must be run to the nearest adjacent signal or tie-in point can, however, significantly increase this cost. The all-in cost of a traffic signal would not likely exceed $750,000.

Summary of Pros & Cons of a Roundabout at Sonoma Street

Following is a simple summary of the overarching benefits and detractors to installing a roundabout at Sonoma Street:

Pros

- Excellent streetscape feature
- One of the safest intersection treatments available
- Most efficient intersection type during off-peak time periods

Cons

- Multi-lane roundabouts are not the best intersection type for bicycle and pedestrian movements
- Roundabouts break traffic progression and disrupt flow in coordinated signal corridors
- A roundabout at Sonoma Street would further divide the frontage road and complicate access and circulation on the east side of South Carson Street
- Large footprint and expensive intersection type
- Does not serve redevelopment efforts or future development access needs
- The high cost is not justified as no significant need or benefit can be demonstrated for this location
- The current project funding may not be sufficient to cover all costs associated with the roundabout

EVALUATION OF ROUNDABOUTS AT OTHER INTERSECTIONS ON SOUTH CARSON STREET

City staff asked that we review other key intersections along the S. Carson Street corridor and determine if any locations would be good alternate candidates for a roundabout. The City is particularly interested in locations that would serve a long-term purpose while at a reasonable cost with low property impacts. Following is a list of the locations considered and key findings associated with each location:

- 5th Street – This location could be selected to construct the smallest and perhaps lowest cost roundabout compared to other locations. A single-lane configuration may be feasible here. However, the intersection is tightly constrained by existing buildings, including a historical building in the northwest quadrant (former Jack's Bar). It is listed in the National Register of Historic Places. The existing building constraints and anticipated right-of-way impacts render the 5th street location not appropriate. Furthermore, the cost of a roundabout may not be justified given a traffic signal is already in place.

- 6th, 7th, 8th, 9th, & 10th Streets – No need for a roundabout and not appropriate due to insufficient cross-street traffic volumes. Each location would have notable right-of-way constraints.
- S. Stewart Street – This location presents a unique opportunity to create a new gateway feature, and potentially improve overall circulation patterns if a connection could be made to Curry Street. An expanded discussion of the S. Stewart Street intersection is provided later in this report.
- Fairview Drive – This location has an existing traffic signal that adequately manages existing and anticipated future traffic volumes. The cost of a roundabout would not be justified at this location given a traffic signal is already in place and there are no other significant justification points supporting a roundabout at this intersection.
- Colorado Street & Sonoma Street – The recently completed traffic counts demonstrate there is no need for a roundabout at either Colorado Street or Sonoma Street. Most of the points outlined above for the Sonoma Street intersection would also apply to the Colorado Street location.
- Rhodes Street – It is our opinion that Rhodes Street and a future Armory Site access intersection should be improved in the future. To maintain traffic progression through the signalized corridor, a traffic signal would be more appropriate and cost effective than a roundabout. However, if a roundabout is ultimately desired in the corridor, the Rhodes Street intersection may be appropriate, particularly with future redevelopment of the Armory Site.
- Moses Street – The Moses Street intersection is located only 600 feet from the signalized Koontz Lane intersection. This is inadequate separation from Koontz Lane for new major street controls.
- Koontz Lane, Eagle Station Lane & Clearview Drive – These locations have existing traffic signals that will adequately manage existing and anticipated future traffic volumes. The cost of a roundabout would not be justified given a traffic signal is already in place and there is no other significant justification for a roundabout at these locations.
- Roventini Way & Overland St/Snyder Ave – These intersections are located less than 650 feet from the signalized Clearview Drive intersection. This is inadequate separation from Clearview Drive for new major street controls.
- Appion Way – Long-term intersection improvements have been considered for the realignment of Snyder Avenue to West Appion Way to gain separation of Snyder Avenue from Clearview Drive. A roundabout could potentially be constructed with any realignment in the future, but would not be appropriate until then, given the extremely low traffic volumes on West Appion Way and the uncertainty of the Snyder Avenue realignment geometrics. A roundabout at Appion Way would break the traffic progression / signal coordination between Hwy 50/I-580 and Clearview Drive which could adversely impact peak traffic flows on S. Carson Street in a high volume segment.
- Roland Street – Roland Street is approximately 750 feet from the Interstate 580/Hwy 50 intersection. This is inadequate separation from a major highway intersection for major street controls (signal or roundabout).

It is worth noting that crash history was reviewed for the corridor and no particular intersection within the study limits stood out as having a much higher number of crashes than any other location. We did not identify any location that would indicate a roundabout is needed to resolve existing safety issues.

We also considered the potential impacts of a roundabout on the Nevada Day Parade. Locations at Stewart Street, and north thereof, could potentially restrict the parade route width and thereby affect parade operations. This would be less of an issue with a multi-lane roundabout at Stewart Street compared to single lane configurations that would likely be utilized at intersections north of Stewart Street.

In summary, only the S. Stewart Street and Rhodes Street intersections would offer very good opportunities and reasonable justification for the installation of a roundabout.

SOUTH STEWART STREET INTERSECTION

The S. Stewart Street/S. Carson Street intersection is unique within the corridor in that 1) it has a very large existing right-of-way footprint, 2) is at an ideal location to create a gateway feature and gateway sign, and 3) is proximate to a long and unconnected segment of S. Curry Street which could potentially be connected to a roundabout at this location in the future. Additionally, a roundabout at S. Stewart Street would fit better within the overall coordinated signal system in that it would be outside the more auto-centric development pattern south of Fairview Drive. A roundabout at one end of a coordinated corridor is less disruptive to traffic progression than one located in the middle of a signalized corridor.

These aspects, in combination, create a situation where reconstruction of the intersection to ultimately create a link to Curry Street, via roundabout(s), could be beneficial even though the intersection is already signalized. With the existing right-of-way available, and few adjacent driveways, S. Stewart Street would likely be one of the easiest and most cost effective intersections for roundabout installation. A new roadway extension to Curry Street has been desired for a long time, and if deemed feasible, would serve many of the same overall connectivity purposes as an improved connection at Rhodes Street.

Under this line of reasoning, S. Carson Street could have a different feel north of Stewart Street, with a roundabout effectively being the gateway feature. The coordinated signal corridor would then be Fairview Drive to US 50 and significant traffic capacity would be maintained on S. Carson Street for any freeway bypass needs under emergency situations. All aspects considered, the S. Stewart Street intersection is most reasonable for a roundabout at this time.

CONCLUSIONS

There is no real evidence of drivers not being able to make westbound to southbound left-turn movements from Sonoma Street, or a need to significantly improve that movement. The data and analysis indicates that STOP control is a reasonable control method for the foreseeable future. We suspect that the perception of difficult left turns from Sonoma Street was a function of the prior traffic volumes (before the freeway extension was complete) and that the condition is now significantly different and improved.

Construction of a roundabout at Sonoma Street is not recommended for the following reasons:

- No demonstrated need or significant benefit that supports the high construction cost
- Would not support development/redevelopment
- Would break traffic signal coordination and vehicle progression on S. Carson Street
- A multi-lane roundabout is not a particularly good fit for bicycle travel or pedestrian crossings
- Divides the frontage road again and therefore negatively impacts business access and circulation
- Would be a poor use of available funds relative to other investment options

Roundabouts have been considered at other locations along S. Carson Street in this evaluation. It is our opinion that investment at either S. Stewart Street (for gateway benefits and potential future connection to Curry Street) or Rhodes Street (for long-term redevelopment benefits) would have significantly greater value than intersection reconstruction work at Sonoma Street.

The S. Stewart Street intersection appears to be the most reasonable for a roundabout at this particular time as it would fit well considering existing right-of-way, support future connection to S. Curry Street, serve as a gateway feature to the revitalized downtown area, and be a good location relative to the coordinated signal system (which would become the segment of Fairview Drive and south thereof).

The City should continue planning long-term intersection improvements at Rhodes Street. Rhodes Street will be a key access location for the Armory Site and will additionally serve future development/redevelopment on the west side of S. Carson Street.

We sincerely appreciate this opportunity to assist Carson City with this important project and look forward to working with you again in the future. Please do not hesitate to contact me at 775.322.4300 with any questions or concerns.

Sincerely,
TRAFFIC WORKS, LLC

Loren E. Chilson, PE
Principal

Attachments:

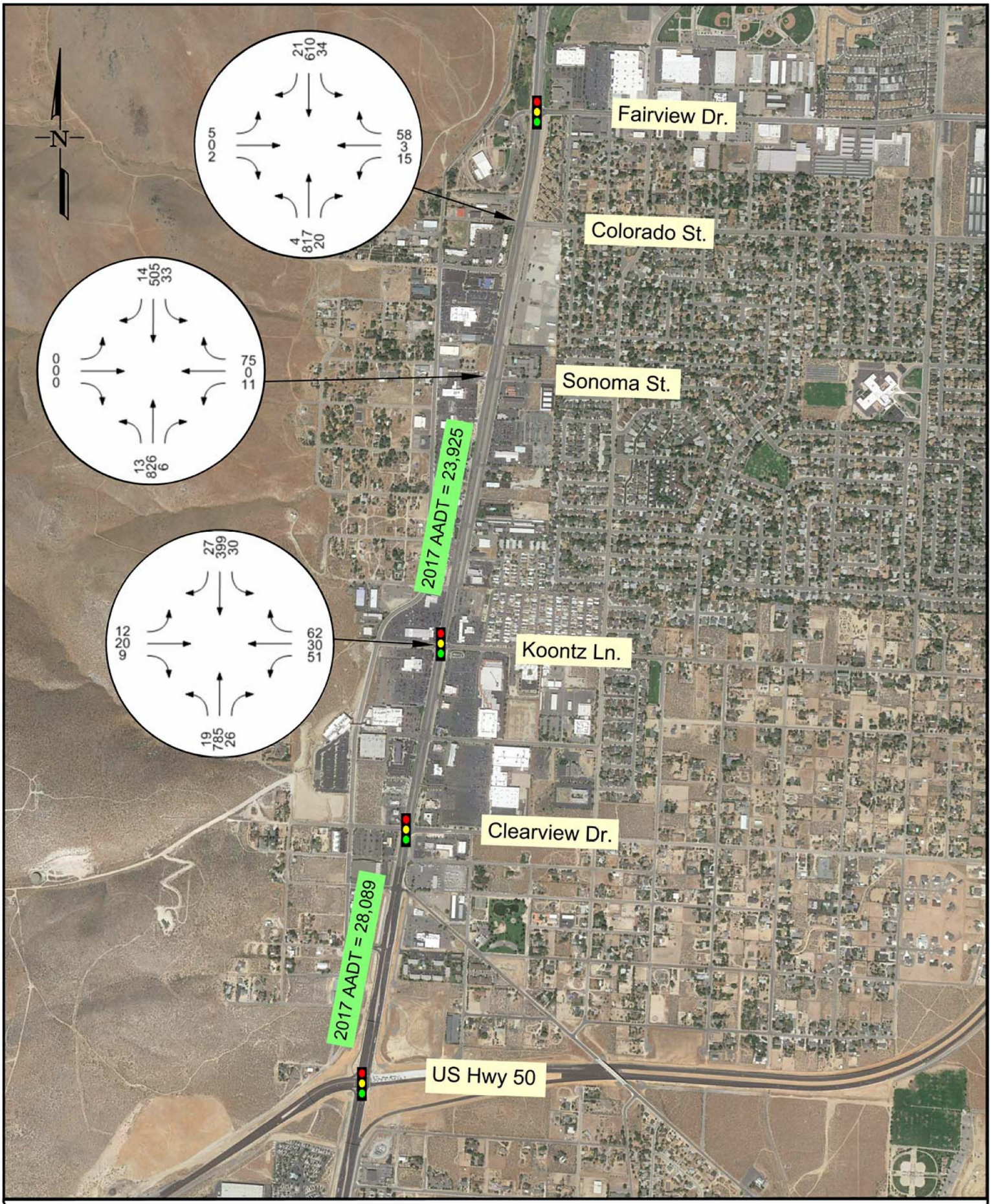
Attachment A – AM Peak Hour Existing Volumes, Roadway Network, and Current Intersection Controls

Attachment B – PM Peak Hour Existing Volumes, Roadway Network, and Current Intersection Controls

Attachment C - Sonoma Street Roundabout Concept

Attachment D - Existing Conditions Level of Service Calculations

Attachment E - 2040 Future Conditions Level of Service Calculations

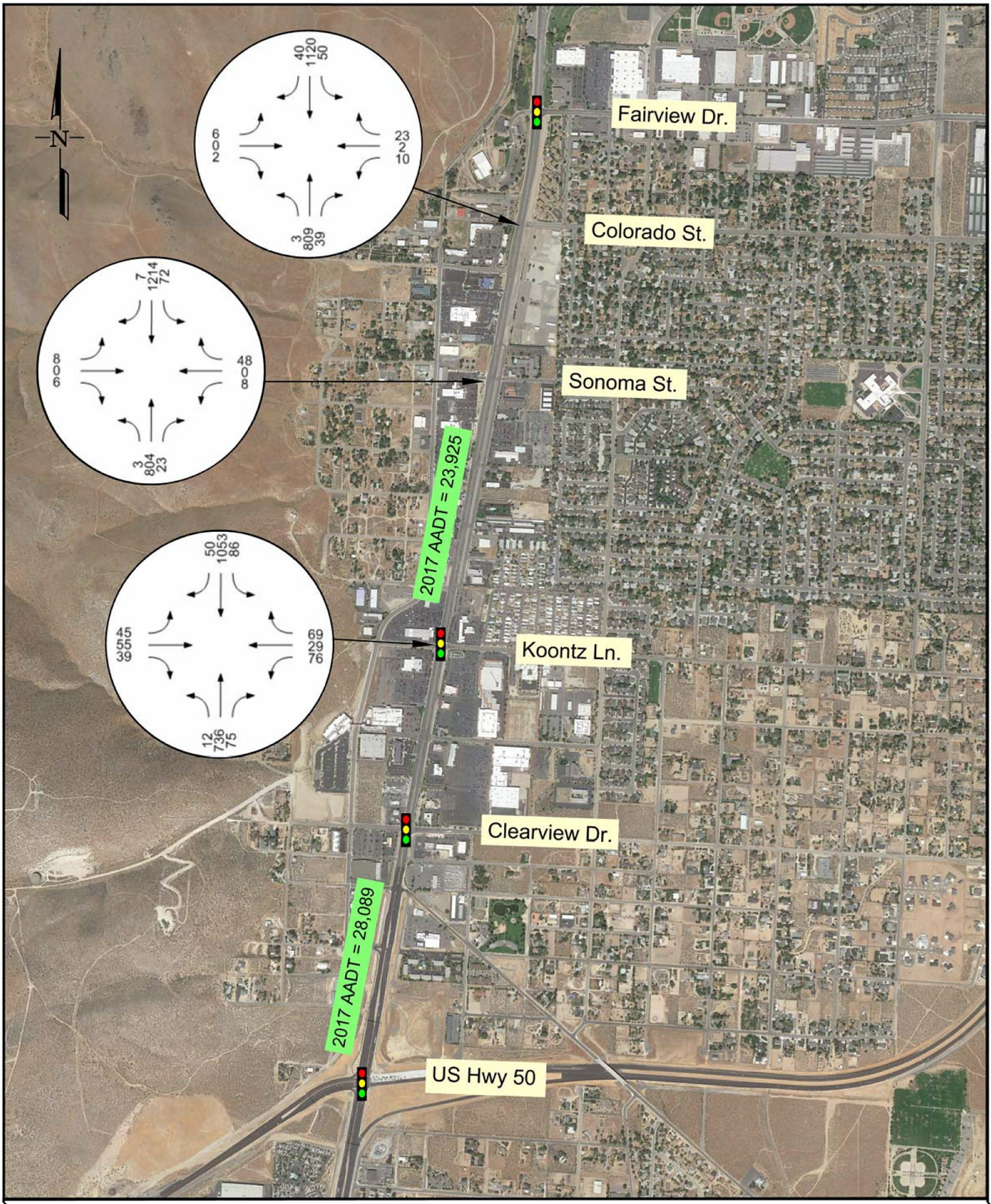


TRAFFIC WORKS
5482 Longley Lane
Suite B
Reno, NV 89511
775-322-4300

Attachment A

Existing AM Peak Hour Volumes

Intersection Alternatives Evaluation



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5482 Longley Lane
Suite B
Reno, NV 89511
775-322-4300

Attachment B

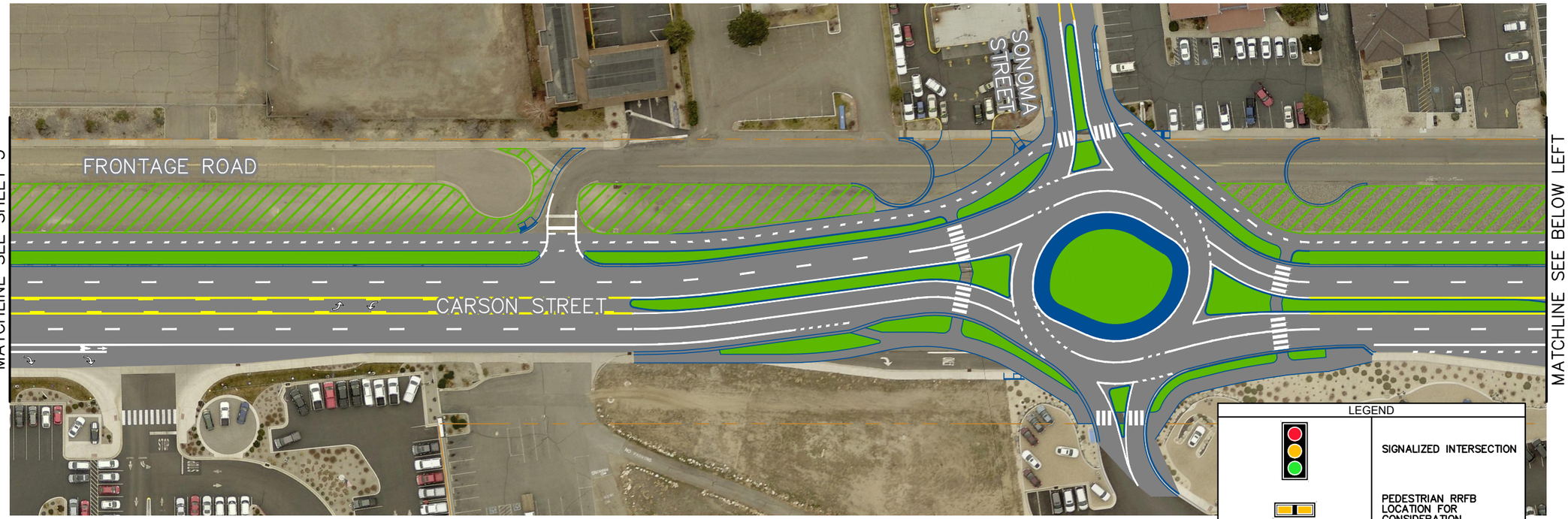
Existing PM Peak Hour Volumes

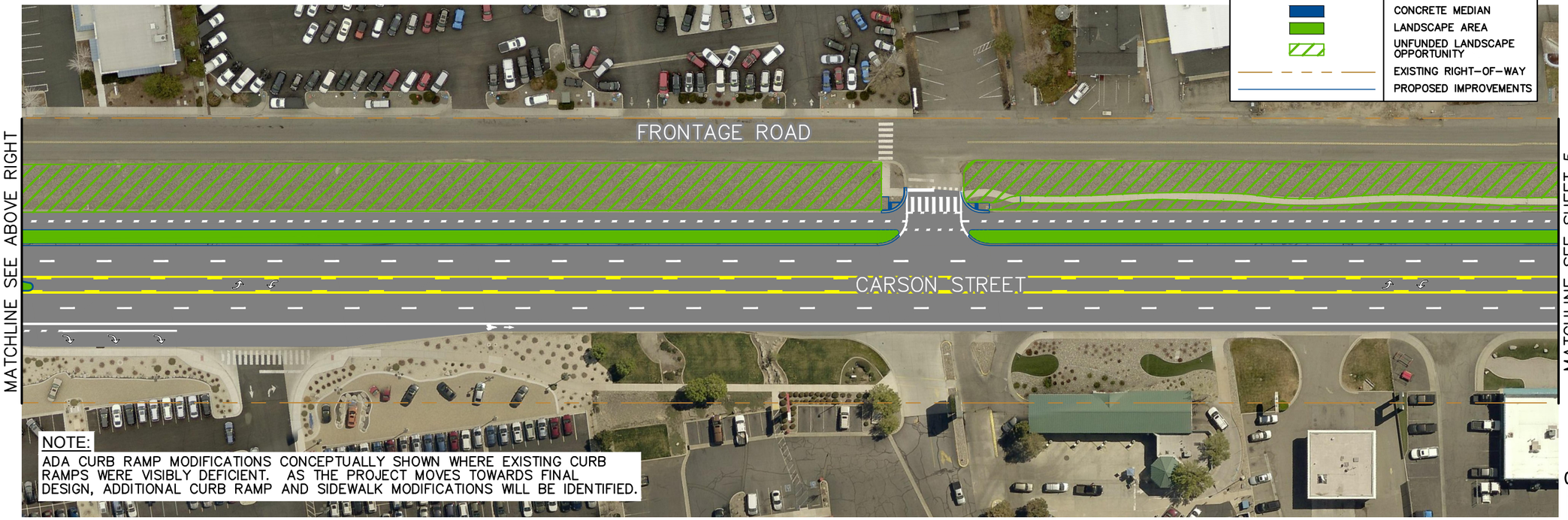
Intersection Alternatives Evaluation

Attachment C:

S. Carson St / Sonoma St Roundabout Concept

(From Carson Street Complete Street Study)





LEGEND

	SIGNALIZED INTERSECTION
	PEDESTRIAN RRFB LOCATION FOR CONSIDERATION
	CONCRETE MEDIAN
	LANDSCAPE AREA
	UNFUNDED LANDSCAPE OPPORTUNITY
	EXISTING RIGHT-OF-WAY
	PROPOSED IMPROVEMENTS

NOTE:
ADA CURB RAMP MODIFICATIONS CONCEPTUALLY SHOWN WHERE EXISTING CURB RAMPS WERE VISIBLY DEFICIENT. AS THE PROJECT MOVES TOWARDS FINAL DESIGN, ADDITIONAL CURB RAMP AND SIDEWALK MODIFICATIONS WILL BE IDENTIFIED.

GRAPHIC SCALE IN FEET
0 40 80 160

Date: May 22, 2017 - 1:01pm / User: fernando.raez
Path: K:\LAV_PublicTrans\092775_Carson City\002-Carson_Street\CAD\Exhibits\Carson St-Roundabout.dwg

PRELIMINARY CONCEPT - NOT FOR DESIGN

CARSON STREET COMPLETE STREET STUDY

Kimley»Horn

Attachment D:

Existing Condition

Level of Service Calculations

LEVEL OF SERVICE SUMMARY

EXISTING CONDITIONS

	CARSON ST.		CARSON ST.		DRIVEWAY		SONOMA ST.	
AM Peak	**Northbound**		**Southbound**		**Eastbound**		**Westbound**	
	Delay (s)	**LOS**	**Delay (s)**	**LOS**	**Delay (s)**	**LOS**	**Delay (s)**	**LOS**
6 Lane Side Street Stop	0.16	A	0.86	A	26.03	D	17.56	C
4 Lane Side Street Stop	0.13	A	0.61	A	28.46	D	18.84	C
4 Lane Side Street Stop w/ 2 Stage Left Turn	0.13	A	0.61	A	18.21	C	15.25	C

PM Peak	**Northbound**		**Southbound**		**Eastbound**		**Westbound**	
	Delay (s)	**LOS**	**Delay (s)**	**LOS**	**Delay (s)**	**LOS**	**Delay (s)**	**LOS**
6 Lane Side Street Stop	0.02	A	0.82	A	37.07	E	19.54	C
4 Lane Side Street Stop	0.04	A	0.57	A	68.73	F	28.53	D
4 Lane Side Street Stop w/ 2 Stage Left Turn	0.04	A	0.57	A	29.42	D	16.01	C

2040 FUTURE CONDITIONS

	CARSON ST.		CARSON ST.		DRIVEWAY		SONOMA ST.			
AM Peak	**Northbound**		**Southbound**		**Eastbound**		**Westbound**		**Overall**	
	Delay (s)	**LOS**	**Delay (s)**	**LOS**	**Delay (s)**	**LOS**	**Delay (s)**	**LOS**	**Delay (s)**	**LOS**
4 Lane Side Street Stop w/ 2 Stage Left Turn	0.14	A	0.63	A	20.22	C	**18.02**	**C**	-	-
Roundabout	9	A	6.9	A	5.5	A	10.9	B	8.4	A
Traffic Signal	4.94	A	4.18	A	6.98	A	7.87	A	4.9	A

PM Peak	**Northbound**		**Southbound**		**Eastbound**		**Westbound**		**Overall**	
	Delay (s)	**LOS**	**Delay (s)**	**LOS**	**Delay (s)**	**LOS**	**Delay (s)**	**LOS**	**Delay (s)**	**LOS**
4 Lane Side Street Stop w/ 2 Stage Left Turn	0.04	A	0.59	A	46.72	E	**18.89**	**C**	-	-
Roundabout	12.1	B	16.4	B	11.1	B	9.1	A	14.3	B
Traffic Signal	7.1	A	7.3	A	14.19	B	15.49	B	7.6	A

Intersection Level Of Service Report
Intersection 2: Carson / Sonoma

Control Type:	Two-way stop	Delay (sec / veh):	24.6
Analysis Method:	HCM 2010	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.058

Intersection Setup

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Base Volume Input [veh/h]	13	826	6	33	505	14	1	1	1	11	1	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	826	6	33	505	14	1	1	1	11	1	75
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	229	2	9	140	4	0	0	0	3	0	21
Total Analysis Volume [veh/h]	14	918	7	37	561	16	1	1	1	12	1	83
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.05	0.01	0.00	0.00	0.01	0.00	0.06	0.00	0.15
d_M, Delay for Movement [s/veh]	8.68	0.00	0.00	10.16	0.00	0.00	21.12	23.35	10.17	24.60	24.50	13.78
Movement LOS	A	A	A	B	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh]	0.04	0.00	0.00	0.16	0.00	0.00	0.03	0.03	0.03	0.81	0.81	0.81
95th-Percentile Queue Length [ft]	1.07	0.00	0.00	3.97	0.00	0.00	0.82	0.82	0.82	20.15	20.15	20.15
d_A, Approach Delay [s/veh]	0.13			0.61			18.21			15.25		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	1.22											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Two-way stop	Delay (sec / veh):	45.3
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Base Volume Input [veh/h]	13	826	6	33	505	14	1	1	1	11	1	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	826	6	33	505	14	1	1	1	11	1	75
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	229	2	9	140	4	0	0	0	3	0	21
Total Analysis Volume [veh/h]	14	918	7	37	561	16	1	1	1	12	1	83
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.05	0.01	0.00	0.01	0.01	0.00	0.11	0.01	0.15
d_M, Delay for Movement [s/veh]	8.68	0.00	0.00	10.16	0.00	0.00	33.47	41.44	10.47	41.13	45.34	15.30
Movement LOS	A	A	A	B	A	A	D	E	B	E	E	C
95th-Percentile Queue Length [veh]	0.04	0.00	0.00	0.16	0.00	0.00	0.06	0.06	0.06	1.08	1.08	1.08
95th-Percentile Queue Length [ft]	1.07	0.00	0.00	3.97	0.00	0.00	1.46	1.46	1.46	26.88	26.88	26.88
d_A, Approach Delay [s/veh]	0.13			0.61			28.46			18.84		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	1.45											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Two-way stop	Delay (sec / veh):	46.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Base Volume Input [veh/h]	13	826	6	33	505	14	0	0	0	11	0	75
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	826	6	33	505	14	0	0	0	11	0	75
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	229	2	9	140	4	0	0	0	3	0	21
Total Analysis Volume [veh/h]	14	918	7	37	561	16	0	0	0	12	0	83
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.09	0.01	0.00	0.00	0.00	0.00	0.07	0.00	0.18
d_M, Delay for Movement [s/veh]	10.91	0.00	0.00	14.27	0.00	0.00	24.44	42.75	10.89	29.62	46.54	15.82
Movement LOS	B	A	A	B	A	A	C	E	B	D	E	C
95th-Percentile Queue Length [veh]	0.07	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.97	0.97	0.97
95th-Percentile Queue Length [ft]	1.72	0.00	0.00	7.10	0.00	0.00	0.00	0.00	0.00	24.26	24.26	24.26
d_A, Approach Delay [s/veh]	0.16			0.86			26.03			17.56		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	1.43											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 2: Carson / Sonoma

Control Type:	Two-way stop	Delay (sec / veh):	47.5
Analysis Method:	HCM 2010	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.067

Intersection Setup

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Base Volume Input [veh/h]	3	804	23	72	1214	7	6	1	8	8	1	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	804	23	72	1214	7	6	1	8	8	1	48
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	214	6	19	323	2	2	0	2	2	0	13
Total Analysis Volume [veh/h]	3	855	24	77	1291	7	6	1	9	9	1	51
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.10	0.01	0.00	0.07	0.01	0.02	0.06	0.01	0.09
d_M, Delay for Movement [s/veh]	11.84	0.00	0.00	10.24	0.00	0.00	47.49	41.22	16.06	30.06	38.22	13.09
Movement LOS	B	A	A	B	A	A	E	E	C	D	E	B
95th-Percentile Queue Length [veh]	0.02	0.00	0.00	0.33	0.00	0.00	0.32	0.32	0.32	0.55	0.55	0.55
95th-Percentile Queue Length [ft]	0.43	0.00	0.00	8.37	0.00	0.00	8.01	8.01	8.01	13.81	13.81	13.81
d_A, Approach Delay [s/veh]	0.04			0.57			29.42			16.01		
Approach LOS	A			A			D			C		
d_I, Intersection Delay [s/veh]	0.97											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Two-way stop	Delay (sec / veh):	130.1
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Base Volume Input [veh/h]	3	804	23	72	1214	7	6	1	8	8	1	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	804	23	72	1214	7	6	1	8	8	1	48
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	214	6	19	323	2	2	0	2	2	0	13
Total Analysis Volume [veh/h]	3	855	24	77	1291	7	6	1	9	9	1	51
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.10	0.01	0.00	0.17	0.03	0.02	0.17	0.03	0.09
d_M, Delay for Movement [s/veh]	11.84	0.00	0.00	10.24	0.00	0.00	120.46	130.13	27.42	77.74	122.20	18.00
Movement LOS	B	A	A	B	A	A	F	F	D	F	F	C
95th-Percentile Queue Length [veh]	0.02	0.00	0.00	0.33	0.00	0.00	0.77	0.77	0.77	1.14	1.14	1.14
95th-Percentile Queue Length [ft]	0.43	0.00	0.00	8.37	0.00	0.00	19.30	19.30	19.30	28.38	28.38	28.38
d_A, Approach Delay [s/veh]	0.04			0.57			68.73			28.53		
Approach LOS	A			A			F			D		
d_I, Intersection Delay [s/veh]	1.57											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 2: New Intersection

Control Type:	Two-way stop	Delay (sec / veh):	131.4
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

Intersection Setup

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Base Volume Input [veh/h]	3	804	23	72	1214	7	6	0	8	8	0	48
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	804	23	72	1214	7	6	0	8	8	0	48
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	214	6	19	323	2	2	0	2	2	0	13
Total Analysis Volume [veh/h]	3	855	24	77	1291	7	6	0	9	9	0	51
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.17	0.01	0.00	0.09	0.00	0.03	0.09	0.00	0.11
d_M, Delay for Movement [s/veh]	17.98	0.00	0.00	14.71	0.00	0.00	64.36	131.43	18.88	43.74	129.60	15.27
Movement LOS	C	A	A	B	A	A	F	F	C	E	F	C
95th-Percentile Queue Length [veh]	0.03	0.00	0.00	0.62	0.00	0.00	0.39	0.39	0.39	0.71	0.71	0.71
95th-Percentile Queue Length [ft]	0.81	0.00	0.00	15.38	0.00	0.00	9.76	9.76	9.76	17.79	17.79	17.79
d_A, Approach Delay [s/veh]	0.06			0.82			37.07			19.54		
Approach LOS	A			A			E			C		
d_I, Intersection Delay [s/veh]	1.25											
Intersection LOS	F											

Attachment E:

2040 Future Condition

Level of Service Calculations

Intersection Level Of Service Report
Intersection 2: Carson / Sonoma

Control Type:	Two-way stop	Delay (sec / veh):	28.9
Analysis Method:	HCM 2010	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.101

Intersection Setup

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Base Volume Input [veh/h]	14	909	7	36	556	15	1	1	1	16	1	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	909	7	36	556	15	1	1	1	16	1	83
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	253	2	10	154	4	0	0	0	4	0	23
Total Analysis Volume [veh/h]	16	1010	8	40	618	17	1	1	1	18	1	92
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.06	0.01	0.00	0.01	0.01	0.00	0.10	0.01	0.18
d_M, Delay for Movement [s/veh]	8.88	0.00	0.00	10.65	0.00	0.00	23.92	26.32	10.43	28.92	28.47	15.78
Movement LOS	A	A	A	B	A	A	C	D	B	D	D	C
95th-Percentile Queue Length [veh]	0.05	0.00	0.00	0.19	0.00	0.00	0.04	0.04	0.04	1.17	1.17	1.17
95th-Percentile Queue Length [ft]	1.29	0.00	0.00	4.70	0.00	0.00	0.95	0.95	0.95	29.23	29.23	29.23
d_A, Approach Delay [s/veh]	0.14			0.63			20.22			18.02		
Approach LOS	A			A			C			C		
d_I, Intersection Delay [s/veh]	1.44											
Intersection LOS	D											

MOVEMENT SUMMARY

Site: S. Carson / Sonoma - AM Peak

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: S. Carson Street											
3	L2	15	3.0	0.481	9.0	LOS A	2.8	72.7	0.22	0.09	33.3
8	T1	988	3.0	0.481	9.0	LOS A	2.8	72.7	0.22	0.09	33.2
18	R2	8	3.0	0.481	9.0	LOS A	2.8	72.7	0.22	0.09	32.2
Approach		1011	3.0	0.481	9.0	LOS A	2.8	72.7	0.22	0.09	33.2
East: Sonoma St.											
1	L2	61	3.0	0.286	10.9	LOS B	0.8	20.7	0.60	0.61	31.4
6	T1	1	3.0	0.286	10.9	LOS B	0.8	20.7	0.60	0.61	31.3
16	R2	90	3.0	0.286	10.9	LOS B	0.8	20.7	0.60	0.61	30.5
Approach		152	3.0	0.286	10.9	LOS B	0.8	20.7	0.60	0.61	30.9
North: S. Carson St.											
7	L2	39	3.0	0.326	6.9	LOS A	1.5	38.3	0.25	0.13	34.1
4	T1	604	3.0	0.326	6.9	LOS A	1.5	38.3	0.25	0.13	34.1
14	R2	16	3.0	0.326	6.9	LOS A	1.5	38.3	0.25	0.13	33.2
Approach		660	3.0	0.326	6.9	LOS A	1.5	38.3	0.25	0.13	34.1
West: Driveway											
5	L2	1	3.0	0.005	5.5	LOS A	0.0	0.3	0.42	0.32	34.1
2	T1	1	3.0	0.005	5.5	LOS A	0.0	0.3	0.42	0.32	34.0
12	R2	1	3.0	0.005	5.5	LOS A	0.0	0.3	0.42	0.32	33.0
Approach		3	3.0	0.005	5.5	LOS A	0.0	0.3	0.42	0.32	33.7
All Vehicles		1826	3.0	0.481	8.4	LOS A	2.8	72.7	0.26	0.15	33.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection Level Of Service Report
Intersection 2: Carson / Sonoma

Control Type:	Signalized	Delay (sec / veh):	4.9
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.347

Intersection Setup

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Base Volume Input [veh/h]	14	909	7	36	556	15	1	1	1	56	1	83
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	909	7	36	556	15	1	1	1	56	1	83
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	242	2	10	148	4	0	0	0	15	0	22
Total Analysis Volume [veh/h]	15	967	7	38	591	16	1	1	1	60	1	88
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	40	74	0	95	74	0	0	46	0	0	46	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
L, Total Lost Time per Cycle [s]	0.00	4.00	4.00	0.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0	8	8	0	8	8	3	3
g / C, Green / Cycle	0.00	0.43	0.43	0.00	0.43	0.43	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.26	0.07	0.17	0.01	0.00	0.09
s, saturation flow rate [veh/h]	756	1863	1858	528	3547	1583	1825	1745
c, Capacity [veh/h]	376	810	808	376	1543	689	519	521
d1, Uniform Delay [s]	9.58	4.14	4.14	9.58	3.67	3.09	6.98	7.57
k, delay calibration	0.50	0.11	0.11	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.20	0.72	0.72	0.54	0.16	0.01	0.00	0.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

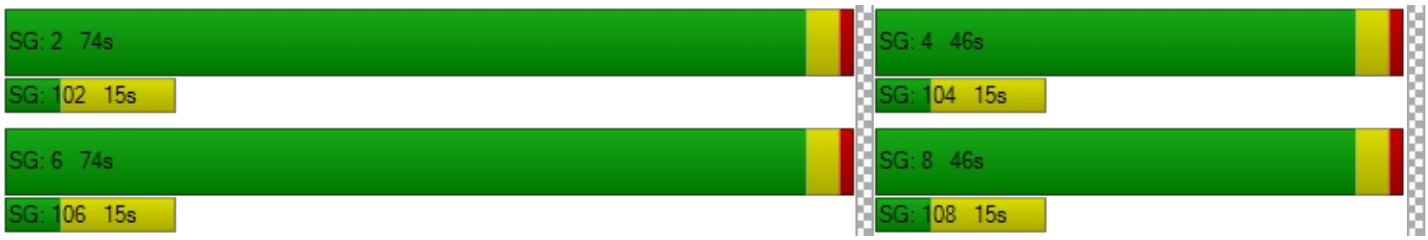
X, volume / capacity	0.04	0.60	0.60	0.10	0.38	0.02	0.01	0.29
d, Delay for Lane Group [s/veh]	9.77	4.86	4.86	10.11	3.82	3.10	6.98	7.87
Lane Group LOS	A	A	A	B	A	A	A	A
Critical Lane Group	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.06	0.24	0.23	0.15	0.07	0.00	0.01	0.31
50th-Percentile Queue Length [ft]	1.44	5.88	5.87	3.87	1.81	0.11	0.14	7.70
95th-Percentile Queue Length [veh]	0.10	0.42	0.42	0.28	0.13	0.01	0.01	0.55
95th-Percentile Queue Length [ft]	2.59	10.58	10.57	6.96	3.26	0.20	0.25	13.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	9.77	4.86	4.86	10.11	3.82	3.10	6.98	6.98	6.98	7.87	7.87	7.87
Movement LOS	A	A	A	B	A	A	A	A	A	A	A	A
d_A, Approach Delay [s/veh]	4.94			4.18			6.98			7.87		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.91											
Intersection LOS	A											
Intersection V/C	0.347											

Sequence

Ring 1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Carson / Sonoma

Control Type:	Two-way stop	Delay (sec / veh):	63.6
Analysis Method:	HCM 2010	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.143

Intersection Setup

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	300.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			Yes		

Volumes

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Base Volume Input [veh/h]	3	864	25	79	1335	8	9	1	7	12	1	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	864	25	79	1335	8	9	1	7	12	1	53
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	230	7	21	355	2	2	0	2	3	0	14
Total Analysis Volume [veh/h]	3	919	27	84	1420	9	10	1	7	13	1	56
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			Yes	Yes
Number of Storage Spaces in Median	0	0	1	1

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.00	0.12	0.01	0.00	0.14	0.01	0.02	0.10	0.01	0.10
d_M, Delay for Movement [s/veh]	12.68	0.00	0.00	10.65	0.00	0.00	63.56	53.62	21.68	35.12	45.97	14.63
Movement LOS	B	A	A	B	A	A	F	F	C	E	E	B
95th-Percentile Queue Length [veh]	0.02	0.00	0.00	0.39	0.00	0.00	0.59	0.59	0.59	0.79	0.79	0.79
95th-Percentile Queue Length [ft]	0.48	0.00	0.00	9.84	0.00	0.00	14.87	14.87	14.87	19.80	19.80	19.80
d_A, Approach Delay [s/veh]	0.04			0.59			46.72			18.89		
Approach LOS	A			A			E			C		
d_I, Intersection Delay [s/veh]	1.21											
Intersection LOS	F											

MOVEMENT SUMMARY

Site: S. Carson / Sonoma - PM Peak

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: S. Carson Street											
3	L2	3	3.0	0.609	12.1	LOS B	4.3	108.9	0.43	0.26	31.9
8	T1	961	3.0	0.609	12.1	LOS B	4.3	108.9	0.43	0.26	31.7
18	R2	245	3.0	0.609	12.1	LOS B	4.3	108.9	0.43	0.26	30.8
Approach		1209	3.0	0.609	12.1	LOS B	4.3	108.9	0.43	0.26	31.5
East: Sonoma St.											
1	L2	46	3.0	0.192	9.1	LOS A	0.5	12.9	0.56	0.56	32.1
6	T1	1	3.0	0.192	9.1	LOS A	0.5	12.9	0.56	0.56	32.0
16	R2	58	3.0	0.192	9.1	LOS A	0.5	12.9	0.56	0.56	31.1
Approach		104	3.0	0.192	9.1	LOS A	0.5	12.9	0.56	0.56	31.6
North: S. Carson St.											
7	L2	86	3.0	0.742	16.4	LOS C	7.7	195.9	0.43	0.21	29.9
4	T1	1451	3.0	0.742	16.4	LOS C	7.7	195.9	0.43	0.21	29.9
14	R2	9	3.0	0.742	16.4	LOS C	7.7	195.9	0.43	0.21	29.2
Approach		1546	3.0	0.742	16.4	LOS C	7.7	195.9	0.43	0.21	29.9
West: Driveway											
5	L2	10	3.0	0.053	11.1	LOS B	0.1	3.2	0.69	0.69	31.0
2	T1	1	3.0	0.053	11.1	LOS B	0.1	3.2	0.69	0.69	31.0
12	R2	8	3.0	0.053	11.1	LOS B	0.1	3.2	0.69	0.69	30.1
Approach		18	3.0	0.053	11.1	LOS B	0.1	3.2	0.69	0.69	30.7
All Vehicles		2877	3.0	0.742	14.3	LOS B	7.7	195.9	0.44	0.25	30.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection Level Of Service Report
Intersection 2: Carson / Sonoma

Control Type:	Signalized	Delay (sec / veh):	7.6
Analysis Method:	HCM 2010	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

Intersection Setup

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Carson Street			Carson Street			Driveway			Sonoma Street		
Base Volume Input [veh/h]	3	864	25	79	1335	8	9	1	7	42	1	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	864	25	79	1335	8	9	1	7	42	1	53
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	216	6	20	334	2	2	0	2	11	0	13
Total Analysis Volume [veh/h]	3	864	25	79	1335	8	9	1	7	42	1	53
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	60	0	20	71	0	0	40	0	0	40	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	C	C
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	0	16	16	3	18	18	3	3
g / C, Green / Cycle	0.00	0.47	0.47	0.08	0.55	0.55	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.00	0.27	0.27	0.05	0.42	0.01	0.01	0.06
s, saturation flow rate [veh/h]	1597	1676	1660	1597	3192	1425	1543	1552
c, Capacity [veh/h]	7	797	789	126	1755	783	302	293
d1, Uniform Delay [s]	16.72	6.33	6.33	15.03	5.87	3.43	14.11	14.84
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	35.60	0.62	0.63	5.01	0.70	0.01	0.08	0.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.56	0.56	0.63	0.76	0.01	0.06	0.33
d, Delay for Lane Group [s/veh]	52.32	6.95	6.95	20.03	6.57	3.44	14.19	15.49
Lane Group LOS	D	A	A	C	A	A	B	B
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh]	0.09	1.36	1.35	0.65	1.68	0.01	0.10	0.62
50th-Percentile Queue Length [ft]	2.23	34.07	33.77	16.24	42.12	0.29	2.57	15.62
95th-Percentile Queue Length [veh]	0.16	2.45	2.43	1.17	3.03	0.02	0.19	1.12
95th-Percentile Queue Length [ft]	4.01	61.33	60.79	29.24	75.82	0.53	4.63	28.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.32	6.95	6.95	20.03	6.57	3.44	14.19	14.19	14.19	15.49	15.49	15.49
Movement LOS	D	A	A	C	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	7.10			7.30			14.19			15.49		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	7.60											
Intersection LOS	A											
Intersection V/C	0.482											

Sequence

Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

STAFF REPORT

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

Meeting Date: November 14, 2018

Staff Contact: Lucia Maloney, Transportation Manager and Stephanie Hicks, Real Property Manager

Agenda Title: (For Information Only) Information on the status of right-of-way relinquishments and land transfers between Carson City and the Nevada Department of Transportation (NDOT) for portions of South Carson Street, the frontage roads, Snyder Avenue and related surplus parcels along the IR 580 corridor.

Staff Summary: In August 2017, NDOT opened Phase 2B-3 of the Carson City Freeway extending the link between Reno and Carson City. In 2016 Carson City entered into Highway Agreement No. R386-04-002 with NDOT where Carson City agreed to take ownership of right-of-way on South Carson Street, the frontage roads, Snyder Avenue, and additional surplus parcels. Staff will provide an update on the status of these relinquishments.

Agenda Action: Other/Presentation **Time Requested:** 10 minutes

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Proposed Motion
N/A

Background/Issues & Analysis
In April 1997, Carson City and NDOT entered into an agreement to facilitate the construction of Phase 1 of the Carson City Freeway (Carson City Bypass), a limited access freeway passing downtown Carson City on the east side of Carson City, from US-395 north at Lakeview Hill to the intersection of US-395/US-50 south. Several amendments to the agreement transpired over the years which identified maintenance responsibilities and funding obligations, as well as right-of-way and parcels to be relinquished to Carson City upon completion of the bypass.

Following the opening of Phase 2B-3, on April 30, 2018, NDOT submitted the Resolution Consenting to Relinquishment and Land Transfer Agreement for the ownership of right-of-way on South Carson Street, the frontage roads, Snyder Avenue, and additional surplus parcels to be relinquished to the City. On October 18, 2018, the Carson City Board of Supervisors adopted four resolutions, for the four areas noted above, which initiates the process for NDOT to begin its preparation of the detailed resolutions of relinquishment that will be taken to the November 14th NDOT Board. The Board of Supervisors directed staff to review the November 2018 State Transportation Board Agenda and supporting materials, as well as, to attend the November 2018 State Transportation Board Meeting to enter public comment, if appropriate, on the associated legal documents, maps, permits, et al that staff feels are under appropriate review for Carson City.

Applicable Statute, Code, Policy, Rule or Regulation
NRS 277.180 Interlocal Contracts; NRS 408.527 Procedure for relinquishment of roadways

Financial Information
Is there a fiscal impact? ☐ Yes ☒ No

If yes, account name/number:

Is it currently budgeted? ☐ Yes ☐ No

Explanation of Fiscal Impact: N/A

Supporting Material
-Exhibit-1: October 18, 2018 Board of Supervisors Item #19 including resolutions consenting to relinquishments and land transfer

Board Action Taken:

Motion: _____ 1) _____ Aye/Nay
2) _____ _____
_____
_____
_____

_____
(Vote Recorded By)

STAFF REPORT

Report To: Board of Supervisors **Meeting Date:** October 18, 2018

Staff Contact: Darren Schulz, Public Works Director

Agenda Title: For Possible Action: To adopt the following Resolutions Consenting to Relinquishments and Land Transfer Agreements between Carson City and the State of Nevada, Department of Transportation for:
1. Approximately 1.83 miles of South Carson Street including portions of frontage road extending from the northerly right-of-way line of IR-580 to the southerly right-of-way line of Fairview Drive;
2. Approximately 1,485 feet of frontage road extending from Arthur Street to south of Clear Creek Avenue;
3. Approximately 1 mile of Snyder Avenue extending east from the easterly line of South Carson Street; and
4. Eighteen (18) surplus parcels located along the IR-580 corridor from Colorado Street to South Carson Street.
(Dan Stucky, DStucky@carson.org; Lucia Maloney, LMaloney@carson.org; and Stephanie Hicks, SHicks@carson.org)

Staff Summary: In August 2017, State of Nevada, Department of Transportation (NDOT) opened Phase 2B-3 of the Carson City Freeway completing the link between Reno and Carson City. In 2016 Carson City entered into Highway Agreement No. R386-04-002 with NDOT, where Carson City agreed to take ownership of right-of-way on South Carson Street, the frontage roads, Snyder Avenue and additional surplus parcels that are listed in the supporting documentation. These resolutions of consent are the beginning of the formal process that is followed in order for NDOT to begin its preparation of the detailed resolutions of relinquishment that will be taken to the NDOT Board.

Agenda Action: Formal Action/Motion **Time Requested:** 20 minutes

---

Proposed Motion

I move to adopt the four resolutions consenting to relinquishments and land transfer agreements between Carson City and the State of Nevada, Department of Transportation as described on the record.

Board's Strategic Goal

Quality of Life

Previous Action

April 1, 1997 - Board of Supervisors and NDOT entered into Agreement No. R159-97-060 to facilitate the construction of Phase 1 of the Carson City Freeway (Carson City Bypass), which included preliminary engineering, right-of-way acquisition, construction, and construction engineering.

October 14, 2004 - Board of Supervisors and NDOT entered into Agreement No. R386-04-002, constituting Amendment No. 1 to Agreement No. R159-97-060, for the purpose of addressing construction of Phase 2 of the Carson City Freeway (Carson City Bypass) and addressing Carson's financial contribution to Phase 2.

December 27, 2007 - Board of Supervisors and NDOT entered into Amendment No. 2 to Agreement No. R159-97-060 as amended by Agreement No. R386-04-002, in order to modify Carson City's remaining Phase 1 funding obligation by identifying certain portions of State highways, along with attendant maintenance responsibilities to be relinquished to Carson City by NDOT.

September 4, 2009 - Board of Supervisors and NDOT entered into Amendment No. 3 to Agreement No. R159-97-060 as amended by Agreement No. R386-04-002, in order to modify Carson City's remaining Phase 2 funding obligation, whereby State highways, along with attendant maintenance responsibilities, were relinquished to Carson City.

August 10, 2016 - Board of Supervisors and NDOT entered into Amendment No. 4 to Agreement R159-97-060 as amended by Highway Agreement No. R386-04-002, to provide for the transfer from NDOT to Carson City of portions of State Highways and their attendant maintenance duties, obligations, and responsibilities, and in order to modify Carson City's remaining funding obligations for Phase 2 of the Carson City Freeway.

Background/Issues & Analysis

In April 1997, Carson City and NDOT entered into an agreement to facilitate the construction of Phase 1 of the Carson City Freeway (Carson City Bypass), a limited access freeway passing downtown Carson City on the east side of Carson City, from US-395 north at Lakeview Hill to the intersection of US-395/US-50 south. Several amendments to the agreement transpired over the years which identified maintenance responsibilities and funding obligations, as well as right-of-way and parcels to be relinquished to Carson City upon completion of the bypass.

In August 2017, NDOT opened Phase 2B-3 of the Carson City Freeway completing the link between Reno and Carson City. In anticipation of receipt of the South Carson Street right-of-way, in July of 2016 Carson City embarked on a planning effort, the South Carson Street Complete Streets Corridor Study, to evaluate 2.5 miles of South Carson Street for conceptual design alternatives. The study was completed in June of 2017 and provided a recommended conceptual design which was vetted and approved by the public. The Carson City Gateway: South Carson Street Complete Street Project includes a corridor-wide road diet, narrowed travel lanes, a modern roundabout, a multi-use path with landscaping buffer, dedicated bicycle facilities, pedestrian safety measures, ADA-compliant sidewalks and curb ramps, gray and green stormwater infrastructure, lighting fixtures, new signals, and fiber optic communications.

In October 2017, Carson City submitted an application for a $7.5 million Transportation Investment Generating Economic Recovery (TIGER) Grant in order to implement the Carson City Gateway: South Carson Street Complete Streets Project. In March of 2018, Carson City was notified of award of the $7.5 million which will be used to transform South Carson Street from a state-owned major arterial into a calmer, City-owned multimodal street.

Pursuant to the previously approved agreements, on April 30, 2018, NDOT submitted the Resolution Consenting to Relinquishment and Land Transfer Agreement for the remaining four areas to be relinquished to the City. The Department of Transportation, Board of Directors will need to hear and approve these relinquishments in order to finalize the transfer of right-of-way and land. Following this approval, NDOT will provide to the City all documentation related to the relinquished right-of-way and surplus parcels including lease and license documentation, legal descriptions, right-of-way maps, active permits, maintenance records, as-built plans and structural details.

Applicable Statute, Code, Policy, Rule or Regulation

NRS 277.180 Interlocal Contracts; NRS 408.527 Procedure for relinquishment of roadways

Financial Information

Is there a fiscal impact? ☐ Yes ☒ No

If yes, account name/number:

Is it currently budgeted? ☐ Yes ☒ No

Explanation of Fiscal Impact:

Alternatives

Do not move to adopt Resolutions.

Propose modified motion.

Board Action Taken:

Motion: App

1) BB
2) KA

Aye/Nay 5/0

JM
(Vote Recorded By)

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
1263 S. Stewart Street
Carson City, Nevada 89712

BRIAN SANDOVAL
Governor

RUDY MALFABON, P.E., *Director*

April 30, 2018

In Reply, Refer to:

CARSON CITY
LUCIA MALONEY
TRANSPORTATION MANAGER
3505 BUTTI WAY
CARSON CITY NV 89701

Resolution Consenting to Relinquishment
Road Transfer No.: RT 16-02A1
All of Route: SR-529 (Carson Street)
Parcel: S-529-CC-000.157 RT1

Dear Ms. Maloney:

Please find enclosed is a Resolution Consenting to Relinquishment and Land Transfer Agreement for Road Transfer Parcel S-529-CC-000.157 RT1 owned by the Nevada Department of Transportation located in Carson City, Nevada.

Please present the Consent to Carson City Board of Supervisors, obtain the required signatures and return it to me at 1263 S. Stewart Street, Carson City, NV 89712 at your earliest convenience. I may be contacted at (775) 888-7195 or by email at Dcallahan@dot.nv.gov should you have questions regarding this land transfer.

Sincerely,

D Callahan

Diana Callahan
Staff Specialist, Acquisitions

dtc/ak
Enclosure
cc: G. Shull, Assistant Chief Right-of-Way Agent
J. Henkelman, Manager PLS Right-of-Way
S. Hicks, Real Property Manager

302
[CC]

Control Section: CC-02
Routes: SR-529 (Carson Street) and FRCC01 frontage road
Road Transfer No.: RT 16-02A1
Surplus Parcel: S-529-CC-000.157 RT1

RESOLUTION CONSENTING TO RELINQUISHMENT
AND LAND TRANSFER AGREEMENT

WHEREAS, the State of Nevada, Department of Transportation, hereinafter called the Department, desires to relinquish all of SR-529 (Carson Street) including portions of FRCC01 frontage road, lying within Carson City, State of Nevada, extending from the northerly right-of-way line of IR-580 at approximate Highway Engineer's Station "PE" 47+23.75 P.O.T. to the southerly right-of-way line of Fairview Drive at approximate Highway Engineer's Station "PE" 143+95.16 P.O.T., a distance of approximately 1.83 miles, said right-of-way is delineated and identified as Parcel S-529-CC-000.157 RT1 on EXHIBIT "A" attached hereto and made a part hereof; and

WHEREAS, the Carson City Board of Supervisors desires that the aforesaid highway be relinquished to Carson City; and

WHEREAS, Carson City has requested the relinquishment of aforesaid highway for the purpose of a transportation facility; and

WHEREAS, Carson City has agreed to accept the relinquishment of said right-of-way for the aforesaid SR-529 (Carson Street) together with any and all revocable leases and licenses entered into between the Department and the adjoining owners for the multiple use of the right-of-way.

NOW THEREFORE be it resolved that the Carson City Board of Supervisors does in consideration of the actions of the Department as set forth herein, hereby consent to the State of Nevada, Department of Transportation, Board of Directors, relinquishing to Carson City, all of SR-529 (Carson Street) including portions of FRCC01 frontage road, lying within Carson City, State of Nevada, extending from the northerly right-of-way line of IR-580 at approximate Highway Engineer's Station "PE" 47+23.75 P.O.T. to the southerly right-of-way line of Fairview Drive at approximate Highway Engineer's Station "PE" 143+95.16 P.O.T., a distance of approximately 1.83 miles, said right-of-way is delineated and identified as Parcel S-529-CC-000.157 RT1 on EXHIBIT "A" attached hereto and made a part hereof.

The parties acknowledge that no relinquishment can occur until the Department of Transportation, Board of Directors approves of this relinquishment.

IN WITNESS WHEREOF the parties hereto have executed this agreement dated this _____. day of _____, 20___.

REVIEWED AND RECOMMENDED BY:

_____
Board of Supervisors Chairperson

REVIEWED AND RECOMMENDED BY:

_____
Chief Right-of-Way Agent

APPROVED FOR LEGALITY AND FORM:

_____
Carson City District Attorney

APPROVED AS TO LEGALITY AND FORM:

_____
Deputy Attorney General

ATTEST:

_____
Clerk-Recorder

STATE

SEAL

STATE OF NEVADA acting by and through its Department of Transportation

_____
Director

STATE OF NEVADA
CARSON CITY

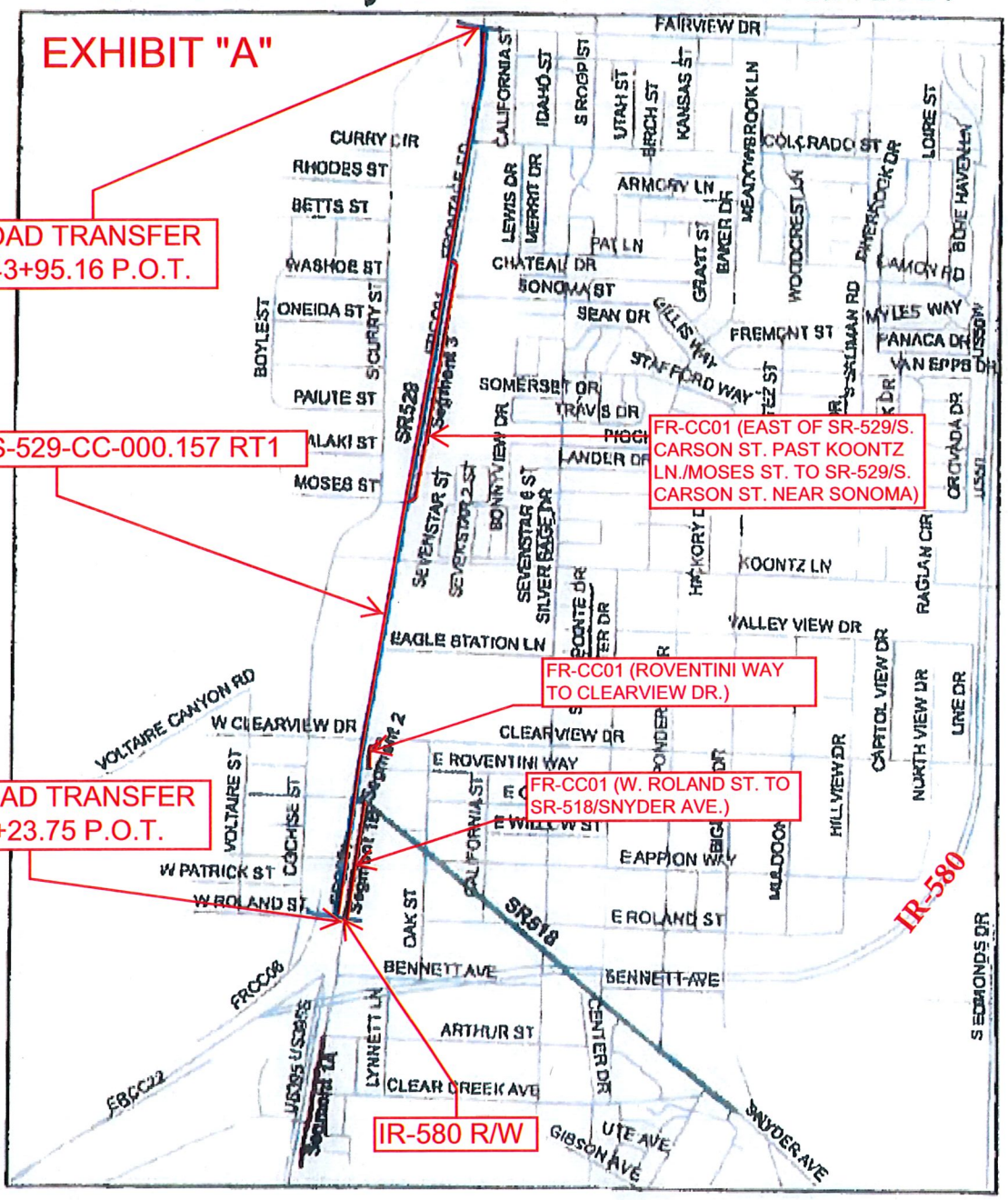
On this _____ day of _____, 20___, personally appeared before me, the undersigned, a Notary Public in and for Carson City, State of Nevada, _____personally known (or proved) to me to be the _____Director of the Department of Transportation of the State of Nevada who subscribed to the above instrument for the Nevada Department of Transportation under authorization of Nevada Revised Statutes, Chapter 408.205; that he/she affirms that the seal affixed to said instrument is the seal of said Department; and that said instrument was executed for the Nevada Department of Transportation freely and voluntarily and for the uses and purposes therein mentioned.

SEAL

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

_____

Carson City /NDOT Road Transfer



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
1263 S. Stewart Street
Carson City, Nevada 89712

BRIAN SANDOVAL
Governor

April 30, 2018

RUDY MALFABON, P.E., *Director*

In Reply, Refer to:

CARSON CITY
LUCIA MALONEY
TRANSPORTATION MANAGER
3505 BUTTI WAY
CARSON CITY NV 89701

Resolution Consenting to Relinquishment
Road Transfer No.: RT 16-02A2
Project No.: MG-395-1(006)
Parcel: U-395-CC-000.159 RT1

Dear Ms. Maloney:

Please find enclosed is a Resolution Consenting to Relinquishment and Land Transfer Agreement for Road Transfer Parcel U-395-CC-000.159 RT1 owned by the Nevada Department of Transportation located in Carson City, Nevada.

Please present the Consent to Carson City Board of Supervisors, obtain the required signatures and return it to me at 1263 S. Stewart Street, Carson City, NV 89712 at your earliest convenience. I may be contacted at (775) 888-7195 or by email at Dcallahan@dot.nv.gov should you have questions regarding this land transfer.

Sincerely,

D. Callahan

Diana Callahan
Staff Specialist, Acquisitions

dtc/ak
Enclosure
cc: G. Shull, Assistant Chief Right-of-Way Agent
J. Henkelman, Manager PLS Right-of-Way
S. Hicks, Real Property Manager

302
[CC]

Control Section: CC-04
Route: US-395 (FRCC01 frontage road)
Project: MG-395-1(006)
E.A.: 71366
Ptn. of Parcels: U-050-CC-007.513 and U-050-CC-007.537
Road Transfer No.: RT 16-02A2
Surplus Parcel: U-395-CC-000.159 RT1

RESOLUTION CONSENTING TO RELINQUISHMENT
AND LAND TRANSFER AGREEMENT

WHEREAS, the State of Nevada, Department of Transportation, hereinafter called the Department, desires to relinquish a portion of FRCC01 frontage road along the east side of US-395 lying within Carson City, State of Nevada, extending from approximate Highway Engineer's Station "XN" 614+75.09 P.O.T., 0.096 miles south of Clear Creek Avenue (formerly known as Lupin Drive) to approximate Highway Engineer's Station "XN" 629+59.61 P.O.T. at Arthur Street, a distance of approximately 1,485 feet, said right-of-way is delineated and identified as Parcel U-395-CC-000.159 RT1 on EXHIBIT "A" attached hereto and made a part hereof; and

WHEREAS, the Carson City Board of Supervisors desires that the aforesaid portion of said highway be relinquished to Carson City; and

WHEREAS, Carson City has requested the relinquishment of aforesaid portion of highway for the purpose of a transportation facility; and

WHEREAS, Carson City has agreed to accept the relinquishment of said right-of-way for the aforesaid portion of FRCC01 frontage road together with any and all revocable leases and licenses entered into between the Department and the adjoining owners for the multiple use of the right-of-way.

NOW THEREFORE be it resolved that the Carson City Board of Supervisors does in consideration of the actions of the Department as set forth herein, hereby consent to the State of Nevada, Department of Transportation, Board of Directors, relinquishing to Carson City, that portion of FRCC01 frontage road along the east side of US-395 lying within Carson City, State of Nevada, extending from approximate Highway Engineer's Station "XN" 614+75.09 P.O.T., 0.096 miles south of Clear Creek Avenue (formerly known as Lupin Drive) to approximate Highway Engineer's Station "XN" 629+59.61 P.O.T. at Arthur Street, a distance of approximately 1,485 feet, said right-of-way is delineated and identified as Parcel U-395-CC-000.159 RT1 on-EXHIBIT "A" attached hereto and made a part hereof.

The parties acknowledge that no relinquishment can occur until the Department of Transportation, Board of Directors approves of this relinquishment.

IN WITNESS WHEREOF the parties hereto have executed this agreement dated this _____. day of _____, 20___.

IN WITNESS WHEREOF the parties hereto have executed this agreement dated this _____. day of _____, 20___.

REVIEWED AND RECOMMENDED BY:

_____
Board of Supervisors Chairperson

REVIEWED AND RECOMMENDED BY:

_____
Chief Right-of-Way Agent

APPROVED FOR LEGALITY AND FORM:

_____
Carson City District Attorney

APPROVED AS TO LEGALITY AND FORM:

_____
Deputy Attorney General

ATTEST:

_____
Clerk-Recorder

S
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STATE OF NEVADA acting by and through its Department of Transportation

_____
Director

STATE OF NEVADA
CARSON CITY

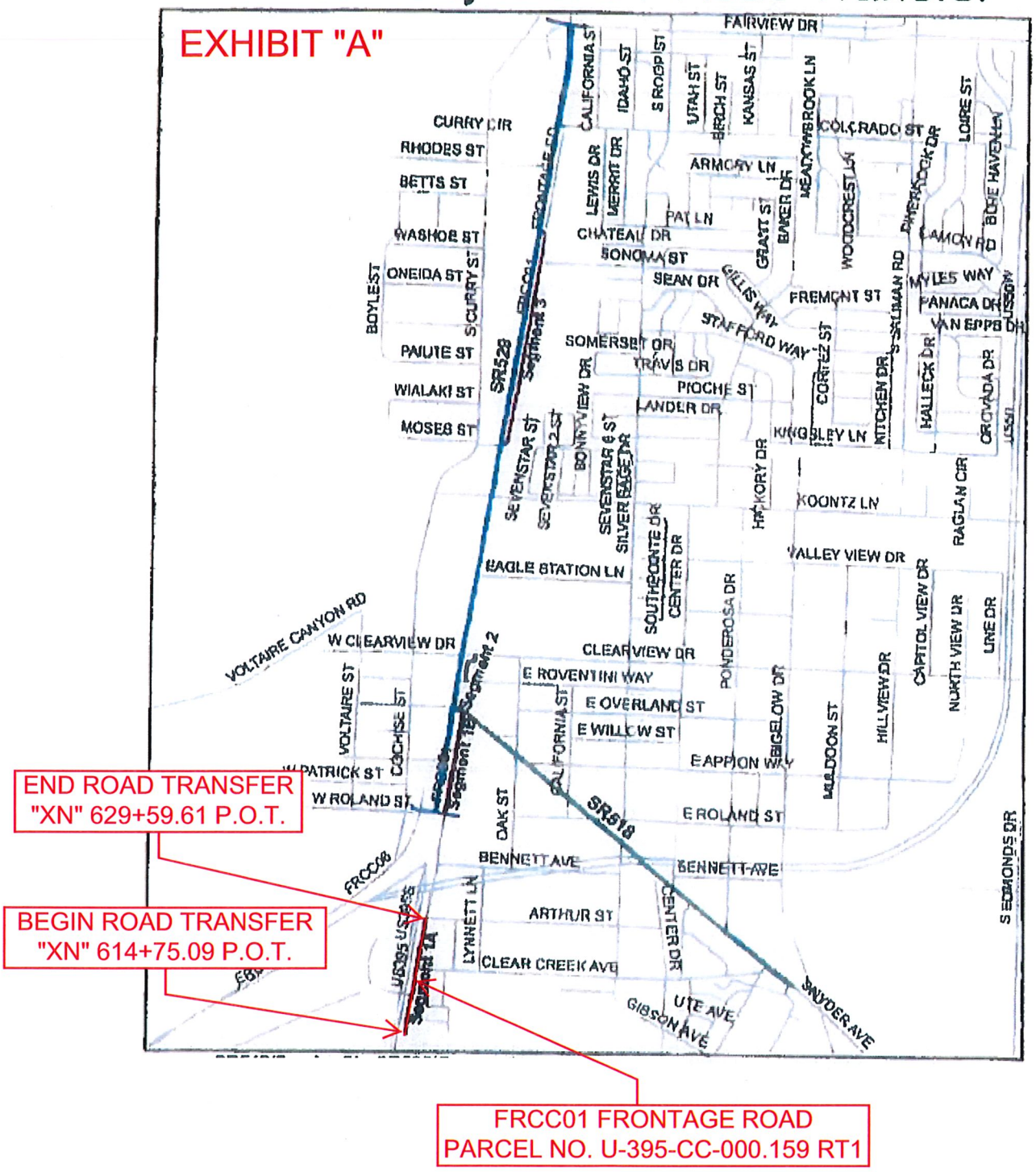
On this _____ day of _____, 20___, personally appeared before me, the undersigned, a Notary Public in and for Carson City, State of Nevada, _____personally known (or proved) to me to be the _____Director of the Department of Transportation of the State of Nevada who subscribed to the above instrument for the Nevada Department of Transportation under authorization of Nevada Revised Statutes, Chapter 408.205; that he/she affirms that the seal affixed to said instrument is the seal of said Department; and that said instrument was executed for the Nevada Department of Transportation freely and voluntarily and for the uses and purposes therein mentioned.

S
E
A
L

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

_____

Carson City /NDOT Road Transfer



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
1263 S. Stewart Street
Carson City, Nevada 89712

BRIAN SANDOVAL
Governor

April 30, 2018

RUDY MALFABON, P.E., *Director*

In Reply, Refer to:

CARSON CITY
LUCIA MALONEY
TRANSPORTATION MANAGER
3505 BUTTI WAY
CARSON CITY NV 89701

Resolution Consenting to Relinquishment
Road Transfer No.: RT 16-02A3
All of Route: SR-518 (Snyder Ave.)
Parcel: S-518-CC-000.040 RT1

Dear Ms. Maloney:

Please find enclosed is a Resolution Consenting to Relinquishment and Land Transfer Agreement for Road Transfer Parcel S-518-CC-000.040 RT1 owned by the Nevada Department of Transportation located in Carson City, Nevada.

Please present the Consent to Carson City Board of Supervisors, obtain the required signatures and return it to me at 1263 S. Stewart Street, Carson City, NV 89712 at your earliest convenience. I may be contacted at (775) 888-7195 or by email at Dcallahan@dot.nv.gov should you have questions regarding this land transfer.

Sincerely,

D Callahan

Diana Callahan
Staff Specialist, Acquisitions

dtc/ak
Enclosure
cc: G. Shull, Assistant Chief Right-of-Way Agent
J. Henkelman, Manager PLS Right-of-Way
S. Hicks, Real Property Manager

302
[CC]

Control Section: CC-12
Route: SR-518 (Snyder Avenue)
Road Transfer No.: RT 16-02A3
Surplus Parcel: S-518-CC-000.040 RT1

RESOLUTION CONSENTING TO RELINQUISHMENT
AND LAND TRANSFER AGREEMENT

WHEREAS, the State of Nevada, Department of Transportation, hereinafter called the Department, desires to relinquish all of SR-518 (Snyder Avenue) lying within Carson City, State of Nevada, extending from the easterly right-of-way line of SR-529 (Carson Street) at approximate Highway Engineer's Station "SY" 27+00.00 P.O.T. to approximate Highway Engineer's Station "SY" 76+74.03 P.O.T., a distance of approximately 1 mile, said right-of-way is delineated and identified as Parcel S-518-CC-000.040 RT1 on EXHIBIT "A" attached hereto and made a part hereof; and

WHEREAS, the Carson City Board of Supervisors desires that the aforesaid highway be relinquished to Carson City; and

WHEREAS, Carson City has requested the relinquishment of aforesaid highway for the purpose of a transportation facility; and

WHEREAS, Carson City has agreed to accept the relinquishment of said right-of-way for the aforesaid SR-518 (Snyder Avenue) together with any and all revocable leases and licenses entered into between the Department and the adjoining owners for the multiple use of the right-of-way.

NOW THEREFORE be it resolved that the Carson City Board of Supervisors does in consideration of the actions of the Department as set forth herein, hereby consent to the State of Nevada, Department of Transportation, Board of Directors, relinquishing to Carson City, all of SR-518 (Snyder Avenue) lying within Carson City, State of Nevada, extending from the easterly right-of-way line of SR-529 (Carson Street) at approximate Highway Engineer's Station "SY" 27+00.00 P.O.T. to approximate Highway Engineer's Station "SY" 76+74.03 P.O.T., a distance of approximately 1 mile, said right-of-way is delineated and identified as Parcel S-518-CC-000.040 RT1 on EXHIBIT "A" attached hereto and made a part hereof.

The parties acknowledge that no relinquishment can occur until the Department of Transportation, Board of Directors approves of this relinquishment.

IN WITNESS WHEREOF the parties hereto have executed this agreement dated this _____. day of _____, 20___.

REVIEWED AND RECOMMENDED BY:

_____
Board of Supervisors Chairperson

REVIEWED AND RECOMMENDED BY:

_____
Chief Right-of-Way Agent

APPROVED FOR LEGALITY AND FORM:

_____
Carson City District Attorney

APPROVED AS TO LEGALITY AND FORM:

_____
Deputy Attorney General

ATTEST:

_____
Clerk-Recorder

STATE

SEAL

STATE OF NEVADA acting by and through its Department of Transportation

_____
Director

STATE OF NEVADA
CARSON CITY

On this _____ day of _____, 20___, personally appeared before me, the undersigned, a Notary Public in and for Carson City, State of Nevada, _____personally known (or proved) to me to be the _____Director of the Department of Transportation of the State of Nevada who subscribed to the above instrument for the Nevada Department of Transportation under authorization of Nevada Revised Statutes, Chapter 408.205; that he/she affirms that the seal affixed to said instrument is the seal of said Department; and that said instrument was executed for the Nevada Department of Transportation freely and voluntarily and for the uses and purposes therein mentioned.

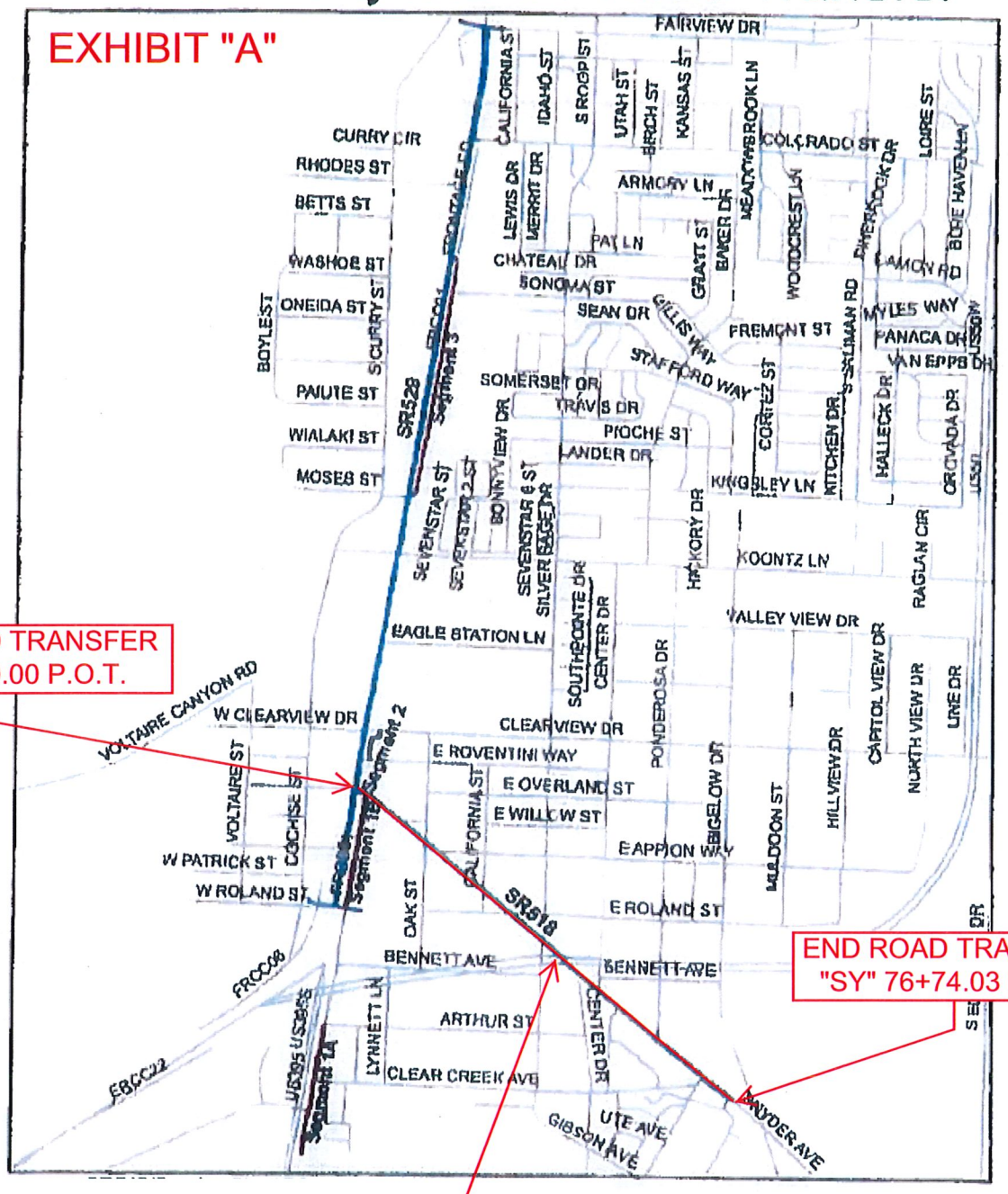
SEAL

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

_____

Carson City /NDOT Road Transfer

EXHIBIT "A"



BEGIN ROAD TRANSFER
"SY" 27+00.00 P.O.T.

END ROAD TRANSFER
"SY" 76+74.03 P.O.T.

PARCEL NO. S-518-CC-000.040 RT1

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
1263 S. Stewart Street
Carson City, Nevada 89712

BRIAN SANDOVAL
Governor

RUDY MALFABON, P.E., *Director*

April 30, 2018

In Reply, Refer to:

CARSON CITY
LUCIA MALONEY
TRANSPORTATION MANAGER
3505 BUTTI WAY
CARSON CITY NV 89701

Resolution Consenting to Relinquishment

Carson City Property Exchange
Project: MG-395-1(006)
E.A.: 71366
Parcels: U-050-CC-007.553 EX1, 007.620 EX1. 007.653 EX1, 007.715 EX1, 007.716 EX1, 007.746 EX1, 007.780 EX1, 007.780 EX2, 007.999 EX1, 009.091 EX1, 009.330 EX1, 009.393 EX1, 009.453PE EX1, 009.453PE EX1, 009.759 EX1, 009.824 EX1, 010.019 EX1, 010.400PE EX1

Dear Ms. Maloney:

Please find enclosed is a Resolution Consenting to Relinquishment and Land Transfer Agreement for the above surplus parcels owned by the Nevada Department of Transportation located in Carson City, Nevada, pursuant to Interlocal Agreement No. PR251-12-015.

Please present the Consent to the Carson City Board of Supervisors for approval, obtain the required signatures and return it to me at 1263 S. Stewart Street, Carson City, NV 89712 at your earliest convenience. I may be contacted at (775) 888-7195 or by email at Dcallahan@dot.nv.gov should you have questions regarding this land transfer.

Sincerely,

Diana Callahan
Staff Specialist, Acquisitions

dtc/
Enclosures
cc: G. Shull, Assistant Chief Right-of-Way Agent
J. Henkelman, Manager PLS, R/W
S. Hicks, Real Property Manager

302
(City)

Ptns. of Assessor's Book 9 Page 19
Book 9 Page 20
Book 9 Page 21
Book 9 Page 23
Book 10 Page 6
Book 10 Page 13
Book 10 Page 14
Book 10 Page 15
Book 10 Page 18
Book 10 Page 19

Control Section: CC-18
Route: IR-580/US-50/US-395
Project: MG-395-1(006)
E.A.: 71366

Ptn. of Parcels: U-050-CC-007.553
U-050-CC-007.653
U-050-CC-007.715
U-050-CC-007.746
U-050-CC-007.904
U-050-CC-007.968
U-050-CC-009.091
U-050-CC-009.330
U-050-CC-009.759
U-050-CC-009.824
U-050-CC-010.019
U-050-CC-010.400PE

Ptns. of Parcels: U-050-CC-007.780
U-050-CC-007.999
U-050-CC-009.393
U-050-CC-009.453PE

All of Parcels: U-050-CC-007.620
U-050-CC-007.716

Exchange Parcels: U-050-CC-007.553 EX1
U-050-CC-007.620 EX1
U-050-CC-007.653 EX1
U-050-CC-007.715 EX1
U-050-CC-007.716 EX1
U-050-CC-007.746 EX1
U-050-CC-007.780 EX1
U-050-CC-007.780 EX2
U-050-CC-007.999 EX1
U-050-CC-009.091 EX1
U-050-CC-009.330 EX1
U-050-CC-009.393 EX1
U-050-CC-009.453PE EX1
U-050-CC-009.453PE EX2
U-050-CC-009.759 EX1
U-050-CC-009.824 EX1
U-050-CC-010.019 EX1
U-050-CC-010.400PE EX1

RESOLUTION CONSENTING TO RELINQUISHMENT
AND LAND TRANSFER AGREEMENT

WHEREAS, the State of Nevada, Department of Transportation, hereinafter called the Department, desires to relinquish parcels of land lying within Carson City, State of Nevada, said parcels are delineated and identified as Parcels U-050-CC-007.553 EX1, U-050-CC-007.620 EX1, U-050-CC-007.653 EX1, U-050-CC-007.715 EX1, U-050-CC-007.716 EX1, U-050-CC-007.746 EX1, U-050-CC-007.780 EX1, U-050-CC-007.780 EX2, U-050-CC-007.999 EX1, U-050-CC-009.091 EX1, U-050-CC-009.330 EX1, U-050-CC-009.393 EX1, U-050-CC-009.453PE EX1, U-050-CC-009.453PE EX2, U-050-CC-009.759 EX1, U-050-CC-009.824 EX1, U-050-CC-010.019 EX1, U-050-CC-010.400PE EX1 on EXHIBITS "A" through "F", inclusive attached hereto and made a part hereof; and

WHEREAS, the Carson City Board of Supervisors desires that the aforesaid parcels of land be relinquished to Carson City; and

WHEREAS, Carson City has requested the relinquishment of aforesaid parcels of land for the purpose of a transportation facility; and

WHEREAS, Carson City has agreed to accept the relinquishment of said parcels of land together with any and all revocable leases and licenses entered into between the Department and the adjoining owners for the multiple use of the right-of-way.

NOW THEREFORE be it resolved that the Carson City Board of Supervisors, does in consideration of the actions of the Department as set forth herein, hereby consent to the State of Nevada, Department of Transportation, Board of Directors, relinquishing to Carson City, those portions of land lying within Carson City, State of Nevada, delineated and identified as Parcels U-050-CC-007.553 EX1, U-050-CC-007.620 EX1, U-050-CC-007.653 EX1, U-050-CC-007.715 EX1, U-050-CC-007.716 EX1, U-050-CC-007.746 EX1, U-050-CC-007.780 EX1, U-050-CC-007.780 EX2, U-050-CC-007.999 EX1, U-050-CC-009.091 EX1, U-050-CC-009.330 EX1, U-050-CC-009.393 EX1, U-050-CC-009.453PE EX1, U-050-CC-009.453PE EX2, U-050-CC-009.759 EX1, U-050-CC-009.824 EX1, U-050-CC-010.019 EX1, U-050-CC-010.400PE EX1 on EXHIBITS "A" through "F", inclusive attached hereto and made a part hereof.

The parties acknowledge that no relinquishment can occur until the Department of Transportation, Board of Directors approves of this relinquishment.

IN WITNESS WHEREOF the parties hereto have executed this agreement dated this _____.day of _____, 20___.

ATTEST:

Susan Merrell
City Clerk

[CITY COUNCIL/BOARD OF SUPERVISORS]

Mayor

REVIEWED AND RECOMMENDED BY:

Chief Right-of-Way Agent

APPROVED AS TO LEGALITY AND FORM:

Chief Deputy Attorney General
Chief Counsel, Department of Transportation

STATE SEAL

STATE OF NEVADA acting by and through its Department of Transportation

Director

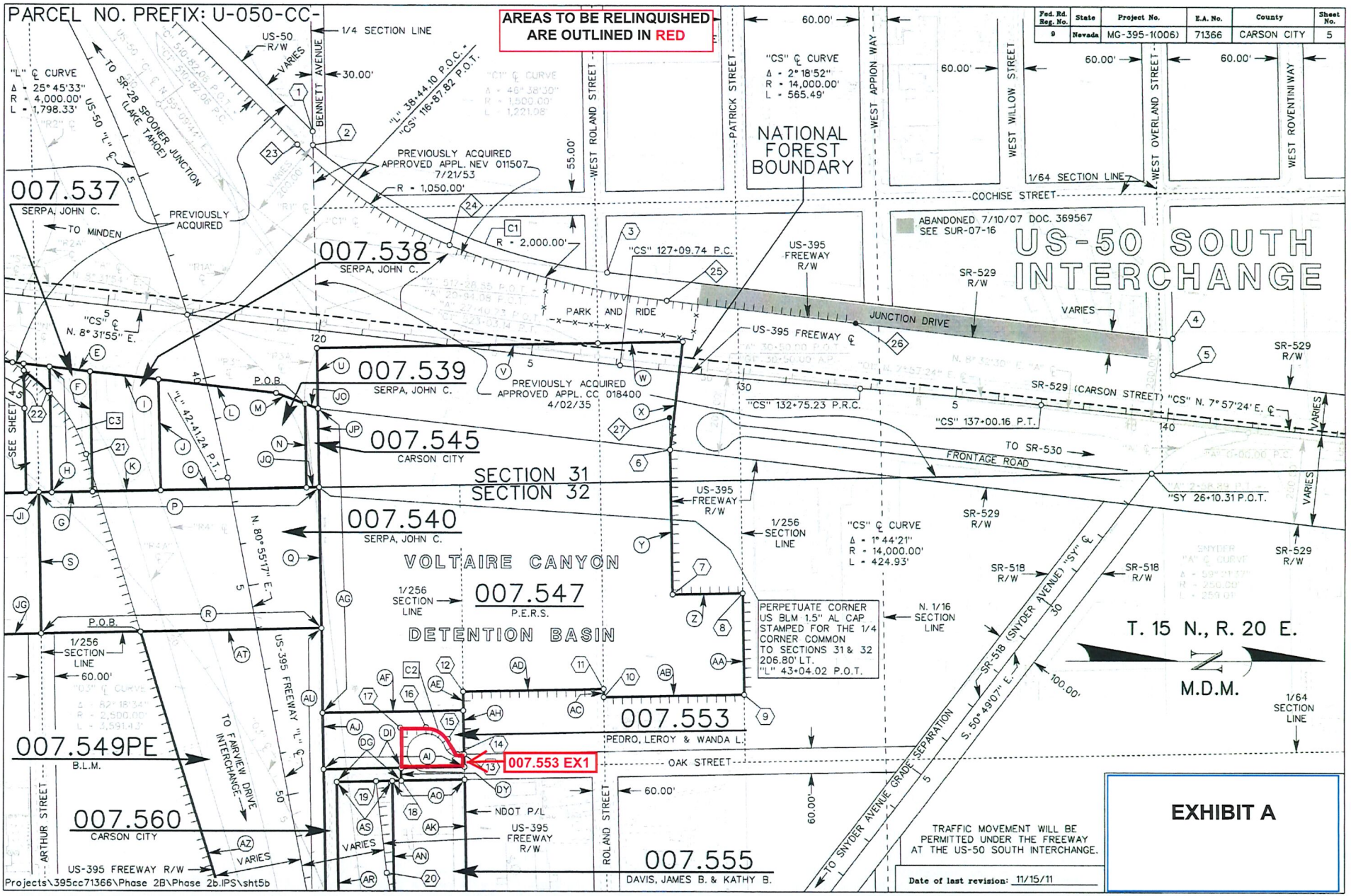
STATE OF NEVADA
CARSON CITY

On this _____ day of _____, 20___, personally appeared before me, the undersigned, a Notary Public in and for Carson City, State of Nevada, _____personally known (or proved) to me to be the _____Director of the Department of Transportation of the State of Nevada who subscribed to the above instrument for the Nevada Department of Transportation under authorization of Nevada Revised Statutes, Chapter 408.205; that he/she affirms that the seal affixed to said instrument is the seal of said Department; and that said instrument was executed for the Nevada Department of Transportation freely and voluntarily and for the uses and purposes therein mentioned.

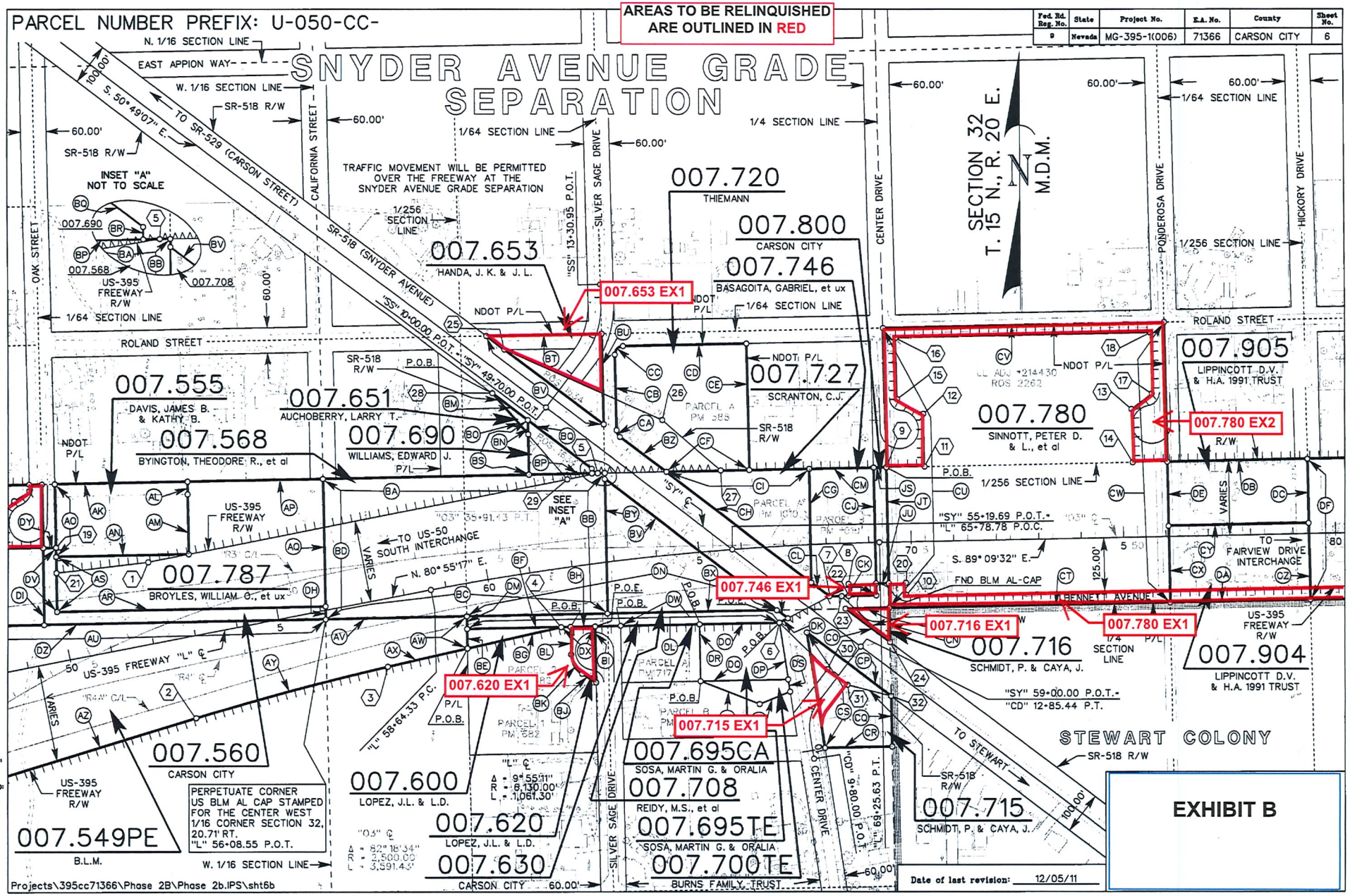
SEAL

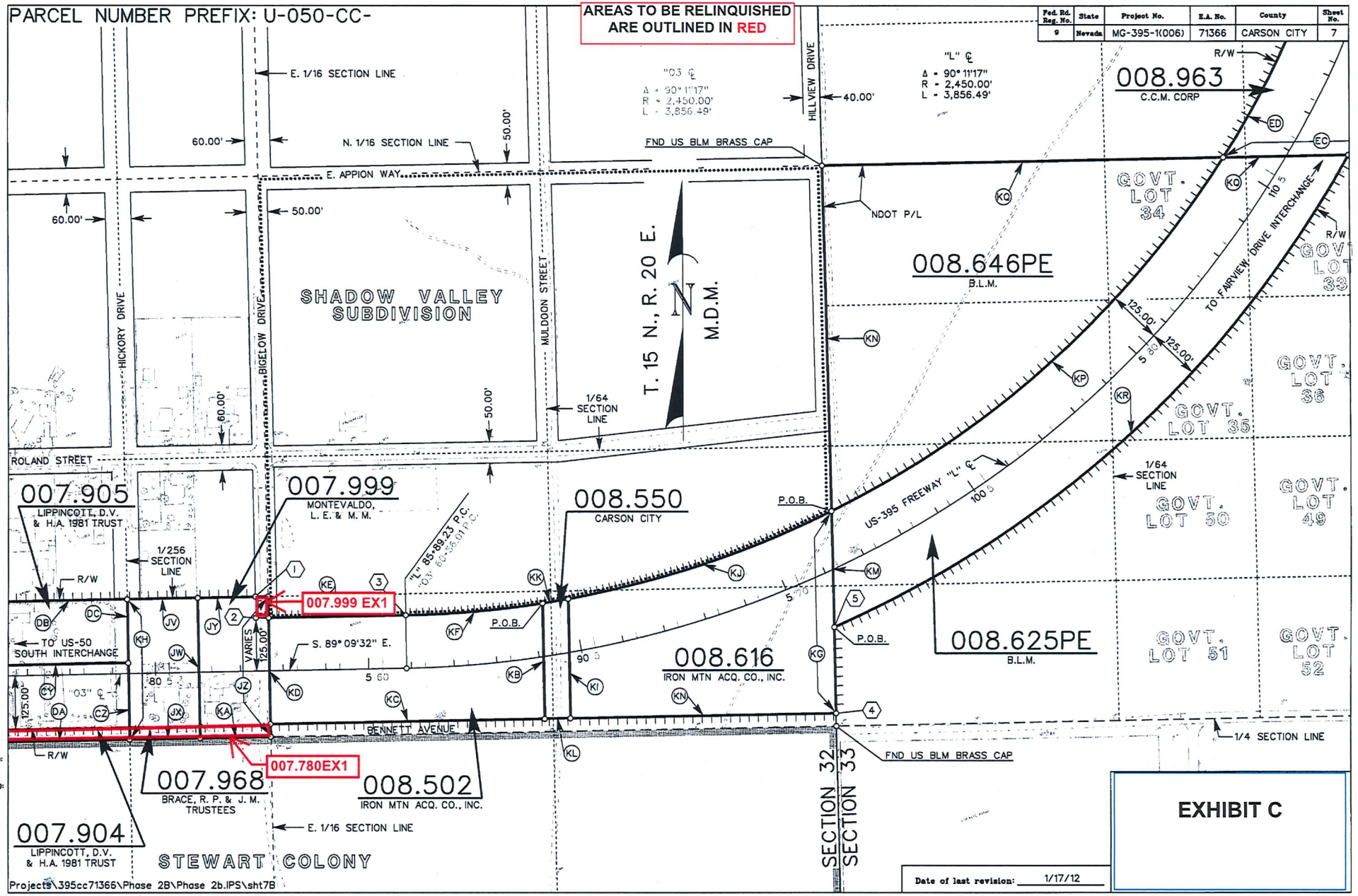
IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

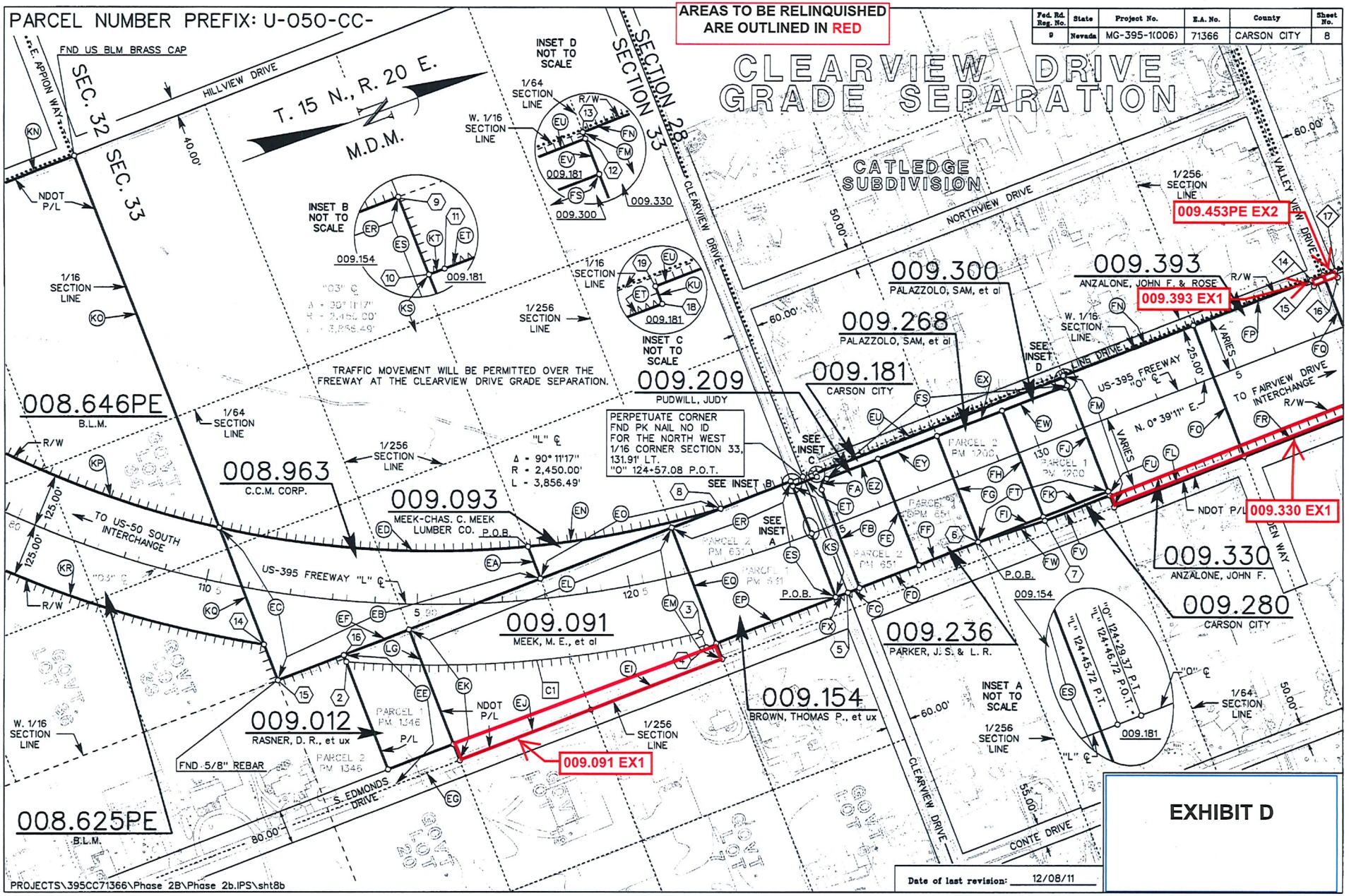
R18-05



TRACED: RDL/ JPK
CHECKED: JHH

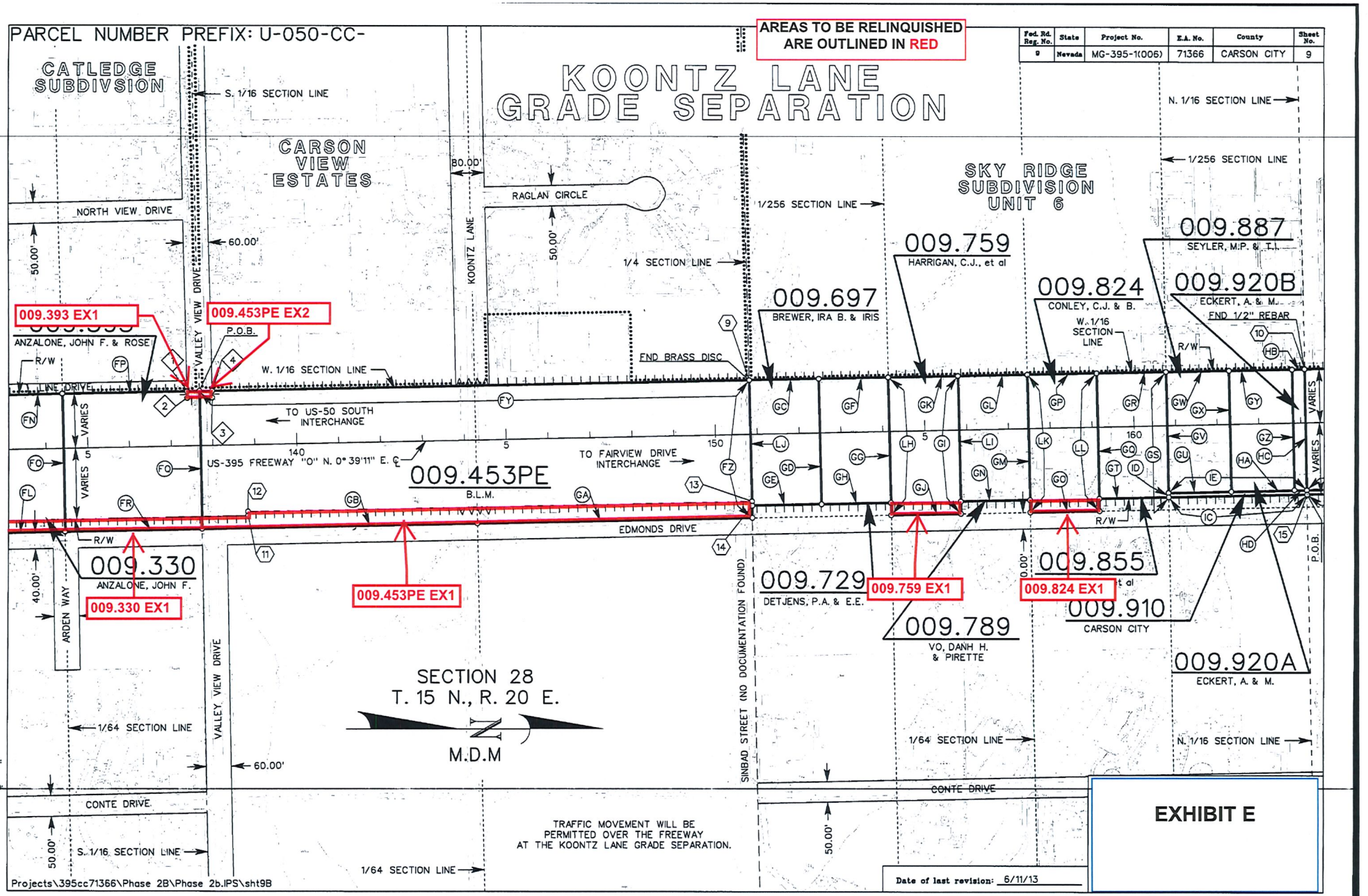


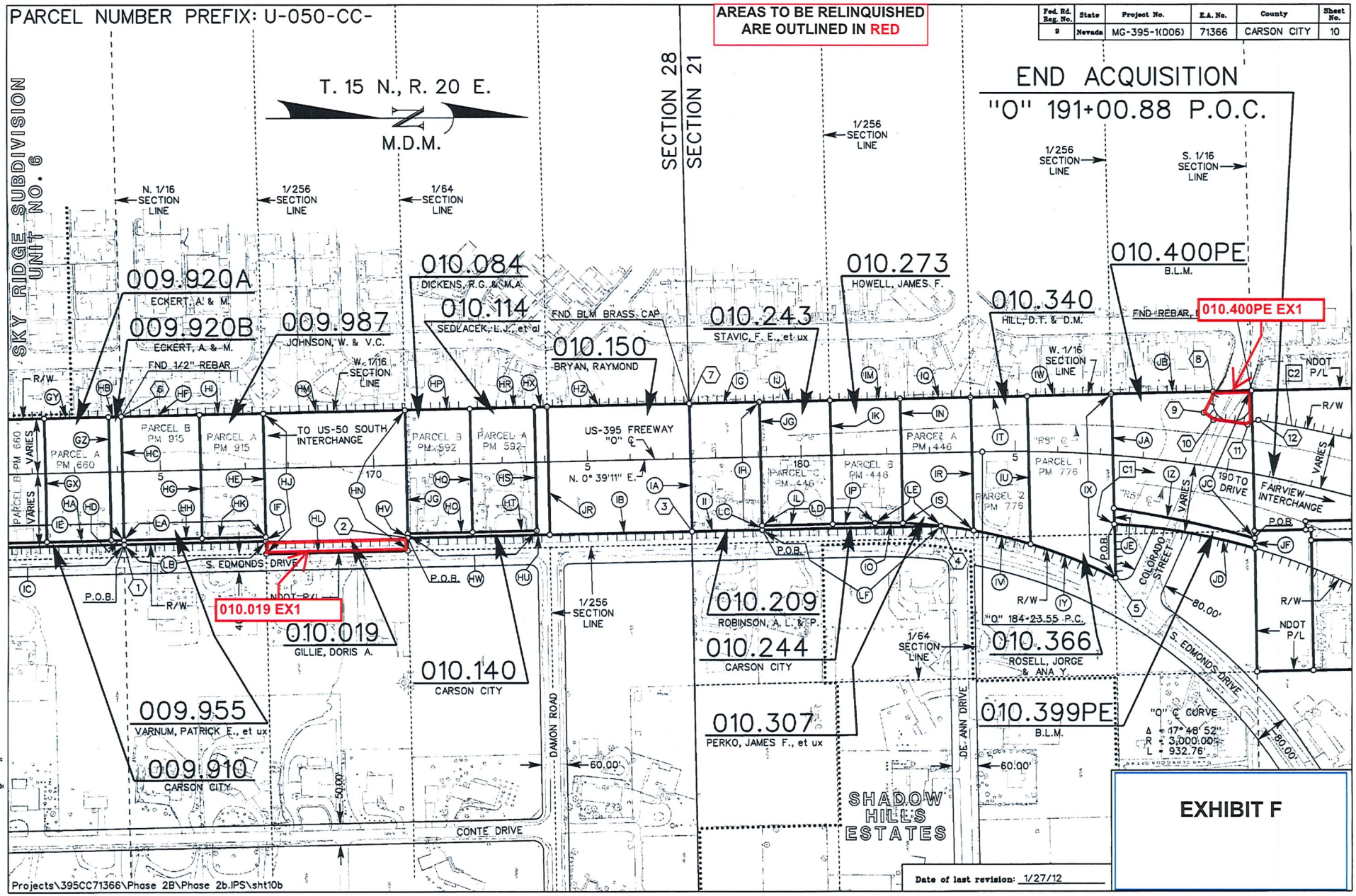




TRACED: RDL
CHECKED: JHH

Packet Page Number 80


PARCEL NUMBER PREFIX: U-050-CC-
AREAS TO BE RELINQUISHED ARE OUTLINED IN RED
KOONTZ LANE GRADE SEPARATION
Fed. Rd. Reg. No. | State | Project No. | E.A. No. | County | Sheet No.
9 | Nevada | MG-395-1(006) | 71366 | CARSON CITY | 9
CATLEDGE SUBDIVISION
CARSON VIEW ESTATES
SKY RIDGE SUBDIVISION UNIT 6
S. 1/16 SECTION LINE
N. 1/16 SECTION LINE
1/256 SECTION LINE
1/4 SECTION LINE
W. 1/16 SECTION LINE
W. 1/16 SECTION LINE
NORTH VIEW DRIVE
VALLEY VIEW DRIVE
KOONTZ LANE
RAGLAN CIRCLE
80.00'
60.00'
50.00'
009.393 EX1
009.453PE EX2
009.887
SEYLER, M.P. & T.I.
009.759
HARRIGAN, C.J., et al
009.824
CONLEY, C.J. & B.
009.920B
ECKERT, A. & M.
009.697
BREWER, IRA B. & IRIS
ANZALONE, JOHN F. & ROSE
P.O.B.
END BRASS DISC
END 1/2" REBAR
R/W
TO US-50 SOUTH INTERCHANGE
TO FAIRVIEW DRIVE INTERCHANGE
US-395 FREEWAY "O" N. 0° 39'11" E.
009.453PE
B.L.M.
EDMONDS DRIVE
009.330
ANZALONE, JOHN F.
009.330 EX1
009.453PE EX1
009.729
DETJENS, P.A. & E.E.
009.759 EX1
009.824 EX1
009.855
009.910
CARSON CITY
009.789
VO, DANH H. & PIRETTE
009.920A
ECKERT, A. & M.
ARDEN WAY
40.00'
SINBAD STREET (NO DOCUMENTATION FOUND)
SECTION 28
T. 15 N., R. 20 E.
M.D.M
1/64 SECTION LINE
CONTE DRIVE
TRAFFIC MOVEMENT WILL BE PERMITTED OVER THE FREEWAY AT THE KOONTZ LANE GRADE SEPARATION.
VARIES
140
150
160
TRACED: RDL
CHECKED: HH
Projects\395cc71366\Phase 2B\Phase 2b.IPS\sht9B
Date of last revision: 6/11/13
EXHIBIT E



CARSON CITY NEVADA
Consolidated Municipality and State Capital
PUBLIC WORKS

September 27, 2018

Bob Madewell, CPM, Assistant Chief
Roadway Systems, Nevada Dept. of Transportation
1263 S. Stewart Street
Carson City, Nevada 89712

Subject: Carson City Freeway Right-of-Way Relinquishments & Surplus Parcel Land Transfers

Dear Bob:

Thank you for your letter dated August 23, 2018, in response to the City's questions regarding the pending right-of-way and surplus parcel transfers. While there are outstanding issues that need to be resolved in order to adequately define the right-of-way and surplus parcels being relinquished, you have explained that it is Nevada Department of Transportation's (NDOT) standard practice to only provide a strip description (from-to) for right-of-way and preliminary parcel boundaries for surplus property at this point in the relinquishment process. Therefore, in reliance on your representations, Carson City staff will proceed to take the *Consent to Relinquishment* requests forward to the Carson City Board of Supervisors.

It is our understanding that approximately 30 to 60 days after Carson City Board of Supervisors' approval of the *Resolution Consenting to Relinquishment* documents, the relinquishments will be taken to Department of Transportation, Board of Directors. At that time, the Department of Transportation, Board of Directors will be provided final sketch maps, deeds, legal descriptions, and all other documentation required for legal relinquishment of effected parcels and Right of Way. The Department of Transportation, Board of Directors approval triggers a signature by the Governor and subsequent recordation of deeds. We understand that Carson City Board of Supervisors action on the *Resolution Consenting to Relinquishment* documents constitutes their singular opportunity for action on this matter.

When the Department of Transportation, Board of Directors takes action and the property transfer is complete, Carson City expects that NDOT will promptly provide all lease and license documentation, legal descriptions, right-of-way maps, active permits, maintenance records, as-built plans, and structural details. In order for the City to meet its obligations within the Freeway Agreements, NDOT must provide the aforementioned information no later than January 1, 2019.

Please be advised that any action by the Board of Supervisors on the *Resolution Consenting to Relinquishment* documents in no way absolves NDOT's requirements to provide the above documents pursuant to the existing Carson City Freeway Agreements, including Article 1, Paragraphs 3 through 5 of Amendment 4 to Highway Agreement No. R159-97-060. Carson City expects that NDOT will fulfill all obligations under the existing freeway agreements by January 1, 2019. If you have a different understanding of NDOT's obligations, please inform me immediately.

CARSON CITY NEVADA
Consolidated Municipality and State Capital
PUBLIC WORKS

I accept your offer to have NDOT staff present at the Carson City Board of Supervisor's meeting to answer any questions that the Supervisors may have about the *Consent to Relinquishment* and the overall process on the right of way and surplus parcel transfers. Please prepare your staff to attend the October 18, 2018 Board of Supervisor's meeting, which starts at 8:30 a.m., located at the Sierra Room in the Carson City Community Center. Thank you for your continued cooperation.

If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Lucia Maloney

Lucia Maloney, PMP
Transportation Manager
LMaloney@carson.org
775.283.7396

Amendment No. 4 to Highway Agreement No. R159-97-060
As Amended By
Highway Agreement No. R386-04-002

This Amendment is made and entered into on 8/10/2016 , between the State of Nevada, Department of Transportation, hereinafter referred to as "NDOT", and Carson City, Nevada, a consolidated municipality under the Nevada Revised Statutes, hereinafter referred to as "CARSON".

WITNESSETH:

WHEREAS, on April 1, 1997, the parties entered into Agreement No. R159-97-060 to facilitate the construction of Phase 1 of the Carson City Freeway (Carson City Bypass), a limited access freeway passing downtown Carson City on the east side of Carson City, from US-395 north at Lakeview Hill to the intersection of US-395/US-50 south, which included preliminary engineering, right-of-way acquisition, construction, and construction engineering; and

WHEREAS, on October 14, 2004, the parties entered into Agreement No. R386-04-002, constituting Amendment No. 1 to Agreement No. R159-97-060, for the purpose of addressing construction of Phase 2 of the Carson City Freeway (Carson City Bypass) and addressing CARSON's financial contribution to Phase 2; and

WHEREAS, on December 27, 2007, the parties entered into Amendment No. 2 to Agreement No. R159-97-060 as amended by Agreement No. R386-04-002, in order to modify CARSON's remaining Phase 1 funding obligation by identifying certain portions of State highways, along with attendant maintenance responsibilities, to be relinquished to CARSON by NDOT; and

WHEREAS, on September 4, 2009, the parties entered into Amendment No. 3 to Agreement No. R159-97-060 as amended by Agreement No. R386-04-002, in order to modify CARSON's remaining Phase 2 funding obligation, whereby additional State highways, along with attendant maintenance responsibilities, were relinquished to CARSON; and

WHEREAS, NDOT has proceeded with the construction of Phase 2 of the Carson Freeway (Carson City Bypass) in four (4) sub phases – 2B-1, 2B-2, 2B-3, and 2B-4 as shown on Exhibit 1, attached hereto and incorporated herein; and

WHEREAS, sub phases 2B-1 and 2B-2 are complete, and 2B-3 will open the freeway to traffic in 2017; and

WHEREAS, sub phase 2B-4 which will provide an interchange and complete Phase 2B is not programmed to be completed as of 2016; and

WHEREAS, the parties now desire to make certain modifications and amendments to Highway Agreement No. R159-97-060 as amended by Highway Agreement No. R386-04-002, providing for the transfer from NDOT to CARSON of portions of State highways and their attendant maintenance duties, obligations and responsibilities, and provide for the modification of CARSON's remaining funding obligations for PHASE 2 of the Carson City Freeway (Carson City Bypass); and

WHEREAS, NRS 408.527 provides a procedure for the relinquishment of portions of State highways.

NOW THEREFORE, the parties agree as follows:

1. Article I, Paragraph 1, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "NDOT shall relinquish to CARSON and CARSON shall accept the ownership of those certain portions of State highways identified in Attachment "A"-

Summary of Right of Way, and Exhibit 2, attached hereto and incorporated herein, together with all of their attendant maintenance duties, obligations and responsibilities."

2. Article I, Paragraph 2, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "The maintenance duties, obligations and responsibilities for those portions of State highways identified in Attachment "A" and Exhibit 2 shall be transferred from NDOT to CARSON upon the completion and opening of Phase 2B-3 to traffic, the recordation of the Resolution Consenting to Relinquishment and Land Transfer Agreement (Relinquishment) for each portion of highway to be transferred, and Relief of Maintenance from the District Engineer."

3. Article I, Paragraph 3, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "NDOT shall provide CARSON with copies of records regarding those certain portions of State highways to be relinquished from NDOT to CARSON as identified in Attachment "A" and Exhibit 2, attached hereto and incorporated herein, which records shall include but not be limited to legal descriptions, right-of-way maps, permits, maintenance records, as-built plans, and structural details."

4. Article I, Paragraph 4, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "NDOT shall prepare, all legal descriptions and maps necessary for the relinquishment of those certain portions of State highways identified in Attachment "A" and Exhibit 2, attached hereto and incorporated herein."

5. Article I, Paragraph 5, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "NDOT shall provide CARSON with legal descriptions and maps for CARSON's review and comment prior to NDOT's relinquishment to CARSON of those portions of State highways identified in Attachment "A" and Exhibit 2, attached hereto and incorporated herein."

6. Article I, Paragraph 6, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "The parties hereto shall complete the relinquishment of those certain portions of State highways as identified in Attachment "A" and Exhibit 2, together with the relinquishment and transfer of their attendant maintenance duties, obligations and responsibilities, upon Relief of Maintenance from the District Engineer. Before relinquishment, NDOT will conduct plantmix patching and microsurfacing of the roadway, and replace of substandard curb and ADA ramps."

7. Article I, Paragraph 7, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "The parties hereto shall comport with the requirements of NRS 408.527 in facilitating NDOT's relinquishments to CARSON of those portions of State highways identified in Attachment "A" and Exhibit 2, attached hereto and incorporated herein. NDOT shall prepare a Relinquishment for issuance by its Board of Directors. Should NDOT's Board of Directors approve the Relinquishment relating to those portions of State highways identified within Attachment "A" and Exhibit 2, NDOT shall cause a certified copy or copies of the Relinquishment to be filed with CARSON's legislative body. NDOT shall record the Relinquishment in the office of the Carson City Recorder, and upon recordation, all right title and interest of NDOT in and to said portions of highway shall vest in CARSON. CARSON's duty to maintain those portions of State highways shall commence upon the recordation of the Relinquishment for each portion of State highway transferred."

8. Article I, Paragraph 11, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "NDOT shall pay CARSON a sum not to exceed Five Million Five Hundred Thousand and No/100 Dollars ($5,500,000.00) upon Relinquishment relating to those portions of State highways identified within Attachment "A" and Exhibit 2, in lieu of NDOT's performance of pavement surfacing of Carson Street which was to be undertaken by NDOT, and which sum represents the estimated costs for the most appropriate pavement surfacing strategy

in accordance with current NDOT standards, including, at a minimum, a two (2) inch overlay. Through NDOT's provision of said payment, NDOT shall be deemed to have fulfilled its obligation to rehabilitate the State highway pavement from Fairview Drive in the north to the new at-grade intersection with the Carson City Freeway/U.S. Highway 50 West in the south, hereinafter referred to as Spooner Interchange.

(A) Upon recordation of the Relinquishment and Relief of Maintenance from the District Engineer, CARSON CITY shall invoice NDOT for the total sum of Five Million Five Hundred Thousand and No/100 Dollars ($5,500,000.00).

The payment to CARSON CITY is being reduced to collect the outstanding balance of Invoice number 03327J0901 ($371,152.66). Therefore, the total payment amount to CARSON CITY will be in the amount of ($5,128,847.34).

(B) CARSON shall utilize the funds identified in Article I, Paragraph 11, of this Amendment, for improvements to include a Complete Streets Project, within the relinquished State highways area identified within Attachment "A" and Exhibit 2 only. CARSON agrees to have its Complete Streets Project under construction by the end of 2019."

9. Article I, Paragraph 12, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "NDOT shall defer until after the completion of the Carson City Freeway (Carson City Bypass), including a full interchange at Carson Street/U.S. Highway 50 West at the southern terminus of the Carson City Freeway, CARSON's payment of its remaining funding obligation of Seven Million One Hundred Twenty-Seven Thousand Three Hundred Forty and No/100 dollars ($7,127,340.00), relating to CARSON's contribution to Phase 2 of the Carson City Bypass Project, as required pursuant to Agreement No. R159-97-060, as Amended by Agreement R386-04-002."

10. Article I, Paragraph 13, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "The parties agree that should any alternative funding sources, not yet identified, be made available for the Carson City Freeway (Carson City Bypass) Project, NDOT shall consider the application of that funding toward CARSON's funding obligations for Phase 2 of the Carson City Freeway (Carson City Bypass) Project, as required pursuant to Article II, Paragraph 4 of Agreement No. R386-04-002, said Agreement constituting Amendment No. 1 to Agreement No. R159-07-060."

11. Article I, Paragraph 15, provided in Amendment No. 3 is amended by deleting it in its entirety and inserting in its place: "All notices or other communications required or permitted to be given under Agreement No. R159-97-060, as amended by Agreement No. R386-04-002, shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by telephonic facsimile with simultaneous regular mail, or mailed certified mail, return receipt requested, postage prepaid on the date posted, and addressed to the other party at the address set forth below, or provided by e-mail at the address set forth below:

FOR DEPARTMENT:
Rudy Malfabon, P.E., Director
Nevada Department of Transportation
1263 South Stewart Street
Sparks, NV 89431
Telephone: (775) 888-7440
Fax: (775) 888-7201
E-mail: rmalfabon@dot.state.nv.us

FOR CITY:
Nick Marano, Carson City Manager
Attn: Darren Schulz
3505 Butti Way
Carson City, NV 89701-3498
Telephone: (775) 887-2355

Fax: (775) 887-2112
E-mail: dschulz@carson.org"

12. Article III provided in Agreement R159-97-060 is amended by adding Paragraph 17: "NDOT certifies that to the best of its knowledge, the property being relinquished to CARSON is free and clear of hazardous wastes, regulated materials or other harmful substances, with the exception of the area identified in the following paragraph. CARSON acknowledges that it is consenting to acceptance of NDOT's relinquishment of the property in an "AS-IS" condition. In the event that hazardous wastes, regulated materials or other harmful substances are discovered subsequent to the transfer of title of the subject property, CARSON agrees to assume any and all cleanup costs associated therewith."

13. Article III provided in Agreement R159-97-060 is amended by adding Paragraph 18: "CARSON acknowledges that there may be hazardous wastes and/or regulated materials present on the property for which it is consenting to acceptance of relinquishment from NDOT in the area of the underground storage tank (UST) system located at 4385 South Carson Street, Carson City, NV 89701. CARSON agrees to take any actions necessary in respect to the UST system in accordance with all the applicable Environmental Protection Laws, Standards, and Regulations. CARSON acknowledges that it is taking the subject property with full knowledge of the risk of possible presence of hazardous wastes and/or regulated materials in, around, and/or under the UST system and further agrees to hold NDOT harmless and indemnify and defend NDOT against any and all losses, damages, claims, costs, penalties, liabilities, and expenses arising from or incurred because of, or incident to, or otherwise with respect to hazardous waste or regulated materials that may be present in, around, and/or under the UST system and/or the adjoining property."

14. This Amendment shall not become effective until and unless approved by appropriate official action of the governing body of each party.

IN WITNESS WHEREOF, the above named parties have hereunto set their hands and executed this Amendment the date first written above.

CARSON CITY

DocuSigned by:
R L Crowell
8A37C67F6BD0445...

Robert L. Crowell

DocuSigned by:
Susan Merriwether
62199357CE334E5...

8/8/2016

Clerk Recorder, Date

State of Nevada, acting by and through its DEPARTMENT OF TRANSPORTATION

DocuSigned by:
C4C7CE5CD584445...

Director

Reviewed and Recommended:

DocuSigned by:
William Hoffman
2A815875EGF94F1...

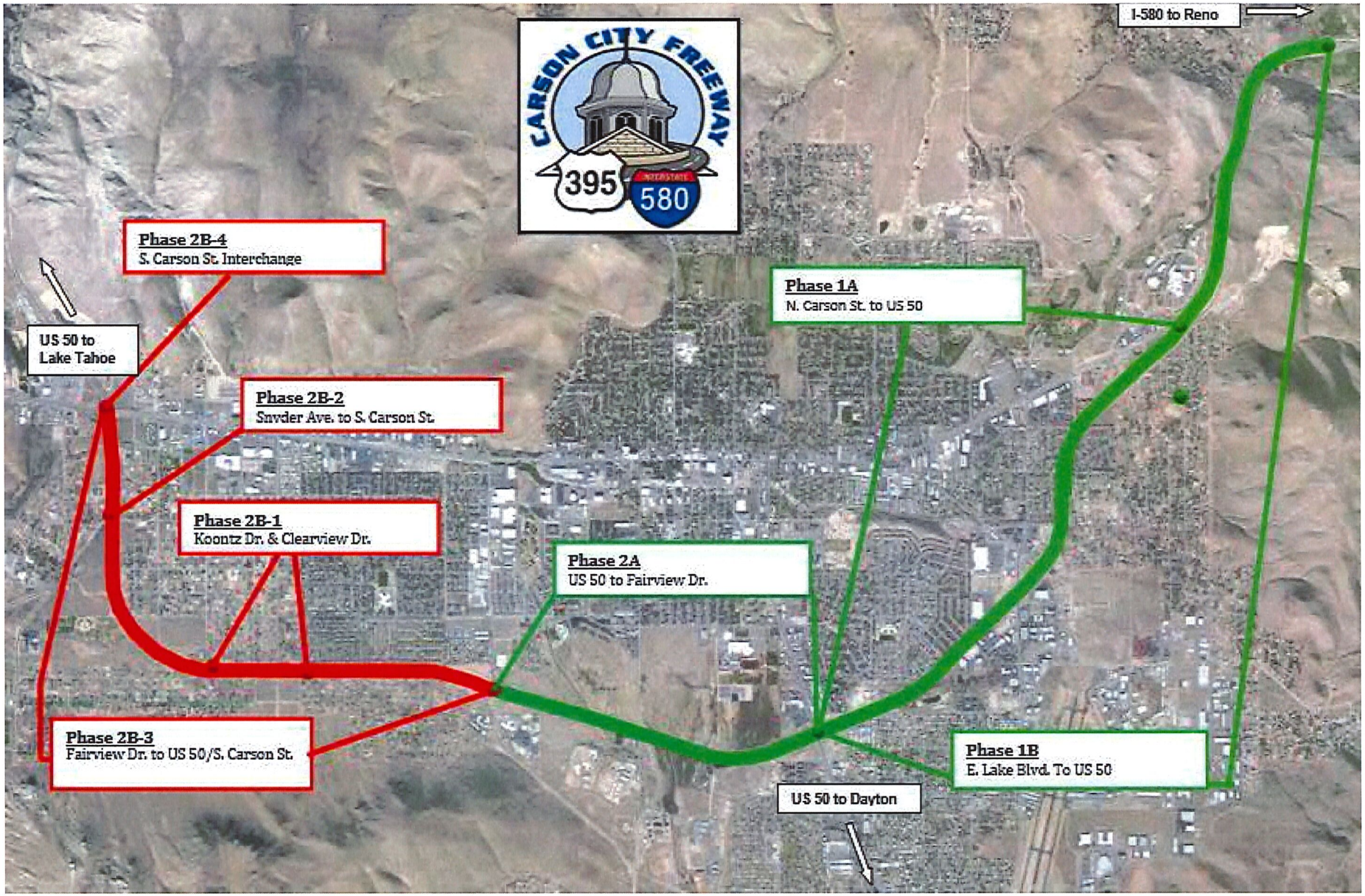
Deputy Director

Approved as to Legality and Form:

DocuSigned by:
Lou Holland
524781170C844C7...

Deputy Attorney General

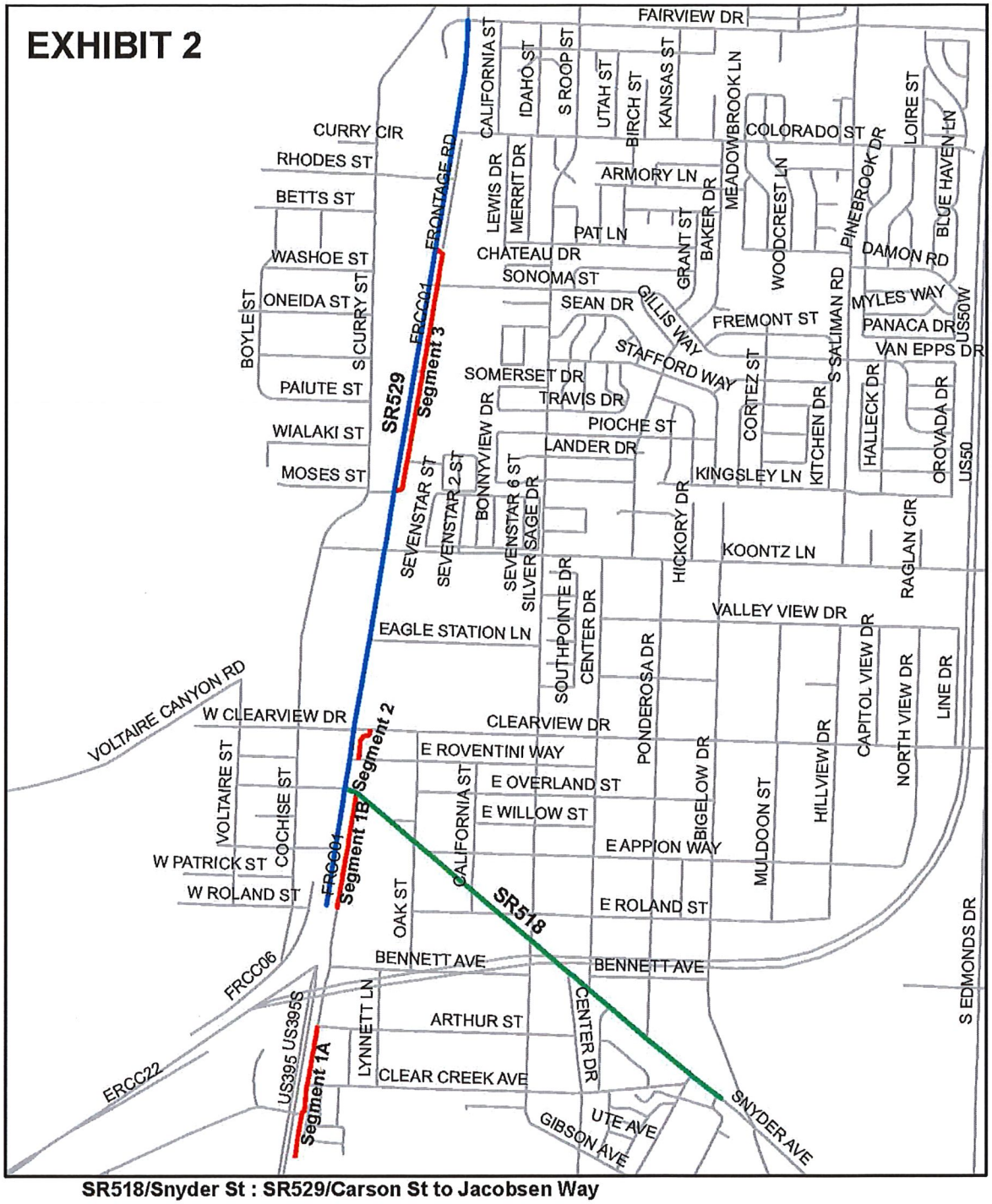
EXHIBIT 1



ATTACHMENT A
Summary of Right of Way
Roads to be transferred to Carson City upon completion of Carson Freeway Phase 2B-3

Location:	From*	To*	Length (mi.)*
SR 518 Snyder	Carson St.	Jacobsen Way	1.017
Carson Street	South ROW line of Fairview	North ROW line of Spooner Interchange	1.750
FRCC01- the following three segments of this frontage road falls within Carson Street Right-of-Way and will be transferred with the portion of Carson St. from Fairview Ave. to Spooner Junction.			
Segment 1a.	0.096 Miles S. of Lupin Dr.	Arthur Dr.	0.287
Segment 1b.	Roland St.	Snyder Ave.	0.245
Segment 2	Roventini Way	Clearview Dr.	0.074
Segment 3	S. Carson St. (past Koontz Ln./Moses Ave.)	S. Carson St. (near Sonoma)	0.519
Total to be transferred to City upon completion of Carson Freeway Phase 2B-3			**3.892**
*Notes:			
1) Termini shown are approximate and only for reference. Actual limits will be defined in right-of-way documents.			
2) Length shown is approximate and only for reference. Actual lengths will be defined in right-of-way documents.			
3) Actual conveyance of the properties will occur upon recordation of the resolution.			
4) There will be no transfer of ownership of any portion of roadways falling within Carson Freeway right-of-way.			

Carson City /NDOT Road Transfer



SR518/Snyder St : SR529/Carson St to Jacobsen Way

SR529/Carson St ; South ROW line of Fairview to North ROW line of Spooner Interchange

FRCC01
Segment 1A : 0.096 miles south of Lupin Dr, East Side of US395 to Authur St: 0.287
Segmant 1B : Roland St, East Side of US395 to SR518/Snyder Ave: 0.245
Segment 2 : Roventini Way, East Side of US395 to Clearview Dr: 0.074
Segment 3 : East of SR529/S. Carson St past Koontz Ln/Moses Ave to SR529/ S. Carson St near Sonoma St: 0.519

NEVADA DOT ROADWAY SYSTEMS

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STAFF REPORT

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

Meeting Date: November 14, 2018

Staff Contact: Graham Dollarhide, Transit Coordinator

Agenda Title: (For Possible Action) To authorize the Transportation Manager to execute an Interlocal Cooperative Agreement with Tahoe Transportation District, Douglas County, and the Regional Transportation Commission of Washoe County to facilitate the provision of intercity bus service substantially in the form of the agreement presented to the RTC.

Staff Summary: An Interlocal Cooperative Agreement was originally executed in October 2011. The purpose of the agreement is to provide for Tahoe Transportation District's (TTD) operation of the Lake & Valley Express routes that connect Carson City and the Carson Valley to the Lake Tahoe Basin. TTD is solely responsible for the operation and funding of the transit service. The RTC is responsible for maintenance of TTD bus stops within Carson City. The current Agreement is substantially different from the one presented at the July 11, 2018 RTC meeting in that it adds the Regional Transportation Commission of Washoe County and reflects changes to the transit service operated by TTD.

Agenda Action: Formal Action/Motion **Time Requested:** 5 minutes

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Proposed Motion

Move to authorize the Transportation Manager to execute an Interlocal Cooperative Agreement with Tahoe Transportation District, Douglas County, and the Regional Transportation Commission of Washoe County to facilitate the provision of intercity bus service substantially in the form of the agreement presented to the RTC.

Previous Action

The Transportation Manager was authorized to execute the Interlocal Cooperative Agreement at the July 11, 2018 RTC meeting, however, it was not able to be executed in substantial form as presented to the RTC due to the addition of the Regional Transportation Commission of Washoe County.

Background/Issues & Analysis

The current Interlocal Cooperative Agreement adds the Regional Transportation Commission of Washoe County as a participant and incorporates additional changes made to the fixed route, commuter express intercity bus service provided by Tahoe Transportation District, which went into effect October 1, 2018. The transit service provided under the Agreement is open to the public for all trip purposes and is fully accessible to persons with disabilities. The addition of the Regional Transportation Commission of Washoe County further solidifies the regional partnership between all agencies involved with the Agreement, and formalizes a no additional fare transfer policy between the various transit systems. The impact to the Jump Around Carson (JAC) transit system is negligible in that passengers boarding JAC were previously able to use tickets from the other systems to ride JAC at no additional cost. The RTC will continue to be responsible for maintenance of bus stops and bus stop amenities for stops used by TTD within Carson City.

Applicable Statute, Code, Policy, Rule or Regulation

NRS 277.180

Financial Information

Is there a fiscal impact? ☐ Yes ☒ No

If yes, Fund Name, Account Name / Account Number:

Is it currently budgeted? ☐ Yes ☐ No

Explanation of Fiscal Impact: N/A

Alternatives

N/A

Supporting Material

-Exhibit-1: Draft Interlocal Cooperative Agreement between Tahoe Transportation District, Douglas County, the Carson City Regional Transportation Commission, and the Regional Transportation Commission of Washoe County (depicts edits that have occurred since the RTC's July 11 meeting).

Board Action Taken:

Motion: _____ 1) _____ Aye/Nay

2) _____ _____

_____

_____

_____

_____

(Vote Recorded By)

INTERLOCAL COOPERATIVE AGREEMENT BETWEEN THE TAHOE TRANSPORTATION DISTRICT, DOUGLAS COUNTY, ~~AND~~ THE CARSON CITY REGIONAL TRANSPORTATION COMMISSION AND THE REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY

Regarding Implementation of Regular, Fixed Route, Commuter Express Public Transit Services between Carson City, Nevada; the communities of Minden / Gardnerville, Nevada; and South Lake Tahoe, California

THIS AGREEMENT is made and entered this _____ day of ~~May~~November 2018, by and between the Tahoe Transportation District, a special purpose district created by Article IX of the Tahoe Regional Planning Compact, hereinafter referred to as "TTD", the Carson City Regional Transportation Commission, hereinafter referred to as "Carson City RTC", the Regional Transportation Commission of Washoe County, hereinafter referred to as "RTC Washoe", and Douglas County, for the purpose of defining agency roles, responsibilities, and commitments in conjunction with the provision of regular, fixed-route commuter express public transit service between South Lake Tahoe, CA, Carson City, NV and Minden / Gardnerville, NV on the State Route 207 and Highway 395 corridors between the aforementioned communities (hereinafter referred to as "the Service").

WITNESSETH:

WHEREAS, Nevada Revised Statutes (NRS) 277.180(1) allows any one or more public agencies to contract with any one or more other public agencies to perform any governmental service, activity or undertaking which any of the public agencies entering into the contract is authorized by law to perform; and

WHEREAS, NRS 277.180(3)(g) provides that the authorized purposes of an agreement made pursuant to NRS 277.180(1) includes the joint use or operation of a system of public transportation;

NOW, THEREFORE, in consideration of the promises and of the mutual covenants hereinafter contained, it is hereby agreed by and between the parties as follows:

1. Purpose of Agreement

The purpose of this Agreement is a cooperative operational arrangement that will facilitate the provision of regularly scheduled, fixed-route, commuter express intercity bus service between South Lake Tahoe and Minden / Gardnerville, Nevada; and between Carson City, Nevada and Minden / Gardnerville, Nevada. The service will be open to the public for all trip purposes and will be fully accessible to persons with disabilities.

2. Lead Agency

TTD is the lead agency for administration of the Project and will be responsible for service contracting and compliance with all federal and state requirements,

including reporting requirements pursuant to the National Transit Database. TTD shall indemnify, defend and hold Douglas County, RTC Washoe, and the Carson City RTC, the officers and employees thereof, harmless from all costs, expenses, losses, liabilities, and judgments arising out of or caused by the acts or omission of TTD, its officers, agents, or employees solely in the performance of this Agreement. Douglas County, RTC Washoe, and the Carson City RTC shall indemnify, defend and hold the TTD, its officers and employees, harmless from all costs, expenses, losses, liabilities, and judgments arising out of or caused by the acts or omission of Douglas County, RTC Washoe, and the Carson City RTC, its officers, agents or employees, solely in the performance of this Agreement.

~~**3. Service Contracting**~~

~~TTD will be responsible for the operation and scheduling of the commuter services, provide for the legal operating authority and ensure that all requisite insurance provisions are met.~~

3~~4~~. Service Plan

The bus service, routes 19x and 2~~2~~0x, will continue to operate seven (7) days per week between the Stateline Transit Center in South Lake Tahoe, California and the JAC Transfer Point in downtown Carson City, Nevada using the aforementioned corridors. The service will continue to make connections to RTC Washoe's INTERCITY route, Douglas County's Douglas Area Rural Transit (DART), the Eastern Sierra Transit Authority~~ESTA~~, and Carson City RTC's Jump Around Carson~~JAC~~. Service will generally operate between ~~5:30~~6:00 a.m. and 6~~9~~:00 p.m. TTD reserves the right to make service revisions.

4~~5~~. Funding

TTD shall be responsible for the funding of the commuter services described in the Service Plan. Nothing in this agreement is understood to preclude the Carson City RTC, RTC Washoe, or Douglas County from future participation in the funding of the Service.

Funding Sources

The primary sources of funding for the Project will include FTA Section 5311 funds through NDOT and other local funds that TTD can allocate to the Service.

5~~6~~. Bus Equipment

The Service will utilize ADA accessible vehicles suitable for highway operations. TTD will provide all buses.

6~~7~~. Bus Stops

Bus stops in Carson City will be installed, maintained and paid for by

the Carson City RTC. Bus stops in Minden / Gardnerville will be installed, maintained and paid for with Federal funds available to Douglas County. All other bus stops will be installed, maintained and paid for by TTD.

78. ~~Fares~~Transfers

~~TTD's fare structure on routes 19x and 20x is as follows:~~

~~One Way: $4.00~~
~~Day Pass: $10.00~~
~~Monthly Pass: $120.00~~
~~20 Ride Pass: $60.00~~
~~Reduced Fare One Way: $2.00 *Passengers must prove reduced fare eligibility.~~

The Carson City RTC, RTC Washoe, and Douglas County shall accept TTD transfers as fare credit on JAC, INTERCITY, and DART routes. TTD shall accept JAC, INTERCITY, and DART transfers as fare on TTD Express routes.

89. Marketing

Marketing activities, including, without limitation, the preparation of promotional materials and printed schedules, will be developed by TTD. The parties will work cooperatively to come up with a marketing strategy that maximizes ridership and effectiveness of the service.

910. Maintenance

TTD shall provide or coordinate ~~and provide~~ all major repairs and preventive maintenance functions on its vehicles.

101. Effective Date

This Agreement becomes effective immediately upon its adoption and approval by each of the governing bodies of the participating entities ("Effective Date").

This Agreement shall be automatically renewed for a one-year period on each anniversary date of the Effective Date thereafter, unless one of the parties to the Agreement serves, by certified mail, on one or both of the other parties a written notice of termination thirty (30) days prior to the date of expiration, in which event this Agreement shall terminate on the date of expiration.

112. Amendment

This Agreement may only be amended by the written consent of all parties.

123. Termination

This Agreement may, by mutual consent, be terminated upon thirty (30) days' written notice.

The continuation of this Agreement is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available to the Carson City RTC, RTC Washoe, Douglas County and/or TTD by the State Legislature, the FTA and/or any other source for the operation of the Service. The Carson City RTC, RTC Washoe, Douglas County or TTD may terminate this Agreement, and the Carson City RTC, RTC Washoe, Douglas County and/or TTD waive any and all claims for damages, effective immediately upon service of written notice, or any date specified therein, if for any reason one party's funding from state, federal and/or other sources for the operation of the Service is not appropriated or is withdrawn, limited or impaired.

134. Miscellaneous Provisions

~~A) In the event of any dispute arising under this Agreement as to performance, compensation, and the interpretation of satisfactory fulfillment of the terms of this Agreement, the forum for resolution of any such dispute shall be by binding arbitration in accordance with the Nevada Uniform Arbitration Act of 2000, NRS 38.206, *et seq.*, including rights to discovery. In such case, the arbitrator shall have both legal and equitable jurisdiction, and the arbitration award shall be final, and judgment on the arbitration award may be entered in any court having jurisdiction over the subject matter of the controversy.~~

AB) This Agreement and the rights and obligations of the parties hereto shall be governed by, and construed according to, the laws of the State of Nevada. The parties consent to the exclusive jurisdiction of the Nevada district courts for enforcement of this Agreement.

BC) All notices or other communications required or permitted to be given under this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally in hand, by telephone facsimile with simultaneous regular mail, or mailed certified mail, return receipt requested, postage prepaid on the date posted and addressed to the other parties at the addresses set forth below:

FOR CARSON CITY RTC:

Lucia Maloney, Transportation Manager
Carson City Regional Transportation Commission
3505 Butti Way
Carson City, NV 89701-3498
Phone: 775-887-2355
Fax: 775-887-2112

FOR DOUGLAS COUNTY:

Steven J. Thaler~~Michael Olson~~, Chair~~man~~
ATTN: Scott Morgan~~Travis K. Lee~~
Douglas County Community Services~~Senior Services & Public Transit~~
P.O. Box 218

Minden, NV 89423
Phone: 775-7823 9829~~6455~~
Fax: 775-783-6457
smorgan@douglasnv.us ~~tle~~
~~e@co.douglas.nv.us~~

FOR RTC Washoe:

Lee Gibson, Executive Director
ATTN: David Jickling
Regional Transportation Commission of Washoe County
1105 Terminal Way
Reno, NV 89502
Phone: (775) 348-0400
Fax: (775) 348-3218
E-Mail: djickling@rtcwashoe.com

FOR TTD:

Carl Hasty, District Manager
ATTN: Carl Hasty
Tahoe Transportation District
P.O Box 499
Zephyr Cove, NV 89448
Phone: (775) 589-5500
Fax: (775) 588-0917
E-Mail: chasty@tahoetransportation.org

C~~D~~) The parties are associated with each other only for the purposes and to the extent set forth in this Agreement. Each party is and shall be an entity separate and distinct from the other party and shall have the right to supervise, manage, operate, control and direct performance of the details incident to its duties under this Agreement.

D~~E~~) No party shall be deemed to be in violation of this Agreement if it is prevented from performing any of its obligations hereunder for any reason beyond its control, including, without limitation, strikes, inmate disturbances, acts of God, civil or military authority, act of public enemy, accidents, fires, explosions, earthquakes, floods, winds storms, failure of public transportation, or any other similar serious cause beyond the reasonable control of either party. In such an event the intervening cause must not be through the fault of the party asserting such an excuse, and the excused party is obligated to promptly perform in accordance with the terms of this Agreement after the intervening cause ceases.

~~F) Each party shall keep confidential all information, in whatever form, produced, prepared, observed or received by that party to the extent that such information is confidential by law or otherwise required by this Agreement.~~

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EG) Pursuant to NRS 239.010, information or documents may be open to public inspection and copying. The parties will have the duty to disclose unless a particular record is confidential by law or a common law balancing of interests.

FH) The illegality or invalidity of any provision or portion of this Agreement shall not affect the validity of the remainder of this Agreement and this Agreement shall be construed as if such provision did not exist and the non-enforceability of such provision shall not be held to render any other provision or provisions of this Agreement unenforceable.

GI) The parties hereto represent and warrant that the person executing this Agreement on behalf of each party has full power and authority to enter into this Agreement and that the parties are authorized by law to engage in the activities which form the subject of this Agreement.

HJ) This Agreement shall not become effective until and unless approved by appropriate official action of the governing body of each party.

IK) This Agreement constitutes the entire agreement of the parties and such is intended as a complete and exclusive statement of the promises, representations, negotiations, discussions, and other agreements that may have been made in connection with the subject matter hereof. Unless an integrated attachment to this Agreement specifically displays a mutual intent to amend a particular part of this Agreement, general conflicts in language between any such attachment and this Agreement shall be construed consistent with the terms of this Agreement. Unless otherwise specifically authorized by the terms of this Agreement, no modifications or amendment to this Agreement shall be binding upon the parties unless the same is in writing and signed by the respective parties hereto.

Remainder of Page Intentionally Blank.

Signature Page(s) Follows.

IN WITNESS WHEREOF, the parties have executed this AGREEMENT the day and year first above written.

TAHOE TRANSPORTATION DISTRICT

By: _____
Carl Hasty, District Manager

Approved as to Form:

By: _____

Attest:

By: _____
Judi Allen, Executive Assistant

CARSON CITY REGIONAL TRANSPORTATION COMMISSION

By: _____
Lucia Maloney, Transportation Manager

Approved as to Form:

By: _____
Iris Yowell~~J. Daniel Yu~~, ~~Chief~~ Deputy District Attorney

Attest:

By: _____

DOUGLAS COUNTY

By: _____
Steven J. Thaler, Chair
Douglas County Board of Commissioners

Approved as to Form:

By: _____
Zachary Wadle, Deputy District Attorney III

Attest:

By: _____
Kathy Lewis,
Douglas County Clerk

REGIONAL TRANSPORTATION COMMISSION OF WASHOE COUNTY

By: _____
Lee Gibson, Executive Director

Approved as to Form:

By: _____
Dale Ferguson, RTC Chief Counsel

STAFF REPORT

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

Meeting Date: November 14, 2018

Staff Contact: Graham Dollarhide, Transit Coordinator

Agenda Title: (For Information Only) Information on Jump Around Carson's Federal Transit Administration grant funding.

Staff Summary: The Jump Around Carson (JAC) transit system is primarily funded by Federal Transit Administration (FTA) grants. Staff will provide detail about the funding sources, grant balances, and the Transit Fund budget.

Agenda Action: Other/Presentation **Time Requested:** 5 minutes

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Proposed Motion
N/A

Background/Issues & Analysis
The FTA provides annual funding apportionments that are used for funding operations and capital purchases for the JAC transit system. Funding is available through various funding types including the FTA's Section 5307, 5310, and 5339 Programs. These funds are apportioned directly to the Carson Area Metropolitan Planning Organization and are formula based. A local match is required for each of these funding sources, which is provided through a transfer from Carson City's General Fund. These funds make up the Transit Fund budget, which includes all of the City's "225" accounts. The match share for an individual expenditure can range from 15% to 50% depending on the project and funding program. Typically, 15% is required for bus purchases, 20% for other capital purchases, and 50% for operating expenditures. FTA grant funds must be allocated to specific activities/projects at the time the grant application is submitted in the federal electronic grant award system. This often results in a fund balance for some projects, which can remain unused until a future need arises, at which time an amendment may be done to allocate the funds to another transit project need.

There are currently seven active FTA grants used for funding the operation of the JAC transit system. A breakdown of the current funding allocation between activities/projects is provided in the attached Jump Around Carson (JAC) Federal Transit Administration (FTA) Grant Fund Availability Table. A list of the various projects and examples of activities within each project is provided below. Notably, as of the beginning of Fiscal Year 2019, almost half of this funding is allocated for the purchase of new replacement fixed route and paratransit buses. This is in response to the fact that by the end of calendar year 2020, at least six of JAC's vehicle fleet will need to be replaced.

Grant Fund Activities/Projects

- Operating – Contract operator (e.g. MV Transit), utilities, office supplies, etc.
- Preventive Maintenance – Maintenance performed by Carson City Public Works Fleet Maintenance staff or outside vendors.
- Capitalized Operating/ADA Paratransit – The FTA makes a special optional provision for up to 10% of each 5307 grant that can be used as 80/20 match for operating costs associated with providing Americans with Disabilities Act (ADA) paratransit service. This allows for a larger federal share for expenditures that would normally receive only a 50% federal reimbursement.
- Capitalized Operating/Transit Service – Section 5310 funds can be used for the "acquisition of transportation services under a contract" at an 80% federal match rate. These funds are used towards contract operator expenses to maximize the benefit of this funding source. This use of the funds would not be eligible for the 80/20 match if Carson City were to operate the JAC transit system in-house and would instead require the standard 50/50 split for this expense.
- Rolling Stock – The term used by the FTA for vehicle purchases is rolling stock. JAC purchases buses and vans with this funding, which is eligible for an 85/15 match if the vehicle is compliant with the Clean Air Act or the Americans with Disabilities Act.
- Software – JAC uses software in its operations to assist with scheduling, dispatching, and vehicle location. This is necessary to maximize the efficiency of paratransit vehicles in service and to provide real-time information to staff and passengers about vehicle location.
- Safety & Security – The FTA requires that at least one percent of each 5307 grant be spent on projects intended to increase the safety and security of transit. These funds have been used in the past to install solar lights at bus stops, and most recently are being used to provide fencing, lighting, gates, locks, etc. at the new administrative facility and bus yard. Funding still exists in several grants for this project because requests for reimbursement have not yet been processed.
- Bus Stop Amenities – Includes the provision of amenities such as shelters, lighting, seating, etc. at JAC fixed route bus stops.
- Facility Relocation – Funds used for the relocation of the JAC administrative facility and bus yard. Funding still exists in multiple grants for this project because requests for reimbursement have not yet been processed and because additional expenditures have yet to be made.

Applicable Statute, Code, Policy, Rule or Regulation
N/A

Financial Information
Is there a fiscal impact? ☐ Yes ☒ No

If yes, Fund Name, Account Name / Account Number:

Is it currently budgeted? ☐ Yes ☐ No

Explanation of Fiscal Impact: N/A

Alternatives
N/A

Supporting Material
-Exhibit-1: Jump Around Carson (JAC) Federal Transit Administration (FTA) Grant Fund Availability Table

Jump Around Carson (JAC) Federal Transit Administration (FTA) Grant Fund Availability - Beginning of Fiscal Year 2019										
		Grant Activity / Project Fund Balance								
		Operating	Preventive Maintenance	Capitalized Operating / ADA Paratransit	Capitalized Operating / Transit Service	Rolling Stock	Software	Safety & Security	Bus Stop Amenities	Facility Relocation
FTA Fund Type	**Grant Number (Year Executed)**									
5307	NV-90-X075 (FFY 2014)							$8,915		
5307	NV-90-X077 (FFY 2015)							$9,396		$79,885
5307	NV-2016-007 (FFY 2016)							$9,604		$80,000
5307	NV-2017-002 (FFY 2017)	$132,957	$89,502	$12,471		$51,797		$9,786		
5339	NV-2017-008 (FFY 2018)					$97,967				
5307	NV-2018-007 (FFY 2019)	$300,000	$200,000	$120,776		$400,000	$50,000	$12,078	$44,908	$80,000
5339(b)	NV-2018-010 (FFY 2018)					$447,480				
5310	[grant number not yet assigned]*				$135,665					
5339	[grant number not yet assigned]*					$133,626				
	Total	*$432,957*	*$289,502*	*$133,247*	*$135,665*	*$1,130,870*	*$50,000*	*$49,779*	*$44,908*	*$239,885*

* Funding has been apportioned by the FTA to CAMPO, and awarded by CAMPO to the RTC, but grants have not yet been executed in the FTA's electronic grant award system; grants are projected for execution during FFY 2019.

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Carson City Regional Transportation Commission
Item for Commission Information

RTC Meeting Date:
To: Regional Transportation Commission
From: Justin Tiearney, Street Supervisor
Date Prepared: November 6, 2018
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 September 2018

Street Repair and Maintenance

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Crack Seal Operation (blocks of sealant used)	0	170
Street Patching Operation (tons of asphalt)	182	324
Pot Holes Repaired	3	3

Tree Care and Maintenance

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Tree Pruning Operations	120	301
Tree Removal	2	3
Tree Replacement	0	0
Tree Care Chemical Treatment	0	0
Tree Work for Other Departments	14	27
Weed Abatement Chemical Sprayed (gallons applied)	450	3795

Concrete Repair and Maintenance

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Concrete Poured (yards)	34.75	136.25
Curb & Gutter (linear feet)	138	762
Sidewalk & Flat Work (sq/ft)	1903	5228
Wheel Chair Ramps	2	6
Misc.	0	0

Grading and Shoulder Maintenance

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Dirt Road Work/Misc		
Shoulder Work on Asphalt Roads		280
Debris Cleaned	0	95

Storm Water

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Sediment Removed from Ditches (yards)	0	560
Lineal foot of ditch cleared	0	0
Pipe Hydro Flushed (linear feet)	0	0
Drainage Inlets Cleaned	0	0
Sediment Removed from Ditches (yards)	0	560

Sweeper Operations

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Curb Miles Swept	403.4	1730.1

Material Picked Up (yards)	147.5	650.5
City Parking Lots Swept	2	8

Trucking Bins

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Bins Hauled for Waste Water Treatment Plant (yards)	23	97
Bins Hauled for Sweeping Operation (yards)	47	180
Equipment Transported for other Departments	0	0

Banner and Decorations Activities

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Banner Operations Carson Street	4	12
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	8	30
Signs Replaced	9	34
Sign Post Replaced	4	15
Signs Replaced due to Graffiti Damage	0	8
Delineators Replaced	1	2
Cross Walks Painted	83	345
Stop Bars Painted	107	413
Yield Bars Painted	40	168
Right Arrows Painted	14	84
Left Arrows Painted	131	379
Straight Arrows Painted	21	59
Stop (word) Painted	0	37
Only (word) Painted	43	173
Bike Symbol & Arrow	0	0
Install Street, bicycle, and pedestrian counters	8	12
Curb Painted (linear feet)	0	0

Weather Events

ACTIVITIES	QUANTITIES/COMMENTS	FYTD
Snow and Ice Control	0	0
Rain Event/Flood Control	0	0
Wind	0	0

Carson City Regional Transportation Commission
Request for Commission Information

RTC Meeting Date: November 14, 2018
Time Requested: 10 Minutes
To: Regional Transportation Commission
From: Dan Stucky, City Engineer
Date Prepared: October 29, 2018
Subject Title: Project Status Report
Staff Summary: Monthly Status Report for the Commission's Information

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List of Projects

South Carson Street Complete Streets Project

Project Name: South Carson Street Complete Streets
Project Number: 031711 and 031801
Fund Number: 250 and 257
Fund Name: RTC
Source of Funding: FY 2017-2018
Department: Public Works
Total Estimated Cost: $17,257,559
Project to Date Cost: $246,000

Project Description
Resurfacing and Complete Streets improvements on South Carson Street corridor between Fifth and Roland Street

Justification
Carson City received a TAP grant for $750,000, a TIGER grant for $7,570,202, and additionally STBG in the amount of $372,372

Project Location
South Carson Street between Fifth Street and Roland Street (includes portion of the Frontage Road)

Status
Staff is working with the Federal Highway Administration (FHWA) to draft an agreement for TIGER and moving forward with design. Design plans have reached 30% for civil and electrical work. Preliminary design for the roundabout and landscaping areas are underway

Freeway Multi-Use Path to Colorado Street

Project Name: Freeway Multi-Use Path to Colorado Street
Project Number: 031803
Fund Number: 250
Fund Name: RTC
Source of Funding: FY 2017-2018
Department: Public Works
Total Estimated Cost: $651,950 (95% federally funded)
Project to Date Cost: $1,000

Project Description
Construct 4,200 feet of multi-use path and associate improvements

Justification
A TAP grant was approved by NDOT

Project Location
West side of I-580 from linear ditch path to Colorado Street

Status
Project in design

Fairview Drive Reconstruction Project

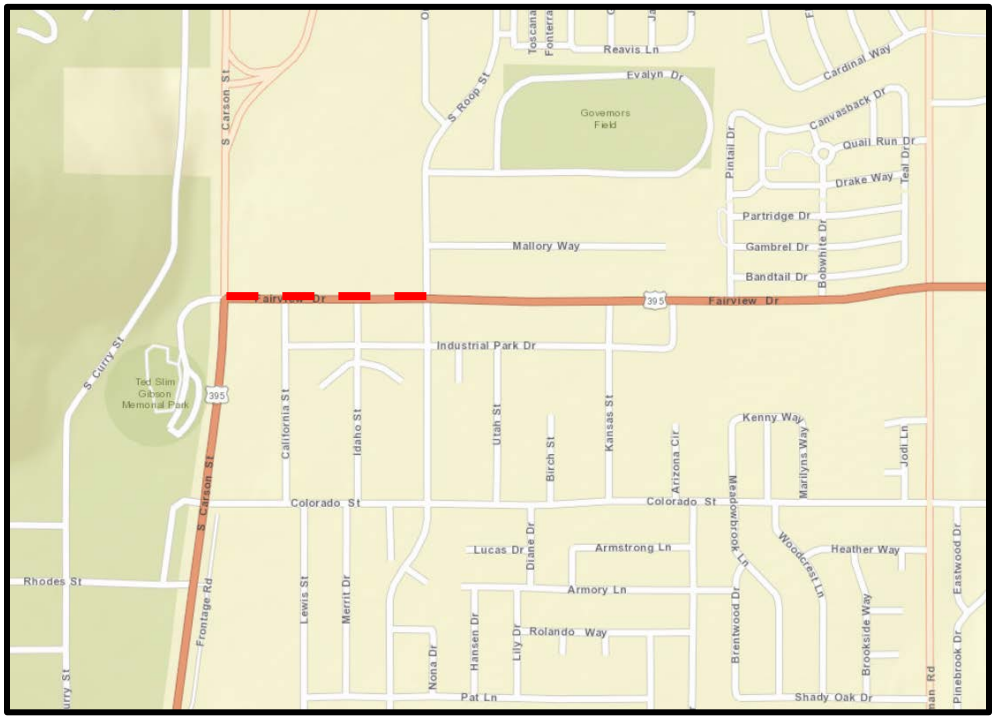
Project Name: Fairview Drive Reconstruction
Project Number: TBD
Fund Number: 250
Fund Name: RTC
Source of Funding: FY 2018-2019
Department: Public Works
Total Estimated Cost: $593,000 (95% federally funded)
Project to Date Cost: $0

Project Description
Reconstruct Fairview Drive between Carson Street and Roop Street. Project includes reconstruction of roadway and a partial mill and overlay with patching.

Justification
Fairview Drive is in need of reconstruction due to the high amounts of traffic over the years. With the completion of the I-580 bypass, Fairview Drive has seen a significant reduction in traffic

Project Location
Fairview Drive from Carson Street to Roop Street

Status
Project is on hold, due to the need to reprioritize utility funds elsewhere at the moment



Fairview Drive Preservation Project

Project Name: Fairview Drive Preservation
Project Number: 031804
Fund Number: 250
Fund Name: RTC
Source of Funding: FY 2018-2019
Department: Public Works
Total Estimated Cost: $630,000 (95% federally funded)
Project to Date Cost: $361,134

Project Description
Slurry seal on Fairview Drive between Highway 50 and Roop Street and a small section of Fairview Drive near the intersection of Butti Way

Justification
Fairview Drive is in need of preservation improvements due to the high amounts of traffic over the years. With the completion of the I-580 bypass, Fairview Drive has seen a significant reduction in traffic

Project Location
Fairview Drive from Highway 50 to Roop Street and the intersection of Butti Way

Status
Project Complete

Kings Canyon Trailhead Improvements and Roadway Reconstruction Project

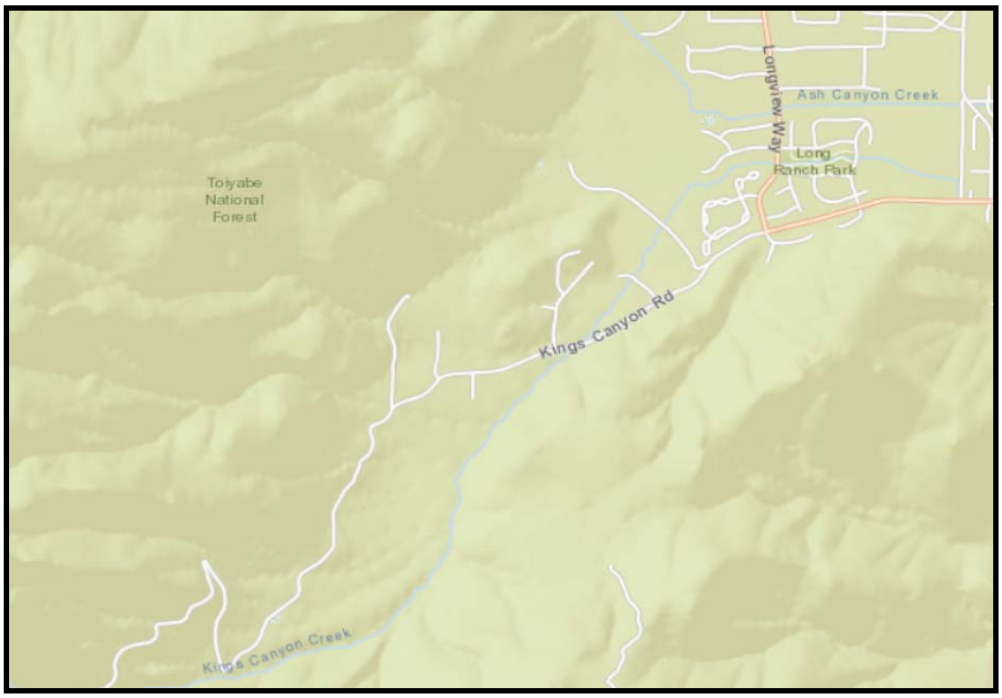
Project Name: Kings Canyon Trailhead Improvements and Roadway Reconstruction
Project Number: TBD
Fund Number: 250-3035-431.70-90 & 254-5047-452.70-40
Fund Name: RTC Fund, Transportation Infrastructure & Quality of Life – Open Space Capital Projects/Construction Accounts
Source of Funding: Multiple, Total Local Match $185,350, $150,000 from RTC Fund, Transportation Infrastructure & $35,350 from Quality of Life, Open Space, Capital Projects/Construction Accounts
Department: Public Works (lead)
Total Estimated Cost: $3,707,000
Project to Date Cost: $0

Project Description
This project will widen the existing roadway, accommodate bicycle lanes, and improve the trailhead parking lot with restroom facilities and additional capacity

Justification
RTC was awarded $3,707,000 from the Federal Highway Administration (FHWA), Central Federal Lands Highway Division (CFLHD) for the Federal Lands Access Program (FLAP) grant.

Project Location
Kings Canyon road just east of Kings Canyon Creek to the Kings Canyon Trailhead

Status
Project partners held kick off meeting, 30% design plans are anticipated in late winter



Stewart Street Pedestrian Signal Project

Project Name: Stewart Street Pedestrian Signal
Project Number: TBD
Fund Number: 250
Fund Name: RTC
Source of Funding: FY 2018-2019
Department: Public Works
Total Estimated Cost: $858,342 ($30,000 local match)
Project to Date Cost: $0

Project Description
Pedestrian crossing improvements, including a slurry seal between Little Lane and S. Carson Street

Justification
This location was identified in the Nevada Department of Transportation (NDOT) Pedestrian Uncontrolled Crosswalk Guidelines

Project Location
Stewart Street from Little Lane to Wright Way

Status
Project is on hold, construction is anticipated in the spring when temperatures are warmer

CDBG College Parkway Improvements Project

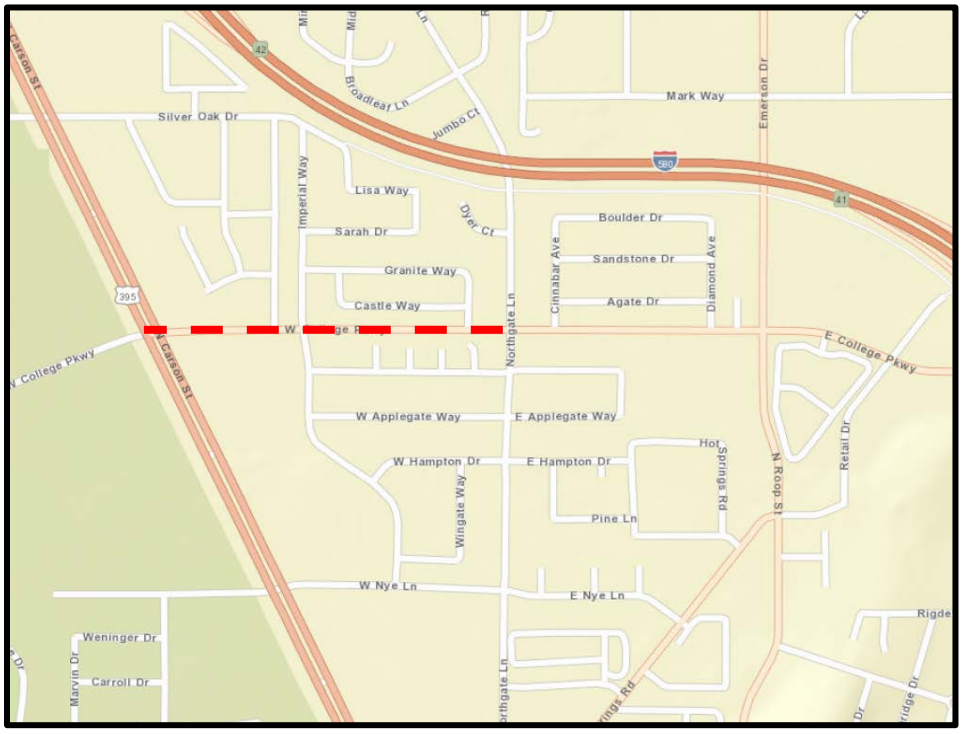
Project Name: CDBG College Parkway Improvements
Project Number: TBD
Fund Number: TBD
Fund Name: RTC
Source of Funding: FY 2019-2020
Department: Public Works
Total Estimated Cost: $268,892
Project to Date Cost: $0

Project Description
ADA improvements on West College Parkway

Justification
Received CDBG grant award for ADA improvements

Project Location
West College Parkway between North Carson Street and Northgate Lane

Status
Waiting for environmental clearances and notice to proceed on project design



Freeway Multi-Use Path to Edmonds Sports Complex

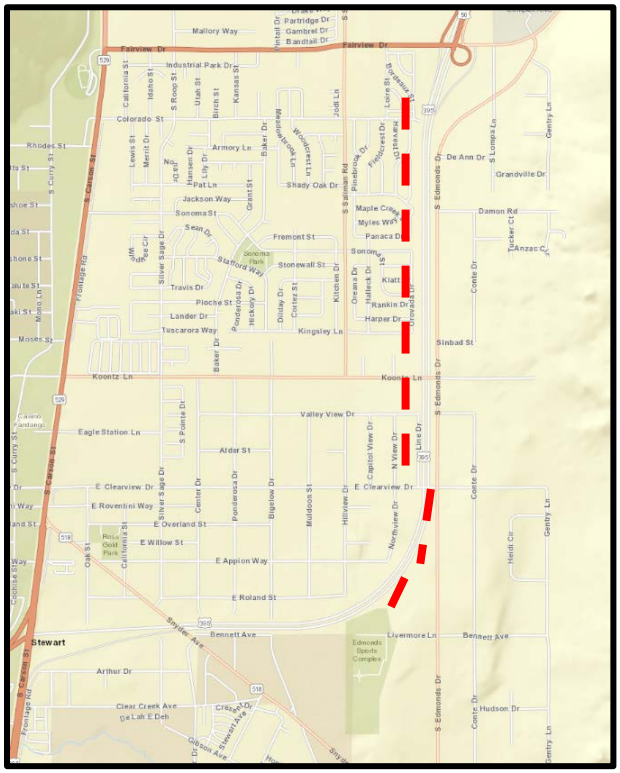
Project Name: Freeway Multi-Use Path to Edmonds Sports Complex
Project Number: 031808
Fund Number: 250-3035-431.70-90
Fund Name: RTC
Source of Funding: Transportation Alternatives Program (TAP)
Department: Public Works
Total Estimated Cost: $1,618,000
Project to Date Cost: $0

Project Description
Multi-use path from Colorado Street to the Pete Livermore Sports Complex off Edmonds Drive

Justification
Received TAP grant award for 2.3 miles of bicycle and pedestrian improvements, path will continue from previous phase on Colorado Street

Project Location
Along the freeway

Status
Waiting for NDOT to schedule kick-off meeting



Airport Road Sewer Replacement Project

Project Name: Airport Road Sewer Replacement
Project Number: 51403.5
Fund Numbers: 250-0000-331.64-99, 510-3205-434.70-40, and 520-3502-435.70-40
Fund Names: RTC Fund - STBG Funding Revenue Account, Water Fund Construction, & Sewer Fund Construction
Source of Funding: City's 5-year Wastewater Capital Improvement Plan, Water Capital Improvements Plan, and Surface Transportation Block Grant (STBG)
Department: Public Works
Total Estimated Cost: $2,450,000 (comprised of $160,000 from STBG funding, $1,690,000 from Sewer Capital, and $600,000 from Water Capital)
Project to Date Cost: $20,000

Project Description
Sewer, water, and roadway improvements on Airport Road from Highway 50 to Minonee Lane

Justification
The sewer and water mains located in Airport Road are planned to be replaced due to capacity and condition. Due to poor pavement condition the road is to be reconstructed along with the sewer replacement

Project Location
Airport Road from Highway 50 to Minonee Lane

Status
Project is in the pre-design phase, a survey of the area is in progress and the geotechnical report is complete