REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

NOTICE AND AGENDA OF PUBLIC MEETING

EXECUTIVE ADVISORY COMMITTEE

9:15 A.M., THURSDAY, SEPTEMBER 30, 2021

RTC ADMINISTRATION BUILDING
600 S. GRAND CENTRAL PARKWAY, ROOM 108
LAS VEGAS, NV 89106
(702) 676-1500

Pursuant to State of Nevada Executive Department Declaration of Emergency Directives, attendees will be required to wear facemasks.

The Regional Transportation Commission of Southern Nevada (RTC) encourages citizen participation at its public meetings. During the initial Citizens Participation, any citizen may address the Executive Advisory Committee (Committee) on an item featured on the agenda. During the final Citizens Participation, any citizen may address the Committee on matters within the Committee's jurisdiction, but not necessarily featured on the agenda. No vote can be taken on a matter not listed on the posted agenda; however, the Committee can direct that the matter be placed on a future agenda. The RTC appreciates the time citizens devote to be involved in this important process.

With the rise in COVID-19 cases in Clark County, the RTC will be temporarily accepting public comment via email to be read aloud onto the record. Public comment relating to the RTC may be submitted via email to PublicComments@rtcsnv.com. Public comment via email submission must be received by 5:00 p.m. (Pacific Daylight Time) on the business day prior to the meeting. Public comment submissions received after 5:00 p.m. (Pacific Daylight Time) on the business day prior to the meeting will be included in the written record of the meeting. Please be sure to include your name and the agenda item number you wish to comment on. Also, indicate if you would like your comment read aloud on the record or just added to the backup for the record. Only the first 500 words of comments submitted to be read into the record will be read aloud. The remaining words will be included in the written record.

The RTC keeps the official record of all proceedings of the meeting. In order to maintain a complete and accurate record, copies of documents used during presentations should be submitted to the Recording Secretary.

The meeting room is accessible to the disabled. Assistive listening devices are available for the hearing impaired. A sign language interpreter for the deaf will be made available with 48 hours advance request to the RTC offices. Phone: 702-676-1500 TDD: 702-676-1834.

Additional language interpretation services are available upon request with a 48-hour advance notice to the RTC.

This agenda, including the supporting materials, is available at the RTC Administration Building, 600 S. Grand Central Parkway, Las Vegas, Nevada; the RTC's website, http://www.rtcsnv.com; or by contacting David Gloria at (702) 676-1623 or by email at GloriaD@rtcsnv.com.

In compliance with Nevada Revised Statute 241.035(4), the RTC shall create an audio and/or video recording of the meeting and retain such recording(s) for the required period of time.

THIS MEETING HAS BEEN PROPERLY NOTICED AND POSTED IN THE FOLLOWING LOCATIONS:

RTC	RTC website	Nevada Public Notice
600 S. Grand Central Pkwy. Las Vegas, NV 89106	www.rtcsnv.com	https://notice.nv.gov

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [ ]	Transit [ ]	Administration and Finance [X]

SUBJECT: CITIZENS PARTICIPATION

PETITIONER: M.J. MAYNARD, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE EXECUTIVE ADVISORY COMMITTEE CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

GOAL: ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM

FISCAL IMPACT:
None

BACKGROUND:
In accordance with State of Nevada Open Meeting Law, the Regional Transportation Commission of Southern Nevada Executive Advisory Committee (Committee) shall invite interested persons to make comments. For the initial Citizens Participation, the public should address items on the current agenda. For the final Citizens Participation, interested persons may make comments on matters within the Committee's jurisdiction, but not necessarily on the current agenda.

No action can be taken on any matter discussed under this item, although the Committee can direct that it be placed on a future agenda.

Respectfully submitted,

DocuSigned by:
John Pennelas
79E5AF522AE1479...

JOHN R. PEÑUELAS, JR., P.E.
Senior Director of Engineering

dbg

EAC Item #1
September 30, 2021
Non-Consent

Items 2 through 19 and 21 are items for possible action. Items 1, 20, 22, 23, and 24 are discussion items and no action can be taken. Please be advised that the Executive Advisory Committee has the discretion to take items on the agenda out of order, combine two or more agenda items for consideration, remove an item from the agenda, or delay discussion relating to an item on the agenda any time.

1. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

2. APPROVE THE AGENDA (FOR POSSIBLE ACTION)

CONSENT AGENDA (ITEMS 3 THROUGH 19)
All items marked with asterisks (**) are considered by the Regional Transportation Commission of Southern Nevada Executive Advisory Committee to be routine and may be acted upon in one motion. However, the Executive Advisory Committee may discuss any consent item individually if requested by a Committee member or a citizen when the consent agenda is considered for approval.

MINUTES

**3. APPROVAL OF THE MINUTES: Meeting of August 26, 2021 (FOR POSSIBLE ACTION)

METROPOLITAN PLANNING ORGANIZATION

Streets and Highways

**4. ADOPT AMENDMENTS TO THE CAPITAL IMPROVEMENT PROGRAM (FOR POSSIBLE ACTION)

**5. RECEIVE A REPORT ON THE SUMMARY OF FISCAL ACTIONS RELATED TO THE CAPITAL IMPROVEMENT PROGRAM (FOR POSSIBLE ACTION)

**6. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CLARK COUNTY PROJECT 065A-FTI2 – MOUNT CHARLESTON, ECHO VIEW PAVEMENT REHABILITATION (FOR POSSIBLE ACTION)

**7. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CLARK COUNTY PROJECT 116C-FTI2 – HACIENDA AVENUE, RAINBOW BOULEVARD TO DECATUR BOULEVARD (FOR POSSIBLE ACTION)

**8. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CLARK COUNTY PROJECT 190Q-Q10 – TRAIL CONNECTIVITY, CC-215 BELTWAY TRAIL BRIDGES, EASTERN AVENUE AND CHARLESTON BOULEVARD (FOR POSSIBLE ACTION)

**9. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN SUPPLEMENTAL INTERLOCAL CONTRACT NO. 1 TO INCREASE FUNDING FOR CITY OF LAS VEGAS PROJECT 222A-FTI2 – PEDESTRIAN BRIDGE, INTERSECTION AT SAHARA AVENUE AND LAS VEGAS BOULEVARD (FOR POSSIBLE ACTION)

**10. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF NORTH LAS VEGAS PROJECT 163C-FTI2 – COMMERCE STREET, HENDERSON CIRCLE TO CRAIG ROAD (FOR POSSIBLE ACTION)

**11. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 111C-FTI2 – BERMUDA ROAD, ST. ROSE PARKWAY POWER POLE REMOVAL (FOR POSSIBLE ACTION)

**12. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 156C-FTI2 – GALLERIA DRIVE, PATRICK LANE TO PANHANDLE DRIVE (FOR POSSIBLE ACTION)

**13. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 192E-FTI2 – SUNRIDGE HEIGHTS PARKWAY, SEVEN HILLS DRIVE TO HORIZON RIDGE PARKWAY (FOR POSSIBLE ACTION)

**14. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 263A-FTI2 – CARNEGIE STREET, PASEO VERDE PARKWAY TO SUNRIDGE HEIGHTS PARKWAY (FOR POSSIBLE ACTION)

**15. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 264A-FTI2 – SEVEN HILLS DRIVE, ST. ROSE PARKWAY TO GRAND HILLS DRIVE (FOR POSSIBLE ACTION)

**16. APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN SUPPLEMENTAL INTERLOCAL CONTRACT NO. 1 TO INCREASE FUNDING FOR CITY OF HENDERSON PROJECT 135AL-MVFT – ARTERIAL RECONSTRUCTION PROGRAM 2019 MAINTENANCE CONSTRUCTION, STEPHANIE STREET, I-215 TO UNION PACIFIC RAILROAD (FOR POSSIBLE ACTION)

**17. RECEIVE A REPORT OF AWARD OF BID FOR CITY OF HENDERSON PROJECT 199C-FTI2; VIA NOBILA, VIA INSPIRADA TO LAS VEGAS BOULEVARD TO LAS VEGAS PAVING CORPORATION FOR $38,876,543.21 (FOR POSSIBLE ACTION)

**18. ACCEPT THE FINAL ACCOUNTING REPORTS AND CLOSE PROJECTS (FOR POSSIBLE ACTION)

Planning

**19. RECEIVE THE REGIONAL HOUSING FORECAST REPORTS (FOR POSSIBLE ACTION)

****END OF CONSENT AGENDA****

METROPOLITAN PLANNING ORGANIZATION

Streets and Highways

20. RECEIVE A PRESENTATION ON THE REGIONAL BIKEWAY AND SIDEWALK INVENTORY

Planning

21. APPROVE AMENDMENT CLARK 21-11 TO THE 2021-2050 REGIONAL TRANSPORTATION PLAN (FOR POSSIBLE ACTION)

22. RECEIVE A PRESENTATION OF THE SOUTHERN NEVADA EXTREME HEAT VULNERABILITY ANALYSIS

ADMINISTRATION

23. DISCUSS TOPICS OF INTEREST

24. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

During the initial Citizens Participation, any citizen may address the Executive Advisory Committee on an item featured on the agenda. During the final Citizens Participation, any citizen may address the Committee on matters within the Committee's jurisdiction, but not necessarily featured on the agenda. No vote can be taken on a matter not listed on the posted agenda; however, the Committee can direct that the matter be placed on a future agenda.

With the rise in COVID-19 cases in Clark County, the Regional Transportation Commission of Southern Nevada (RTC) will be temporarily accepting public comment via email to be read aloud onto the record. Public comment relating to the RTC may be submitted via email to PublicComments@rtcsnv.com. Public comment via email submission must be received by 5:00 p.m. (Pacific Daylight Time) on the business day prior to the meeting. Public comment submissions received after 5:00 p.m. (Pacific Daylight Time) on the business day prior to the meeting will be included in the written record of the meeting. Please be sure to include your name and the agenda item number you wish to comment on. Also, indicate if you would like your comment read aloud on the record or just added to the backup for the record. Only the first 500 words of comments submitted to be read into the record will be read aloud. The remaining words will be included in the written record.

Each citizen must be recognized by the Chair. The citizen is then asked to approach the podium, state his or her name, and spell their last name for the record. The Chair may limit remarks to three minutes' duration.

The RTC keeps the official record of all proceedings of the meeting. In order to maintain a complete and accurate record, copies of documents used during presentations should be submitted to the Recording Secretary.

The RTC appreciates the time citizens devote to be involved in this important process.

The meeting room is accessible to the disabled. Assistive listening devices are available for the hearing impaired. A sign language interpreter for the deaf will be made available with a 48-hour advance request to the Regional Transportation Commission of Southern Nevada offices. Phone: 702-676-1500 TDD: 702-676-1834

In compliance with Nevada Revised Statute 241.035(4), the Regional Transportation Commission of Southern Nevada shall create an audio and/or video recording of the meeting and retain such recording(s) for the required period of time.

Any action taken on these items is advisory to the Regional Transportation Commission of Southern Nevada.

MINUTES
EXECUTIVE ADVISORY COMMITTEE
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
AUGUST 26, 2021

These minutes are prepared in compliance with NRS 241.035. Text is in summarized rather than verbatim format. For complete contents, please refer to meeting recordings on file at the Regional Transportation Commission of Southern Nevada.

THIS MEETING WAS PROPERLY NOTICED AND POSTED IN THE FOLLOWING LOCATIONS ON AUGUST 19, 2021

RTC	RTC Website	Nevada Public Notice
600 S. Grand Central Pkwy.	www.rtcsnv.com	https://notice.nv.gov
Las Vegas, NV 89106		

CALL TO ORDER

Mr. Denis Cederburg, Chair, called the meeting to order at 9:17 a.m. in Meeting Room 108 of the RTC Administration Building.

MEMBERS PRESENT:
Denis Cederburg, Chair, Clark County
Ed McGuire, Vice Chair, City of Henderson
Travis Anderson, City of Mesquite
Dale Daffern, City of North Las Vegas
Seth Floyd, City of Las Vegas
Mike Janssen, City of Las Vegas
Keegan Littrell, City of Boulder City
Michael Mays, City of Boulder City
Johanna Murphy, City of North Las Vegas (Alternate)
Andrew Roether, City of Henderson (Alternate) (via teleconference)
Sondra Rosenberg, Nevada Department of Transportation
Richard Secrist, City of Mesquite

MEMBERS ABSENT:
Nancy Amundsen, Clark County

RTC STAFF:
David Swallow, Deputy Chief Executive Officer
John Peñuelas, Senior Director of Engineering
Andrew Kjellman, Director of Metropolitan Planning Organization
David Clyde, Associate General Counsel
Joe Damiani, Manager of Engineering
Todd Gurnee, GIS Analyst
David Gloria, Management Analyst

INTERESTED PARTIES:
None

Item:
1. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION
Comments:
No comments were made.
Motion:
No motion was necessary.
Vote/Summary:
No vote was taken.

Item:
2. APPROVE THE AGENDA (FOR POSSIBLE ACTION)
Comments:
No comments were made.
Motion:
Vice Chair Ed McGuire, City of Henderson, made a motion to approve the agenda.
Vote/Summary:
11 Ayes. 0 Nays. The motion carried. Ayes: Travis Anderson, Denis Cederburg, Dale Daffern, Seth Floyd, Mike Janssen, Keegan Littrell, Michael Mays, Ed McGuire, Johanna Murphy, Sondra Rosenberg, Richard Secrist Nays: None Absent: Nancy Amundsen, Andrew Roether

CONSENT AGENDA (ITEMS 3 THROUGH 33)
All items marked with asterisks (**) are considered by the Executive Advisory Committee to be routine and may be acted upon in one motion. However, the Executive Advisory Committee may discuss any consent item individually if requested by a Committee member or a citizen when the consent agenda is considered for approval.

**3.	APPROVAL OF THE MINUTES: Meeting of July 29, 2021 (FOR POSSIBLE ACTION)
**4.	ADOPT AMENDMENTS TO THE CAPITAL IMPROVEMENT PROGRAM (FOR POSSIBLE ACTION)
**5.	RECEIVE A REPORT ON THE SUMMARY OF FISCAL ACTIONS RELATED TO THE CAPITAL IMPROVEMENT PROGRAM (FOR POSSIBLE ACTION)
**6.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR RTC PROJECT 262A-FTI2 – TRAFFIC SIGNAL PROGRAM MANAGEMENT (FOR POSSIBLE ACTION)
**7.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR RTC PROJECT 262B-FTI2 – ADAPTIVE TRAFFIC SIGNAL FEASIBILITY STUDY (FOR POSSIBLE ACTION)
**8.	~~APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR RTC PROJECT 262C-FTI2 – TRAFFIC SIGNAL DETECTION (FOR POSSIBLE ACTION)~~
**9.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR RTC PROJECT 262D-FTI2 – ITS MASTER PLAN (FOR POSSIBLE ACTION)
**10.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR RTC PROJECT 262E-FTI2 – TRAFFIC SIGNAL MAINTENANCE (FOR POSSIBLE ACTION)
**11.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL

	CONTRACT FOR CLARK COUNTY PROJECT 010Q-FTI2 – RAINBOW BOULEVARD, ERIE AVENUE TO BLUE DIAMOND ROAD (FOR POSSIBLE ACTION)
**12.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CLARK COUNTY PROJECT 010R-FTI2 – RAINBOW BOULEVARD, ARBY AVENUE TO BADURA AVENUE (FOR POSSIBLE ACTION)
**13.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CLARK COUNTY PROJECT 213B-FTI2 – SLOAN LANE, VEGAS VALLEY DRIVE TO RUBY CREEK DRIVE (FOR POSSIBLE ACTION)
**14.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN SUPPLEMENTAL INTERLOCAL CONTRACT NO. 4 TO INCREASE FUNDING FOR CITY OF LAS VEGAS PROJECT 176E-FTI2 – COMPLETE STREETS: CHARLESTON BOULEVARD, MARTIN L. KING BOULEVARD TO RANCHO DRIVE (FOR POSSIBLE ACTION)
**15.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN SUPPLEMENTAL INTERLOCAL CONTRACT NO. 4 TO INCREASE FUNDING FOR CITY OF LAS VEGAS PROJECT 228A-MVFT – CITYWIDE TRAFFIC ENGINEERING DESIGN SERVICES, FISCAL YEAR 2020 (FOR POSSIBLE ACTION)
**16.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF NORTH LAS VEGAS PROJECT 123G-FTI2 – ALEXANDER ROAD, DECATUR BOULEVARD TO SIMMONS STREET (FOR POSSIBLE ACTION)
**17.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF NORTH LAS VEGAS PROJECT 149G-FTI2 – NORTH 5TH STREET, CHEYENNE AVENUE TO LONE MOUNTAIN ROAD (FOR POSSIBLE ACTION)
**18.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 199C-FTI2 – VIA NOBILA, VIA INSPIRADA TO LAS VEGAS BOULEVARD (FOR POSSIBLE ACTION)
**19.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN SUPPLEMENTAL INTERLOCAL CONTRACT NO. 1 TO EXTEND THE PROJECT COMPLETION DATE AND INCREASE FUNDING FOR CITY OF HENDERSON PROJECT 135AG-FTI2 – ARTERIAL RECONSTRUCTION PROGRAM, FISCAL YEAR 2020 (FOR POSSIBLE ACTION)
**20.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN SUPPLEMENTAL INTERLOCAL CONTRACT NO. 3 TO INCREASE FUNDING FOR CITY OF HENDERSON PROJECT 140B-FTI2 – GREENWAY ROAD, BOULDER HIGHWAY TO PARADISE HILLS ROAD (FOR POSSIBLE ACTION)
**21.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN SUPPLEMENTAL INTERLOCAL CONTRACT NO. 4 TO INCREASE FUNDING FOR CITY OF HENDERSON PROJECT 199B-MVFT – VIA NOBILA, LAS VEGAS BOULEVARD TO VIA INSPIRADA (FOR POSSIBLE ACTION)
**22.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF BOULDER CITY PROJECT 178U-FTI2 – PEDESTRIAN SAFETY UPGRADES PROGRAM – FISCAL YEAR 2022 (FOR POSSIBLE ACTION)
**23.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF BOULDER CITY PROJECT 205E-FTI2 – ADA UPGRADES PROGRAM: FISCAL YEAR 2022 (FOR POSSIBLE ACTION)
**24.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF BOULDER CITY PROJECT 261A-FTI2 – NEVADA WAY, RIGHT-OF-WAY (FOR POSSIBLE ACTION)
**25.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN SUPPLEMENTAL INTERLOCAL CONTRACT NO. 2 TO INCREASE FUNDING FOR CITY OF BOULDER CITY PROJECT 135AF-MVFT – ARTERIAL RECONSTRUCTION PROGRAM, FISCAL YEAR 2020 (FOR POSSIBLE ACTION)

**26.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF MESQUITE 063AX-FTI2 PROJECT – MESQUITE ROADWAY IMPROVEMENT PROJECT – LEAVITT LANE AND HAFEN LANE (FOR POSSIBLE ACTION)
**27.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF MESQUITE PROJECT 063AY-FTI2 – MESQUITE ROADWAY IMPROVEMENT PROJECT: THOMAS EDISON COURT (FOR POSSIBLE ACTION)
**28.	APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF MESQUITE PROJECT 063AZ-FTI2 – MESQUITE: FISCAL YEAR 2021 TRAFFIC SIGNAL IMPROVEMENT PROJECT (FOR POSSIBLE ACTION)
**29.	RECEIVE A REPORT OF AWARD OF BID FOR CITY OF MESQUITE PROJECT 063AV-FTI2; MESQUITE – FALCON RIDGE PARKWAY, HORIZON BOULEVARD HALF ROADWAY IMPROVEMENTS TO TRADE WEST CONSTRUCTION, INC. FOR $2,265,076.34 (FOR POSSIBLE ACTION)
**30.	RECEIVE A REPORT OF AWARD OF BID FOR CITY OF MESQUITE PROJECT 063AW-FTI2; MESQUITE – EXTENSION OF ISAAC NEWTON DRIVE TO TEAL EXCAVATING, LLC FOR $1,040,870.00 (FOR POSSIBLE ACTION)
**31.	ACCEPT THE FINAL ACCOUNTING REPORTS AND CLOSE PROJECTS (FOR POSSIBLE ACTION)
**32.	APPROVE AMENDMENTS TO THE RTC POLICIES AND PROCEDURES (FOR POSSIBLE ACTION)
**33.	RECEIVE NOTIFICATION THAT THE MONTHLY CAPITAL PROJECT TRACKING REPORT AND THE UNIFIED PLANNING WORK PROGRAM PROJECT ACTIVITY STATUS REPORT HAVE BEEN POSTED TO THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA'S WEBSITE (FOR POSSIBLE ACTION)

Comments:
Chair Denis Cederburg, Clark County, requested to hold Item #8 until the next Executive Advisory Committee meeting and for RTC staff to meet with Clark County staff to discuss the issues.

Motion:
Chair Denis Cederburg, Clark County, motioned to approve the Consent Agenda with the removal of Item #8.

Vote/Summary:
11 Ayes. 0 Nays. The motion carried.
Ayes: Travis Anderson, Denis Cederburg, Dale Daffern, Seth Floyd, Mike Janssen, Keegan Littrell, Michael Mays, Ed McGuire, Johanna Murphy, Sondra Rosenberg, Richard Secrist
Nays: None
Absent: Nancy Amundsen, Andrew Roether

Item:
34. REVIEW THE REGIONAL PROJECT COORDINATION MAP

Comments:
Mr. Joe Damiani, Manager of Engineering for the Regional Transportation Commission of Southern Nevada (RTC), began his update by demonstrating the features available on the Regional Project Coordination GIS Map (Map) and showing the different filters and data map layers that are available. He then reviewed the project phase categories and criteria. The roadway project phases were explained as follows:

- New Project – Any new roadway project
- Design Phase – Any project with design plans that is presented to the RTC for design funds

- Soon to Advertise Phase – Any project that is presented to the RTC for release of construction funds; primarily used for roadway projects
- Advertising – Any project that has open bids, but has not received a Notice to Proceed
- Construction – Any project that has received a Notice to Proceed

As Mr. Damiani concluded his presentation, he explained how the data is collected from the different agencies, remarked on the convenience of exporting the information as GIS data, and emphasized how the data does not need to be reformatted prior to sharing with the RTC.

Chair Denis Cederburg, Clark County, said that project Dust Control Operating Permits were listed by address rather than by entity. Mr. Damiani stated that the data is added to the Map according to the format provided by the agency. Mr. John Peñuelas, Senior Director of Engineering for the RTC, explained that the address appears instead of the entity because the data is entered according to its geolocation.

Mr. Mike Janssen, City of Las Vegas, inquired about listing utility work. Mr. Damiani explained that the Map is in a pilot stage intended to show that the concept works and does include the utilities. He also mentioned the difficulty in collecting data from the utility companies. Mr. Peñuelas remarked that utility information, when it is provided by the entity, is currently tracked under the participants field for each project.

Vice Chair Ed McGuire, City of Henderson, asked about tracking completed projects. Mr. Damiani reviewed the different ways that RTC staff tracked completed projects, including project notice of completion and physical site visits. Mr. Damiani asked for recommendations as to how to track private development projects or any other data that should be added to the Map.

Mr. Janssen asked if the Map's website traffic is tracked. Mr. Todd Gurnee, GIS Analyst for the RTC, provided visitor traffic for the past 30 days, noting that there were 409 views and 232 unique visits.

Motion:
No motion was necessary.

Vote/Summary:
No vote was taken.

Item:
35. DISCUSS TOPICS OF INTEREST

Comments:
No comments were made.

Motion:
No motion was necessary.

Vote/Summary:
No vote was taken.

Item:
36. CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

Comments:
No comments were made.

Motion:
No motion was necessary.

Vote/Summary:

No vote was taken.

ADJOURNMENT

The meeting adjourned at 9:42 a.m.

Respectfully submitted,

DocuSigned by:
David Gloria
179E8F805E9348E...

David Gloria, Recording Secretary

DocuSigned by:
Marek Biernacinski
26AA405162134B0...

Marek Biernacinski, Transcription Secretary

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: CAPITAL IMPROVEMENT PROGRAM AMENDMENTS

PETITIONER: M.J. MAYNARD, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) ADOPT AMENDMENTS TO THE CAPITAL IMPROVEMENT PROGRAM (FOR POSSIBLE ACTION)

GOAL: ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM

FISCAL IMPACT:
None

BACKGROUND:
The following amendments to the Capital Improvement Program (CIP) are being requested. The fiscal actions associated with these projects are detailed later in this agenda.

Entity	Project No.	Fund	Year Programmed	Year Amended	Funds Available
Clark County	065A-FTI2	FTI2	FY23	FY22	YES
Henderson	156C-FTI2	FTI2	FY23	FY22	YES

These amendments have no adverse impacts to the associated CIP and, therefore, are recommended for approval.

Respectfully submitted,

DocuSigned by:
John Peñuelas
79E5AF522AE1479...

JOHN R. PEÑUELAS, JR., P.E.
Senior Director of Engineering

gk

EAC Item #4
September 30, 2021
Consent

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: CAPITAL IMPROVEMENTS PROGRAM FISCAL ACTIONS

PETITIONER: M.J. MAYNARD, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) RECEIVE A REPORT ON THE SUMMARY OF FISCAL ACTIONS RELATED TO THE CAPITAL IMPROVEMENT PROGRAM (FOR POSSIBLE ACTION)

GOAL: ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM

FISCAL IMPACT:
None

BACKGROUND:
This agenda item addresses requested changes in funding associated with the Capital Improvement Program (CIP) administered by the Streets and Highways Department of the Regional Transportation Commission of Southern Nevada. The attached Exhibit A and Exhibit B list requests for new projects and/or deletions of closed projects from the adopted CIP.

Respectfully submitted,

DocuSigned by:
John Peñuelas
79E5AF522AE1479...

JOHN R. PEÑUELAS, JR., P.E.
Senior Director of Engineering

gk

EAC Item #5
September 30, 2021
Consent

EXHIBIT A - SUMMARY OF FISCAL ACTIONS 10-14-2021

MOTOR VEHICLE FUEL TAX

ENTITY	PROJECT NUMBER	PROJECT NAME	ACTION	AMOUNT
CLV	146K-MVFT	Bus Turnout Project; Shelter Acquisitions,	Close out	($308,432.12)
HEN	135AL-MVFT	Arterial Reconstruction Program; Stephanie, 215 to UPRR, GVP & Paseo Verde Pkwy	1st SUPPLEMENTAL	$5,000,000.00
HEN	142X-MVFT	Entity Non-Project Specific Expenses; Fiscal Year 2021, City of Henderson	Close out	($79.40)
MES	063AP-MVFT	Mesquite; 2020 Street Reconstruction Project, Kitty Hawk Dr	Close out	($9,170.28)
			MVFT TOTAL	**$4,682,318.20**

FUEL REVENUE INDEXING EXTENSION

ENTITY	PROJECT NUMBER	PROJECT NAME	ACTION	AMOUNT
CC	116C-FTI2	Hacienda Ave; Rainbow Blvd, Decatur Blvd (D)	ORIGINAL	$1,500,000.00
CLV	144BB-FTI2	ITS; City of Las Vegas Downtown ITS, Traffic Signal Communications Upgrade	Close out	($38,926.65)
CLV-TIBP	222A-FTI2	Transportation Improvement Business Plan; Pedestrian Bridge, Intersection at Sahara Ave	1st SUPPLEMENTAL	$2,000,000.00
CNLV	173C-FTI2	Sawtooth Roads- Gowan, Alexander, Revere, N. 5th) NV Energy Reimbursement	Reimbursement	($150,726.00)
CNLV	163C-FTI2	Commerce St; Henderson Cir, Craig Rd (D)	ORIGINAL	$400,000.00
HEN	088C-FTI2	Pebble Rd; Eastern Ave, Pecos Rd	Close out	($149,638.10)
HEN	100F-FTI2	I-515 Interchange; at I-215, Interchange Improvements	Close out	($410,612.38)
HEN	111C-FTI2	Bermuda Rd; St. Rose Pkwy Power Pole Removal (C),	ORIGINAL	$150,000.00
HEN	156C-FTI2	Galleria Dr; Patrick Ln, Panhandle Dr (D)	ORIGINAL	$400,000.00
HEN	192D-FTI2	Sunridge Heights Pkwy; Executive Airport Dr, St. Rose Pkwy	Close out	($2,756,691.04)
HEN	192E-FTI2	Sunridge Heights Pkwy; Seven Hills Dr, Horizon Ridge Pkwy (D)	ORIGINAL	$550,000.00
HEN	263A-FTI2	Carnegie St; Paseo Verde Pkwy, Sunridge Heights Pkwy (D)	ORIGINAL	$650,000.00
HEN	264A-FTI2	Seven Hills Dr; St Rose Pkwy, Grand Hills Dr (D)	ORIGINAL	$700,000.00
RTC	144Y-FTI2	ITS; FAST Program Management Services, FY 2020	Close out	($3,455.80)
			FRI TOTAL	**$2,839,950.03**

QUESTION 10

ENTITY	PROJECT NUMBER	PROJECT NAME	ACTION	AMOUNT
CC	190Q-Q10	Trail Connectivity; CC-215 Beltway Trail Bridges (D), Eastern and Charleston	ORIGINAL	$1,800,000.00
			Q10 TOTAL	**$1,800,000.00**

DIRECT DISTRIBUTION

ENTITY	PROJECT NUMBER	PROJECT NAME	ACTION	AMOUNT
CC	065A-FTI2	Mount Charleston; Echo View Pavement Rehabilitation (D),	ORIGINAL	$100,000.00
			DD TOTAL	**$100,000.00**

COMPLETE STREETS

ENTITY	PROJECT NUMBER	PROJECT NAME	ACTION	AMOUNT
MES	191H-CSF	Complete Streets Fund; City of Mesquite, Bus Shelters	Close out	($15,102.56)
			TOTAL	**($15,102.56)**

TOTAL FISCAL IMPACT THIS AGENDA	**$9,407,165.67**

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM

UPDATED OCTOBER 14, 2021

SUMMARY OF 10-YEAR CAPITAL IMPROVEMENT PROGRAM

ENTITY	FY 2022 Q10 REVENUE	FY 2022 Q10 PROGRAMMED	FY 2022 Q10 BALANCE	FY 2023-2031 Q10 REVENUE	FY 2023-2031 Q10 PROGRAMMED	FY 2023-2031 Q10 BALANCE	TEN YEAR TOTAL Q10 REVENUE	TEN YEAR TOTAL Q10 PROGRAMMED	TEN YEAR TOTAL Q10 BALANCE
CLARK COUNTY	$ 32,978,625	$ 9,155,000	$ 23,823,625	$ 172,044,308	$ 87,795,000	$ 84,249,308	$ 205,022,934	$ 96,950,000	$ 108,072,934
LAS VEGAS	$ 3,848,049	$ 2,595,011	$ 1,253,038	$ 92,538,262	$ 57,995,000	$ 34,543,262	$ 96,386,311	$ 60,590,011	$ 35,796,299
HENDERSON	$ 16,817,980	$ 6,566,247	$ 10,251,733	$ 55,296,254	$ 13,190,000	$ 42,106,254	$ 72,114,235	$ 19,756,247	$ 52,357,987
NORTH LAS VEGAS	$ 7,777,762	$ 25,000	$ 7,752,762	$ 35,820,066	$ 8,940,000	$ 26,880,066	$ 43,597,827	$ 8,965,000	$ 34,632,827
RTC	$ 200,000	$ 939,126	$ (739,126)	$ 100,400,000	$ 100,400,000	$ -	$ 100,600,000	$ 101,339,126	$ (739,126)
BOULDER CITY	$ 3,587,479	$ 7,454	$ 3,580,024	$ 2,417,697	$ -	$ 2,417,697	$ 6,005,176	$ 7,454	$ 5,997,722
MESQUITE	$ 5,815,171	$ -	$ 5,815,171	$ 4,057,466	$ -	$ 4,057,466	$ 9,872,637	$ -	$ 9,872,637
TOTALS	**$ 71,025,066**	**$ 19,287,839**	**$ 42,342,031**	**$ 456,098,890**	**$ 268,320,000**	**$ 187,778,890**	**$ 517,721,306**	**$ 287,600,385**	**$ 230,120,921**

ENTITY	FY 2022 FUEL TAX REVENUE	FY 2022 FUEL TAX PROGRAMMED	FY 2022 FUEL TAX BALANCE	FY 2023-2031 FUEL TAX REVENUE	FY 2023-2031 FUEL TAX PROGRAMMED	FY 2023-2031 FUEL TAX BALANCE	TEN YEAR TOTAL FUEL TAX REVENUE	TEN YEAR TOTAL FUEL TAX PROGRAMMED	TEN YEAR TOTAL FUEL TAX BALANCE
CLARK COUNTY	$ 260,103,958	$ 186,388,653	$ 73,715,305	$ 621,239,623	$ 714,017,000	$ (92,777,377)	$ 881,343,582	$ 900,405,653	$ (19,062,071)
LAS VEGAS	$ (774,817)	$ 35,632,099	$ (36,406,916)	$ 334,149,007	$ 293,750,000	$ 40,399,007	$ 333,374,190	$ 329,382,099	$ 3,992,091
HENDERSON	$ 44,442,232	$ 83,395,200	$ (38,952,968)	$ 199,670,797	$ 169,470,000	$ 30,200,797	$ 244,113,029	$ 252,865,200	$ (8,752,171)
NORTH LAS VEGAS	$ 38,918,611	$ 43,024,008	$ (4,105,397)	$ 129,343,681	$ 104,827,250	$ 24,516,431	$ 168,262,291	$ 147,851,258	$ 20,411,034
RTC	$ 14,505,000	$ 13,692,738	$ 812,262	$ 223,880,000	$ 217,380,000	$ 6,500,000	$ 238,385,000	$ 231,072,738	$ 7,312,262
BOULDER CITY	$ 12,616,043	$ 11,004,135	$ 1,611,908	$ 8,730,132	$ 24,245,000	$ (15,514,868)	$ 21,346,175	$ 35,249,135	$ (13,902,961)
MESQUITE	$ 14,749,995	$ 9,360,830	$ 5,389,165	$ 14,651,217	$ 21,269,000	$ (6,617,783)	$ 29,401,212	$ 30,629,830	$ (1,228,617)
TOTALS	**$ 384,561,022**	**$ 382,497,663**	**$ 2,063,359**	**$ 1,531,664,457**	**$ 1,544,958,250**	**$ (13,293,793)**	**$ 1,916,225,479**	**$ 1,927,455,913**	**$ (11,230,434)**
TOTAL ALL FUNDS	**$ 455,586,088**	**$ 401,785,502**	**$ 44,405,390**	**$ 1,987,763,347**	**$ 1,813,278,250**	**$ 174,485,097**	**$ 2,433,946,785**	**$ 2,215,056,297**	**$ 218,890,488**

EXHIBIT B - FISCAL YEAR 2022 BOARD ACTIONS

	SALES TAX	FUEL TAX	TOTALS
RESOURCES START OF FY 2022	$ 71,025,066.10	$ 384,561,021.81	$ 455,586,087.91
FISCAL IMPACT FROM BOARD ACTION	$ 3,179,238.84	$ 112,282,453.85	$ 115,461,692.69
AVAILABLE RESOURCES REMAINING FY 2022	$ 67,845,827.26	$ 272,278,567.96	$ 340,124,395.22

BOARD DATE	Q10	FUEL TAX	TOTALS	CLARK COUNTY	LAS VEGAS	HENDERSON	NORTH LAS VEGAS	RTC	BOULDER CITY	MESQUITE	TOTAL CHECK
				$ 293,082,583	$ 3,073,232	$ 61,260,212	$ 46,696,372	$ 14,705,000	$ 16,203,522	$ 20,565,166	$ 455,586,087.91
July 8, 2021	$ 1,670,000.00	$ 16,906,016.78	$ 18,576,016.78	$ 3,205,000.00	$ 930,000.00	$ 16,890,000.00	$ 50,000.00	$ (2,498,983.22)	$ -	$ -	$ 18,576,016.78
August 12, 2021	$ (236,173.60)	$ 12,076,238.50	$ 11,840,064.90	$ 1,762,879.59	$ 1,724,022.89	$ (146,990.22)	$ -	$ 3,846,017.40	$ (45,864.76)	$ 4,700,000.00	$ 11,840,064.90
September 9, 2021	$ (54,587.56)	$ 77,777,930.34	$ 77,723,342.78	$ 19,881,273.42	$ 8,770,446.41	$ 35,085,458.02	$ 7,739,024.63	$ 2,283,286.00	$ 2,233,854.30	$ 1,730,000.00	$ 77,723,342.78
October 14, 2021	**$ 1,800,000.00**	**$ 5,522,268.23**	**$ 7,322,268.23**	**$ 3,300,000.00**	**$ (347,358.77)**	**$ 4,132,979.08**	**$ 249,274.00**	**$ (3,455.80)**	**$ -**	**$ (9,170.28)**	**$ 7,322,268.23**
November 11, 2021	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
December 9, 2021	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
January 13, 2022	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
February 10, 2022	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
March 10, 2022	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
April 14, 2022	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
May 19, 2022	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
June 9, 2022	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ 3,179,238.84	**$ 112,282,453.85**	**$ 115,461,692.69**	**$ 28,149,153.01**	**$ 11,077,110.53**	**$ 55,961,446.88**	**$ 8,038,298.63**	**$ 3,626,864.38**	**$ 2,187,989.54**	**$ 6,420,829.72**	**$ 115,461,692.69**
				$ 264,933,430.43	$ (8,003,878.59)	$ 5,298,765.29	$ 38,658,073.61	$ 11,078,135.62	$ 14,015,532.28	$ 14,144,336.59	$ 340,124,395.22

EXHIBIT "B"

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX				
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	AVAILABLE RESOURCES		$ 384,561,022
		PROGRAMMED	$ 1,930,955,913	$ 385,997,663
		REMAINING RESOURCES		$ (1,436,641)

CLARK COUNTY				
		available resources		$ 260,103,958
unencumbered from previous year	$ (48,931,685)	programmed	$ 900,405,653	$ 186,388,653
		remaining resources		$ 73,715,305

$ 1,500,000.00 Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS		
									AMOUNT	DATE	PHASE
				ARTERIAL RECONSTRUCTION PROGRAM			$ 117,000,000	$ 18,500,000			
				NEIGHBORHOOD REHABILITATION PROGRAM			$ 85,000,000	$ 20,000,000			
				ADA UPGRADES PROGRAM			$ 8,000,000	$ 1,000,000			
239F-FTI2	FTI2	7/8/2021		SAFETY UPGRADES PROGRAM			$ 8,000,000	$ 1,000,000	$ 1,000,000.00	7/8/2021	CONST
				INTERSECTION IMPROVEMENTS PROGRAM			$ 60,000,000	$ 10,000,000			
142AC-FTI2	FTI2	7/8/2021		ENTITY NON SPECIFIC FY 2022-26			$ 1,200,000	$ 150,000	$ 150,000.00	7/8/2021	CONST
				VARIOUS SAW TOOTH			$ 8,000,000	$ 1,000,000			
DESIGN CONTRACTS											
006K-FTI2	FTI2	9/10/2020	$ 1,200,000	TROPICANA	RAINBOW	DEAN MARTIN	$ 13,200,000				
006L-FTI2	FTI2	9/10/2020	$ 2,000,000	TROPICANA	BOULDER HWY	COH LIMITS ALONG BROADBENT	$ 5,800,000	$ 3,800,000			
006M-FTI2	FTI2	10/8/2020	$ 1,000,000	TROPICANA	UNIVERSITY CENTER DR	GRADE SEPARATION	$ 1,000,000				
007Q-FTI2	FTI2	11/14/2019	$ 1,200,000	DECATUR	TROPICANA	SAHARA	$ 1,200,000				
007M-MVFT	MVFT	8/14/2014	$ 3,850,000	DECATUR	CACTUS	WARM SPRINGS	$ 3,850,000				
008Y-FTI2	FTI2	9/10/2020	$ 500,000	RUSSELL	HUALAPAI	CC-215	$ 2,500,000	$ 2,000,000			
010N-FTI2	FTI2	12/12/2019	$ 4,200,000	RAINBOW	ERIE	BLUE DIAMOND	$ 4,200,000				
010Q-FTI2	FTI2	9/9/2021		RAINBOW	ERIE	BLUE DIAMOND	$ 6,500,000	$ 6,500,000	$ 6,500,000.00	9/9/2021	CONST
010P-FTI2	FTI2	9/10/2020	$ 800,000	RAINBOW	BLUE DIAMOND	CC-215	$ 9,860,000	$ 9,060,000			
010R-FTI2	FTI2	9/9/2021		RAINBOW	ARBY	BADURA	$ 1,500,000	$ 1,500,000	$ 1,500,000.00	9/9/2021	CONST
016H-MVFT	MVFT	8/8/2013	$ 2,033,000	CAREY	NELLIS	TOIYABE	$ 8,821,000	$ 6,788,000			
016L-FTI2	FTI2	9/10/2020	$ 1,000,000	CAREY	PECOS	NELLIS	$ 3,200,000	$ 2,200,000			
024N-MVFT	MVFT	2/8/2018	$ 235,000	PECOS	ALEXANDER	OWEN	$ 235,000				
033S-FTI2	FTI2	9/12/2019	$ 1,106,000	JONES	BLUE DIAMOND	WINDMILL	$ 11,685,000	$ 2,000,000			
046L-FTI2	FTI2	2/13/2020	$ 1,000,000	WARM SPRINGS	DECATUR	DEAN MARTIN	$ 6,171,000	$ 5,171,000			
050S-MVFT	MVFT	12/14/2017	$ 875,000	TRAFFIC SIGNAL IMPROVEMENTS PACKAGE 102			$ 875,000				
057D-FTI2	FTI2	10/8/2020	$ 800,000	VEGAS VALLEY	LAS VEGAS WASH	LOS FELIZ	$ 800,000				
083B-FTI2	FTI2	9/10/2020	$ 500,000	SANDHILL	DESERT INN	SUNSET	$ 4,500,000	$ 500,000	$ 500,000.00	7/8/2021	DESIGN
								$ 3,500,000			
099D-FTI2	FTI2	9/12/2019	$ 1,000,000	HOLLYWOOD	LAKE MEAD	CHEYENNE	$ 6,000,000	$ 5,000,000			
113D-FTI2	FTI2	8/9/2018	$ 2,600,000	FORT APACHE	BLUE DIAMOND	WARM SPRINGS	$ 2,600,000				
130C-FTI2	FTI2	9/12/2019	$ 200,000	HUALAPAI	RUSSELL	FLAMINGO	$ 4,200,000	$ 4,000,000			
147B-FTI2	FTI2	8/9/2018	$ 1,835,500	CACTUS	FORT APACHE	BUFFALO	$ 9,000,000	$ 7,164,500			
175U-FTI2	FTI2	11/14/2019	$ 1,000,000	NEIGHBORHOOD REHABILITATION PROGRAM; FY 2020			$ 1,000,000				
175X-FTI2	FTI2	8/13/2020	$ 1,000,000	NEIGHBORHOOD REHABILITATION PROGRAM, PROJECT 104			$ 1,000,000				

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX				
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	AVAILABLE RESOURCES		$ 384,561,022
		PROGRAMMED	$ 1,930,955,913	$ 385,997,663
		REMAINING RESOURCES		$ (1,436,641)

CLARK COUNTY				
		available resources		$ 260,103,958
unencumbered from previous year	$ (48,931,685)	programmed	$ 900,405,653	$ 186,388,653
		remaining resources		$ 73,715,305

$ 1,500,000.00 Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
188C-FTI2	FTI2	9/12/2019	$ 1,700,000	TROPICAL	DURANGO	CC-215	$ 6,700,000	$ 5,000,000			
211C-FTI2	FTI2	8/13/2020	$ 4,400,000	TRAFFIC SIGNAL IMPROVEMENTS PACKAGE 103			$ 6,400,000	$ 1,000,000	$ 1,000,000.00	7/8/2021	CONST
								$ 1,000,000	$ 1,000,000.00	8/12/2021	CONST
213B-FTI2	FTI2	9/9/2021		SLOAN	VEGAS VALLEY	RUBY CREEK	$ 12,000,000	$ 12,000,000	$ 12,000,000.00	9/9/2021	CONST
217A-FTI2	FTI2	9/13/2018	$ 800,000	CIMARRON	BLUE DIAMOND	ROBINDALE	$ 10,000,000	$ 9,200,000			
223P-MVFT	MVFT	8/13/2020	$ 2,000,000	INTERSECTION IMPROVEMENTS PROGRAM	FY21		$ 2,000,000				
223U-FTI2	MVFT	2/11/2021	$ 500,000	INTERSECTION IMPROVEMENTS PROGRAM	FY21		$ 500,000				
230A-FTI2	FTI2	9/12/2019	$ 500,000	ELKHORN	TENAYA	JONES	$ 3,500,000	$ 3,000,000			
231A-FTI2	FTI2	9/12/2019	$ 400,000	LINDELL	SOUTH OF ROY HORN		$ 400,000				
240B-FTI2	FTI2	9/10/2020	$ 300,000	SUNSET	HUALAPAI	CC-215	$ 2,300,000	$ 2,000,000			
240C-FTI2	FTI2	9/10/2020	$ 1,400,000	SUNSET	DURANGO	DECATUR	$ 15,000,000	$ 1,000,000	$ 1,000,000.00	8/12/2021	DESIGN
241A-FTI2	FTI2	9/10/2020	$ 1,000,000	DEAN MARTIN	SAMMY DAVIS JR DR	OQUENDO RD	$ 6,000,000				
242A-FTI2	FTI2	9/10/2020	$ 800,000	BADURA AVE	TENAYA WAY	EL CAPITAN WAY	$ 5,800,000	$ 200,000	$ 200,000.00	7/8/2021	DESIGN
								$ 4,800,000			
243A-FTI2	FTI2	9/10/2020	$ 800,000	PYLE	LAS VEGAS BL	BERMUDA	$ 4,800,000	$ 4,000,000			
244A-FTI2	FTI2	9/10/2020	$ 500,000	SPENCER	RUSSELL	TWAIN	$ 3,500,000	$ 300,000	$ 300,000.00	7/8/2021	DESIGN
								$ 2,700,000			
245A-FTI2	FTI2	9/10/2020	$ 750,000	STARR	LAS VEGAS BLVD	BERMUDA	$ 2,385,000	$ 15,000	$ 15,000.00	8/12/2021	DESIGN
								$ 1,620,000			
NEW PROJECTS											
				ALTO WIDENING	PECOS	NELLIS	$ 2,000,000				
				BACKROAD TO SANDY VALLEY			$ 15,000,000				
				BERMUDA	ST ROSE	SILVERADO	$ 7,929,000	$ 750,000			
				BUFFALO	HACIENDA	I 215	$ 7,200,000				
				BUFFALO	CC 215	BLUE DIAMOND	$ 12,640,000				
				BUFFALO	BLUE DIAMOND	STARR	$ 11,000,000				
				CHRISTY	CAREY	SOUTH OF CHARLESTON	$ 2,500,000				
				COLUMBIA PASS ROAD REHAB			$ 10,000,000				
				CRAIG	JENSEN	BUFFALO	$ 3,000,000				
				DECATUR	CC 215	TROPICANA	$ 9,000,000				
				DEAN MARTIN	SOUTHERN HIGHLANDS	BLUE DIAMOND	$ 6,000,000	$ 1,000,000			
				DEAN MARTIN	BLUE DIAMOND	WARM SPRINGS	$ 4,400,000				
				DESERT INN	HUALAPAI	BUFFALO	$ 6,500,000				

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX				
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	AVAILABLE RESOURCES		$ 384,561,022
		PROGRAMMED	$ 1,930,955,913	$ 385,997,663
		REMAINING RESOURCES		$ (1,436,641)

CLARK COUNTY				
		available resources		$ 260,103,958
unencumbered from previous year	$ (48,931,685)	programmed	$ 900,405,653	$ 186,388,653
		remaining resources		$ 73,715,305

$ 1,500,000.00 Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS		
									AMOUNT	DATE	PHASE
				DESERT INN	BUFFALO	DECATUR	$ 6,500,000				
				DESERT INN	DECATUR	VALLEY VIEW	$ 3,000,000	$ 1,000,000			
				ELKHORN	HUALAPAI	GRAND CANYON	$ 1,900,000	$ 900,000			
				EL CAPITAN	TROPICANA	DESERT INN	$ 3,500,000				
				FRANK SINATRA	SAINT ROSE	SILVERADO RANCH	$ 11,200,000				
				GILESPIE	BARBARA	SILVERADO RANCH	$ 16,000,000				
				GRAND CANYON	MAULE	PEACE	$ 4,000,000				
				GRAND TETON	BUFFALO	JONES	$ 5,500,000				
				HACIENDA	MARYLAND	LAMB	$ 5,800,000				
116C-FTI2	FTI2	10/14/2021		HACIENDA (D)	DECATUR	RAINBOW	$ 1,500,000	$ 1,500,000	$ 1,500,000.00	10/14/2021	DESIGN
				HARMON	MARYLAND	MCLEOD	$ 2,700,000				
				HARMON	MCLEOD	BOULDER HWY	$ 2,421,000				
				HARMON	TORREY PINES	DECATUR	$ 2,250,000				
				HOLLYWOOD	WETLANDS	SAHARA	$ 22,205,000	$ 2,441,000			
				HOLLYWOOD	SAHARA	CHARLESTON	$ 1,000,000	$ 1,000,000			
				JIMMY DURANTE	FLAMINGO	TROPICANA	$ 4,000,000				
				JONES	ERIE	PYLE	$ 4,000,000	$ 4,000,000			
				JONES	RUSSELL	SAHARA	$ 5,500,000				
				LAS VEGAS BL	JEAN	ST. ROSE	$ 35,000,000				
				LINDELL	TROPICANA	HARMON	$ 7,600,000				
				MARION	OWENS	LAS VEGAS BLVD	$ 6,000,000				
				MCLEOD	TWAIN	PATRICK	$ 4,000,000				
				MCLEOD	PECOS	SUNSET	$ 5,800,000				
				MOJAVE	FREMONT	CHARLESTON	$ 2,000,000	$ 1,000,000			
				NEEDLES HWY			$ 13,000,000				
				OWENS	PECOS	LOS FELIZ	$ 7,000,000	$ 1,000,000			
				PATRICK	DURANGO	DECATUR	$ 5,500,000				
				PATRICK	FORT APACHE	DURANGO (OVER CC-215)	$ 6,400,000				
				PATRICK	EASTERN	GREEN VALLEY PKWY	$ 3,200,000				
				PYLE	JONES	DEAN MARTIN	$ 8,000,000				
				ROBINDALE	DURANGO	BUFFALO	$ 12,200,000				
				ROBINDALE	JONES	DEAN MARTIN	$ 4,500,000				
				ROBINDALE	LAS VEGAS BL	AMIGO	$ 4,000,000				
				SANDHILL	CHARLESTON	SAHARA	$ 4,000,000	$ 4,000,000			
				SAHARA	DURANGO	DECATUR	$ 7,000,000				

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX				
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	AVAILABLE RESOURCES		$ 384,561,022
		PROGRAMMED	$ 1,930,955,913	$ 385,997,663
		REMAINING RESOURCES		$ (1,436,641)

CLARK COUNTY											
						available resources		$ 260,103,958			
unencumbered from previous year	$ (48,931,685)					programmed	$ 900,405,653	$ 186,388,653			
						remaining resources		$ 73,715,305			
									$ 1,500,000.00 Total this cycle		10/14/2021
PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS		
									AMOUNT	DATE	PHASE
				SAHARA	PARADISE	BOULDER HWY	$ 5,200,000				
				SAHARA	BOULDER HWY	NELLIS	$ 4,500,000				
				SPENCER	CACTUS	WINDMILL	$ 2,100,000				
				SPRING MOUNTAIN	HUALAPAI	DURANGO	$ 1,300,000				
				SPRING MOUNTAIN	RAINBOW	I15	$ 15,000,000	$ 2,000,000			
				STEPHANIE	RUSSELL	MISSOURI	$ 3,000,000	$ 500,000			
				SWENSON	FLAMINGO	DESERT INN	$ 3,200,000				
				TORREY PINES	RUSSELL	SAHARA	$ 2,800,000				
				TROPICANA BUS TURN-OUTS			$ 1,000,000				
				TWAIN	HUALAPAI	RAINBOW	$ 4,500,000				
				TWAIN	BOULDER HWY	CABANA	$ 3,500,000				
				TWAIN	SANDS	MARYLAND	$ 1,000,000				
				VALLEY OF FIRE ROAD REHAB			$ 4,000,000				
				VALLEY VIEW	BLUE DIAMOND	SUNSET	$ 8,640,000				
				VEGAS VALLEY	BOULDER HWY	NELLIS	$ 3,000,000	$ 3,000,000			
				VEGAS VALLEY	NELLIS	LAS VEGAS WASH	$ 3,000,000				
				WALNUT	OWENS	CRAIG	$ 2,500,000				
				WARM SPRINGS	FORT APACHE	I-15	$ 13,694,000				
				WASHINGTON	NELLIS	LOS FELIZ	$ 4,000,000	$ 4,000,000			
				WINDMILL	JONES	DECATUR (WITH UPRR CROSSING)	$ 21,000,000				
				WINDMILL	DURANGO	JONES	$ 11,600,000				
CLOSED PROJECTS											
165B-MVFT	MVFT	8/13/2015	$ 5,350,000	LONE MOUNTAIN ROAD	CC215	TENAYA	$ 5,097,880	$ (252,120)	$ (252,120)	8/12/2021	CLOSE OUT
142Y-MVFT	MVFT	9/9/2021	$ 150,000	ENTITY NON SPECIFIC FY 21			$ 31,273	$ (118,727)	$ (118,727)	9/9/2021	CLOSE OUT
TOTALS			$ 52,716,500				$ 938,622,153	$ 186,388,653	$ 26,294,153		

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX				
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	AVAILABLE RESOURCES		$ 384,561,022
		PROGRAMMED	$ 1,926,425,913	$ 381,497,663
		REMAINING RESOURCES		$ 3,063,359

CITY OF LAS VEGAS

		available resources		$ (774,817)
unencumbered from previous year	$ (166,997,237)	programmed	$ 329,382,099	$ 35,632,099
		remaining resources		$ (36,406,916)

$ (347,358.77) Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	FUNDING REQUESTS DATE	FUNDING REQUESTS PHASE
				ARTERIAL RECONSTRUCTION PROGRAM			$ 13,200,000				
				NEIGHBORHOOD REHABILITATION PROGRAM			$ 15,950,000	$ 650,000			
				ADA UPGRADES PROGRAM			$ 500,000				
				SAFETY UPGRADES PROGRAM			$ 7,600,000	$ 1,000,000			
				INTERSECTION IMPROVEMENTS PROGRAM			$ 10,000,000	$ 2,500,000			
142AD-FTI2	FTI2	7/8/2021		ENTITY NON SPECIFIC			$ 825,000	$ 275,000	$ 275,000	7/8/2021	CONST
				TRAFFIC SIGNAL COMMUNICATIONS UPGRADES			$ 9,000,000				
				ANNUAL PEDESTRIAN SAFETY UPGRADES			$ 15,000,000				
				ANNUAL INTERSECTION IMPROVEMENTS			$ 20,000,000				
				CITYWIDE BUS TURNOUTS			$ -				
				SCHOOL SAFETY INFRASTRUCTURE IMPROVEMENTS			$ 2,000,000				
				OPEN DESIGN CONTRACTS							
009L-FTI2	FTI2	5/21/2020	$ 705,000	CHARLESTON BOULEVARD	MARYLAND	BOULDER HWY	$ 705,000				
009Q-FTI2	FTI2	12/12/2019	$ 1,500,000	CHARLESTON	ART	GRAND CENTRAL	$ 1,500,000				
037B-MVFT	MVFT	8/9/2012	$ 500,000	RANCHO	BONANZA	RAINBOW	$ 650,000	$ 150,000			
037E-FTI2	FTI2	7/12/2018	$ 2,020,000	RANCHO	SAHARA	MESQUITE	$ 30,020,000	$ 1,500,000	$ 1,500,000	8/12/2021	DESIGN
045D-MVFT	MVFT	3/14/2019	$ 1,000,000	OGDEN	MAIN	LAS VEGAS BLVD	$ 1,000,000				
048L-FTI2	FTI2	5/23/2019	$ 703,750	LAKE MEAD BOULEVARD (CLV LEAD; CNLV PARTICIPATION)	SIMMONS	LOSEE	$ 17,703,750				
071G-MVFT	MVFT	7/13/2017	$ 1,550,000	BUFFALO DR	CHARLESTON	SAHARA	$ 1,550,000				
089M-FTI2	FTI2	11/9/2017	$ 15,650,000	LAS VEGAS BL	STEWART	WASHINGTON	$ 43,650,000				
123E-FTI2	FTI2	1/10/2019	$ 1,100,000	ALEXANDER ROAD OVERPASS @ US95			$ 2,500,000	$ 1,400,000			
123F-MVFT	MVFT	8/8/2019	$ 550,000	ALEXANDER	DECATUR	RANCHO	$ 11,550,000				
124C-MVFT	MVFT	5/19/2005	$ 2,772,000	SHEEP MOUNTAIN PARKWAY CORRIDOR STUDY			$ 12,272,000				
128D-MVFT	2020	6/12/2003	$ 3,449,000	US 95 @ GRANDTETON OVERPASS			$ 3,449,000				
128K-FTI2	FTI2	9/14/2017	$ 1,600,000	GRAND TETON DRIVE OVERPASS @ US95			$ 1,600,000				
144AC-FTI2	FTI2	8/8/2019	$ 650,000	GO MED GRANT AUTONAMOUS VEHICLES MEDICAL DISTRICT			$ 650,000				
144AD-FTI2	FTI2	9/12/2019	$ 500,000	CLV FIBER OPTIC MASTER PLAN PHASE 2			$ 500,000				
144AF-FTI2	FTI2	2/23/2020	$ 500,000	TRAFFIC SIGNAL COMMUNICATIONS UPGRADES NORTHWEST ITS IMPROVEMENTS			$ 2,150,000	$ 1,650,000			
145B-FTI2	FTI2	12/14/2017	$ 550,000	CITY PKWY	GRAND CENTRAL PKW	BONANZA RD	$ 1,300,000				
146L-FTI2	FTI2	7/9/2020	$ 250,000	CHEYENNE BUS TURNOUTS	DECATUR	HUALAPAI	$ 1,000,000	$ 750,000	$ 750,000	8/12/2021	DESIGN
146K-MVFT	MVFT	8/8/2013	$ 1,750,000	BUS SHELTER ACQUISITIONS			$ 1,750,000				
146R-MVFT	MVFT	9/12/2019	$ 600,000	CITYWIDE BUS TURNOUTS			$ 5,600,000				
165C-FTI2	FTI2	10/11/2018	$ 1,100,000	LONE MOUNTAIN	US95 OVERPASS		$ 1,100,000				
170E-FTI2	FTI2	5/21/2020	$ 1,490,000	CENTENNIAL	ALPINE RIDGE	DURANGO	$ 1,490,000				
173E-FTI2	FTI2	10/8/2020	$ 400,000	SAWTOOTH ROADS	NORTHWEST AREA ARTERIALS		$ 11,400,000	$ 1,000,000			
176E-FTI2	FTI2	3/8/2018	$ 13,250,000	CHARLESTON COMPLETE STREET	MLK JR	RANCHO	$ 32,250,000	$ 7,300,000	$ 7,300,000	9/9/2021	DESIGN
176G-FTI2	FTI2	11/8/2018	$ 600,000	COMPLETE STREETS: JACKSON AVENUE	H ST	C ST	$ 5,100,000	$ 4,500,000			
176H-FTI2	FTI2	11/8/2018	$ 875,000	COMPLETE STREET: WYOMING AVENUE	LAS VEGAS BLVD	INDUSTRIAL	$ 5,875,000				
178L-MVFT	MVFT	2/8/2018	$ 645,000	PEDESTRIAN UPGRADES; Downtown Pedestrian Safety Program, Phase 1			$ 645,000				

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX				
		AVAILABLE RESOURCES		$ 384,561,022
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	PROGRAMMED	$ 1,926,425,913	$ 381,497,663
		REMAINING RESOURCES		$ 3,063,359

CITY OF LAS VEGAS				
		available resources		$ (774,817)
unencumbered from previous year	$ (166,997,237)	programmed	$ 329,382,099	$ 35,632,099
		remaining resources		$ (36,406,916)

$ (347,358.77) Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS		
									AMOUNT	DATE	PHASE
178M2-FTI2	FTI2	4/18/2018	$ 785,000	PEDESTRIAN SAFETY UPGRADES FISCAL YEAR 2018			$ 785,000				
178N-MVFT	MVFT	1/10/2019	$ 70,000	PEDESTRIAN SAFETY UPGRADES FISCAL YEAR 2019 (AREA 2B)			$ 2,070,000				
187B-FTI2	FTI2	8/8/2009	$ 2,200,000	SHADOW LANE	ALTA	CHARLESTON	$ 2,200,000				
194A-MVFT	MVFT	11/10/2016	$ 1,255,000	SYMPHONY PARK INFRASTRUCTURE-PHASE 2			$ 1,855,000	$ 600,000	$ 600,000	7/8/2021	CONST
203B-MVFT	MVFT	1/11/2018	$ 1,000,000	SAFE ROUTE TO SCHOOL: HARRIS AVENUE; BRUCE TO WARDELLE			$ 9,000,000	$ 8,000,000			
204A-FTI2	FTI2	11/9/2017	$ 800,000	7TH COMPLETE STREET IMPROVEMENTS	STEWART	BRIDGER	$ 800,000				
207A-FT12	FT12	2/8/2018	$ 1,000,000	PINTO	RANCHO	ML KING	$ 1,000,000				
212A-FTTI	FTI2	7/2/2018	$ 600,000	CALIFORNIA	COMMERCE	3RD	$ 600,000				
214A-MVFT	MVFT	7/12/2018	$ 750,000	CASINO CENTER COMPLETE STREET	COLORADO	WYOMING	$ 10,450,000				
218A-FTI2	FTI2	9/13/2018	$ 250,000	CITYWIDE BOTTLENECK INTERSECTION IMPROVEMENTS	DECATUR BOULEVARD @ US 95		$ 250,000				
218C-FTI2	FTI2	10/11/2018	$ 35,000	CITYWIDE BOTTLENECK INTERSECTION IMPROVEMENTS	NELLIS BOULEVARD @ CHARLESTON BLVD		$ 35,000				
219A-FTI2	FTI2	9/13/2018	$ 405,000	BOULDER AVE COMPLETE STREET IMPROVEMENTS	1ST	ART	$ 405,000				
223L-FTI2	FTI2	3/12/2020	$ 375,000	INTERSECTION IMPROVEMENT; CHARLESTON @ WESTWIND AND UPLAND			$ 1,125,000				
226A-FTI2	FTI2	7/11/2019	$ 500,000	IRON MOUNTAIN ROAD	BRADLEY	THOM	$ 9,500,000				
227A-FTI2	FTI2	7/11/2019	$ 700,000	COLORADO AVENUE	COMMERCE	4TH	$ 4,500,000				
228A-MVFT	MVFT	7/11/2019	$ 1,800,000	TRAFFIC ENGINEERING CONTRACT			$ 5,300,000	$ 1,500,000	$ 1,500,000	9/9/2021	DESIGN
235A-FTI2	FTI2	3/12/2020	$ 350,000	8TH COMPLETE STREET IMPROVEMENTS	STEWART	BRIDGER	$ 10,350,000	$ 500,000			
237A-FTI2	FTI2	5/21/2020	$ 1,050,000	UTAH AVENUE	INDUSTRIAL	3RD	$ 7,050,000				
239D-FTI2	FTI2	4/8/2021	$ 400,000	SAFETY UPGRADES PROGRAM-CITYWIDE CRASH STUDY PH 2			$ 400,000				
239E-FTI2	FTI2	4/8/2021	$ 500,000	SAFETY UPGRADES PROGRAM-NEIGHBORHOOD AREA 2B			$ 1,300,000				
246A-FTI2	FTI2	11/12/2020	$ 360,000	FARM ROAD (30 % DESIGN ONLY)	TULE SPRINGS	TENAYA	$ 7,960,000	$ 600,000			
				NEW PROJECTS							
				ADCOCK/GARSIDE SAFE ROUTES TO SCHOOL			$ 300,000				
				BRADLEY/ELKHORN & DEER SPRINGS INTERSECTION IMPROVEMENTS			$ 1,800,000	$ 1,800,000			
				BUFFALO COALITION NEIGHBORHOOD IMPROVEMENTS			$ 1,000,000				
				CHARLESTON BLVD MEDIANS	LINDELL	ESSEX	$ 1,650,000	$ 150,000			
				CLV MOBILITY MASTER PLAN UPDATE			$ 800,000				
				DECATUR BLVD (CCPW) CLV PORTION	TROPICANA	SAHARA	$ 2,000,000				
				GRAND TETON OVERPASS CONSTRUCTION (MOVED FROM MVFT)	@US95		$ 3,200,000				
				OAKEY BOULEVARD	INDUSTRIAL	RANCHO	$ 5,600,000				
				PARADISE ROAD/ST LOUIS AVE COMPLETE STREET	LAS VEGAS BLVD	SAHARA	$ 3,500,000				
				RAMPART BOULEVARD	CHARLESTON	VEGAS	$ 11,500,000	$ 500,000			
				SHEEP MTN PKWY/US95 INTERCHANGE ALTERNATIVES			$ 700,000				
				3RD STREET IMPROVEMENTS	OGDEN	FREMONT	$ 250,000				
				VEGAS DRIVE OVERPASS @ US95			$ -				
							$ -				
				CLOSEOUTS							
072H-MVFT	MVFT	3/13/2019	$ 150,000	INDUSTRIAL ROAD- BOSTON AVE TO CIRCUS CIRCUS DRIVE			$ 36,700	$ (113,300)	$ (113,300)	8/12/2021	CLOSE OUT

City of Las Vegas **EXHIBIT "B"**

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX					
		AVAILABLE RESOURCES		$	384,561,022
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	PROGRAMMED	$ 1,926,425,913	$	381,497,663
		REMAINING RESOURCES		$	3,063,359

CITY OF LAS VEGAS											
						available resources		$ (774,817)			
				unencumbered from previous year	$ (166,997,237)	programmed	$ 329,382,099	$ 35,632,099			
						remaining resources		$ (36,406,916)			
									$ (347,358.77)	Total this cycle	10/14/2021
PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS		
									AMOUNT	DATE	PHASE
021G-MVFT	MVFT	3/10/2016	$ 250,000	MARTIN LUTHER KING JR/ HIGHLAND FEASIBILITY			$ 222,732	$ (27,268)	$ (27,268)	8/12/2021	CLOSE OUT
142S-MVFT	MVFT	7/11/2019	$ 250,000	ENTITY NON-PROJECT EXPENSES FY20			$ 212,848	$ (37,152)	$ (37,152)	8/12/2021	CLOSE OUT
176D-MVFT	MVFT	10/13/2016	$ 200,000	COMPLETE STREETS DOWNTOWN			$ 61,732	$ (138,268)	$ (138,268)	8/12/2021	CLOSE OUT
142L-MVFT	MVFT	7/9/2020	$ 200,000	ENTITY NON-PROJECT EXPENSES FY21			$ 196,865	$ (3,135)	$ (3,135)	9/9/2021	CLOSE OUT
218B-FTI2	FTI2	10/11/2018	$ 100,000	CITYWIDE BOTTLE NECK IMPROVEMENTS ANN, CENTENNIAL			$ 73,581	$ (26,419)	$ (26,419)	9/9/2021	CLOSE OUT
146K-MVFT	MVFT	8/8/2013	$ 1,750,000	BUS TURNOUT PROJECT SHELTER ACQUISITIONS			$ 1,441,568	$ (308,432)	$ (308,432)	10/14/2021	CLOSE OUT
144BB-FTI2	FTI2	9/14/2017	$ 1,070,000	ITS DOWNTOWN, TRAFFIC SIGNAL COMMUNICATIONS UPGRADE			$ 1,031,073	$ (38,927)	$ (38,927)	10/14/2021	CLOSE OUT
TOTALS			$ 75,414,750				$ 405,546,849	$ 35,632,099	$ 11,232,099		

City of Las Vegas EXHIBIT "B"

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX		AVAILABLE RESOURCES		$ 384,561,022
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	PROGRAMMED	$ 1,930,955,913	$ 385,997,663
		REMAINING RESOURCES		$ (1,436,641)

CITY OF HENDERSON		available resources		$ 44,442,232				
unencumbered from previous year	$ (54,884,004)	programmed	$ 252,865,200	$ 83,395,200				
		remaining resources		$ (38,952,968)				
					$ 4,132,979.08	Total this cycle	10/14/2021	

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
				ARTERIAL RECONSTRUCTION PROGRAM			$ 13,000,000				
				NEIGHBORHOOD REHABILITATION PROGRAM			$ 35,800,000				
175V-MVFT	MVFT	7/9/2020	$ 4,000,000	NEIGHBORHOOD REHABILITATION PROGRAM	FY 21		$ 8,000,000	$ 4,000,000	$ 4,000,000	7/8/2021	CONST
				ADA UPGRADES PROGRAM			$ -				
				SAFETY UPGRADES PROGRAM			$ -				
				INTERSECTION IMPROVEMENTS PROGRAM			$ -				
142AE-FTI2	FTI2	7/8/2021		ENTITY NON-PROJECT SPECIFIC			$ 490,000	$ 30,000	$ 30,000	7/8/2021	CONST
OPEN DESIGN CONTRACTS											
002AC-FTI2	FTI2	5/18/2017	$ 500,000	EASTERN IMPROVEMENTS - PHASE I	HORIZON RIDGE	I-215	$ 500,000				
002AD-MVFT	MVFT	1/14/2021	$ 550,000	EASTERN AVENUE	HORIZON RIDGE	SUN CITY ANTHEM DRIVE	$ 4,550,000	$ 4,000,000			
			$ -	PEBBLE	PECOS	WIGWAM	$ 3,000,000				
135AB4-MVFT	MVFT	1/10/2019	$ 600,000	ARTERIAL RECONSTRUCTION PROGRAM: FY 2019			$ 600,000				
135AG-FTI2	FTI2	12/12/2019	$ 4,000,000	ARTERIAL RECONSTRUCTION; FY 2020			$ 4,500,000	$ 500,000	$ 500,000	9/9/2021	DESIGN
135AL-MVFT	MVFT	7/9/2020	$ 2,600,000	ARTERIAL RECONSTRUCTION PROGRAM	STEPHANIE	GREEN VALLEY	$ 7,600,000	$ 5,000,000	$ 5,000,000	10/14/2021	CONST
135AP-MVFT	MVFT	1/14/2021	$ 600,000	ARTERIAL RECONSTRUCTION PROGRAM	KELSO DUNES AVE	AND MARKS STREET	$ 4,600,000				
140B-FTI2	FTI2	4/12/2018	$ 650,000	GREENWAY	BOULDER	PARADISE HILLS	$ 750,000	$ 100,000	$ 100,000	9/9/2021	DESIGN
140C-FTI2	FTI2	7/8/2021		GREENWAY AND HEATHER	BOULDER TO PARADISE	GREENWAY TO COLLEGE	$ 12,000,000	$ 12,000,000	$ 12,000,000	7/8/2021	CONST
146S-MVFT	MVFT	8/13/2020	$ 150,000	BUS TURNOUT PROJECT	ST ROSE PKWY	MARYLAND PKWY	$ 150,000				
199B-MVFT	MVFT	1/10/2019	$ 1,550,000	VIA NOBILA	VIA INSPIRADA	LAS VEGAS BLVD	$ 1,725,000	$ 175,000	$ 175,000	9/9/2021	DESIGN
199C-FTI2	FTI2	9/9/2021		VIA NOBILA	VIA INSPIRADA	LAS VEGAS BLVD	$ 35,000,000	$ 35,000,000	$ 35,000,000	9/9/2021	CONST
209A-FTI2	FTI2	4/12/2018	$ 400,000	HEATHER	GREENWAY	COLLEGE	$ 400,000				
216A-FTI2	FTI2	9/13/2018	$ 625,000	NEVADA STATE	Paradise Hills	I-515	$ 725,000	$ 100,000	$ 100,000	8/12/2021	DESIGN
223A-MVFT	MVFT	3/14/2019	$ 250,000	INTERSECTION IMP PROGRAM	LAS VEGAS BLVD	LARSON	$ 250,000				
224A-FTI2	FTI2	5/23/2019	$ 1,200,000	BOULDER HWY	WAGONWHEEL	TULIP FALLS	$ 4,200,000	$ 1,000,000			
229A-FTI2	FTI2	7/11/2019	$ 1,200,000	INTERCHAGE; I-11	at NEVADA STATE		$ 1,200,000				
229B-FTI2	FTI2	7/11/2019	$ 1,500,000	INTERCHANGE; I-215 at PECOS AND I-215 AT GREEN VALLEY			$ 7,000,000	$ 1,500,000			
234A-FTI2	FTI2	12/12/2019	$ 1,500,000	GILESPIE	ST ROSE PKWY	VIA INSPIRADA	$ 1,500,000				
240A-FTI2	FTI2	6/12/2019	$ 760,000	SUNSET	I-515	PABCO	$ 10,760,000	$ 4,000,000			
NEW PROJECTS											
				AMERICAN PACIFIC	ARROYO GRANDE	AUTOMALL DRIVE	$ 4,000,000				
				APPALOOSA	WAGONWHEEL	EQUESTRIAN	$ 3,500,000				
				ATHOL	FOSTER	ROLLY	$ 3,000,000				
				BURKHOLDER	RACETRACK	LAKE MEAD	$ 4,000,000				

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX		AVAILABLE RESOURCES		$ 384,561,022
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	PROGRAMMED	$ 1,930,955,913	$ 385,997,663
		REMAINING RESOURCES		$ (1,436,641)

CITY OF HENDERSON		available resources		$ 44,442,232			
unencumbered from previous year	$ (54,884,004)	programmed	$ 252,865,200	$ 83,395,200			
		remaining resources		$ (38,952,968)			
					$ 4,132,979.08 Total this cycle		10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
111C-FTI2	FTI2	10/14/2021		BERMUDA- POWER POLE REMOVAL	ST ROSE PKWY		$ 150,000	$ 150,000	$ 150,000	10/14/2021	CONST
263A-FTI2	FTI2	10/14/2021		CARNEGIE STREET (D)	PASEO VERDE	SUNRIDGE HEIGHTS	$ 3,530,000	$ 650,000	$ 650,000	10/14/2021	DESIGN
				COLLEGE	MISSION	BOULDER HWY	$ 4,500,000				
				DEMOCRACY DRIVE	ANTHEM HIGHLANDS	VIA INSPIRADA	$ 5,000,000				
				EASTERN IMPROVEMENTS - PHASE II	HORIZON RIDGE	I-215	$ 2,500,000				
				EASTGATE RD	WARM SPRINGS	LAKE MEAD	$ 3,820,000				
				EQUESTRIAN	BOULDER HWY	FOOTHILLS	$ 4,000,000	$ 4,000,000			
156C-FTI2	FTI2	10/14/2021		GALLERIA DRIVE (D)	PATRICK	PANHANDLE	$ 2,900,000	$ 400,000	$ 400,000	10/14/2021	DESIGN
				GIBSON RD PH1	BOULDER HWY	I-515	$ 500,000				
				GRAND HILLS	EASTERN	SEVEN HILLS	$ 2,500,000				
				HORIZON RIDGE - PHASE I	GIBSON	EAST COH LIMIT	$ 5,000,000	$ 5,000,000			
				HORIZON RIDGE - PHASE II	GREEN VALLEY	GIBSON	$ 4,300,000				
				HORIZON RIDGE - PHASE III	GREEN VALLEY	SEVEN HILLS	$ 5,000,000	$ 1,000,000			
				LAS PALMAS ENTRADA	GIBSON RD	HORIZON RIDGE	$ -				
				MAGIC WAY	EQUESTRIAN	WARM SPRINGS	$ -				
				MAJOR AVENUE	WARM SPRINGS	BOULDER HWY	$ 580,000				
				MARY CREST/GALLAGHER CREST	AMERICAN PACIFIC	CASSIA WAY	$ 3,000,000	$ 3,000,000			
				MISSION DR PH I	COH LIMITS	COLLEGE DR	$ 4,000,000				
				OLD VEGAS TRAIL	WAGONWHEEL	PARADISE HILLS	$ 1,500,000				
				PABCO ROAD	GALLERIA DRIVE	WARM SPRINGS	$ -				
036C-FTI2	FTI2	7/8/2021		PACIFIC	HORIZON	APIAN	$ 2,000,000	$ 250,000	$ 250,000	7/8/2021	DESIGN
				PARADISE HILLS	CALVERT	GREENWAY	$ -				
				PARADISE HILLS	COMPASSION DR	OLD VEGAS TRAIL	$ -				
				PASEO VERDE PARKWAY	GREEN VALLEY	STEPHANIE ST	$ 2,000,000				
				PECOS	I-215	WINDMILL	$ 4,500,000	$ 4,500,000			
				PUEBLO	BURKHOLDER	LAKE MEAD	$ 3,100,000				
				ROBINDALE	GREEN VALLEY	EASTERN	$ -				
				SERENE AVENUE	EASTERN	ST. ROSE PARKWAY	$ 2,000,000				
264A-FTI2	FTI2	10/14/2021		SEVEN HILLS (D)	GRAND HILLS	ST. ROSE AND LOOP	$ 3,700,000	$ 700,000	$ 700,000	10/14/2021	DESIGN
				SIENA HEIGHTS	JEFFREYS	ST. ROSE PARKWAY	$ 2,280,000				
				STEPHANIE STREET	SUNSET ROAD	RAILROAD TRACKS	$ 3,400,000				
				SUN CITY ANTHEM/ANTHEM	EASTERN	REUNION	$ 4,000,000				
192E-FTI2	FTI2	10/14/2021		SUNRIDGE HEIGHTS (D)	SEVEN HILLS	HORIZON RIDGE	$ 5,400,000	$ 550,000	$ 550,000	10/14/2021	DESIGN

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX		AVAILABLE RESOURCES		$ 384,561,022
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	PROGRAMMED	$ 1,930,955,913	$ 385,997,663
		REMAINING RESOURCES		$ (1,436,641)

CITY OF HENDERSON		available resources		$ 44,442,232				
unencumbered from previous year	$ (54,884,004)	programmed	$ 252,865,200	$ 83,395,200				
		remaining resources		$ (38,952,968)				
					$ 4,132,979.08	Total this cycle	10/14/2021	

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
				VAN WAGENEN	GREENWAY	LAKE MEAD	$ 4,000,000				
				WAGONWHEEL	I-515	FOOTHILLS	$ 1,750,000				
				WEISNER/BURNS	SUNSET	COH LIMITS	$ -				
				WIGWAM	EASTERN	GIBSON	$ 6,500,000				
				WINDMILL	ARROYO GRANDE	GREEN VALLEY	$ 4,500,000				
				NEVADA STATE	COMPASSION DR	I-515	$ 5,000,000				
							$ -				
							$ -				
CLOSEOUTS											
175N-FTI2	FTI2	12/14/2017	$ 4,024,900	NEIGHBORHOOD REHAB FY 2018			$ 3,901,274	$ (123,626)	$ (123,626)	8/12/2021	CLOSE OUT
223C-MVFT	MVFT	5/23/2019	$ 100,000	INTERSECTION IMPROVEMENT PROGRAM	EASTERN	SUN CITY ATHEM	$ 2,821	$ (97,179)	$ (97,179)	8/12/2021	CLOSE OUT
178S-MVFT	MVFT	9/12/2019	$ 600,000	PEDESTRIAN UPGRADES FY 20			$ 534,374	$ (65,626)	$ (65,626)	9/9/2021	CLOSE OUT
192C-FTI2	FTI2	5/23/2019	$ 1,800,000	SUNRIDGE HEIGHTS PKWY	EXECUTIVE AIRPORT	BERMUDA	$ 1,193,651	$ (606,349)	$ (606,349)	9/9/2021	CLOSE OUT
142X-MVFT	MVFT	7/9/2020	$ 30,000	ENTITY NON-PROJECT SPECIFIC FY21			$ 29,921	$ (79)	$ (79)	10/14/2021	CLOSE OUT
088C-FTI2	FTI2	5/23/2019	$ 150,000	PEBBLE ROAD	EASTERN	PECOS	$ 362	$ (149,638)	$ (149,638)	10/14/2021	CLOSE OUT
100F-FTI2	FTI2	12/12/2019	$ 1,000,000	I-515 INTERCHANGE AT CC215			$ 589,388	$ (410,612)	$ (410,612)	10/14/2021	CLOSE OUT
192D-FTI2	FTI2	1/9/2020	$ 7,000,000	SUNRIDGE HEIGHTS PKWY	EXECUTIVE AIRPORT	ST ROSE PKWY	$ 4,243,309	$ (2,756,691)	$ (2,756,691)	10/14/2021	CLOSE OUT
							$ -				
TOTALS			$ 37,339,900				$ 290,205,100	$ 83,395,200	$ 55,395,200		

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX		AVAILABLE RESOURCES		$ 384,561,022
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	PROGRAMMED	$ 1,930,955,913	$ 385,997,663
		REMAINING RESOURCES		$ (1,436,641)

CITY OF NORTH LAS VEGAS

		available resources		$ 38,918,611
unencumbered from previous year	$ (25,423,402)	programmed	$ 147,851,258	$ 43,024,008
		remaining resources		$ (4,105,397)

$ 249,274.00 Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
				ARTERIAL RECONSTRUCTION PROGRAM	VARIOUS	VARIOUS	$ 11,600,000	$ 600,000			
				NEIGHBORHOOD REHABILITATION PROGRAM	VARIOUS	VARIOUS	$ 7,000,000	$ 1,500,000			
				ADA UPGRADES PROGRAM	VARIOUS	VARIOUS	$ 1,400,000	$ 500,000			
				SAFETY UPGRADES PROGRAM	VARIOUS	VARIOUS	$ 2,300,000	$ 800,000			
				INTERSECTION IMPROVEMENTS PROGRAM	GRAND TETON DR	DECATUR BLVD	$ 1,500,000	$ -			
142AF-FTI2	FTI2	7/8/2021		ENTITY NON SPECIFIC			$ 500,000	$ 50,000	$ 50,000	7/8/2021	CONST
				OPEN DESIGN CONTRACTS							
048L-FTI2	FTI2	5/23/2019	$ 528,750	LAKE MEAD BOULEVARD (CLV LEAD ENTITY)	SIMMONS	LOSEE	$ 15,137,500	$ 1,750,000			
048M-FTI2	FTI2	7/11/2019	$ 50,000	LAKE MEAD BOULEVARD (CLV LEAD ENTITY)	SIMMONS	LOSEE	$ 50,000				
089N-FTI2	FTI2	10/10/2019	$ 2,250,000	LAS VEGAS BLVD	TONOPAH	CAREY	$ 20,350,000	$ 9,550,000			
123D-FTI2	FTI2	11/9/2017	$ 2,350,000	ALEXANDER	SIMMONS	N. 5TH	$ 8,430,000	$ 6,080,000			
135AC-MVFT	MVFT	7/11/2019	$ 250,000	ARTERIAL RECONSTRUCTION PROGRAM FISCAL YEAR 2020			$ 250,000				
142W-MVFT	MVFT	7/11/2019	$ 50,000	ENTITY NON SPECIFIC			$ 50,000				
148E-FTI2	FTI2	7/11/2019	$ 600,000	SIMMONS	RED COACH	HAMMER	$ 4,760,000	$ 2,000,000			
160B-FTI2	FTI2	7/11/2019	$ 542,000	ALLEN	CRAIG	CENTENNIAL	$ 2,904,000				
165D-FTI2	FTI2	2/14/2019	$ 800,000	LONE MOUNTAIN	LOSEE	COMMERCE	$ 10,834,000	$ 1,710,000			
170D-FTI2	FTI2	2/14/2019	$ 2,160,000	CENTENNIAL	PECOS	LAMB	$ 12,150,000	$ 3,100,000			
175Z-MVFT	MVFT	12/10/2020	$ 160,000	NEIGHBORHOOD REHABILITATION PROGRAM:			$ 160,000				
176F-FTI2	FTI2	11/9/2017	$ 1,700,000	COMPLETE STREETS-DOWNTOWN PED IMPROVEMENTS			$ 1,700,000				
203A-FTI2	FTI2	11/9/2018	$ 700,000	SCHOOL SAFETY PROGRAM			$ 3,418,209	$ 2,718,209			
205A-FTI2	FTI2	1/11/2018	$ 500,000	ADA UPGRADES PROGRAM			$ 500,000				
223E-MVFT	MVFT	7/11/2019	$ 300,000	INTERSECTION IMPROVEMENTS PROGRAM FISCAL YEAR 2020			$ 300,000				
232A-FTI2	FTI2	10/10/2019	$ 885,000	CIVIC CENTER	CAREY	CHEYENNE	$ 3,700,000	$ 2,815,000			
239A-MVFT	MVFT	6/11/2020	$ 325,000	SAFETY UPGRADES PROGRAM: FY 2021			$ 1,325,000	$ 1,000,000			
				NEW PROJECTS							
				BELMONT	LAKE MEAD	LAS VEGAS BL	$ 2,500,000				
				BRUCE	COLTON	ALEXANDER	$ 1,760,000	$ 165,000			
163C-FTI2	FTI2	10/14/2021		COMMERCE STREET	HENDERSON CIR	CRAIG	$ 400,000	$ 400,000	$ 400,000	10/14/2021	DESIGN
				DEER SPRINGS/SHELLEY BERKLEY WAY	LOSEE	LAMB	$ 6,500,000				
				DONOVAN WAY	DMV	TROPICAL	$ 6,750,000				
				GOWAN	CIVIC CENTER	PECOS	$ 1,850,000	$ 162,500			
				HOLLYWOOD	ANN	SPEEDWAY	$ 6,600,000				
				TROPICAL	LAMB	PECOS	$ 2,640,000				
149F-FTI2	FTI2	9/9/2021		NORTH 5TH	CHEYENNE	LONE MOUNTAIN	$ 8,425,000	$ 830,000	$ 830,000	9/9/2021	DESIGN
				CIVIC CENTER	CHEYENNE	GOWAN	$ 2,150,000	$ 185,000			
123G-FTI2	FTI2	9/9/2021		ALEXANDER	DECATUR	SIMMONS	$ 7,000,000	$ 7,000,000	$ 7,000,000	9/9/2021	CONST
				LAKE MEAD	CIVIC CENTER	PECOS	$ 5,350,000	$ 350,000			
							$ -				
				CLOSEOUTS							
024Q-FTI2	FTI2	7/11/2019	$ 125,000	PECOS ROAD	OWENS	ALEXANDER	$ 87,343	$ (37,657)	$ (37,657)	9/9/2021	CLOSE OUT
135AA-FTI2	FTI2	1/11/2018	$ 300,000	ARTERIAL RECONSTRUCTION PROGRAM			$ 246,681	$ (53,319)	$ (53,319)	9/9/2021	CLOSE OUT
173C-FTI2	FTI2	5/15/2014	$ 15,715,750	SAWTOOTH ROADS PROJECT-'NV ENERGY			$ 15,565,024	$ (150,726)	$ (150,726)	10/14/2021	REIMBURSEMENT
TOTALS			$ 30,291,500				$ 178,142,758	$ 43,024,008	$ 8,038,299		

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX				
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	AVAILABLE RESOURCES		$ 384,561,022
		PROGRAMMED	$ 1,930,955,913	$ 385,997,663
		REMAINING RESOURCES		$ (1,436,641)

CITY OF MESQUITE

		available resources		$ 14,749,995
unencumbered from previous year	$ 7,461,747	programmed	$ 30,629,830	$ 9,360,830
		remaining resources		$ 5,389,165

$ (9,170.28) Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS		
									AMOUNT	DATE	PHASE
				ARTERIAL RECONSTRUCTION PROGRAM	VARIOUS	VARIOUS	$ 13,500,000	$ 1,500,000			
				NEIGHBORHOOD REHABILITATION PROGRAM	VARIOUS	VARIOUS	$ 4,650,000	$ 500,000			
				ADA UPGRADES PROGRAM	VARIOUS	VARIOUS	$ 900,000	$ 100,000			
				SAFETY UPGRADES PROGRAM	VARIOUS	VARIOUS	$ 900,000	$ 100,000			
				INTERSECTION IMPROVEMENTS PROGRAM	VARIOUS	VARIOUS	$ -				
				ENTITY NON SPECIFIC	VARIOUS	VARIOUS	$ -				
OPEN DESIGN CONTRACTS											
063AR-MVFT	MVFT	7/9/2020	$ 199,500	FALCON RIDGE PKWY AND HORIZON BLVD			$ 199,500				
063AV-FRI2	FRI2			FALCON RIDGE PKWY AND HORIZON BLVD	FALCON RIDGE/ SIDEWINDER	CANYON CREST/ HORIZON BLVD	$ 3,000,000	$ 3,000,000	$ 3,000,000	8/12/2021	CONST
063AT-MVFT	MVFT	2/11/2021	$ 150,000	2021 STREET CONSTRUCTION PROJECT	ISAAC NEWTON DRIVE		$ 150,000				
063AW-FRI2	FRI2			2021 STREET CONSTRUCTION PROJECT	ISAAC NEWTON DRIVE		$ 1,700,000	$ 1,700,000	$ 1,700,000	8/12/2021	CONST
063AU-MVFT	MVFT	5/20/2021	$ 60,000	2021 TRAFFIC SIGNAL IMPROVEMENTS PROJECT	RIVERSIDE ROAD/ HAFEN LANE	FALCON RIDGE/ FLAT TOP MESA	$ 800,000	$ 740,000			
063AX-FTI2	FTI2	9/9/2021		MESQUITE; ROADWAY IMPROVEMENT, LEAVITT LANE AND HAFEN LANE			$ 150,000	$ 150,000	$ 150,000	9/9/2021	DESIGN
063AY-FTI2	FTI2	9/9/2021		MESQUITE; ROADWAY IMPROVEMENT, THOMAS EDISON COURT			$ 80,000	$ 80,000	$ 80,000	9/9/2021	DESIGN
063AZ-FTI2	FTI2	9/9/2021		MESQUITE; FISCAL YEAR 2021 TRAFFIC SIGNAL IMPROVEMENT PROJECT			$ 1,500,000	$ 1,500,000	$ 1,500,000	9/9/2021	CONST
							$ -				
							$ -				
							$ -				
NEW PROJECTS											
				HAFEN LANE	RIVERSIDE ROAD	ABBOTT WASH	$ 460,000				
				HAFEN LANE	LANTANA	FIRST SOUTH STREET	$ 759,000				
				PIONEER BOULEVARD			$ 1,300,000				
				LEAVITT LANE EXTENSION			$ 1,000,000				
CLOSEOUTS											
063AP-MVFT	MVFT	1/9/2020	$ 1,920,000	2020 STREET RECONSTRUCTION PROJECT	KITTY HAWK DRIVE		$ 1,910,830	$ (9,170)	$ (9,170)	10/14/2021	CLOSE OUT
							$ -				
TOTALS			$ 2,329,500				$ 32,959,330	$ 9,360,830	$ 6,420,830		

Mesquite **EXHIBIT "B"**

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX					
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	AVAILABLE RESOURCES		$ 384,561,022
		PROGRAMMED	$ 1,930,955,913	$ 385,997,663
		REMAINING RESOURCES		$ (1,436,641)

CITY OF BOULDER CITY

		available resources		$ 12,616,043
unencumbered from previous year	$ 3,273,239	programmed	$ 20,049,135	$ 11,004,135
		remaining resources		$ 1,611,908

$ - Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS		
									AMOUNT	DATE	PHASE
				ARTERIAL RECONSTRUCTION PROGRAM	VARIOUS	VARIOUS	$ 5,340,000	$ 1,340,000			
				NEIGHBORHOOD REHABILITATION PROGRAM	VARIOUS	VARIOUS	$ 5,595,000	$ 1,200,000			
				ADA UPGRADES PROGRAM	VARIOUS	VARIOUS	$ 700,000	$ -			
				SAFETY UPGRADES PROGRAM	VARIOUS	VARIOUS	$ 500,000	$ -			
				INTERSECTION IMPROVEMENTS PROGRAM	VARIOUS	VARIOUS	$ 900,000	$ 500,000			
				ENTITY NON SPECIFIC	VARIOUS	VARIOUS	$ -				
OPEN DESIGN CONTRACTS											
135AB5-MVFT	MVFT	3/14/2019	$ 250,000	ARTERIAL RECONSTRUCTION PROGRAM; FY 2019 PAVEMENT EVALUATION			$ 250,000				
135AF-MVFT	MVFT	11/14/2019	$ 1,500,000	ARTERIAL RECONSTRUCTION PROGRAM; FY 2020 PAVEMENT EVALUATION			$ 3,160,000	$ 1,660,000	$ 1,660,000	9/9/2021	CONST
223F-MVFT	MVFT	7/11/2019	$ 200,000	INTERSECTION IMPROVEMENTS PROGRAM; FY2020			$ 200,000				
233A-MVFT	MVFT	10/10/2019	$ 500,000	RAILROAD MUSEUM ROAD	YUCCA	BOULDER CITY PARKWAY	$ 5,500,000	$ 5,000,000			
NEW PROJECTS											
				BOULDER CITY PKWY COMPLETE STREETS IMPROVEI	BUCHANAN	PACIFICA WAY- EAST CITY LIMIT	$ 15,000,000	$ 750,000			
261A-FTI2	FTI2	9/9/2021		NEVADA WAY RIGHT-OF-WAY			$ 100,000	$ 100,000	$ 100,000	9/9/2021	DESIGN
178U-FTI2	FTI2	9/9/2021		PEDESTRIAN UPGRADES FY 2022			$ 300,000	$ 300,000	$ 300,000	9/9/2021	CONST
205E-FTI2	FTI2	9/9/2021		ADA UPGRADES PROGRAM FY 22			$ 200,000	$ 200,000	$ 200,000	9/9/2021	CONST
							$ -				
							$ -				
CLOSEOUTS											
175T-MVFT	MVFT	10/10/2019	$ 700,000	NEIGHBORHOOD REHAB FY 2020			$ 660,584	$ (39,416)	$ (39,416)	8/12/2021	CLOSE OUT
178R-MVFT	MVFT	11/14/2019	$ 210,000	PEDESTRIAN UPGRADES FY 2020			$ 209,557	$ (443)	$ (443)	8/12/2021	CLOSE OUT
159E-MVFT	MVFT	11/14/2019	$ 400,000	BICYCLE FACILITIES FY 2020			$ 393,994	$ (6,006)	$ (6,006)	8/12/2021	CLOSE OUT
TOTALS			$ 3,760,000				$ 39,009,135	$ 11,004,135	$ 2,214,135		

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

FUEL TAX		AVAILABLE RESOURCES		$ 384,561,022
UNENCUMBERED FROM PREVIOUS YEAR	$ (285,501,341)	PROGRAMMED	$ 1,927,455,913	$ 382,497,663
		REMAINING RESOURCES		$ 2,063,359

RTC & TIBP RESOURCES						
		available resources		$ 14,505,000		
unencumbered from previous year	$ -	programmed	$ 231,072,738	$ 13,692,738		
		remaining resources		$ 812,262	$ (3,455.80) Total this cycle	10/14/2021

REGIONAL TRANSPORTATION COMMISSION (RTC)

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS		
									AMOUNT	DATE	PHASE
				FAST AMS Operating Budget - Detail from MS Govern			$ 28,210,000	$ 5,300,000			
				OPEN DESIGN CONTRACTS							
003Z-FTI2	FTI2	2/13/2020	$ 25,000,000	MARYLAND PARKWAY	RUSSELL	MEDICAL DISTRICT	$ 125,000,000	$ -			
144AB-FTI2	FTI2	10/10/2019	$ 1,000,000	ITS WORKZONE ITS FY 20			$ 1,000,000				
144AE-FTI2	FTI2	12/12/2019	$ 1,000,000	ITS ASSET INVENTORY PILOT			$ 1,000,000				
144AG-FTI2	FTI2	3/12/2020	$ 650,000	ITS EASTERN ADAPTIVE SIGNAL PROJECT			$ 650,000				
144AH-FTI2	FTI2	5/21/2020	$ 2,000,000	ITS FAST NETWORK UPGRADES			$ 2,000,000				
144AJ-FTI2	FTI2	9/10/2020	$ 150,000	ITS ATMS SYS MAINTENANCE -			$ 450,000	$ 150,000			
262A-FTI2	FTI2	9/9/2021	$ -	ITS FAST PROGRAM SERVICES - ON CALL DESIGN SERVICE			$ 750,000	$ 150,000	$ 150,000	9/9/2021	DESIGN
262E-FTI2	FTI2	9/9/2021	$ -	FAST TRAFFIC SIGNAL MAINTENANCE - ON CALL CONTRACTOR			$ 2,400,000	$ 400,000	$ 400,000	9/9/2021	CONST
				NEW PROJECTS							
256A-FTI2	FTI2	7/8/2021		UNDERGROUND EXISTING UTILITIES-MARYLAND PKWY	RUSSELL	FLAMINGO	$ 500,000	$ 500,000	$ 500,000	7/8/2021	DESIGN
				TRAFFIC SIGNAL SOFTWARE			$ 8,000,000				
144AM-FTI2	FTI2	8/12/2021		ITS DATA ANALYTICS			$ 1,250,000	$ 250,000	$ 250,000	8/12/2021	DESIGN
				GPS PRE-EMPTION			$ 4,000,000				
				B2G NNOW SOFTWARE FOR LSB/LDB PROGRAM			$ 275,000	$ 55,000			
				ADAPTIVE SIGNAL CORRIDOR PROJECTS-			$ 4,900,000	$ 900,000			
262B-FTI2	FTI2	9/9/2021		ADAPTIVE SIGNAL CORRIDOR PROJECTS- FEASIBILITY STUDY			$ 100,000	$ 100,000	$ 100,000	9/9/2021	DESIGN
262D-FTI2	FTI2	9/9/2021		ITS INFRASTRUCTURE MASTER PLAN			$ 2,000,000	$ 2,000,000	$ 2,000,000	9/9/2021	DESIGN
				ITS INFRASTRUCTURE SECURITY			$ 3,500,000	$ 500,000			
257A-FTI2	FTI2	8/12/2021		BACKUP POWER AND COOLING REQUIREMENTS AT HUBS			$ 1,000,000	$ 500,000	$ 500,000	8/12/2021	DESIGN
				CAMERAS AT ALL INTERSECTIONS			$ 2,000,000				
				PEDESTRIAN SAFETY PASSIVE DETECTION PILOT PROJECT			$ 100,000	$ 100,000			
258A-FTI2	FTI2	8/12/2021		ATCMTD US 95 PROJECT (NDOT PROJECT - LOCAL MATCH)			$ 3,100,000	$ 3,100,000	$ 3,100,000	8/12/2021	DESIGN
				TRANSIT SIGNAL PRIORITY PILOT PROJECT			$ 1,000,000	$ 1,000,000			
				CLOSEOUTS							
144W-FTI2	FTI2	6/14/2018	$ 15,000,000	RTC FAST 2015 FAST CHARLESTON			$ 11,051,017	$ (3,948,983)	$ (3,948,983)	7/8/2021	CLOSE OUT
144AG-FTI2	FTI2	3/12/2020	$ 650,000	EASTERN AVENUE ADAPTIVE SIGNAL PROJECT			$ 646,017	$ (3,983)	$ (3,983)	8/12/2021	CLOSE OUT
144X-FTI2	FTI2	7/11/2019	$ 415,000	ITS FAST TRAFFIC SIGNAL MAINTENANCE			$ 59,160	$ (355,840)	$ (355,840)	9/9/2021	CLOSE OUT
144Y-FTI2	FTI2	7/11/2019	$ 150,000	ITS FAST PROGRAM SERVICES FY2020			$ 146,544	$ (3,456)	$ (3,456)	10/14/2021	CLOSE OUT
TOTALS			$ 46,015,000				$ 205,087,738	$ 10,692,738	$ 2,687,738		

RESORT CORRIDOR AREA ROAD IMPROVEMENTS (TIBP)

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS		
									AMOUNT	DATE	PHASE
				OPEN DESIGN CONTRACTS							
222A-FTI2		2/14/2019	$ 1,000,000	CLV, PEDESTRIAN BRIDGE AT INTERSECTION OF SAHARA AVENUE AT LAS VEGAS BOULEVARD			$ 32,000,000	$ 2,000,000	$ 2,000,000	10/14/2021	DESIGN
222B-FTI2		2/13/2020	$ 3,500,000	CLV, MLK EXTENSION	OAKEY	DESERT INN	$ 3,500,000				
							$ -				
				NEW PROJECTS							
				TIBP ROAD PROJECTS			$ 21,000,000	$ 1,000,000			
TOTALS			$ 96,530,000				$ 56,500,000	$ 3,000,000	$ 2,000,000		

RTC EXHIBIT "B"

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM- SALES TAX AND FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

DIRECT DISTRIBUTION		AVAILABLE RESOURCES	Fuel Tx & Q10	$ 24,593,025
UNENCUMBERED FROM PREVIOUS YEAR	$ 15,914,656	PROGRAMMED	$ 26,736,000	$ 9,600,000
		REMAINING RESOURCES		$ 14,993,025

TOWN OF BUNKERVILLE - 062

		available resources	Fuel Tx & Q10	$ (112,696)
unencumbered from previous year (FT & Q10)	$ (410,692)	programmed	$ 800,000	$ -
		remaining resources		$ (112,696)

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	FUNDING REQUESTS DATE	FUNDING REQUESTS PHASE
OPEN DESIGN CONTRACTS											
							$ -				
NEW PROJECTS											
				PAVEMENT REHAB			$ 800,000				
TOTALS			$ -				$ 800,000	$ -	$ -		

TOWN OF INDIAN SPRINGS - 066

		available resources	Fuel Tx & Q10	$ 451,446
unencumbered from previous year (FT & Q10)	$ 332,214	programmed	$ 824,000	$ 250,000
		remaining resources		$ 201,446

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	FUNDING REQUESTS DATE	FUNDING REQUESTS PHASE
OPEN DESIGN CONTRACTS											
							$ -				
NEW PROJECTS											
				MISCELLANEOUS ROAD IMPROVEMENTS			$ 824,000	$ 250,000			
TOTALS			$ -				$ 824,000	$ 250,000	$ -		

TOWN OF LAUGHLIN - 064

		available resources	Fuel Tx & Q10	$ 19,423,254
unencumbered from previous year (FT & Q10)	$ 14,548,436	programmed	$ 14,000,000	$ 8,000,000
		remaining resources		$ 11,423,254

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	FUNDING REQUESTS DATE	FUNDING REQUESTS PHASE
OPEN DESIGN CONTRACTS											
064R-MVFT	MVFT	1/10/2019	$ 1,500,000	CASINO	NEEDLES HWY	HARRAH'S HOTEL	$ 9,500,000	$ 8,000,000			
NEW PROJECTS											
				LAUGHLIN STREET REHAB			$ 6,000,000				
TOTALS			$ 1,500,000				$ 15,500,000	$ 8,000,000	$ -		

TOWN OF MOAPA - 069

		available resources	Fuel Tx & Q10	$ 752,097
unencumbered from previous year (FT & Q10)	$ 89,815	programmed	$ 2,600,000	$ -
		remaining resources		$ 752,097

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	FUNDING REQUESTS DATE	FUNDING REQUESTS PHASE
OPEN DESIGN CONTRACTS											
							$ -				
NEW PROJECTS											
				PAVEMENT REHAB - SIM			$ 600,000				
				PAVEMENT REHABILITATION - REDCLOUD, BARLOW, RANCH ROAD			$ 2,000,000				
TOTALS			$ -				$ 2,600,000	$ -	$ -		

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM- SALES TAX AND FUEL TAX FUNDING

UPDATED OCTOBER 14, 2021

DIRECT DISTRIBUTION		AVAILABLE RESOURCES	Fuel Tx & Q10	$ 24,593,025
UNENCUMBERED FROM PREVIOUS YEAR	$ 15,914,656	PROGRAMMED	$ 26,736,000	$ 9,600,000
		REMAINING RESOURCES		$ 14,993,025

TOWN OF MOAPA VALLEY - 068						available resources	Fuel Tx & Q10	$ 1,529,640			
				unencumbered from previous year (FT & Q10)	$ (360,775)	programmed	$ 4,500,000	$ -			
						remaining resources		$ 1,529,640			
PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
OPEN DESIGN CONTRACTS											
							$ -				
068L-MVFT	MVFT	8/8/2019	$ 600,000	MOAPA VALLEY AIRPORT RD RELOCATION			$ 600,000				
NEW PROJECTS											
				PAVEMENT REHABILITATION			$ 2,000,000				
				MISCELANEOUS RAOD REPAIR			$ 2,500,000				
TOTALS			$ 600,000				$ 5,100,000	$ -	$ -		

TOWN OF MOUNT CHARLESTON - 065						available resources	Fuel Tx & Q10	$ 1,652,578			
				unencumbered from previous year (FT & Q10)	$ 1,176,499	programmed	$ 4,500,000	$ 1,100,000			
						remaining resources		$ 552,578			
PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
OPEN DESIGN CONTRACTS											
							$ -				
NEW PROJECTS											
				RAINBOW CANYON PAVEMNET REHAB			$ 1,000,000	$ 1,000,000			
065-FTI2	FTI2	10/14/2021		ECHO VIEW PAVEMENT REHAB (D)			$ 600,000	$ 100,000	$ 100,000	10/14/2021	DESIGN
				CATHEDRAL ROCK PAVEMENT REHAB			$ 300,000				
				VARIOUS STREET IMPROVEMENTS			$ 300,000				
TOTALS			$ -				$ 2,200,000	$ 1,100,000	$ 100,000		

TOWN OF SEARCHLIGHT - 061						available resources	Fuel Tx & Q10	$ 896,707			
				unencumbered from previous year (FT & Q10)	$ 539,158	programmed	$ 4,500,000	$ 250,000			
						remaining resources		$ 646,707			
PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
OPEN DESIGN CONTRACTS											
							$ -				
NEW PROJECTS											
				MISCELANEOUS ROAD IMPROVEMENTS			$ 1,812,000	$ 250,000			
TOTALS			$ -				$ 1,812,000	$ 250,000	$ -		

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - Q10 - SALES TAX FUNDING

UPDATED OCTOBER 14, 2021

Q10				
		AVAILABLE RESOURCES		$ 71,025,066
UNENCUMBERED FROM PREVIOUS YEAR	$ 29,454,440	PROGRAMMED	$ 287,607,839	$ 19,287,839
		REMAINING RESOURCES		$ 51,737,227

CLARK COUNTY

		available resources		$ 32,978,625
unencumbered from previous year	$ 13,326,249	programmed	$ 96,950,000	$ 9,155,000
		remaining resources		$ 23,823,625

$ 1,800,000.00 Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	FUNDING REQUESTS DATE	FUNDING REQUESTS PHASE
OPEN DESIGN CONTRACTS											
190N-Q10	Q10	2/11/2021	$ 2,000,000	TRAIL CONNECTIVITY	BLUE DIAMOND WASH TRAIL	DURANGO DR TO HUALAPAI WY	$ 2,000,000				
							$ -				
NEW PROJECTS											
255A-Q10	Q10	7/8/2021		TRAIL MAINTENANCE: OFF STREET SHARED USE PATH MAINTENANCE			$ 550,000	$ 55,000	$ 55,000	7/8/2021	CONST
				BELTWAY TRAIL BRIDGE	AT SPENCER		$ 3,000,000				
190Q-Q10	Q10	10/14/2021		215 BELTWAY TRAIL BRIDGES (D)	EASTERN	CHARLESTON	$ 10,000,000	$ 1,800,000	$ 1,800,000	10/14/2021	DESIGN
				FORT APACHE BRIDGE	CC215		$ 6,000,000				
				I-515 TRAIL	CHARLESTON	SAHARA	$ 1,300,000				
				PATRICK PED BIKE TRAIL	OVER CC 215		$ 2,500,000				
				SAHARA BRIDGE	CC215		$ 5,500,000	$ 500,000			
				TROPICANA BRIDGE	CC215		$ 5,500,000	$ 500,000			
				CHARLESTON TRAIL BRIDGE	CC215		$ 4,800,000	$ 800,000			
				WINDMILL TRAIL BRIDGE			$ 3,500,000	$ 500,000			
				LAS VEGAS BLVD PEDESTRIAN BRIDGE	BELLAGIO		$ 27,000,000	$ 2,000,000			
				LAS VEGAS BLVD PEDESTRIAN BRIDGE	CONVENTION CENTER		$ 22,000,000	$ 2,000,000			
				WIGWAM			$ 500,000	$ 500,000			
				RED ROCK LEGACY TRAIL			$ 4,000,000	$ 500,000			
TOTALS			$ 2,000,000				$ 98,150,000	$ 9,155,000	$ 1,855,000		

CITY OF LAS VEGAS

		available resources		$ 3,848,049
unencumbered from previous year	$ (6,722,465)	programmed	$ 60,590,011	$ 2,595,011
		remaining resources		$ 1,253,038

$ - Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	FUNDING REQUESTS DATE	FUNDING REQUESTS PHASE
OPEN DESIGN CONTRACTS											
037B-Q10	Q10	3/10/2011	$ 7,369,000	RANCHO	BONANZA	RAINBOW	$ 7,369,000				
124C-Q10	Q10	2/12/2004	$ 8,012,000	SHEEP MOUNTAIN PARKWAY CORRIDOR STUDY			$ 8,012,000				
170C-Q10	Q10	4/11/2013	$ 161,887	CENTENNIAL PARKWAY	SKY POINTE	US-95	$ 911,887				
190C-Q10	Q10	5/21/2020	$ 1,300,000	CC 215 TRAIL BRIDGES @ LAKE MEAD & SUMMERLIN PKWY			$ 14,300,000				
194B-Q10	Q10	9/13/2018	$ 1,104,000	SYMPHONY PARK PEDESTRIAN BRIDGE @ UPRR			$ 6,654,000	$ 550,000			
							$ -				
NEW PROJECTS											
				PEDESTRIAN SAFETY UPGRADES FISCAL YEAR 2018 (DESIGN MVFT, CONST Q10)			$ 22,300,000	$ 700,000			
				SPENCER STREET GREENWAY (CCPW LEAD AGENCY)			$ 1,150,000				
				SUGGESTED ROUTE TO SCHOOL PEDESTRIAN SAFETY PROGRAM			$ 2,250,000				
255B-Q10	Q10	7/8/2021		TRAIL MAINTENANCE: OFF STREET SHARED USE PATH MAINTENANCE			$ 550,000	$ 55,000	$ 55,000	7/8/2021	CONST
				SUMMERLIN PARKWAY PHASE IV IMPROVEMENTS			$ 750,000	$ 750,000			
				SUMMERLIN PARKWAY TRAIL IMPROVEMENTS			$ 2,000,000				
				CHALESTON TRAIL BRIDGE			$ 2,750,000				
				DOWNTOWN MOBILITY IMPROVEMENTS			$ 5,000,000	$ 500,000			
				DOWNTOWN AMENITIES MAINTENANCE			$ 4,750,000	$ 250,000			
							$ -				
							$ -				
CLOSEOUTS											
190F-Q10	Q10	8/12/2021	$ 450,000	TRAIL CONNECTIVITY PEDESTRIAN BRIDGE	CIMARRON	SUMMERLIN PKWY	$ 240,011	$ (209,989)	$ (209,989)	8/12/2021	CLOSE OUT
							$ -				
TOTALS			$ 18,396,887				$ 78,986,898	$ 2,595,011	$ (154,989)		

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - Q10 - SALES TAX FUNDING

UPDATED OCTOBER 14, 2021

Q10				
		AVAILABLE RESOURCES		$ 71,025,066
UNENCUMBERED FROM PREVIOUS YEAR	$ 29,454,440	PROGRAMMED	$ 287,607,839	$ 19,287,839
		REMAINING RESOURCES		$ 51,737,227

CITY OF NORTH LAS VEGAS

		available resources		$ 7,777,762
unencumbered from previous year	$ 3,686,086	programmed	$ 8,965,000	$ 25,000
		remaining resources		$ 7,752,762

$ - Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	FUNDING REQUESTS DATE	FUNDING REQUESTS PHASE
OPEN DESIGN CONTRACTS											
190H-Q10	Q10	2/14/2019	$ 450,000	PEDESTRIAN BRIDGE: CRAIG ROAD @ UPPER LAS VEGAS WASH			$ 5,015,000				
190J-Q10	Q10	7/11/2019	$ 350,000	PEDESTRIAN BRIDGE: ANN ROAD @ UPPER LAS VEGAS WASH			$ 3,500,000				
NEW PROJECTS											
				TRAILS MAINTENANCE: OFF STREET SHARED USE PATH MAINTENANCE			$ 250,000	$ 25,000			
				CC-215 TRAIL & PEDESTRIAN BRIDGE	DECATUR	ALIANTE	$ 1,000,000				
TOTALS			$ 800,000				$ 9,765,000	$ 25,000	$ -		

CITY OF HENDERSON

		available resources		$ 16,817,980
unencumbered from previous year	$ 10,501,568	programmed	$ 19,756,247	$ 6,566,247
		remaining resources		$ 10,251,733

$ - Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	FUNDING REQUESTS DATE	FUNDING REQUESTS PHASE
OPEN DESIGN CONTRACTS											
190L-Q10	Q10	12/12/2019	$ 750,000	I-215 PEDESTRIAN BRIDGE @ GREEN VALLEY PKWY			$ 750,000				
NEW PROJECTS											
255C-Q10	Q10	7/8/2021		TRAILS MAINTENANCE: OFF STREET SHARED USE PATH MAINTENANCE			$ 1,100,000	$ 210,000	$ 210,000	7/8/2021	CONST
250A-Q10	Q10	4/8/2021	$ 300,000	JEFFREYS STREET	HORIZON RIDGE PKWY	SIENA HEIGHTS DR	$ 700,000	$ 400,000	$ 400,000	7/8/2021	CONST
				CACTUS WREN/I-215 TRAIL CROSSING			$ 4,000,000				
				JEFFREYS/ST. ROSE TRAIL CROSSING (NDOT MATCH)			$ 4,000,000				
				PEDESTRIAN SAFETY IMPROVEMENTS			$ 300,000				
				INTERSECTION IMPROVEMENTS			$ 5,000,000	$ 1,000,000			
				BOULDER HIGHWAY TRANSIT (NDOT MATCH)			$ -				
				INTERCHANGE; I-11 (NDOT MATCH)			$ -				
				INTERCHANGE; I-215 (NDOT MATCH)	at EASTERN		$ -				
				INTERCHANGE; I-515 (NDOT MATCH)	at WAGONWHEEL		$ -				
				INTERCHANGE; I-15	at VIA NOBILA		$ 5,000,000	$ 5,000,000			
				INTERCHANGE; I-15	at SLOAN		$ -				
				GRADE SEPARATED RR CROSSINGS (NDOT MATCH)	Various	Various	$ -				
				ST. ROSE AND EASTERN INTERSECTION (NDOT MATCH)			$ -				
				LAKE MEAD CORRIDOR (NDOT MATCH)	I-11/US95	LAKE LAS VEGAS PKWY.	$ -				
				LOWER PITTMAN WASH TRAIL (NDOT MATCH)			$ -				
				VIA NOBILA TRAIL (NDOT MATCH)	VIA INSPIRADA	LAS VEGAS BLVD.	$ -				
				VIA INSPIRADA TRAIL AND GRADE SEPARATION (NDOT M	VOLUNTEER BLVD.	ADIGE PLACE	$ -				
				ST. ROSE TRAIL NORTH (NDOT MATCH)	EASTERN AVE.	LAS VEGAS BLVD.	$ -				
				DOWNTOWN HENDERSON PHASE II (MAJOR, MINOR, VICTORY, TEXAS, OCEAN)			$ -				
				CAPE HORN; EASTGATE; MIDDLEGATE; PARKSON			$ -				
							$ -				
CLOSEOUTS											
175H-Q10	Q10	8/12/2021	$ 364,000	NEIGHBORHOOD REHAB	West Henderson Roads		$ 337,815	$ (26,185)	$ (26,185)	8/12/2021	CLOSE OUT
190A-Q10	Q10	1/14/2016	$ 62,000	TRAIL CONNECTIVITY I-215	GV PKWY	PECOS	$ 44,432	$ (17,568)	$ (17,568)	9/9/2021	CLOSE OUT
TOTALS			$ 1,476,000				$ 21,232,247	$ 6,566,247	$ 566,247		

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA
CAPITAL IMPROVEMENT PROGRAM - Q10 - SALES TAX FUNDING

UPDATED OCTOBER 14, 2021

Q10				
		AVAILABLE RESOURCES		$ 71,025,066
UNENCUMBERED FROM PREVIOUS YEAR	$ 29,454,440	PROGRAMMED	$ 287,607,839	$ 19,287,839
		REMAINING RESOURCES		$ 51,737,227

RTC TRANSIT

		available resources		$ 200,000
unencumbered from previous year	$ -	programmed	$ 101,339,126	$ 939,126
		remaining resources		$ (739,126)

$ - Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
OPEN DESIGN CONTRACTS											
144AL-Q10	Q10	1/14/2021	$ 990,000	NEXAR CITYSTREAM			$ 990,000				
249A-Q10	Q10	3/11/2021	$ 550,000	REGIONAL; BIKE AND SIDEWALK INVENTORY			$ 1,300,000	$ 750,000	$ 750,000	7/8/2021	CONST
NEW PROJECTS											
				TRANSIT			$ 100,000,000				
							$ -				
196D-Q10	Q10	7/8/2021		VOLUNTEER COORDINATOR- TRAILS CLEANUP			$ 600,000	$ 200,000	$ 200,000	7/8/2021	CONST
							$ -				
							$ -				
							$ -				
							$ -				
CLOSEOUTS											
196B-Q10	Q10	7/11/2019	$ 325,000	TRAIL MAINTENANCE VOLUNTEER FY 2020			$ 314,126	$ (10,874)	$ (10,874)	9/9/2021	CLOSE OUT
							$ -				
							$ -				
TOTALS			$ 1,865,000				$ 103,204,126	$ 939,126	$ 939,126		

BOULDER CITY

		available resources		$ 3,587,479
unencumbered from previous year	$ 3,311,309	programmed	$ 7,454	$ 7,454
		remaining resources		$ 3,580,024

$ - Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
OPEN DESIGN CONTRACTS											
							$ -				
NEW PROJECTS											
				TRAILS MAINTENANCE: OFF STREET SHARED USE PATH MAINTENANCE			$ -				
				RIVER MOUNTAIN LOOP TRAIL	CITY LIMIT WEST	BOULDER CITY PKWY AT KATZENBAC	$ 33,600	$ 33,600			
							$ -				
							$ -				
CLOSEOUTS											
176C-Q10	Q10	5/19/2016	$ 16,850,000	COMPLETE STREETS-BOULDER CITY PKWY	I-11	PACIFICA WAY	$ 16,823,854	$ (26,146)	$ (26,146)	9/9/2021	CLOSE OUT
							$ -				
TOTALS			$ 16,850,000				$ 16,857,454	$ 7,454	$ (26,146)		

CITY OF MESQUITE

		available resources		$ 5,815,171
unencumbered from previous year	$ 5,351,693	programmed	$ -	$ -
		remaining resources		$ 5,815,171

$ - Total this cycle 10/14/2021

PROJECT NUMBER	FUND	CONTRACT START	CONTRACT AMOUNT	PROJECT	FROM	TO	COST	2021-22	FUNDING REQUESTS AMOUNT	DATE	PHASE
OPEN DESIGN CONTRACTS											
							$ -				
NEW PROJECTS											
							$ -				
TOTALS			$ -				$ -	$ -	$ -		

FY 2022 AVAILABLE BALANCE $ 6,295,949

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE AN INTERLOCAL CONTRACT FOR A NEW CONSTRUCTION PROJECT

PETITIONER: DENIS CEDERBURG, DIRECTOR
CLARK COUNTY PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CLARK COUNTY PROJECT 065A-FTI2 – MOUNT CHARLESTON, ECHO VIEW PAVEMENT REHABILITATION (FOR POSSIBLE ACTION)

GOAL: INCREASE SAFETY FOR BOTH MOTORIZED AND NON-MOTORIZED USERS

FISCAL IMPACT:
Funds in the amount of $100,000.00 are budgeted in the Highway Improvement Acquisition Fund for Fiscal Year 2022.

BACKGROUND:
This Interlocal Contract applies to improvements to existing roads within the Echo View Subdivision in the Mount Charleston Township. The improvements will include removal and replacement of deteriorated pavement and the removal of a dead tree in the right-of-way that could pose a hazard if left unattended.

Respectfully submitted,

DocuSigned by:
678086A027094E5...

DENIS CEDERBURG, P.E.
Director of Public Works

RTC Item #6
September 30, 2021
Consent

INTERLOCAL CONTRACT
MOUNT CHARLESTON
ECHO VIEW PAVEMENT REHABILITATION

THIS INTERLOCAL CONTRACT is made and entered into this 14TH day of October 2021, by and between Clark County, a political subdivision, hereinafter referred to as "COUNTY" and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the COUNTY intends to rehabilitate roadways within the Echo View subdivision, which is included on the adopted RTC Capital Improvement Plan, hereinafter referred to as "PROJECT," located wholly within Clark County; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the COUNTY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the COUNTY is requesting funds to commence the construction for the PROJECT; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION I: SCOPE OF PROJECT

This Interlocal Contract applies to existing roadways within the Mount Charleston Township. The improvements will include roadway rehabilitation such as paving of dirt roadways, removal and replacement of failed pavement, or resurfacing of paved roads, drainage facilities, traffic control devices, and other appurtenances as may be necessary for a complete and functional project. The Project is further described in Exhibit "A" which is attached hereto and by this reference incorporated herein.

SECTION II: PROJECT COSTS

The RTC agrees to provide funding for all costs associated with the PROJECT from the Highway Improvement Acquisition Fund as outlined below:

1. The total cost for this contract shall not exceed $100,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

a. ENGINEERING not to exceed $ 0.00
b. RIGHT-OF-WAY not to exceed $ 0.00
c. CONSTRUCTION not to exceed $ 100,000.00

3. At the time the ATP for construction is granted, the COUNTY will make all attempts to publish the bid for this PROJECT within 90 calendar days.

4. A supplemental interlocal contract will be required for any changes to the amounts identified in number 2 above.

5. The RTC agrees to reimburse funds advanced by the COUNTY for eligible PROJECT costs incurred after August 1, 2021.

SECTION III: GENERAL

1. The title sheet of both the plans and specifications shall designate the RTC as the funding agency. If construction funds are provided by sources other than the RTC, the plans, contract documents, special provisions, and PROJECT signs shall also show the RTC as a funding agency.

2. Preliminary engineering, design and right-of-way engineering shall be performed by the COUNTY or by a consultant employed by the COUNTY.

3. The design, construction, right-of-way acquisition and contract administration of the PROJECT shall comply with the requirements as set forth in the current "Policies and Procedures" of the RTC.

4. The COUNTY's Department of Public Works has a policy which effectively prohibits utility cuts through the pavement for a period of five years after the completion of a PROJECT.

5. Upon completion of the construction of the PROJECT, it shall be maintained by the COUNTY and no funding is provided by this Contract for such maintenance.

6. The PROJECT must be completed to the satisfaction of the RTC prior to the current applicable completion date of December 31, 2026. The RTC may, at any time thereafter, grant time extensions or terminate this Contract and require all sums advanced to the COUNTY be repaid.

7. It is understood and agreed that the purpose of this Interlocal Contract is to fund the PROJECT as herein above set forth. It is further understood and agreed that the COUNTY is responsible for the design and construction of the PROJECT. The COUNTY will be responsible for the actions or inactions of its Officers and Employees. The RTC's sole responsibility is to facilitate funding for the PROJECT. The RTC disavows any responsibility for the actions or inactions of the COUNTY, its Officers, Employees, or agents.

8. Should the construction funds be provided by sources other than the RTC, the COUNTY

will reimburse the RTC for a percentage of the preliminary engineering and design costs associated with other funding sources, as mutually agreed upon by the RTC and the COUNTY.

The remainder of this page is left intentionally blank.

IN WITNESS WHEREOF, this Interlocal Contract #1325 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CLARK COUNTY BOARD OF COMMISSIONERS

_____ BY: _____

MARILYN KIRKPATRICK
Chair

Attest

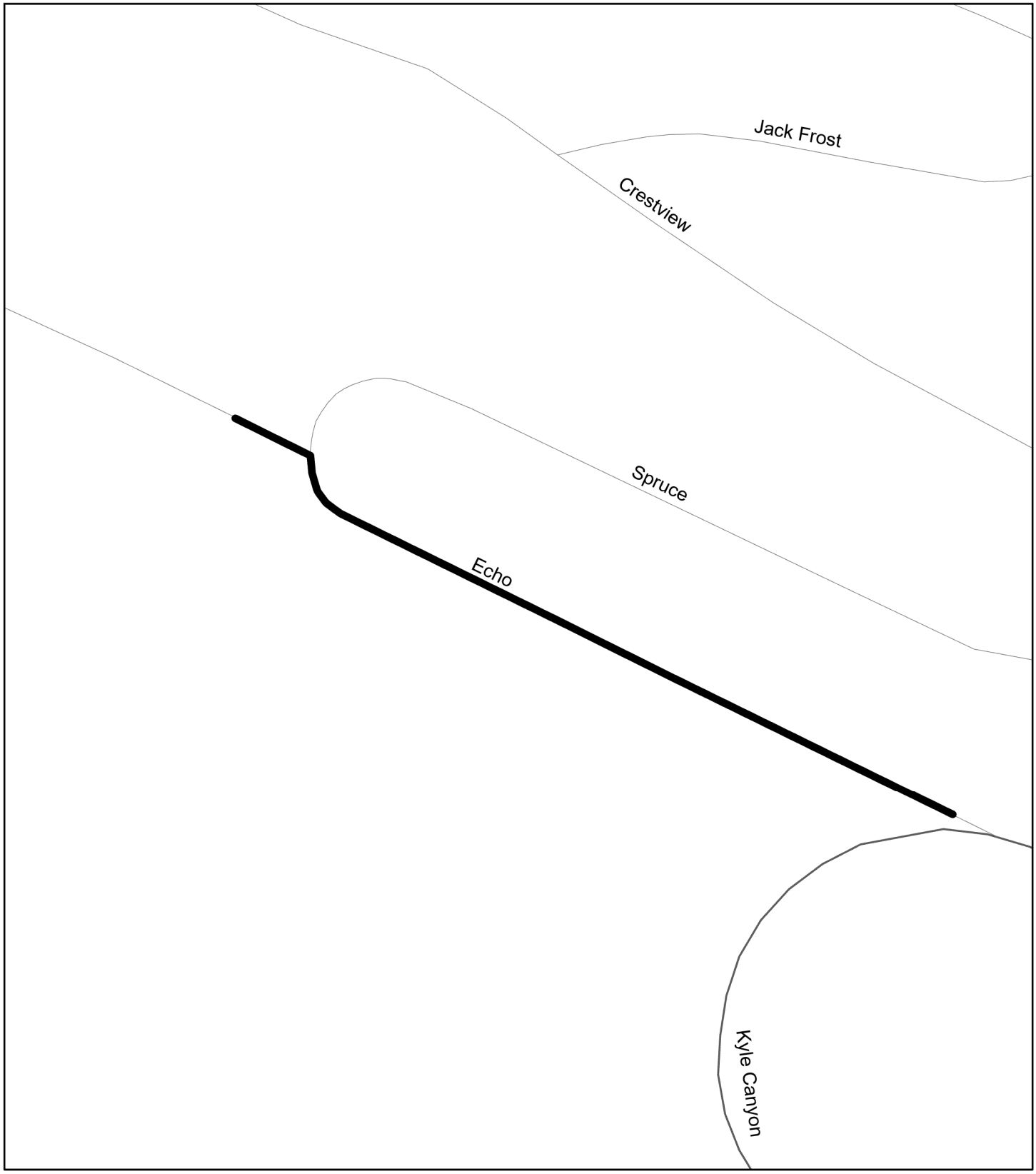
_____

LYNN MARIE GOYA
County Clerk

Approved as to Form

_____

LAURA C. REHFELDT
Deputy District Attorney



Legend

- Proposed
- Existing
- Future

Exhibit A

N
W E
S

CLARK COUNTY NEVADA	**Project Number: TBD**	CLARK COUNTY PUBLIC WORKS
		SCALE: NOT TO SCALE
	Echo View in Mount Charleston	DATE: 08-26-2021
		SHEET NUMBER: 1 OF 1

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE AN INTERLOCAL CONTRACT FOR A NEW DESIGN PROJECT

PETITIONER: DENIS CEDERBURG, DIRECTOR
CLARK COUNTY PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CLARK COUNTY PROJECT 116C-FTI2 – HACIENDA AVENUE, RAINBOW BOULEVARD TO DECATUR BOULEVARD (FOR POSSIBLE ACTION)

GOAL: MAINTAIN AND IMPROVE TRANSPORTATION SYSTEM INFRASTRUCTURE

FISCAL IMPACT:
Funds in the amount of $1,500,000.00 are budgeted in the Highway Improvement Acquisition Fund for Fiscal Year 2022.

BACKGROUND:
This pavement rehabilitation program includes Americans with Disabilities Act upgrades; signage and striping; utility adjustments; sidewalk, curb, and gutter repairs; signal modifications; and Intelligent Transportation System infrastructure along Hacienda Avenue from Rainbow Boulevard to Decatur Boulevard.

Respectfully submitted,

DocuSigned by:
678086A027094E5...

DENIS CEDERBURG, P.E.
Director of Public Works

RTC Item #7
September 30, 2021
Consent

INTERLOCAL CONTRACT
HACIENDA AVENUE
RAINBOW BOULEVARD TO DECATUR BOULEVARD

THIS INTERLOCAL CONTRACT is made and entered into this 14TH day of October 2021, by and between Clark County, a political subdivision, hereinafter referred to as "COUNTY" and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the COUNTY intends to improve Hacienda Avenue, Rainbow Boulevard to Decatur Boulevard, which is included on the adopted RTC Capital Improvement Plan, hereinafter referred to as "PROJECT," located wholly within the Clark County; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the COUNTY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the COUNTY is requesting funds to commence the design for the PROJECT; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION I: SCOPE OF PROJECT

This Interlocal Contract applies to pavement rehabilitation, American with Disabilities Act upgrades, signage and striping, utility adjustments, sidewalk and curb and gutter repairs, signal modifications and Intelligent Transportation System infrastructure along Hacienda Avenue from Rainbow Boulevard to Decatur Boulevard.. The Project is further described in Exhibit "A" which is attached hereto and by this reference incorporated herein.

SECTION II: PROJECT COSTS

The RTC agrees to provide funding for all costs associated with the PROJECT from the Highway Improvement Acquisition Fund as outlined below:

1. The total cost for this contract shall not exceed $1,500,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

    a. ENGINEERING not to exceed $ 1,500,000.00

b. RIGHT-OF-WAY not to exceed $ 0.00
c. CONSTRUCTION not to exceed $ 0.00

3. At the time the ATP for construction is granted, the COUNTY will make all attempts to publish the bid for this PROJECT within 90 calendar days.

4. A supplemental interlocal contract will be required for any changes to the amounts identified in number 2 above.

SECTION III: GENERAL

1. The title sheet of both the plans and specifications shall designate the RTC as the funding agency. If construction funds are provided by sources other than the RTC, the plans, contract documents, special provisions, and PROJECT signs shall also show the RTC as a funding agency.

2. Preliminary engineering, design and right-of-way engineering shall be performed by the COUNTY or by a consultant employed by the COUNTY.

3. The design, construction, right-of-way acquisition and contract administration of the PROJECT shall comply with the requirements as set forth in the current "Policies and Procedures" of the RTC.

4. The COUNTY's Department of Public Works has a policy which effectively prohibits utility cuts through the pavement for a period of five years after the completion of a PROJECT.

5. Upon completion of the construction of the PROJECT, it shall be maintained by the COUNTY and no funding is provided by this Contract for such maintenance.

6. The PROJECT must be completed to the satisfaction of the RTC prior to the current applicable completion date of December 31, 2026. The RTC may, at any time thereafter, grant time extensions or terminate this Contract and require all sums advanced to the COUNTY be repaid.

7. It is understood and agreed that the purpose of this Interlocal Contract is to fund the PROJECT as herein above set forth. It is further understood and agreed that the COUNTY is responsible for the design and construction of the PROJECT. The COUNTY will be responsible for the actions or inactions of its Officers and Employees. The RTC's sole responsibility is to facilitate funding for the PROJECT. The RTC disavows any responsibility for the actions or inactions of the COUNTY, its Officers, Employees, or agents.

8. Should the construction funds be provided by sources other than the RTC, the COUNTY will reimburse the RTC for a percentage of the preliminary engineering and design costs associated with other funding sources, as mutually agreed upon by the RTC and the COUNTY.

IN WITNESS WHEREOF, this Interlocal Contract #1326 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CLARK COUNTY BOARD OF COMMISSIONERS

_____ BY: _____

MARILYN KIRKPATRICK
Chair

Attest

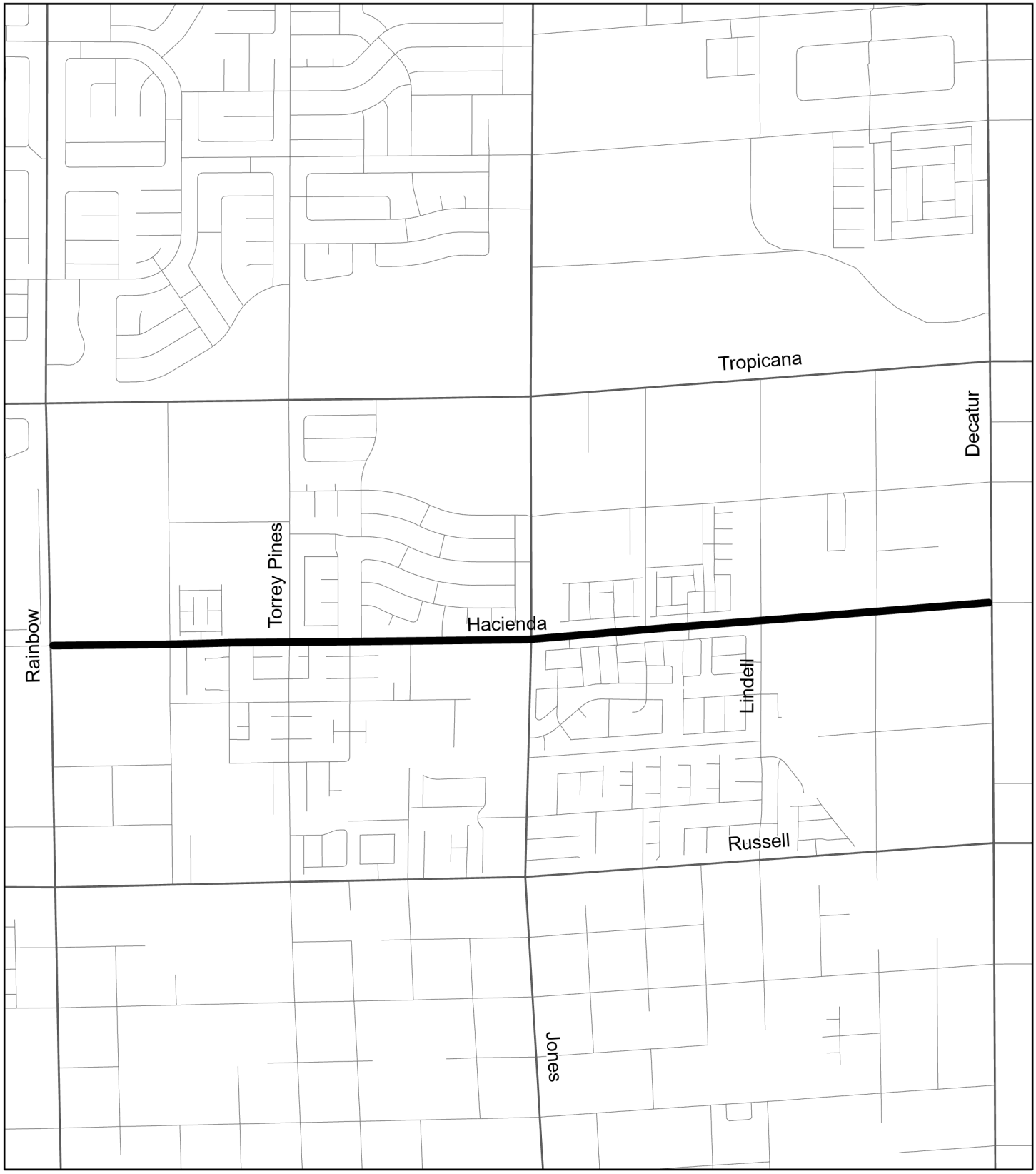
_____

LYNN MARIE GOYA
County Clerk

Approved as to Form

_____

LAURA C. REHFELDT
Deputy District Attorney



Legend

- Proposed
- Existing
- Future

Exhibit A

N
W E
S

CLARK COUNTY NEVADA	**Project Number: TBD**	CLARK COUNTY PUBLIC WORKS
		SCALE: NOT TO SCALE
	Hacienda Avenue Rehabilitation - Rainbow Boulevard to Decatur Boulevard	DATE: 08-26-2021
		SHEET NUMBER: 1 OF 1

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE AN INTERLOCAL CONTRACT FOR A NEW DESIGN PROJECT

PETITIONER: DENIS CEDERBURG, DIRECTOR
CLARK COUNTY PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CLARK COUNTY PROJECT 190Q-Q10 – TRAIL CONNECTIVITY, CC-215 BELTWAY TRAIL BRIDGES, EASTERN AVENUE AND CHARLESTON BOULEVARD (FOR POSSIBLE ACTION)

GOAL: INCREASE SAFETY FOR BOTH MOTORIZED AND NON-MOTORIZED USERS

FISCAL IMPACT:
Funds in the amount of $1,800,000.00 are budgeted in the Highway Improvement Fund for Fiscal Year 2022.

BACKGROUND:
This Interlocal Contract will provide funding for the design of pedestrian trail bridges along the Clark County-215 Bruce Woodbury Beltway (Beltway) at Eastern Avenue and Charleston Boulevard. The improvements shall include the construction of pedestrian bridges and trails along the Beltway and related appurtenances. The improvements will generally consist of bridge structures, trails, concrete retaining walls, concrete stairs, plantmix bituminous paving, curb and gutter, sidewalk, concrete median island, construction traffic control, street lighting, pavement markings, signage, pedestrian railing, chain link fencing, and other related items.

Respectfully submitted,

DocuSigned by:
678086A027094E5...

DENIS CEDERBURG, P.E.
Director of Public Works

RTC Item #8
September 30, 2021
Consent

INTERLOCAL CONTRACT
TRAIL CONNECTIVITY CC-215 BELTWAY TRAIL BRIDGES
EASTERN AVENUE AND CHARLESTON BOULEVARD

THIS INTERLOCAL CONTRACT is made and entered into this 14TH day of October 2021, by and between Clark County, a political subdivision, hereinafter referred to as "COUNTY" and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the COUNTY intends to improve Clark County 215 Bruce Woodbury Beltway Trail Bridges at Eastern Avenue and Charleston Boulevard, which is included on the adopted RTC Capital Improvement Plan, hereinafter referred to as "PROJECT," located wholly within the Clark County; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the COUNTY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the COUNTY is requesting funds to commence the design for the PROJECT; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION I: SCOPE OF PROJECT

This Interlocal Contract applies to the design of various pedestrian trail bridges along the Clark County 215 Bruce Woodbury Beltway. The improvements shall include the construction of pedestrian bridges and trails along the Beltway and related appurtenances. The improvements will generally consist of bridge structures, trails, concrete retaining walls, concrete stairs, plantmix bituminous paving, curb and gutter, sidewalk, concrete median island, construction traffic control, street lighting, pavement markings, signage, pedestrian railing, chain link fencing, and other related items. The Project is further described in Exhibit "A" which is attached hereto and by this reference incorporated herein.

SECTION II: PROJECT COSTS

The RTC agrees to provide funding for all costs associated with the PROJECT from the Highway Improvement Fund as outlined below:

1. The total cost for this contract shall not exceed $1,800,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

a. ENGINEERING not to exceed $ 1,800,000.00
b. RIGHT-OF-WAY not to exceed $ 0.00
c. CONSTRUCTION not to exceed $ 0.00

3. At the time the ATP for construction is granted, the COUNTY will make all attempts to publish the bid for this PROJECT within 90 calendar days.

4. A supplemental interlocal contract will be required for any changes to the amounts identified in number 2 above.

SECTION III: GENERAL

1. The title sheet of both the plans and specifications shall designate the RTC as the funding agency. If construction funds are provided by sources other than the RTC, the plans, contract documents, special provisions, and PROJECT signs shall also show the RTC as a funding agency.

2. Preliminary engineering, design and right-of-way engineering shall be performed by the COUNTY or by a consultant employed by the COUNTY.

3. The design, construction, right-of-way acquisition and contract administration of the PROJECT shall comply with the requirements as set forth in the current "Policies and Procedures" of the RTC.

4. The COUNTY's Department of Public Works has a policy which effectively prohibits utility cuts through the pavement for a period of five years after the completion of a PROJECT.

5. Upon completion of the construction of the PROJECT, it shall be maintained by the COUNTY and no funding is provided by this Contract for such maintenance.

6. The PROJECT must be completed to the satisfaction of the RTC prior to the current applicable completion date of December 31, 2026. The RTC may, at any time thereafter, grant time extensions or terminate this Contract and require all sums advanced to the COUNTY be repaid.

7. It is understood and agreed that the purpose of this Interlocal Contract is to fund the PROJECT as herein above set forth. It is further understood and agreed that the COUNTY is responsible for the design and construction of the PROJECT. The COUNTY will be responsible for the actions or inactions of its Officers and Employees. The RTC's sole responsibility is to facilitate funding for the PROJECT. The RTC disavows any responsibility for the actions or inactions of the COUNTY, its Officers, Employees, or agents.

8. Should the construction funds be provided by sources other than the RTC, the COUNTY will reimburse the RTC for a percentage of the preliminary engineering and design costs associated with other funding sources, as mutually agreed upon by the RTC and the COUNTY.

IN WITNESS WHEREOF, this Interlocal Contract #1324 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CLARK COUNTY BOARD OF COMMISSIONERS

_____ BY: _____

MARILYN KIRKPATRICK
Chair

Attest

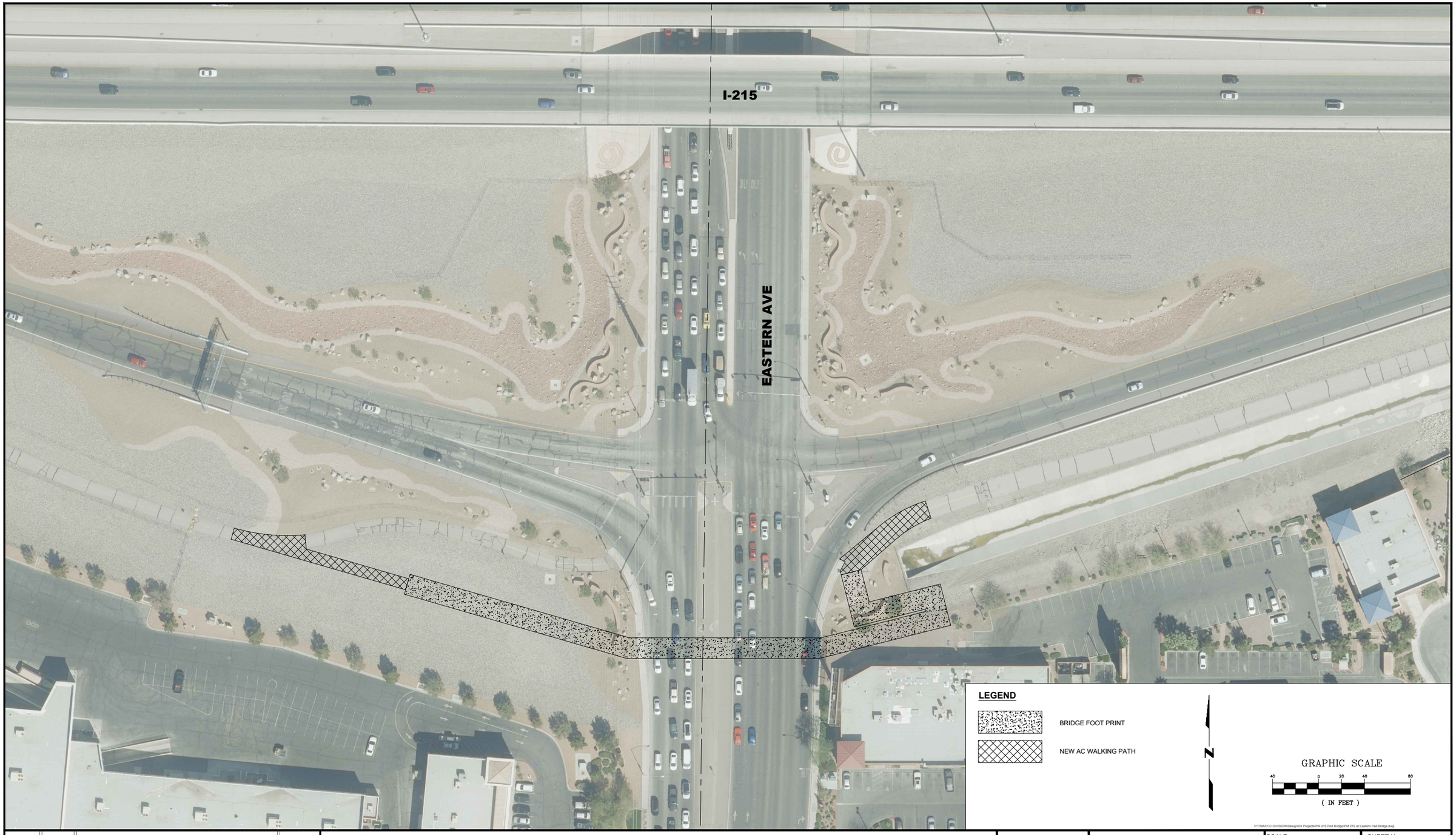
_____

LYNN MARIE GOYA
County Clerk

Approved as to Form

_____

LAURA C. REHFELDT
Deputy District Attorney



LEGEND

BRIDGE FOOT PRINT

NEW AC WALKING PATH

N

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)

P:\TRAFFIC DIVISION\Design\03 Projects\PM 215 Ped Bridge\PM 215 at Eastern Ped Bridge.dwg

REV No	DATE	DESCRIPTION	APPROVED

PEDESTRIAN BRIDGE

AT I-215 AND EASTERN AVE

CLARK COUNTY, NEVADA, DEPARTMENT OF PUBLIC WORKS

DESIGNED BY:

DRAWN BY:

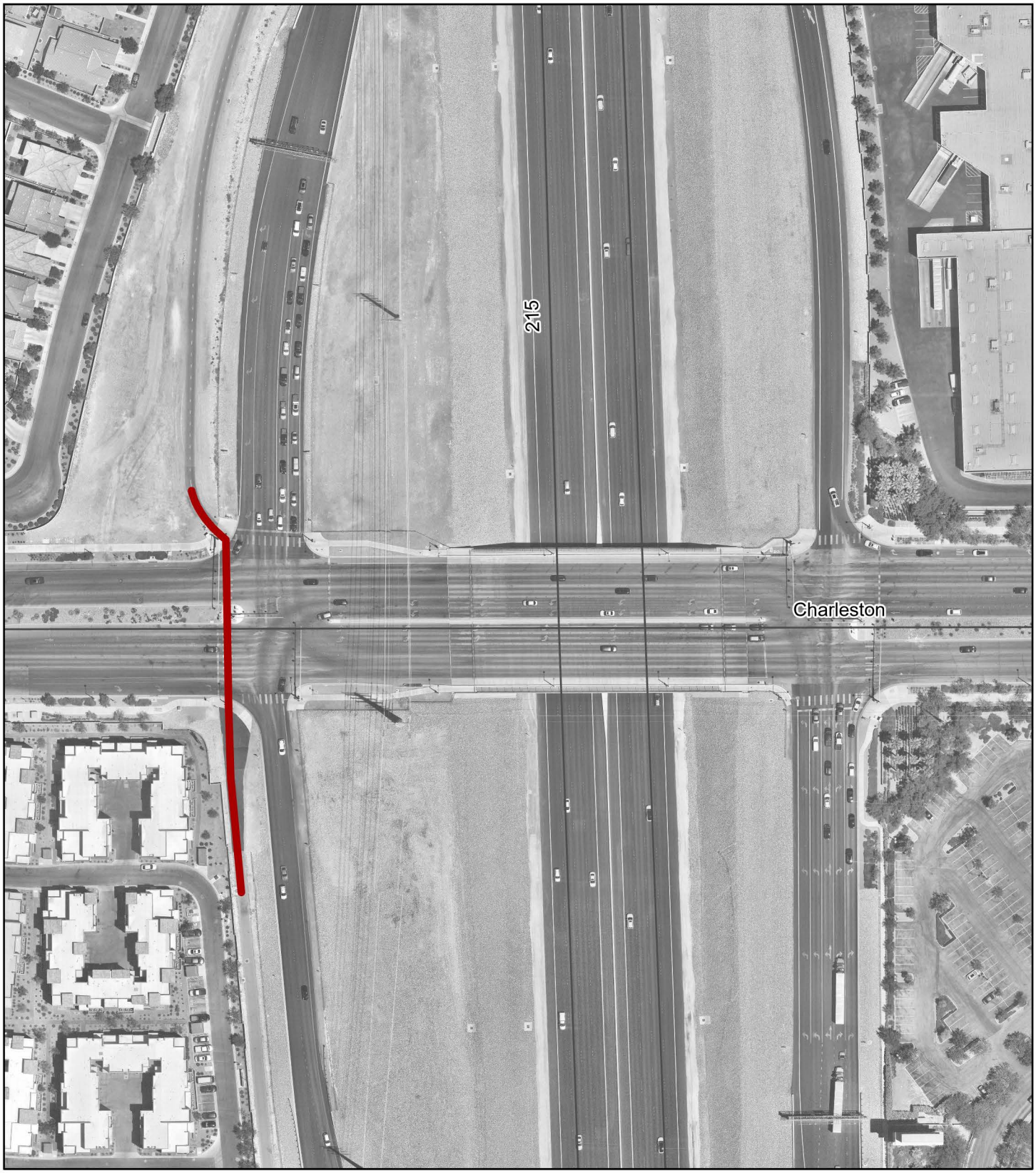
CHECKED BY:

DATE:

SCALE	
HORIZ:	AS SHOWN
VERT:	NONE
FIELD BOOK	NONE
WORK ORDER	NONE
PROJECT No.	NONE

SHEET No

EX-1



Legend

- Proposed
- Existing
- Future

Exhibit A

N
W E
S

CLARK COUNTY NEVADA	**Project Number: TBD**	CLARK COUNTY PUBLIC WORKS
		SCALE: NOT TO SCALE
	Pedestrian Bridge **At I-215 and Charleston Boulevard**	DATE: 09-07-2021
		SHEET NUMBER: 1 OF 1

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE SUPPLEMENTAL INTERLOCAL CONTRACT

PETITIONER: MIKE JANSSEN, DIRECTOR
CITY OF LAS VEGAS PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN SUPPLEMENTAL INTERLOCAL CONTRACT NO. 1 TO INCREASE FUNDING FOR CITY OF LAS VEGAS PROJECT 222A-FTI2 – PEDESTRIAN BRIDGE, INTERSECTION AT SAHARA AVENUE AND LAS VEGAS BOULEVARD (FOR POSSIBLE ACTION)

GOAL: ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM

FISCAL IMPACT:
Funds in the amount of $2,000,000.00 are budgeted in the Highway Improvement Acquisition Fund for Fiscal Year 2022.

BACKGROUND:
The Regional Transportation Commission of Southern Nevada (RTC) previously approved funding for design of the subject project. This Supplemental Interlocal Contract will provide additional design funds to cover City of Las Vegas internal labor and the design consultant agreement for the pedestrian bridge at the intersection of Sahara Avenue and Las Vegas Boulevard. This project is administered by the City of Las Vegas in coordination with Clark County and is on the RTC's adopted Transportation Investment Business Plan.

Respectfully submitted,

DocuSigned by:
Joey Paskey
266A9F0F986B429...

FOR

MIKE JANSSEN, P.E., PTOE
Director of Public Works

RTC Item #9
September 30, 2021
Consent

SUPPLEMENTAL INTERLOCAL CONTRACT NO. 1
PEDESTRIAN BRIDGE
INTERSECTION AT SAHARA AVENUE AND LAS VEGAS BOULEVARD

THIS SUPPLEMENTAL INTERLOCAL CONTRACT NO. 1 is made and entered into this 14TH day of October 2021, by and between the City of Las Vegas, a municipal corporation, hereinafter referred to as "CITY," Clark County, a political subdivision, hereinafter referred to as "COUNTY," and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the RTC approved Interlocal Contract #1064 dated February 14, 2019, hereinafter referred to as "PROJECT," located partially within City of Las Vegas and partially within Clark County; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the CITY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the CITY will coordinate with the COUNTY, but will be the lead entity for the design and construction of the project; and

WHEREAS, the CITY wishes to increase total PROJECT funding; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION II: PROJECT COSTS; Paragraphs 1 and 2 shall be revised to read as follows:

1. The total cost for this contract shall not exceed $3,000,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

    a. ENGINEERING not to exceed $3,000,000.00
    b. RIGHT-OF-WAY not to exceed $0.00
    c. CONSTRUCTION not to exceed $0.00

The remainder of Interlocal Contract #1064 dated February 14, 2019, shall remain unchanged.

The remainder of this page is left intentionally blank.

IN WITNESS WHEREOF, this Supplemental Interlocal Contract No. 1 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CITY OF LAS VEGAS

_____ BY: _____

CAROLYN G. GOODMAN
Mayor

Attest

_____

LUANN D. HOLMES, MMC
City Clerk

Approved as to Form

_____

Deputy City Attorney

Date of Council Action:

CLARK COUNTY BOARD OF COMMISSIONERS

_____ BY: _____

MARILYN KIRKPATRICK
Chair

Attest

_____

LYNN MARIE GOYA
County Clerk

Approved as to Form

_____

LAURA C. REHFELDT
Deputy District Attorney

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE AN INTERLOCAL CONTRACT FOR A NEW DESIGN PROJECT

PETITIONER: DALE DAFFERN, P.E., DIRECTOR
CITY OF NORTH LAS VEGAS PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF NORTH LAS VEGAS PROJECT 163C-FTI2 – COMMERCE STREET, HENDERSON CIRCLE TO CRAIG ROAD (FOR POSSIBLE ACTION)

GOAL: MAINTAIN AND IMPROVE TRANSPORTATION SYSTEM INFRASTRUCTURE

FISCAL IMPACT:
Funds in the amount of $400,000.00 are budgeted in the Highway Improvement Acquisition Fund for Fiscal Year 2022.

BACKGROUND:
This item will provide funding to begin design of Commerce Street from Henderson Circle to Craig Road.

Respectfully submitted,

DocuSigned by:
Dale Daffern
5E272F52F7E74CF...

DALE DAFFERN, P.E.
Director of Public Works

RTC Item #10
September 30, 2021
Consent

INTERLOCAL CONTRACT
COMMERCE STREET
HENDERSON CIRCLE TO CRAIG ROAD

THIS INTERLOCAL CONTRACT is made and entered into this 14TH day of October 2021, by and between the City of North Las Vegas, a municipal corporation, hereinafter referred to as "CITY" and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the CITY intends to improve Commerce Street from Henderson Circle to Craig Road, which is included on the adopted RTC Capital Improvement Plan, hereinafter referred to as "PROJECT," located wholly within the City of North Las Vegas; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the CITY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the CITY is requesting funds to commence the design for the PROJECT; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION I: SCOPE OF PROJECT

This Interlocal Contract applies to engineering and right-of-way for Commerce Street from Henderson Circle to Craig Road. The Project is further described in Exhibit "A" which is attached hereto and by this reference incorporated herein.

SECTION II: PROJECT COSTS

The RTC agrees to provide funding for all costs associated with the PROJECT from the Highway Improvement Acquisition Fund as outlined below:

1. The total cost for this contract shall not exceed $400,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

    a. ENGINEERING not to exceed $ 375,000.00
    b. RIGHT-OF-WAY not to exceed $ 25,000.00
    c. CONSTRUCTION not to exceed $ 0.00

3. At the time the ATP for construction is granted, the CITY will make all attempts to publish the bid for this PROJECT within 90 calendar days.

4. A supplemental interlocal contract will be required for any changes to the amounts identified in number 2 above.

SECTION III: GENERAL

1. The title sheet of both the plans and specifications shall designate the RTC as the funding agency. If construction funds are provided by sources other than the RTC, the plans, contract documents, special provisions, and PROJECT signs shall also show the RTC as a funding agency.

2. Preliminary engineering, design and right-of-way engineering shall be performed by the CITY or by a consultant employed by the CITY.

3. The design, construction, right-of-way acquisition and contract administration of the PROJECT shall comply with the requirements as set forth in the current "Policies and Procedures" of the RTC.

4. The CITY's Department of Public Works has a policy which effectively prohibits utility cuts through the pavement for a period of five years after the completion of a PROJECT.

5. Upon completion of the construction of the PROJECT, it shall be maintained by the CITY and no funding is provided by this Contract for such maintenance.

6. The PROJECT must be completed to the satisfaction of the RTC prior to the current applicable completion date of December 31, 2026. The RTC may, at any time thereafter, grant time extensions or terminate this Contract and require all sums advanced to the CITY be repaid.

7. It is understood and agreed that the purpose of this Interlocal Contract is to fund the PROJECT as herein above set forth. It is further understood and agreed that the CITY is responsible for the design and construction of the PROJECT. The CITY will be responsible for the actions or inactions of its Officers and Employees. The RTC's sole responsibility is to facilitate funding for the PROJECT. The RTC disavows any responsibility for the actions or inactions of the CITY, its Officers, Employees, or agents.

8. Should the construction funds be provided by sources other than the RTC, the CITY will reimburse the RTC for a percentage of the preliminary engineering and design costs associated with other funding sources, as mutually agreed upon by the RTC and the CITY.

The remainder of this page is left intentionally blank.

IN WITNESS WHEREOF, this Interlocal Contract #1327 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CITY OF NORTH LAS VEGAS

_____ BY: _____

JOHN J. LEE
Mayor

Attest

_____

JACKIE RODGERS
Chief Deputy City Clerk

Approved as to Form

_____

MICAELA RUSTIA MOORE
City Attorney

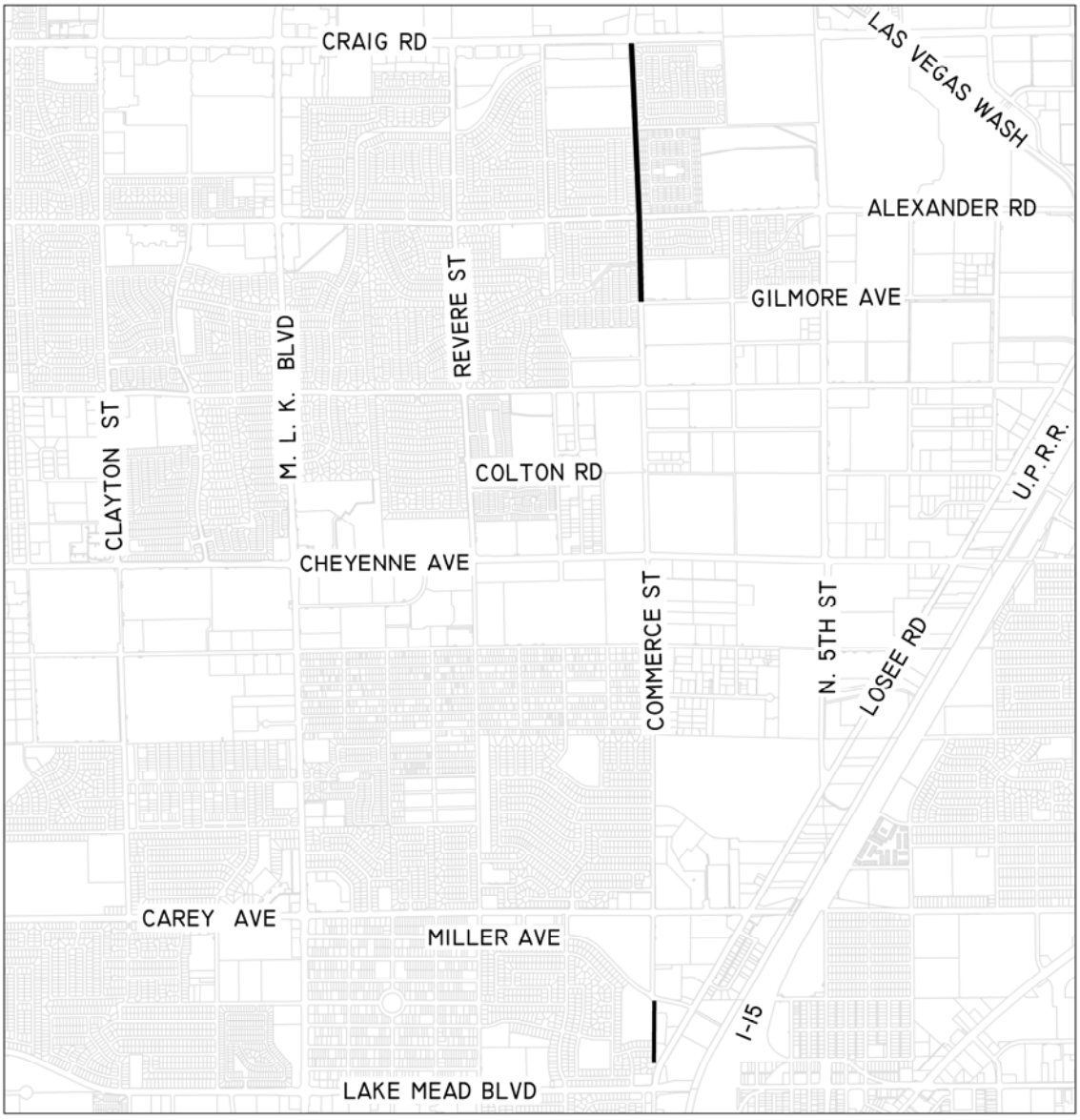


EXHIBIT "A"
VICINITY MAP

CITY OF NORTH LAS VEGAS
Your Community of Choice

DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND CONSTRUCTION
SERVICES DIVISION

ARTERIAL RECONSTRUCTION
FISCAL YEAR 2021

SCALE:	NONE
DRAWING NAME:	10280B-21-VIC Commerce.DWG
DRAWN BY:	T. COCHRAN
DATE:	9/7/2021
SHEET NUMBER	1 OF 1

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE AN INTERLOCAL CONTRACT FOR A NEW CONSTRUCTION PROJECT

PETITIONER: EDWARD MCGUIRE, P.E., DIRECTOR
CITY OF HENDERSON PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 111C-FTI2 – BERMUDA ROAD, ST. ROSE PARKWAY POWER POLE REMOVAL (FOR POSSIBLE ACTION)

GOAL: INCREASE SAFETY FOR BOTH MOTORIZED AND NON-MOTORIZED USERS

FISCAL IMPACT:
Funds in the amount of $150,000.00 are budgeted in the Highway Improvement Acquisition Fund for Fiscal Year 2022.

BACKGROUND:
On April 12, 2018, the Regional Transportation Commission of Southern Nevada approved Interlocal Contract #1006 for the design of Bermuda Road, Volunteer Boulevard to St. Rose Parkway, which was supplemented for construction on June 13, 2019. The project was closed in April 8, 2021. On July 9, 2021, NV Energy executed a Rule 9 Line Extension Agreement (LEA) for the removal of power poles on the project. The existing poles are too close to the edge of the interim pavements, causing a vehicle safety issue and conflict with the ultimate road section curb line. This Interlocal Contract will fund the LEA for NV Energy to complete the removal of power poles.

Respectfully submitted,

DocuSigned by:
Edward McGuire
046713FB96714C2...

EDWARD MCGUIRE, P.E.
Director of Public Works

RTC Item #11
September 30, 2021
Consent

INTERLOCAL CONTRACT
BERMUDA ROAD
ST. ROSE PARKWAY POWER POLE REMOVAL

THIS INTERLOCAL CONTRACT is made and entered into this 14TH day of October 2021, by and between the City of Henderson, a municipal corporation, hereinafter referred to as "CITY" and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the CITY intends to improve Bermuda Road, St. Rose Parkway, which is included on the adopted RTC Capital Improvement Plan, hereinafter referred to as "PROJECT," located wholly within the City of Henderson; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the CITY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the CITY is requesting funds to commence the construction for the PROJECT; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION I: SCOPE OF PROJECT

This Interlocal Contract applies to the removal of existing power poles by NV Energy. The Project is further described in Exhibit "A" which is attached hereto and by this reference incorporated herein.

SECTION II: PROJECT COSTS

The RTC agrees to provide funding for all costs associated with the PROJECT from the Highway Improvement Acquisition Fund as outlined below:

1. The total cost for this contract shall not exceed $150,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

    a. ENGINEERING not to exceed $ 0.00
    b. RIGHT-OF-WAY not to exceed $ 0.00
    c. CONSTRUCTION not to exceed $ 150,000.00

3. At the time the ATP for construction is granted, the CITY will make all attempts to publish the bid for this PROJECT within 90 calendar days.

4. A supplemental interlocal contract will be required for any changes to the amounts identified in number 2 above.

5. The RTC agrees to reimburse funds advanced by the CITY for eligible PROJECT costs incurred after July 9, 2021.

SECTION III: GENERAL

1. The title sheet of both the plans and specifications shall designate the RTC as the funding agency. If construction funds are provided by sources other than the RTC, the plans, contract documents, special provisions, and PROJECT signs shall also show the RTC as a funding agency.

2. Preliminary engineering, design and right-of-way engineering shall be performed by the CITY or by a consultant employed by the CITY.

3. The design, construction, right-of-way acquisition and contract administration of the PROJECT shall comply with the requirements as set forth in the current "Policies and Procedures" of the RTC.

4. The CITY's Department of Public Works has a policy which effectively prohibits utility cuts through the pavement for a period of five years after the completion of a PROJECT.

5. Upon completion of the construction of the PROJECT, it shall be maintained by the CITY and no funding is provided by this Contract for such maintenance.

6. The PROJECT must be completed to the satisfaction of the RTC prior to the current applicable completion date of December 31, 2026. The RTC may, at any time thereafter, grant time extensions or terminate this Contract and require all sums advanced to the CITY be repaid.

7. It is understood and agreed that the purpose of this Interlocal Contract is to fund the PROJECT as herein above set forth. It is further understood and agreed that the CITY is responsible for the design and construction of the PROJECT. The CITY will be responsible for the actions or inactions of its Officers and Employees. The RTC's sole responsibility is to facilitate funding for the PROJECT. The RTC disavows any responsibility for the actions or inactions of the CITY, its Officers, Employees, or agents.

8. Should the construction funds be provided by sources other than the RTC, the CITY will reimburse the RTC for a percentage of the preliminary engineering and design costs associated with other funding sources, as mutually agreed upon by the RTC and the CITY.

The remainder of this page is left intentionally blank.

IN WITNESS WHEREOF, this Interlocal Contract #1328 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CITY OF HENDERSON

_____ BY: _____

RICHARD A. DERRICK
City Manager/CEO

Approved as to Finance: Attest

_____ _____

JIM MCINTOSH
Chief Financial Officer

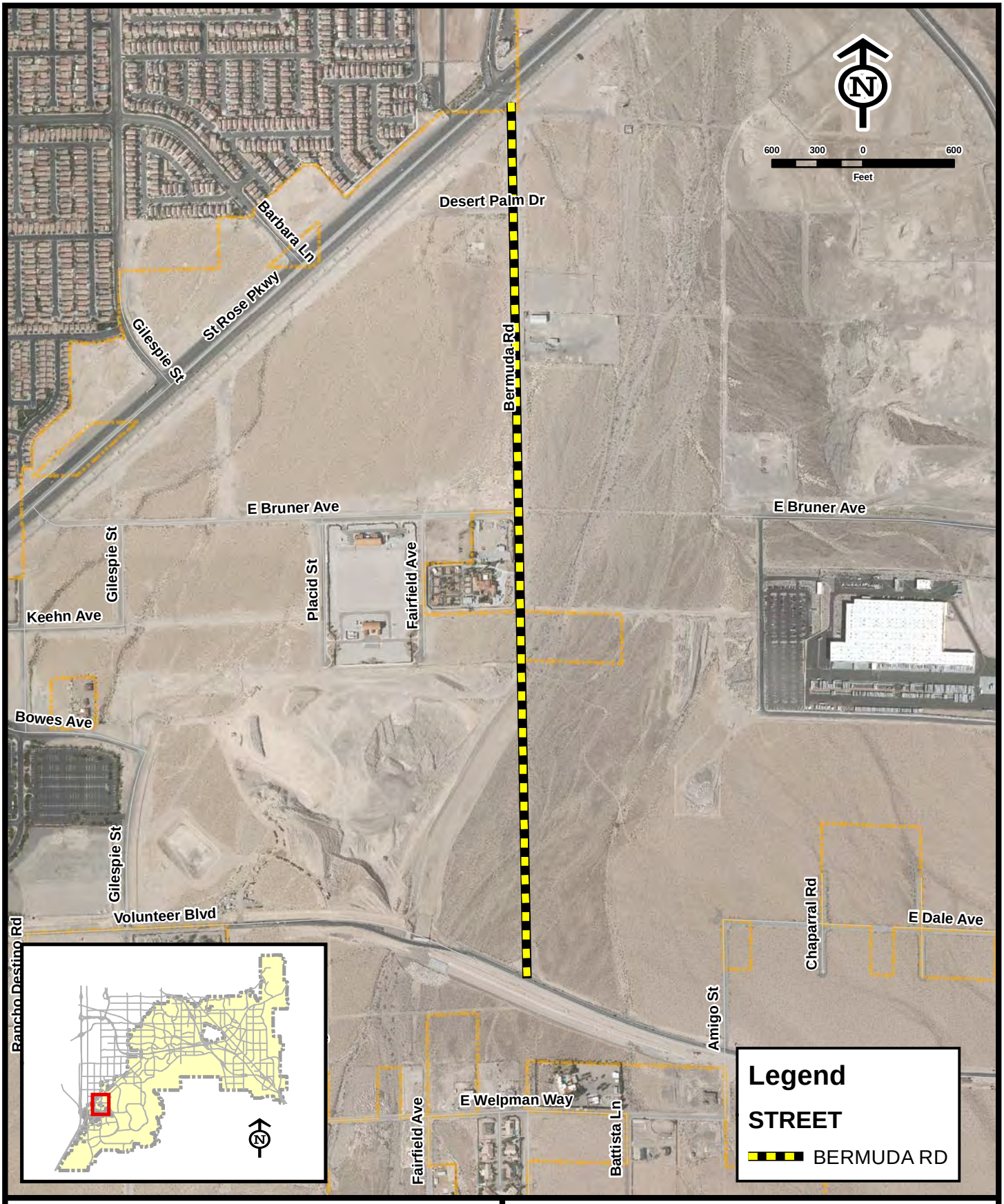
Jose Luis Valdez, CMC
City Clerk

Approved as to Content: Approved as to Form

_____ _____

EDWARD MCGUIRE, P.E.
Director, Public Works

NICHOLAS G. VASKOV
City Attorney



City of Henderson, Nevada
Department of Public Works,
Parks and Recreation
Geographic Information Systems
This map is offered as a general reference guide only.
Neither warranty of accuracy is intended nor should any

Bermuda Rd
St Rose Pkwy to Volunteer Blvd

March 2018

P:\projects\public_works\engineering\2018\RTC_Exhibits_Kristin\BermudaRd.mxd 3/5/2018 12:14:58 PM kcl

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE AN INTERLOCAL CONTRACT FOR A NEW DESIGN PROJECT

PETITIONER: EDWARD MCGUIRE, P.E., DIRECTOR
CITY OF HENDERSON PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 156C-FTI2 – GALLERIA DRIVE, PATRICK LANE TO PANHANDLE DRIVE (FOR POSSIBLE ACTION)

GOAL: MAINTAIN AND IMPROVE TRANSPORTATION SYSTEM INFRASTRUCTURE

FISCAL IMPACT:
Funds in the amount of $400,000.00 are budgeted in the Highway Improvement Acquisition Fund for Fiscal Year 2022.

BACKGROUND:
The City of Henderson has negotiated with Kimley-Horn and Associates to design roadway improvements for Galleria Drive from Patrick Lane to Panhandle Drive. This Interlocal Contract will provide funding for design of the project.

Respectfully submitted,

DocuSigned by:
Edward McGuire
046713FB96714C2...

EDWARD MCGUIRE, P.E.
Director of Public Works

RTC Item #12
September 30, 2021
Consent

INTERLOCAL CONTRACT
GALLERIA DRIVE
PATRICK LANE TO PANHANDLE DRIVE

THIS INTERLOCAL CONTRACT is made and entered into this 14TH day of October 2021, by and between the City of Henderson, a municipal corporation, hereinafter referred to as "CITY" and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the CITY intends to improve Galleria Drive from Patrick Lane to Panhandle Drive, which is included on the adopted RTC Capital Improvement Plan, hereinafter referred to as "PROJECT," located wholly within the City of Henderson; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the CITY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the CITY is requesting funds to commence the design for the PROJECT; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION I: SCOPE OF PROJECT

This Interlocal Contract applies to roadway improvements including, but not limited to, pavement rehabilitation, analyses for pedestrian safety needs and road diet, and complete street and safety elements as feasible for complete project. The Project is further described in Exhibit "A" which is attached hereto and by this reference incorporated herein.

SECTION II: PROJECT COSTS

The RTC agrees to provide funding for all costs associated with the PROJECT from the Highway Improvement Acquisition Fund as outlined below:

1. The total cost for this contract shall not exceed $400,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

    a. ENGINEERING not to exceed $ 400,000.00
    b. RIGHT-OF-WAY not to exceed $ 0.00
    c. CONSTRUCTION not to exceed $ 0.00

3. At the time the ATP for construction is granted, the CITY will make all attempts to publish the bid for this PROJECT within 90 calendar days.

4. A supplemental interlocal contract will be required for any changes to the amounts identified in number 2 above.

5. The RTC agrees to reimburse funds advanced by the CITY for eligible PROJECT costs incurred after August 15, 2021.

SECTION III: GENERAL

1. The title sheet of both the plans and specifications shall designate the RTC as the funding agency. If construction funds are provided by sources other than the RTC, the plans, contract documents, special provisions, and PROJECT signs shall also show the RTC as a funding agency.

2. Preliminary engineering, design and right-of-way engineering shall be performed by the CITY or by a consultant employed by the CITY.

3. The design, construction, right-of-way acquisition and contract administration of the PROJECT shall comply with the requirements as set forth in the current "Policies and Procedures" of the RTC.

4. The CITY's Department of Public Works has a policy which effectively prohibits utility cuts through the pavement for a period of five years after the completion of a PROJECT.

5. Upon completion of the construction of the PROJECT, it shall be maintained by the CITY and no funding is provided by this Contract for such maintenance.

6. The PROJECT must be completed to the satisfaction of the RTC prior to the current applicable completion date of December 31, 2026. The RTC may, at any time thereafter, grant time extensions or terminate this Contract and require all sums advanced to the CITY be repaid.

7. It is understood and agreed that the purpose of this Interlocal Contract is to fund the PROJECT as herein above set forth. It is further understood and agreed that the CITY is responsible for the design and construction of the PROJECT. The CITY will be responsible for the actions or inactions of its Officers and Employees. The RTC's sole responsibility is to facilitate funding for the PROJECT. The RTC disavows any responsibility for the actions or inactions of the CITY, its Officers, Employees, or agents.

8. Should the construction funds be provided by sources other than the RTC, the CITY will reimburse the RTC for a percentage of the preliminary engineering and design costs associated with other funding sources, as mutually agreed upon by the RTC and the CITY.

The remainder of this page is left intentionally blank.

IN WITNESS WHEREOF, this Interlocal Contract #1330 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CITY OF HENDERSON

_____ BY: _____

RICHARD A. DERRICK
City Manager/CEO

Approved as to Finance: Attest

_____ _____

JIM MCINTOSH
Chief Financial Officer

Jose Luis Valdez, CMC
City Clerk

Approved as to Content: Approved as to Form

_____ _____

EDWARD MCGUIRE, P.E.
Director, Public Works

NICHOLAS G. VASKOV
City Attorney

EXHIBIT A

City of Henderson, Nevada
Public Works Department
Geographic Information Systems

This map is offered as a general reference guide only. Neither warranty of accuracy is intended nor should any be assumed.

Galleria Drive

Patrick Ln to Panhandle Dr

August 2021

P:\projects\public_works\engineering\2021\RTC Exhibits\RTC Exhibits.aprx 8/26/2021 9:28 AM - Galleria Dr

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE AN INTERLOCAL CONTRACT FOR A NEW DESIGN PROJECT

PETITIONER: EDWARD MCGUIRE, P.E., DIRECTOR
CITY OF HENDERSON PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 192E-FTI2 – SUNRIDGE HEIGHTS PARKWAY, SEVEN HILLS DRIVE TO HORIZON RIDGE PARKWAY (FOR POSSIBLE ACTION)

GOAL: MAINTAIN AND IMPROVE TRANSPORTATION SYSTEM INFRASTRUCTURE

FISCAL IMPACT:
Funds in the amount of $550,000.00 are budgeted in the Highway Improvement Acquisition Fund for Fiscal Year 2022.

BACKGROUND:
The City of Henderson has negotiated with CA Group, Inc. to design roadway improvements for Sunridge Heights Parkway from Seven Hills Drive to Horizon Ridge Parkway. This Interlocal Contract will provide funding for the design of the project.

Respectfully submitted,

DocuSigned by:
Edward McGuire
046713FB96714C2...

EDWARD MCGUIRE, P.E.
Director of Public Works

RTC Item #13
September 30, 2021
Consent

INTERLOCAL CONTRACT
SUNRIDGE HEIGHTS PARKWAY
SEVEN HILLS DRIVE TO HORIZON RIDGE PARKWAY

THIS INTERLOCAL CONTRACT is made and entered into this 14TH day of October 2021, by and between the City of Henderson, a municipal corporation, hereinafter referred to as "CITY" and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the CITY intends to improve Sunridge Heights Parkway from Seven Hills Drive to Horizon Ridge Parkway, which is included on the adopted RTC Capital Improvement Plan, hereinafter referred to as "PROJECT," located wholly within the City of Henderson; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the CITY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the CITY is requesting funds to commence the design for the PROJECT; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION I: SCOPE OF PROJECT

This Interlocal Contract applies to roadway improvements including, but not limited to, pavement rehabilitation, analyses for potential added turn lane and road diet, and complete street and safety elements as feasible for a complete project. The Project is further described in Exhibit "A" which is attached hereto and by this reference incorporated herein.

SECTION II: PROJECT COSTS

The RTC agrees to provide funding for all costs associated with the PROJECT from the Highway Improvement Acquisition Fund as outlined below:

1. The total cost for this contract shall not exceed $550,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

    a. ENGINEERING not to exceed $ 550,000.00
    b. RIGHT-OF-WAY not to exceed $ 0.00
    c. CONSTRUCTION not to exceed $ 0.00

3. At the time the ATP for construction is granted, the CITY will make all attempts to publish the bid for this PROJECT within 90 calendar days.

4. A supplemental interlocal contract will be required for any changes to the amounts identified in number 2 above.

5. The RTC agrees to reimburse funds advanced by the CITY for eligible PROJECT costs incurred after August 15, 2021.

SECTION III: GENERAL

1. The title sheet of both the plans and specifications shall designate the RTC as the funding agency. If construction funds are provided by sources other than the RTC, the plans, contract documents, special provisions, and PROJECT signs shall also show the RTC as a funding agency.

2. Preliminary engineering, design and right-of-way engineering shall be performed by the CITY or by a consultant employed by the CITY.

3. The design, construction, right-of-way acquisition and contract administration of the PROJECT shall comply with the requirements as set forth in the current "Policies and Procedures" of the RTC.

4. The CITY's Department of Public Works has a policy which effectively prohibits utility cuts through the pavement for a period of five years after the completion of a PROJECT.

5. Upon completion of the construction of the PROJECT, it shall be maintained by the CITY and no funding is provided by this Contract for such maintenance.

6. The PROJECT must be completed to the satisfaction of the RTC prior to the current applicable completion date of December 31, 2026. The RTC may, at any time thereafter, grant time extensions or terminate this Contract and require all sums advanced to the CITY be repaid.

7. It is understood and agreed that the purpose of this Interlocal Contract is to fund the PROJECT as herein above set forth. It is further understood and agreed that the CITY is responsible for the design and construction of the PROJECT. The CITY will be responsible for the actions or inactions of its Officers and Employees. The RTC's sole responsibility is to facilitate funding for the PROJECT. The RTC disavows any responsibility for the actions or inactions of the CITY, its Officers, Employees, or agents.

8. Should the construction funds be provided by sources other than the RTC, the CITY will reimburse the RTC for a percentage of the preliminary engineering and design costs associated with other funding sources, as mutually agreed upon by the RTC and the CITY.

The remainder of this page is left intentionally blank.

IN WITNESS WHEREOF, this Interlocal Contract #1332 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CITY OF HENDERSON

_____ BY: _____

RICHARD A. DERRICK
City Manager/CEO

Approved as to Finance: Attest

_____ _____

JIM MCINTOSH
Chief Financial Officer

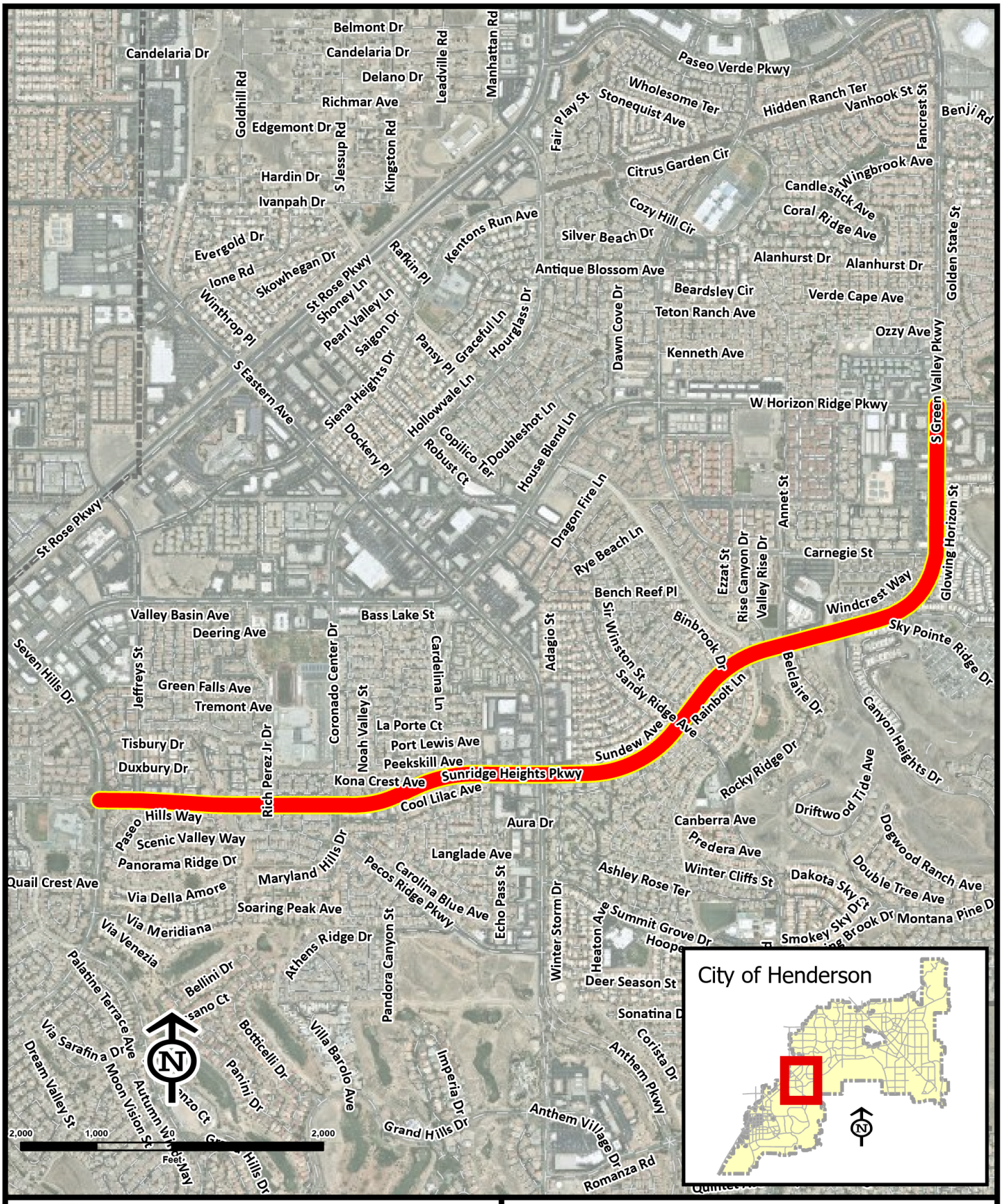
Jose Luis Valdez, CMC
City Clerk

Approved as to Content: Approved as to Form

_____ _____

EDWARD MCGUIRE, P.E.
Director, Public Works

NICHOLAS G. VASKOV
City Attorney



THE CITY OF HENDERSON
A Place To Call Home

City of Henderson, Nevada
Public Works Department
Geographic Information Systems

This map is offered as a general reference guide only. Neither warranty of accuracy is intended nor should any be assumed.

Sunridge Heights Pkwy

Seven Hills Drive to Horizon Ridge Pkwy

August 2021

P:\projects\public_works\engineering\2021\RTC Exhibits\RTC Exhibits.aprx 8/26/2021 8:39 AM - Sunridge Heights Pkwy

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE AN INTERLOCAL CONTRACT FOR A NEW DESIGN PROJECT

PETITIONER: EDWARD MCGUIRE, P.E., DIRECTOR
CITY OF HENDERSON PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 263A-FTI2 – CARNEGIE STREET, PASEO VERDE PARKWAY TO SUNRIDGE HEIGHTS PARKWAY (FOR POSSIBLE ACTION)

GOAL: MAINTAIN AND IMPROVE TRANSPORTATION SYSTEM INFRASTRUCTURE

FISCAL IMPACT:
Funds in the amount of $650,000.00 are budgeted in the Highway Improvement Acquisition Fund for Fiscal Year 2022.

BACKGROUND:
The City of Henderson has negotiated with Jacobs Engineering to design roadway improvements for Carnegie Street from Paseo Verde Parkway to Sunridge Heights Parkway. This Interlocal Contract will provide funding for the design of the project.

Respectfully submitted,

DocuSigned by:
Edward McGuire
046713FB96714C2...

EDWARD MCGUIRE, P.E.
Director of Public Works

RTC Item #14
September 30, 2021
Consent

INTERLOCAL CONTRACT
CARNEGIE STREET
PASEO VERDE PARKWAY TO SUNRIDGE HEIGHTS PARKWAY

THIS INTERLOCAL CONTRACT is made and entered into this 14TH day of October 2021, by and between the City of Henderson, a municipal corporation, hereinafter referred to as "CITY" and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the CITY intends to improve Carnegie Street from Paseo Verde Parkway to Sunridge Heights Parkway, which is included on the adopted RTC Capital Improvement Plan, hereinafter referred to as "PROJECT," located wholly within the City of Henderson; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the CITY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the CITY is requesting funds to commence the design for the PROJECT; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION I: SCOPE OF PROJECT

This Interlocal Contract applies to roadway improvements including, but not limited to, pavement rehabilitation, pedestrian safety and intersection improvements, and complete street and safety elements as feasible for a complete project. The Project is further described in Exhibit "A" which is attached hereto and by this reference incorporated herein.

SECTION II: PROJECT COSTS

The RTC agrees to provide funding for all costs associated with the PROJECT from the Highway Improvement Acquisition Fund as outlined below:

1. The total cost for this contract shall not exceed $650,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

    a. ENGINEERING not to exceed $ 650,000.00
    b. RIGHT-OF-WAY not to exceed $ 0.00
    c. CONSTRUCTION not to exceed $ 0.00

3. At the time the ATP for construction is granted, the CITY will make all attempts to publish the bid for this PROJECT within 90 calendar days.

4. A supplemental interlocal contract will be required for any changes to the amounts identified in number 2 above.

5. The RTC agrees to reimburse funds advanced by the CITY for eligible PROJECT costs incurred after June 1, 2021.

SECTION III: GENERAL

1. The title sheet of both the plans and specifications shall designate the RTC as the funding agency. If construction funds are provided by sources other than the RTC, the plans, contract documents, special provisions, and PROJECT signs shall also show the RTC as a funding agency.

2. Preliminary engineering, design and right-of-way engineering shall be performed by the CITY or by a consultant employed by the CITY.

3. The design, construction, right-of-way acquisition and contract administration of the PROJECT shall comply with the requirements as set forth in the current "Policies and Procedures" of the RTC.

4. The CITY's Department of Public Works has a policy which effectively prohibits utility cuts through the pavement for a period of five years after the completion of a PROJECT.

5. Upon completion of the construction of the PROJECT, it shall be maintained by the CITY and no funding is provided by this Contract for such maintenance.

6. The PROJECT must be completed to the satisfaction of the RTC prior to the current applicable completion date of December 31, 2026. The RTC may, at any time thereafter, grant time extensions or terminate this Contract and require all sums advanced to the CITY be repaid.

7. It is understood and agreed that the purpose of this Interlocal Contract is to fund the PROJECT as herein above set forth. It is further understood and agreed that the CITY is responsible for the design and construction of the PROJECT. The CITY will be responsible for the actions or inactions of its Officers and Employees. The RTC's sole responsibility is to facilitate funding for the PROJECT. The RTC disavows any responsibility for the actions or inactions of the CITY, its Officers, Employees, or agents.

8. Should the construction funds be provided by sources other than the RTC, the CITY will reimburse the RTC for a percentage of the preliminary engineering and design costs associated with other funding sources, as mutually agreed upon by the RTC and the CITY.

The remainder of this page is left intentionally blank.

IN WITNESS WHEREOF, this Interlocal Contract #1329 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CITY OF HENDERSON

_____ BY: _____

RICHARD A. DERRICK
City Manager/CEO

Approved as to Finance: Attest

_____ _____

JIM MCINTOSH
Chief Financial Officer

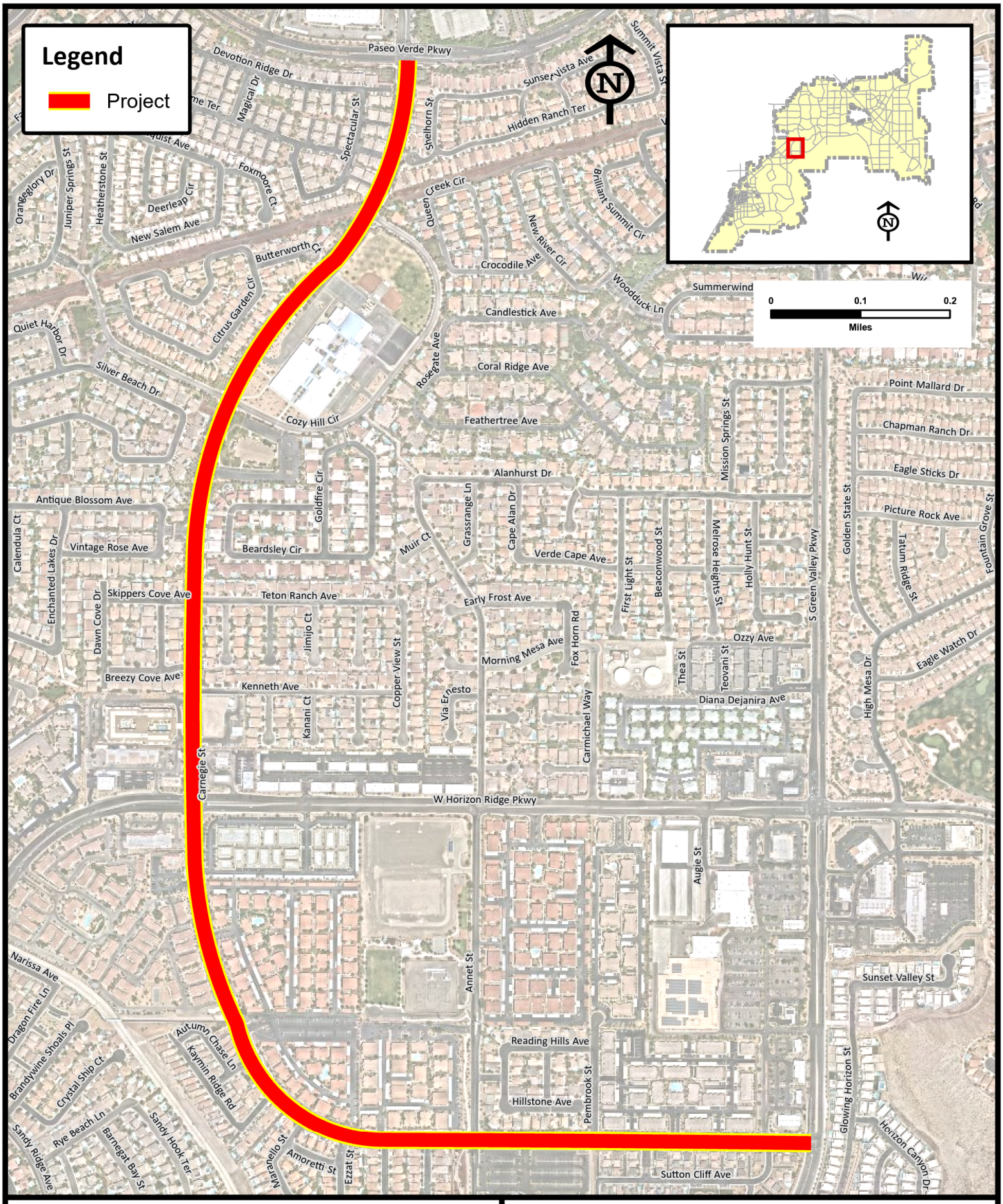
Jose Luis Valdez, CMC
City Clerk

Approved as to Content: Approved as to Form

_____ _____

EDWARD MCGUIRE, P.E.
Director, Public Works

NICHOLAS G. VASKOV
City Attorney



City of Henderson, Nevada
Public Works Department
Geographic Information Systems

This map is offered as a general reference guide only. Neither warranty of accuracy is intended nor should any be assumed.

Carnegie St

Paseo Verde Pkwy to Sunridge Heights Pkwy

August 2021

P:\projects\public_works\engineering\2021\Exhibits_Matt_R\Exhibits_Matt_R.aprx - Carnegie St - ths2

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE AN INTERLOCAL CONTRACT FOR A NEW DESIGN PROJECT

PETITIONER: EDWARD MCGUIRE, P.E., DIRECTOR
CITY OF HENDERSON PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN THE INTERLOCAL CONTRACT FOR CITY OF HENDERSON PROJECT 264A-FTI2 – SEVEN HILLS DRIVE, ST. ROSE PARKWAY TO GRAND HILLS DRIVE (FOR POSSIBLE ACTION)

GOAL: INCREASE SAFETY FOR BOTH MOTORIZED AND NON-MOTORIZED USERS

FISCAL IMPACT:
Funds in the amount of $700,000.00 are budgeted in the Highway Improvement Acquisition Fund for Fiscal Year 2022.

BACKGROUND:
The City of Henderson has negotiated with Westwood Professional Services, Inc. to design roadway improvements for Seven Hills Drive from St. Rose Parkway to Grand Hills Drive. This Interlocal Contract will provide funding for the design of the project.

Respectfully submitted,

DocuSigned by:
Edward McGuire
046713FB96714C2...

EDWARD MCGUIRE, P.E.
Director of Public Works

RTC Item #15
September 30, 2021
Consent

INTERLOCAL CONTRACT
SEVEN HILLS DRIVE
ST. ROSE PARKWAY TO GRAND HILLS DRIVE

THIS INTERLOCAL CONTRACT is made and entered into this 14TH day of October 2021, by and between the City of Henderson, a municipal corporation, hereinafter referred to as "CITY" and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the CITY intends to improve Seven Hills Drive from St. Rose Parkway to Grand Hills Drive, which is included on the adopted RTC Capital Improvement Plan, hereinafter referred to as "PROJECT," located wholly within the City of Henderson; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the CITY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the CITY is requesting funds to commence the design for the PROJECT; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION I: SCOPE OF PROJECT

This Interlocal Contract applies to design of roadway rehabilitation along Seven Hills Drive from St. Rose Parkway to Grand Hills Drive, including intersection improvements at Seven Hills Drive and St. Rose Parkway, pedestrian safety improvements on Seven Hills Drive at Vivaldi Park and Seven Hills Drive at Sonata Park, and complete street and safety elements as feasible. The Project is further described in Exhibit "A" which is attached hereto and by this reference incorporated herein.

SECTION II: PROJECT COSTS

The RTC agrees to provide funding for all costs associated with the PROJECT from the Highway Improvement Acquisition Fund as outlined below:

1. The total cost for this contract shall not exceed $700,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

a. ENGINEERING not to exceed $ 700,000.00
b. RIGHT-OF-WAY not to exceed $ 0.00
c. CONSTRUCTION not to exceed $ 0.00

3. At the time the ATP for construction is granted, the CITY will make all attempts to publish the bid for this PROJECT within 90 calendar days.

4. A supplemental interlocal contract will be required for any changes to the amounts identified in number 2 above.

5. The RTC agrees to reimburse funds advanced by the CITY for eligible PROJECT costs incurred after June 1, 2021.

SECTION III: GENERAL

1. The title sheet of both the plans and specifications shall designate the RTC as the funding agency. If construction funds are provided by sources other than the RTC, the plans, contract documents, special provisions, and PROJECT signs shall also show the RTC as a funding agency.

2. Preliminary engineering, design and right-of-way engineering shall be performed by the CITY or by a consultant employed by the CITY.

3. The design, construction, right-of-way acquisition and contract administration of the PROJECT shall comply with the requirements as set forth in the current "Policies and Procedures" of the RTC.

4. The CITY's Department of Public Works has a policy which effectively prohibits utility cuts through the pavement for a period of five years after the completion of a PROJECT.

5. Upon completion of the construction of the PROJECT, it shall be maintained by the CITY and no funding is provided by this Contract for such maintenance.

6. The PROJECT must be completed to the satisfaction of the RTC prior to the current applicable completion date of December 31, 2026. The RTC may, at any time thereafter, grant time extensions or terminate this Contract and require all sums advanced to the CITY be repaid.

7. It is understood and agreed that the purpose of this Interlocal Contract is to fund the PROJECT as herein above set forth. It is further understood and agreed that the CITY is responsible for the design and construction of the PROJECT. The CITY will be responsible for the actions or inactions of its Officers and Employees. The RTC's sole responsibility is to facilitate funding for the PROJECT. The RTC disavows any responsibility for the actions or inactions of the CITY, its Officers, Employees, or agents.

8. Should the construction funds be provided by sources other than the RTC, the CITY will reimburse the RTC for a percentage of the preliminary engineering and design costs associated with other funding sources, as mutually agreed upon by the RTC and the CITY.

IN WITNESS WHEREOF, this Interlocal Contract #1331 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CITY OF HENDERSON

_____ BY: _____

RICHARD A. DERRICK
City Manager/CEO

Approved as to Finance: Attest

_____ _____

JIM MCINTOSH
Chief Financial Officer

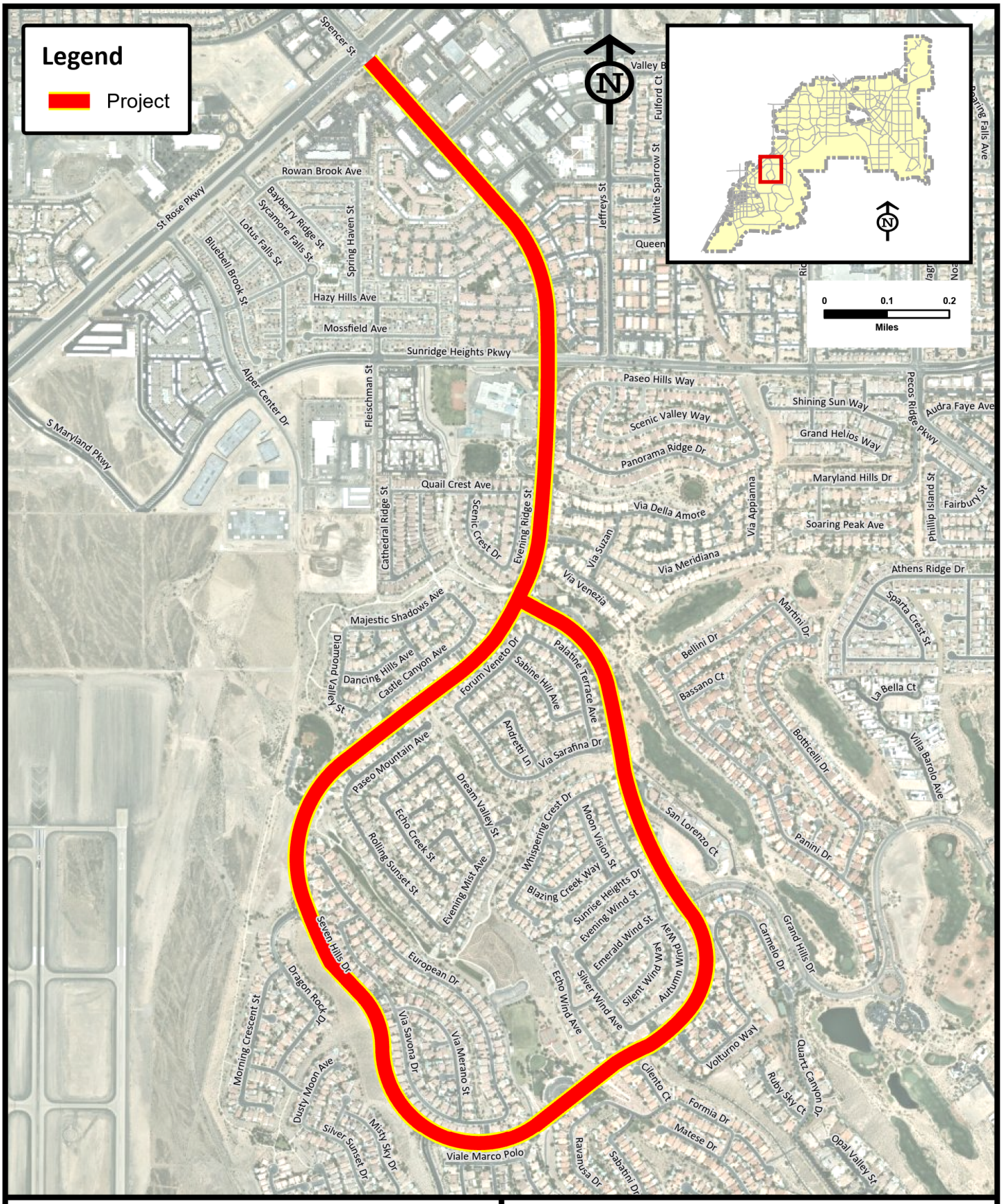
Jose Luis Valdez, CMC
City Clerk

Approved as to Content: Approved as to Form

_____ _____

EDWARD MCGUIRE, P.E.
Director, Public Works

NICHOLAS G. VASKOV
City Attorney



THE CITY OF HENDERSON
A Place To Call Home

City of Henderson, Nevada
Public Works Department
Geographic Information Systems

This map is offered as a general reference guide only. Neither warranty of accuracy is intended nor should any be assumed.

Seven Hills Dr

St Rose Pkwy to Seven Hills Dr

August 2021

P:\projects\public_works\engineering\2021\Exhibits_Matt_R\Exhibits_Matt_R.aprx - Seven Hills Dr - ths2

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: APPROVE SUPPLEMENTAL INTERLOCAL CONTRACT

PETITIONER: EDWARD MCGUIRE, P.E., DIRECTOR
CITY OF HENDERSON PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) APPROVE AND AUTHORIZE THE CHAIRWOMAN TO SIGN SUPPLEMENTAL INTERLOCAL CONTRACT NO. 1 TO INCREASE FUNDING FOR CITY OF HENDERSON PROJECT 135AL-MVFT – ARTERIAL RECONSTRUCTION PROGRAM 2019 MAINTENANCE CONSTRUCTION, STEPHANIE STREET, I-215 TO UNION PACIFIC RAILROAD (FOR POSSIBLE ACTION)

GOAL: IMPROVE THE EFFICIENCY AND EFFECTIVENESS OF THE TRANSPORTATION SYSTEM AND AIR QUALITY BY MANAGING CONGESTION

FISCAL IMPACT:
Funds in the amount of $5,000,000.00 are budgeted in the Highway Improvement Acquisition Fund for Fiscal Year 2022.

BACKGROUND:
The Regional Transportation Commission of Southern Nevada (RTC) previously approved funding for construction of the subject project. On July 9, 2020, the RTC approved an Interlocal Contract for the construction of Arterial Reconstruction: 2019 City of Henderson Maintenance Construction; Stephanie Street, I-215 to Union Pacific Railroad. The construction contract was awarded to Las Vegas Paving Corporation on February 16, 2021. The City of Henderson has negotiated a change order with Las Vegas Paving Corporation to change the scope and funding of the project to include roadway improvements needed on Green Valley Parkway and Paseo Verde Parkway due to the construction of the Dollar Loan Center Arena and the anticipated traffic impacts. This Supplemental Interlocal Contract will provide additional construction funds to roadway and intersection improvements along Green Valley Parkway from Pebble Road to Wingbrook Avenue, and Paseo Verde Parkway from Pecos Road/St. Rose Parkway to Desert Shadow Trail. The design was funded by RTC Projects 229B-FTI2 and 190L-Q10.

Respectfully submitted,

DocuSigned by:
Edward McGuire
046713FB96714C2...

EDWARD MCGUIRE, P.E.
Director of Public Works

SUPPLEMENTAL INTERLOCAL CONTRACT NO. 1
ARTERIAL RECONSTRUCTION PROGRAM
2019 CITY OF HENDERSON MAINTENANCE CONSTRUCTION
STEPHANIE STREET, I-215 TO UNION PACIFIC RAILROAD

THIS SUPPLEMENTAL INTERLOCAL CONTRACT NO. 1 is made and entered into this 14TH day of October 2021, by and between the City of Henderson, a municipal corporation, hereinafter referred to as "CITY" and the Regional Transportation Commission of Southern Nevada, hereinafter referred to as "RTC."

W I T N E S S E T H

WHEREAS, the RTC approved Interlocal Contract #1199 dated July 9, 2020, for improvements to Arterial Reconstruction Program 2019 City Of Henderson Maintenance Construction Stephanie Street, I-215 To Union Pacific Railroad, hereinafter referred to as "PROJECT," located wholly within City of Henderson; and

WHEREAS, Nevada Revised Statue (NRS) Chapter 277.180 authorizes any one or more public agencies to contract with any one or more other public agencies to perform any governmental services, activity or undertaking which any of the public agencies entering into the agreement is authorized by law to perform and refers to such as an interlocal contract; and

WHEREAS, the CITY agrees to conform to the current RTC Policies and Procedures, as amended and incorporated herein by reference; and

WHEREAS, the CITY wishes to add additional scope to this contract; and

WHEREAS, the CITY wishes to increase total PROJECT funding; and

NOW, THEREFORE, in consideration of the covenants, conditions, agreements, and promises of the Parties hereto, the Parties agree to proceed as follows:

SECTION I: SCOPE OF PROJECT; the following paragraph shall be added:

This Supplemental Interlocal Contract adds roadway and intersection improvements along Green Valley Parkway and Paseo Verde Parkway, including all appurtenances necessary for a complete project. The Project is further described in Exhibit "A" which is attached hereto and by this reference incorporated herein.

SECTION II: PROJECT COSTS; Paragraphs 1 and 2 shall be revised to read as follows:

1. The total cost for this contract shall not exceed $7,600,000.00.

2. Authorizations to Proceed (ATP) are granted as follows:

    a. ENGINEERING not to exceed $0.00
    b. RIGHT-OF-WAY not to exceed $0.00
    c. CONSTRUCTION not to exceed $7,600,000.00

The remainder of Interlocal Contract #1199 dated July 9, 2020, shall remain unchanged.

IN WITNESS WHEREOF, this Supplemental Interlocal Contract No. 1 is effective as of the date first set forth above:

Date of Commission Action: REGIONAL TRANSPORTATION COMMISSION

October 14, 2021 BY: _____

DEBRA MARCH, Chairwoman

Attest:

_____

MARIN DUBOIS, Management Analyst

Approved as to Form:

DocuSigned by:
David Clyde
C20A409B6B774C0...

RTC Legal Counsel

Date of Council Action: CITY OF HENDERSON

_____ BY: _____

RICHARD A. DERRICK
City Manager/CEO

Approved as to Finance: Attest

_____ _____

JIM MCINTOSH
Chief Financial Officer

Jose Luis Valdez, CMC
City Clerk

Approved as to Content: Approved as to Form

_____ _____

EDWARD MCGUIRE, P.E.
Director, Public Works

NICHOLAS G. VASKOV
City Attorney

City of Henderson, Nevada
Public Works Department
Geographic Information Systems

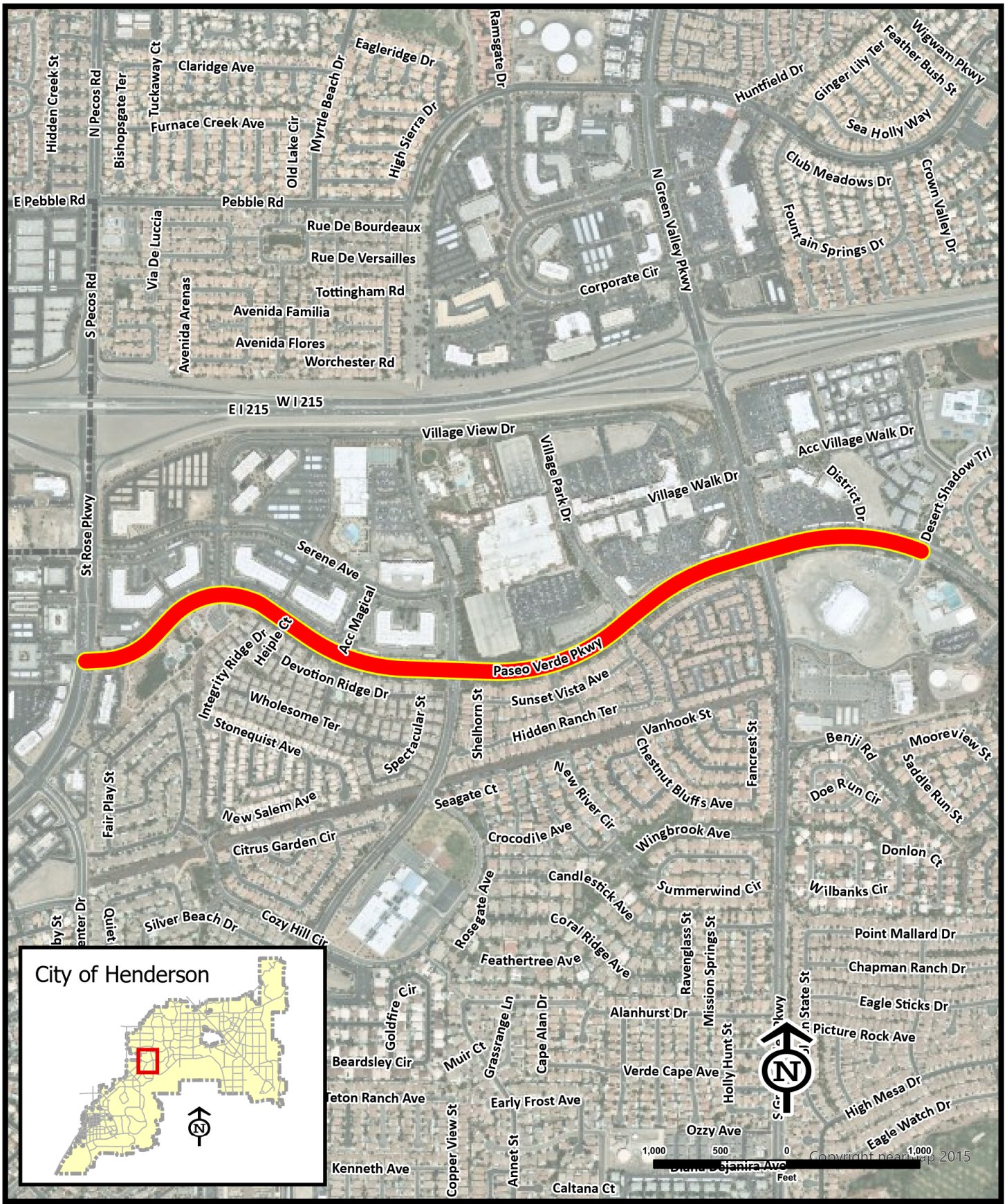
This map is offered as a general reference guide only. Neither warranty of accuracy is intended nor should any be assumed.

Green Valley Pkwy

Pebble Road to Wingbrook Avenue

August 2021

P:\projects\public_works\engineering\2021\RTC Exhibits\RTC Exhibits.aprx 8/25/2021 10:08 AM - Green Valley Pkwy



City of Henderson, Nevada
Public Works Department
Geographic Information Systems

This map is offered as a general reference guide only. Neither warranty of accuracy is intended nor should any be assumed.

Paseo Verde Pkwy

Pecos Road to Desert Shadow Trail

August 2021

P:\projects\public_works\engineering\2021\RTC Exhibits\RTC Exhibits.aprx 8/25/2021 9:51 AM - Paseo Verde Pkwy

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: AWARD OF BID

PETITIONER: EDWARD MCGUIRE, P.E., DIRECTOR
CITY OF HENDERSON PUBLIC WORKS

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) RECEIVE A REPORT OF AWARD OF BID FOR CITY OF HENDERSON PROJECT 199C-FTI2; VIA NOBILA, VIA INSPIRADA TO LAS VEGAS BOULEVARD TO LAS VEGAS PAVING CORPORATION FOR $38,876,543.21 (FOR POSSIBLE ACTION)

GOAL: IMPROVE THE EFFICIENCY AND EFFECTIVENESS OF THE TRANSPORTATION SYSTEM AND AIR QUALITY BY MANAGING CONGESTION

FISCAL IMPACT:

Engineer's Estimate	Bid Amount		
$ 53,862,258.50	RTC Funds	Other Funds	Total
	$ 30,425,327.21	$ 8,451,216.00	$ 38,876,543.21

BACKGROUND:
Bids were opened on July 8, 2021, and six bids were received ranging from $38,876,543.21 to $51,766,887.00. Per Nevada Revised Statute 338.143, staff evaluated the bids and determined the lowest responsive and responsible bidder is Las Vegas Paving Corporation, with a bid amount of $38,876,543.21, which is 27.82 percent less than the engineer's estimate.

Respectfully submitted,

DocuSigned by:
Edward McGuire
046713FB96714C2...

EDWARD MCGUIRE, P.E.
Director of Public Works

RTC Item #17
September 30, 2021
Consent

Bid Tabulation
Via Nobila- Via Inspirada to Las Vegas Blvd

				Apparent Low Bidder											
				Las Vegas Paving		Fisher		Granite		CG&B Enterprises		Target Construction		TAB	
Item No.	Description	Quantity	Unit	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total
106.01	Quality Control Testing	1	LS	$415,000.00	$415,000.00	$500,000.00	$500,000.00	$280,000.00	$280,000.00	$695,510.40	$695,510.40	$630,000.00	$630,000.00	$715,000.00	$715,000.00
107.01	Traffic Control	1	LS	$70,000.00	$70,000.00	$50,000.00	$50,000.00	$30,000.00	$30,000.00	$139,287.50	$139,287.50	$56,000.00	$56,000.00	$213,000.00	$213,000.00
200.01	Mobilization	1	LS	$175,000.00	$175,000.00	$3,845,693.07	$3,845,693.07	$3,999,999.00	$3,999,999.00	$1,579,657.90	$1,579,657.90	$610,000.00	$610,000.00	$1,456,365.00	$1,456,365.00
200.02	Project Sign	6	EA	$700.00	$4,200.00	$2,000.00	$12,000.00	$150.00	$900.00	$995.29	$5,971.74	$3,600.00	$21,600.00	$1,030.00	$6,180.00
201.01	Clearing and Grubbing	1	LS	$55,000.00	$55,000.00	$100,000.00	$100,000.00	$70,000.00	$70,000.00	$84,777.82	$84,777.82	$170,000.00	$170,000.00	$75,000.00	$75,000.00
202.01	Remove Bituminous Surface	10639	SY	$6.50	$69,153.50	$5.00	$53,195.00	$4.00	$42,556.00	$5.18	$55,110.02	$5.55	$59,046.00	$5.00	$53,195.00
202.02	Remove Concrete Curb	942	LF	$4.00	$3,768.00	$3.50	$3,297.00	$2.50	$2,355.00	$7.93	$7,470.06	$3.15	$2,967.30	$10.00	$9,420.00
202.03	Remove and Salvage Sign	4	EA	$40.00	$160.00	$150.00	$600.00	$135.00	$540.00	$50.14	$200.56	$54.00	$216.00	$50.00	$200.00
202.04	Remove Chain-Link Fence	2440	LF	$7.00	$17,080.00	$3.00	$7,320.00	$5.50	$13,420.00	$4.71	$11,492.40	$7.80	$19,032.00	$10.00	$24,400.00
202.05	Remove Concrete Pad	510	SF	$3.00	$1,530.00	$3.00	$1,530.00	$2.80	$1,428.00	$6.08	$3,100.80	$2.00	$1,020.00	$5.00	$2,550.00
202.06	Remove and Salvage Portable Precast Concrete Barrier Rail	502	LF	$10.00	$5,020.00	$4.00	$2,008.00	$15.00	$7,530.00	$8.69	$4,362.38	$7.65	$3,840.30	$20.00	$10,040.00
202.07	Remove and Salvage Impact Attenuator	1	EA	$2,500.00	$2,500.00	$400.00	$400.00	$550.00	$550.00	$1,374.56	$1,374.56	$1,850.00	$1,850.00	$4,000.00	$4,000.00
202.08	Remove Transformer Pad and Conduits	1	EA	$2,835.00	$2,835.00	$3,000.00	$3,000.00	$785.00	$785.00	$1,337.16	$1,337.16	$770.00	$770.00	$20,000.00	$20,000.00
202.09	Remove RCP End Section	2	EA	$1,200.00	$2,400.00	$1,000.00	$2,000.00	$393.00	$786.00	$454.29	$908.58	$530.00	$1,060.00	$500.00	$1,000.00
202.10	Remove and Reset Mailbox	1	EA	$250.00	$250.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$589.89	$589.89	$1,750.00	$1,750.00	$600.00	$600.00
202.11	Remove Electric Pull Box	3	EA	$600.00	$1,800.00	$600.00	$1,800.00	$202.00	$606.00	$1,927.74	$5,783.22	$630.00	$1,890.00	$200.00	$600.00
202.12	Remove Flexible Guide Post	8	EA	$38.00	$304.00	$50.00	$400.00	$50.00	$400.00	$50.14	$401.12	$54.00	$432.00	$100.00	$800.00
202.13	Remove Pole Sleeve and Foundation	2	EA	$1,260.00	$2,520.00	$300.00	$600.00	$400.00	$800.00	$183.86	$367.72	$880.00	$1,760.00	$3,000.00	$6,000.00
202.14	Remove and Salvage Electric Meter	2	EA	$2,100.00	$4,200.00	$1,500.00	$3,000.00	$400.00	$800.00	$927.10	$1,854.20	$810.00	$1,620.00	$2,000.00	$4,000.00
202.15	Remove Riprap	14	CY	$160.00	$2,240.00	$35.00	$490.00	$57.00	$798.00	$78.71	$1,101.94	$31.00	$434.00	$75.00	$1,050.00
202.16	Remove Telephone Pullbox	1	EA	$700.00	$700.00	$500.00	$500.00	$787.00	$787.00	$1,929.97	$1,929.97	$325.00	$325.00	$300.00	$300.00
203.01	Excavation and Backfill	1	LS	$2,797,426.21	$2,797,426.21	$1,850,000.00	$1,850,000.00	$1,996,372.00	$1,996,372.00	$4,223,871.20	$4,223,871.20	$5,168,000.00	$5,168,000.00	$8,950,070.00	$8,950,070.00
212.01	Modify Landscaping and Irrigation	1	LS	$10,000.00	$10,000.00	$8,500.00	$8,500.00	$5,000.00	$5,000.00	$55,715.00	$55,715.00	$12,000.00	$12,000.00	$55,000.00	$55,000.00
217.01	Environmental Compliance	1	LS	$366,000.00	$366,000.00	$475,000.00	$475,000.00	$389,000.00	$389,000.00	$478,034.70	$478,034.70	$325,000.00	$325,000.00	$768,870.00	$768,870.00
302.01	4-inch Type II Aggregate Base	1135	SY	$8.00	$9,080.00	$6.25	$7,093.75	$19.00	$21,565.00	$8.96	$10,169.60	$5.70	$6,469.50	$5.00	$5,675.00
302.02	6-inch Type II Aggregate Base	166500	SY	$6.15	$1,023,975.00	$5.75	$957,375.00	$5.00	$832,500.00	$8.34	$1,388,610.00	$4.80	$799,200.00	$6.00	$999,000.00
402.01	2-inch Plantmix Bituminous Surface	1140	SY	$13.75	$15,675.00	$12.00	$13,680.00	$11.50	$13,110.00	$12.37	$14,101.80	$17.50	$19,950.00	$12.00	$13,680.00
402.02	5.5-inch Plantmix Bituminous Surface	148300	SY	$22.75	$3,373,825.00	$23.50	$3,485,050.00	$23.50	$3,485,050.00	$25.63	$3,800,929.00	$30.00	$4,449,000.00	$24.00	$3,559,200.00
402.03	Milled Rumble Strips	1	MILE	$5,250.00	$2,625.00	$15,000.00	$7,500.00	$3,900.00	$1,950.00	$111,430.00	$55,715.00	$15,000.00	$7,500.00	$8,530.00	$4,265.00
412.01	Type II Slurry Seal	1100	SY	$8.50	$9,350.00	$12.00	$13,200.00	$8.00	$8,800.00	$11.14	$12,254.00	$9.65	$10,615.00	$9.00	$9,900.00
502.01	Headwall (NDOT, 60-inch RCP)	2	EA	$13,000.00	$26,000.00	$11,000.00	$22,000.00	$11,633.00	$23,266.00	$18,766.83	$37,533.66	$23,000.00	$46,000.00	$14,065.00	$28,130.00
502.02	Headwall (NDOT, 8-foot by 5-foot RCB)	2	EA	$22,000.00	$44,000.00	$17,000.00	$34,000.00	$16,850.00	$33,700.00	$28,104.38	$56,208.76	$20,000.00	$40,000.00	$24,075.00	$48,150.00
502.03	Via Nobila Bridge over Gravel Pit	1	LS	$4,285,000.00	$4,285,000.00	$4,100,000.00	$4,100,000.00	$6,185,580.00	$6,185,580.00	$5,627,259.35	$5,627,259.35	$5,593,760.70	$5,593,760.70	$5,695,995.00	$5,695,995.00
502.04	8-foot x 5-foot Precast Reinforced Concrete Box	159	LF	$760.00	$120,840.00	$850.00	$135,150.00	$814.00	$129,426.00	$1,306.65	$207,757.35	$1,175.00	$186,825.00	$1,135.00	$180,465.00
502.05	10-foot x 6-foot Precast Reinforced Concrete Box	2640	LF	$1,095.00	$2,890,800.00	$1,500.00	$3,960,000.00	$1,015.00	$2,679,600.00	$1,668.87	$4,405,816.80	$1,722.67	$4,547,848.80	$1,635.00	$4,316,400.00
502.06	Dual 18-foot by 8-foot Cast-In-Place Reinforced Concrete Box with Headwalls	1	LS	$2,185,000.00	$2,185,000.00	$1,450,000.00	$1,450,000.00	$1,355,941.00	$1,355,941.00	$966,243.95	$966,243.95	$1,945,000.00	$1,945,000.00	$1,577,240.00	$1,577,240.00
502.07	Junction Structure 1 (Sta 116+00, 23-ft LT)	1	EA	$47,000.00	$47,000.00	$40,000.00	$40,000.00	$41,473.00	$41,473.00	$77,815.30	$77,815.30	$45,500.00	$45,500.00	$64,995.00	$64,995.00
502.08	Junction Structure 2 (Sta 128+20, 22.5-ft LT)	1	EA	$96,000.00	$96,000.00	$68,000.00	$68,000.00	$64,380.00	$64,380.00	$112,312.05	$112,312.05	$73,000.00	$73,000.00	$74,620.00	$74,620.00
502.09	14-foot by 11-foot Cast-In-Place Box (Pedestrian Tunnel) w/Headwalls, Retaining Walls, & Stairs	1	LS	$1,950,000.00	$1,950,000.00	$1,650,000.00	$1,650,000.00	$2,000,000.00	$2,000,000.00	$1,390,294.80	$1,390,294.80	$1,805,000.00	$1,805,000.00	$1,992,105.00	$1,992,105.00
502.10	Portable Precast Concrete Barrier Rail (F-Shape)	450	LF	$75.00	$33,750.00	$70.00	$31,500.00	$84.00	$37,800.00	$73.16	$32,922.00	$11.00	$4,950.00	$90.00	$40,500.00
502.11	Single Slope Concrete Barrier Rail (Type A)	170	LF	$118.00	$20,060.00	$200.00	$34,000.00	$262.00	$44,540.00	$285.37	$48,512.90	$330.00	$56,100.00	$175.00	$29,750.00
502.12	Concrete Channel Under the Bridge	1	LS	$760,000.00	$760,000.00	$975,000.00	$975,000.00	$1,000,000.00	$1,000,000.00	$1,249,718.34	$1,249,718.34	$1,035,000.00	$1,035,000.00	$1,200,125.00	$1,200,125.00
502.13	Access Manhole	6	EA	$5,400.00	$32,400.00	$3,100.00	$18,600.00	$3,802.00	$22,812.00	$3,222.56	$19,335.36	$4,615.00	$27,690.00	$4,395.00	$26,370.00
603.01	18-inch RCP Storm Drain (Class III)	1907	LF	$175.00	$333,725.00	$95.00	$181,165.00	$114.00	$217,398.00	$142.51	$271,766.57	$152.00	$289,864.00	$155.00	$295,585.00
603.02	18-inch RCP Storm Drain (Class V)	48	LF	$340.00	$16,320.00	$125.00	$6,000.00	$117.00	$5,616.00	$263.64	$12,654.72	$146.00	$7,008.00	$205.00	$9,840.00
603.03	24-inch RCP Storm Drain (Class III)	3044	LF	$200.00	$608,800.00	$105.00	$319,620.00	$133.00	$404,852.00	$151.00	$459,644.00	$155.00	$471,820.00	$155.00	$471,820.00
603.04	24-inch RCP Storm Drain (Class IV)	96	LF	$400.00	$38,400.00	$115.00	$11,040.00	$135.00	$12,960.00	$173.25	$16,632.00	$158.00	$15,168.00	$280.00	$26,880.00
603.05	24-inch RCP Storm Drain (Class V)	78	LF	$340.00	$26,520.00	$125.00	$9,750.00	$146.00	$11,388.00	$207.43	$16,179.54	$180.00	$14,040.00	$325.00	$25,350.00
603.06	30-inch RCP Storm Drain (Class IV)	170	LF	$330.00	$56,100.00	$140.00	$23,800.00	$203.00	$34,510.00	$240.69	$40,917.30	$186.00	$31,620.00	$280.00	$47,600.00
603.07	36-inch RCP Storm Drain (Class III)	3466	LF	$300.00	$1,039,800.00	$170.00	$589,220.00	$180.00	$623,880.00	$223.77	$775,586.82	$211.00	$731,326.00	$260.00	$901,160.00
603.08	36-inch RCP Storm Drain (Class IV)	31	LF	$500.00	$15,500.00	$175.00	$5,425.00	$185.00	$5,735.00	$453.26	$14,051.06	$265.00	$8,215.00	$400.00	$12,400.00
603.09	48-inch RCP Storm Drain (Class III)	430	LF	$320.00	$137,600.00	$200.00	$86,000.00	$204.00	$87,720.00	$302.20	$129,946.00	$241.00	$103,630.00	$330.00	$141,900.00
603.10	54-inch RCP Storm Drain (Class III)	378	LF	$460.00	$173,880.00	$290.00	$109,620.00	$241.00	$91,098.00	$347.90	$131,506.20	$317.00	$119,826.00	$410.00	$154,980.00
603.11	54-inch RCP Storm Drain (Class IV)	79	LF	$520.00	$41,080.00	$330.00	$26,070.00	$148.00	$11,692.00	$418.98	$33,099.42	$332.00	$26,228.00	$495.00	$39,105.00
603.12	60-inch RCP Storm Drain (Class III)	105	LF	$455.00	$47,775.00	$350.00	$36,750.00	$241.00	$25,305.00	$514.40	$54,012.00	$404.00	$42,420.00	$490.00	$51,450.00
603.13	60-inch RCP Storm Drain (Class IV)	17	LF	$975.00	$16,575.00	$475.00	$8,075.00	$314.00	$5,338.00	$1,240.66	$21,091.22	$573.00	$9,741.00	$830.00	$14,110.00
603.14	72-inch RCP Storm Drain (Class III)	236	LF	$475.00	$112,100.00	$465.00	$109,740.00	$558.00	$131,688.00	$673.95	$159,052.20	$558.00	$131,688.00	$730.00	$172,280.00
603.15	72-inch RCP Storm Drain (Class IV)	817	LF	$750.00	$612,750.00	$575.00	$469,775.00	$614.00	$501,638.00	$718.66	$587,145.22	$594.00	$485,298.00	$830.00	$678,110.00
603.16	24-inch RCP End Section	6	EA	$1,900.00	$11,400.00	$2,100.00	$12,600.00	$3,580.00	$21,480.00	$2,133.51	$12,801.06	$2,430.00	$14,580.00	$1,625.00	$9,750.00
603.17	54-inch RCP End Section	2	EA	$4,400.00	$8,800.00	$5,100.00	$10,200.00	$5,250.00	$10,500.00	$5,674.02	$11,348.04	$6,270.00	$12,540.00	$7,365.00	$14,730.00
603.18	18-inch Precast RCP Plug	1	EA	$900.00	$900.00	$800.00	$800.00	$1,721.00	$1,721.00	$996.13	$996.13	$1,415.00	$1,415.00	$855.00	$855.00
603.19	24-inch Precast RCP Plug	1	EA	$1,100.00	$1,100.00	$1,000.00	$1,000.00	$1,743.00	$1,743.00	$1,117.59	$1,117.59	$1,545.00	$1,545.00	$985.00	$985.00
603.20	36-inch Precast RCP Plug	1	EA	$1,600.00	$1,600.00	$1,500.00	$1,500.00	$1,920.00	$1,920.00	$1,479.73	$1,479.73	$1,935.00	$1,935.00	$1,370.00	$1,370.00
603.21	72-inch Precast RCP Plug	2	EA	$4,900.00	$9,800.00	$5,000.00	$10,000.00	$2,620.00	$5,240.00	$4,836.51	$9,673.02	$5,510.00	$11,020.00	$5,125.00	$10,250.00
605.01	18-inch C-900 PVC Storm Drain	189	LF	$225.00	$42,525.00	$135.00	$25,515.00	$141.00	$26,649.00	$252.57	$47,735.73	$150.00	$28,350.00	$185.00	$34,965.00
605.02	24-inch C-900 PVC Storm Drain	209	LF	$310.00	$64,790.00	$180.00	$37,620.00	$200.00	$41,800.00	$284.65	$59,491.85	$200.00	$41,800.00	$240.00	$50,160.00
609.01	Storm Drain Manhole Type I (48-inch)	5	EA	$7,500.00	$37,500.00	$5,100.00	$25,500.00	$6,622.00	$33,110.00	$12,228.63	$61,143.15	$6,900.00	$34,500.00	$7,830.00	$39,150.00
609.02	Storm Drain Manhole Type I (60-inch)	5	EA	$8,600.00	$43,000.00	$6,800.00	$34,000.00	$7,524.00	$37,620.00	$13,233.73	$66,168.65	$8,600.00	$43,000.00	$11,310.00	$56,550.00
609.03	Storm Drain Manhole Type III (60-inch)	16	EA	$12,200.00	$195,200.00	$10,000.00	$160,000.00	$10,444.00	$167,104.00	$16,614.29	$265,828.64	$12,000.00	$192,000.00	$15,710.00	$251,360.00
609.04	Storm Drain Manhole NDOT Type IV	4	EA	$25,000.00	$100,000.00	$22,000.00	$88,000.00	$21,875.00	$87,500.00	$28,828.40	$115,313.60	$26,000.00	$104,000.00	$29,675.00	$118,700.00
609.05	Drop Inlet, Type 2 Single Grate	1	EA	$8,400.00	$8,400.00	$6,700.00	$6,700.00	$8,000.00	$8,000.00	$14,831.41	$14,831.41	$10,000.00	$10,000.00	$9,625.00	$9,625.00
609.06	Drop Inlet, Type 2B Single Grate with Apron	29	EA	$9,300.00	$269,700.00	$7,000.00	$203,000.00	$8,043.00	$233,247.00	$14,627.38	$424,194.02	$10,300.00	$298,700.00	$9,260.00	$268,540.00
609.07	Type "DM2" Drop Inlet (L=22.5 feet)	2	EA	$37,000.00	$74,000.00	$31,000.00	$62,000.00	$29,872.00	$59,744.00	$44,774.38	$89,548.76	$45,000.00	$90,000.00	$51,000.00	$102,000.00
609.08	Adjust Storm Drain Manhole to Grade	7	EA	$1,200.00	$8,400.00	$1,000.00	$7,000.00	$770.00	$5,390.00	$1,486.69	$10,406.83	$1,300.00	$9,100.00	$1,250.00	$8,750.00
610.01	Rip Rap w/ Filter (D50=6-inch, Thk = 12-inch) Grouted	163	CY	$120.00	$19,560.00	$140.00	$22,820.00	$71.00	$11,573.00	$191.84	$31,269.92	$130.00	$21,190.00	$155.00	$25,265.00
610.02	Rip Rap w/ Filter (D50=12-inch, Thk = 24-inch)	17966	CY	$51.00	$916,266.00	$53.00	$952,198.00	$71.00	$1,275,586.00	$105.71	$1,899,185.86	$49.00	$880,334.00	$90.00	$1,616,940.00
610.03	Riprap w/Filter (D50=12-inch, Thk=24-inch) Grouted	1732	CY	$96.00	$166,272.00	$87.00	$150,684.00	$71.00	$122,972.00	$194.26	$336,458.32	$79.00	$136,828.00	$145.00	$251,140.00

Bid Tabulation
Via Nobila- Via Inspirada to Las Vegas Blvd

				Apparent Low Bidder											
				Las Vegas Paving		Fisher		Granite		CG&B Enterprises		Target Construction		TAB	
Item No.	Description	Quantity	Unit	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total
610.04	Riprap w/Filter (D50=24-inch, Thk=48-inch) Grouted	944	CY	$96.00	$90,624.00	$77.00	$72,688.00	$71.00	$67,024.00	$102.68	$96,929.92	$67.00	$63,248.00	$150.00	$141,600.00
613.01	Concrete "L" Type Curb and Gutter	170	LF	$37.50	$6,375.00	$35.00	$5,950.00	$58.00	$9,860.00	$46.91	$7,974.70	$48.00	$8,160.00	$40.00	$6,800.00
613.02	Concrete "A" Type Curb	8780	LF	$13.00	$114,140.00	$10.00	$87,800.00	$13.00	$114,140.00	$15.23	$133,719.40	$14.00	$122,920.00	$25.00	$219,500.00
613.03	Concrete Sidewalk	2175	SF	$6.50	$14,137.50	$7.50	$16,312.50	$11.00	$23,925.00	$8.43	$18,335.25	$11.00	$23,925.00	$10.00	$21,750.00
613.04	Concrete Median Surface (4-inch)	2410	SF	$8.50	$20,485.00	$9.00	$21,690.00	$12.00	$28,920.00	$8.76	$21,111.60	$13.08	$31,530.00	$10.00	$24,100.00
613.05	Concrete Surface (5-inch)	720	SF	$12.50	$9,000.00	$7.50	$5,400.00	$12.00	$8,640.00	$12.66	$9,115.20	$11.00	$7,920.00	$10.00	$7,200.00
616.01	72-inch Chain-Link Fence	10600	LF	$17.50	$185,500.00	$17.00	$180,200.00	$17.00	$180,200.00	$39.98	$423,788.00	$20.00	$212,000.00	$20.00	$212,000.00
616.02	24-Foot Double Swing Gate (72-Inch Chain-Link Fence)	2	EA	$2,625.00	$5,250.00	$2,600.00	$5,200.00	$2,525.00	$5,050.00	$2,763.46	$5,526.92	$3,000.00	$6,000.00	$2,700.00	$5,400.00
618.01	Midwest Guardrail System Flared End Section (Method D)	2	EA	$5,200.00	$10,400.00	$6,000.00	$12,000.00	$5,051.00	$10,102.00	$5,571.50	$11,143.00	$6,000.00	$12,000.00	$5,300.00	$10,600.00
618.02	Guardrail Barrier Rail Connection	2	EA	$5,200.00	$10,400.00	$6,000.00	$12,000.00	$5,051.00	$10,102.00	$5,571.50	$11,143.00	$6,000.00	$12,000.00	$5,300.00	$10,600.00
623.01	Street Light Assembly Single Arm (Arterial LED)	16	EA	$4,830.00	$77,280.00	$4,700.00	$75,200.00	$4,753.00	$76,048.00	$5,450.04	$87,200.64	$6,500.00	$104,000.00	$6,000.00	$96,000.00
623.02	1-1/4-inch PVC Conduit (Street Light)	12850	LF	$18.25	$234,512.50	$17.50	$224,876.00	$18.00	$231,300.00	$18.16	$233,356.00	$33.85	$434,972.50	$15.00	$192,750.00
623.03	2-inch PVC Conduit	3570	LF	$23.00	$82,110.00	$23.00	$82,110.00	$23.00	$82,110.00	$15.49	$55,299.30	$35.50	$126,735.00	$20.00	$71,400.00
623.04	3-inch PVC Conduit	9615	LF	$25.00	$240,375.00	$25.00	$240,375.00	$25.00	$240,375.00	$16.21	$155,859.15	$41.50	$399,022.50	$25.00	$240,375.00
623.05	4-inch PVC Conduit (ITS) with 6 Pair PE-39 #22 Twisted Wire	35260	LF	$29.00	$1,022,540.00	$28.00	$987,280.00	$29.00	$1,022,540.00	$26.02	$917,465.20	$48.00	$1,692,480.00	$35.00	$1,234,100.00
623.06	No. 8 Lighting Conductor (Street Light)	22660	LF	$1.60	$36,256.00	$1.60	$36,256.00	$2.00	$45,320.00	$1.95	$44,187.00	$2.00	$45,320.00	$2.00	$45,320.00
623.07	No. 4 Lighting Conductor (Street Light)	10720	LF	$2.50	$26,800.00	$2.50	$26,800.00	$2.50	$26,800.00	$3.12	$33,446.40	$3.25	$34,840.00	$3.00	$32,160.00
623.08	No. 10 Lighting Conductor (Intersection Light)	13550	LF	$1.00	$13,550.00	$1.00	$13,550.00	$1.00	$13,550.00	$1.62	$21,951.00	$1.50	$20,325.00	$2.00	$27,100.00
623.09	No. 3 1/2 Pullbox (Street Light)	31	EA	$760.00	$23,560.00	$725.00	$22,475.00	$744.00	$23,064.00	$569.41	$17,651.71	$1,080.00	$33,480.00	$435.00	$13,485.00
623.10	No. 7 Pullbox (Traffic Signal)	23	EA	$1,365.00	$31,395.00	$1,350.00	$31,050.00	$1,343.00	$30,889.00	$2,406.89	$55,358.47	$3,000.00	$69,000.00	$660.00	$15,180.00
623.11	P30 Pullbox (ITS)	80	EA	$1,700.00	$136,000.00	$1,750.00	$140,000.00	$1,653.00	$132,240.00	$1,092.01	$87,360.80	$1,700.00	$136,000.00	$700.00	$56,000.00
623.12	Type 100 Pull Box	3	EA	$10,300.00	$30,900.00	$10,000.00	$30,000.00	$10,125.00	$30,375.00	$7,102.55	$21,307.65	$9,500.00	$28,500.00	$6,160.00	$18,480.00
623.13	Type 200 Splice Vault	6	EA	$11,340.00	$68,040.00	$11,000.00	$66,000.00	$11,158.00	$66,948.00	$6,838.46	$41,030.76	$9,000.00	$54,000.00	$6,400.00	$38,400.00
623.14	Traffic Signal System at Via Nobila/Via Inspirada	1	LS	$370,000.00	$370,000.00	$375,000.00	$375,000.00	$364,000.00	$364,000.00	$433,000.27	$433,000.27	$560,000.00	$560,000.00	$455,000.00	$455,000.00
623.15	Type XX-A Pole with "L" Foundation	7	EA	$20,500.00	$143,500.00	$20,000.00	$140,000.00	$20,042.00	$140,294.00	$26,704.20	$186,929.40	$34,500.00	$241,500.00	$34,780.00	$243,460.00
623.16	Type XX-B Pole with "M" Foundation	6	EA	$42,000.00	$252,000.00	$40,000.00	$240,000.00	$41,323.00	$247,938.00	$36,571.33	$219,427.98	$51,700.00	$310,200.00	$42,450.00	$254,700.00
623.17	Underdeck Lighting Fixture (100 Watt LED Equivalent)	3	EA	$6,600.00	$19,800.00	$6,500.00	$19,500.00	$6,508.00	$19,524.00	$3,277.16	$9,831.48	$3,225.00	$9,675.00	$5,075.00	$15,225.00
623.18	200 AMP Service Pedestal	4	EA	$9,600.00	$38,400.00	$9,200.00	$36,800.00	$9,401.00	$37,604.00	$7,114.81	$28,459.24	$9,700.00	$38,800.00	$12,510.00	$50,040.00
627.01	Permanent Sign (Ground Mounted) (Metal Supports)	98	EA	$245.00	$24,010.00	$275.00	$26,950.00	$267.00	$26,166.00	$284.15	$27,846.70	$305.00	$29,890.00	$270.00	$26,460.00
627.02	Permanent Sign (Pole Mounted)	22	EA	$160.00	$3,520.00	$275.00	$6,050.00	$300.00	$6,600.00	$284.15	$6,251.30	$306.00	$6,732.00	$270.00	$5,940.00
627.03	Solar Driver Feedback Sign (Ground Mounted)	1	EA	$5,200.00	$5,200.00	$12,000.00	$12,000.00	$11,221.00	$11,221.00	$18,720.24	$18,720.24	$12,900.00	$12,900.00	$11,385.00	$11,385.00
627.04	Permanent Sign (Remove and Reset)	2	EA	$300.00	$600.00	$265.00	$530.00	$268.00	$536.00	$284.15	$568.30	$306.00	$612.00	$270.00	$540.00
628.01	Polyurea Pavement Striping (6-inch Solid White)	45019	LF	$1.20	$54,022.80	$1.50	$67,528.50	$1.50	$67,528.50	$1.39	$62,576.41	$1.50	$67,528.50	$2.00	$90,038.00
628.02	Polyurea Pavement Striping (6-inch Solid Yellow)	17723	LF	$1.20	$21,267.60	$1.50	$26,584.50	$1.50	$26,584.50	$1.39	$24,634.97	$1.50	$26,584.50	$2.00	$35,446.00
628.03	Polyurea Pavement Marking (6-inch Dotted White)	1233	LF	$1.20	$1,479.60	$1.50	$1,849.50	$1.50	$1,849.50	$1.39	$1,713.87	$1.50	$1,849.50	$2.00	$2,466.00
628.04	Polyurea Pavement Marking (24-inch Solid White)	2375	LF	$11.50	$27,312.50	$13.00	$30,875.00	$13.00	$30,875.00	$13.37	$31,753.75	$14.40	$34,200.00	$13.00	$30,875.00
628.05	Polyurea Pavement Marking (24-inch Solid Yellow)	458	LF	$11.50	$5,267.00	$13.00	$5,954.00	$13.00	$5,954.00	$13.37	$6,123.46	$14.40	$6,595.20	$13.00	$5,954.00
628.06	Polyurea Pavement Marking (Legends & Arrows)	120	EA	$105.00	$12,600.00	$110.00	$13,200.00	$105.00	$12,600.00	$111.43	$13,371.60	$120.00	$14,400.00	$105.00	$12,600.00
628.07	Polyurea Pavement Marking (Bike Legend & Arrow)	20	EA	$53.00	$1,060.00	$51.00	$1,020.00	$60.00	$1,200.00	$55.72	$1,114.40	$60.00	$1,200.00	$53.00	$1,060.00
628.08	Polyurea Pavement Marking (Solid White Varies)	451	SF	$6.00	$2,706.00	$6.50	$2,931.50	$7.50	$3,382.50	$6.69	$3,017.19	$7.20	$3,247.20	$7.00	$3,157.00
628.09	Polyurea Pavement Marking (Solid Yellow Varies)	1129	SF	$6.00	$6,774.00	$6.50	$7,338.50	$7.50	$8,467.50	$6.69	$7,553.01	$7.20	$8,128.80	$7.00	$7,903.00
628.10	Polyurea Pavement Marking (12-inch Solid White) (Chevrons)	687	LF	$6.00	$4,122.00	$6.50	$4,465.50	$7.50	$5,152.50	$6.69	$4,596.03	$7.20	$4,946.40	$7.00	$4,809.00
628.11	Reflective Yellow Median Paint	313	SF	$3.00	$939.00	$3.00	$939.00	$4.00	$1,252.00	$2.79	$873.27	$7.20	$2,253.60	$3.00	$939.00
629.01	6-inch C900 PVC Water Line	1335	LF	$140.00	$186,900.00	$54.00	$72,090.00	$112.00	$149,520.00	$82.26	$109,817.10	$69.00	$92,115.00	$140.00	$186,900.00
629.02	16-inch DIP Water Line	76	LF	$245.00	$18,620.00	$165.00	$12,540.00	$205.00	$15,580.00	$280.39	$21,309.64	$181.00	$13,756.00	$340.00	$25,840.00
629.03	24-inch DIP Water Line	10625	LF	$270.00	$2,868,750.00	$171.00	$1,816,875.00	$263.00	$2,794,375.00	$269.61	$2,864,606.25	$262.00	$2,783,750.00	$220.00	$2,337,500.00
629.04	16-Inch Cap and 2-Inch Blow-Off	4	EA	$4,000.00	$16,000.00	$4,000.00	$16,000.00	$3,788.00	$15,152.00	$5,572.55	$22,290.20	$2,800.00	$11,200.00	$3,300.00	$13,200.00
629.05	24-Inch Cap and 6-Inch Blow-Off	1	EA	$12,000.00	$12,000.00	$7,500.00	$7,500.00	$4,264.00	$4,264.00	$18,520.56	$18,520.56	$3,500.00	$3,500.00	$4,395.00	$4,395.00
629.06	6-inch Gate Valve	24	EA	$2,550.00	$61,200.00	$2,000.00	$48,000.00	$2,950.00	$70,800.00	$2,498.61	$59,966.64	$2,200.00	$52,800.00	$2,375.00	$57,000.00
629.07	16-Inch Gate Valve	2	EA	$8,500.00	$17,000.00	$8,000.00	$16,000.00	$9,200.00	$18,400.00	$13,284.41	$26,568.82	$8,700.00	$17,400.00	$8,530.00	$17,060.00
629.08	6-inch Blow Off Assembly	13	EA	$14,300.00	$185,900.00	$11,500.00	$149,500.00	$12,200.00	$158,600.00	$15,857.31	$206,145.03	$11,500.00	$149,500.00	$17,500.00	$227,500.00
629.09	24-inch Direct Buried Gate Valve with Bypass	12	EA	$43,000.00	$516,000.00	$39,000.00	$468,000.00	$42,000.00	$504,000.00	$64,512.62	$774,151.44	$44,000.00	$528,000.00	$46,375.00	$556,500.00
629.10	6-Inch Combination Air Valve Assembly	14	EA	$20,500.00	$287,000.00	$16,500.00	$231,000.00	$20,000.00	$280,000.00	$32,406.61	$453,692.54	$18,000.00	$252,000.00	$23,720.00	$332,080.00
629.11	Adjust Water Valve Box to Grade	45	EA	$1,000.00	$45,000.00	$700.00	$31,500.00	$1,000.00	$45,000.00	$517.21	$23,274.45	$950.00	$42,750.00	$840.00	$37,800.00
629.12	Adjust Water Blow-Off Valve Assembly	6	EA	$1,750.00	$10,500.00	$1,100.00	$6,600.00	$1,000.00	$6,000.00	$546.26	$3,277.56	$1,200.00	$7,200.00	$1,160.00	$6,960.00
629.13	Fire Hydrant Assembly	23	EA	$9,800.00	$225,400.00	$9,000.00	$207,000.00	$11,000.00	$253,000.00	$12,837.86	$295,270.78	$11,000.00	$253,000.00	$10,760.00	$247,480.00
629.14	10-Inch DIP Waterline	15	LF	$330.00	$4,950.00	$165.00	$2,475.00	$170.00	$2,550.00	$754.57	$11,318.55	$155.00	$2,325.00	$300.00	$4,500.00
629.15	12-Inch DIP Waterline	90	LF	$240.00	$21,600.00	$185.00	$16,650.00	$205.00	$18,450.00	$183.91	$16,551.90	$155.00	$13,950.00	$340.00	$30,600.00
629.16	10-Inch Gate Valve	1	EA	$3,650.00	$3,650.00	$3,500.00	$3,500.00	$4,000.00	$4,000.00	$3,157.65	$3,157.65	$3,200.00	$3,200.00	$3,070.00	$3,070.00
629.17	12-Inch Gate Valve	1	EA	$4,150.00	$4,150.00	$3,750.00	$3,750.00	$4,400.00	$4,400.00	$4,049.09	$4,049.09	$3,600.00	$3,600.00	$3,485.00	$3,485.00
629.18	10-Inch Cap and 2-Inch Blow-Off	1	EA	$3,200.00	$3,200.00	$3,500.00	$3,500.00	$3,300.00	$3,300.00	$3,750.82	$3,750.82	$2,200.00	$2,200.00	$2,470.00	$2,470.00
629.19	12-Inch Cap and 2-Inch Blow-Off	1	EA	$3,500.00	$3,500.00	$3,500.00	$3,500.00	$3,400.00	$3,400.00	$3,639.39	$3,639.39	$2,300.00	$2,300.00	$2,580.00	$2,580.00
630.01	Adjust Sanitary Sewer Manhole to Grade	13	EA	$1,200.00	$15,600.00	$1,200.00	$15,600.00	$1,000.00	$13,000.00	$1,490.29	$19,373.77	$1,380.00	$17,940.00	$840.00	$10,920.00
630.02	8-inch C-900 PVC Sewer Pipe	30	LF	$255.00	$7,650.00	$110.00	$3,300.00	$250.00	$7,500.00	$233.07	$6,992.10	$103.00	$3,090.00	$450.00	$13,500.00
630.03	10-inch SDR35 PVC Sewer Pipe	1233	LF	$135.00	$166,455.00	$63.00	$77,679.00	$200.00	$246,600.00	$133.92	$165,123.36	$50.00	$61,650.00	$110.00	$135,630.00
630.04	10-inch C-900 PVC Sewer Pipe	1246	LF	$150.00	$186,900.00	$81.00	$100,926.00	$200.00	$249,200.00	$155.08	$193,229.68	$52.00	$64,792.00	$130.00	$161,980.00
630.05	12-inch C-900 PVC Sewer Pipe	125	LF	$210.00	$26,250.00	$125.00	$15,625.00	$225.00	$28,125.00	$145.02	$18,127.50	$139.00	$17,375.00	$235.00	$29,375.00
630.06	18-inch C-900 PVC Sewer Pipe	140	LF	$220.00	$30,800.00	$135.00	$18,900.00	$270.00	$37,800.00	$160.43	$22,460.20	$148.00	$20,720.00	$300.00	$42,000.00
630.07	48-inch Sanitary Sewer Manhole	6	EA	$9,500.00	$57,000.00	$9,000.00	$54,000.00	$13,600.00	$81,600.00	$14,898.14	$89,388.84	$9,655.00	$57,930.00	$10,930.00	$65,580.00
630.08	60-inch Sanitary Sewer Manhole	1	EA	$8,000.00	$8,000.00	$7,200.00	$7,200.00	$12,000.00	$12,000.00	$15,801.90	$15,801.90	$7,625.00	$7,625.00	$11,995.00	$11,995.00
630.09	72-inch Sanitary Sewer Manhole	1	EA	$21,500.00	$21,500.00	$21,000.00	$21,000.00	$26,000.00	$26,000.00	$28,243.34	$28,243.34	$36,000.00	$36,000.00	$28,460.00	$28,460.00
633.01	Non-Reflective Pavement Marker	6831	EA	$3.00	$20,493.00	$3.00	$20,493.00	$3.50	$23,908.50	$3.06	$20,902.86	$3.30	$22,542.30	$3.00	$20,493.00
633.02	Reflective Pavement Marker	2700	EA	$3.00	$8,100.00	$3.00	$8,100.00	$3.50	$9,450.00	$3.06	$8,262.00	$3.30	$8,910.00	$3.00	$8,100.00
637.01	Dust Control	1	LS	$150,000.00	$150,000.00	$850,000.00	$850,000.00	$330,540.00	$330,540.00	$1,068,451.73	$1,068,451.73	$885,000.00	$885,000.00	$500,000.00	$500,000.00
637.02	Storm Water Pollution Control	1	LS	$20,000.00	$20,000.00	$21,000.00	$21,000.00	$45,000.00	$45,000.00	$55,719.64	$55,719.64	$86,000.00	$86,000.00	$550.00	$550.00
637.03	Dust Palliative, Rock Mulch (1-inch Minus) (2" Depth)	14	AC	$12,600.00	$181,440.00	$11,000.00	$158,400.00	$14,000.00	$201,600.00	$16,020.18	$230,690.59	$2,250.00	$32,400.00	$14,630.00	$210,672.00
649.01	Cathodic Protection	10950	LF	$19.00	$208,050.00	$22.00	$240,900.00	$30.00	$328,500.00	$40.70	$445,665.00	$13.50	$147,825.00	$8.00	$87,600.00
649.02	Test Station	10	EA	$6,000.00	$60,000.00	$3,200.00	$32,000.00	$4,500.00	$45,000.00	$3,333.35	$33,333.50	$5,785.00	$57,850.00	$6,835.00	$68,350.00
655.01	Fiber Optic Conduit (Two 4-Inch)	10700	LF	$30.50	$326,350.00	$30.00	$321,000.00	$32.00	$342,400.00	$43.35	$463,845.00	$33.00	$353,100.00	$40.00	$428,000.00

Bid Tabulation
Via Nobila- Via Inspirada to Las Vegas Blvd

				Apparent Low Bidder											
				Las Vegas Paving		Fisher		Granite		CG&B Enterprises		Target Construction		TAB	
Item No.	Description	Quantity	Unit	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total	Calculated Unit Price	Total
655.02	Fiber Optic Pullbox	22	EA	$7,600.00	$167,200.00	$7,500.00	$165,000.00	$7,000.00	$154,000.00	$17,828.80	$392,233.60	$4,800.00	$105,600.00	$8,200.00	$180,400.00
657.01	42-inch Steel Casing	755	LF	$375.00	$283,125.00	$300.00	$226,500.00	$400.00	$302,000.00	$377.11	$284,718.05	$400.00	$302,000.00	$595.00	$449,225.00
0.00	NV Energy Project #3005136057														
671.01	NVE Duct Bank (6) 6" Conduit with Concrete Encasement	2450	LF	$160.00	$392,000.00	$155.00	$379,750.00	$175.00	$428,750.00	$226.20	$554,190.00	$280.00	$686,000.00	$175.00	$428,750.00
671.02	NVE 6-Inch Coupling	18	EA	$70.00	$1,260.00	$70.00	$1,260.00	$76.00	$1,368.00	$84.69	$1,524.42	$52.00	$936.00	$165.00	$2,970.00
671.03	NVE RS-94 Electric Manhole	4	EA	$18,000.00	$72,000.00	$18,000.00	$72,000.00	$20,000.00	$80,000.00	$22,397.43	$89,589.72	$20,000.00	$80,000.00	$16,425.00	$65,700.00
0.00	NV Energy Project #3005942568														
671.04	NVE Duct Bank (6) 6-Inch Conduit with Concrete Encasement	415	LF	$160.00	$66,400.00	$165.00	$68,475.00	$188.00	$78,020.00	$397.32	$164,887.80	$275.00	$114,125.00	$175.00	$72,625.00
671.05	NVE Duct Bank (3) 6-Inch Conduit with Concrete Encasement	4780	LF	$97.00	$463,660.00	$93.00	$444,540.00	$106.00	$506,680.00	$154.89	$740,374.20	$205.00	$979,900.00	$115.00	$549,700.00
671.06	NVE 6-Inch Coupling	9	EA	$70.00	$630.00	$70.00	$630.00	$77.00	$693.00	$84.69	$762.21	$52.00	$468.00	$165.00	$1,485.00
671.07	NVE RS-97 Electric Manhole	1	EA	$23,000.00	$23,000.00	$25,000.00	$25,000.00	$25,200.00	$25,200.00	$24,358.60	$24,358.60	$21,500.00	$21,500.00	$17,585.00	$17,585.00
671.08	NVE RS-94 Electric Manhole	6	EA	$21,000.00	$126,000.00	$20,000.00	$120,000.00	$22,600.00	$135,600.00	$22,397.43	$134,384.58	$20,000.00	$120,000.00	$16,425.00	$98,550.00
0.00	NV Energy Project #3006355156 – LRS 1201/1202														
671.09	NVE Duct Bank (6) 6-Inch Conduit with Concrete Encasement	4585	LF	$143.00	$655,655.00	$140.00	$641,900.00	$157.00	$719,845.00	$223.97	$1,026,902.45	$285.00	$1,306,725.00	$195.00	$894,075.00
671.10	NVE Duct Bank (3) 6-Inch Conduit with Concrete Encasement	591	LF	$110.00	$65,010.00	$125.00	$73,875.00	$120.00	$70,920.00	$153.77	$90,878.07	$250.00	$147,750.00	$115.00	$67,965.00
671.11	NVE Duct Bank (2) 6-Inch Conduit with Concrete Encasement	40	LF	$136.00	$5,440.00	$135.00	$5,400.00	$150.00	$6,000.00	$121.46	$4,858.40	$375.00	$15,000.00	$105.00	$4,200.00
671.12	NVE 6-Inch Coupling	9	EA	$70.00	$630.00	$80.00	$720.00	$77.00	$693.00	$84.69	$762.21	$52.00	$468.00	$165.00	$1,485.00
671.13	NVE RS-97 Electric Manhole	1	EA	$23,000.00	$23,000.00	$25,000.00	$25,000.00	$25,200.00	$25,200.00	$24,358.60	$24,358.60	$21,500.00	$21,500.00	$17,585.00	$17,585.00
671.14	NVE RS-94 Electric Manhole	7	EA	$21,000.00	$147,000.00	$21,000.00	$147,000.00	$22,600.00	$158,200.00	$22,397.43	$156,782.01	$20,000.00	$140,000.00	$16,425.00	$114,975.00
0.00	NV Energy Project #3006355156 – LRS 1206/1207														
671.15	NVE Duct Bank (6) 6-Inch Conduit with Concrete Encasement	1730	LF	$145.00	$250,850.00	$145.00	$250,850.00	$170.00	$294,100.00	$231.77	$400,962.10	$280.00	$484,400.00	$185.00	$320,050.00
671.16	NVE RS-94 Electric Manhole	3	EA	$21,000.00	$63,000.00	$21,000.00	$63,000.00	$25,200.00	$75,600.00	$22,397.43	$67,192.29	$20,000.00	$60,000.00	$16,425.00	$49,275.00
671.17	NVE 6-Inch Coupling	6	EA	$80.00	$480.00	$80.00	$480.00	$77.00	$462.00	$84.69	$508.14	$53.00	$318.00	$165.00	$990.00
0.00	NV Energy Project #3006355156 – LRS 1213/1214														
671.18	NVE Duct Bank (6) 6-Inch Conduit with Concrete Encasement	1730	LF	$200.00	$346,000.00	$189.00	$326,970.00	$220.00	$380,600.00	$231.77	$400,962.10	$280.00	$484,400.00	$175.00	$302,750.00
671.19	NVE RS-94 Electric Manhole	3	EA	$21,000.00	$63,000.00	$22,000.00	$66,000.00	$22,900.00	$68,700.00	$22,397.43	$67,192.29	$20,000.00	$60,000.00	$16,425.00	$49,275.00
671.20	NVE 6-Inch Coupling	6	EA	$80.00	$480.00	$80.00	$480.00	$88.00	$528.00	$84.69	$508.14	$52.00	$312.00	$165.00	$990.00
				Total:	$38,876,543.21	**Total:**	$39,329,330.32	**Total:**	$42,542,046.50	**Total:**	$49,090,480.78	**Total:**	$48,517,068.60	**Total:**	$51,766,887.00
				As Bid:	$38,876,543.21	**As Bid:**	$39,329,329.32	**As Bid:**	$42,546,546.50	**As Bid:**	$48,125,383.00	**As Bid:**	$48,516,869.05	**As Bid:**	$51,766,887.00
	Bidder's Preference Y/N if N add 5%			**Y**		**Y**		**Y**		**Y**	$965,097.78	**Y**	$199.55	**Y**	

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X] Transit [ ] Administration and Finance [ ]

SUBJECT: FINAL ACCOUNTING REPORTS AND CLOSE PROJECTS

PETITIONER: M.J. MAYNARD, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) ACCEPT THE FINAL ACCOUNTING REPORTS AND CLOSE PROJECTS (FOR POSSIBLE ACTION)

GOAL: ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM

FISCAL IMPACT:
None

BACKGROUND:
When a project is completed and no additional reimbursements are anticipated, a final report on the project is prepared. Upon approval, no further charges against the project can be reimbursed. Any project funds remaining in the contract will be returned to the entities available resources.

Project Number	Entity	Contract	Expenses	Balance
063AP-MVFT	City of Mesquite	1163	$ 1,910,829.72	$ 9,170.28
088C-FTI2	City of Henderson	1084	$ 361.90	$ 149,638.10
100F-FTI2	City of Henderson	1158	$ 589,387.62	$ 410,612.38
142X-MVFT	City of Henderson	1197	$ 29,920.60	$ 79.40
144BB-FTI2	City of Las Vegas	958	$ 1,031,073.35	$ 38,926.65
144Y-FTI2	Regional Transportation Commission	1114	$ 146,544.20	$ 3,455.80
146K-MVFT	City of Las Vegas	723	$ 1,441,567.88	$ 308,432.12
191H-CSF	City of Mesquite	1243	$ 284,897.44	$ 15,102.56
192D-FTI2	City of Henderson	1162	$ 4,243,308.96	$ 2,756,691.04
			Total Balance	$ 3,692,078.33

Respectfully submitted,

DocuSigned by:
John Peñuelas
79E5AF522AE1479...

JOHN R. PEÑUELAS, JR., P.E.
Senior Director of Engineering

ssf

EAC Item #18
September 30, 2021
Consent

Final Report

Mesquite: 2020 Street Reconstruction Project Kitty Hawk Dr

City of Mesquite
1163

063AP-MVFT

	Invoice	Record	Engineering	RoW	Construction	Amount
City of Mesquite						
	Check No.	60077	(137,675.00)	0.00	0.00	(137,675.00)
4/22/2020	PW2020203	51495	128,594.00	0.00	0.00	128,594.00
12/2/2020	PW2021083	54141	7,210.00	0.00	0.00	7,210.00
12/9/2020	PW2021084	54142	115,150.00	0.00	0.00	115,150.00
4/1/2021	PW2021160	56907	17,225.00	0.00	0.00	17,225.00
5/5/2021	PW2021187	57199	0.00	0.00	702,354.27	702,354.27
8/5/2021	PW2021222	59847	5,300.00	0.00	0.00	5,300.00
8/19/2021	PW2021221	59849	50,569.01	0.00	915,544.96	966,113.97
8/19/2021	PW2022013	59853	21,557.46	0.00	85,000.02	106,557.48
		TTL	207,930.47	0.00	1,702,899.25	1,910,829.72

	Engineering	RoW	Construction	Total
Project Totals	207,930.47	0.00	1,702,899.25	1,910,829.72
Encumbered	220,000.00	0.00	1,700,000.00	1,920,000.00
Balance	12,069.53	0.00	(2,899.25)	9,170.28

Approval:

DocuSigned by: Travis H. Anderson 8/25/2021
CC9FB21DC885408...

DocuSigned by: Joe Damiani 8/25/2021
1296E0A5F05745F...

Report: ACCTHIST Generated: 18DEC20 11:59 Run: TUESDAY AUG2421 9:31 Page: 1

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/24/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
05000-029-7020-2786-0000							
CO Infra - Design/Engineering							
00069		AP	03/31/20	1	CITY OF MESQUITE	$128,594.00	
PW2020203				36794			
					Account Total	$128,594.00	
05000-129-7020-2786-0000							
CO Infra - Design/Engineering							
00069		AP	10/31/20	1	CITY OF MESQUITE	$7,210.00	
PW2021083				37796			
00069		AP	11/30/20	1	CITY OF MESQUITE	$115,150.00	
PW2021084				37820			
00069		AP	02/28/21	1	CITY OF MESQUITE	$17,225.00	
PW2021160				38246			
00069		AP	06/30/21	1	CITY OF MESQUITE	$50,569.01	
PW2021221				90006262			
00069		AP	06/30/21	1	CITY OF MESQUITE	$21,557.46	
PW2022013				90006262			
00069		AP	06/30/21	1	CITY OF MESQUITE	$5,300.00	
PW2021222				90006170			
0000000115		AR	08/16/21		Reimbur incorrect project no. 1743		$137,675.00
					Account Total	$217,011.47	$137,675.00
05000-129-7023-2786-0000							
CO Infra - Construction							
00069		AP	03/31/21	1	CITY OF MESQUITE	$702,354.27	
PW2021187				90005558			
00069		AP	06/30/21	1	CITY OF MESQUITE	$915,544.96	
PW2021221				90006262			
00069		AP	06/30/21	1	CITY OF MESQUITE	$85,000.02	
PW2022013				90006262			
					Account Total	$1,702,899.25	
					Total	$2,048,504.72	$137,675.00
					Ending Balance	$1,910,829.72	

Final Report

Pebble Rd: Eastern Ave Pecos Rd

City of Henderson
1084

088C-FTI2

	Invoice	Record	Engineering	RoW	Construction	Amount
City of Henderson						
6/10/2020	MSC-5033422	51847	121.74	0.00	0.00	121.74
		TTL	121.74	0.00	0.00	121.74
HENDERSON, CITY OF						
12/4/2019	MSC-5032354	50533	240.16	0.00	0.00	240.16
		TTL	240.16	0.00	0.00	240.16

	Engineering	RoW	Construction	Total
Project Totals	361.90	0.00	0.00	361.90
Encumbered	150,000.00	0.00	0.00	150,000.00
Balance	149,638.10	0.00	0.00	149,638.10

Approval:

DocuSigned by: Kristin Harrell 8/25/2021
8CC8BCC15ACD4DD...

DocuSigned by: Joe Damiani 8/25/2021
1296E0A5F05745F...

Report: ACCTHIST Generated: 18DEC20 11:59 Run: THURSDAY AUG1921 10:52 Page: 1

REGIONAL TRANSP COMM OF SO NV

Account History

07/01/11 - 08/19/21

Account # / Name Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
72000-029-7020-2708-0000							
CO Infra - Design/Engineering							
00021		AP	10/31/19	1	CITY OF HENDERSON	$240.16	
MSC-5032354				90002600			
00021		AP	05/31/20	1	CITY OF HENDERSON	$121.74	
MSC-5033422				90003676			
		JE	06/30/20		Rcls City Hend Inv MSC-5033422 2403		$121.74
					Account Total	$361.90	$121.74
72000-129-7020-2708-0000							
CO Infra - Design/Engineering							
					Account Total		
73000-029-7020-2708-0000							
CO Infra - Design/Engineering							
		JE	06/30/20		Rcls City Hend Inv MSC-5033422 2403	$121.74	
					Account Total	$121.74	
					Total	$483.64	$121.74
					Ending Balance	$361.90	

Final Report

I-515 Interchange: at I-215 Interchange Improvements

City of Henderson
1158

100F-FTI2

	Invoice	Record	Engineering	RoW	Construction	Amount
CA Group						
1/8/2020	CAG-2172-8	50647	163,362.02	0.00	0.00	163,362.02
1/22/2020	CAG-2172-9	50785	208,401.14	0.00	0.00	208,401.14
3/11/2020	CAG-2172-10	51192	149,363.21	0.00	0.00	149,363.21
3/11/2020	CAG-2172-11	51193	54,318.83	0.00	0.00	54,318.83
5/6/2020	CAG-2172-12	51606	10,000.00	0.00	0.00	10,000.00
		TTL	585,445.20	0.00	0.00	585,445.20
City of Henderson						
6/10/2020	MSC-5033410	51836	152.15	0.00	0.00	152.15
		TTL	152.15	0.00	0.00	152.15
HENDERSON, CITY OF						
12/18/2019	MSC-5032389	50462	506.13	0.00	0.00	506.13
1/8/2020	MSC-5032545	50674	1,468.95	0.00	0.00	1,468.95
2/26/2020	MSC-5032830	51048	1,026.02	0.00	0.00	1,026.02
4/1/2020	MSC-5033115	51411	114.09	0.00	0.00	114.09
4/8/2020	MSC-5032957	51244	675.08	0.00	0.00	675.08
		TTL	3,790.27	0.00	0.00	3,790.27

	Engineering	RoW	Construction	Total
Project Totals	589,387.62	0.00	0.00	589,387.62
Encumbered	1,000,000.00	0.00	0.00	1,000,000.00
Balance	410,612.38	0.00	0.00	410,612.38

Approval: Kristin K Harrell

DocuSigned by: Joe Damiani
1296E0A5F05745E...
8/5/2021

Report: ACCTHIST Generated: 18DEC20 11:59 Run: THURSDAY JUL2221 15:23 Page: 1

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/10 - 07/22/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
72000-029-7020-2781-0000							
CO Infra - Design/Engineering							
00021		AP	11/30/19	1	CITY OF HENDERSON	$506.13	
MSC-5032389				90002731			
00277		AP	12/31/19	1	C-A GROUP, INC.	$163,362.02	
CAG-2172-8				36105			
00021		AP	12/31/19	1	CITY OF HENDERSON	$1,468.95	
MSC-5032545				90002814			
00277		AP	12/31/19	1	C-A GROUP, INC.	$208,401.14	
CAG-2172-9				36208			
00021		AP	01/31/20	1	CITY OF HENDERSON	$1,026.02	
MSC-5032830				90003122			
00277		AP	02/29/20	1	C-A GROUP, INC.	$54,318.83	
CAG-2172-11				36519			
00277		AP	02/29/20	1	C-A GROUP, INC.	$149,363.21	
CAG-2172-10				36519			
00021		AP	02/29/20	1	CITY OF HENDERSON	$114.09	
MSC-5033115				90003285			
		JE	02/29/20		Rcls inv CAG-2172-11 fr fund 7 2285		$54,318.83
		JE	02/29/20		Rcls inv CAG-2172-10 fr fund 7 2285		$149,363.21
00021		AP	03/31/20	1	CITY OF HENDERSON	$675.08	
MSC-5032957				90003321			
00277		AP	03/31/20	1	C-A GROUP, INC.	$10,000.00	
CAG-2172-12				90003502			
00021		AP	05/31/20	1	CITY OF HENDERSON	$152.15	
MSC-5033410				90003676			
		JE	06/30/20		Rcls City Hend Inv MSC-5033410 2404		$152.15
					Account Total	$589,387.62	$203,834.19
72000-129-7020-2781-0000							
CO Infra - Design/Engineering							
					Account Total		
73000-029-7020-2781-0000							
CO Infra - Design/Engineering							
		JE	02/29/20		Rcls inv CAG-2172-11 fr fund 7 2285	$54,318.83	
		JE	02/29/20		Rcls inv CAG-2172-10 fr fund 7 2285	$149,363.21	
		JE	06/30/20		Rcls City Hend Inv MSC-5033410 2404	$152.15	
					Account Total	$203,834.19	
73000-129-7020-2781-0000							

Report: ACCTHIST Generated: 18DEC20 11:59 Run: THURSDAY JUL2221 15:23 Page: 2

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/10 - 07/22/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
CO Infra - Design/Engineering							
					Account Total		
					Total	$793,221.81	$203,834.19
					Ending Balance	$589,387.62	

Final Report

Entity Non-Project Specific Expenses: Fiscal Year 2021 City of Henderson

City of Henderson
1197

142X-MVFT

	Invoice	Record	Engineering	RoW	Construction	Amount
City of Henderson						
10/7/2020	MSC-5033869	53575	1,185.68	0.00	0.00	1,185.68
10/7/2020	MSC-5033998	53739	182.54	0.00	0.00	182.54
10/7/2020	MSC-5033999	53740	243.39	0.00	0.00	243.39
10/7/2020	MSC-5034000	53741	547.61	0.00	0.00	547.61
11/4/2020	MSC-5034165	53954	182.54	0.00	0.00	182.54
11/4/2020	MSC-5034166	53955	182.54	0.00	0.00	182.54
11/4/2020	MSC-5034167	53956	486.75	0.00	0.00	486.75
12/9/2020	MSC-5034317	54171	1,525.86	0.00	0.00	1,525.86
12/9/2020	MSC-5034316	54172	547.60	0.00	0.00	547.60
1/20/2021	MSC-5034499	54404	121.68	0.00	0.00	121.68
1/20/2021	MSC-5034501	54410	1,741.25	0.00	0.00	1,741.25
1/20/2021	MSC-5034500	54426	365.07	0.00	0.00	365.07
2/10/2021	MSC-5034667	54621	121.68	0.00	0.00	121.68
2/10/2021	MSC-5034668	54622	730.14	0.00	0.00	730.14
2/10/2021	MSC-5034669	54623	1,360.48	0.00	0.00	1,360.48
3/3/2021	MSC-5034830	54818	121.68	0.00	0.00	121.68
3/3/2021	MSC-5034831	54819	121.68	0.00	0.00	121.68
3/3/2021	MSC-5034832	54820	3,884.85	0.00	0.00	3,884.85
4/14/2021	MSC-5034972	56994	121.68	0.00	0.00	121.68
4/14/2021	MSC-5034973	56995	882.29	0.00	0.00	882.29
4/14/2021	MSC-5034974	56996	2,986.33	0.00	0.00	2,986.33
5/26/2021	MSC-5035176	57221	486.78	0.00	0.00	486.78
5/26/2021	MSC-5035177	57222	486.78	0.00	0.00	486.78
5/26/2021	MSC-5035178	57223	2,878.53	0.00	0.00	2,878.53

	Invoice	Record	Engineering	RoW	Construction	Amount
6/9/2021	MSC-5035316	58371	243.42	0.00	0.00	243.42
6/9/2021	MSC-5035317	58372	365.07	0.00	0.00	365.07
6/9/2021	MSC-5035318	58373	6,407.87	0.00	0.00	6,407.87
7/8/2021	MSC-5035535	59566	60.85	0.00	0.00	60.85
7/8/2021	MSC-5035536	59567	861.23	0.00	0.00	861.23
8/12/2021	MSC-5035758	59868	121.68	0.00	0.00	121.68
8/12/2021	MSC-5035759	59869	243.39	0.00	0.00	243.39
8/12/2021	MSC-5035760	59870	121.68	0.00	0.00	121.68
		TTL	29,920.60	0.00	0.00	29,920.60

	Engineering	RoW	Construction	Total
Project Totals	29,920.60	0.00	0.00	29,920.60
Encumbered	30,000.00	0.00	0.00	30,000.00
Balance	79.40	0.00	0.00	79.40

Approval:

DocuSigned by: Kristin Harrell 8/18/2021
8CC8BCC15ACD4DD...

DocuSigned by: Joe Damiani 8/18/2021
1296E0A5F05745F...

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/17/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
05000-129-7027-2821-0000							
CO Infra - Misc							
00021		AP	08/31/20	1	CITY OF HENDERSON	$182.54	
MSC-5033998				90004342			
00021		AP	08/31/20	1	CITY OF HENDERSON	$243.39	
MSC-5033999				90004342			
00021		AP	08/31/20	1	CITY OF HENDERSON	$547.61	
MSC-5034000				90004342			
00021		AP	08/31/20	1	CITY OF HENDERSON	$1,185.68	
MSC-5033869				90004342			
00021		AP	09/30/20	1	CITY OF HENDERSON	$182.54	
MSC-5034165				90004510			
00021		AP	09/30/20	1	CITY OF HENDERSON	$182.54	
MSC-5034166				90004510			
00021		AP	09/30/20	1	CITY OF HENDERSON	$486.75	
MSC-5034167				90004510			
00021		AP	11/30/20	1	CITY OF HENDERSON	$1,525.86	
MSC-5034317				90004687			
00021		AP	11/30/20	1	CITY OF HENDERSON	$547.60	
MSC-5034316				90004687			
00021		AP	12/31/20	1	CITY OF HENDERSON	$121.68	
MSC-5034499				90004947			
00021		AP	12/31/20	1	CITY OF HENDERSON	$1,741.25	
MSC-5034501				90004947			
00021		AP	12/31/20	1	CITY OF HENDERSON	$365.07	
MSC-5034500				90004947			
00021		AP	01/31/21	1	CITY OF HENDERSON	$121.68	
MSC-5034667				90005056			
00021		AP	01/31/21	1	CITY OF HENDERSON	$730.14	
MSC-5034668				90005056			
00021		AP	01/31/21	1	CITY OF HENDERSON	$1,360.48	
MSC-5034669				90005056			
00021		AP	01/31/21	1	CITY OF HENDERSON	$121.68	
MSC-5034830				90005171			
00021		AP	01/31/21	1	CITY OF HENDERSON	$121.68	
MSC-5034831				90005171			
00021		AP	01/31/21	1	CITY OF HENDERSON	$3,884.85	
MSC-5034832				90005171			
00021		AP	03/31/21	1	CITY OF HENDERSON	$121.68	
MSC-5034972				90005430			
00021		AP	03/31/21	1	CITY OF HENDERSON	$882.29	
MSC-5034973				90005430			
00021		AP	03/31/21	1	CITY OF HENDERSON	$2,986.33	
MSC-5034974				90005430			
00021		AP	04/30/21	1	CITY OF HENDERSON	$486.78	
MSC-5035176				90005677			
00021		AP	04/30/21	1	CITY OF HENDERSON	$486.78	
MSC-5035177				90005677			
00021		AP	04/30/21	1	CITY OF HENDERSON	$2,878.53	
MSC-5035178				90005677			
00021		AP	05/31/21	1	CITY OF HENDERSON	$243.42	

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/17/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
MSC-5035316				90005763			
00021		AP	05/31/21	1	CITY OF HENDERSON	$365.07	
MSC-5035317				90005763			
00021		AP	05/31/21	1	CITY OF HENDERSON	$6,407.87	
MSC-5035318				90005763			
00021		AP	06/30/21	1	CITY OF HENDERSON	$60.85	
MSC-5035535				90005971			
00021		AP	06/30/21	1	CITY OF HENDERSON	$861.23	
MSC-5035536				90005971			
00021		AP	06/30/21	1	CITY OF HENDERSON	$121.68	
MSC-5035758				90006209			
00021		AP	06/30/21	1	CITY OF HENDERSON	$243.39	
MSC-5035759				90006209			
00021		AP	06/30/21	1	CITY OF HENDERSON	$121.68	
MSC-5035760				90006209			
					Account Total	$29,920.60	
					Total	$29,920.60	
					Ending Balance	$29,920.60	

Final Report

ITS: City of Las Vegas Downtown ITS Traffic Signal Communications Upgrade

City of Las Vegas
958

144BB-FTI2

	Invoice	Record	Engineering	RoW	Construction	Amount
City of Las Vegas						
12/19/2018	273185	59591	72,361.60	0.00	0.00	72,361.60
5/6/2020	317397	51623	32,086.05	0.00	0.00	32,086.05
7/1/2020	322337	52033	20,959.45	0.00	0.00	20,959.45
8/5/2020	325837	53282	23,806.58	0.00	0.00	23,806.58
10/1/2020	332219	53697	59,600.00	0.00	0.00	59,600.00
12/2/2020	335042	54088	58,904.42	0.00	0.00	58,904.42
1/27/2021	339777	54539	31,668.78	0.00	0.00	31,668.78
3/3/2021	343017	54766	0.00	0.00	15,400.00	15,400.00
4/28/2021	VOID	57163	0.00	0.00	0.00	0.00
7/26/2021	Check No. 130204838	60083	(110,993.10)	0.00	0.00	(110,993.10)
		TTL	188,393.78	0.00	15,400.00	203,793.78
LAS VEGAS, CITY OF						
4/4/2018	253461	47315	98,898.00	0.00	0.00	98,898.00
4/25/2018	256566	47466	18,000.00	0.00	0.00	18,000.00
8/1/2018	258817	47870	24,965.20	0.00	0.00	24,965.20
8/29/2018	263437	47984	17,490.00	0.00	0.00	17,490.00
9/19/2018	268217	48185	6,146.72	0.00	0.00	6,146.72
3/13/2019	277138	48957	0.00	0.00	134,018.04	134,018.04
4/24/2019	280057	49115	0.00	0.00	76,521.61	76,521.61
6/26/2019	282078	49485	30,256.00	0.00	0.00	30,256.00
7/10/2019	283745	49607	65,917.70	0.00	0.00	65,917.70
7/31/2019	287477	49841	77,273.90	0.00	0.00	77,273.90
8/21/2019	288897	49891	50,000.00	0.00	0.00	50,000.00

	Invoice	Record	Engineering	RoW	Construction	Amount
9/5/2019	291857	50021	27,714.50	0.00	0.00	27,714.50
10/10/2019	295177	50217	36,714.50	0.00	0.00	36,714.50
11/20/2019	298940	50399	42,104.75	0.00	0.00	42,104.75
2/19/2020	308397	51007	14,498.90	0.00	0.00	14,498.90
5/6/2020	314238	51437	106,759.75	0.00	0.00	106,759.75
		TTL	616,739.92	0.00	210,539.65	827,279.57

	Engineering	RoW	Construction	Total
Project Totals	805,133.70	0.00	225,939.65	1,031,073.35
Encumbered	700,000.00	0.00	370,000.00	1,070,000.00
Balance	(105,133.70)	0.00	144,060.35	38,926.65

Approval:

DocuSigned by:
Eric Fritz
D5BA67D1E04A418...
8/18/2021

DocuSigned by:
Joe Damiani
1296E0A5F05745F...
8/18/2021

Report: ACCTHIST Generated: 18DEC20 11:59 Run: TUESDAY AUG1721 16:59 Page: 1
REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/17/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
72000-029-7020-2602-0000							
CO Infra - Design/Engineering							
00171		AP	02/28/18	1	CITY OF LAS VEGAS - FINANCE	$98,898.00	
253461				29667			
00171		AP	03/31/18	1	CITY OF LAS VEGAS - FINANCE	$18,000.00	
256566				29965			
00171		AP	06/30/18	1	CITY OF LAS VEGAS - FINANCE	$24,965.20	
258817				31301			
00171		AP	06/30/18	1	CITY OF LAS VEGAS - FINANCE	$17,490.00	
263437				31634			
00171		AP	08/31/18	1	CITY OF LAS VEGAS - FINANCE	$6,146.72	
268217				31979			
00171		AP	11/30/18	1	CITY OF LAS VEGAS - FINANCE	$72,361.60	
273185				90000822			
00171		AP	05/31/19	1	CITY OF LAS VEGAS - FINANCE	$30,256.00	
282078				90001625			
00171		AP	06/30/19	1	CITY OF LAS VEGAS - FINANCE	$65,917.70	
283745				90001797			
00171		AP	06/30/19	1	CITY OF LAS VEGAS - FINANCE	$77,273.90	
287477				90001839			
00171		AP	06/30/19	1	CITY OF LAS VEGAS - FINANCE	$50,000.00	
288897				90001958			
		JE	06/30/19		AP ACCRUALS	$27,714.50	
					2067		
		JE	07/01/19		Reversal of batch# 2067		$27,714.50
					2068		
00171		AP	07/31/19	1	CITY OF LAS VEGAS - FINANCE	$27,714.50	
291857				90002027			
00171		AP	09/30/19	1	CITY OF LAS VEGAS - FINANCE	$36,714.50	
295177				90002227			
00171		AP	10/31/19	1	CITY OF LAS VEGAS - FINANCE	$42,104.75	
298940				90002511			
00171		AP	01/31/20	1	CITY OF LAS VEGAS - FINANCE	$14,498.90	
308397				90003049			
00171		AP	03/31/20	1	CITY OF LAS VEGAS - FINANCE	$32,086.05	
317397				90003500			
00171		AP	03/31/20	1	CITY OF LAS VEGAS - FINANCE	$106,759.75	
314238				90003500			
00171		AP	05/31/20	1	CITY OF LAS VEGAS - FINANCE	$20,959.45	
322337				90003803			
00171		AP	06/30/20	1	CITY OF LAS VEGAS - FINANCE	$23,806.58	
325837				90004028			
		JE	06/30/20		Rcls CLV Inv 322337 to fund 73		$20,959.45
					2394		
		JE	06/30/20		Rcls CLV Inv 325837 fund 73		$23,806.58
					2470		
		CR	07/28/21		10 CITY OF LV CK#130204838		$110,993.10
					2673		
					Account Total	$793,668.10	$183,473.63

Report: ACCTHIST Generated: 18DEC20 11:59 Run: TUESDAY AUG1721 16:59 Page: 2
REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/17/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
72000-029-7023-2602-0000							
CO Infra - Construction							
00171		AP	02/28/19	1	CITY OF LAS VEGAS - FINANCE	$134,018.04	
277138				90001039			
00171		AP	03/31/19	1	CITY OF LAS VEGAS - FINANCE	$76,521.61	
280057				90001241			
					Account Total	$210,539.65	
72000-129-7020-2602-0000							
CO Infra - Design/Engineering							
00171		AP	08/31/20	1	CITY OF LAS VEGAS - FINANCE	$59,600.00	
332219				90004321			
		JE	10/21/20		Rcls CLV Inv 332219 fund 73		$59,600.00
					2534		
00171		AP	10/31/20	1	CITY OF LAS VEGAS - FINANCE	$58,904.42	
335042				90004664			
00171		AP	12/31/20	1	CITY OF LAS VEGAS - FINANCE	$31,668.78	
339777				90004984			
					Account Total	$150,173.20	$59,600.00
72000-129-7023-2602-0000							

CO Infra - Construction						
00171	AP	01/31/21	1 CITY OF LAS VEGAS - FINANCE		$15,400.00	
343017			90005183			
			Account Total		$15,400.00	
73000-029-7020-2602-0000						
CO Infra - Design/Engineering						
	JE	06/30/20	Rcls CLV Inv 322337 to fund 73 2394		$20,959.45	
	JE	06/30/20	Rcls CLV Inv 325837 fund 73 2470		$23,806.58	
			Account Total		$44,766.03	
73000-129-7020-2602-0000						
CO Infra - Design/Engineering						
	JE	10/21/20	Rcls CLV Inv 332219 fund 73 2534		$59,600.00	
			Account Total		$59,600.00	

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/17/21

Account # / Name Vendor/Whse Addr # PO Type Date Bank Description/Vendor Name Debit Amount Credit Amount Stock/Invoice # Stock Known by Check # Ref # Revised Budget/Encumbered						
			Total		$1,274,146.98	$243,073.63
			Ending Balance		$1,031,073.35	

Final Report

ITS: FAST Program Management Services FY 2020

Regional Transportation Commission
1114

144Y-FTI2

	Invoice	Record	Engineering	RoW	Construction	Amount
GC WALLACE						
11/20/2019	104502	50439	13,972.50	0.00	0.00	13,972.50
11/20/2019	104237	50440	20,307.50	0.00	0.00	20,307.50
12/18/2019	104682	50600	3,430.00	0.00	0.00	3,430.00
12/18/2019	104903	50601	1,750.00	0.00	0.00	1,750.00
1/15/2020	105216	50766	2,825.00	0.00	0.00	2,825.00
2/26/2020	105586	51137	4,787.50	0.00	0.00	4,787.50
4/29/2020	106186	51506	13,146.70	0.00	0.00	13,146.70
7/15/2020	106762	52127	16,930.00	0.00	0.00	16,930.00
		TTL	77,149.20	0.00	0.00	77,149.20
GCW						
	109591	60158	5,237.50	0.00	0.00	5,237.50
12/16/2020	9-107715	54233	14,832.50	0.00	0.00	14,832.50
12/23/2020	107432	60160	22,245.00	0.00	0.00	22,245.00
1/13/2021	107943	54395	1,662.50	0.00	0.00	1,662.50
1/27/2021	108176	54570	3,905.00	0.00	0.00	3,905.00
1/28/2021	107715	60152	14,832.50	0.00	0.00	14,832.50
5/6/2021	108427	60153	1,362.50	0.00	0.00	1,362.50
5/6/2021	108620	60154	5,125.00	0.00	0.00	5,125.00
5/6/2021	108786	60155	3,600.00	0.00	0.00	3,600.00
6/2/2021	Check No. 115439	60159	(14,832.50)	0.00	0.00	(14,832.50)
6/3/2021	109065	60156	10,025.00	0.00	0.00	10,025.00
7/1/2021	109361	60157	1,400.00	0.00	0.00	1,400.00
		TTL	69,395.00	0.00	0.00	69,395.00

	Engineering	RoW	Construction	Total
Project Totals	146,544.20	0.00	0.00	146,544.20
Encumbered	150,000.00	0.00	0.00	150,000.00
Balance	3,455.80	0.00	0.00	3,455.80

Approval:

DocuSigned by:
Joe Damiani
1296E0A5F05745F...
8/19/2021

Report: ACCTHIST Generated: 18DEC20 11:59 Run: THURSDAY AUG1921 10:37 Page: 1

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/19/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
72000-029-7020-2739-0000							
CO Infra - Design/Engineering							
00039		AP	10/31/19	1 GCW, INC		$13,972.50	
104502				90002504			
00039		AP	10/31/19	1 GCW, INC		$20,307.50	
104237				90002504			
00039		AP	11/30/19	1 GCW, INC		$3,430.00	
104682				90002678			
00039		AP	11/30/19	1 GCW, INC		$1,750.00	
104903				90002678			
00039		AP	12/31/19	1 GCW, INC		$2,825.00	
105216				90002837			
00039		AP	01/31/20	1 GCW, INC		$4,787.50	
105586				90003125			
00039		AP	03/31/20	1 GCW, INC		$13,146.70	
106186				90003459			
		JE	04/30/20	Rcls GCW Inv 106186 to fund 73 2333			$13,146.70
00039		AP	06/30/20	1 GCW, INC		$16,930.00	
106762				90003876			
		JE	06/30/20	Rcls GCW Inv 106762 fund 73 2472			$16,930.00
				Account Total		$77,149.20	$30,076.70
72000-129-7020-2739-0000							
CO Infra - Design/Engineering							
00039		LQ	09/30/20	REQ# R006694 31000000730	$72,850.80		
00039 R006694		PO	09/30/20	GCW, INC	$72,850.80CR		
00039 P006050		PO	09/30/20	GCW, INC	$72,850.80CR		
00039		AP	11/30/20	1 GCW, INC		$14,832.50	
9-107715				90004735			
00039 P006050		AP	11/30/20	1 GCW, INC		$22,245.00	
107432				90004789			
00039		LQ	11/30/20	PO # P006050 31000000730	$22,245.00		
00039		AP	12/31/20	1 GCW, INC		$1,662.50	
107943				90004910			
00039		AP	12/31/20	1 GCW, INC		$3,905.00	
108176				90004976			
00039 P006050		AP	01/31/21	1 GCW, INC		$14,832.50	
107715				90005173			
00039		LQ	01/31/21	PO # P006050 31000000730	$14,832.50		
00039 P006050		AP	04/30/21	1 GCW, INC		$1,362.50	
108427				90005591			
00039 P006050		AP	04/30/21	1 GCW, INC		$5,125.00	

Report: ACCTHIST Generated: 18DEC20 11:59 Run: THURSDAY AUG1921 10:37 Page: 2

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/19/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
108620				90005591			
00039 P006050		AP	04/30/21	1 GCW, INC		$3,600.00	
108786				90005591			
00039		LQ	04/30/21	PO # P006050 31000000730	$1,362.50		
00039		LQ	04/30/21	PO # P006050 31000000730	$5,125.00		
00039		LQ	04/30/21	PO # P006050 31000000730	$3,600.00		
00039 P006050		AP	05/31/21	1 GCW, INC		$10,025.00	
109065				90005765			
00039		LQ	05/31/21	PO # P006050 31000000730	$10,025.00		
		CR	06/02/21	21 GCW,INC CK#115439 2631			$14,832.50
00039 P006050		AP	06/30/21	1 GCW, INC		$1,400.00	
109361				90006017			
00039 P006050		AP	06/30/21	1 GCW, INC		$5,237.50	
109591				90006017			
00039		LQ	06/30/21	PO # P006050 31000000730	$1,400.00		
00039		LQ	06/30/21	PO # P006050 31000000730	$5,237.50		
				Account Total	$9,023.30CR	$84,227.50	$14,832.50

73000-029-7020-2739-0000						
CO Infra - Design/Engineering						
	JE	04/30/20	Rcls GCW Inv 106186 to fund 73 2333		$13,146.70	
	JE	06/30/20	Rcls GCW Inv 106762 fund 73 2472		$16,930.00	
			Account Total		$30,076.70	
73000-129-7020-2739-0000						
CO Infra - Design/Engineering						
			Account Total			
			Total	$9,023.30CR	$191,453.40	$44,909.20
			Ending Balance		$146,544.20	

Report: ACCTHIST Generated: 18DEC20 11:59 Run: MONDAY AUG0921 12:09 Page: 1

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/09/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
72000-029-7020-2739-0000							
CO Infra - Design/Engineering							
00039		AP	10/31/19	1 GCW, INC		$13,972.50	
104502				90002504			
00039		AP	10/31/19	1 GCW, INC		$20,307.50	
104237				90002504			
00039		AP	11/30/19	1 GCW, INC		$3,430.00	
104682				90002678			
00039		AP	11/30/19	1 GCW, INC		$1,750.00	
104903				90002678			
00039		AP	12/31/19	1 GCW, INC		$2,825.00	
105216				90002837			
00039		AP	01/31/20	1 GCW, INC		$4,787.50	
105586				90003125			
00039		AP	03/31/20	1 GCW, INC		$13,146.70	
106186				90003459			
		JE	04/30/20	Rcls GCW Inv 106186 to fund 73 2333			$13,146.70
00039		AP	06/30/20	1 GCW, INC		$16,930.00	
106762				90003876			
		JE	06/30/20	Rcls GCW Inv 106762 fund 73 2472			$16,930.00
				Account Total		$77,149.20	$30,076.70
72000-129-7020-2739-0000							
CO Infra - Design/Engineering							
00039		LQ	09/30/20	REQ# R006694 31000000730	$72,850.80		
00039 R006694		PO	09/30/20	GCW, INC	$72,850.80CR		
00039 P006050		PO	09/30/20	GCW, INC	$72,850.80CR		
00039		AP	11/30/20	1 GCW, INC		$14,832.50	
9-107715				90004735			
00039 P006050		AP	11/30/20	1 GCW, INC		$22,245.00	
107432				90004789			
00039		LQ	11/30/20	PO # P006050 31000000730	$22,245.00		
00039		AP	12/31/20	1 GCW, INC		$1,662.50	
107943				90004910			
00039		AP	12/31/20	1 GCW, INC		$3,905.00	
108176				90004976			
00039 P006050		AP	01/31/21	1 GCW, INC		$14,832.50	
107715				90005173			
00039		LQ	01/31/21	PO # P006050 31000000730	$14,832.50		
00039 P006050		AP	04/30/21	1 GCW, INC		$1,362.50	
108427				90005591			
00039 P006050		AP	04/30/21	1 GCW, INC		$5,125.00	

Report: ACCTHIST Generated: 18DEC20 11:59 Run: MONDAY AUG0921 12:09 Page: 2

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/09/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
108620				90005591			
00039 P006050		AP	04/30/21	1 GCW, INC		$3,600.00	
108786				90005591			
00039		LQ	04/30/21	PO # P006050 31000000730	$1,362.50		
00039		LQ	04/30/21	PO # P006050 31000000730	$5,125.00		
00039		LQ	04/30/21	PO # P006050 31000000730	$3,600.00		
00039 P006050		AP	05/31/21	1 GCW, INC		$10,025.00	
109065				90005765			
00039		LQ	05/31/21	PO # P006050 31000000730	$10,025.00		
		CR	06/02/21	21 GCW,INC CK#115439 2631			$14,832.50
00039 P006050		AP	06/30/21	1 GCW, INC		$1,400.00	
109361				90006017			
00039 P006050		AP	06/30/21	1 GCW, INC		$5,237.50	
109591				90006017			
00039		LQ	06/30/21	PO # P006050 31000000730	$1,400.00		
00039		LQ	06/30/21	PO # P006050 31000000730	$5,237.50		
				Account Total	$9,023.30CR	$84,227.50	$14,832.50

73000-029-7020-2739-0000
CO Infra - Design/Engineering

JE	04/30/20	Rcls GCW Inv 106186 to fund 73 2333		$13,146.70	
JE	06/30/20	Rcls GCW Inv 106762 fund 73 2472		$16,930.00	
		Account Total		$30,076.70	

73000-129-7020-2739-0000
CO Infra - Design/Engineering

		Account Total			
		Total	$9,023.30CR	$191,453.40	$44,909.20
		Ending Balance		$146,544.20	

Final Report

Bus Turnout Project: Shelter Acquisitions

City of Las Vegas
723

146K-MVFT

	Invoice	Record	Engineering	RoW	Construction	Amount
City of Las Vegas						
5/6/2020	317357	51621	0.00	1,108.75	0.00	1,108.75
6/10/2020	319477	51793	0.00	2,342.50	0.00	2,342.50
6/17/2020	Check No. 130187809	53685	0.00	(67,570.00)	0.00	(67,570.00)
		TTL	0.00	(64,118.75)	0.00	(64,118.75)
LAS VEGAS, CITY OF						
10/23/2013	164439	39819	0.00	185.19	0.00	185.19
3/10/2014	167597	40047	0.00	716.43	0.00	716.43
4/8/2014	168757	40181	0.00	2,455.10	0.00	2,455.10
4/29/2014	169337	40222	0.00	864.90	0.00	864.90
5/29/2014	171097	40382	532.15	0.00	0.00	532.15
7/8/2014	173417	40515	0.00	367.33	0.00	367.33
7/24/2014	173956	40565	0.00	2,795.00	0.00	2,795.00
8/4/2014	174417	40736	597.27	0.00	0.00	597.27
8/14/2014	174632	40781	24,427.50	0.00	0.00	24,427.50
9/18/2014	175422	40913	0.00	2,942.97	0.00	2,942.97
10/6/2014	175724	40954	0.00	10,092.05	0.00	10,092.05
10/30/2014	176658	41096	0.00	15,758.64	0.00	15,758.64
12/29/2014	178177	41368	24,891.25	5,414.32	0.00	30,305.57
1/27/2015	179717	41536	1,810.29	12,665.33	0.00	14,475.62
2/3/2015	180322	41552	12,343.34	3,139.12	0.00	15,482.46
3/2/2015	181837	41674	0.00	11,481.88	0.00	11,481.88
3/24/2015	183257	41870	0.00	21,698.61	0.00	21,698.61
4/20/2015	185777	42050	0.00	6,340.64	0.00	6,340.64

	Invoice	Record	Engineering	RoW	Construction	Amount
5/27/2015	187677	42184	0.00	31,853.25	0.00	31,853.25
7/14/2015	189842	42394	0.00	53,194.46	0.00	53,194.46
7/28/2015	191157	42543	0.00	23,703.96	0.00	23,703.96
7/28/2015	192590	42616	0.00	10,122.55	0.00	10,122.55
8/13/2015	194417	42689	0.00	2,700.00	0.00	2,700.00
9/8/2015	195037	42833	1,143.79	0.00	0.00	1,143.79
10/13/2015	195677	42976	0.00	8,397.09	0.00	8,397.09
11/17/2015	197166	43126	0.00	3,790.93	0.00	3,790.93
12/22/2015	300277	43324	0.00	4,572.31	0.00	4,572.31
2/9/2016	204197	43582	0.00	29,337.80	0.00	29,337.80
3/8/2016	206897	43696	0.00	48,162.05	0.00	48,162.05
5/17/2016	211277	43939	0.00	5,078.94	0.00	5,078.94
5/17/2016	212537	44007	0.00	3,440.21	0.00	3,440.21
6/7/2016	214437	44177	0.00	3,066.14	0.00	3,066.14
7/19/2016	217117	44381	0.00	1,917.49	0.00	1,917.49
8/16/2016	219461	44572	0.00	1,751.47	0.00	1,751.47
8/30/2016	220787	44664	0.00	20,778.50	0.00	20,778.50
9/19/2016	221199	44750	0.00	15,790.00	0.00	15,790.00
10/18/2016	222179	44871	9,904.19	0.00	0.00	9,904.19
11/15/2016	223516	44997	0.00	88,275.51	0.00	88,275.51
12/13/2016	224845	45115	9,697.27	35,409.25	0.00	45,106.52
1/10/2017	225351	45159	9,142.29	91,825.50	0.00	100,967.79
2/7/2017	225852	45335	9,658.52	31,078.85	0.00	40,737.37
3/14/2017	226617	45495	11,705.16	62,363.75	0.00	74,068.91
4/4/2017	227182	45602	6,842.50	82,023.49	0.00	88,865.99
4/25/2017	227837	45736	12,292.74	56,612.72	0.00	68,905.46
8/29/2017	229857	46053	6,952.71	12,817.50	0.00	19,770.21
8/29/2017	234097	46302	0.00	3,197.66	0.00	3,197.66
8/29/2017	235617	46358	0.00	1,833.75	0.00	1,833.75
8/30/2017	228358	45916	7,830.36	53,528.75	0.00	61,359.11
9/11/2017	237497	46418	0.00	2,378.75	0.00	2,378.75
10/18/2017	241617	46615	214.86	0.00	0.00	214.86

	Invoice	Record	Engineering	RoW	Construction	Amount
12/5/2017	243737	46765	0.00	1,520.00	0.00	1,520.00
12/5/2017	245557	46843	0.00	9,323.22	0.00	9,323.22
1/16/2018	249877	46978	0.00	5,310.97	0.00	5,310.97
1/16/2018	242297	46661	0.00	2,117.36	0.00	2,117.36
1/23/2018	231577	47011	0.00	2,310.58	0.00	2,310.58
2/13/2018	251357	47137	0.00	15,952.40	0.00	15,952.40
4/4/2018	253438	47319	0.00	4,279.81	0.00	4,279.81
4/18/2018	254757	47415	0.00	3,567.05	0.00	3,567.05
4/25/2018	256557	47470	0.00	2,587.11	0.00	2,587.11
6/6/2018	257941	47682	0.00	1,470.04	0.00	1,470.04
8/1/2018	258757	47872	0.00	1,456.41	0.00	1,456.41
8/29/2018	263297	47980	0.00	7,792.64	0.00	7,792.64
9/19/2018	268357	48181	0.00	2,207.41	0.00	2,207.41
10/24/2018	271317	48305	0.00	1,716.07	0.00	1,716.07
11/14/2018	271884	48399	0.00	2,741.72	0.00	2,741.72
12/19/2018	273179	48603	0.00	17,462.00	0.00	17,462.00
1/24/2019	274521	48660	0.00	28,030.94	0.00	28,030.94
2/21/2019	276327	48870	0.00	25,116.21	0.00	25,116.21
3/13/2019	277098	48955	0.00	32,119.19	0.00	32,119.19
4/17/2019	278820	49113	0.00	39,374.35	0.00	39,374.35
5/8/2019	280240	49204	0.00	3,093.02	0.00	3,093.02
7/10/2019	282037	49602	0.00	2,617.83	0.00	2,617.83
7/10/2019	283738	49603	0.00	10,157.03	0.00	10,157.03
7/31/2019	287337	49839	0.00	20,773.16	0.00	20,773.16
8/29/2019	291457	50012	0.00	8,515.75	0.00	8,515.75
9/11/2019	292698	50042	0.00	3,515.44	0.00	3,515.44
10/10/2019	295197	50218	2,234.71	10,241.75	0.00	12,476.46
10/30/2019	298217	50357	0.00	67,570.00	0.00	67,570.00
11/20/2019	298897	50397	0.00	1,996.19	0.00	1,996.19
1/8/2020	301657	50644	0.00	75,091.74	0.00	75,091.74
2/5/2020	306958	50919	0.00	16,374.40	0.00	16,374.40
2/19/2020	308297	51003	0.00	764.69	0.00	764.69

	Invoice	Record	Engineering	RoW	Construction	Amount
2/19/2020	308317	51004	0.00	37,903.25	0.00	37,903.25
4/1/2020	312217	51354	0.00	214.64	0.00	214.64
4/15/2020	314217	51435	0.00	2,261.22	0.00	2,261.22
		TTL	152,220.90	1,353,465.73	0.00	1,505,686.63

	Engineering	RoW	Construction	Total
Project Totals	152,220.90	1,289,346.98	0.00	1,441,567.88
Encumbered	150,000.00	1,600,000.00	0.00	1,750,000.00
Balance	(2,220.90)	310,653.02	0.00	308,432.12

Approval:

ERIC FRITZ - CLV

DocuSigned by:
Joe Damiani 7/26/2021
1296E0A5F05745F...

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 07/20/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
05000-029-7018-2390-0000							
CO Infra - Land Acquisition							
00171		AP	04/30/15	1	CITY OF LAS VEGAS	$11,414.00	
187677				15956			
00171		AP	06/30/15	1	CITY OF LAS VEGAS - PARKING	$8,400.00	
191157				16859			
00171		AP	06/30/15	1	CITY OF LAS VEGAS - PARKING	$5,000.00	
192590				16859			
		JE	06/30/15		FY2015 - A/P ACCRUAL	$2,700.00	
				915			
		JE	07/01/15		Reversal of batch# 915		$2,700.00
				916			
00171		AP	07/31/15	1	CITY OF LAS VEGAS - FINANCE	$2,700.00	
194417				17108			
00171		AP	01/31/16	1	CITY OF LAS VEGAS - FINANCE	$13,900.00	
204197				19165			
00171		AP	06/30/16	1	CITY OF LAS VEGAS - FINANCE	$8,000.00	
220787				21869			
00171		AP	08/31/16	1	CITY OF LAS VEGAS - FINANCE	$4,900.00	
221199				22138			
00171		AP	10/31/16	1	CITY OF LAS VEGAS - FINANCE	$67,300.00	
223516				22958			
00171		AP	11/30/16	1	CITY OF LAS VEGAS - FINANCE	$21,075.00	
224845				23288			
00171		AP	12/31/16	1	CITY OF LAS VEGAS - FINANCE	$79,600.00	
225351				23573			
00171		AP	01/31/17	1	CITY OF LAS VEGAS - FINANCE	$22,317.35	
225852				23994			
00171		AP	02/28/17	1	CITY OF LAS VEGAS - FINANCE	$57,131.25	
226617				24464			
00171		AP	02/28/17	1	CITY OF LAS VEGAS - FINANCE	$73,000.00	
227182				24799			
00171		AP	03/31/17	1	CITY OF LAS VEGAS - FINANCE	$39,242.72	
227837				25100			
00171		AP	06/30/17	1	CITY OF LAS VEGAS - FINANCE	$9,875.00	
229857				26941			
00171		AP	08/31/17	1	CITY OF LAS VEGAS - FINANCE	$44,550.00	
228358				27067			
00171		AP	11/30/17	1	CITY OF LAS VEGAS - FINANCE	$6,000.00	
245557				28193			
00171		AP	12/31/17	1	CITY OF LAS VEGAS - FINANCE	$5,310.97	
249877				28777			
00171		AP	12/31/17	1	CITY OF LAS VEGAS - FINANCE	$2,310.58	
231577				28777			
00171		AP	01/31/18	1	CITY OF LAS VEGAS - FINANCE	$15,952.40	
251357				29067			
00171		AP	02/28/18	1	CITY OF LAS VEGAS - FINANCE	$4,279.81	
253438				29667			
00171		AP	03/31/18	1	CITY OF LAS VEGAS - FINANCE	$3,567.05	
254757				29884			
00171		AP	03/31/18	1	CITY OF LAS VEGAS - FINANCE	$2,587.11	

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 07/20/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
256557				29965			
00171		AP	04/30/18	1	CITY OF LAS VEGAS - FINANCE	$1,470.04	
257941				30466			
00171		AP	06/30/18	1	CITY OF LAS VEGAS - FINANCE	$1,456.41	
258757				31301			
00171		AP	06/30/18	1	CITY OF LAS VEGAS - FINANCE	$7,792.64	
263297				31634			
00171		AP	08/31/18	1	CITY OF LAS VEGAS - FINANCE	$2,207.41	
268357				31878			
00171		AP	09/30/18	1	CITY OF LAS VEGAS - FINANCE	$1,716.07	
271317				32326			
00171		AP	10/31/18	1	CITY OF LAS VEGAS - FINANCE	$2,741.72	
271884				32538			
00171		AP	11/30/18	1	CITY OF LAS VEGAS - FINANCE	$17,462.00	
273179				90000792			
00171		AP	12/31/18	1	CITY OF LAS VEGAS - FINANCE	$28,030.94	
274521				90000858			
00171		AP	01/31/19	1	CITY OF LAS VEGAS - FINANCE	$25,116.21	
276327				90000956			
00171		AP	02/28/19	1	CITY OF LAS VEGAS - FINANCE	$32,119.19	
277098				90001039			
00171		AP	03/31/19	1	CITY OF LAS VEGAS - FINANCE	$39,374.35	
278820				90001205			
00171		AP	04/30/19	1	CITY OF LAS VEGAS - FINANCE	$3,093.02	
280240				90001316			

00171	AP	06/30/19	1 CITY OF LAS VEGAS - FINANCE	$2,617.83		
282037			90001715			
00171	AP	06/30/19	1 CITY OF LAS VEGAS - FINANCE	$10,157.03		
283738			90001715			
00171	AP	06/30/19	1 CITY OF LAS VEGAS - FINANCE	$20,773.16		
287337			90001839			
	JE	06/30/19	AP ACCRUALS	$8,515.75		
			2067			
	JE	07/01/19	Reversal of batch# 2067			$8,515.75
			2068			
00171	AP	07/31/19	1 CITY OF LAS VEGAS - FINANCE	$8,515.75		
291457			90001999			
00171	AP	08/31/19	1 CITY OF LAS VEGAS - FINANCE	$3,515.44		
292698			90002062			
00171	AP	09/30/19	1 CITY OF LAS VEGAS - FINANCE	$10,241.75		
295197			90002227			
00171	AP	09/30/19	1 CITY OF LAS VEGAS - FINANCE	$67,570.00		
298217			90002365			
00171	AP	10/31/19	1 CITY OF LAS VEGAS - FINANCE	$1,996.19		
298897			90002511			
00171	AP	12/31/19	1 CITY OF LAS VEGAS - FINANCE	$75,091.74		
301657			90002823			
00171	AP	12/31/19	1 CITY OF LAS VEGAS - FINANCE	$16,374.40		
306958			90003016			
00171	AP	01/31/20	1 CITY OF LAS VEGAS - FINANCE	$764.69		
308297			90003049			

Account # / Name Vendor/Whse Addr #	PO	Type	Date	Bank Check #	Description/Vendor Name Ref #	Debit Amount Revised Budget/Encumbered	Credit Amount
00171		AP	01/31/20	1	CITY OF LAS VEGAS - FINANCE	$37,903.25	
308317				90003049			
00171		AP	02/29/20	1	CITY OF LAS VEGAS - FINANCE	$214.64	
312217				90003294			
00171		AP	03/31/20	1	CITY OF LAS VEGAS - FINANCE	$2,261.22	
314217				90003383			
00171		AP	03/31/20	1	CITY OF LAS VEGAS - FINANCE	$1,108.75	
317357				90003500			
00171		AP	05/31/20	1	CITY OF LAS VEGAS - FINANCE	$2,342.50	
319477				90003688			
		CR	06/24/20	7	CITY OF LAS VEGAS #130187809		$67,570.00
					2389		
					Account Total	$943,657.33	$78,785.75

05000-029-7019-2390-0000
CO Infra - Right Of Way

00171	AP	09/30/13	1 CITY OF LAS VEGAS	$185.19		
164439			8364			
00171	AP	02/28/14	1 CITY OF LAS VEGAS	$716.43		
167597			9953			
00171	AP	03/31/14	1 CITY OF LAS VEGAS	$2,455.10		
168757			10314			
00171	AP	04/29/14	1 CITY OF LAS VEGAS	$864.90		
169337			10740			
00171	AP	06/30/14	1 CITY OF LAS VEGAS	$367.33		
173417			11773			
00171	AP	06/30/14	1 CITY OF LAS VEGAS	$2,795.00		
173956			12116			
00171	AP	08/31/14	1 CITY OF LAS VEGAS	$2,942.97		
175422			12771			
00171	AP	09/30/14	1 CITY OF LAS VEGAS	$10,092.05		
175724			12964			
00171	AP	10/30/14	1 CITY OF LAS VEGAS	$15,758.64		
176658			13429			
00171	AP	11/30/14	1 CITY OF LAS VEGAS	$5,414.32		
178177			14032			
00171	AP	12/31/14	1 CITY OF LAS VEGAS	$12,665.33		
179717			14389			
00171	AP	12/31/14	1 CITY OF LAS VEGAS	$3,139.12		
180322			14470			
00171	AP	02/28/15	1 CITY OF LAS VEGAS	$11,481.88		
181837			14837			
00171	AP	02/28/15	1 CITY OF LAS VEGAS	$21,698.61		
183257			15074			
00171	AP	03/31/15	1 CITY OF LAS VEGAS	$6,340.64		
185777			15608			
00171	AP	04/30/15	1 CITY OF LAS VEGAS	$20,439.25		
187677			15956			
00171	AP	06/30/15	1 CITY OF LAS VEGAS - PARKING	$53,194.46		

Account # / Name Vendor/Whse Addr #	PO	Type	Date	Bank	Description/Vendor Name	Debit Amount	Credit Amount

Stock/Invoice #	Stock Known by		Check #	Ref #	Revised Budget/Encumbered		
189842			16650				
00171	AP	06/30/15	1	CITY OF LAS VEGAS - PARKING		$15,303.96	
191157			16859				
00171	AP	06/30/15	1	CITY OF LAS VEGAS - PARKING		$5,122.55	
192590			16859				
00171	AP	09/30/15	1	CITY OF LAS VEGAS - FINANCE		$8,397.09	
195677			17769				
00171	AP	10/31/15	1	CITY OF LAS VEGAS - FINANCE		$3,790.93	
197166			18185				
00171	AP	11/30/15	1	CITY OF LAS VEGAS - FINANCE		$4,572.31	
200277			18602				
00171	AP	01/31/16	1	CITY OF LAS VEGAS - FINANCE		$15,437.80	
204197			19165				
00171	AP	01/31/16	1	CITY OF LAS VEGAS - FINANCE		$48,162.05	
206897			19534				
00171	AP	04/30/16	1	CITY OF LAS VEGAS - FINANCE		$5,078.94	
211277			20469				
00171	AP	04/30/16	1	CITY OF LAS VEGAS - FINANCE		$3,440.21	
212537			20469				
00171	AP	05/31/16	1	CITY OF LAS VEGAS - FINANCE		$3,066.14	
214437			20753				
00171	AP	06/30/16	1	CITY OF LAS VEGAS - FINANCE		$1,751.47	
219461			21697				
00171	AP	06/30/16	1	CITY OF LAS VEGAS - FINANCE		$12,778.50	
220787			21869				
00171	AP	06/30/16	1	CITY OF LAS VEGAS - FINANCE		$1,917.49	
217117			21503				
00171	AP	08/31/16	1	CITY OF LAS VEGAS - FINANCE		$10,890.00	
221199			22138				
00171	AP	10/31/16	1	CITY OF LAS VEGAS - FINANCE		$20,975.51	
223516			22958				
00171	AP	11/30/16	1	CITY OF LAS VEGAS - FINANCE		$14,334.25	
224845			23288				
00171	AP	12/31/16	1	CITY OF LAS VEGAS - FINANCE		$12,225.50	
225351			23573				
00171	AP	01/31/17	1	CITY OF LAS VEGAS - FINANCE		$8,761.50	
225852			23994				
00171	AP	02/28/17	1	CITY OF LAS VEGAS - FINANCE		$5,232.50	
226617			24464				
00171	AP	02/28/17	1	CITY OF LAS VEGAS - FINANCE		$9,023.49	
227182			24799				
00171	AP	03/31/17	1	CITY OF LAS VEGAS - FINANCE		$17,370.00	
227837			25100				
00171	AP	06/30/17	1	CITY OF LAS VEGAS - FINANCE		$3,197.66	
234097			26941				
00171	AP	06/30/17	1	CITY OF LAS VEGAS - FINANCE		$2,942.50	
229857			26941				
00171	AP	06/30/17	1	CITY OF LAS VEGAS - FINANCE		$1,833.75	
235617			26941				
00171	AP	08/31/17	1	CITY OF LAS VEGAS - FINANCE		$2,378.75	
237497			27155				

Account # / Name

Vendor/Whse Addr #	PO	Type	Date	Bank	Description/Vendor Name	Debit Amount	Credit Amount
Stock/Invoice #	Stock Known by			Check #	Ref # Revised Budget/Encumbered		
00171		AP	08/31/17	1	CITY OF LAS VEGAS - FINANCE	$8,978.75	
228358				27067			
00171		AP	11/30/17	1	CITY OF LAS VEGAS - FINANCE	$1,520.00	
243737				28193			
00171		AP	11/30/17	1	CITY OF LAS VEGAS - FINANCE	$3,323.22	
245557				28193			
00171		AP	12/31/17	1	CITY OF LAS VEGAS - FINANCE	$2,117.36	
242297				28777			
					Account Total	$424,475.40	

05000-029-7020-2390-0000

CO Infra - Design/Engineering

00171		AP	05/28/14	1	CITY OF LAS VEGAS	$532.15	
171097				11265			
		JE	06/30/14		FY2014 - A/P ACCRUAL	$597.27	
					634		
		JE	06/30/14		FY2014 - A/P ACCRUAL	$24,427.50	
					634		
		JE	07/01/14		Reversal of batch# 634		$597.27
					635		
		JE	07/01/14		Reversal of batch# 634		$24,427.50
					635		
00171		AP	07/31/14	1	CITY OF LAS VEGAS	$597.27	
174417				12206			
00171		AP	07/31/14	1	CITY OF LAS VEGAS	$24,427.50	
174632				12357			
00171		AP	11/30/14	1	CITY OF LAS VEGAS	$24,891.25	
178177				14032			
00171		AP	12/31/14	1	CITY OF LAS VEGAS	$1,810.29	
179717				14389			

00171	AP	12/31/14	1 CITY OF LAS VEGAS	$12,343.34	
180322			14470		
00171	AP	08/31/15	1 CITY OF LAS VEGAS - FINANCE	$1,143.79	
195037			17387		
00171	AP	09/30/16	1 CITY OF LAS VEGAS - FINANCE	$9,904.19	
222179			22546		
00171	AP	11/30/16	1 CITY OF LAS VEGAS - FINANCE	$9,697.27	
224845			23288		
00171	AP	12/31/16	1 CITY OF LAS VEGAS - FINANCE	$9,142.29	
225351			23573		
00171	AP	01/31/17	1 CITY OF LAS VEGAS - FINANCE	$9,658.52	
225852			23994		
00171	AP	02/28/17	1 CITY OF LAS VEGAS - FINANCE	$11,705.16	
226617			24464		
00171	AP	02/28/17	1 CITY OF LAS VEGAS - FINANCE	$6,842.50	
227182			24799		
00171	AP	03/31/17	1 CITY OF LAS VEGAS - FINANCE	$12,292.74	
227837			25100		
00171	AP	06/30/17	1 CITY OF LAS VEGAS - FINANCE	$6,952.71	

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 07/20/21

Account # / Name Vendor/Whse Addr # PO Type Date Bank Description/Vendor Name Debit Amount Credit Amount Stock/Invoice # Stock Known by Check # Ref # Revised Budget/Encumbered					
229857			26941		
00171	AP	08/31/17	1 CITY OF LAS VEGAS - FINANCE	$7,830.36	
228358			27067		
00171	AP	09/30/17	1 CITY OF LAS VEGAS - FINANCE	$214.86	
241617			27573		
00171	AP	09/30/19	1 CITY OF LAS VEGAS - FINANCE	$2,234.71	
295197			90002227		
			Account Total	$177,245.67	$25,024.77
05000-129-7018-2390-0000 CO Infra - Land Acquisition					
			Account Total		
05000-129-7019-2390-0000 CO Infra - Right Of Way					
			Account Total		
05000-129-7020-2390-0000 CO Infra - Design/Engineering					
			Account Total		
			Total	$1,545,378.40	$103,810.52
			Ending Balance	$1,441,567.88	

Final Report

Complete Streets Fund: City of Mesquite Bus Shelters

City of Mesquite

1243

191H-CSF

	Invoice	Record	Engineering	RoW	Construction	Amount
City of Mesquite						
8/19/2021	PW2022018	59851	0.00	0.00	284,897.44	284,897.44
		TTL	0.00	0.00	284,897.44	284,897.44

	Engineering	RoW	Construction	Total
Project Totals	0.00	0.00	284,897.44	284,897.44
Encumbered	0.00	0.00	300,000.00	300,000.00
Balance	0.00	0.00	15,102.56	15,102.56

Approval:

DocuSigned by:
Travis H. Anderson 8/25/2021
CC9FB21DC885408...

DocuSigned by:
Joe Damiani 8/25/2021
1296E0A5F05745F...

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 08/23/21

Account # / Name Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
06000-049-7023-2868-0000 CO Infra - Construction							
00069 PW2022018		AP	06/30/21	1 90006262	CITY OF MESQUITE	$284,897.44	
					Account Total	$284,897.44	
				FUND 006	Total	$284,897.44	
					Ending Balance	$284,897.44	
					Total	$284,897.44	
					Ending Balance	$284,897.44	
					Ending Budget		
					Available Balance $284,897.44CR		

Final Report

Sunridge Heights Pkwy: Executive Airport Dr St. Rose Pkwy

City of Henderson
1162

192D-FTI2

	Invoice	Record	Engineering	RoW	Construction	Amount
Arc Document Solutions						
4/29/2020	ARC-10575845	51469	0.00	0.00	181.05	181.05
		TTL	0.00	0.00	181.05	181.05
City of Henderson						
6/10/2020	MSC-5033404	51830	0.00	0.00	22,235.07	22,235.07
7/8/2020	MSC-5033540	52100	0.00	0.00	20,484.59	20,484.59
9/16/2020	MSC-5033870	53576	0.00	0.00	23,191.62	23,191.62
9/23/2020	MSC-5033698	53548	0.00	0.00	20,980.41	20,980.41
10/7/2020	MSC-5034001	53742	0.00	0.00	13,177.91	13,177.91
11/4/2020	MSC-5034168	53957	0.00	0.00	8,581.65	8,581.65
12/9/2020	MSC-5034318	54170	0.00	0.00	5,522.14	5,522.14
1/20/2021	MSC-5034502	54422	0.00	0.00	4,581.77	4,581.77
2/10/2021	MSC-5034670	54624	0.00	0.00	2,107.37	2,107.37
3/3/2021	MSC-5034833	54821	0.00	0.00	226.11	226.11
3/31/2021	Check No. 0000402091	59533	0.00	(1,541.20)	0.00	(1,541.20)
4/14/2021	MSC-5034975	56997	0.00	0.00	1,653.09	1,653.09
5/26/2021	MSC-5035179	57224	0.00	0.00	1,739.39	1,739.39
		TTL	0.00	(1,541.20)	124,481.12	122,939.92
Fidelity National Title						
3/4/2020	FNT-42045898	51141	0.00	1,239,717.20	0.00	1,239,717.20
		TTL	0.00	1,239,717.20	0.00	1,239,717.20
Las Vegas Paving						
7/1/2020	1-192D-FTI2	52031	0.00	0.00	727,679.35	727,679.35
8/19/2020	3-192D-FTI2	53312	0.00	0.00	865,289.39	865,289.39

	Invoice	Record	Engineering	RoW	Construction	Amount
9/9/2020	4-192D-FTI2	53493	0.00	0.00	342,457.95	342,457.95
1/13/2021	5-192D-FTI2	54377	0.00	0.00	412,962.61	412,962.61
2/24/2021	6-192D-FTI2	54707	0.00	0.00	116,915.13	116,915.13
3/10/2021	5B-192D-FTI2	55804	0.00	0.00	73,941.26	73,941.26
3/24/2021	7-192D-FTI2	56856	0.00	0.00	90,884.19	90,884.19
		TTL	0.00	0.00	2,630,129.88	2,630,129.88
LAS VEGAS PAVING CORP						
7/15/2020	2-192D-FTI2	52122	0.00	0.00	241,820.91	241,820.91
		TTL	0.00	0.00	241,820.91	241,820.91
Tre Barnen LLC DBA Red Star Fence Company						
5/5/2021	RSF-12033	57245	0.00	0.00	8,520.00	8,520.00
		TTL	0.00	0.00	8,520.00	8,520.00

	Engineering	RoW	Construction	Total
Project Totals	0.00	1,238,176.00	3,005,132.96	4,243,308.96
Encumbered	0.00	1,300,000.00	5,700,000.00	7,000,000.00
Balance	0.00	61,824.00	2,694,867.04	2,756,691.04

Approval:

DocuSigned by: Kristin Harrell 8/2/2021
8CC8BCC15ACD4DD...

DocuSigned by: Joe Damiani 8/2/2021
1296E0A5F05745F...

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 07/27/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
72000-029-7018-2785-0000							
CO Infra - Land Acquisition							
01645		AP	01/31/20	1	FIDELITY NATIONAL TITLE	$1,239,717.20	
FNT-42045898				99998061			
		JE	06/30/20		Rcls Fidelity Nat'l Title Inv 2394		$1,239,717.20
		CR	04/21/21		16 CITY OF HENDERSON #402091 2602		$1,541.20
					Account Total	$1,239,717.20	$1,241,258.40
72000-029-7023-2785-0000							
CO Infra - Construction							
00144		AP	03/31/20	1	AMERICAN REPROGRAPHICS COMPANY	$181.05	
ARC-10575845				36826			
		JE	04/30/20		Rcls Inv ARC-10575845 to fund 2333		$181.05
00021		AP	05/31/20	1	CITY OF HENDERSON	$22,235.07	
MSC-5033404				90003676			
00062		AP	05/31/20	1	LAS VEGAS PAVING CORP	$727,679.35	
1-192D-FTI2				90003797			
00021		AP	06/30/20	1	CITY OF HENDERSON	$20,484.59	
MSC-5033540				90003825			
00062		AP	06/30/20	1	LAS VEGAS PAVING CORP	$241,820.91	
2-192D-FTI2				90003878			
00062		AP	06/30/20	1	LAS VEGAS PAVING CORP	$865,289.39	
3-192D-FTI2				90004130			
		JE	06/30/20		Rcls City Hend Inv MSC-5033404 2404		$22,235.07
		JE	06/30/20		Rcls LVP Inv 1-192D-FTI2 to fu 2404		$727,679.35
		JE	06/30/20		Rcls Hend Inv MSC-5033540 fund 2473		$20,484.59
		JE	06/30/20		Rcls LVP Inv 2-192D-FTI2 fund 2473		$241,820.91
		JE	06/30/20		Rcls LVP Inv 3-192D-FTI2 fund 2473		$865,289.39
					Account Total	$1,877,690.36	$1,877,690.36
72000-129-7018-2785-0000							
CO Infra - Land Acquisition							
					Account Total		
72000-129-7023-2785-0000							
CO Infra - Construction							
00062		AP	08/31/20	1	LAS VEGAS PAVING CORP	$342,457.95	
4-192D-FTI2				90004198			
00021		AP	08/31/20	1	CITY OF HENDERSON	$23,191.62	

REGIONAL TRANSP COMM OF SO NV
Account History
07/01/11 - 07/27/21

Account # / Name / Vendor/Whse Addr # / Stock/Invoice #	PO / Stock Known by	Type	Date	Bank / Check #	Description/Vendor Name / Ref # / Revised Budget/Encumbered	Debit Amount	Credit Amount
MSC-5033870				90004230			
00021		AP	08/31/20	1	CITY OF HENDERSON	$20,980.41	
MSC-5033698				90004273			
00021		AP	08/31/20	1	CITY OF HENDERSON	$13,177.91	
MSC-5034001				90004342			
00021		AP	09/30/20	1	CITY OF HENDERSON	$8,581.65	
MSC-5034168				90004510			
00021		AP	11/30/20	1	CITY OF HENDERSON	$5,522.14	
MSC-5034318				90004687			
00062		AP	12/31/20	1	LAS VEGAS PAVING CORP	$412,962.61	
5-192D-FTI2				90004912			
00021		AP	12/31/20	1	CITY OF HENDERSON	$4,581.77	
MSC-5034502				90004947			
00021		AP	01/31/21	1	CITY OF HENDERSON	$2,107.37	
MSC-5034670				90005056			
00062		AP	01/31/21	1	LAS VEGAS PAVING CORP	$116,915.13	
6-192D-FTI2				90005126			
00021		AP	01/31/21	1	CITY OF HENDERSON	$226.11	
MSC-5034833				90005171			
00062		AP	02/28/21	1	LAS VEGAS PAVING CORP	$73,941.26	
5B-192D-FTI2				90005213			
00062		AP	02/28/21	1	LAS VEGAS PAVING CORP	$90,884.19	
7-192D-FTI2				90005298			
00021		AP	03/31/21	1	CITY OF HENDERSON	$1,653.09	
MSC-5034975				90005430			

01694	AP	03/31/21	1 TRE BARNEN LLC		$8,520.00	
RSF-12033			38415			
00021	AP	04/30/21	1 CITY OF HENDERSON		$1,739.39	
MSC-5035179			90005677			
			Account Total		$1,127,442.60	
73000-029-7018-2785-0000						
CO Infra - Land Acquisition						
	JE	06/30/20	Rcls Fidelity Nat'l Title Inv 2394		$1,239,717.20	
			Account Total		$1,239,717.20	
73000-029-7023-2785-0000						
CO Infra - Construction						
	JE	04/30/20	Rcls Inv ARC-10575845 to fund 2333		$181.05	
	JE	06/30/20	Rcls City Hend Inv MSC-5033404 2404		$22,235.07	
	JE	06/30/20	Rcls LVP Inv 1-192D-FTI2 to fu 2404		$727,679.35	
	JE	06/30/20	Rcls Hend Inv MSC-5033540 fund 2473		$20,484.59	

Account # / Name Vendor/Whse Addr # PO Stock/Invoice # Stock Known by	Type	Date	Bank Check #	Description/Vendor Name Ref # Revised Budget/Encumbered	Debit Amount	Credit Amount
	JE	06/30/20		Rcls LVP Inv 2-192D-FTI2 fund 2473	$241,820.91	
	JE	06/30/20		Rcls LVP Inv 3-192D-FTI2 fund 2473	$865,289.39	
				Account Total	$1,877,690.36	
73000-129-7023-2785-0000						
CO Infra - Construction						
				Account Total		
				Total	$7,362,257.72	$3,118,948.76
				Ending Balance	$4,243,308.96	

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: REGIONAL HOUSING FORECAST RESEARCH PROJECT

PETITIONER: M.J. MAYNARD, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE EXECUTIVE ADVISORY COMMITTEE RECEIVE THE REGIONAL HOUSING FORECAST REPORTS (FOR POSSIBLE ACTION)

GOAL: SUPPORT REGIONAL PLANNING EFFORTS TO IMPROVE ECONOMIC VITALITY AND EDUCATION AND INVEST IN COMPLETE COMMUNITIES

FISCAL IMPACT:
None

BACKGROUND:
The Regional Planning Team within the Metropolitan Planning Organization (MPO) Department of the Regional Transportation Commission of Southern Nevada (RTC) administers the Southern Nevada Strong (SNS) Regional Plan. In early 2020, the Regional Planning Team developed a work program that guides staff in effective administration of the Regional Plan. Within the work program, staff identified regional research projects to develop technical assistance and tools to guide and inform processes by which the region can implement the SNS Regional Plan.

One such research project aims to analyze future housing supply and demand to better understand how our region can meet the needs of a growing and changing population. The Regional Planning Team is researching best practices and tools to maintain an adequate supply of housing with a range of price, density, ownership, and building types.

The attached Regional Housing Forecast Reports draft materials presents the SNS vision on housing and complete communities, explores regional jobs and housing balance methodology, projects future housing affordability, and summarizes potential demand by housing type.

Respectfully submitted,

DocuSigned by:
Andrew Kjellman
B86D33CF1FA44C3...

ANDREW KJELLMAN
Director of Metropolitan Planning Organization

rl

EAC Item #19
September 30, 2021
Consent

Southern Nevada Regional Housing Analysis

An Analysis and Discussion of the Region's Housing Inventory

Southern Nevada has been among the nation's fastest growing regions for the better part of the last three decades and this trend is expected to continue well into the future. This rapid rate of development brought prosperity and opportunity to many, but also created challenges. Unplanned and uncoordinated growth has seen much of our development occur at the edges of the region, and most of these new homes offer limited variety in type and affordability, as well as limited access to employment hubs, public transit, or transportation choice

How housing affects our community:

- Growth of low-wage jobs and lack of economic diversification means a growing need for low cost housing and high volatility within employment
- Lack of affordable and middle income housing stock stresses the ability of families to grow and accumulate wealth
- Increase in homelessness and housing insecurity affects educational attainment by increasing student transiency
- Spatial mismatches between housing, employment, and other amenities cause increased spending on other necessities such as transportation

To better understand Southern Nevada's housing needs and inform current and future policies and planning efforts, an assessment of the region's housing inventory was completed. The assessment examines the healthy balance between jobs and housing, current affordability and future needs, as well as the diversity of existing housing types. Additionally, using an open source model, research identified potential future demands by type and cost. Detailed findings of the analysis are documented in three briefs, providing information to better understand factors contributing to the current and future state of Southern Nevada's housing inventory.

BY THE NUMBERS

Population: 2,266,715

Households: 813,607

Total Dwelling Units: 924,533

Household size: 2.76

Vacancy rate: 12%

Housing type:

- *SFH detached*: 59%
- *SFH attached*: 5%
- *MFH, 2-4 units*: 9%
- *MFH, 5-19 units*: 15%
- *MFH, 20+ units*: 10%
- *Mobile homes*: 3%

Median household income: $62,100

Tenure:

- *Owners*: 54%
- *Renters*: 46%

Median monthly housing costs:

- *Mortgage*: $1,600
- *Rent*: $1,200

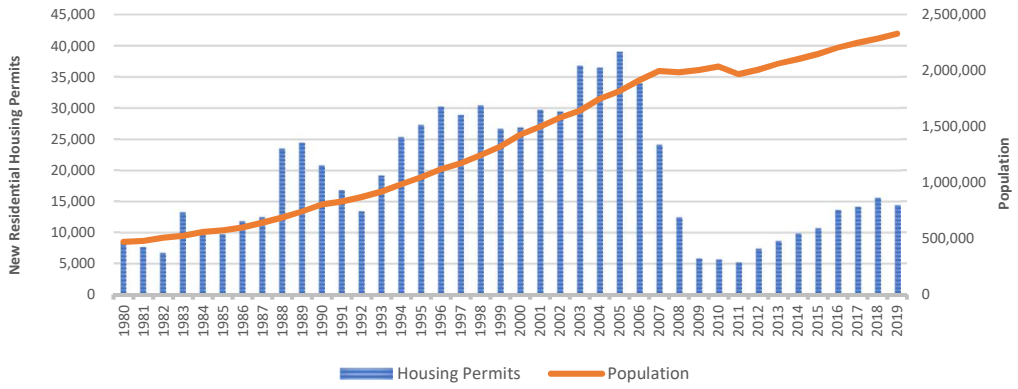
Housing cost burdened:

- *Total: 37%*
- *Owners*: 24%
- *Renters*: 53%

U.S. Census Bureau, American Community Survey, Single-year estimates (Table DP04)

Housing Permits & Population Growth in Southern Nevada

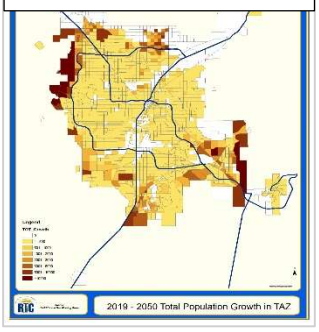
Driven by the rapid and sustained influx of new residents, housing production increased fairly consistently through most of the 90s and early 2000s. Annual housing construction permits effectively doubled during this time period, jumping from approximately 20,000 in the early 90s to a high of 39,000 in 2005. However, new housing construction dropped precipitously during the Great Recession, falling to roughly 5,000 permits per year during the recession – levels lower than the region saw in the early 80s – even as the population continued to climb. While production has increased in the years since the recession, housing permits are still less than half what they were prior to 2007, leading to growing affordability concerns throughout the region.



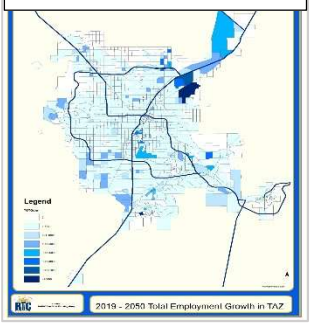
JOBS-HOUSING BALANCE | Housing location v. activity centers

Housing continues to be developed at great distances from employment and activity centers, increasing transportation costs for all families. This has led to longer commutes, increased greenhouse gas emissions, and reduced access to vital services such as grocery stores and medical institutions.

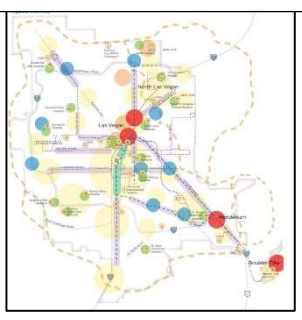
Population growth 2019-2050



Job growth 2019-2050



SNS Preferred Land Use Vision



THE FUTURE

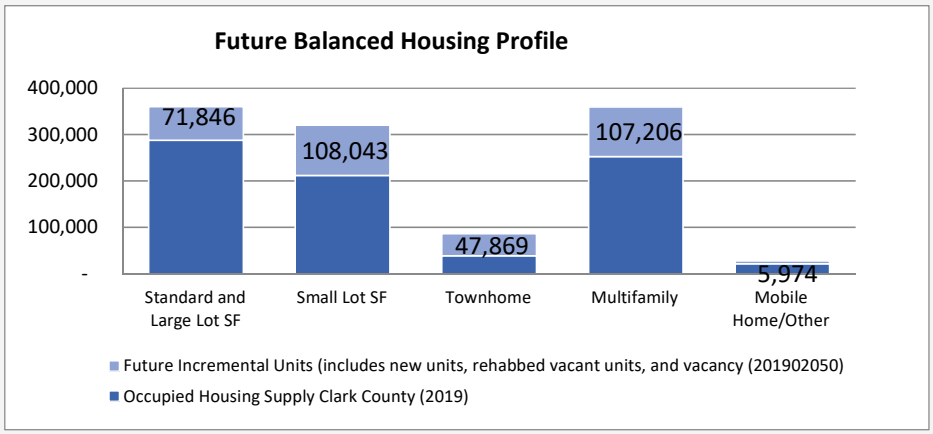
Changing Population | Changing Demands

By 2050, Southern Nevada will grow by over 800,00 people, which will require **more housing as well as job growth**.

Southern Nevada will become **older** and more **racially and ethnically diverse**, which will impact the community's prefence on the types of homes they will want.

To meet demand and accommodate for obsolete stock and vacancy, Southern Nevada will need **340,937 more units**.

- **227,758** Single Family homes (including small lot development and townhomes)
- **107,206** Multifamily homes
- **5,974** Mobile homes



The Envision Tomorrow model uses today's demographic and income information to predict the future demand and needed housing by type. For more information visit: Envision Tomorrow model

Southern Nevada Strong: Regional Housing Vision

The Investing in Complete Communities Goal calls upon the region to evaluate how it can ensure its housing profile is well matched to meet the needs of the future population and economy. Without major investments in affordable housing and multi-modal transit networks, access to critical services and employment opportunities is unlikely to improve.

The SNS plan prioritized the development of an adequate housing supply with a range of price, density, ownership, and building types and calls for increased coordination around planning for housing (as well as transportation and economic development).

Regional Plan Recommendations:

- Diversify housing options to meet the needs of local talent and workers in future industries
- Design housing to meet the needs of residents with low mobility and/or disabiliites
- Develop low-income and workforce housng in neighborhoods across the region
- Work with developers to encourage new mixed-income developments across the region near employment centers, service providers, shopping, public transportation and recreation
- Educate elected officials & community organizations on housing choice, needs, and rights.

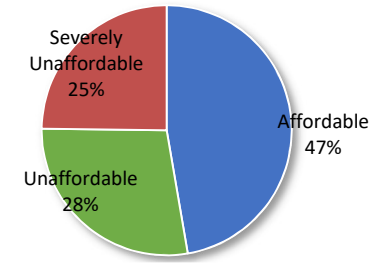
HOUSING AFFORDABILITY

Once considered a strength of the region, Southern Nevada's low cost of living – driven largely by its housing market's relative affordability – has waned in recent years.

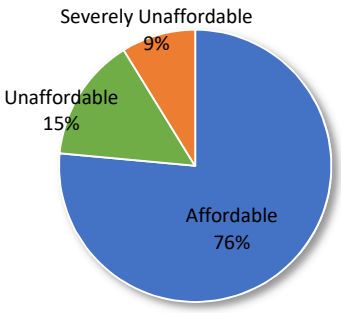
Increased housing demand brought on by consistent population growth, coupled with lagging housing production since the last recession has predictably led to an increase in housing prices over the course of the decade. As home prices have increased, affordability has decreased.

Rental prices have also surged in recent years. Over the course of the decade, median gross monthly rent in the region increased 20 percent, peaking in 2019.

Rental Housing Affordability



Owner Housing Affordability



$28.56/hour

According to recent analysis from the Nevada Housing Coalition, the hourly wage required to afford a 2 bedroom market rate rental without being cost burdened in 2021 is $28.56/hour.

Regional Housing Analysis: **Diversifying Housing Type**

Introduction

Southern Nevada was once the fastest growing community in the United States. While its growth has continued since the Great Recession, a housing crisis has emerged in which the average family may be unable to afford the average cost of rent or purchase of a home not to mention those with incomes under the median income. The Regional Planning team explored this multi-faceted challenge by investigating the future of housing affordability, housing stock type, and the overall balance between jobs and homes.

Housing type – the diversity of the housing stock between single family, multifamily, townhomes, or other such designs – can lend to options that reflect the diversity of Southern Nevada's demographics and economic opportunity.

A strong mix of housing suggests options for young adults, growing families, aging citizens and the many combinations in between.

Housing type can change from a rural, suburban, or urban environment. Often, but not always, smaller or denser units can be less expensive, thus being available to a wide-range of residents. However, these same units may be unavailable for purchase since they are usually rental units, thus prohibiting residents from gaining the long-term benefits of home ownership. As such, housing type has a major influence on affordability, asset building, and economic opportunity. When housing stock is more homogenous than its residents prefer, the imbalance can contribute to higher costs, more or less availability, and the possible perception that a community may not be a "fit" for a specific type of resident.

In researching peer communities and surveying local residents for *Southern Nevada Strong,* housing choices emerged as a top priority for the region. *SNS (*page 74) describes that:

> *If development continues as it has in the past, some housing types and neighborhoods will be less available in the Las Vegas area than in competitor regions, limiting housing choice for Southern Nevadans. However, with well-planned and balanced housing, Southern Nevada residents will have homes that they can afford and they will be able to choose from a variety of housing styles, sizes and neighborhoods. From a longer-term perspective, planning for increased housing diversity and affordability also means ensuring housing availability and affordability that will keep people in the region and help to attract new residents and jobs to the area. Creating housing options that answer the needs of Southern Nevada's diverse population, while sustaining and supporting existing neighborhoods, will result in a more prosperous, vibrant and inviting region.*

SNS identified the following opportunities and priorities to invest in housing choices and future housing stock diversity:

- Maintaining an adequate supply of land with flexible zoning designations to meet the anticipated housing demand
- Developing housing to meet the needs of workers in future industry sectors
- Designing housing to meet the needs of residents with low mobility and/or disabilities
- Developing low-income and workforce housing in neighborhoods across the region
- Considering the needs of the aging population
- Educating and informing the population regarding housing choice, needs and rights

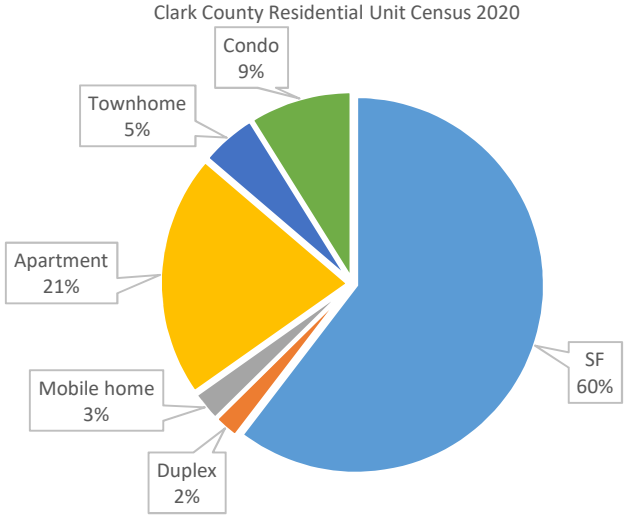
What does Southern Nevada look like today?

Southern Nevada's housing market has mirrored the "boom" and "bust" trajectory of a single-industry economy. When tourism and the convention industry boomed, so did the local economy and wages across the community. However, following the events of September 11, 2001 and the 2020 global pandemic, when air travel plummeted, the local economy crashed and many were left unemployed for long periods of time. At the same time, Southern Nevada's housing market also experiences a "boom" and "bust"

cycle, sometimes connected to the economic conditions like the 2009 Great Recession when the Las Vegas valley led the country in home foreclosure rates. However, the housing market unpredictably soared during the 2020 pandemic, possibly pressured by migration or by external demands, as those drawn to gaming and entertainment destinations purchase housing as secondary homes rather than primary. These extreme cycles have a catastrophic impact to the many families who may have been still recovering from the Great Recession during the start of the 2020 COVID-19 Pandemic. Specifically, millennials have been hit hard by the Great Recession and, although this generation is relatively well-educated, they have had limited ability to attain housing and are more likely to be living in multi-generation housing or holding off on homeownership altogether.

Housing growth within Southern Nevada largely followed the auto-centric design of many other younger and western communities. In 2020 (see Figure 1), 60 percent of the homes available are single-family detached units, likely resulting from the low cost of undeveloped land and construction sector that thrived throughout the 1990s "boom". Low-rise apartments make up around 20 percent of the housing stock, with the remaining stock shared amongst townhomes, condominiums, mobile homes, or duplexes. More dense or attached housing products provide smaller and potentially more affordable residential stock. It's important to note that this current mix of residential units by type may be a result more of the market conditions of new development rather than the preference of existing residents or future homebuyers.

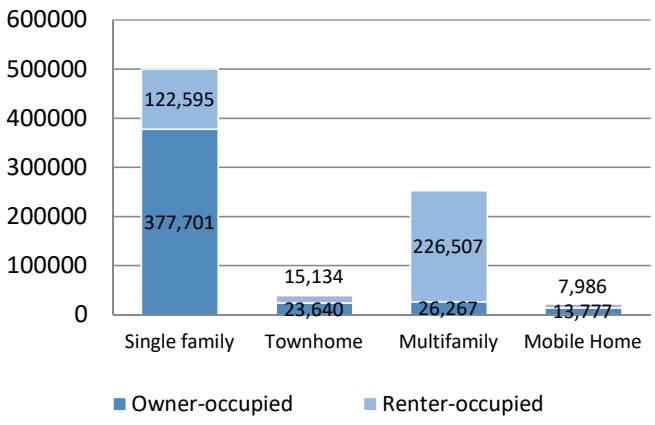
Figure 1: 2020 Residential Units by type



When choosing the type of housing suitable for a resident, *The Clark County Housing Market Analysis* written during the *SNS* planning phase, the most influential factors that drive this decision are age of resident, size of household, and income[1].

Additionally, national trends have likely influenced the development of housing type. A decline in young adults entering the housing market in the late 1980-1990s may have resulted in a decline in construction of multi-family housing across the county. Currently within the US, there are relatively equal shares of householders ages 25-44 and 45-64, representing 35% and 37% of householders respectively. Householders age 65+ represent approximately 25%[2].

Figure 2: Housing Type by Tenure



With the housing market dominated by detached single-family homes, which are generally the most expensive housing type[3], few options for younger professionals or young families (assuming early career wages) exist for those to enter homeownership. Typically, duplexes, townhomes, or small lot single-family homes provide housing options to the "missing middle" – those with stable incomes that no longer qualify for government assistance, but may not be able to find rental units that cost less than 30 percent of their income. While multi-family options exist in Southern Nevada, there appears to be little opportunity to own these types, limiting families from investing in multi-family real-estate (condos and apartments).

[1] *Clark County Housing Market Analysis 2012-2035* April 12, 2013

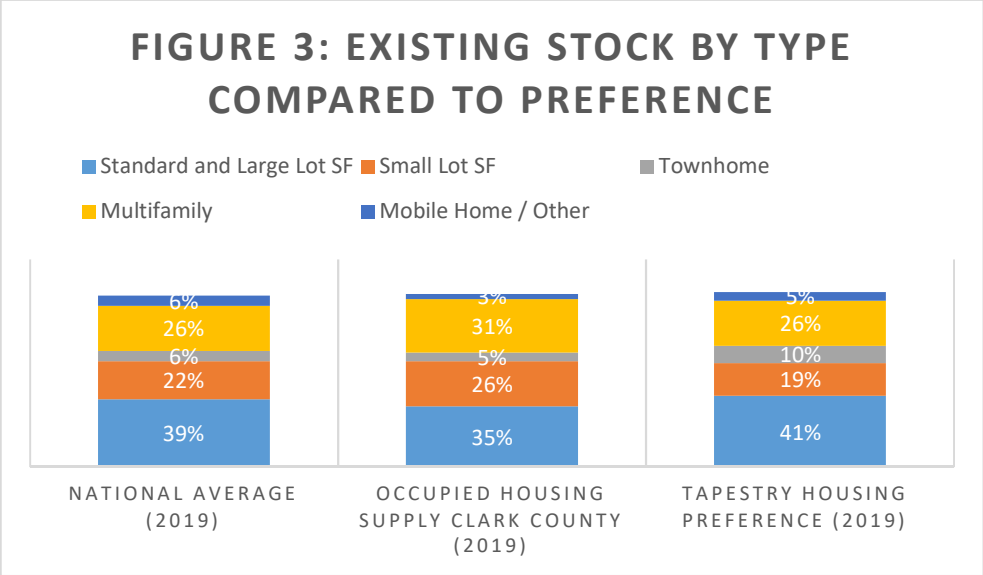
[2] Pendall, R., Freiman, L., Myers, D., Hepp, S. (March, 2012). Demographic challenges and opportunities for U.S. housing markets. Bipartisan Policy Center.

[3] The average new home price is $363,000 and around 2,000 square feet

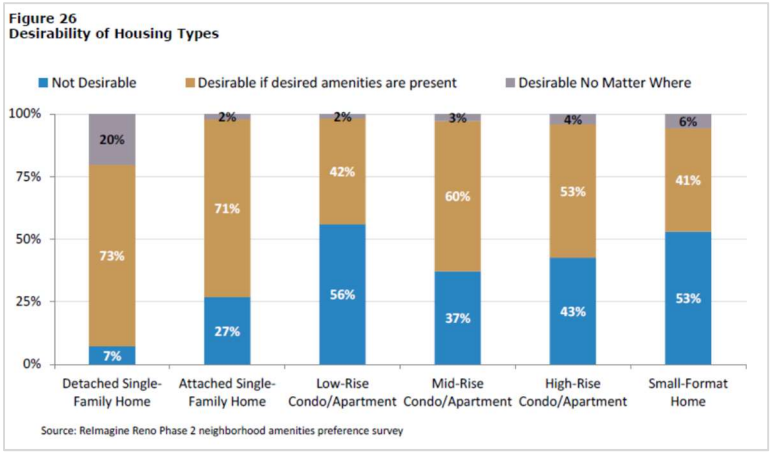
Figure 2 shows how residential type impacts the ability for families to own homes, by comparing owner versus renter occupied by type of home. Multi-family units are overwhelmingly rented rather than owned compared to single-family homes. This data may indicate that the types of residential units available for ownership and accessible for the community to purchase (likely in terms of income and transportation cost) are out of reach for the majority of residents.

Exploring housing preferences

In Southern Nevada, housing type occupancy is likely dependent on a number of interdependent economic conditions, rather than only the desirability of each type. Households may be choosing their housing based on proximity to employment or public transit or based on their ability to afford a unit. Data or research that identifies existing housing types and the demographics of those that occupy those units is significantly lacking, in regards to their age or other characteristics, making it difficult to assess preference by household make-up. Additionally, without a local survey to identify the preferences of Southern Nevada's existing population, future projection is difficult to assess, this report relies on several national or Nevada-based studies and models.



A housing forecast was completed using Envision Tomorrow's *Balanced Housing Model,* creating many of the graphs and tables seen in this report.[4]. The open-source model – which leverages demographic data and the power of scenarios to estimate a community's future housing needs illuminated not just the potential on the future of housing in Southern Nevada, but also the existing inventory based on today's demographics. For example, the model relies on more granular and specific data, Tapestry Segmentation, available from Esri. This analysis divides residential areas into 67 distinct segments based on socioeconomic factors and demographics[5], which are used to predict future housing availability, affordability, and preferences. Based on the model, today's housing mix for Clark County is slightly unbalanced compared to the preferences of the community's segments. Seen in Figure 3, the region's housing stock is made up of 31% multifamily units, while the existing population may only demand 26 percent of that type. At the same time, the existing stock of small-lot single family homes is 26 percent compared to only 19 percent preference of that type. Imbalances like these could contribute to households renting versus owning residential units, trading off their preferences to units that may meet other needs like cost or proximity to amenities.



As part of the City of Reno Master Plan, researchers included a local housing preference survey that can illuminate the types of homes that are desired by various households and residents across age groups. These results mirror others found in national surveys and, due to similar economic conditions, Reno's results may provide a glimpse into

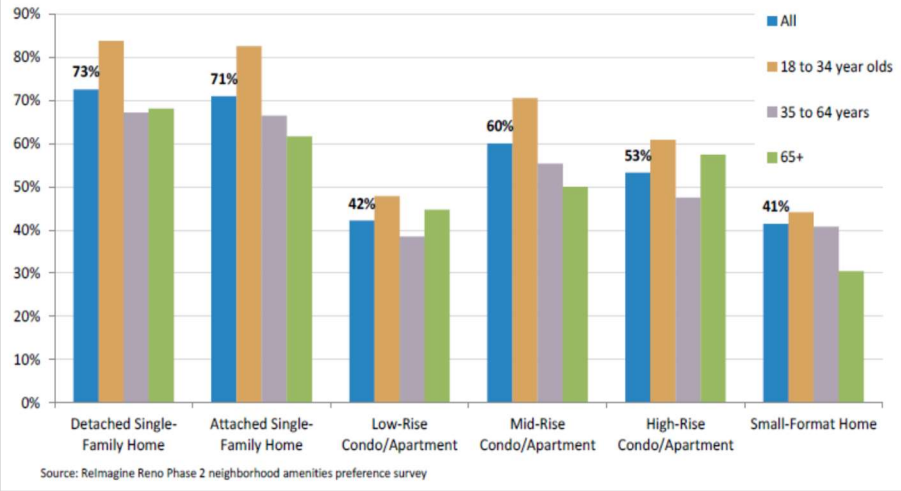
[4] The *Balanced Housing Model* has its origins in Oregon's Statewide Goal 10 Housing Needs Analysis and the Portland Metro Region. Since its inception, it has been used in cities and regions across the country, most notably, Chicago where it is now the accepted standard for housing needs studies.

[5] Esri Tapestry Segmentation

Southern Nevada's needs. A few takeaways from the results of this survey include:

1. When looking at the type of homes that are desirable, preference may be associated with amenities that a neighborhood offers. In Figure 26 (taken from the City of Reno report), respondents identified that single-family homes are desirable regardless of amenities and location more than any other type of home. This could mean that there are residents that could never be convinced to leave a single family home regardless of the surrounding built environment and distance of amenities. However, in the case of other housing types, there is a clear mix of desirability based on amenities, which could be an indication that more research based on location is important when looking at housing type (see *SNS Regional Job to Housing Balance Brief*).

Figure 27
Desirability of Housing Types if Neighborhood Amenities are Present by Age Group



2. Figure 27 (also taken from the City of Reno report) shows that young adults, which can include young professionals and young families, prefer single family homes either attached or detached. While desirability for this type may be strong across all demographics, the current affordability of this type may be keeping potential homeowners from participating in the market (see *SNS Regional Housing Affordability Brief*).

3. Also in Figure 27, older residents (those 65 years and older) desire apartments and condominiums at the same rate as other age brackets, but with the majority of residential units being single family homes, seniors may not be able to find other options.

What will Southern Nevada look like in 2050?

As Southern Nevada has grown, it's apparent that the population has shifted dramatically across demographics, and the future is no different. Shown in the projections in Table 1, the future population of Southern Nevada will be larger, more diverse, and older. As previously mentioned, age, household size, and income are the highest factors to influencing a household's decision in their preferred type of home. A few observations that may influence the future's housing demand:

- Growth in the 65 + population will create new demands for affordable and accessible housing, in addition to solutions for aging in place
- Growth in minority communities may impact housing demands based on cultural preferences that haven't been seen at the same scale as the past
- Stagnation or relatively small changes in the population younger than 25 may indicate that family and household size may decrease, driving demand for smaller homes

Table 1: Population Projection (2020 compared to 2050)

Population (in thousands)	2020	2050	% change
Total Population	2391.37	2985.61	25%
White	1007.04	916.04	-9%
Black	264.04	325.49	23%
Hispanic	769.52	1252.07	63%
Other	350.77	492.01	40%
0-14	458.78	455.77	0
15-24	298.84	310.94	4%
24-64	1268.07	1442.59	14%
65+	374.05	744.82	99%
Labor Force	1139.89	1477.47	30%
Labor Force participation rate	.61	.60	

Source: CBER populations projections 2019

National research captured within *SNS* shows that these trends can impact the housing sector in other ways:

- Seniors will be selling off more units than they can occupy as they age and downsize
- Millennials have held out longer in buying a home, because they have had wage stagnation and high unemployment, which can lead to a pent-up demand once they are able to purchase
- Rental housing demand likely to climb in coming years based on stagnant wages
- Homeownership rates among Black and Hispanic American have suffered significant setbacks, but there is still a strong desire among many to own a home
- Transportation costs will be a key factor when households consider where to locate

What could Southern Nevada demand look like?

According to the Envision Tomorrow model, to meet future demand and replace obsolete stock, the region must add approximately 341,000 new housing units to the market by 2050. To do so, an average of roughly 11,000 new units need to be built each year, which is certainly feasible, given recent development trends[6]. However, just as important as ensuring an adequate supply of housing in total numbers is making sure new stock aligns with the preferences of those who will call Southern Nevada home. With the significant changes of the local community's diversity (as shown in Table 1) it's expected to impact housing demand dramatically. The region must diversify its housing stock by prioritizing *missing middle* housing types (see Figure 4) at the expense of large single family lots to meet future demand.

Figure 4: MISSING MIDDLE HOUSING

Daniel Parolek coined the term in 2010 and describes them as "building types, such as duplexes, fourplexes, cottage courts, and courtyard buildings, [that] provide diverse housing options and support locally-serving retail and public transportation options."

Missing Middle "sit in the middle of a spectrum between detached single-family homes and mid-rise to high-rise apartment buildings, in terms of form and scale, as well as number of units and often, affordability."

Traditionally, housing cost burden has not included transportation costs into its analysis; however, as more communities plan for housing, they have begun to consider how these costs may implicate a households ability to not face unintended cost burden. In Southern Nevada, the majority of new residential land exists far from the center of the valley, thus increasing transportation costs for every new household. Low and middle income residents may be priced out of future homes based on this fact alone, likely resulting in future demand to be situated in existing neighborhoods and close to employment centers, public transportation, and services. If this prediction holds true, housing in infill areas may be an opportunity to fill the *missing middle* gap.

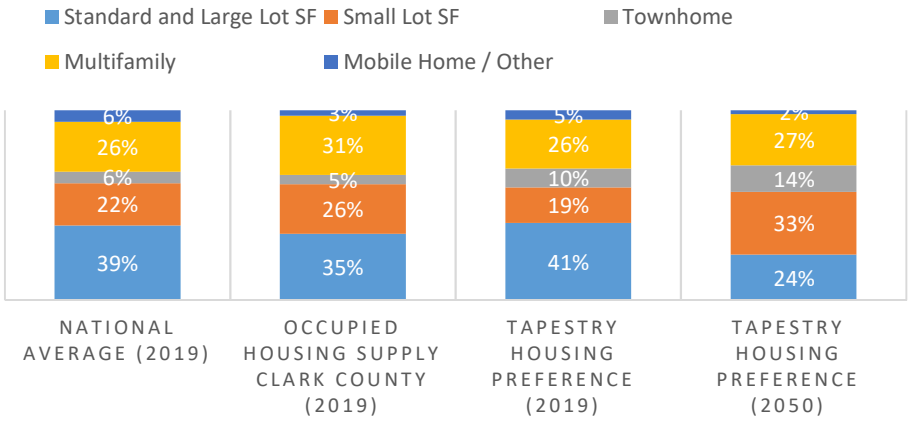
According to the Envision Tomorrow model, by 2050, householders age 65+ will represent approximately 52 percent of householders, while householders ages 25-44 and 45-64 will represent 19 percent and 25 percent respectively. This potentially creates new demands for affordable and accessible housing – as seniors are likely to live on fixed incomes and need physical amenities to continue to live independently. Sheer size of baby boomer population (all of who will be 65 or older by 2030) could cause a dramatic increase in the construction of senior-accessible housing over the coming decade. While seniors may not desire to leave their existing homes, 65% of respondents to a 2018 AARP survey desired to remain in their home or "age in place"[7], a transition may be inevitable, thus increasing the stock of older homes, and increasing demand for smaller homes or supportive housing.

[6] The region has seen an average of 11,400 new housing units per year since 2015, according to Clark County housing unit estimates
[7] 2018 AARP "Home and Community Preference Survey"

Envision Tomorrow model provides other insight into future preferences (Figure 5):

- Currently, Clark County's housing stock may be skewed compared to the preference of the current residents. The model shows that the community may prefer less small lot and multifamily homes as well as more large lot homes and townhomes.
- In order to align the market with predicted housing demand over the next decades, Southern Nevada needs to provide more small-lot single-family home and townhome options (combined 31% in 2019 compared with 47% predicted in 2050)
- While there will still be a market for single-family homes, housing preferences in the future will see more demand for small single-family lots and townhomes compared to 2019.

FIGURE 5: EXISTING STOCK BY TYPE COMPARED TO TODAY AND 2050 PREFERENCE



In addition to age changing the housing landscape, the Envision Tomorrow model predicts that the share of renters among populations 45-64 and 65+ will grow by 5 percent and 3 percent respectively. This increase, as a proportion to the increase in these populations, could be dramatic. Projections that assume 2010 rates (Table 2) of household formation and homeownership will extend unchanged to 2030 underscore the possibility that the nation will require large amounts of rental housing to meet demand for the remainder of the decade and beyond.

Table 2: Tenure Projected to 2030 by age group

	Rent 2010	Own 2010	Rent 2030	Own 2030	Rent Change
Under 25	84%	16%	83%	17%	-1%
25-44	47%	53%	48%	52%	1%
45-64	26%	74%	31%	69%	5%
65+	23%	77%	26%	74%	3%

Recommendations for future research – Approaches to identifying future demand type

Southern Nevada faces many challenges to the housing market in 2021 and likely for the next several decades. The 2020 COVID-19 pandemic may be exasperating the issues that were likely to appear – increased demand of low cost units, likely rental properties; increased demand for high-end, high-cost units from new residents fleeing high cost states; and increased demands in unit that can accommodate multi-generational families.

In order to better understand this issue and prepare for the region's impending growth, additional research on existing local preference could be an opportunity to strategize. A local survey to capture housing preference by age, family stage, income, profession and other demographics is a vital input to working on solutions. Another important tool will be planning various scenarios to include changing demographics and economic or environmental stressors that may change the economic conditions that Southern Nevada is so sensitive to, in order to be prepared for the next possible "boom" or "bust".

Regional Housing Analysis: **Housing Affordability**

Southern Nevada has been among the nation's fastest growing regions for the better part of the last three decades. This rapid rate of development brought prosperity and opportunity to many, but also created challenges. Much of our new development has occurred on the edges of the region, and most of these new homes offer limited access to employment hubs and public transit. Additionally, in recent years, housing development has failed to keep pace with our population gains, which has led to growing affordability concerns.

To better understand Southern Nevada's housing needs and inform current and future policies and planning efforts, the RTC of Southern Nevada's Metropolitan Planning Organization (MPO) completed an assessment of the region's current and future housing balance. The assessment examined three important pieces of the region's housing puzzle – jobs-housing balance, affordability, and type. As part of the analysis, a housing forecast was completed using Envision Tomorrow's *Balanced Housing Model* to get a sense of what the region's housing market could look like in 2050.

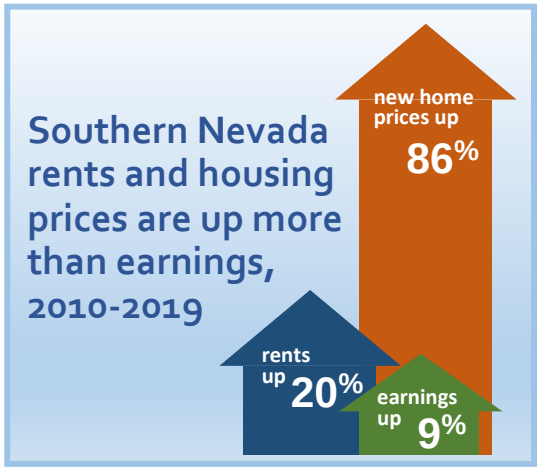
This document is one of three *report briefs* that share findings from this research.

Decreasing affordability in Southern Nevada

Once considered a strength of the region, Southern Nevada's low cost of living – driven largely by its housing market's relative affordability – has waned in recent years. Increased housing demand brought on by consistent population growth, coupled with lagging housing production since the last recession (see Figure 2), has predictably led to an increase in housing prices over the course of the decade.

In fact, Southern Nevada home prices have increased faster than nearly anywhere in the country in recent years[1]. As home prices have increased, affordability has decreased. In 2013, coming out of the Great Recession, nearly 80% homes sold in Southern Nevada were affordable to a family earning the local median income; by the end of the decade, the number dropped to 58%[2]. The affordability issue is more pronounced among renters. Just as home prices surged in recent years, so too have rents. Over the course of the decade, median gross monthly rent in the region increased 20%[3], peaking at nearly $1,200 in 2019.

FIGURE 1



Home price information from SalesTraq, New Home Median Closing Prices; Rent price information from U.S. Census Bureau, American Community Survey, 1-year estimates, Median Gross Rent (Table DP04); Earnings information from U.S. Census Bureau, American Community Survey, 1-year estimates, Median Earnings for Full-Time, Year-Round Workers with Earnings (Table S2001)

Housing cost burdens

Households are considered *housing cost-burdened* when they spend more than 30% of their incomes on housing-related expenses, which include costs like a mortgage, rent, and utilities. They are considered *severely cost-burdened* when more than half of their income goes toward housing. When households are housing cost-burdened, they have less to spend on other necessities, such as food, clothing, transportation, and healthcare. In addition to financial constraints cost-burdened households face, research also finds that the lack of affordable housing is also associated with other impacts, including both physical and mental health outcomes, especially among low-income households and vulnerable populations, according to a Center for Housing Policy research summary.

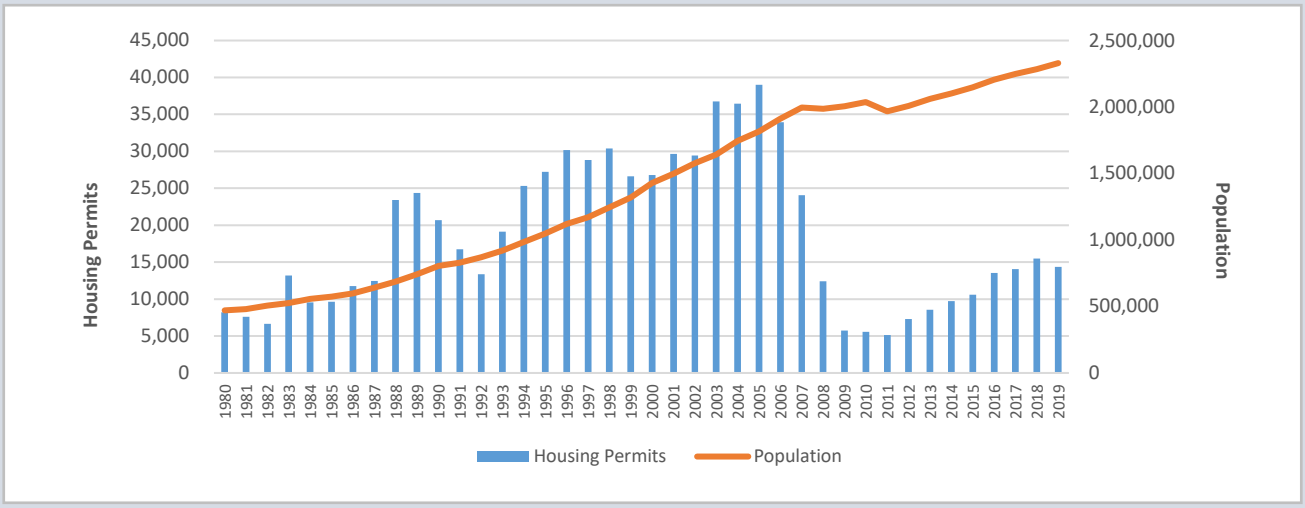
[1] S&P CoreLogic Case-Shiller U.S. National Home Price Index
[2] National Association of Home Builders (NAHB)/Wells Fargo, Housing Opportunity Index
[3] U.S. Census Bureau, American Community Survey, Single-year estimates (Table DP04)

FIGURE 2

Housing Permits & Population Growth in Southern Nevada

Driven by the rapid and sustained influx of new residents, housing production increased fairly consistently through most of the 90s and early 2000s. Annual housing construction permits effectively doubled during the time period, jumping from approximately 20,000 in early 90s to a high of 39,000 in 2005.

However, housing construction dropped precipitously during the Great Recession. New residential construction permits fell to roughly 5,000 per year during the recession – levels lower than the region saw in the early 80s – even as the population continued to climb. And while production has increased in the years since the recession, housing permits are still less than half what they were prior to 2007.



Population data from U.S. Census Bureau, American Community Survey, 1-year estimates, Total Population (Table B01003); Housing permit data from UNLV, Center for Business and Economic Research (CBER)

Additionally, in many major metro areas, affordable housing is not located near job centers, which increases transportation costs (see *Regional Housing Analysis: Jobs-Housing Balance* report brief) and greenhouse gas emissions that result from longer commutes

Current condition

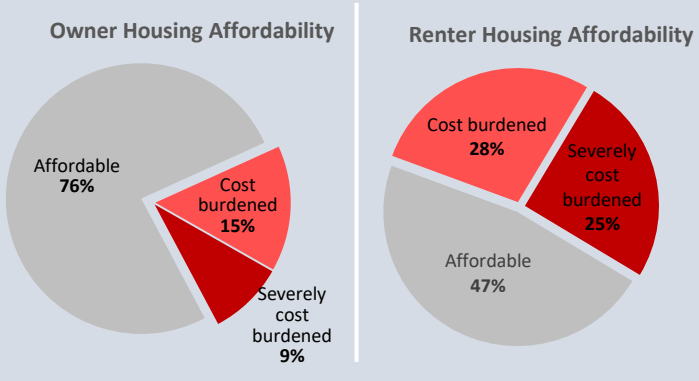
Today, an estimated 290,000 Southern Nevada households are cost burdened[4]. That means more than 1 in 3 households spend more than the recommended 30% of their income on housing-related expenses. While the share of cost-burdened households in the region has improved dramatically over the course of the past decade, the percentage of cost-burdened households in Southern Nevada has remained 15-20% higher than the national rate.

When digging into local housing affordability data a little more, affordability patterns and distinctions begin to emerge that

FIGURE 3

Southern Nevada Housing Affordability by Tenure

A typical standard to determine affordability is that a household should pay no more than 30% of household income for housing-related expenses. Households paying more than this are "cost burdened," and may have fewer resources to pay for other necessities. Households spending more than half of their income on housing expenses are considered "severely cost burdened."



Housing cost data from U.S. Census Bureau, American Community Survey, Single-year estimates (Table DP04)

[4] U.S. Census Bureau, American Community Survey, Single-year estimates (Table DP04)

paint a clearer picture of what types of households are most impacted by the region's housing affordability challenges. Clear differences exist between renters and owners (see Figure 3). More than half of renters are cost burdened in Southern Nevada, compared to less than a quarter of homeowners. And 25% of renters in Southern Nevada are severely cost burdened, meaning they spend more than 50% of their monthly income on rent. A wage of nearly $30 per hour is needed to afford a typical 2-bedroom apartment and utilities in the Las Vegas region, according to the Nevada Housing Coalition.

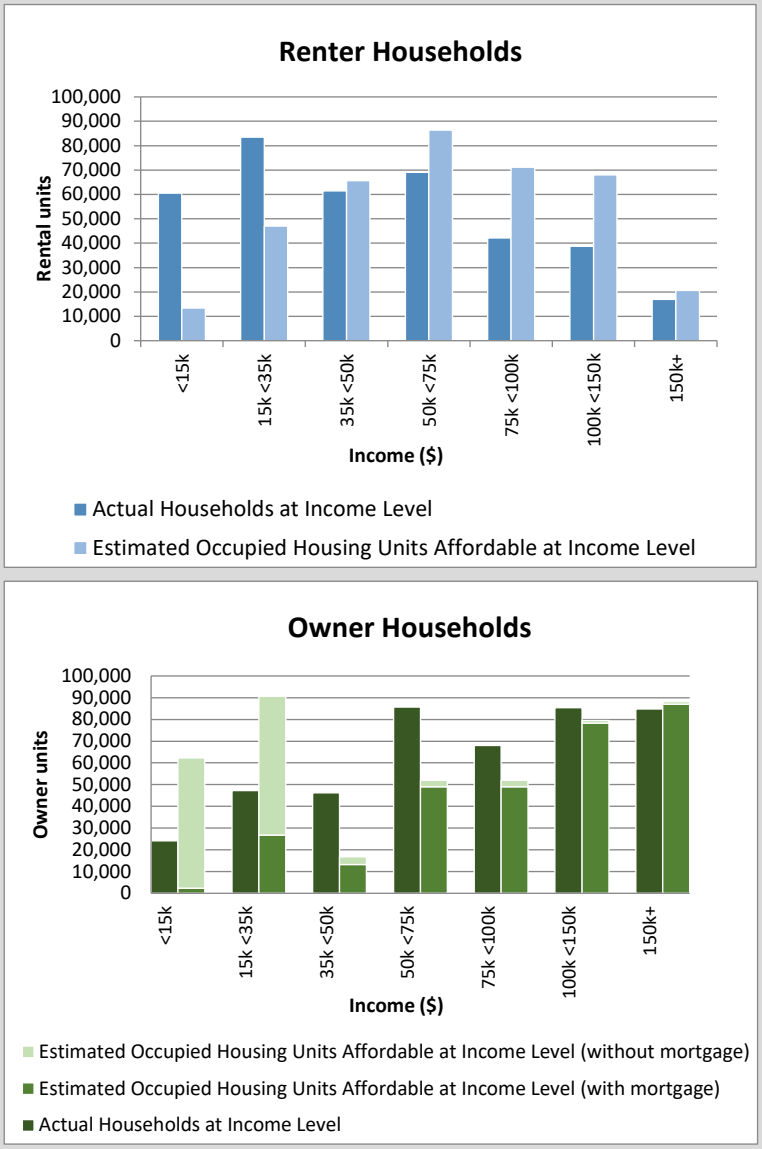
When it comes to the rental market in Southern Nevada, there's an extreme shortage of units affordable to households earning less than $35,000 per year. For the 144,000 households in the region in this income bracket who rent, there are only approximately 60,000 units affordable to them, forcing the majority to occupy rental properties outside of their price range (see Figure 4, top graph). At the other end of the spectrum, southern Nevada also has an oversupply of rental units with prices appropriate for households at the highest income levels.

Assessing affordability shortages and surpluses by income among the owner households is less straightforward than for renters, largely due to the fact that roughly 135,000 households in the region don't have a mortgage, significantly lowering their housing expenses. This makes it appear as though the region has a surplus of housing affordable to households in the lowest-income brackets (see Figure 4, bottom graph), when in reality, many of these units would likely be unaffordable to these households if they were on the market[5]. However, the apparent shortage of housing affordable to middle-income households does align with findings of local studies, which have found that, increasingly, the impacts of the region's affordable housing shortage are being felt by working class households that earn too much to qualify for housing assistance programs, but are underserved by the housing market. This shortage forces these middle-income households to occupy housing either (a) more

FIGURE 4

Comparing Household Incomes with Occupied Housing Units Affordable at 30% of Income Based on Total Housing Expenses

Housing expenses include costs such as payments for rent or mortgages, common utilities, insurance, and any applicable housing-related taxes and fees.



Housing cost data from U.S. Census Bureau, American Community Survey, Single-year estimates (Table DP04)

[5] Additional research and analysis, outside the scope of this research brief, could be done to develop more accurate estimates, based on market values of housing units without a mortgage.

appropriate for lower-income households, exacerbating the shortage of units available to lower-income households, or (b), above their price range, making them housing cost-burdened.

Shortages in units affordable to extremely low-income renters and middle-income households have been highlighted and examined both locally and nationally. The National Low Income Housing Coalition's 2021 *The Gap* report, which assesses shortages in affordable rental homes, found that of the 50 largest metropolitan areas in the U.S., extremely low-income renters face the most severe shortages in the Las Vegas region, with 16 affordable and available rental homes for every 100 extremely low-income renter households[6]. The report also found that nearly 90% of extremely low-income renters in the region are severely cost-burdened[7]. Southern Nevada's "missing middle" housing shortage was the focus of *The Housing Affordability Gap in Southern Nevada*, a report published by Nevada HAND, the region's largest affordable housing developer, in 2017.

Subsidized housing

A significant factor in explaining housing cost burdens in Southern Nevada is the lack of subsidized housing in the region. Only 2.4% of the region's housing stock is made up of subsidized affordable housing[8]. In total, there are approximately 21,500 subsidized housing units in the region[9], which equates to roughly 9 units per 1,000 residents (a rate significantly less than Washoe County and the U.S., which are both above 15). And despite the region's consistent population growth in recent years, the total number of subsidized affordable units in the region has decreased by more than 500 units since 2014[10]. The Nevada Housing Division estimates that it would take 140,000 affordable units being made affordable[11] to meet the region's remaining need[12].

When looking specifically at HUD-assisted[13] rental housing, the Las Vegas region again ranks among the worst in the country. Just 4% of the region's total rental stock is made up of HUD-assisted units, according to *The Gap*. Comparatively, around 20% of the rental housing in Providence, Rhode Island consists of HUD-assisted units[14], which is top in the country.

Future need

As part of the Regional Housing Analysis, a housing forecast was completed using Envision Tomorrow's *Balanced Housing Model*[15]. The open-source model – which leverages demographic data and the power of scenarios to estimate a community's future housing needs – is one tool to better understand what the region's housing market could look like in 2050.

According to the model, to meet future demand and replace obsolete stock, the region must add approximately 441,000 new

FIGURE 5

Southern Nevada
Population Overview (2019 & 2050)

	2019	2050
Total population	2,226,715	3,067,000
Age		
0-14	450,330 (20%)	455,770 (15%)
15-24	284,460 (13%)	310,940 (10%)
25-64	1,244,080 (56%)	1,442,590 (47%)
65 and older	355,620 (16%)	744,820 (24%)
Race & ethnicity		
Black	257,980 (12%)	325,490 (11%)
Hispanic	743,590 (33%)	1,252,070 (41%)
White	991,930 (46%)	916,040 (30%)
All other	430,980 (19%)	492,010 (16%)

2019 population data and 2050 population projections from UNLV, Center for Business and Economic Research (CBER) 2019-2060 Population Forecast. Percentages in the "Race & ethnicity" category do not add up to 100% because "race" and "ethnicity" are separate categories in the ACS.

[6] National Low Income Housing Coalition (NLIHC), "The Gap: A Shortage of Affordable Homes," March 2021 (p. 10)
[7] National Low Income Housing Coalition (NLIHC), "The Gap: A Shortage of Affordable Homes," March 2021 (p. 11)
[8] Calculated using data from the Nevada Housing Division and Clark County Comprehensive Planning Department
[9] The Nevada Housing Division maintains a list of subsidized housing within each jurisdiction in the state. Housing types included in the list are all types of tax credit properties, private or non-profit properties with property based HUD rental assistance, public housing, USDA Rural Development housing, properties owned by regional housing authorities, and some properties built or assisted with HOME, Low-income Housing Trust Funds or Neighborhood Stabilization Program funding, as well as a small number of properties with other miscellaneous funding. To be included on the list, the properties must either have project based rental assistance, or deed restrictions or other agreements restricting income levels of occupants or rent levels.
[10] Nevada Housing Division, "2020 Annual Housing Progress Report," February 2021 (p. 11)
[11] This could be accomplished many ways, including but not limited to: making existing units affordable through vouchers or renters tax credit, or building new affordable units.
[12] Nevada Housing Division, "2020 Annual Housing Progress Report," February 2021 (pp. 12-14)
[13] The U.S. Department of Housing & Urban Development administers several programs that incentivize affordable housing development and subsidize housing costs for low-income households
[14] National Low Income Housing Coalition (NLIHC), "The Gap: A Shortage of Affordable Homes," March 2021 (pp. 10-11)
[15] The *Balanced Housing Model* has its origins in Oregon's Statewide Goal 10 Housing Needs Analysis and the Portland Metro Region. Since its inception, it has been used in cities and regions across the country, most notably Chicago, where it is now the accepted standard for housing needs studies.

housing units to the market by 2050 (see Table 1). This would require an average of roughly 14,000 new houses to be built each year, which is certainly feasible given recent development trends in the region[16]. However, just as important as ensuring an adequate supply of housing in total numbers, is making sure new stock aligns with affordability needs. To do so, the region must prioritize housing affordable to low- and middle-income earners.

For rental housing, 88% of 202,000 units needed by 2050 need to be affordable to households with incomes below $35,000 to meet future demand (see Table 2). This means that nearly 180,000 rental units should have rents less than $900 per month, and roughly half of those need to be less than $400 per month (in 2019 dollars). For owner housing, a clear need exists for units affordable to households at extremely low income (those who earn less than $15,000 annually) and middle-income levels (specifically those who earn between $35,000 and $50,000). More than 50% (126,000) of the nearly 239,000 owner units needed by 2050 to meet projected demand need to be affordable to households in these income brackets (see Table 3). The majority of the remaining future need for owner units is divided fairly evenly among income brackets above $50,000:

- $50,000 - $75,000: 11%
- $75,000 - $100,000: 10%
- $100,000 - $150,000: 14%
- $150,000 and above: 11%

Table 1

	All units (2050)							
Clark County	<$15k	$15k - $35k	$35k - $50k	$50k - $75k	$75k - $100k	$100k - $150k	$150k+	Total
Target Units Needed to Meet Projected Demand	148,277	95,641	91,317	42,136	23,836	32,634	29,461	440,536
Additional Units Beyond Forecasted Need Within this Income Range	-	2,660	-	-	13,844	17,594	-	-

Table 2

	Rental units (2050)							
Clark County	<$15k	$15k - $35k	$35k - $50k	$50k - $75k	$75k - $100k	$100k - $150k	$150k+	Total
Target Units Needed to Meet Projected Demand	86,315	91,200	27,544	15,577	-	-	4,158	202,028
Additional Units Beyond Forecasted Need Within this Income Range	-	-	-	-	13,844	17,594	-	-

Table 3

	Owner units (2050)							
Clark County	<$15k	$15k - $35k	$35k - $50k	$50k - $75k	$75k - $100k	$100k - $150k	$150k+	Total
Target Units Needed to Meet Projected Demand	61,962	4,441	63,773	26,559	23,836	32,634	25,303	238,508
Additional Units Beyond Forecasted Need Within this Income Range	-	2,660	-	-	-	-	-	-

Results in Tables 1-3 from Envision Tomorrow's "Future Housing Model" using Esri "Tapestry Segmentation" data and housing cost data from U.S. Census Bureau, American Community Survey, Single-year estimates (Table DP04)

Addressing the need

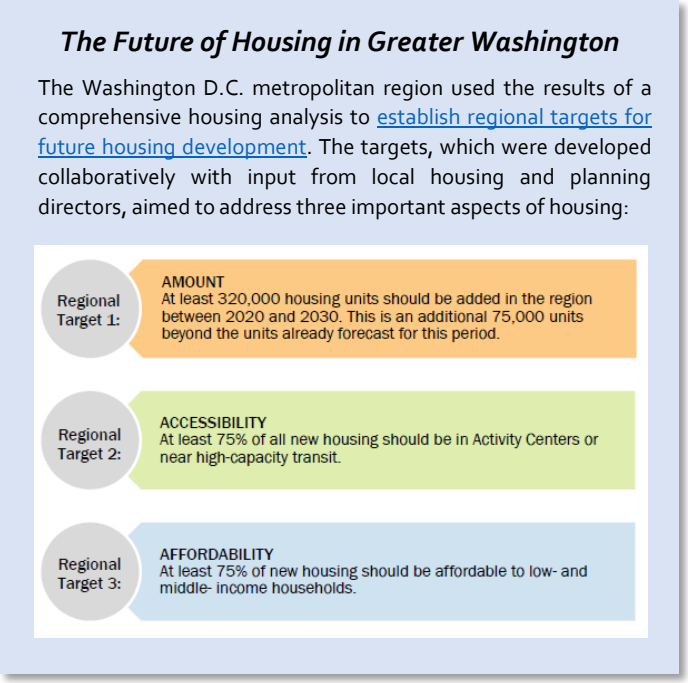
The *Southern Nevada Strong (SNS)* regional plan lays out a clear vision for housing in the region. Among the plan's recommendations for realizing a housing market that meets the needs of the entire Southern Nevada community include developing more low-income and workforce housing, and diversifying the types of housing available in the region. According to the plan, to reach these goals, housing must become a regional priority that is tackled across sectors and industries. And in recent years, local and state leaders – from elected officials and academics to housing advocates and nonprofit leaders – have increasingly devoted resources to better understanding and addressing the issue. Though progress has been slow, Southern Nevada must continue to actively prioritize housing affordability in the coming years and champion informed decision-making.

Improving housing affordability at the regional level is no small task. Like all housing-related issues, affordability should not be examined or addressed in a vacuum. The complexity of the housing market requires a holistic approach that addresses both producers

[16] The region has seen an average of approximately 13,000 new housing units per year since 2017, according to Clark County housing unit estimates

and consumers, and includes a diverse set of stakeholders. Further examining and addressing potential barriers or misalignment could yield positive outcomes. Additionally, aligning economic and workforce development efforts with future housing planning warrants further exploration. Improving the economic prospects of the region, especially for those in the lowest income brackets, could result in affordability gains. The importance of land use and zoning should also not be discounted. Across the country, cities tend to constrain the supply of housing through zoning restrictions. Allowing for more affordable housing types – such as accessory dwelling units, multiplexes, apartments, and tiny homes – along with increased density could also increase affordability (see *Regional Housing Analysis: Diversifying Housing Type* report brief). The location of housing, also a function of land use, is also an often overlooked factor that ties closely to housing affordability. Ensuring that housing affordable to lower- and middle-income earners is near job centers and in close proximity to public transit can reduce transportation costs, which many experts contend is necessary to understanding the true price of housing[17].

FIGURE 6



To better understand the true scope and nature of the region's housing crisis, a comprehensive housing assessment should be undertaken. More precise and locally-specific projections could likely be obtained through a more concerted and collaborative process that included data sharing, fine-tuning inputs, and adjusting model assumptions. A truly collaborative and data-driven assessment could help the region establish targets for future housing production and affordability (see Figure 6, for example).

[17] See: U.S. Department of Transportation, Housing And Transportation Affordability

SNS Regional Housing Inventory Brief: Jobs-Housing Balance

Introduction

Southern Nevada has been among the nation's fastest growing regions for the better part of the last three decades and this trend is expected to continue well into the future. This rapid rate of growth brought prosperity and opportunity to many, but it also created many challenges, stretching fiscal and natural resources to the limit. Rapid growth led to unplanned and uncoordinated development, much of which occurred at the edges of the region. These land use patterns strain the fiscal resources of local jurisdictions and service providers and make access to amenities, services, and opportunities difficult without a car.

The SNS Regional Policy Plan seeks to better integrate housing, transportation, and jobs. Balance between these necessities will allow Southern Nevadans to earn more, keeping dollars local and, providing for reinvestment in education, jobs, health, and quality communities.

In response, the Southern Nevada Strong (SNS) Regional Policy Plan set forth a vision that includes creating "complete communities" throughout the region. The complete communities concept looks at locating jobs, housing, transportation options, and community amenities within a reasonable proximity of one another – meaning that everyone has access to housing, economic opportunity, and healthy resources, regardless of income or transportation choice. The vision calls upon the region to employ more resource-efficient land use and development practices and to ensure that the region's housing profile is well matched to meet the needs of the future population and economy.

As such, the regional planning team conducted a regional housing analysis, providing current data and insights into the state of Southern Nevada's housing profile. The assessment examined three key aspects of healthy housing markets: Jobs-housing balance, affordability, and type.

The analysis finds that problems of the past still exist in today's housing market. In fact, by many standards, Southern Nevada is experiencing a housing crisis. The influx of new residents, jobs, and businesses could intensify today's housing challenges unless the region comes together to address them. In recent years, housing development has failed to keep pace with the region's population gains, leading to growing affordability concerns and inequity throughout the region. Additionally, housing in Southern Nevada is limited in its diversity of type and there continues to be spatial mismatches between housing locations, employment hubs, public transit, and transportation choice. Well-functioning housing markets are widely understood to provide for the diverse needs and desires of a variety of workers and consider how access to jobs and necessary services establish quality of life and economic success for the region. Healthy housing markets also provide important benefits for the economic progress, stability, health, and well-being of individuals and families. Inaction on housing challenges can not only undermine the region's future economic growth and prosperity, but can worsen economic inequality and health disparities in the region.

Detailed findings of this analysis are documented in three briefs, providing information to better understand factors contributing to these outcomes. The briefs are intended to inform current and future planning efforts and policies in the region, and are the first phase in continuing research being performed by the Regional Transportation Commission's (RTC) regional planning team. This brief focuses on the current and forecasted jobs-housing balance in Southern Nevada and the implications of housing locations in the region.

What is jobs-housing balance (JHB)?

The location of housing is one of many factors affecting regional housing markets and quality of life. Research and data show that the location of housing developments can greatly impact personal and public transportation costs and strain the fiscal resources of local governments and service providers who provide infrastructure and services to the public. As such, many regions and local governments adopt priority development zones in an effort to promote more cost-efficient development patterns. Identifying preferred locations for housing is one such method and this is commonly accomplished through jobs-housing balance.

Jobs Housing Balance (JHB) = # of jobs / # of housing units

Jobs-housing balance (JHB) is the "distribution of employment relative to the distribution of workers in a given geographic area."[1] In other words, JHB is the ratio of workers living within a given area to the number of jobs that are available within that area. This ratio can help inform the overall housing needs of a region, providing information about the spatial relationships between jobs, housing, transportation, services, and amenities.

Assessing the JHB of a region is a customary method for forecasting housing needs and housing supply, primarily because it's a simple and quantitative way to define housing needs and goals (JHB = # of jobs/# of housing units).While the methodology is formulaic, the process for determining an appropriate JHB for any given area should go beyond this simple numeric calculation. Achieving real balance requires that workers' skills match with job opportunities as well as with a broad mix of housing types and prices that accommodate households with a broad mix of income ranges in various stages of life. Thus, a comprehensive understanding of community preferences as well as of the affordability and type of housing available is needed alongside an analysis and discussion about JHB. (See separate *SNS Regional Housing Inventory Briefs: Affordability* and *Type.*)

Why is jobs-housing balance important?

There are many reasons why considering housing location and JHB in a regional housing analysis are important. Research shows that regions with "good JHB" (definitions of good JHB vary by region and locality, and southern Nevada does not have an established target for JHB) are more economically competitive, more financially stable, and exhibit more satisfaction among quality of life indicators, such as community health and educational opportunity.

Well-balanced jobs and housing ratios have been shown to increase the economic competiveness of a region. Specifically, an Urban Institute (2019) study from the Washington, D.C. region finds that housing location challenges can undermine worker productivity, increase the difficulty businesses face in attracting and retaining employees, and discourage businesses from locating in housing-challenged regions. Employers need a diversity of talent to fill a variety of positions

Employee preference surveys can show how commute times affect quality of life and economic competitiveness of regions.

55%

of employees surveyed in the UK cite long commutes as reasons why they would leave a job (Wardrip, Williams, and Hague, 2011).

76%

of surveyed workers in the UK age 18-34 and 2/3 of low-wage workers (earning less than $50,000) would consider a lateral move if it would shorten their commute. The number is similar for higher-wage workers (more than $50,000) at 60%. (Wardrip et. al., 2011).

7 Days

A study of 34,000 workers found that those who commute under 30 minutes a day gain seven days of productivity a year compared to those who commute over an hour a day (Mercer, 2017).

[1] Wu, Q., Zhang, M., and Yang, D. (2015). Chapter 18 Jobs-housing balance: The right ratio for the right place. In Recent Developments in Chinese Urban Planning. Springer International Publishing, Switzerland.

(both low- and high-wage) and the ability to attract, retain, and develop such a workforce depends on the availability of housing within a reasonable proximity to jobs.[2] In a national survey of over 300 companies located in the United Kingdom, more than half (55 percent) of large companies acknowledged that employees cite long commutes as reasons why they leave the company.[3] Additionally, congested roads, a consequence of spatial mismatches between housing and jobs, can reduce the profitability of local businesses by increasing their operating costs and shrinking the area where businesses can expect to recruit workers and customers. Research also finds that spatial mismatches between housing and jobs can cause higher unemployment rates as well as longer periods of unemployment.[4] Consequently, regions that fail to provide an adequate balance between housing and jobs may find themselves lacking the competitive advantages of more balanced regions.

Moreover, communities that do not provide an adequate JHB are more likely to find themselves fiscally constrained and financially unstable in the future. As the region grows, local governments and service providers must provide for new roads, utility infrastructure, schools, and other services that are essential for housing and quality of life. Communities that prioritize housing location in accordance with JHB goals are more likely to see growth patterns that are less costly to develop, resulting in potentially millions of public dollars saved. According to the SNS Regional Plan, if housing development continues as it has in the past, more than 1,500 new miles of roads would be needed to service these areas, costing more than $7 billion.

Ultimately, development costs are shared by many players, including developers and home buyers, but taxpayers also share in these costs through the infrastructure and service costs needed for new development. The public sector has multiple obligations and must prioritize across their various responsibilities and services. Prioritizing housing infill and dense, mixed-use housing in underdeveloped areas and places with existing infrastructure in the region could provide a substantial savings on the costs needed to service new development. (See Table 2 for cost savings comparisons between existing development trends and more compact development.) Thus, establishing a healthy JHB to encourage denser, more compact development and determining priority locations for housing can go a long way towards reducing potential fiscal strains while simultaneously improving the quality of services, such as education, within the community.

Residents in communities with good JHB are also more likely to experience a higher quality of life. The core concept behind the SNS complete communities theme is to improve quality of life within the region by improving spatial alignment between jobs and housing (i.e. jobs-housing balance). Co-locating housing options, employment centers, and community amenities reduces sprawl and traffic congestion, improves resource availability and environmental quality, and provides for more diversity in the type and cost of available housing, alleviating stresses for cost burdened households. (See *SNS Regional Housing Inventory Briefs: Affordability* and *Type*.) All of these factors relate to important quality of life goals in the SNS Regional Plan.

In its simplest form, JHB describes the commuting patterns of a region. Benefits for regions that provide for a "good JHB" include shortening commute distances and travel times for workers, reducing vehicle miles traveled (VMT), and, in turn, reducing greenhouse gas emissions and other transportation-related pollutants. Additionally, areas that have balanced jobs and housing opportunities often see decreased instances of stress and improved health outcomes through increased opportunities for non-motorized transit, like walking and bicycling. Research finds that time scarcity due to longer commute times is a significant cause of stress, given that people with longer commutes experience higher rates of depression and financial concern.[5] Additionally, regions with healthy JHB tend to spend less on infrastructure and service costs, which may improve investments in education, climate adaptation, and publicly provided recreation, such as parks and community centers. Thus, investments in housing near jobs and activity centers can not only help regions meet their housing goals, but can also go a long way towards improving environmental, community health, and quality of life outcomes as well.

[2] Urban Institute. (2019). Meeting the Washington Region's Future Housing Needs. Urban Institute. Washington, D.C.

[3] Wardrip, K., Williams, L., and Hague, S. (January, 2011). The role of affordable housing in creating jobs and stimulating local economic development: A review of the literature. Center for Housing Policy.

[4] Urban Institute. (2019). Meeting the Washington Region's Future Housing Needs. Urban Institute. Washington, D.C.

[5] Ibid.

What is a good jobs-housing balance for Southern Nevada?

So, what is a "good" JHB? This is a difficult question to answer. There is no academic or professional consensus on what ratio is an appropriate jobs-housing balance, and there are many local factors to consider. What experts do agree on is that a regional jobs-housing balance ratio will likely need to be a range, accounting for regional differences in preferences and need.[6]

Generally, the closer the JHB ratio is to a value of 1, the more balanced the region. Values lower than 1 reflect that more housing than jobs are available in that area and values lower than .75 are typically characterized as bedroom communities. Values larger than 1 reflect that more jobs than housing are available and values larger than 1.25 may show that many residents are driving outside of their local community for work (i.e. commute times are longer). The typical JHB ratio that's considered appropriate for a region (meaning a large geographic area such as an urbanized county) is around 1.5 jobs/household.[7] This ratio reflects the fact that most households have more than one worker, so jobs and housing will necessarily be relatively dispersed within a region. However, there is some academic consensus around the idea that measuring jobs-housing ratios regionally is relatively meaningless, due to its inability to account for local conditions, preferences, and needs. Because regions are large areas, it is likely that cities and regions will appear balanced when measured by the numbers.[8]

Year	Housing Units	Jobs	Jobs-housing ratio	Housing surplus/shortage using JHB ratio of 1.5
2010	799292	1,056,986	1.32	94,282
2011	801,468	1,076,766	1.34	83,265
2012	804,221	1,092,996	1.36	75,193
2013	813,632	1,125,631	1.38	62,836
2014	816,939	1,168,817	1.43	37,338
2015	825,114	1,215,757	1.47	14,204
2016	829,236	1,263,139	1.52	(13,278)
2017	840,032	1,306,107	1.55	(31,141)
2018	853,541	1,350,621	1.58	*(47,323)*
2019	868,343	*1,357,000*	1.56	*(36,776)*
2020	*879,309*	*1,371,000*	1.56	*(35,148)*
2025	*922,239*	*1,406,000*	1.52	*(15,563)*
2030	*968,281*	*1,414,000*	1.46	*25,143*
2035	*1,003,265*	*1,448,000*	1.44	*37,449*
2040	*1,037,469*	*1,491,000*	1.44	*42,972*
2045	*1,068,393*	*1,533,000*	1.43	*45,882*
2050	*1,099,107*	*1,576,000*	1.43	*47,915*

Table 1 shows historic jobs-housing balance from 2010-2020 and predicted jobs-housing balance in 5-year increments for years 2025-2050. Housing unit data provided by RTC's Land Use Work Group. Employment data 2010-2018 is from U.S. Bureau of Economic Analysis (BEA) and 2019-2050 is from CBER forecasts for total employment.

Instead, experts find that analysis at a more localized level, such as near employment centers, neighborhoods, downtowns, and other planning subareas, is much more likely to reflect the true preferences and needs of communities. Suburban and rural neighborhoods may prefer to remain housing rich communities (JHB near .75) whereas employment centers and transit corridors likely need more balance between housing and jobs in order to see the kind of density and activity that make these areas succeed (JHB near 1.0). At the smaller local scale, the ratio between jobs and housing provides much more information about whether or not JHB is appropriate and what housing needs are for that area.

[6] Wu, Q., Zhang, M., and Yang, D. (2015) Chapter 18 Jobs-housing balance: The right ratio for the right place. In Recent Developments in Chinese Urban Planning. Springer International Publishing, Switzerland.

[7] Cervero, R. (1989). Jobs-housing balancing and regional mobility. Journal of the American Planning Association. 55:2 (136-150).

[8] Wu, Q., Zhang, M., and Yang, D. (2015) Chapter 18 Jobs-housing balance: The right ratio for the right place. In Recent Developments in Chinese Urban Planning. Springer International Publishing, Switzerland.

What does JHB in Southern Nevada look like today?

Currently, there are no regionally established targets for JHB in Southern Nevada, although local jurisdictions have recently established targets. Census data does, however, provide some insight into what the region's JHB looks like today and in the past. (See Table 1) Over the past decade, between 2010 and 2020, the regional JHB ratio has steadily increased from 1.32 to 1.56. This trend held true over the 5 years since adopting the SNS Regional Plan in 2015, and in 2018, Southern Nevada had a regional high JHB ratio of 1.58. In the future, the regional JHB is forecasted to fall slightly, settling at 1.43 by 2050.

While the differences between these ratios may not seem extreme, they tell very different stories about the state of housing and potential housing needs in the region. (See Figure 1) In the years 2010-2013, the region had a JHB ratio between 1.32 and 1.38. Using the standard ratio of 1.5 for regional jobs-housing balance, this means the region was slightly housing rich, evidenced by the housing surplus shown during these years (Table 1). However, as the JHB in the region began to increase, eventually hitting 1.58 in 2018, the region started to experience a slight housing shortage. By 2030, the region is forecast to start becoming more balanced again, however the regional JHB ratio will be higher than the previous decade at 1.46. The region is again forecast to have a surplus of housing, although the surplus will be less than earlier in the decade when the region had a lower JHB. If the region wanted to return to the balance it saw in 2010-2013, more housing than is currently predicted would need to be provided.

Transit accessibility in Southern Nevada

Not all Nevadans are able to afford and maintain a personal vehicle.

21st

Southern Nevada ranked 21st in the nation for transit accessibility (based on the number of jobs that are accessible within a 30-minute public transit ride) in 2019

77%

Southern Nevada has almost 77% less jobs accessible by transit than Los Angeles, 59% less than Denver, 40% less than Salt Lake City, and 13% less than Phoenix.

4.3%

In 2019, only 4.3% of work commutes were by alternative transportation options (transit/walk/bike).

Without further context and regionally established JHB goals, these numbers don't provide a lot of information on their own. When paired with transportation data, the JHB story becomes a little clearer. According to the Nevada Department of Transportation (NDOT), vehicle miles traveled (VMT) in Nevada are growing faster than the population.[9] In the years between 2010 and 2020, data shows that Nevadans are driving more and that average commute times for residents are increasing. In 2019, Southern Nevadans drove a combined 19.1 billion miles.[10] Per resident, VMT increased by 20 percent since 2009 and 11 percent since 2005.[11] Projections also

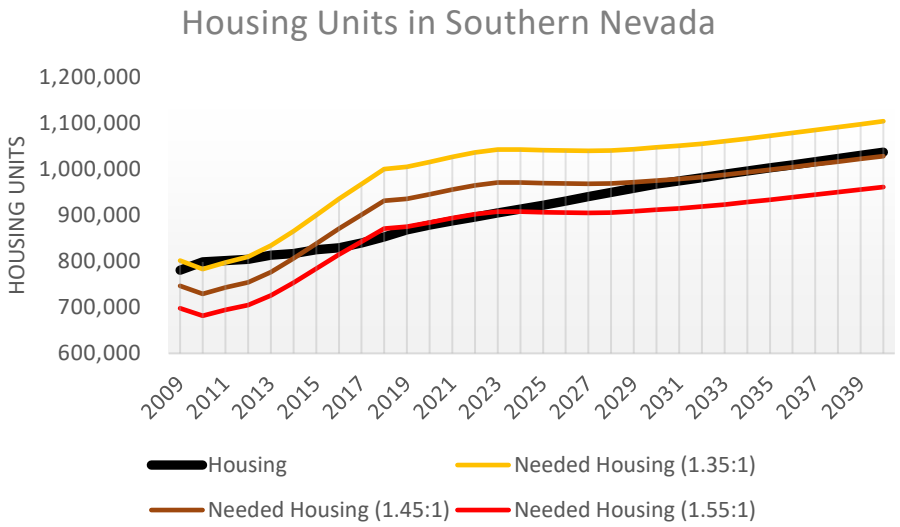


Figure 1 shows housing needs based on various jobs-housing ratios, ranging between 1.35-1.55. Different ratios show shortages and surpluses depending on the desired jobs-housing balance.

[9] State of Nevada. (2021). State of Nevada Climate Strategy. Department of Conservation and Natural Resources. Carson City, NV.

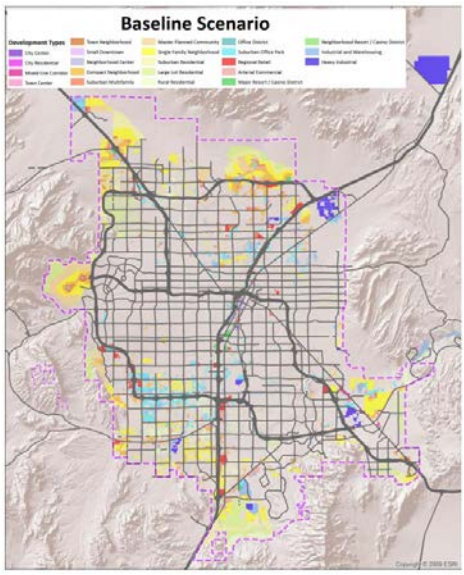
[10] State of Nevada. (2021). State of Nevada Climate Strategy. Department of Conservation and Natural Resources. Carson City, NV.

[11] Nevada Department of Transportation (NDOT). (2021). Annual Vehicle Miles of Travel: 2019 HPMS Data, Annual Vehicle Miles of Travel: 2009 HPMS Data, and Annual Vehicle Miles of Travel: 2005 HPMS Data. Carson City, NV.

indicate that over the next ten years, annual VMT across the state will increase by another 30 percent, fueled by a 14 percent increase in VMT per citizen.[12] Additionally, the mean travel time for the region increased by 4 percent between 2010 and 2019, from 24.3 minutes to 25.2 minutes respectively.[13] While this increase in commute time is fairly negligible now, the overall trend is concerning and, if development continues as it has the past, commute times are likely to worsen in the region.

Housing experts continue to make the case for including transportation costs in housing affordability. Transportation costs are typically a household's second-largest expenditure and these costs are largely a function of the neighborhood characteristics where households choose to live. Neighborhoods with characteristics that align with the SNS complete communities theme – compact development with access to jobs, housing, transit, and a wide variety of businesses – tend to have lower transportation costs, making them more affordable for a variety of residents overall. Currently, transportation costs make up an average of 24 percent of an average household's costs in southern Nevada and the region's compact neighborhood score (an index that assess the density and walkability of an area) is 1.6, meaning the region is very low density and most households require a vehicle in order to access jobs and services in the region.[14]

JHB can be used to capture these qualities as well. The further dispersed housing and jobs are (ratios that are greater than 1), the more likely it is that transportation costs will exceed reasonable levels for households, compounding other affordability issues (see *SNS Regional Housing Inventory: Affordability Brief*). As JHB increases in the region, historical trends suggest that residents need to travel farther and commute longer to reach their jobs, and they may be accruing increased transportation costs as well. The more time and money southern Nevadans spend on the road, the more time residents spend away from their homes and family, and the less time and money they have to spend on other activities that may positively affect their quality of life.



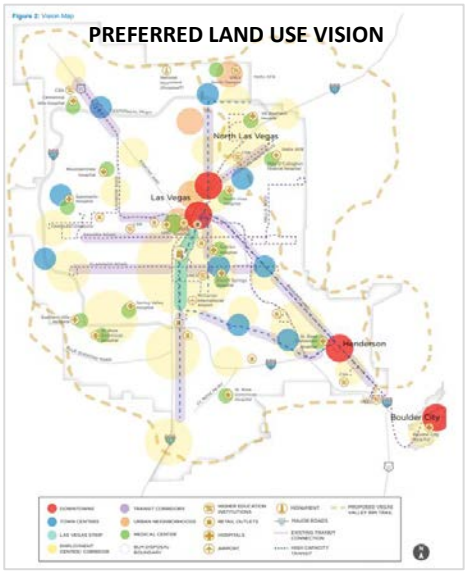


Figure 2 shows two future growth scenarios developed during the SNS regional planning effort. Scenarios include the baseline scenario and the preferred land use vision. (Click on maps for full size image.)

For further information on this scenario planning process, see the Southern Nevada Strong Regional Plan, Chapter 4.

[12] State of Nevada. (2021). State of Nevada Climate Strategy. Department of Conservation and Natural Resources. Carson City, NV.

[13] U.S. Census Bureau. (2021) 2019: ACS 5-Year Estimates Table S0801 and 2010: ACS 5-Year Estimates Table S0801.

[14] H+T Index. (2021) Housing and Transportation Affordability Index: Clark County. Center for Neighborhood Technology. Chicago. IL.

What do land use patterns say about JHB in Southern Nevada?

While the region does not have established JHB targets, planning for JHB is guided by local jurisdictions who, through adoption of the SNS Regional Plan, seek to build "complete communities" throughout the region that see more sustainable and compact development types such as mixed-use, mixed-income, and transit-oriented development, providing for housing near employment centers, service providers, shopping, public transportation, and recreational facilities. In order to promote this concept, the SNS Regional Plan used scenario-planning and community input to develop both a "baseline scenario" and a "preferred land use vision." The two scenarios present different growth patterns, both of which are realistic scenarios for the region and represent plausible future housing and job growth. They compare the advantages and opportunities for developing more complete communities and provide some insight for discussing where housing growth should occur and regional JHB goals.

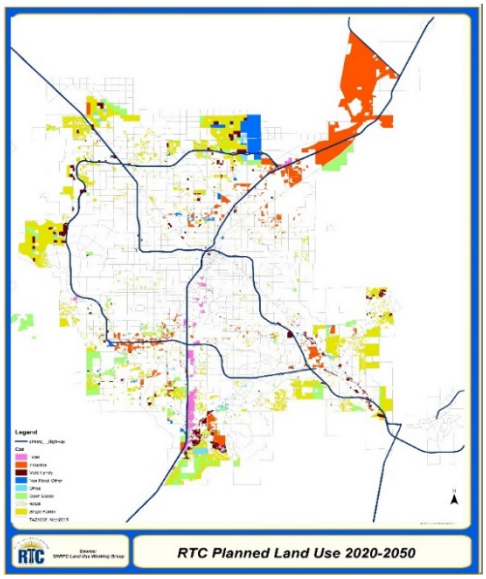


Figure 3 shows that future land use between years 2020-2050 closely matches that of the baseline scenario. (Click on map for full size image.)

The baseline scenario is similar to historical growth patterns for the region. In this scenario, 67,000 acres of new development is needed to accommodate future growth. The model (Fig. 2) shows that employment would continue to focus around current industry clusters and that new employment centers would likely grow on the edges of existing development. New housing, particularly higher-density housing, would also be developed on the outskirts of the region, and road congestion and commute times in the region would likely worsen as housing and jobs are not predicted to be located close together. Transportation and infrastructure investments would continue to be auto-oriented and the economic and health disparities within the region would likely continue and worsen.

In the preferred land use scenario (Fig. 2), only 55,000 acres of new development is needed to accommodate future growth. By adopting new planning practices and policies, the region would see an improvement in JHB near major employment and activity

Baseline Scenario Challenges	Preferred Land Use Benefits	Changes from the Baseline Scenario
Most of the growth is at the "fringe," in single-use development types	• Transportation costs decrease • New infrastructure costs are less • Land consumption decreases (-11K acres)	• 30% fewer housing units in suburban residential development types • 18% fewer jobs in single-use employment types • **Average annual household transportation costs are $3,000 less in central vs. fringe areas**
Few "mixed-use centers"	• Jobs/housing proximity improves • Transit supporting density increases • Pedestrian and bicycle access increases • Infill development increases (Increase of ~700 acres)	• 51% of new housing units in mixed-use areas *(Only 24% in base case)* • 19% of new jobs in mixed-use areas *(Only 8% in base case)* • 16% of new housing within a ¼ mile of high-capacity transit *(Only 9% in the base case)*
Low proximity of housing to existing schools and parks	• Better use of existing school facilities, potential to expand or build within existing neighborhoods • Support existing public amenities	• 26% more housing units within one mile of existing schools • 21% more housing units within a ¼ mile of existing parks
Fiscal efficiency	• Fewer road miles to build/maintain • Tax revenue increases (Higher property values for commercial land, more housing units)	• **$600,000,000 cost savings in roadway infrastructure** • Overall increase in fiscal efficiency
Environmental resource use	• Reduced emissions and resource usage	• 11% decrease in energy use • 11% decrease in carbon emissions • 21% decrease in water use

Table 2 was developed during the SNS regional planning process and provides insights into the benefits the region may experience if future growth and land use follow the patterns and policies modeled in the preferred land use vision. For further information on these benefits, see the Southern Nevada Strong Regional Plan, Chapter 4.

centers. Specifically, the preferred land use vision shows new housing growth occurring in existing neighborhoods, redevelopment of vacant and underused sites, and housing that is located closer to jobs. The region would also experience more investment and redevelopment within transit corridors, likely reducing the public investment needed in infrastructure and capital costs. The region's downtowns and town centers would provide for a variety of jobs, services, housing types, price ranges, and new employment and workforce development opportunities would also be created. Additionally, economic and health disparities would likely improve.

2019-2050 Land Use Forecasts

The location of housing and job growth is extremely important. New compact development provides conditions that support the development of new housing types in the region in locations that are likely less expensive to serve, supporting new economic growth within the region. Current conditions are the result of historic development trends and public policy choices. Future conditions will also be a result of these decisions and implementation of the preferred land use vision represents that the region prioritizes the well-being and quality of life for southern Nevadans while also prioritizing fiscal responsibility and economic vitality. This commitment was made in the adoption of the SNS Regional Policy Plan. The region may be on its way to achieving this vision (see note) but recent forecasts show the region is much more likely to achieve the baseline scenario (Fig. 3).

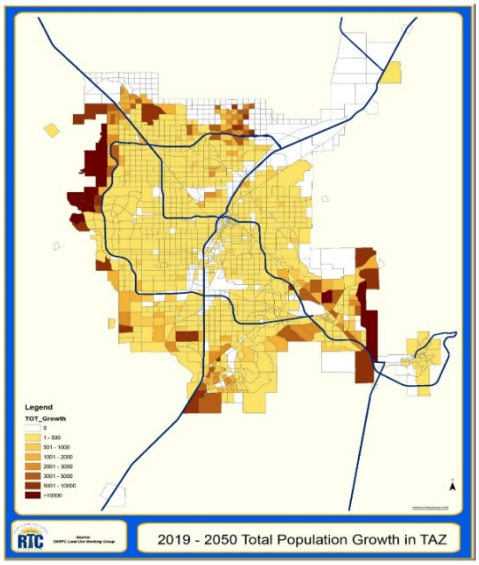


Figure 4 shows that population growth in the years 2020-2050 primarily occurs at the edges of the region. (Click on map for full size image.)

The RTC's Land Use Working Group (LUWG) provides forecasted land use data for the region and forecasts are done every four years in order to inform RTC's Regional Transportation Plan (RTP). Looking out to 2050, the forecast map that informs the 2021-2050 RTP (Fig. 3) shows future land use growth, for both housing and employment, closely matches that of the baseline scenario, with most new growth happening at the edges of the region.

Overall population growth (Fig. 4), shows that while new housing growth will occur throughout the region, the majority of this growth will occur on the periphery of the region in the northwest and southeast, with smaller pockets of growth happening in the north, south, and southwest as well. The population density projection (Fig. 5), also reveals that much of this housing growth is also projected to be lower-density development with very little higher-density development. Some higher density development occurs primarily at the edges in the north and south, and, to a lesser extent, in the northwest.

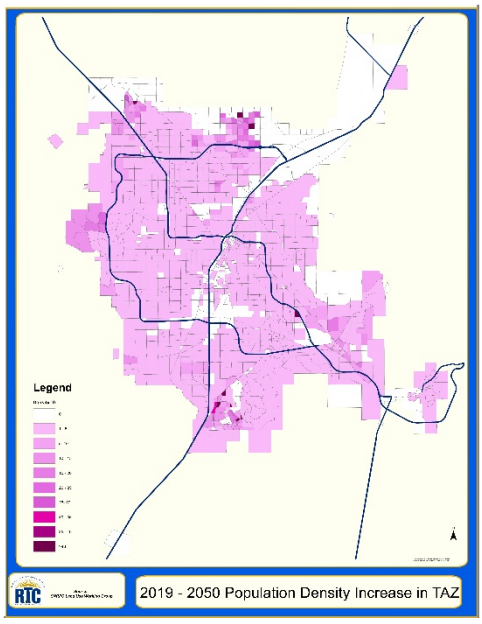


Figure 5 shows population density in the region between years 2020-2050 will remain low. Housing in the region will continue to be primarily low-density and dispersed throughout the region. (Click on map for full size image.)

These patterns are also true for future job growth (Fig. 6 and Fig. 7). In 2050, most of the job growth will occur at the edges of the region and in the resort corridor east of the I-15. The density of jobs will remain low throughout the region, with a higher-density of jobs occurring in the resort corridor. Some higher-density job availability will also emerge in the north and south in the future as well, but overall housing and jobs will continue to be dispersed across the region. Housing preferences in this scenario will include a willingness to commute and VMT and commute times will likely increase as NDOT

It's important to ***NOTE*** *that the forecast data used in this analysis represents where we are as a region* ***today****, and that the forecast may change in the future. Land use is slow to change and many of the region's jurisdictions have been working hard to update their land use policies, zoning, and development codes to better align with the complete community's vision in the SNS Regional Plan. As these new codes and policies are adopted, future forecasts will likely start to reflect patterns that move the region closer to the preferred land use vision. RTC updates its forecasts every four years, coinciding with updates to the Regional Transportation Plan (RTP).*

projects. Capital costs will be expensive both for development and maintenance, and residents will make housing and employment decisions that include trade-offs between quality of life due to the cost of housing and commuting.

What's next?

In order to drive more balance within the region, it might be beneficial for the region to look at establishing JHB goals. Establishing goals can help focus housing balance near priority development areas, such as employment and activity centers and along transit corridors. Additionally, JHB goals can also help regions plan for future growth, infrastructure, and services, helping local jurisdictions to be more financially stable and invest in more services and opportunities.

It's important to keep in mind that JHB only provides information about the relationship between housing and jobs, indicating an area's potential for greater balance, but this balance also depends on the share of jobs and housing available in the region as well as the match between worker's skills and job opportunities, and worker income and housing affordability. Alone, JHB does not solve for affordability or diversity in housing, but striving for more balance in certain areas in the region, such as near employment centers, activity centers, and transit corridors, can encourage more sustainable and compact development which may contribute positively towards these issues.

The region has already begun to identify priority areas for housing, job, and transit growth and a few local jurisdictions are also establishing JHB targets for certain areas within the region. The SNS Regional Policy Plan also identifies future activity centers in the preferred land use vision, and On Board, the region's mobility plan, identifies future corridors for high-capacity transit investments. Much of the groundwork has been laid to help inform where future housing development and job growth could occur and future forecasts can continue to provide insight on the progress the region is making on these goals.

As administrators of the SNS Regional Plan, RTC's regional planning team is poised to provide further research and technical assistance to help the region meet its housing goals.

Future research may include:

- Facilitate regional coordination around housing issues
    - Research best practices and outline how to facilitate this in the region
    - Develop regional consensus around housing and JHB goals
    - Seek to build housing priorities into regional documents such as the RTP and Comprehensive Economic Development Strategy (CEDS)
    - Develop preferred growth zones for the region
- Continue forecasting and scenario planning
    - The RTC may be able to adopt its forecasting process to help the region test new policies and to track progress on regional housing goals
    - Develop future housing scenarios

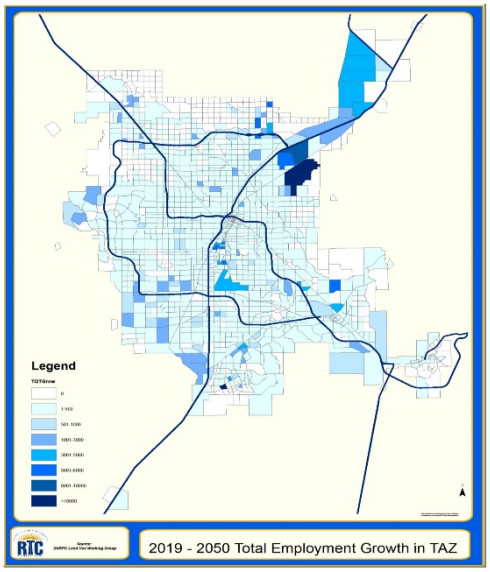


Figure 6 shows that employment growth between the years 2020 and 2050 will occur throughout the region, but primarily at the edges. (Click on map for full size image.)

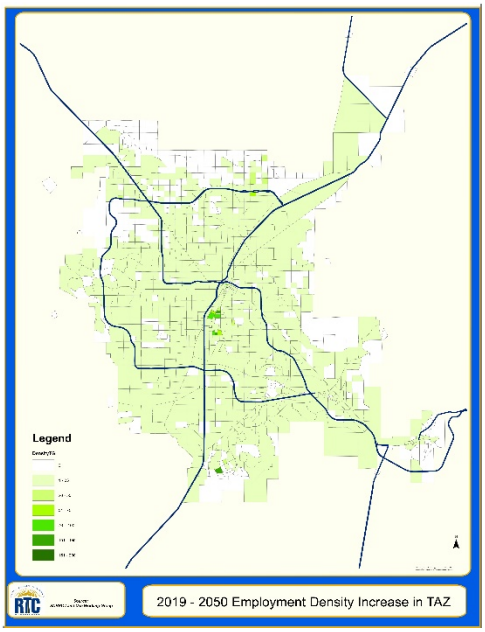


Figure 7 shows that employment density in the years 2020-2050 will remain dispersed throughout the region and that the Strip remains the only dense employment center within the region. (Click on map for full size image.)

    - Use spatial technology to identify possible infill/redevelopment opportunities and infrastructure investment options
- Research fiscal impacts of various development choices (sprawl v. compact development)
    - Infrastructure analysis to determine where existing infrastructure can support new development
    - Review tensions that prohibit compact development
- Develop a model or process for conducting fiscal feasibility analyses
    - Consider factors such as current zoning, market rate rents, and construction costs in the region and determine if desired development types are feasible
- Study linkages between transportation and housing in the region
    - Where is there efficiency of location
    - Research transportation costs and how they factor into housing costs and cost burdens in the region
- Research relationships between jobs-housing balance and housing market
    - Does jobs-housing balance have any relationship to housing costs or the housing opportunity index?

References

Cervero, R. (1989). Jobs-housing balancing and regional mobility. Journal of the American Planning Association. 55:2 (136-150).

H+T Index. (2021) Housing and Transportation Affordability Index: Clark County. Center for Neighborhood Technology. Chicago. IL.

Mercer. (May, 2017). Long commutes costing firms a week's worth of staff productivity. Mercer United Kingdom. London, United Kingdom.

Nevada Department of Transportation (NDOT). (2019). Annual Vehicle Miles of Travel: 2019 HPMS Data. Carson City, NV.

Nevada Department of Transportation (NDOT). (2009). Annual Vehicle Miles of Travel: 2009 HPMS Data. Carson City, NV.

Nevada Department of Transportation (NDOT). (2005). Annual Vehicle Miles of Travel: 2005 HPMS Data HPMS Data. Carson City, NV.

State of Nevada. (2021). State of Nevada Climate Strategy. Department of Conservation and Natural Resources. Carson City, NV.

Urban Institute. (2019). Meeting the Washington Region's Future Housing Needs. Urban Institute. Washington, D.C.

U.S. Census Bureau. (2019) 2019: ACS 5-Year Estimates Table S0801.

U.S. Census Bureau. (2010) 2010: ACS 5-Year Estimates Table S0801.

Wardrip, K., Williams, L., and Hague, S. (January, 2011). The role of affordable housing in creating jobs and stimulating local economic development: A review of the literature. Center for Housing Policy.

Wu, Q., Zhang, M., and Yang, D. (2015) Chapter 18 Jobs-housing balance: The right ratio for the right place. In Recent Developments in Chinese Urban Planning. Springer International Publishing, Switzerland.

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: REGIONAL BIKEWAY AND SIDEWALK INVENTORY

PETITIONER: M.J. MAYNARD, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC) RECEIVE A PRESENTATION ON THE REGIONAL BIKEWAY AND SIDEWALK INVENTORY

GOAL: ENHANCE MOBILITY BY IMPROVING TRANSPORTATION CHOICES AND FACILITATING MULTI-MODAL CONNECTIVITY

FISCAL IMPACT:
None

BACKGROUND:
The Regional Bikeway and Sidewalk Inventory will determine the presence of sidewalks and bike lanes along existing major roadways and whether they are compliant with Americans with Disabilities Act (ADA) requirements. The Regional Bikeway and Sidewalk Inventory will also establish a consistent GIS database for active transportation and ADA planning processes.

Staff will provide a presentation on the project's overview.

Respectfully submitted,

DocuSigned by:
John Pennelas
79E5AF522AE1479...

JOHN R. PEÑUELAS, JR., P.E.
Senior Director of Engineering

EAC Item #20
September 30, 2021
Non-Consent

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: 2021-2050 REGIONAL TRANSPORTATION PLAN AMENDMENT CLARK 21-11

PETITIONER: M.J. MAYNARD, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE EXECUTIVE ADVISORY COMMITTEE APPROVE AMENDMENT CLARK 21-11 TO THE 2021-2050 REGIONAL TRANSPORTATION PLAN (FOR POSSIBLE ACTION)

GOAL: IMPROVE THE EFFICIENCY AND EFFECTIVENESS OF THE TRANSPORTATION SYSTEM AND AIR QUALITY BY MANAGING CONGESTION

FISCAL IMPACT:
None by this action

BACKGROUND:
The Regional Transportation Commission of Southern Nevada (RTC) adopted the 2021-2050 Regional Transportation Plan (RTP) at its January 14, 2021 meeting. Federal regulations require the RTP to be amended when there are major adjustments to program elements.

Amendment Clark 21-11 adds and modifies projects and adjusts funds in the RTP. Project details are included in the agenda backup.

A 30-day public review and comment period started on September 1, 2021 and will end on September 30, 2021. The comment period has been publicly noticed and details of Amendment Clark 21-11 are available on the RTC website. The September 14, 2021 Metropolitan Planning Subcommittee meeting served as the public information meeting for Amendment Clark 21-11. Public comments received during the 30-day comment period will be considered and reported to the Executive Advisory Committee and RTC Board of Commissioners.

This amendment has demonstrated air quality conformity and is consistent with the RTP. Staff recommends approval.

Respectfully submitted,

DocuSigned by:
Andrew Kjellman
B86D33CF1FA44C3...

ANDREW KJELLMAN
Director of Metropolitan Planning Organization

mf

EAC Item #21
September 30, 2021
Non-Consent

Regional Transportation Commission of Southern Nevada

AGENDA ITEM DEVELOPMENT REPORT

Agenda Item Recommendation (as submitted):
THAT THE EXECUTIVE ADVISORY COMMITTEE APPROVE REGIONAL TRANSPORTATION PLAN AMENDMENT CLARK 21-11 TO THE 2021-2050 REGIONAL TRANSPORTATION PLAN (FOR POSSIBLE ACTION)

Agenda Item Requested by: Regional Transportation Commission of Southern Nevada

Date: 09/15/2021	Staff

Discussion: The Regional Transportation Commission of Southern Nevada (RTC) adopted the 2021-2050 Regional Transportation Plan (RTP) at its January 14, 2021 meeting. Federal regulations require the RTP to be amended when there are major adjustments to program elements. Amendment Clark 21-11 adds and modifies projects and adjusts funds in the RTP. Project details are included in the agenda backup.

A 30-day public review and comment period started September 1, 2021 and will end on September 30, 2021. The comment period has been publicly noticed, and details of Amendment Clark 21-11 are available on the RTC website. The September 14, 2021 Metropolitan Planning Subcommittee meeting served as the public information meeting for Amendment Clark 21-11. Public comments received during the 30-day comment period will be considered and reported to the RTC Executive Advisory Committee and Board.

The requested changes in Amendment Clark 21-11 are summarized below:

- Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) funds were added to existing Clark County, Henderson, and Las Vegas projects.
- A new CRRSAA funded Civic Center Drive/Alexander Road Project was added.
- A new City of Las Vegas CC-215 Beltway Trail Bridges project was added.
- Clark County Department of Air Quality moved funds to 2023 for Hybrid and Battery Electric Vehicle Programs.
- Nevada Department of Transportation modified the I-515 (Downtown Access) project description, moved it forward, and reduced funds.
- Nevada Department of Transportation modified the Henderson Interchange project description and moved it forward.
- RTC Transit reduced funds for the Maryland Pkwy and Capital Cost of Contracting projects, increased funds for the RTC Transit Fleet Buses project, and identified completed projects.

This amendment does not impact air quality and is consistent with the RTP. Staff recommends approval.

Advisory Action: Approval ☒ Disapproval ☐ Hold Item ☐

Meeting Date: 09/30/2021	**Executive Advisory Committee**

Discussion: Recommended Approval

Advisory Action: Approval ☒ Disapproval ☐ Hold Item ☐

access 2050

Enhancing Mobility for Southern Nevada Residents

REGIONAL TRANSPORTATION PLAN for SOUTHERN NEVADA 2021 - 2050

AMENDMENT 21-11

RTC

CL20200121 (Ver 2) 21-11 STATUS In Progress - Programmed FEDERAL

Title: St Rose Parkway Pedestrian Bridge (PE) and (CON)

Description: Construct 1 pedestrian bridge at St Rose Parkway and Jeffreys

Project Type: Bridge - New/replace **AQ:** Exempt, Air Quality - Bicycle and pedestrian facilities. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Bridge #: New Bridge

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	HIP-CRRSAA 2021 Clark	$400,000	$0	$0	$0	$400,000
2022	Local Fund	$21,053	$0	$0	$0	$21,053
2024	HIP-CRRSAA 2021 Clark	$0	$0	$4,000,000	$0	$4,000,000
2024	Local Fund	$0	$0	$210,526	$0	$210,526
	2021-2025 TOTAL	**$421,053**	**$0**	**$4,210,526**	**$0**	**$4,631,579**
	ALL YEARS TOTAL	**$421,053**	**$0**	**$4,210,526**	**$0**	**$4,631,579**

MPO **RTCSNV** (6277) Lead Agency **City of Henderson**

Previously Approved Version

CL20200121 (Ver 1) 21-01

Title: St Rose Parkway Pedestrian Bridge (PE) and (CON)

Description: Construct 1 pedestrian bridge at St Rose Parkway and Jeffreys

Project Type: Bridge - New/replace **AQ:** Exempt, Air Quality - Bicycle and pedestrian facilities. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Bridge #: New Bridge

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2024	CMAQ - Clark County	$434,503	$0	$0	$0	$434,503
2024	Local Fund	$22,869	$0	$0	$0	$22,869
	2021-2025 TOTAL	**$457,372**	**$0**	**$0**	**$0**	**$457,372**
	ALL YEARS TOTAL	**$457,372**	**$0**	**$0**	**$0**	**$457,372**

MPO **RTCSNV** (6277) Lead Agency **City of Henderson**

CL20100193 (Ver 15) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: SR 159, Construct right turn lane and bus turnout improvements
Description: Construct Bus Turnout and Intersection Improvements
Project Type: Rd Interchange/ Intersec **AQ:** Exempt, All Projects - Intersection signalization projects at individual intersections. **TCM:** No **NDOT:** District 1
County: Clark **Limits:** Primary Crossstreet: Charleston Blvd, Secondary Crossstreet: Torrey Pines Dr

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	CMAQ - Clark County	$0	$0	$2,100,000	$0	$2,100,000
2022	HIP-CRRSAA 2021 Clark	$0	$0	$289,473	$0	$289,473
2022	Local Fund	$0	$0	$125,762	$0	$125,762
<2021	Prior	$189,473	$1,112,000	$0	$0	$1,301,473
	2021-2025 TOTAL	**$0**	**$0**	**$2,515,235**	**$0**	**$2,515,235**
	ALL YEARS TOTAL	**$189,473**	**$1,112,000**	**$2,515,235**	**$0**	**$3,816,708**

MPO **RTCSNV** (2780) Lead Agency **City of Las Vegas**

Previously Approved Version

CL20100193 (Ver 14) 21-09

Title: SR 159, Construct right turn lane and bus turnout improvements
Description: Construct Bus Turnout and Intersection Improvements
Project Type: Rd Interchange/ Intersec **AQ:** Exempt, All Projects - Intersection signalization projects at individual intersections. **TCM:** No **NDOT:** District 1
County: Clark **Limits:** Primary Crossstreet: Charleston Blvd, Secondary Crossstreet: Torrey Pines Dr

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	CMAQ - Clark County	$0	$0	$2,100,000	$0	$2,100,000
2022	Local Fund	$0	$0	$110,527	$0	$110,527
<2021	Prior	$189,473	$1,112,000	$0	$0	$1,301,473
	2021-2025 TOTAL	**$0**	**$0**	**$2,210,527**	**$0**	**$2,210,527**
	ALL YEARS TOTAL	**$189,473**	**$1,112,000**	**$2,210,527**	**$0**	**$3,512,000**

MPO **RTCSNV** (2780) Lead Agency **City of Las Vegas**

CL20100195 (Ver 16) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: Eastern Avenue Turnouts

Description: Design and construct 11 bus turnouts.

Project Type: Rd Improvement **AQ:** Exempt **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Primary Crossstreet: Eastern Ave, Secondary Crossstreet: Harris Ave

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	CMAQ - Clark County	$0	$0	$2,923,750	$0	$2,923,750
2022	HIP-CRRSAA 2021 Clark	$0	$0	$1,147,368	$0	$1,147,368
2022	Local Fund	$0	$0	$214,270	$0	$214,270
<2021	Prior	$0	$2,631,579	$0	$0	$2,631,579
	2021-2025 TOTAL	**$0**	**$0**	**$4,285,388**	**$0**	**$4,285,388**
	ALL YEARS TOTAL	**$0**	**$2,631,579**	**$4,285,388**	**$0**	**$6,916,967**

MPO **RTCSNV** (2773) Lead Agency **City of Las Vegas**

Previously Approved Version

CL20100195 (Ver 15) 21-09

Title: Eastern Avenue Turnouts

Description: Design and construct 11 bus turnouts.

Project Type: Rd Improvement **AQ:** Exempt **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Primary Crossstreet: Eastern Ave, Secondary Crossstreet: Harris Ave

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	CMAQ - Clark County	$0	$0	$2,923,750	$0	$2,923,750
2022	Local Fund	$0	$0	$153,882	$0	$153,882
<2021	Prior	$0	$2,631,579	$0	$0	$2,631,579
	2021-2025 TOTAL	**$0**	**$0**	**$3,077,632**	**$0**	**$3,077,632**
	ALL YEARS TOTAL	**$0**	**$2,631,579**	**$3,077,632**	**$0**	**$5,709,211**

MPO **RTCSNV** (2773) Lead Agency **City of Las Vegas**

CL20110121 (Ver 16) 21-11 STATUS In Progress - Programmed FEDERAL

Title: West Charleston Blvd Bus Turnouts

Description: Construct seven (7) bus turnouts/right turn lanes on Charleston Boulevard.

Project Type: Rd Improvement **AQ:** Exempt **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Primary Crossstreet: Charleston Blvd, Secondary Crossstreet: Campbell Dr

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	CMAQ - Clark County	$0	$500,000	$0	$0	$500,000
2022	HIP-CRRSAA 2021 Clark	$0	$667,000	$0	$0	$667,000
2022	Local Fund	$0	$61,422	$0	$0	$61,422
2023	CMAQ - Clark County	$0	$0	$4,408,000	$0	$4,408,000
2023	Local Fund	$0	$0	$232,000	$0	$232,000
	2021-2025 TOTAL	**$0**	**$1,228,422**	**$4,640,000**	**$0**	**$5,868,422**
	ALL YEARS TOTAL	**$0**	**$1,228,422**	**$4,640,000**	**$0**	**$5,868,422**

MPO **RTCSNV** (2787) Lead Agency **City of Las Vegas**

Previously Approved Version

CL20110121 (Ver 15) 21-09

Title: West Charleston Blvd Bus Turnouts

Description: Construct seven (7) bus turnouts/right turn lanes on Charleston Boulevard.

Project Type: Rd Improvement **AQ:** Exempt **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Primary Crossstreet: Charleston Blvd, Secondary Crossstreet: Campbell Dr

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	CMAQ - Clark County	$0	$500,000	$0	$0	$500,000
2022	Local Fund	$0	$413,000	$0	$0	$413,000
2023	CMAQ - Clark County	$0	$0	$4,408,000	$0	$4,408,000
2023	Local Fund	$0	$0	$232,000	$0	$232,000
	2021-2025 TOTAL	**$0**	**$913,000**	**$4,640,000**	**$0**	**$5,553,000**
	ALL YEARS TOTAL	**$0**	**$913,000**	**$4,640,000**	**$0**	**$5,553,000**

MPO **RTCSNV** (2787) Lead Agency **City of Las Vegas**

CL20130040 (Ver 14) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: Various Intersections Right Turn Improvements

Description: Design and construct right turn lanes at 5 different intersections.

Project Type: Rd Interchange/ Intersec **AQ:** Exempt, All Projects - Intersection signalization projects at individual intersections. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Primary Crossstreet: Rainbow Blvd, Secondary Crossstreet: Cheyenne Ave

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	CMAQ - Clark County	$0	$0	$1,665,350	$0	$1,665,350
2022	HIP-CRRSAA 2021 Clark	$0	$0	$347,000	$0	$347,000
2022	Local Fund	$0	$0	$105,914	$0	$105,914
<2021	Prior	$263,158	$1,842,106	$0	$0	$2,105,264
	2021-2025 TOTAL	**$0**	**$0**	**$2,118,264**	**$0**	**$2,118,264**
	ALL YEARS TOTAL	**$263,158**	**$1,842,106**	**$2,118,264**	**$0**	**$4,223,528**

MPO **RTCSNV** (5078) Lead Agency **City of Las Vegas**

Previously Approved Version

CL20130040 (Ver 13) 21-09

Title: Various Intersections Right Turn Improvements

Description: Design and construct right turn lanes at 5 different intersections.

Project Type: Rd Interchange/ Intersec **AQ:** Exempt, All Projects - Intersection signalization projects at individual intersections. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Primary Crossstreet: Rainbow Blvd, Secondary Crossstreet: Cheyenne Ave

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	CMAQ - Clark County	$0	$0	$1,665,350	$0	$1,665,350
2022	Local Fund	$0	$0	$87,650	$0	$87,650
<2021	Prior	$263,158	$1,842,106	$0	$0	$2,105,264
	2021-2025 TOTAL	**$0**	**$0**	**$1,753,000**	**$0**	**$1,753,000**
	ALL YEARS TOTAL	**$263,158**	**$1,842,106**	**$1,753,000**	**$0**	**$3,858,264**

MPO **RTCSNV** (5078) Lead Agency **City of Las Vegas**

CL20200132 (Ver 2) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: City of Las Vegas Arterial/Collector Pavement Rehabilitation

Description: Pavement overlays, median island modifications, bike lanes, signage and striping, where feasible. Corridors include Tenaya Way, Lake Mead to Washington; Vegas Drive, Rampart to Rainbow; Buffalo Drive, Sahara to Charleston; Craig Road, Buffalo to US95; Jones Blvd, Horse to Lone Mountain; Vegas Drive/Owens Ave, Rancho to I-15; Anasazi Drive, Town Center to Lake Mead; Rainbow Blvd, US95 to Smoke Ranch; Lake Mead Drive, Hills Center to CC215; Washington Ave, Sandhill to Nellis; Tenaya Way, Cheyenne to Craig; St Louis, Paradise to Boulder Hwy; Far Hills, Carriage Hill to Anasazi; and Hualapai Way, Anasazi to Town Center.

Project Type: Rd Recons/Rehab/Resur **AQ:** Exempt, Safety - Pavement resurfacing and/or rehabilitation. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** From Lake Mead Blvd to Washington Avenue of Distance (mile) 1.0

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2023	RTC Gas Tax	$0	$0	$1,057,500	$0	$1,057,500
2023	STBG CL	$0	$0	$20,092,500	$0	$20,092,500
	2021-2025 TOTAL	**$0**	**$0**	**$21,150,000**	**$0**	**$21,150,000**
	ALL YEARS TOTAL	**$0**	**$0**	**$21,150,000**	**$0**	**$21,150,000**

MPO **RTCSNV** (6284) Lead Agency **City of Las Vegas**

Previously Approved Version

CL20200132 (Ver 1) 21-01

Title: City of Las Vegas Arterial/Collector Pavement Rehabilitation

Description: Pavement overlays, bike lane enhancements, and ADA ramp upgrades, as feasible. Corridors include Western/Highland from CLV limits to Wyoming; Alta Drive from Hualapai to Rainbow; St. Louis from Paradise Road to Fremont and Paradise from St. Louis to Sahara; Lake Mead from CC 215 to Anasazi and Anasazi from Lake Mead to Summerlin Parkway; Vegas from Rainbow to I-15; and Jones from Rome to Horse.

Project Type: Rd Recons/Rehab/Resur **AQ:** Exempt, Safety - Pavement resurfacing and/or rehabilitation. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** From Wyoming Avenue to Edna Avenue of Distance (mile) 1.2

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2023	RTC Gas Tax	$0	$0	$1,042,240	$0	$1,042,240
2023	STBG CL	$0	$0	$19,802,499	$0	$19,802,499
	2021-2025 TOTAL	**$0**	**$0**	**$20,844,739**	**$0**	**$20,844,739**
	ALL YEARS TOTAL	**$0**	**$0**	**$20,844,739**	**$0**	**$20,844,739**

MPO **RTCSNV** (6284) Lead Agency **City of Las Vegas**

CL20210022 (Ver 1) 21-11 STATUS **New Project** **LOCAL**

Title: CC215 Beltway Trail Bridges and Upgrades, Alexander Rd to Charleston Blvd

Description: Provide trail upgrades and safety improvements to the existing CC215 Beltway Trail including lighting, rest areas, and trail bridges

Project Type: Bicycle & Pedestrian **AQ:** Exempt, Air Quality - Bicycle and pedestrian facilities. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** CC215 Beltway from Alexander to Charleston of Distance (mile) 6.0

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2023	Question 10	$1,300,000	$0	$0	$0	$1,300,000
>2025	Beyond	$0	$0	$13,000,000	$0	$13,000,000
	2021-2025 TOTAL	**$1,300,000**	**$0**	**$0**	**$0**	**$1,300,000**
	ALL YEARS TOTAL	**$1,300,000**	**$0**	**$13,000,000**	**$0**	**$14,300,000**

MPO **RTCSNV** (6319) Lead Agency **City of Las Vegas**

CL20210023 (Ver 1) 21-11 STATUS **New Project** **FEDERAL**

Title: Civic Center Drive/Alexander Road Project

Description: This project consists of the design and construction to widen/infill/rehabilitate the existing pavement, upgrade the streetlights to LED, signs, striping, ADA upgrades, and other miscellaneous roadway improvements as needed.

Project Type: Rd Improvement **AQ:** Exempt, Safety - Pavement resurfacing and/or rehabilitation. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** From Cheyenne Avenue/Civic Center Drive to Alexander Road/Pecos Road of Distance (mile) 1.84

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2023	HIP-CRRSAA 2021 Clark	$0	$0	$7,000,000	$0	$7,000,000
2023	Local Fund	$0	$0	$368,421	$0	$368,421
	2021-2025 TOTAL	**$0**	**$0**	**$7,368,421**	**$0**	**$7,368,421**
	ALL YEARS TOTAL	**$0**	**$0**	**$7,368,421**	**$0**	**$7,368,421**

MPO **RTCSNV** (6320) Lead Agency **City of North Las Vegas**

CL20200115 (Ver 2) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: Rainbow Blvd widening
Description: Sawtooth Widen/Improvement
Project Type: Rd Improvement **AQ:** Non-Exempt **TCM:** Yes **NDOT:** District 1
County: Clark **Limits:** From CC-215 to Blue Diamond of Distance (mile) 3.2

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	Local Fund	$29,096	$0	$0	$0	$29,096
2022	STBG CL	$581,913	$0	$0	$0	$581,913
2023	HIP-CRRSAA 2021 Clark	$0	$0	$2,500,000	$0	$2,500,000
2023	Local Fund	$0	$0	$395,904	$0	$395,904
2023	STBG CL	$0	$0	$5,418,087	$0	$5,418,087
	2021-2025 TOTAL	**$611,009**	**$0**	**$8,313,991**	**$0**	**$8,925,000**
	ALL YEARS TOTAL	**$611,009**	**$0**	**$8,313,991**	**$0**	**$8,925,000**

MPO **RTCSNV** (6295) Lead Agency **Clark County**

Previously Approved Version

CL20200115 (Ver 1) 21-01

Title: Rainbow Blvd widening
Description: Sawtooth Widen/Improvement
Project Type: Rd Improvement **AQ:** Non-Exempt **TCM:** Yes **NDOT:** District 1
County: Clark **Limits:** From Blue Diamond to Arby of Distance (mile) 2.55

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	Local Fund	$30,627	$0	$0	$0	$30,627
2022	STBG CL	$581,913	$0	$0	$0	$581,913
2023	Local Fund	$0	$0	$291,763	$0	$291,763
2023	STBG CL	$0	$0	$5,543,487	$0	$5,543,487
	2021-2025 TOTAL	**$612,540**	**$0**	**$5,835,250**	**$0**	**$6,447,790**
	ALL YEARS TOTAL	**$612,540**	**$0**	**$5,835,250**	**$0**	**$6,447,790**

MPO **RTCSNV** (6295) Lead Agency **Clark County**

CL20190029 (Ver 3) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: Clark County Hybrid Electric Vehicle Program

Description: Purchase of up to 60 Hybrid Electric Vehicles over a 4-year period.

Project Type: Environmental Project **AQ:** Exempt **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Not Location Specific

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2023	CMAQ - Clark County	$0	$0	$0	$825,000	$825,000
2023	Local Fund	$0	$0	$0	$43,421	$43,421
	2021-2025 TOTAL	**$0**	**$0**	**$0**	**$868,421**	**$868,421**
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$868,421**	**$868,421**

MPO **RTCSNV** (6263) Lead Agency **Clark County Dept of Air Quality**

Previously Approved Version

CL20190029 (Ver 2) 21-01

Title: Clark County Hybrid Electric Vehicle Program

Description: Purchase of up to 60 Hybrid Electric Vehicles over a 4-year period.

Project Type: Environmental Project **AQ:** Exempt **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Not Location Specific

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	CMAQ - Clark County	$0	$0	$0	$825,000	$825,000
2022	Local Fund	$0	$0	$0	$43,421	$43,421
	2021-2025 TOTAL	**$0**	**$0**	**$0**	**$868,421**	**$868,421**
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$868,421**	**$868,421**

MPO **RTCSNV** (6263) Lead Agency **Clark County Dept of Air Quality**

CL20190030 (Ver 3) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: Clark County Battery Electric Vehicle Program

Description: Purchase of up to 16 Battery Electric Vehicles over a 4-year period.

Project Type: Environmental Project **AQ:** Exempt **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Not Location Specific

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2023	CMAQ - Clark County	$0	$0	$0	$480,000	$480,000
2023	Local Fund	$0	$0	$0	$25,263	$25,263
	2021-2025 TOTAL	**$0**	**$0**	**$0**	**$505,263**	**$505,263**
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$505,263**	**$505,263**

MPO **RTCSNV** (6264) Lead Agency **Clark County Dept of Air Quality**

Previously Approved Version

CL20190030 (Ver 2) 21-01

Title: Clark County Battery Electric Vehicle Program

Description: Purchase of up to 16 Battery Electric Vehicles over a 4-year period.

Project Type: Environmental Project **AQ:** Exempt **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Not Location Specific

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	CMAQ - Clark County	$0	$0	$0	$480,000	$480,000
2022	Local Fund	$0	$0	$0	$25,263	$25,263
	2021-2025 TOTAL	**$0**	**$0**	**$0**	**$505,263**	**$505,263**
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$505,263**	**$505,263**

MPO **RTCSNV** (6264) Lead Agency **Clark County Dept of Air Quality**

CL20180049 (Ver 2) 21-11 STATUS **In Progress - Programmed** **STATE**

Title: I 515, CLARK COUNTY, 28TH MOJAVE ROAD TO RANCHO DRIVE NEPA (Downtown Access Project)

Description: DOWNTOWN ACCESS PROJECT: CONSTRUCT BRAIDED RAMPS BETWEEN I 15 AND I 515; CONSTRUCT HOV INTERCHANGES AT CITY PKWY AND MARYLAND PKWY; ADD HOV LANES FROM MLK TO EASTERN; ADD FREEWAY CAPACITY TO I 515

Project Type: Rd Expansion **AQ:** Exempt **TCM:** Yes **NDOT:** District 1

County: Clark **Limits:** From Mojave Road to Rancho Drive of Distance (mile) 3.98 Milepost begins at 72.77 ends at 76.75

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	State Gas Tax	$17,000,000	$0	$0	$0	$17,000,000
	2021-2025 TOTAL	**$17,000,000**	**$0**	**$0**	**$0**	**$17,000,000**
	ALL YEARS TOTAL	**$17,000,000**	**$0**	**$0**	**$0**	**$17,000,000**

MPO **RTCSNV** (6270) Lead Agency **Nevada DOT**

Previously Approved Version

CL20180049 (Ver 1) 21TIP(22-00)

Title: I-515/ US-95 from US-95 Ranch Blvd to Mojave RD I-515; Mileposts US95 76.75 to I-515 72.77 Package 1 NEPA(Downtown Access Project NEPA)

Description: Construct braided ramps between I-15 and I-515, construct HOV interchanges at City Parkway and Maryland Parkway, add HOV lanes from MLK to Eastern, add freeway capacity to I-515

Project Type: Rd Expansion **AQ:** Exempt **TCM:** Yes **NDOT:** District 1

County: Clark **Limits:** From Rancho Drive to Mojave Road of Distance (mile) 3.98 Milepost begins at 72.77 ends at 76.75

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2024	State Gas Tax	$100,000,000	$103,500,000	$0	$0	$203,500,000
	2022-2026 TOTAL	**$100,000,000**	**$103,500,000**	**$0**	**$0**	**$203,500,000**
	ALL YEARS TOTAL	**$100,000,000**	**$103,500,000**	**$0**	**$0**	**$203,500,000**

MPO **RTCSNV** (6270) Lead Agency **Nevada DOT**

CL20180050 (Ver 2) 21-11 STATUS **In Progress - Programmed** **STATE**

Title: I 515, CLARK COUNTY, 28TH MOJAVE ROAD TO RANCHO DRIVE (Downtown Access Project)

Description: DOWNTOWN ACCESS PROJECT: CONSTRUCT BRAIDED RAMPS BETWEEN I 15 AND I 515; CONSTRUCT HOV INTERCHANGES AT CITY PKWY AND MARYLAND PKWY; ADD HOV LANES FROM MLK TO EASTERN; ADD FREEWAY CAPACITY TO I 515

Project Type: Rd Expansion **AQ:** Non-Exempt **TCM:** Yes **NDOT:** District 1

County: Clark **Limits:** From Mojave Road to Rancho Drive of Distance (mile) 3.98 Milepost begins at 72.77 ends at 76.75

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2023	State Gas Tax	$10,000,000	$200,000,000	$0	$0	$210,000,000
2025	State Gas Tax	$0	$0	$850,000,000	$0	$850,000,000
	2021-2025 TOTAL	**$10,000,000**	**$200,000,000**	**$850,000,000**	**$0**	**$1,060,000,000**
	ALL YEARS TOTAL	**$10,000,000**	**$200,000,000**	**$850,000,000**	**$0**	**$1,060,000,000**

MPO **RTCSNV** (6271) Lead Agency **Nevada DOT**

Previously Approved Version

CL20180050 (Ver 1) 21TIP(22-00)

Title: I-515/ US-95 from US-95 Ranch Blvd to Mojave RD I-515; Mileposts US95 76.75 to I-515 72.77(Downtown Access Project)

Description: Construct braided ramps between I-15 and I-515, construct HOV interchanges at City Parkway and Maryland Parkway, add HOV lanes from MLK to Eastern, add freeway capacity to I-515

Project Type: Rd Expansion **AQ:** Exempt **TCM:** Yes **NDOT:** District 1

County: Clark **Limits:** From Rancho Drive to Mojave Road of Distance (mile) 3.98 Milepost begins at 72.77 ends at 76.75

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
>2026	Beyond	$900,000,000	$931,500,000	$0	$0	$1,831,500,000
	ALL YEARS TOTAL	**$900,000,000**	**$931,500,000**	**$0**	**$0**	**$1,831,500,000**

MPO **RTCSNV** (6271) Lead Agency **Nevada DOT**

CL20180052 (Ver 3) 21-11 STATUS **In Progress - Programmed** **STATE**

Title: Henderson Interchange NEPA

Description: NEPA for Henderson Bowl Project I 11, I 515, I 215, SR564, CLARK COUNTY, HENDERSON INTERCHANGE FROM HORIZON DR TO GALLERIA DR AND FROM VAN WAGENEN ST TO VALLE VERDE DR

Project Type: Rd Interchange/ Intersec **AQ:** Exempt, Other - Non construction related activities. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Primary Interchange: Horizon, Secondary Interchange: I 215

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	State Gas Tax	$7,000,000	$0	$0	$0	$7,000,000
	2021-2025 TOTAL	**$7,000,000**	**$0**	**$0**	**$0**	**$7,000,000**
	ALL YEARS TOTAL	**$7,000,000**	**$0**	**$0**	**$0**	**$7,000,000**

MPO **RTCSNV** (6239) Lead Agency **Nevada DOT**

Previously Approved Version

CL20180052 (Ver 2) 21-01

Title: I 11/I 215/I 515/SR 564 Henderson Bowl NEPA

Description: NEPA for Henderson Bowl Project

Project Type: Rd Interchange/ Intersec **AQ:** Exempt, Other - Non construction related activities. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Primary Interchange: I 11, Secondary Interchange: I 215

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	State Gas Tax	$7,000,000	$0	$0	$0	$7,000,000
	2021-2025 TOTAL	**$7,000,000**	**$0**	**$0**	**$0**	**$7,000,000**
	ALL YEARS TOTAL	**$7,000,000**	**$0**	**$0**	**$0**	**$7,000,000**

MPO **RTCSNV** (6239) Lead Agency **Nevada DOT**

CL20200029 (Ver 1) 21-11 STATUS **New Project** **STATE**

Title: Henderson Interchange

Description: System interchange improvements I 11, I 515, I 215, SR564, CLARK COUNTY, HENDERSON INTERCHANGE FROM HORIZON DR TO GALLERIA DR AND FROM VAN WAGENEN ST TO VALLE VERDE DR

Project Type: Rd New Construction **AQ:** Non-Exempt **TCM:** Yes **NDOT:** District 1

County: Clark **Limits:** From Valle Verde to I 11 of Distance (mile) 2.89 Milepost begins at 1 ends at 3.89

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	State Gas Tax	$12,000,000	$0	$0	$0	$12,000,000
2023	State Gas Tax	$0	$5,000,000	$0	$0	$5,000,000
2024	State Gas Tax	$0	$0	$260,000,000	$0	$260,000,000
	2021-2025 TOTAL	**$12,000,000**	**$5,000,000**	**$260,000,000**	**$0**	**$277,000,000**
	ALL YEARS TOTAL	**$12,000,000**	**$5,000,000**	**$260,000,000**	**$0**	**$277,000,000**

MPO **RTCSNV** (6317) Lead Agency **Nevada DOT**

CL20200123 (Ver 2) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: SR 159, Red Rock Canyon Trail and Intersection Safety Improvements

Description: Construct Trail from Summerlin to the Red Rock Canyon Visitor Center , extension of two right-turn pockets at two intersection, relocate the Red Rock sign and provide parking for users at Calico Basin Road and Scenic Loop Drive

Project Type: Bicycle & Pedestrian **AQ:** Exempt, Safety - Safety Improvement Program. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** From Red Rock Canyon Ent. to Sky Vista Dr. of Distance (mile) 4.8 Milepost begins at 10.7 ends at 15.5

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2022	FHWA FLAP	$0	$0	$11,185,000	$0	$11,185,000
2022	Local Fund	$0	$0	$605,000	$0	$605,000
2022	State Gas Tax	$0	$0	$2,904,000	$0	$2,904,000
	2021-2025 TOTAL	**$0**	**$0**	**$14,694,000**	**$0**	**$14,694,000**
	ALL YEARS TOTAL	**$0**	**$0**	**$14,694,000**	**$0**	**$14,694,000**

MPO **RTCSNV** (6313) Lead Agency **Nevada DOT**

Previously Approved Version

CL20200123 (Ver 1) 21-01

Title: SR 159, Red Rock Canyon Trail and Intersection Safety Improvements

Description: Construct Trail from Summerlin to the Red Rock Canyon Visitor Center , relocate the Red Rock sign and provide parking for users at Calico Basin Road and Scenic Loop Drive

Project Type: Bicycle & Pedestrian **AQ:** Exempt, Safety - Safety Improvement Program. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Summerlin to Red Rock Canyon Visitor Center from Calico Bain Road to Scenic Loop Drive of Distance (mile) N/A

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	FHWA FLAP	$0	$0	$11,185,000	$0	$11,185,000
2021	Local Fund	$0	$0	$605,000	$0	$605,000
2021	State Gas Tax	$0	$0	$2,904,000	$0	$2,904,000
	2021-2025 TOTAL	**$0**	**$0**	**$14,694,000**	**$0**	**$14,694,000**
	ALL YEARS TOTAL	**$0**	**$0**	**$14,694,000**	**$0**	**$14,694,000**

MPO **RTCSNV** (6313) Lead Agency **Nevada DOT**

CL20140002 (Ver 10) 21-11 STATUS **In Progress - Completed** **FEDERAL**

Title: US 93 (Boulder City Bypass Phase 2 Future I 11) Repayments

Description: Construct 4 lane freeway (Advance construct repayment programmed to 2023)

Project Type: Rd Expansion **AQ:** Exempt, Other - Non construction related activities. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** From US 93 at SR 172 Hoover Dam Access Rd to Silver Line Rd. of Distance (mile) 0 Milepost begins at 0 ends at 0

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	STBG CL ACCP	$0	$0	$22,379,029	$0	$22,379,029
<2021	Prior	$0	$0	$44,655,248	$0	$44,655,248
	ALL YEARS TOTAL	**$0**	**$0**	**$44,655,248**	**$0**	**$44,655,248**

*ACCP is not part of Total

MPO **RTCSNV** (4467) Lead Agency **RTC Southern Nevada**

Previously Approved Version

CL20140002 (Ver 9) 21-01

Title: US 93 (Boulder City Bypass Phase 2 Future I 11) Repayments

Description: Construct 4 lane freeway (Advance construct repayment programmed to 2023)

Project Type: Rd Expansion **AQ:** Exempt, Other - Non construction related activities. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** From US 93 at SR 172 Hoover Dam Access Rd to Silver Line Rd. of Distance (mile) 0 Milepost begins at 0 ends at 0

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	STBG CL ACCP	$0	$0	$22,379,029	$0	$22,379,029
<2021	Prior	$0	$0	$44,655,248	$0	$44,655,248
	ALL YEARS TOTAL	**$0**	**$0**	**$44,655,248**	**$0**	**$44,655,248**

*ACCP is not part of Total

MPO **RTCSNV** (4467) Lead Agency **RTC Southern Nevada**

CL20150010 (Ver 22) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: RTC Transit Fleet Buses

Description: Acquire (215) buses for fixed-route bus replacement program

Project Type: Transit-Capital & Rehab **AQ:** Exempt, Mass Transit - Purchase new buses and rail cars to replace existing vehicles or r **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Not Location Specific

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	FTA 5307 Lrg Urb Capital	$0	$0	$0	$3,700,000	$3,700,000
2021	FTA 5337 Good Repair	$0	$0	$0	$8,655,281	$8,655,281
2021	FTA 5339 Bus/Fac Lrg Urb Capital	$0	$0	$0	$13,576,191	$13,576,191
2021	RTC Sales Tax	$0	$0	$0	$4,576,142	$4,576,142
2022	CMAQ - Clark County	$0	$0	$0	$2,600,000	$2,600,000
2022	FTA 5307 Lrg Urb Capital	$0	$0	$0	$22,000,000	$22,000,000
2022	RTC Sales Tax	$0	$0	$0	$5,600,127	$5,600,127
2022	STBG CL	$0	$0	$0	$30,037,701	$30,037,701
2023	RTC Sales Tax	$0	$0	$0	$1,212,435	$1,212,435
2023	STBG CL	$0	$0	$0	$23,036,268	$23,036,268
2024	RTC Sales Tax	$0	$0	$0	$1,287,788	$1,287,788
2024	STBG CL	$0	$0	$0	$24,467,968	$24,467,968
2025	RTC Sales Tax	$0	$0	$0	$720,254	$720,254
2025	STBG CL	$0	$0	$0	$13,684,817	$13,684,817
<2021	Prior	$0	$0	$0	$253,603,394	$253,603,394
	2021-2025 TOTAL	**$0**	**$0**	**$0**	**$155,154,972**	**$155,154,972**
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$408,758,366**	**$408,758,366**

MPO **RTCSNV** (2050) Lead Agency **RTC Southern Nevada**

Previously Approved Version

CL20150010 (Ver 21) 21-13

Title: RTC Transit Fleet Buses

Description: Acquire (215) buses for fixed-route bus replacement program

Project Type: Transit-Capital & Rehab **AQ:** Exempt, Mass Transit - Purchase new buses and rail cars to replace existing vehicles or r **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Not Location Specific

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	FTA 5307 Lrg Urb Capital	$0	$0	$0	$3,700,000	$3,700,000
2021	FTA 5337 Good Repair	$0	$0	$0	$8,655,281	$8,655,281
2021	FTA 5339 Bus/Fac Lrg Urb Capital	$0	$0	$0	$13,576,191	$13,576,191
2021	RTC Sales Tax	$0	$0	$0	$4,576,142	$4,576,142
2022	RTC Sales Tax	$0	$0	$0	$1,580,932	$1,580,932
2022	STBG CL	$0	$0	$0	$30,037,701	$30,037,701
2023	RTC Sales Tax	$0	$0	$0	$896,646	$896,646
2023	STBG CL	$0	$0	$0	$17,036,268	$17,036,268
2024	RTC Sales Tax	$0	$0	$0	$1,287,788	$1,287,788
2024	STBG CL	$0	$0	$0	$24,467,968	$24,467,968
2025	RTC Sales Tax	$0	$0	$0	$720,254	$720,254
2025	STBG CL	$0	$0	$0	$13,684,817	$13,684,817
<2021	Prior	$0	$0	$0	$253,603,394	$253,603,394
	2021-2025 TOTAL	**$0**	**$0**	**$0**	**$120,219,988**	**$120,219,988**
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$373,823,382**	**$373,823,382**

MPO **RTCSNV** (2050) Lead Agency **RTC Southern Nevada**

CL20190025 (Ver 6) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: Maryland Parkway Bus Rapid Transit

Description: High capacity transit system extending from the Las Vegas Medical District to the Bonneville Transit Center, through downtown Las Vegas, and along Maryland Parkway to north of Russell Road. Dedicated transit lanes, enhanced transit stations, signalized pedestrian crossings, protected bike lanes, wider sidewalks, landscaping, and public art.

Project Type: Transit - Other **AQ:** Non-Exempt **TCM:** No **NDOT:** District 1

County: Clark **Limits:** From S. Tonopah Drive/Wellness Way to S. Maryland Parkway/E. Russell Road of Distance (mile) 8.7

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	Fuel Revenue Indexing 2 (FRI 2)	$0	$10,000,000	$0	$0	$10,000,000
2023	CMAQ - Clark County	$0	$0	$20,866,315	$0	$20,866,315
2023	FTA 5307 Lrg Urb Capital	$0	$0	$20,926,685	$0	$20,926,685
2023	FTA 5309 New Starts	$0	$0	$0	$0	$0
2023	FTA 5309 Small Starts	$0	$0	$100,000,000	$0	$100,000,000
2023	Fuel Revenue Indexing 2 (FRI 2)	$0	$0	$83,975,000	$0	$83,975,000
2023	RTC Sales Tax	$0	$0	$31,982,000	$0	$31,982,000
<2021	Prior	$31,250,000	$0	$0	$0	$31,250,000
	2021-2025 TOTAL	**$0**	**$10,000,000**	**$257,750,000**	**$0**	**$267,750,000**
	ALL YEARS TOTAL	**$31,250,000**	**$10,000,000**	**$257,750,000**	**$0**	**$299,000,000**

MPO **RTCSNV** (6262) Lead Agency **RTC Southern Nevada**

Previously Approved Version

CL20190025 (Ver 5) 21-14

Title: Maryland Parkway Bus Rapid Transit

Description: High capacity transit system extending from the Las Vegas Medical District to the Bonneville Transit Center, through downtown Las Vegas, and along Maryland Parkway to north of Russell Road. Dedicated transit lanes, enhanced transit stations, signalized pedestrian crossings, protected bike lanes, wider sidewalks, landscaping, and public art.

Project Type: Transit - Other **AQ:** Non-Exempt **TCM:** No **NDOT:** District 1

County: Clark **Limits:** From S. Tonopah Drive/Wellness Way to S. Maryland Parkway/E. Russell Road of Distance (mile) 8.7

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	Fuel Revenue Indexing 2 (FRI 2)	$0	$10,000,000	$0	$0	$10,000,000
2023	CMAQ - Clark County	$0	$0	$26,866,315	$0	$26,866,315
2023	FTA 5307 Lrg Urb Capital	$0	$0	$14,926,685	$0	$14,926,685
2023	FTA 5309 New Starts	$0	$0	$170,775,000	$0	$170,775,000
2023	Fuel Revenue Indexing 2 (FRI 2)	$0	$0	$77,938,900	$0	$77,938,900
2023	RTC Sales Tax	$0	$0	$13,243,100	$0	$13,243,100
<2021	Prior	$31,250,000	$0	$0	$0	$31,250,000
	2021-2025 TOTAL	**$0**	**$10,000,000**	**$303,750,000**	**$0**	**$313,750,000**
	ALL YEARS TOTAL	**$31,250,000**	**$10,000,000**	**$303,750,000**	**$0**	**$345,000,000**

MPO **RTCSNV** (6262) Lead Agency **RTC Southern Nevada**

CL20200058 (Ver 4) 21-11 STATUS **In Progress - Programmed** **FEDERAL**

Title: Capital Cost of Contracting (Preventive Maintenance)

Description: Preventive Maintenance Capital Assistance under the capital cost of contracting policy. Service contract where contractor provides maintenance and transit service and recipient provides vehicles is eligible for 80% federal share of 40% of the contract.

Project Type: Transit-Maintenance **AQ:** Exempt, Mass Transit - Rehabilitation of transit vehicles. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Not Location Specific

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	FTA 5307 Lrg Urb Capital	$0	$0	$0	$24,000,000	$24,000,000
2021	RTC Sales Tax	$0	$0	$0	$6,000,000	$6,000,000
2022	FTA 5307 Lrg Urb Capital	$0	$0	$0	$15,000,000	$15,000,000
2022	RTC Sales Tax	$0	$0	$0	$3,750,000	$3,750,000
2023	FTA 5307 Lrg Urb Capital	$0	$0	$0	$14,500,000	$14,500,000
2023	RTC Sales Tax	$0	$0	$0	$3,625,000	$3,625,000
<2021	Prior	$0	$0	$0	$10,000,000	$10,000,000
	2021-2025 TOTAL	**$0**	**$0**	**$0**	**$66,875,000**	**$66,875,000**
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$76,875,000**	**$76,875,000**

MPO **RTCSNV** (6270) Lead Agency **RTC Southern Nevada**

Previously Approved Version

CL20200058 (Ver 3) 21-09

Title: Capital Cost of Contracting (Preventive Maintenance)

Description: Preventive Maintenance Capital Assistance under the capital cost of contracting policy. Service contract where contractor provides maintenance and transit service and recipient provides vehicles is eligible for 80% federal share of 40% of the contract.

Project Type: Transit-Maintenance **AQ:** Exempt, Mass Transit - Rehabilitation of transit vehicles. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Not Location Specific

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	FTA 5307 Lrg Urb Capital	$0	$0	$0	$32,000,000	$32,000,000
2021	RTC Sales Tax	$0	$0	$0	$8,000,000	$8,000,000
2022	FTA 5307 Lrg Urb Capital	$0	$0	$0	$29,000,000	$29,000,000
2022	RTC Sales Tax	$0	$0	$0	$7,250,000	$7,250,000
2023	FTA 5307 Lrg Urb Capital	$0	$0	$0	$20,500,000	$20,500,000
2023	RTC Sales Tax	$0	$0	$0	$5,125,000	$5,125,000
<2021	Prior	$0	$0	$0	$10,000,000	$10,000,000
	2021-2025 TOTAL	**$0**	**$0**	**$0**	**$101,875,000**	**$101,875,000**
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$111,875,000**	**$111,875,000**

MPO **RTCSNV** (6270) Lead Agency **RTC Southern Nevada**

CL20200139 (Ver 2) 21-11 STATUS **In Progress - Completed** **FEDERAL**

Title: Expanded Mobility Options to Ensure Equal Access to Healthy Food and Community Service

Description: Study of potential microtransit routes that target low-income areas currently under served by fixed-route transit, and address inequalities in access to healthy food, workplaces, and community services

Project Type: Study/Planning **AQ:** Exempt, Other - Engineering to assess social, economic, and environmental effects of the **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Various Locations

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	FTA 5304 Statewide and Non MPO Planning	$0	$0	$0	$125,000	$125,000
2021	RTC Sales Tax	$0	$0	$0	$13,890	$13,890
	2021-2025 TOTAL	**$0**	**$0**	**$0**	**$138,890**	**$138,890**
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$138,890**	**$138,890**

MPO **RTCSNV** (6315) Lead Agency **RTC Southern Nevada**

Previously Approved Version

CL20200139 (Ver 1) 21-01

Title: Expanded Mobility Options to Ensure Equal Access to Healthy Food and Community Service

Description: Study of potential microtransit routes that target low-income areas currently under served by fixed-route transit, and address inequalities in access to healthy food, workplaces, and community services

Project Type: Study/Planning **AQ:** Exempt, Other - Engineering to assess social, economic, and environmental effects of the **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Various Locations

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
2021	FTA 5304 Statewide and Non MPO Planning	$0	$0	$0	$125,000	$125,000
2021	RTC Sales Tax	$0	$0	$0	$13,890	$13,890
	2021-2025 TOTAL	**$0**	**$0**	**$0**	**$138,890**	**$138,890**
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$138,890**	**$138,890**

MPO **RTCSNV** (6315) Lead Agency **RTC Southern Nevada**

XS20200031 (Ver 3) 21-11 STATUS **In Progress - Completed** **FEDERAL**

Title: RTC Mobile Learning Lab

Description: Build a mobile learning lab to train and educate transportation disadvantaged individuals on technology and resources to improve mobility access to services in the community.

Project Type: Transit - Other **AQ:** Exempt, Other - Non construction related activities. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Not Location Specific

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
<2021	Prior	$0	$0	$0	$197,883	$197,883
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$197,883**	**$197,883**

MPO **RTCSNV** (6275) Lead Agency **RTC Southern Nevada**

Previously Approved Version

XS20200031 (Ver 2) 21-01

Title: RTC Mobile Learning Lab

Description: Build a mobile learning lab to train and educate transportation disadvantaged individuals on technology and resources to improve mobility access to services in the community.

Project Type: Transit - Other **AQ:** Exempt, Other - Non construction related activities. **TCM:** No **NDOT:** District 1

County: Clark **Limits:** Not Location Specific

FED FY	Revenue Source	PE	ROW	CON	OTHER	TOTAL
<2021	Prior	$0	$0	$0	$197,883	$197,883
	ALL YEARS TOTAL	**$0**	**$0**	**$0**	**$197,883**	**$197,883**

MPO **RTCSNV** (6275) Lead Agency **RTC Southern Nevada**

AIR QUALITY CONFORMITY TECHNICAL REPORT FOR ACCESS 2050 (2021-2050 RTP/TIP) AMENDMENT 21-11

Access 2050 (2021-2050 RTP/TIP) Amendment 21-11 includes twenty two projects sponsored by the Cities of Henderson, Las Vegas, North Las Vegas, Clark County, Regional Transportation Commission, and the Nevada Department of Transportation (NDOT). Of the twenty two projects, eighteen are Exempt and four are Non-Exempt. Transportation conformity requirements apply to highway and transit projects in nonattainment and maintenance areas defined by national ambient air quality standards (NAAQS). All twenty two projects are located in Hydrographic Basin 212, which geographically coincides with the Las Vegas Valley. Under NAAQS, this area is designated as nonattainment for ozone, maintenance for PM10 and CO, and attainment or otherwise unclassifiable for other pollutants. The four Non-Exempt projects listed below are subject to transportation conformity requirements:

CL20180050 - I 515, CLARK COUNTY, 28TH MOJAVE ROAD TO RANCHO DRIVE (Downtown Access Project)
CL20200029 - HENDERSON INTERCHANGE FROM HORIZON DR TO GALLERIA DR AND FROM VAN WAGENEN ST TO VALLE VERDE DR (Henderson Bowl)
CL20200115 - RAINBOW BLVD WIDENING FROM BLUE DIAMOND TO CLARK COUNTY 215
CL20190025 - MARYLAND PARKWAY BUS RAPID TRANSIT

The project list, along with planning assumptions, was submitted to the Air Quality Working Group (AQWG) on July 12, 2021 as a part of the air quality conformity consultation process. The project list and additional project information are included in the Amendment 21-11 package. This technical report provides the conformity test results and is provided to the AQWG for their review and comments.

Travel Demand Modeling and Air Emission Modeling Methodology and Assumptions

The RTC Travel Demand Model (TDM) generates vehicle miles traveled (VMT) estimates which are used as one of the inputs for the air emission model, MOVES for Conformity Determinations. In this amendment, the Henderson Interchange project has been incorporated into the TDM. The Downtown Access, Rainbow Blvd, and Maryland Pkwy Bus Rapid Transit Projects were already in the model and has only been updated in this amendment with changes in funding and funding phase. Beyond these, and some minor coding corrections, the analysis methods, model inputs, horizon years, existing air emission budgets and all other planning assumptions used in the TDM and MOVES have remained the same as those of in Access 2050 and Amendment 21-07.

Since the Henderson Interchange project's construction year is 2024 and there is no network change before that year, the TDM model has not been rerun for year of 2020 and 2022, and the 2022 Ozone tests results from RTP Amendment 21-07 are carried over in this analysis. The TDM was run for future horizon years 2030, 2040, and 2050 to update the VMT estimates for the MOVES model. The MOVES model produced Ozone and CO emission estimates for horizon years 2030, 2040 and 2050. The estimated PM10, CO and Ozone emissions are all within the emission budgets and analysis shows that the Air Conformity is met for all pollutants for all future horizon years.

Access 2050 Amendment 21-11 is not a major amendment. This technical report includes only the emission test results. For more information about RTC's TDM, please refer to ACCESS 2050 APPENDIX E - TRAVEL DEMAND MODEL METHODOLOGY AND AIR QUALITY CONFORMITY ANALYSIS https://assets.rtcsnv.com/wp-content/uploads/sites/4/2020/11/07071653/Appendix-E-Travel-Demand-Model-

Methodology-and-Air-Quality-Conformity-Analysis.pdf. For easier referencing and comparison with the Access 2050 technical report, this document keeps the same section titles, section numbers and table numbers as those found in ACCESS 2050 APPENDIX E.

CONFORMITY DETERMINATION

This section describes the conformity determination findings for Access 2050 (RTP/TIP 2021-2050) Amendment 21-11.

CO Emission Summary

"The Henderson Interchange project is a crossover style interchange with the east-west highway directions crossing each other at grade separated structures east and west of the central interchange. By crossing the traffic similar to the diverging diamond interchange on Horizon Drive at I-11, motorists would be positioned to freely enter and exit on the side in the direction they intend to travel. Such a configuration negates the need for most of the large 'flyover' bridge structures commonly associated with a directional interchange. The Build Alternative would use 22 of the existing 27 bridges in the study area, demolishing the four existing Henderson Interchange flyover bridges. " (NDOT technical Memorandum July 14, 2021).

RTC's TDM was run to produce VMT estimates for horizon years 2030, 2040 and 2050 to reflect the impacts of the amended project in Amendment 21-11. As a standard practice and performed in Conformity Analysis for Access 2050, the modeled VMTs were adjusted with the base year traffic volumes from Highway Performance Management System (HPMS) and then used as the input into MOVES model to produce CO and Ozone emissions. The MOVES modeled CO emissions for the month of January are used for the determination. The table below shows the MOVES modeled CO emissions. They are all under the budgets.

NEW Table 39 Net CO Emissions (RTP/TIP Amendment 21-11, July 2021)

	Total CO Emissions (tons/day)			
MOVES Results All Facilities	**2020**	**2030**	**2040**	**2050**
TOTAL CO Emissions	**214.6**	**130.9**	**94.9**	**96.8**
Budgets	**704**	**704**	**704**	**704**

Source: MOVES model results by Regional Transportation Commission staff July 2021. RTP/TIP Amendment 21-11

PM_{10} Emission Summary

The PM_{10} emissions were calculated using the same methods as those used for Conformity for Access 2050 and Amendment 21-07. As performed previously for Access 2050, the TDM modeled VMTs were adjusted by HPMS adjustment factors to match the HPMS VMTs. This amendment caused a slight increase in VMT on freeways and ramps. However, VMTs decreased on arterials and collectors due to minor adjustments to coding and network updates. As a result, the total VMTs for horizon years 2030 and beyond are slightly lower than the previous amendment. The

total roadway PM_{10} emissions are slightly lower than before also due to the fact that PM_{10} emission factors are much higher for arterials and collectors than those for freeway and ramps. New Table 40 presents PM_{10} roadway emissions. Emissions from highway construction and wind erosion are included in New Table 43 and final total PM_{10} emissions are presented in New Table 44.

NEW Table 40. PM_{10} Roadway Analysis for Horizon Years (RTP/TIP Amendment 21-11, July 2021)

2021-2050 RTP					**2006**	**2020**	**2030**	**2040**	**2050**
Facility Type	Adjusted 2020 AAWDVMT	Adjusted 2030 AAWDVMT	Adjusted 2040 AAWDVMT	Adjusted 2050 AAWDVMT	PM10 Emission Factors (g/v-m)	Paved Road Emissions (kg/day)	Paved Road Emissions (kg/day)	Paved Road Emissions (kg/day)	Paved Road Emissions (kg/day)
External connectors	297,088	294,047	313,003	328,226	*1.22*	362	359	382	400
System Ramps	955,274	1,254,495	1,437,636	1,550,996	*1.225*	1,170	1,537	1,761	1,900
Minor Arterials	5,298,178	6,396,261	7,148,106	8,106,247	*1.22*	6,464	7,803	8,721	9,890
Major Arterials	14,116,011	15,782,633	17,090,256	18,688,849	*0.761*	10,742	12,011	13,006	14,222
Ramps	1,560,208	1,750,339	1,890,915	1,994,346	*1.225*	1,911	2,144	2,316	2,443
Interstates	9,529,319	10,220,700	11,371,176	12,541,666	*0.066*	629	675	750	828
Freeways	6,447,834	8,295,334	9,461,691	10,746,793	*0.066*	426	547	624	709
Beltway	158,825	0	0	0	*0.066*	10	0	0	0
Collectors	3,180,053	2,816,539	3,152,946	3,611,040	*1.225*	3,896	3,450	3,862	4,424
Centroid connectors	3,504,272	3,888,671	4,326,245	4,821,142	*3.671*	12,864	14,275	15,882	17,698
Other Local Roads	81,114	90,467	99,136	112,026	*3.671*	298	332	364	411
HOV Lanes	1,647,615	1,600,421	1,711,163	1,778,466	*0.066*	109	106	113	117
Public Transit Bus	57,433	74,663	89,595	107,515	*3.671*	211	274	329	395
Intra-zonal	426,885	588,841	499,257	524,102	*3.671*	1,567	2,162	1,833	1,924
DAILY TOTALS	**47,260,109**	**53,053,412**	**58,591,126**	**64,911,414**		40,659	45,675	49,943	55,362
	Convert to US tons per day					0.001102	0.001102	0.001102	0.001102
	PM10 Emissions (Tons per day)					**44.81**	**50.3**	**55.04**	**61.01**
2006 Mobile Source PM10 Emissions Budgets for the Las Vegas Valley						**141.41**	**141.41**	**141.41**	**141.41**

AAWDVMT=Average Annual Week Day Vehicle Miles Traveled. Regional transportation Commission Staff, Transit Daily Miles was calculated by the RTC Transit Department. Regional Transportation Commission staff July 2021. RTP/TIP Amendment 21-11

New Table 43. PM_{10} Emissions from Highway Construction and Wind Erosion (RTP/TIP Amendment 21-11, July 2021)

	2020		2030		2040		2050	
SOURCE	Link	Lane	Link	Lane	Link	Lane	Link	Lane
CONSTRUCTION								
Construction Miles	**0.0**	**0.0**	**192.4**	**1034.4**	**62.4**	**288.1**	**9.9**	**40.6**
Horizon Year Total Projects								
Number of months in Horizon Year		1		120		120		120
Estimated Acreage		**0**		**1505**		**419**		**59**
Emissions Factors (tons/acre/mon)		0.42		0.42		0.42		0.42
PM10 Vehicle Emission (tons/day)		0.00		20.78		5.79		0.81
Best Practices Reduction (%)		68%		68%		68%		68%
Net Pm 10 Emissions (tons/day)		**0**		**6.6482**		**1.852**		**0.2607**
WIND EROSION								
Estimated Acreage		0		1505		419		59
Erosion Rate (tons/acre/day) 35% of site		0.0008		0.00076		0.0008		0.00076
65% of site		0.0198		0.0198		0.0198		0.0198
PM10 Emissions (tons/day)		0.00		11.17		3.11		0.44
Sections 90-94 Reduction (%)		71%		71%		71%		71%
Net Pm 10 Emissions (tons/day)		**0.00**		**3.24**		**0.902**		**0.127**

Source: Regional Transportation Commission staff July 2021. RTP/TIP Amendment 21-11

New Table 44. Total PM_{10} Mobile Source Emissions Per Day for Horizon Years (RTP/TIP Amendment 21-11, July 2021)

SOURCE	**2020**	**2023**	**2030**	**2040**	**2050**
Paved Road Dust	44.81	46.46	50.33	55.04	61.01
Vehicle Emissions	1.35	1.40	1.50	1.65	1.82
Highway Construction	0.00	1.99	6.65	1.85	0.26
Windblown Construction Dust	0.00	0.97	3.24	0.90	0.13
PM_{10} Mobile Source Emissions	**46.16**	**50.83**	**61.72**	**59.44**	**63.22**
BUDGET	**141.41**	**141.41**	**141.41**	**141.41**	**141.41**

2023 emissions are interpolated from 2020 and 2030 emissions. Source: Regional Transportation Commission staff July 2021. RTP/TIP Amendment 21-11

Note that original tables 41 and 42 are not included in this document because they list the PM_{10} roadway emission factors and vehicle emissions that are included in the total emissions presented in table 44. Year 2023 is a PM_{10} budget year, and a determination has to be made for an emission budget year. The emissions for year 2023 are interpolated from 2020 and 2030 emission results. The PM_{10} emissions from roadway construction and wind erosion are higher for 2030 than that for 2040 and 2050 as this amendment has no Non-Exempt projects to be amended after 2030. Table 44 demonstrates the final total PM_{10} emission calculations that are all under the approved budgets.

Ozone Conformity Determination with Existing Ozone Budgets

On October 23, 2018, Clark County's Department of Air Quality (DAQ) submitted Revision to Motor Vehicle Emissions Budgets in Ozone Redesignation Request and Maintenance Plan to the EPA for approval. In the revision, DAQ established new Ozone motor vehicle emissions budgets (MVEBs) for the whole Clark County. As set out in Table 45 A, these budgets are defined for the two precursors of Ozone: Volatile Organic Compounds (VOC) and the Oxides of Nitrogen (NO_X).

New Table 45 A. NOx and VOC MVEBs for Clark County - Revision to Motor Vehicle Emissions Budgets in Ozone Redesignation Request and Maintenance Plan

Year	NOx MVEBs (tpd)	VOC MVEBs (tpd)
2008 - attainment	89.5	**42.46**
2015 - interim	90.92	**53.94**
2022 - maintenance	86.74	**52.96**

Source: Revision to Motor Vehicle Emissions Budgets in Ozone Redesignation Request and Maintenance Plan Clark County Department of Air Quality, October 2018 and August 27 2019, EPA.

On August 27, 2019, the EPA conditionally approved the 2018 Clark County Ozone Maintenance Plan Revision. The approval is conditional on commitments from NV Division of Environmental Protection (NDEP) and the Clark County DAQ to submit a State Implementation Plan (SIP) revision within one year of final conditional approval. On September 3, 2020, DAQ sent the revised SIP to NDEP for processing. NDEP reviewed the revised SIP and submitted it to the EPA for approval. The ozone determination for this Amendment 21-11 has been performed using these conditional approved budgets.

The MOVES model is used for the Ozone Conformity analysis. All inputs and assumptions were the same as those used for tests for CO. The modeled VMTs were adjusted with the base year traffic volumes from HPMS and then used as the input into the MOVES model to produce Ozone emissions. The MOVES model was run for the month of July in order to estimate peak ozone emission. Emission results for 2020 and 2022 are the same as those for Amendment 21-07. Since the ozone budgets are for the entire Clark County, the ozone conformity analysis should include the emissions sourced from its entirety. A factor of 1.077 is calculated as the ratio of the county total HPMS and the HPMS of the transportation model areas. The MOVES modeled NOx and VOC emissions then are factored by 1.077 to get the county total emissions. The final county total NOx and VOC emissions for all horizon years are all below the budget levels as presented in New Table 46. New Table 46 demonstrates that the ozone conformity tests for all horizon years are lower than the emission budgets and therefore satisfy the ozone conformity requirements.

New Table 46 Ozone Conformity Test Summary (RTP/TIP Amendment 21-11, July 2021)

Year	NOx (tons/day)			VOC (tons/day)		
	Emissions	Emissions Budget	Conformity Requirement	Emissions	Emissions Budget	Conformity Requirement
2020	38.32	**90.92**	***Satisfied***	25.22	**53.94**	***Satisfied***
2022	30.89	**86.74**	***Satisfied***	21.22	**52.96**	***Satisfied***
2030	18.04	**86.74**	***Satisfied***	15.08	**52.96**	***Satisfied***
2040	12.85	**86.74**	***Satisfied***	11.53	**52.96**	***Satisfied***
2050	12.79	**86.74**	***Satisfied***	11.38	**52.96**	***Satisfied***

Source: MOVES model results by Regional Transportation Commission staff July 2021. RTP/TIP Amendment 21-11

Final Conformity Determination (With Existing Ozone Budgets)

The emission test results for PM_{10}, CO and Ozone are presented in New Table 47 below. To compare final emissions determined in this amendment with those determined in Access 2050, refer to Table 47 in ACCESS 2050 APPENDIX 4 - TRAVEL DEMAND MODEL METHODOLOGY AND AIR QUALITY CONFORMITY ANALYSIS. https://assets.rtcsnv.com/wp-content/uploads/sites/4/2020/11/07071653/Appendix-E-Travel-Demand-Model-Methodology-and-Air-Quality-Conformity-Analysis.pdf.

In conclusion, New Table 47 in this document demonstrates that the emissions from all three pollutants, PM_{10} , CO and Ozone (NOx and VOC) are below the emission budgets. The determination is made that the *2021-2050 RTP/TIP Amendment 21-11 meets* all Air Quality Conformity requirements.

New Table 47 Conformity Test Summary (RTP/TIP Amendment 21-11, July 2021)

Year	CO (tons/day) Emissions	CO (tons/day) Emissions Budget	Conformity Requirement	PM10 (tons/day) Emissions	PM10 (tons/day) Emissions Budget	Conformity Requirement
2020	214.59	**704**	***Satisfied***	46.16	**141.41**	***Satisfied***
2023				50.83	**141.41**	***Satisfied***
2030	130.86	**704**	***Satisfied***	61.72	**141.41**	***Satisfied***
2040	94.90	**704**	***Satisfied***	59.44	**141.41**	***Satisfied***
2050	96.77	**704**	***Satisfied***	63.22	**141.41**	***Satisfied***
Year	**NOx (tons/day) Emissions**	**NOx (tons/day) Emissions Budget**	**Conformity Requirement**	**VOC (tons/day) Emissions**	**VOC (tons/day) Emissions Budget**	**Conformity Requirement**
2020	38.32	**90.92**	***Satisfied***	25.22	**53.94**	***Satisfied***
2022	30.89	**86.74**	***Satisfied***	21.22	**52.96**	***Satisfied***
2030	18.04	**86.74**	***Satisfied***	15.08	**52.96**	***Satisfied***
2040	12.85	**86.74**	***Satisfied***	11.53	**52.96**	***Satisfied***
2050	12.79	**86.74**	***Satisfied***	11.38	**52.96**	***Satisfied***

Source: Regional Transportation Commission staff July 2021. RTP/TIP Amendment 21-11

Conformity Determination with New MVEBs To Be Effective on Approval of Clark County's *Revision to Motor Vehicle Emissions Budgets for the 1997 Ozone NAAQS.*

On August 18, 2020, the Clark County Board of County Commissioners approved Clark County's *Revision to Motor Vehicle Emissions Budgets for the 1997 Ozone NAAQS.* The revision was sent on September 3, 2020 to EPA Region 9 as a revision to the Clark County portion of the Nevada State Implementation Plan. On July 19, 2021, EPA Regional Acting Administrator Deborah Jordan signed a Federal Register notice proposing approval of the revised maintenance plan for the 1997 8-hour ozone standard and the associated transportation conformity budgets. The revision provides revised 2022 NOx and VOC MVEBs for Clark County. The MVEBs are obtained by adding 3 tons per day (tpd) of safety margin (less than the difference between 2017 and 2022 total emissions) to the updated 2022 on-road emissions in accordance with the county's June 14, 2019 letter of commitment to the Nevada Division of Environmental Protection and EPA. The following table from the revision shows these new MVEBS that are significantly lower than the existing budgets used for Conformity Amendment 21-11.

NOx and VOC MVEBs for Clark County

Year	NOx MVEBs (tpd)	VOC MVEBs (tpd)
2022 - Maintenance	**32.16**	**23.92**

Source: Table 3-1. NOx and VOC MVEBs for Clark County, Revision to Motor Vehicle Emissions Budgets for the 1997 Ozone NAAQS. Clark County, Nevada August 2020

Upon an EPA approval of the MVEBs, the RTC will be required to use these lower budgets for transportation conformity determinations for regional transportation plans and amendments. It may take 4-6 months for EPA to approve Clark County's *Revision to Motor Vehicle Emissions Budgets for the 1997 Ozone NAAQS.* This timing is likely to overlap with the approval time of Amendment 21-11. On the effective date of new MVERs, the Transportation Air Determination for Amendment 21-11 will retain conformity status under the effective MVERS. This is demonstrated in the two tables below.

New Table 46 (B) Ozone Conformity Test Summary (RTP/TIP Amendment 21-11, July 2021)

	NOx (tons/day)			VOC (tons/day)		
Year	**Emissions**	**Emissions Budget**	**Conformity Requirement**	**Emissions**	**Emissions Budget**	**Conformity Requirement**
2022	30.89	**32.16**	***Satisfied***	21.22	**23.92**	***Satisfied***
2030	18.04	**32.16**	***Satisfied***	15.08	**23.92**	***Satisfied***
2040	12.85	**32.16**	***Satisfied***	11.53	**23.92**	***Satisfied***
2050	12.79	**32.16**	***Satisfied***	11.38	**23.92**	***Satisfied***

Source: MOVES model results by Regional Transportation Commission staff July 2021. RTP/TIP Amendment 21-11

New Table 47 (B) Conformity Test Summary (RTP/TIP Amendment 21-11, July 2021)

	CO (tons/day)			PM10 (tons/day)		
	Emissions	**Emissions Budget**	**Conformity Requirement**	**Emissions**	**Emissions Budget**	**Conformity Requirement**
2023				50.83	**141.41**	***Satisfied***
2030	130.86	**704**	***Satisfied***	61.72	**141.41**	***Satisfied***
2040	94.90	**704**	***Satisfied***	59.44	**141.41**	***Satisfied***
2050	96.77	**704**	***Satisfied***	63.22	**141.41**	***Satisfied***
	NOx (tons/day)			**VOC (tons/day)**		
Year	**Emissions**	**Emissions Budget**	**Conformity Requirement**	**Emissions**	**Emissions Budget**	**Conformity Requirement**
2022	30.89	**32.16**	***Satisfied***	21.22	**23.92**	***Satisfied***
2030	18.04	**32.16**	***Satisfied***	15.08	**23.92**	***Satisfied***
2040	12.85	**32.16**	***Satisfied***	11.53	**23.92**	***Satisfied***
2050	12.79	**32.16**	***Satisfied***	11.38	**23.92**	***Satisfied***

Source: MOVES model results by Regional Transportation Commission staff July 2021. RTP/TIP Amendment 21-11

• PUBLIC NOTICE •

Notice of Public Comment Period for Amendment 21-11 to the Access 2050 Regional Transportation Plan

The Regional Transportation Commission of Southern Nevada (RTC) is seeking public comment on Amendment 21-11 to the 2021-2050 Regional Transportation Plan (RTP) and 2021-2025 Transportation Improvement Program (TIP). The TIP document reflects the transportation improvement priorities in the first five years of the RTP. Federal regulations require the RTP and TIP to be amended when there are major adjustments to program elements. Project sponsors requested this amendment to add new projects and modify existing projects and funds.

RTC has determined that the changes requested by the project sponsors to the RTP meet air quality requirements. Project details and the air quality conformity determination will be available at www.rtcsnv.com during a 30-day public comment period from Wednesday, September 1, 2021, to Thursday, September 30, 2021. Staff will also be available to provide information and receive comments at the following public meeting:

Metropolitan Planning Subcommittee
Tuesday, September 14, 2021
9 a.m. – 10:30 a.m.
Please visit www.rtcsnv.com for updated meeting details.

Submit comments/questions by **5 p.m. September 30, 2021:**

Attn: Sue Christiansen
Email: ChristiansenS@rtcsnv.com
Phone: 702-676-1891
TDD: 702-676-1834
Mail to: RTC of Southern Nevada
600 S. Grand Central Parkway, Las Vegas, NV 89106

For more information visit:
www.rtcsnv.com

RTC

• NOTICIA PÚBLICA •

Aviso de período de comentario público para Enmienda 21-11 al Plan Regional de Transporte de Acceso 2050

La Comisión Regional de Transporte del Sur de Nevada (RTC) está solicitando comentarios del público sobre la Enmienda 21-11 al Plan Regional de Transporte (RTP) 2021-2050 y al Programa de Mejoramiento del Transporte (TIP) 2021-2025. El documento TIP refleja las prioridades de mejora del transporte en los primeros cinco años del RTP. Las regulaciones federales requieren que se modifiquen el RTP y el TIP cuando haya ajustes importantes en los elementos del programa. Los patrocinadores del proyecto solicitaron esta enmienda para agregar nuevos proyectos y modificar proyectos y fondos existentes.

La RTC ha determinado que los cambios solicitados por los patrocinadores del proyecto al RTP cumplen con los requisitos de calidad del aire. Los detalles del proyecto y la determinación de la conformidad de la calidad del aire estarán disponibles en www.rtcsnv.com durante un período de comentarios públicos de 30 días desde el miércoles 1 de septiembre de 2021 hasta el jueves 30 de septiembre de 2021. El personal también estará disponible para proporcionar información y recibir comentarios en la siguiente reunión pública:

Subcomité de Planificación Metropolitana
Martes, 14 de septiembre de 2021
9 a.m. - 10:30 a.m.
Visite www.rtcsnv.com para obtener detalles actualizados de la reunión.

Envíe sus comentarios / preguntas antes de las
5 p.m. 30 de septiembre de 2021:

A la atención de: Sue Christiansen
Correo electrónico: ChristiansenS@rtcsnv.com
Teléfono: 702-676-1891
TDD: 702-676-1834
Envíe por correo a: RTC of Southern Nevada
600 S. Grand Central Parkway, Las Vegas, NV 89106

Para obtener más información, visite:
www.rtcsnv.com

RTC

· 公告 ·

通向2050區域交通規劃
第21-11號修正案
公眾意見征詢期的通知

南內華達區域交通委員會（RTC）現徵求公眾對2021-2050區域交通規劃（簡稱RTP）及2021-2025交通改善立項計劃（簡稱TIP）的第21-11號修正案的意見。TIP文本包括了RTP中首五年的交通改善重點優先項目。聯邦法規要求，當RTP和TIP有重大項目內容調整時，須對RTP和TIP進行修正。提出項目的單位要求了此修正案，以增加新項目並對現有的項目和資金進行修改。

RTC已確認了項目提出單位要求的對RTP做出的修正滿足對空氣質量的要求。在從2021年9月1日（週三）至2021年9月30日（週四），為期30天的公眾意見徵詢期間，項目詳情和對空氣質量合規的判定將提供在rtcsnv.com網站上。在下列的公眾會議上，我們的工作人員將在現場提供信息和收集公眾的意見：

都市規劃小組委員會（Metropolitan Planning Subcommittee）
2021年9月14日（週二）
上午9時至10時30分
請瀏覽www.rtcsnv.com了解最新的會議詳情。

請在2021年9月30日下午5時以前提交您的意見和問題至：
聯繫人： Sue Christiansen
電郵： ChristiansenS@rtcsnv.com
電話： 702-676-1891
TDD： 702-676-1834
郵寄地址： RTC of Southern Nevada
600 S. Grand Central Parkway, Las Vegas, NV 89106

如欲了解更多信息，請瀏覽www.rtcsnv.com網頁。

RTC

access 2050

Enhancing Mobility for Southern Nevada Residents

RTC

REGIONAL TRANSPORTATION PLAN
for
SOUTHERN NEVADA
2021 - 2050

AMENDMENT 21-11

Regional Transportation Plan

- Adopted January 2021
- 20+ Year Planning Horizon
- Transportation Improvement Program (TIP)
- Amendments for Major Changes

RTP Amendment 21-11 Project List

Nevada Department of Transportation

- I-515 (Downtown Access) NEPA: Reduced funds from $203.5 M to $17M
- I-515 (Downtown Access): Reduced funds from $1.8B to $1.0B and moved forward to 2025
- Henderson Interchange NEPA: Updated project description
- Henderson Interchange: Funds increased from $200M to $277M, updated project description, and moved to 2024
- SR 159 Red Rock Canyon Trail: Moved back to 2022

RTP Amendment 21-11 Project List

City of Las Vegas

- CC-215 Beltway Trail Bridge: Added new project for $14.3M
- City of Las Vegas Arterial and Collector Rehab/Pavement: Added $290,000

Department of Air Quality

- Hybrid Electrical and Battery Electric Vehicle Programs: Moved from 2022 to 2023

RTP Amendment 21-11 Project List

Regional Transportation Commission

- Capital Cost of Contracting: Reduced funds from $111.8M to $76.8M
- RTC Transit Fleet Buses: Increased funds from $373.8M to $408.8M
- Maryland Parkway Bus Rapid Transit: Reduced funds from $345M to $299M
- US 93 Boulder City Bypass Repayment, RTC Mobile Learning Lab and Expanded Mobility Options Projects: Completed

CRSSA FUNDS

Agency	Project Name	Funding Source	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total
City of North Las Vegas	Civic Center Drive/Alexander Road Project (Const)	CRRSAA -Clark	$0	$6,525,490	$0	$0	$0	$6,525,490
City of North Las Vegas	Civic Center Drive/Alexander Road Project (Const)	STBGP-Clark	$0	$475,000	$0	$0	$0	$475,000
Total								$7,000,490

Agency	Project Name	Funding Source	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total
City of Henderson	St Rose Trail Bridge near Jeffreys St (PE, Const)	CRRSAA -Clark	$0	$400,000	$0	$4,000,000	$0	$4,400,000
Total								$4,400,000

Agency	Project Name	Funding Source	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total
Clark County	Rainbow Blvd widening	STBGP-Clark	$0	$0	$6,000,000	$0	$0	$6,000,000
Clark County	Rainbow Blvd widening	CRRSAA -Clark	$0	$0	$2,500,000	$0	$0	$2,500,000
Total								$8,500,000

Agency	Project Name	Funding Source	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total
City of Las Vegas	Various Right Turn Improvements (Construction)	CRRSAA -Clark	$0	$347,000	$0	$0	$0	$347,000
City of Las Vegas	Eastern Bus Turnouts (Const)	CRRSAA -Clark	$0	$1,147,368	$0	$0	$0	$1,147,368
City of Las Vegas	West Charleston Bus Turnouts (ROW)	CRRSAA -Clark	$0	$667,000	$0	$0	$0	$667,000
City of Las Vegas	LV Intersection Projects (Construction)	CRRSAA -Clark	$0	$289,473	$0	$0	$0	$289,473
Total								$2,450,841

Schedule

Air Quality Conformity

Public Comment Period
September 1 – September 30

MPS Review
September 14

Executive Advisory Committee
September 30

RTC Board
October 14

RTC

REGIONAL TRANSPORTATION COMMISSION
OF
SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]
SUBJECT: EXTREME HEAT VULNERABILITY RESEARCH PROJECT		
PETITIONER: M.J. MAYNARD, CHIEF EXECUTIVE OFFICER REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA		
RECOMMENDATION BY PETITIONER: THAT THE EXECUTIVE ADVISORY COMMITTEE RECEIVE A PRESENTATION OF THE SOUTHERN NEVADA EXTREME HEAT VULNERABILITY ANALYSIS		
GOAL: SUPPORT REGIONAL PLANNING EFFORTS TO IMPROVE ECONOMIC VITALITY AND EDUCATION AND INVEST IN COMPLETE COMMUNITIES		

FISCAL IMPACT:
None

BACKGROUND:
The Regional Planning Team within the Metropolitan Planning Organization (MPO) Department of the Regional Transportation Commission of Southern Nevada (RTC) administers the Southern Nevada Strong (SNS) Regional Plan. In early 2020, the Regional Planning Team developed a work program that guides staff in administration of the Regional Plan. Within the work program, staff identified regional research projects to develop technical assistance and tools to guide and inform processes by which the region can implement the Regional Plan.

One such research project looks at the impacts of increasing warming and extreme heat events. Southern Nevada has been identified as one of the fastest warming regions in the U.S., and recent research indicates a substantial risk of heat-related deaths from an increasing number of extreme heat events in the Las Vegas Valley. Despite the history of adverse health impacts associated with extreme heat in our region, experts hold that many of these outcomes are preventable. Reducing future adverse outcomes will require developing effective and coordinated responses, as well as improving the awareness of public health officials and the general public about the health risks associated with extreme heat. This is especially critical in areas with populations most vulnerable to extreme heat.

Staff will share progress on this research, which aims to:

- Identify local demographic and environmental factors that increase vulnerability to extreme heat.
- Analyze data to identify areas in the region with populations most vulnerable to extreme heat.

Respectfully submitted,

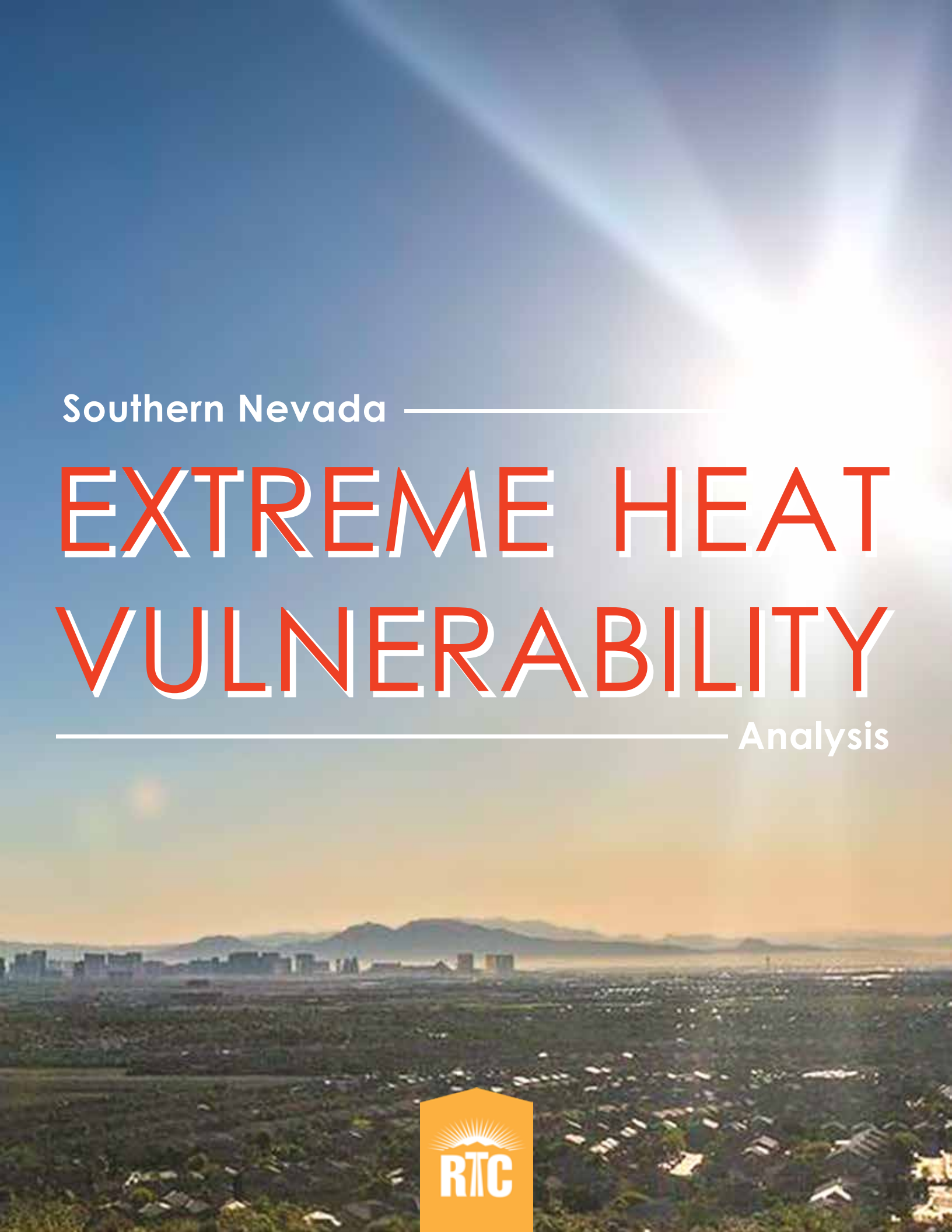
DocuSigned by:
Andrew Kjellman
B86D33CF1FA44C3...

ANDREW KJELLMAN
Director of Metropolitan Planning Organization

EAC Item #22
September 30, 2021

rl

Non-Consent



Southern Nevada

EXTREME HEAT VULNERABILITY

Analysis

RTC

Table of Contents

The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the Metropolitan Planning Program, Section 104(f) of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

Photo source: Getty Images
Front cover photo source: Benjamin Hager/Las Vegas Review-Journal

Project team

Paul Gully, RTC of Southern Nevada

Michelle Larime, RTC of Southern Nevada

Rae Lathrop, RTC of Southern Nevada

Grant Shirts, RTC of Southern Nevada

Technical advisory group

Shane Ammerman, Clark County

Jodi Bechtel, Clark County

Keely Brooks, Southern Nevada Water Authority

Nicole Bungum, Southern Nevada Health District

L.-W. Antony Chen, University of Nevada, Las Vegas

Courtney Coughenhour, University of Nevada, Las Vegas

Namita Koppa, City of Las Vegas

Johanna Murphy, City of North Las Vegas

Annamarie Smith, City of Henderson

Marco Velotta, City of Las Vegas

Additional acknowledgements

Samantha Baker, Clark County

Nancy Brune, Guinn Center for Policy Priorities

Brian Chernoff, Clark County (former)

Ariel Choinard, Clark County

Joselyn Cousins, Federal Reserve Bank of San Francisco

Andrew Kjellman, RTC of Southern Nevada

Daniel Liden, Guinn Center for Policy Priorities (former)

Craig Raborn, RTC of Southern Nevada (former)

Deborah Reardon, RTC of Southern Nevada

Emily Strickler, RTC of Southern Nevada (former)

EXECUTIVE SUMMARY

Southern Nevada has among the hottest climates in the U.S. and has been identified as one of the fastest-warming regions in the country. And recent research predicts the region will experience a significant increase in the frequency and intensity of extreme heat events in the coming decades. Increasing temperatures in the region are associated with and contribute to a host of negative impacts – from poorer air quality to added wear and tear on infrastructure. But, most importantly, studies have found a clear link between increasing temperatures and increasing heat-related deaths and hospitalizations.

Despite the history of adverse health impacts associated with extreme heat in our region, experts hold that many of these outcomes are preventable. Reducing future adverse outcomes require developing effective and coordinated responses, as well as improving the awareness of health officials and the general public about the health risks associated with extreme heat. This is especially critical in areas with populations most vulnerable during extreme heat events.

To identify such areas in Southern Nevada, a heat vulnerability index and map were developed, using the three components of heat vulnerability as a foundation.The spatial analysis found that the areas in Southern Nevada with populations most vulnerable to extreme heat are largely concentrated in and around the region's urban core and east side. These areas include many of the region's older neighborhoods. The populations in these areas are typically more racially and ethnically diverse and economically challenged than other parts of the region. And because these areas are also at lower elevations than much of the western half of the valley, they experience naturally higher temperatures.

The results of the spatial analysis can be used by public health officials, city planners, and service providers to better understand who is most at risk during extreme heat events and target resources that help minimize health impacts, whether through short-term emergency management efforts or longer-term urban planning interventions.

Photo source: Forbes

This page intentionally left blank

INTRODUCTION

Extreme heat events cause more fatalities in the U.S. than any other climate-related hazard, according to Centers for Disease Control and Prevention (CDC) estimates. During the 15-year period from 2004 and 2018, nearly 11,000 deaths were attributed to heat (Vaidyanathan et al. 2020), more than hurricanes, tornadoes, and floods, all of which garner far greater publicity. When looking at the total scope of health impacts caused by extreme heat in the U.S. each year, the numbers are becoming more and more alarming to public health experts. On average, heat results in more than 75,000 health incidents annually, according to the CDC (see Figure 1).

And with a warming climate, the frequency, duration and intensity of extreme heat events are predicted to continue to rise (Seneviratne et al. 2018), increasing the risk of heat-related illness and mortality across the country.

In Southern Nevada, which has one of the hottest climates in the U.S. and has been identified as the fastest-warming region in the country, extreme heat poses a serious and increasing threat to the health of both residents and visitors. During the 10-year period from 2009 to 2018, there were nearly 600 heat-related deaths in Southern Nevada, according to Southern Nevada Health District (SNHD) records, with numbers spiking in the most recent years.

Despite the recent increase in heat-related illness and death, experts contend that most of these outcomes are preventable. Reducing future adverse outcomes will require developing effective and coordinated responses, as well as improving the awareness of public health officials and the general public about the health risks associated with extreme heat. This is especially critical in areas with high concentrations of those most

EXTREME HEAT, for the purposes of this report, is a relative term to refer to conditions above a location's baseline normal temperatures as well as to the higher temperatures during heat waves.

For more discussion on specific definitions of extreme heat conditions, see the EPA's "Excessive Heat Events Guidebook."

vulnerable during extreme heat events.

While increasing attention has been paid to climate change and extreme heat in Southern Nevada in recent years[1], much of the planning and study has concentrated on mitigation efforts. The Southern Nevada Extreme Heat Vulnerability Analysis took a slightly different approach, focusing on vulnerability to extreme heat. Through the development of a heat vulnerability index and map, the analysis identified areas in the region where populations are at high risk to extreme heat. These findings can help public health officials, city planners, and service providers target resources that help minimize health impacts, whether through short-term emergency management efforts or longer-term urban planning interventions.

This report provides an overview of the research and approach taken to identify areas in Southern Nevada with populations most vulnerable to extreme heat, including:

- A synopsis of Southern Nevada's warming climate and its impact on heat-related health outcomes
- Factors that increase risk for heat-related illness and death
- Development of a heat vulnerability index to determine the spatial distribution of the vulnerability to extreme heat in the region
- Discussion of results, including profiles of four areas of high vulnerability in Southern Nevada
- A survey of actions other cities and regions have explored to address extreme heat

VULNERABILITY is typically defined as the inability of a specific group or population to appropriately respond or adapt to a specific harmful stressor.

[1] Examples include: Clark County's "Sustainability & Climate Action Plan" (2021); City of Las Vegas's 2050 Master Plan (2021); Ongoing research by the Guinn Center for Policy Priorities, and at the University of Nevada, Las Vegas (UNLV) and Desert Research Institute (DRI); The Southern Nevada Water Authority's examination of the impact of increasing temperatures on outdoor workerforce.

FIGURE 1

HEAT-RELATED ILLNESS & DEATH IN THE U.S.

Extreme heat has long threatened public health in the United States. According to data captured by the U.S. Centers for Disease Control & Prevention (CDC), heat results in more than 75,000 health incidents on average each year, including:

702
deaths

67,512
emergency room visits

9,235
hospitalizations

BACKGROUND

Climate change impacts on Southern Nevada

Southern Nevada has among the hottest climates in the U.S. with temperatures regularly exceeding 100°F during summer months[2]. The region has also been identified as the fastest-warming in the country, according to a *Climate Central* analysis. The Las Vegas region's average annual temperature has increased nearly 6°F between 1970 and 2018, more than a degree higher than the next fastest-warming metropolitan area[3], according to the analysis. Recent research predicts Southern Nevada, and the southwestern U.S. generally, to experience a significant increase in the frequency and intensity of extreme heat events in the coming decades (Jones et al. 2015).

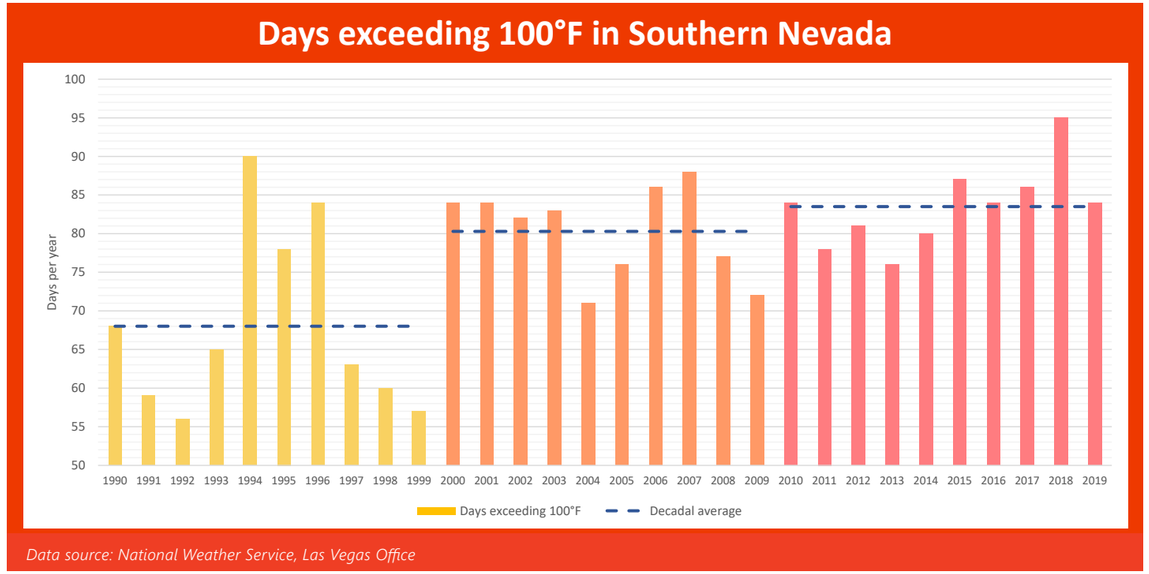
Increasing temperatures in the region are associated with and contribute to a host of negative impacts – from exacerbating drought and poorer air quality to the stretching out of the allergy season and added wear and tear on infrastructure. But, most importantly, studies have found a clear link between increasing temperatures and increasing heat-related deaths and hospitalizations. A recent analysis of heat waves and heat-related death in Southern Nevada between 2007 and 2016 found a statistically significant correlation between the two (Bandala et al. 2019).

Health records offer a glimpse into extreme heat's toll on health locally.

[2] The average daytime high during summer months was 104°F between 2015 and 2019, and there were 84 days that exceeded 100°F in Southern Nevada in 2019, according to data provided the National Weather Service's Las Vegas Office.

[3] El Paso, Texas at 4.74°F

FIGURE 2



Data source: National Weather Service, Las Vegas Office

There were 568 heat-related deaths[4] in Southern Nevada over the 10-year period from 2009-2018, according to data provided by SNHD, with numbers spiking in the most recent years. From 2016-2018 – a three year period – there were 619 heat-related emergency room visits or hospitalizations[5] in the region. And these numbers are almost certainly an undercount, according to public health and medical experts, due to the way this data is captured at hospitals and emergency rooms and on death certificates.

[4] Data source: Death certificates from the Nevada Electronic Death Registry System provided by the Nevada Department of Public and Behavioral Health Office of Analytics. Heat-related death is defined by having one of the following ICD-10 codes as the underlying or contributing cause of death: X30 - Exposure to excessive natural heat; T67 - Effects of heat and light.

[5] Data source: Hospitalization billing data provided by the Center for Health Information Analysis at University of Nevada, Las Vegas. Hospitalization for heat-related illness is defined by having one of the following ICD-10-CM billing codes in any diagnosis field: X30 - Exposure to excessive natural heat; T67 - Effects of heat and light.

Extreme heat and human health

A wide body of research has established a clear link between extreme heat and health risks. Exposure to extreme heat, or even moderate increases in temperature for populations not accustomed to heat, can stress the body's ability to maintain an ideal temperature and increase the risk of experiencing a range of adverse health outcomes (Reid et al. 2009), including heatstroke, heat exhaustion, and hyperthermia.

Temperature extremes can also worsen serious chronic conditions, including cardiovascular and cerebrovascular diseases and diabetes-related conditions. Additionally, heat can impact human health in a variety of indirect ways, most notably through negative air quality impacts. Higher temperatures contribute to the build-up of harmful air pollutants that exacerbate respiratory conditions (Tibbetts 2015).

UNEQUAL IMPACT OF EXTREME HEAT

Extreme heat, like many other weather-related and environmental dangers, has disproportionate impacts across communities. And a growing body of research points to low-income populations and communities of color bearing the brunt of heat's negative impacts.

Decades of discriminatory housing and land use policies in the U.S. have resulted in present-day heat-related disparities. A recent study published in *Climate* found that across the country, formerly redlined[i] areas were exposed to greater heat relative to their non-redlined neighbors (Hoffman et al. 2020).

In an effort to address these historical inequities, cities are being more intentional about targeting resources and taking actions aimed at addressing these environmental injustices.

[i] Redlining was a racist practice outlawed in the U.S. in the 1960s that effectively blocked Black and other people of color from obtaining home loans in certain areas or at all.

The city of Phoenix, for example, is working with residents in historically underserved neighborhoods to improve infrastructure and develop neighborhood-specific heat action plans.

Photo source: Kimberly Paynter/WHYY

Fans being delivered to residents in one of Philadelphia's most heat vulnerable areas.

And through the "Beat the Heat" initiative in Philadelphia, community groups and residents in a predominantly Black and Latinx neighborhood that experiences hotter temperatures than the rest of the city worked with city departments to development a heat relief plan and distribute fans and air conditioning units to residents.

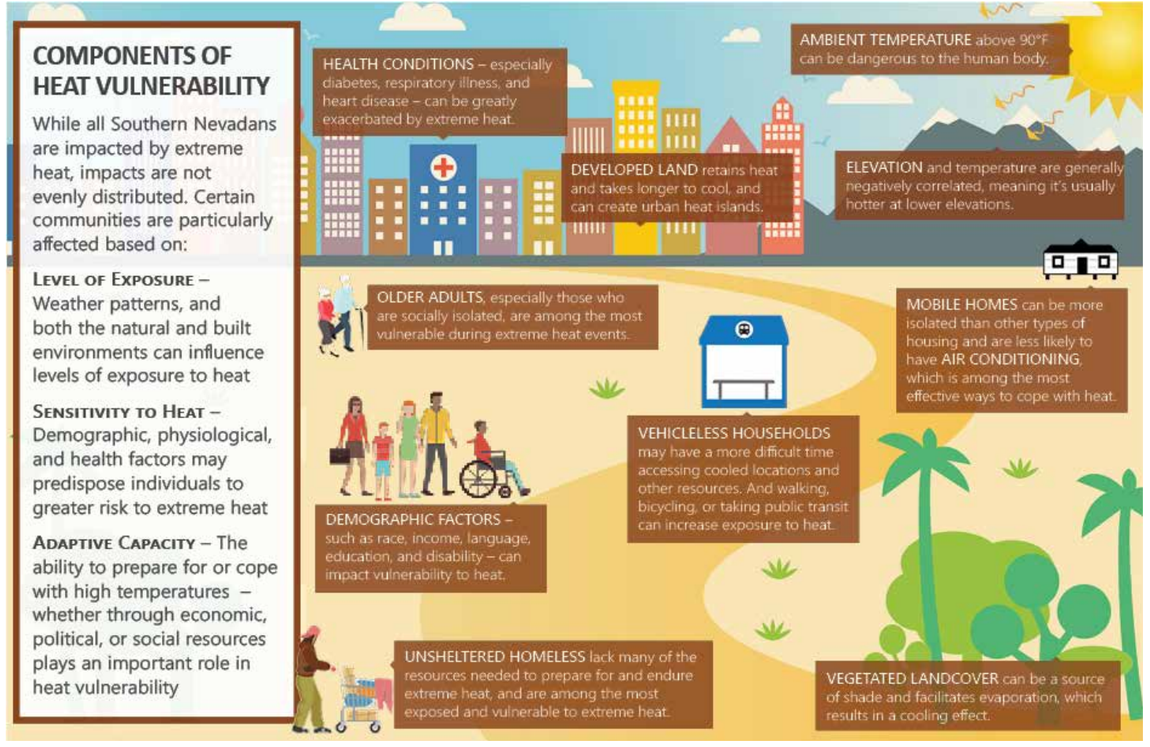
Heat vulnerability factors

While everyone is vulnerable to the effects of extreme heat to some extent, impacts are not evenly distributed. Certain populations are more at risk due to environmental, demographic, socioeconomic, and physiological factors. Current examination and discussion of extreme heat vulnerability center around three dimensions of heat vulnerability, which take these factors into account:

- **Exposure to extreme heat** – Weather patterns, as well as both the natural and built environments can influence levels of exposure to extreme heat.
- **Sensitivity to extreme heat** – Demographic, physiological, and health factors may predispose individuals to greater risk from exposure during extreme heat events.
- **Adaptive capacity** – The ability to prepare for or cope with extreme heat impacts, whether through economic, political, or social resources.

This framework served as a foundation for the Southern Nevada Extreme Heat Vulnerability Analysis. Taking this comprehensive and multidimensional approach to analyzing heat vulnerability that includes social, health, and place-based influences helps ensure the interventions developed as a result will target those most at-risk, while also addressing environmental and social justice.

FIGURE 3



DATA & METHODS

Heat vulnerability indicators

To identify indicators of the three dimensions, an extensive review of heat vulnerability studies and indexes was completed, and local subject-matter experts were consulted. While reviewing existing studies and indexes produced by other cities and regions, a core set of variables found across the majority of analyses emerged. Our analysis began here with a dozen or so variables widely held to increase heat vulnerability. Local experts[6] were then consulted to better understand local factors unique to the region to consider. In total, 18 indicators – which act as proxies to understanding the complex, interconnected nature of extreme heat vulnerability – were selected. The indicators, presented in the below table, are organized around the three components of heat vulnerability. (See Appendix A for additional detail on the selected indicators.)

	INDICATOR	VARIABLE DESCRIPTION	DATA SOURCE
EXPOSURE	Land surface temperature	Difference in daytime and nighttime land surface temperature from June 18 – 25, 2017[7] (1 km)	NASA, MODIS Land Surface Temperature and Emissivity (MOD11)
	Developed land	Percent of developed land (e.g., cement, asphalt, buildings, etc.)	Multi-Resolution Land Characteristics (MRLC) Consortium, National Land Cover Database (2016)
	Vegetated land cover	Percent of an area covered in vegetation (such as trees, shrubs, grass, etc.) from August 29, 2019 (10 m)	ESA Sentinel-2 Satellite, Normalized Difference Vegetation Index
	Mobile homes	Housing units that are mobile homes	U.S. Census Bureau, American Community Survey, 5-year Estimates (2014-2018)
	Air conditioning	Residential parcels without air conditioning	Clark County Assessor's Office, Residential Extraction dataset
	Elevation	Height above sea level	PRISM Climate Group, Oregon State University, Digital Elevation Model
ADAPTIVE CAPACITY	Disability	Population ages 18-64 with a disability (hearing, vision, cognitive, ambulatory, self-care, or independent living difficulty)	U.S. Census Bureau, American Community Survey, 5-year Estimates (2014-2018)
	Educational attainment	Adults 25 years and older who did not receive a regular high school diploma (or any foreign alternative)	U.S. Census Bureau, American Community Survey, 5-year Estimates (2014-2018)
	Language (limited English proficiency)	Population age 5 and older with limited English proficiency	U.S. Census Bureau, American Community Survey, 5-year Estimates (2014-2018)
	Poverty	Population age 20-64 with an income in the past 12 months below the poverty level	U.S. Census Bureau, American Community Survey, 5-year Estimates (2014-2018)
	Race (non-white population)	Population of a race other than "White (non-Hispanic or Latino)"	U.S. Census Bureau, American Community Survey, 5-year Estimates (2014-2018)
	Unsheltered homeless	Population of unsheltered homeless	Southern Nevada Homeless Continuum of Care, Point-in-time Homeless Count (2017-2019)
	Vehicleless households	Households without a vehicle	U.S. Census Bureau, American Community Survey, 5-year Estimates (2014-2018)
SENSITIVITY	Older adults	Population age 50 and older	U.S. Census Bureau, American Community Survey, 5-year Estimates (2014-2018)
	Isolated older adults	Adults 65 and older who live alone	U.S. Census Bureau, American Community Survey, 5-year Estimates (2014-2018)
	Diabetes	Diabetes-related health incidents per 100,000 (age adjusted)	Southern Nevada Health District, Nevada death certificate data (2013-2017); Nevada hospital discharge data (2016-2017)
	Heart disease	Cardiovascular-related health incidents per 100,000 (age adjusted)	Southern Nevada Health District, Nevada death certificate data (2013-2017); Nevada hospital discharge data (2016-2017)
	Respiratory disease	Chronic lower respiratory disease-related health incidents per 100,000 (age adjusted)	Southern Nevada Health District, Nevada death certificate data (2013-2017); Nevada hospital discharge data (2016-2017)

[6] Among those consulted were researchers at the UNLV School of Public Health and public health professionals at the Southern Nevada Health District.

[7] This date range was selected because it was a contemporary heatwave that included the hottest day recorded at the McCarran Airport Weather Station since 2014 and occurs concurrently with ACS survey estimates used in this study.

Index & spatial analysis summary

After variables were identified for each of the 18 indicators, data was collected, processed, and prepared for analysis. Each variable was then mapped.

To overcome differences in the variables' spatial units of measurement (e.g., zip code, block group, census tract, or pixel resolution), which do not allow for direct comparison, the data was disaggregated into a uniform grid using the U.S. National Grid (USNG). Doing so divided the urbanized region into 129,100 100-square-meter cells, each with a disaggregated estimate of the 18 variables.

To improve disaggregated estimates, population-based data was clipped to residential parcels[8] since they refer to data centered around places of residence. This also prevented areas of vacant land, right-of-way, and commercial development from being identified as highly vulnerable areas, as the purpose of the study was to identify areas where people are most vulnerable to extreme heat (see Figure 4).

Next, a statistical regression was performed to determine the relative importance of each variable's inclusion in successfully predicting heat-related health outcomes in the region.

[8] With the exception of the unsheltered homeless population counts

Photo source: CNN

Photo source: MikeBlake/Rueters

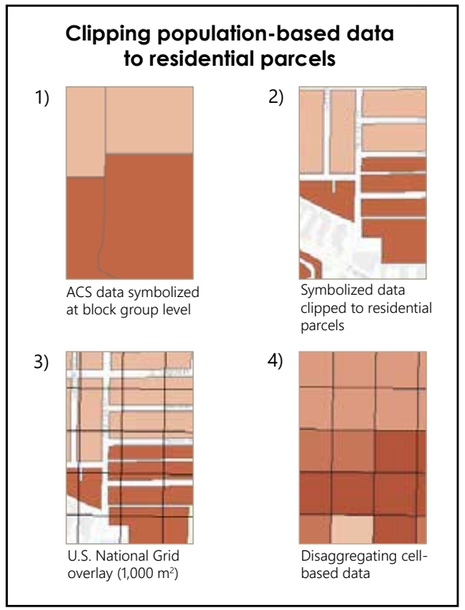
Photo source: John Locher/AP

This allowed for variables to be weighted when forming the extreme heat vulnerability index.

To account for differing units of measurement, each variable was normalized using min-max scaling[9]. Additional scaling was done before each component's weighted score was summed and scaled a final time to create a composite extreme heat vulnerability index

The index results were then mapped, producing a grid cell-based visualization of the results. Next, the spatial results were generalized for both aesthetic and data sensitivity[10] purposes. The results, which are included on the following pages, were then published to an ArcGIS Server to create an interactive web-based map application. Demographic data was added to the web-based map to provide additional neighborhood-level context for users.

FIGURE 4



[9] Min-max scaling performs a linear transformation on original data, rescaling the range of features to between 0 and 1. For this analysis, a value of 0 was assigned to the grid cell with the minimum variable value in the region and a value of 1 to the grid cell with the maximum value. Remaining cells were transformed to a decimal value between 0 and 1 based on their original value.

[10] Sharing health-related data and demographic characteristics at micro-scale geographies comes with privacy and confidentiality concerns.

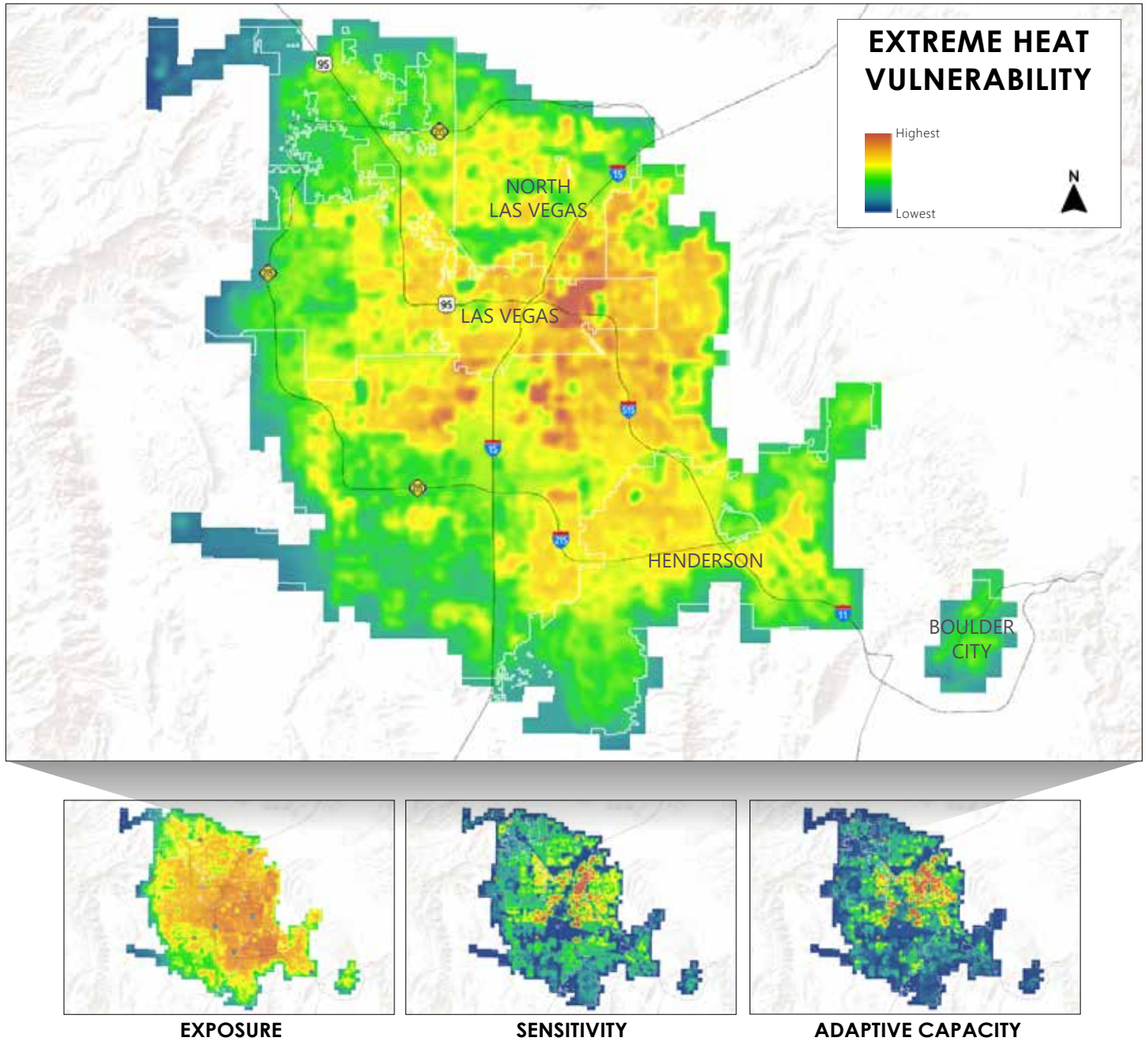
The interactive Southern Nevada Extreme Heat Vulnerability Map is available at https:arcg.is/0mi1n9

RESULTS

The Southern Nevada Extreme Heat Vulnerability Map (see Figure 5) visualizes the spatial distribution of extreme heat vulnerability among the region's population. Red areas in the composite map below represent those with populations most vulnerable to extreme heat, according to the analysis. In the three component maps (see Figures 6-8), red areas represent those with populations most vulnerable to each respective component.

It is important to note that this analysis measured relative vulnerability to extreme heat, not absolute vulnerability. So it should not be inferred that there is little or no vulnerability in areas at the opposite end of the spectrum, just that there are lower levels of vulnerability relative to other areas of the region.

FIGURE 5



Exposure

The spatial distribution of Exposure factors (see Figure 5) is more evenly dispersed across the region than the Sensitivity and Adaptive Capacity components. However, Exposure is more intense in the eastern half of the valley, and is closely correlated with the region's elevation, the most influential variable in this set, according to the analysis. Elevation in the region's urbanized area drops by more than 2,500 feet west to east, resulting in naturally higher temperatures in the valley's east side[10], especially east of the I-515 freeway.

The difference in daytime and nighttime land surface temperature was the next strongest variable in the Exposure set. Its influence can largely been seen in two areas: It's largely responsible for the Summerlin South area's relatively high score compared to neighboring areas, and it also contributes to the dark orange area in central Henderson. However, it is worth noting that while both Summerlin South and central Henderson cool less overnight than much of the urbanized region, the former is naturally cooler due, in large part, to its higher elevation.

Sensitivity

Populations most sensitive to extreme heat in Southern Nevada are concentrated in the region's urban core – largely in and around downtown Las Vegas, downtown North Las Vegas, and the resort corridor. The most influential Sensitivity indicators based on the analysis were the three related

FIGURE 6

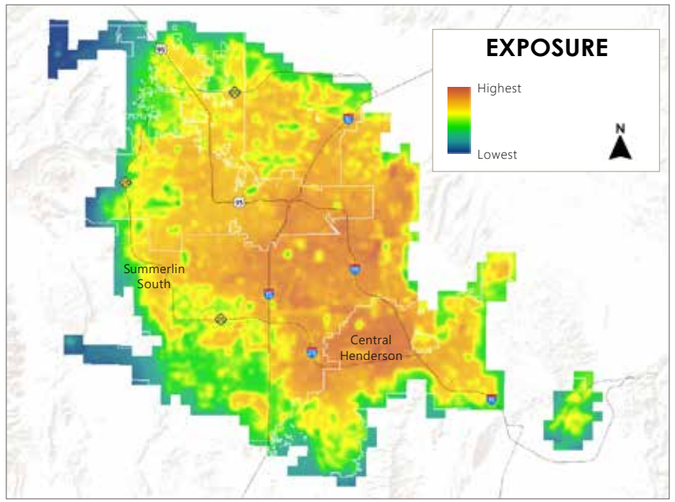
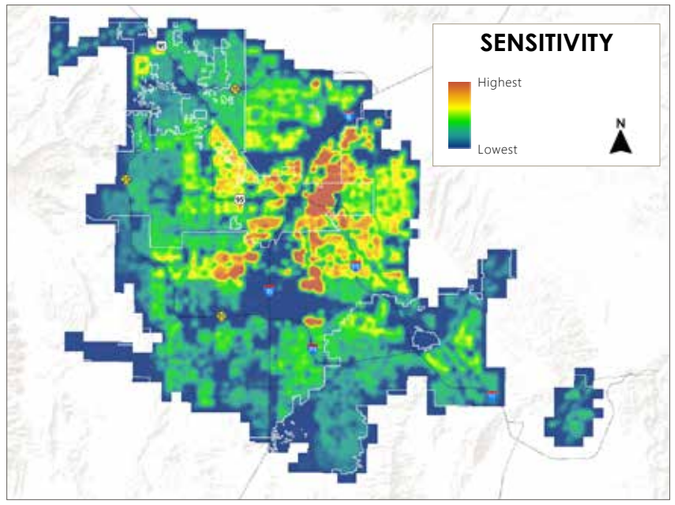


FIGURE 7



[10] On average, the temperature drops 3.57°F for every 1,000-foot increase in elevation in the Las Vegas region, according to the National Weather Service's Las Vegas office. This means there can be a difference of up to 10°F from one side of the valley to the other.

to health: Heart disease, diabetes, and chronic lower respiratory disease. The prevalence of each, not surprisingly, is highest in the same areas.

These health conditions are particularly sensitive to extreme heat. Higher temperatures can increase heat rate and blood pressure, which negatively impact individuals with cardiovascular issues and diabetes (Peters et al. 2020). And because extreme heat can worsen air quality, particularly in dry climates, it can exacerbate asthma and other respiratory conditions (Tibbetts 2015).

Adaptive Capacity

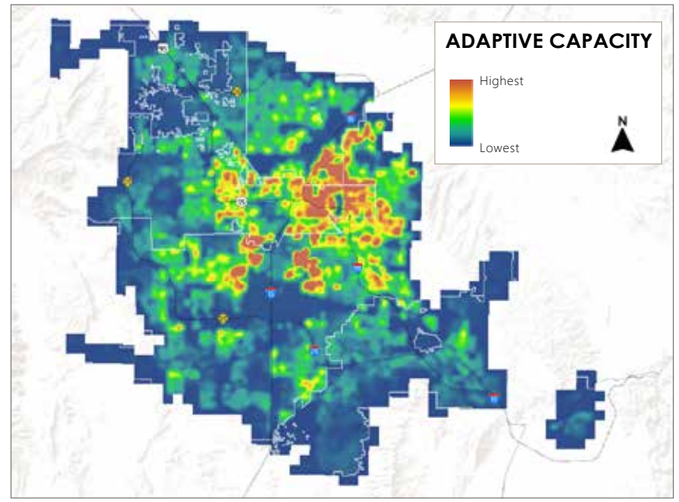
Populations least able to adapt to or cope with the impacts of extreme heat in the region are primarily concentrated in the valley's urban core and east side. The three most influential Adaptive Capacity indicators, based on the analysis, are educational attainment, race, and homelessness.

Research finds that low levels of educational attainment can be a barrier to accessing weather forecasts and extreme weather advisories and warnings (Muttarak et al. 2014), which can allow individuals to appropriately prepare for and respond to weather-related hazards. Low levels of educational attainment are also highly correlated with lack of financial resources, which can limit the ability of households to cope with extreme heat. Adequately weatherizing a home or running air conditioning for extended periods, for example, can be cost prohibitive for low-income households.

Studies also find that non-white populations are disproportionately impacted by extreme heat in the U.S., due in large part to decades of discriminatory housing and land use policies (Benz et al. 2021; Hoffman et al. 2020).

Unsheltered homeless populations often lack many of the critical resources needed to prepare for and endure extreme heat. In Maricopa County, Arizona, data compiled by the public health department show that homeless individuals represent a fast-growing share of heat-related deaths (Flavelle et al. 2019).

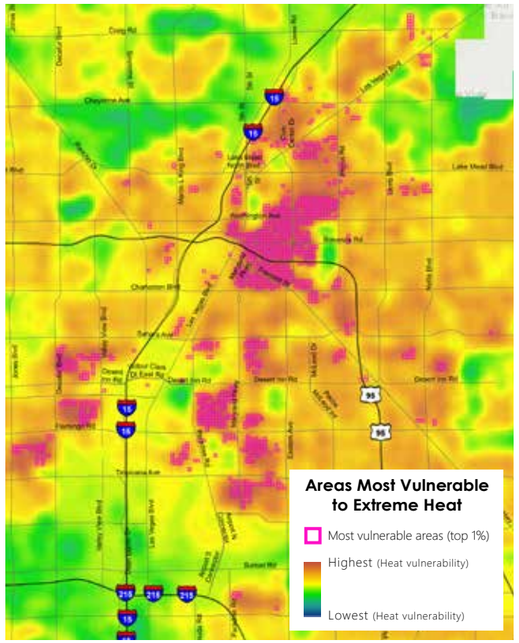
FIGURE 8



Extreme heat vulnerability

Even to an untrained eye, it's clear that heat vulnerability is highest among populations in the central and eastern valley (see Figure 4). And the data bears this out. The majority of the highest-scoring 1 percent of grid cells (i.e., areas with populations most vulnerable to extreme heat) are located in and around the region's urban core and the east side (see Figure 9). These areas include many of the region's older neighborhoods. The populations in these areas are typically more racially and ethnically diverse than other parts of the region, and more economically challenged. And because these areas are also at lower elevations than much of the western half of the urbanized region, they experience naturally higher temperatures.

FIGURE 9



The highest scoring 1 percent of cells (i.e., areas with populations the most vulnerable to extreme heat) in the region highlighted in pink.

In total, an estimated 115,000 people live in the highly vulnerable areas highlighted in Figure 8. A full 80 percent are people of color – more than half identify as Hispanic/Latinx, 17 percent as Black/African American, and 6 percent as Asian. Approximately 25 percent of residents are 50 or older, and nearly 20 percent of residents in these areas live alone. The average median income among households is $31,000, and nearly one-in-five people of working age live below the poverty level.

See the Neighborhood Profiles insert between pages 12 and 13 of this report for neighborhood-level context on four areas within the region found to be particularly vulnerable to extreme heat.

Southern Nevada
Extreme Heat Vulnerability Analysis

NEIGHBORHOOD PROFILES

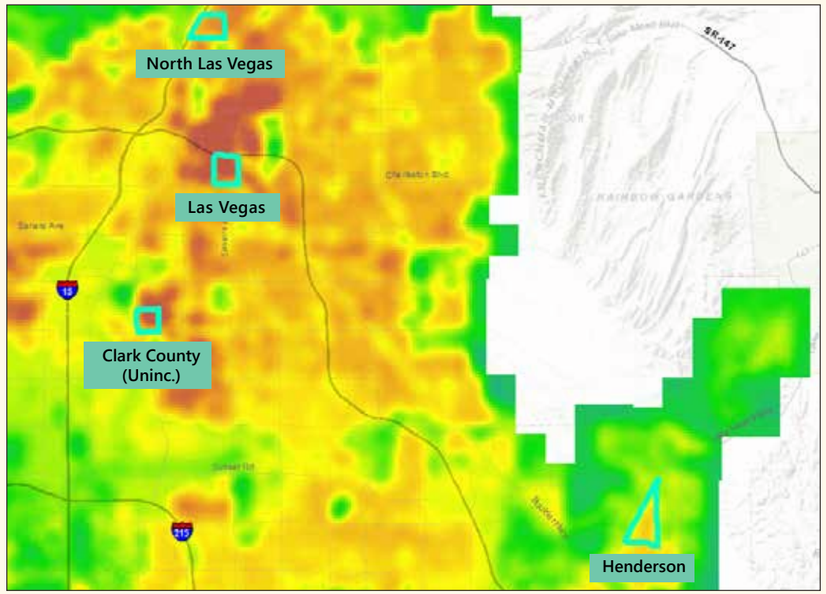
Henderson | Las Vegas | North Las Vegas | Uninc. Clark County

RTC

Neighborhood Profiles

As part of the Southern Nevada Extreme Heat Vulnerability Analysis, neighborhood profiles were completed to highlight vulnerable areas that were found to exist within the region's urban core. Four study areas were profiled – one each in the cities of Henderson, Las Vegas, and North Las Vegas, and one in unincorporated Clark County (see map below).

The profiles are intended to provide neighborhood-level context to the Southern Nevada Extreme Heat Vulnerability Analysis, which is regional in nature. Each profile includes existing conditions, demographic data, and a discussion of each study area within the context of extreme heat vulnerability.



When choosing neighborhoods to profile, two primary factors were prioritized. First, consideration was given to high-scoring areas – the four study areas are among the highest-scoring (i.e., most vulnerable to extreme heat) in their respective jurisdictions. And second, areas were strategically chosen to highlight a range conditions – from the built environment to the makeup of the population – that contribute to higher levels of extreme heat vulnerability. As such, while the observations and insights offered in each profile are specific to the respective neighborhood, they may also be applicable to other areas in the region where characteristics are similar.

The neighborhood profiles were constructed through a variety of research methods, including reviewing local maps and planning documents, informal site visits, and discussions with local planning departments. Review the Summary of Analysis on the following page for an explanation of how high-scoring areas were determined. High scores referenced throughout this section are negative in nature – higher-scoring areas have greater vulnerability to extreme heat.

See the STRATEGIES FOR ADDRESSING EXTREME HEAT section of the Southern Nevada Extreme Heat Vulnerability Analysis for strategies and best practices that could be considered and further explored in these and other high-scoring areas in the region.

Summary of Analysis

To identify areas in Southern Nevada where populations are most vulnerable to extreme heat, extensive data and spatial analysis was completed, built around the three components heat vulnerability:

- **Exposure to extreme heat** – Weather patterns, and both the natural and built environments can influence levels of exposure to extreme heat.
- **Sensitivity to extreme heat** – Demographic, physiological, and health factors may predispose individuals to greater risk to extreme heat.
- **Adaptive capacity** – The ability to prepare for or cope with extreme heat impacts, whether through economic, political, or social resources.

Indicators for each component were selected based on existing research and input from local experts.

EXTREME HEAT VULNERABILITY INDICATORS

Exposure	Sensitivity	Adaptive Capacity
• Temperature • Vegetation • Developed land • Elevation • Air conditioning • Mobile homes	• Older adults (50+) • Isolated seniors • Diabetes • Heart disease • Respiratory illness	• Disability • Educational attainment • Limited English • Poverty • Race (non-white) • Unsheltered homeless • Vehicleless households

Creating a vulnerability ranking based on the data above required overcoming differences in each variables' spatial and numerical units of measurement.

To place each variable in a common spatial unit, the data was disaggregated into a uniform grid using the U.S. National Grid (USNG). Doing so divided the urbanized region into 129,100 100-square-meter cells, each with a disaggregated estimate of the 18 variables. These grid cell values were subsequently scaled to remove units of measurement from each variable.

Before aggregating each set of variables, a statistical regression was performed. As an output, the regresions quantitatively describe the relative importance of each variable's inclusion in successfully predicting the rate of heat-related health outcomes.

Additional scaling was done before each component's weighted score was summed and scaled a final time to form a combined score.

See the DATA & METHODS section, as well as Appendix B, of the Southern Nevada Extreme Heat Vulnerability Analysis report for additional methodology details and analysis results.

CITY OF HENDERSON Neighborhood Profile

Overview of Area

The Henderson study area is located at the northernmost point of the Valley View neighborhood in East Henderson, one of the oldest parts of the city. Like much of East Henderson, the area is economically challenged, demonstrated by its location within both an Opportunity Zone and USDA-defined food desert.

The study area is comprised mostly of low-density residential development, including single-family houses and mobile homes. A cluster of higher-density multifamily complexes, including a Southern Nevada Regional Housing Authority property, is located along Warm Springs Road. The rest of the southern portion of the area (south of Meyers Ave.) is largely made up of ranch-style homes built around 1980. Nearly all of the remaining 100 acres of residential development (north of Meyers Ave.) is mobile/manufactured homes, much of which was built in the mid-1960s. The residents in this portion of the study area tend to be older and Caucasian, as well as more likely to have a disability and have lower incomes compared to the rest of the study area's population. Commercial development in the area is located along Lake Mead Pkwy. Businesses range from a Wildfire Casino and health/rehabilitation center to gas stations and convenience stores.

Infrastructure in the study area appears to be well maintained. The roadways and sidewalks are in good condition. Pedestrian improvements and bike facility enhancements – including a separated bike path along Pueblo Blvd. – were recently completed along several streets running through the area. One defining feature of the built environment in the study area is a concrete stormwater drainage channel that runs along Pueblo Blvd. that limits connectivity. Between Warms Springs Rd. and the northernmost point of the study area, there is only one pedestrian access point to cross the fenced-in channel to the east.

The study area's lack of open space further draws attention to the connectivity barrier the channel presents, as it limits many residents from easily accessing Hayley Hendricks Park located just east of channel. The 20-acre park includes large natural grass fields, mature trees, shaded playground equipment, a splash pad, and covered picnic areas. On the opposite side of the study, west of Lake Mead Pkwy., area are two newly-built parks in the Cadence master planned community. Cadence Central Park features abundant green space along with covered picnic areas and a 2.5-acre pond, while Desert

Study area

- **Boundaries**: Lake Mead Pkwy., Pueblo Blvd., Warm Spring Rd.
- **Zip code**: 89015
- **Census tract**: 54.21
- **Sq. miles**: 0.46 | **Acres**: 295

Heat Vulnerability Scores

Study area averages

- **COMPOSITE**: >80th percentile
- **Exposure**: >80th percentile
- **Sensitivity**: >75th percentile
- **Adaptive Capacity**: >80th pctl

Pulse Park features a playground, picnic areas, dog park and shade structures. However, with limited crosswalks and six lanes of fast-moving traffic on Lake Mead, accessing either of these parks by means other than automobile, especially from the residential parts of the study area, can be challenging.

Extreme Heat Vulnerability

Residents in the study area are among the most vulnerable to extreme heat in Henderson. Driven largely by high Exposure and Adaptive Capacity scores, the area includes 10 of the top 100 highest-scoring cells in the city. Additionally, the study area is located in the 89015 zip code, which is among the top seven zip codes in the region for heat-related deaths (from 2009-2018) and hospitalizations (from 2016-2018) per capita, according to Southern Nevada Health District (SNHD) data.

Exposure. The area's average Exposure score is in the 80th percentile in the region. Due to its lower elevation, temperatures are hotter in East Henderson than most other parts of the valley. The study area also features little vegetated land cover, limiting natural cooling and shade provided by trees and green space. Although there are large community parks in the near vicinity, access is limited by

Southern Nevada Extreme Heat Vulnerability Analysis | City of Henderson Neighborhood Profile

Demographic Snapshot

Study area estimates (County-level estimates in parentheses for comparison)

Population: 3,365
Households: 1,097

Age
- **Median**: 48 years old (37)
- **65 and over**: 21% (15%)

Race/ethnicity
- **Asian**: 3% (10%)
- **Black/Afr. American**: 10% (12%)
- **Hispanic/Latinx**: 19% (31%)
- **White**: 69% (60%)

Language
- **Limited English proficiency**: 4% (7%)
- **Spanish-speaking households**: 15% (31%)

Education
- **Bachelor's degree or higher**: 10% (14%)
- **Less than a high school diploma**: 18% (25%)

Income
- **Median household**: $36,600 ($59,300)
- **Individual below poverty**: 35% (14%)

Transportation
- **Households without a vehicle**: 21% (8%)
- **Take public transportation to work**: 16% (3%)

Housing
- **Detached single-family homes**: 36% (59%)
- **Mobile homes**: 20% (3%)
- **Renter-occupied housing**: 53% (46%)
- **Renter-burdened households**: 78% (52%)
- **65 and older living alone**: 10% (9%)

U.S. Census Bureau, American Community Survey, 5-year estimates (2015-2019)

infrastructure barriers previously noted.

The area's concentration of mobile home units also contributes to its high average Exposure score. Data finds that mobile homes are less likely to be weatherized or have central air conditioning, which can increase exposure levels of inhabitants. Assessor's records indicate that roughly 32 percent of the mobiles homes in study area don't have air conditioning, 15 times higher than the overall regional rate.

Sensitivity. While the study area's average Sensitivity score is in the 75th percentile regionally, it's among the highest in Henderson. The median age of the area's residents, 48, is nearly 11 years older than that of the region, and East Henderson residents also have higher rates of health conditions that can be exacerbated during extreme heat events. The 89015 zip code ranks in the top 20 percent of all zip codes in the county for health issues stemming from chronic lower respiratory disease and diabetes per capita, according to health district data.

Adaptive Capacity. Similar to its Sensitivity score, the study area's average Adaptive Capacity score is among the highest in Henderson. Median household incomes in the study area are among the lowest in Henderson and nearly $23,000 less than that of the region. And a third of the study area's population had an income below the poverty level. Incomes are lowest among residents in the cluster of multifamily housing along Warm Springs Rd. and manufactured housing north of Meyers Rd.

Approximately 25 percent of area residents identify as having a disability, twice that of the region as a whole. One-in-five households in the study area do not have access to a vehicle, leaving them more likely to rely on forms of transportation that subject them to greater levels of direct exposure to extreme heat, such as walking, bicycling, or taking public transit.

A flood channel that runs parallel to Pueblo Blvd. limits connectivity in the study area. A lone pedestrian crossing provides access east to Hayley Hendricks Park.

CITY OF LAS VEGAS Neighborhood Profile

Overview of Area

Located on the city's east side approximately a mile from the core of Downtown Las Vegas, the Las Vegas study area is among the oldest neighborhoods in the region. While the border between the Downtown Las Vegas and East Las Vegas planning areas run through the study area, its population and general character more closely align with the latter. Like much of East Las Vegas, the study area's population is predominantly comprised of communities of color (especially Hispanic/Latinx), and it features an older housing stock with a variety of housing types. In addition to the demographic and built environment similarities, the area also grapples with many of the same challenges that face East Las Vegas, including a high poverty rate, limited open space, environmental justice issues, and historical disinvestment.

The study area is among the most economically challenged in the region. At just over $20,000, its median household income is a third of the region's and among the lowest in Clark County. Nearly 40 percent of area residents are below the poverty level, and two-thirds of households are housing cost burdened. While both Downtown Las Vegas and East Las Vegas have been the focus of redevelopment efforts, recent private investment has been concentrated downtown and has yet to consistently make its way to the east side. However, new economic initiatives by the city aim to enhance workforce development in East Las Vegas and capitalize on training centers in the district, according to the newly adopted City of Las Vegas 2050 Master Plan[1].

Most of the real estate in the study area consists of older residential development with a range of housing types, much of which is naturally occurring affordable housing. The majority of the northern half of the study area is ranch-style single family homes built in the 1950s. A cluster of small multiplexes and low-rise apartments of a similar vintage is located along and around Stewart Ave. Housing in the southern half of the study area varies considerably, both in terms of type and affordability. The southwestern quadrant includes several higher density low-rise apartment complexes, along with a cluster of contemporary loft-style townhomes. The southeastern quadrant consists of low-rise apartments, including a 50-unit emergency housing complex targeted to low-income veterans. Fremont Street also features several single-story converted motels whose rooms are now small rental units.

[1] Adopted in the summer of 2021, the 2050 Master Plan establishes a new vision for a livable and sustainable Las Vegas and addresses a variety of issues and challenges – including population growth, public health, drought, recreation, housing, and economic diversification – in a manner that aim to provide residents equitable access to services, education and jobs. It also addresses climate hazards like extreme heat, urban forestry, and establishes a layered complete street network throughout the city.

Study area

- **Boundaries**: Bruce Street, I-515, Eastern Ave., Charleston Blvd.
- **Zip code**: 89101
- **Census tract**: 5.21
- **Sq. miles**: 0.3 | **Acres**: 190

Heat Vulnerability Scores

Study area averages

- **COMPOSITE**: >99th percentile
- **Exposure**: >80th percentile
- **Sensitivity**: >99th percentile
- **Adaptive Capacity**: >95th pctl

Given the high share of multifamily housing in the study area, it's of little surprise that the majority of residents are renters – though the extent to which may be somewhat surprising: 90 percent of residential units are inhabited by renters, though single-family homes make up more than a quarter of all housing units.

Commercial development is largely concentrated in the southern half of the study area. Strip malls populated with small local businesses are prevalent along Charleston Blvd., while Fremont Street features a mix of commercial development ranging from budget motels, auto parts stores, and a self-storage location. Businesses in the area's northern half are mostly confined to a strip mall along Eastern Ave. at the corner of Stewart Ave.

Infrastructure in the study area is a bit of a mixed bag. Streets and sidewalks are in relatively good condition, though small stretches of sidewalk are incomplete along several residential streets. Connectivity is generally good given the minimal cul-de-sacs and block walls, however the pedestrian network, while better than many areas in the region, suffers somewhat from longer block lengths. Residential units vary in condition, though many of the multifamily and multiplex properties appear poorly maintained. As is the case with most of downtown and East Las Vegas, designated green space in the study area is lacking. However, a public park, community center, and recreation center are all less than a one mile walk

Demographic Snapshot

Study area estimates (County-level estimates in parentheses for comparison)

Population: 3,017
Households: 1,375
Age
- **Median**: 37 years old (37)
- **65 and over**: 28% (15%)

Race/ethnicity
- **Asian**: 2% (10%)
- **Black/Afr. American**: 15% (12%)
- **Hispanic/Latinx**: 55% (31%)
- **White**: 40% (60%)

Language
- **Limited English proficiency**: 26% (7%)
- **Spanish-speaking households**: 46% (31%)

Education
- **Bachelor's degree or higher**: 5% (14%)
- **Less than a high school diploma**: 43% (25%)

Income
- **Median household**: $20,500 ($59,300)
- **Individual below poverty**: 39% (14%)

Transportation
- **Households without a vehicle**: 45% (8%)
- **Take public transportation to work**: 13% (3%)

Housing
- **Detached single-family homes**: 21% (59%)
- **Mobile homes**: 2% (3%)
- **Renter-occupied housing**: 90% (46%)
- **Renter-burdened households**: 74% (52%)
- **65 and older living alone**: 8% (9%)

U.S. Census Bureau, American Community Survey, 5-year estimates (2015-2019)

for nearly all residents in the study area, and along with nearby schools, could be valuable assets for helping address extreme heat impacts in the area.

Many of the residential properties feature mature trees. However, city planners worry that many of the trees in East Las Vegas may soon be in need of replacement due to their age, heat stress, and maintenance needs. As part of the city's downtown master plan and new form-based code, new requirements for trees were included, and shade trees have been planted along Fremont Street in accordance with the new standards. And the 2050 Master Plan prioritizes increasing the tree canopy in East Las Vegas to combat ozone and extreme heat.

Concerns about trees nearing the end of their lifecycle and the lack of parks and open space are illustrative of environmental justice concerns that face much of the city's east side. The portion of I-515 that runs through East Las Vegas is among the most heavily congested roadway segments in the region, resulting in higher levels of noise and air pollution for the surrounding community. In fact, East Las Vegas has among the highest concentrations of ozone in the city, according to the city. There are concerns that a potential freeway expansion project on I-515 could further exacerbate environmental justice issues.

Extreme Heat Vulnerability

Residents in the study area are among the most vulnerable to extreme heat in Southern Nevada. Six of the top 50 highest-scoring cells in region are in the study area – all of which are south of Sunrise Ave. The 89101 zip code, in which the study area is located, has experienced among the most heat-related deaths (from 2009-2018) and hospitalizations (from 2016-2018) in the region, according to Southern Nevada Health District (SNHD) records. While all three of its average component scores are relatively high, its Sensitivity and Adaptive Capacity scores are the primarily drivers of its overall extreme heat vulnerability, with both above the 95th percentile.

Exposure. The study area's average Exposure score puts it in the 70th percentile in the region. Due to its lower elevation, temperatures are naturally hotter in the study area than much of the western half of the urbanized region. While the majority of the study area consists of developed land, it does feature a fair amount of vegetated land cover. Many of the homes in the study area feature mature trees and lawns, while the multifamily developments, include fairly dense tree coverage. The parks and schools in and around the area also include natural green space and trees, which provide cooling and shade. The area's Exposure score is also helped by the fact that nearly all residential units have air conditioning, according to Assessor's records.

Sensitivity. The study area's average Sensitivity score is in the 99th percentile, putting it among the highest in Southern Nevada. It includes 10 of top 100 highest scoring Sensitivity cells in the valley. The area's high scores are largely a product of the high rates of health conditions that are particularly sensitive to extreme heat. The 89101 zips code leads the region in diabetes-related deaths per capita, and has among the highest rates of heart and chronic respiratory diseases, according to SNHD data.

Adaptive Capacity. The study area's average Adaptive Capacity score is also among the highest in the region. Five of the top 250 highest-scoring cells in this category are located in the southern half of the study area. The median household income of residents is among the lowest in the region, and the poverty rate is more than 2.5 times that of the region. This extreme lack of financial resources likely limits the ability of residents to sufficiently cope with extreme heat. Weatherizing a home or running air conditioning for long periods, for example, can be cost prohibitive for low-income households. Additionally, nearly half of households in the study area don't have a vehicle, making them more reliant on transportation modes that subject them to heat.

The low rates of education attainment and high rates of non-English speaking households further contribute to the area's high Adaptive Capacity score. Research points to both factors potentially serving as barriers to accessing public information related to extreme heat, such as warnings and advisories. The study area also features a much higher proportion of communities of color than the region as a whole. Studies find that communities of color in the U.S. are disproportionately impacted by extreme heat due in large part to decades of discriminatory housing and land use policies.

CITY NORTH LAS VEGAS Neighborhood Profile

Overview of Area

Located just north of the heart of downtown North Las Vegas, the North Las Vegas study area, like much of its immediate surroundings, is economically challenged. The median household income of the area is nearly half that of the region's, and 40 percent of its residents are below the poverty level. While downtown North Las Vegas has seen new investment and redevelopment in recent years, much of it has been concentrated in commercial corridors and conditions in the adjacent neighborhoods have been slow to change.

The study area is a working-class neighborhood made up largely of Hispanic/Latinx families with children. Nearly two-thirds of the population identify as Hispanic/Latinx and almost half of the area's 900 households have children. A quarter of the study area population is younger than 10. The study area features a much higher proportion of communities of color than the region as a whole – specifically Hispanic/Latinx and Black/African American residents.

Real estate in the study area consists mostly of residential development, including single family houses, small multiplexes, and low-rise apartments. Nearly all of the multifamily rental properties are located along the study area's western boundary along Donna Street. Most of the apartments were built in the 1960s and 70s, with the exception of a 144-unit complex located in the southwest corner of the study area, which was built in the 90s. The remaining residential development consists of single-family housing. The subdivisions north of Cartier Ave. consist mostly of ranch-style houses built around 1970. The southeast quadrant of the study area includes a mix of ranch-style houses and small, 2- to 5-unit multiplexes.

While there are no commercial businesses within the boundaries of the study area, it is adjacent to downtown North Las Vegas, which has been the focus of both local and state redevelopment efforts. Directly south of the study area is a Smith's Food & Drug and the Maya Cinemas development. North Las Vegas City Hall & Library is also less than three-quarters of a mile from most points in the study area. Though businesses don't exist in the study area, it is home to several churches and schools, which have the potential to serve as valuable community resources for addressing extreme heat impacts, in addition to the nearby civic resources in downtown.

Infrastructure in the study area appears to be in fairly good condition. Streets and sidewalks look to be well maintained, especially along the study area's main thoroughfares. Connectivity throughout the study area and to neighborhoods to the north, east, and south is relatively good. The block walls and cul-de-sacs that impede connectivity in so many neighborhoods across the valley are fairly limited in the study area. I-15, which serves as the area's western boundary, is an obvious infrastructure challenge. In addition to the negative health and environmental outcomes associated with living near a freeway, it also limits connectivity to the west. Study area residents do have access to several parks and natural open space areas. Each of the four schools in and around the area have green space, though shade trees are somewhat limited. Pettitti Park offers grass fields and shaded picnic areas within the study area. And Boris Terrace Park, located just outside the study area on Cartier Ave., also offers both natural and artificial shade elements. The city is heavily investing in infrastructure improvements in downtown North Las Vegas. New pedestrian and bicycle amenities have been added in recent years, and many of the primary arterial streets also slated for improvements over the next several years.

Study area

- **Boundaries**: I-15, Evans Ave., Civic Center Dr., Carey Ave.
- **Zip code**: 89030
- **Census tract**: 44.02
- **Sq. miles**: 0.3 | **Acres**: 190

Heat Vulnerability Scores

Study area averages

- **COMPOSITE**: >95th percentile
- **Exposure**: >70th percentile
- **Sensitivity**: >90th percentile
- **Adaptive Capacity**: >95th pctl

Extreme Heat Vulnerability

Residents in the study area are among the most vulnerable to extreme heat in the valley. Ten of the top 100 highest-scoring cells in the city are in the study area and are also among the top 1 percent of cells

Demographic Snapshot

Study area estimates (County-level estimates in parentheses for comparison)

Population: 3,503
Households: 928

Age
- **Median**: 27 years old (37)
- **65 and over**: 37% (15%)

Race/ethnicity
- **Asian**: 0% (10%)
- **Black/Afr. American**: 23% (12%)
- **Hispanic/Latinx**: 66% (31%)
- **White**: 55% (60%)

Language
- **Limited English proficiency**: 19% (7%)
- **Spanish-speaking households**: 41% (31%)

Education
- **Bachelor's degree or higher**: 5% (14%)
- **Less than a high school diploma**: 41% (25%)

Income
- **Median household**: $28,800 ($59,300)
- **Individual below poverty**: 41% (14%)

Transportation
- **Households without a vehicle**: 19% (8%)
- **Take public transportation to work**: 2% (3%)

Housing
- **Detached single-family homes**: 37% (59%)
- **Mobile homes**: 0% (3%)
- **Renter-occupied housing**: 71% (46%)
- **Renter-burdened households**: 58% (52%)
- **65 and older living alone**: 8% (9%)

U.S. Census Bureau, American Community Survey, 5-year estimates (2015-2019)

in the entire region. The 89030 zip code, in which the study area is located, has experienced among the most heat-related deaths (from 2009-2018) and hospitalizations (from 2016-2018) in the entire region, according to Southern Nevada Health District (SNHD) records.

While all three of the study area's average component scores are relatively high, its Adaptive Capacity and Sensitivity scores are primarily responsible for its overall extreme heat vulnerability, with both in the 90th percentile in their respective categories.

Exposure. The study area's average Exposure score puts it in the 70th percentile in the region. Due to its lower elevation, temperatures are naturally hotter in the study area than much of the western portions of the urbanized region. While the majority of the study area consists of developed land, it does feature a fair amount of vegetated land cover. Many of the homes in the study area feature mature trees and lawns, while the multifamily developments, particularly along Donna Street north of Cartier Ave., include fairly dense tree coverage. The parks and schools in and around the study area also include natural green space and trees, which provide natural cooling and shade. The area's Exposure score is also helped by the fact that nearly all of its residential units have central air conditioning, according to Assessor's records. Two multiplexes in the southeast quadrant, with a total of 6 units between them, are the lone exceptions.

The multifamily developments in the study area, particularly along Donna Street north of Cartier Ave., feature a fairly dense tree canopy.

Sensitivity. Driven largely by the high rates of health conditions that are particularly sensitive to extreme heat, the study area's Sensitivity scores are among the highest in the North Las Vegas. Although study area residents are much younger than the region as a whole – the median age is 27, 10 years less than the region's – heart disease, chronic lower respiratory conditions, and diabetes are all prevalent in the area. In fact, 89030 ranks among the top 5 zip codes in the region for diabetes-related deaths and hospitalizations per capita and top 10 for heart disease, according to SNHD data.

Adaptive Capacity. The study area's average Adaptive Capacity score is in the 97th percentile, putting it among the highest in the valley. In fact, the study area includes six of top 500 highest-scoring cells in the region in this category. Like many of the neighborhoods around downtown North Las Vegas, the study area is economically challenged. Poverty rates are nearly three times the regional rate, and the median household income of study area residents is half that of the region's. This lack of financial resources could limit residents' ability to sufficiently prepare for and cope with extreme heat events. Adequately weatherizing a home or running air conditioning for extended periods, for example, can be cost prohibitive for low-income households.

The low rates of education attainment and high rates of non-English speaking households further contribute to the study area's high Adaptive Capacity score. Research points to both factors potentially serving as barriers to accessing and comprehending public information related to extreme heat, such as warnings and advisories. The study area also features a much higher proportion of communities of color than the region as a whole – specifically Hispanic/Latinx and Black/African American residents. Studies find that communities of color, across all income levels, are disproportionately impacted by extreme heat.

CLARK COUNTY (Uninc.) Neighborhood Profile

Overview of Area

Located in the unincorporated town of Paradise, the Clark County study area is situated between several regional landmarks: It's just northwest of the University of Nevada-Las Vegas (UNLV) main campus, approximately a mile east of the Las Vegas Strip, and less than a mile south of the Las Vegas Convention Center. Its proximity to the Strip and the commercial development along the Maryland Parkway corridor made the area attractive to working class households in the 1960s and 70s. However, beginning in the 90s, the area began to fall into decline, and over the past few decades, has been one of the more economically challenged neighborhoods in the urban core. The median household income of the study is nearly half that of the region's, and nearly a third of its residents are below the poverty level.

Much of the study area consists of low-rise multifamily units – both walk-up apartments and small multiplexes – several of which are low-cost weekly rentals. Siegel Suites has a strong presence in the area, with three residential properties, as well as a commercial office building. Nearly all of the multifamily units were built between 1962 and 1976, and many of them – especially in the interior of the study area – show their age. Some of the residential properties, particularly those along Flamingo Rd. and University Center Dr., are marketed as off-campus student apartments. The study area's adjoining census tracts to the north and east have similar residential characteristics.

Commercial development in the area is concentrated along Flamingo and Paradise roads, as well as along Twain Ave. west of Palos Verde Street. Businesses along Flamingo and Paradise include a mix of national hotel chains and freestanding restaurants capitalizing on the area's proximity to the resort corridor, as well as strip mall developments largely populated with smaller restaurants. Commercial development along Twain Ave. is very different, consisting mostly of strip malls with small local businesses catering to area residents.

The built environment in the study area is a somewhat inconsistent. Residential units are in varying condition – some properties appear well maintained, while others show obvious wear and tear. Street and sidewalk conditions also vary. Infrastructure on and along main thoroughfares is in relatively good condition, while cracked streets and sidewalks are abundant in the study area's interior. A large unpaved drainage channel, approximately a quarter mile in length and more than 80 feet wide (see Fig. 2), is a prominent feature in the study area's southeast quadrant. In addition to limiting connectivity, it has been used as an encampment for the unsheltered homeless. Connectivity throughout the study area is generally poor. Cul-de-sacs in residential areas, the aforementioned flood channel, and walled-off and fenced-in properties serve as impediments.

Study area

- **Boundaries**: Paradise Rd., Twain Ave., University Center Dr., Flamingo Rd.
- **Zip code**: 89119
- **Census tract**: 24.05
- **Sq. miles**: 0.21 | **Acres**: 137

Heat Vulnerability Scores

Study area averages

- **COMPOSITE**: >95th percentile
- **Exposure**: >95th percentile
- **Sensitivity**: >90th percentile
- **Adaptive Capacity**: >95th pctl

While some residential properties feature mature trees and landscaping, asphalt is the predominant landcover in the study area. Large parking lots behind the study area's commercial development, especially along Paradise, feature little to no vegetation. Patches of raw undeveloped land also exist throughout the area. Dedicated open space is nonexistent within the study area, though a park and recreation center are both less than a mile's walk from most residential units.

The makeup of study area residents differs in several key ways from the region as a whole. Nearly 60 percent of study area residents identify as Hispanic/Latinx, nearly twice the regional rate. Half of study area households are Spanish-speaking, compared to a third of households in the valley. And close to 60 percent of study area residents are between the ages of 25-59, compared to 48 percent for the region.

Extreme Heat Vulnerability

Residents in the study area are among the most vulnerable to extreme heat in the entire region. Three of the top 50 and 14 of the top 200 highest-scoring cells in the region are in this study area. And all three of its

Demographic Snapshot

Study area estimates (County-level estimates in parentheses for comparison)

Population: 4,089
Households: 1,901

Age
- **Median**: 38 years old (37)
- **65 and over**: 10% (15%)

Race/ethnicity
- **Asian**: 1% (10%)
- **Black/Afr. American**: 12% (12%)
- **Hispanic/Latinx**: 57% (31%)
- **White**: 40% (60%)

Language
- **Limited English proficiency**: 26% (7%)
- **Spanish-speaking households**: 47% (31%)

Education
- **Bachelor's degree or higher**: 6% (14%)
- **Less than a high school diploma**: 39% (25%)

Income
- **Median household**: $30,700 ($59,300)
- **Individual below poverty**: 29% (14%)

Transportation
- **Households without a vehicle**: 48% (8%)
- **Take public transportation to work**: 24% (3%)

Housing
- **Detached single-family homes**: 1% (59%)
- **Mobile homes**: 0% (3%)
- **Renter-occupied housing**: 97% (46%)
- **Renter-burdened households**: 55% (52%)
- **65 and older living alone**: 13% (9%)

U.S. Census Bureau, American Community Survey, 5-year estimates (2015-2019)

component scores – Exposure, Adaptive Capacity, and Sensitivity – are in the 90th percentile in their respective category. Recent data supports these research findings: The 89119 zip code, in which the study area is located, is among the top 10 in the region for heat-related deaths (from 2009-2018) per capita and top 5 for heat-related hospitalizations (from 2016-2018) per capita, according to Southern Nevada Health District (SNHD) records.

Exposure. The study area's average Exposure score puts it in the 90th percentile in the region. Due to its lower elevation, temperatures are naturally hotter in the study area than much of the western half of the region. Additionally, the study area's residents don't experience as much nighttime relief from daytime temperatures as other parts of the region, which suggests the urban heat island effect is at play. The study area's lack of vegetated land cover also contributes to its high average Exposure score. While several properties do have mature trees, many are palm trees, which don't offer the levels of natural cooling or shade that other varieties provide due to their low leaf area. The majority of the study area is developed land, including large parking lots, paved roads, and residential and commercial buildings.

On the plus side, all of the parcels within the study area have central air conditioning. And a public park and community center are both less than a mile's walk from nearly all residential units in the area.

Sensitivity. The study area includes three of the top 500 highest scoring Sensitivity cells in the region. While study area residents don't differ much in terms of age from the region as a whole, they do have higher rates of health conditions that are sensitive to extreme heat conditions. The 89119 zip code ranks in the top 20 percent in the county for heart disease and diabetes per capita and the top 25 percent in chronic lower respiratory disease, according to SNHD data.

Adaptive Capacity. The study area's average Adaptive Capacity score is 16 times higher than the region's. The area's northeast quadrant was found to have among the highest Adaptive Capacity scores in the region. In general, study area residents have less financial resources than most in the region, which limits their ability to prepare for and cope with the negative impacts of extreme heat to the same extent as others in the region. The median household income in the study area is nearly $30,000 less than that of the region, and its poverty rate is twice as high. The study area also has a fairly consistent presence of unsheltered homeless individuals, ranking in the top five percent of census tracts in the region, according to county data. Approximately half of area households don't have a vehicle – six times higher than the regional rate – and a quarter rely on public transportation to get to work.

The low rates of education attainment and high rates of non-English speaking households further contribute to the study area's high Adaptive Capacity score. Research points to both factors potentially serving as barriers to accessing public information related to extreme heat, such as warnings and advisories.

A drainage channel that runs through the southwest quadrant of the study area not only limits connectivity, but is also frequently the site of small homeless encampments.

Neighborhood Profiles front and back cover photo source: Patrick Connolly/Las Vegas-ReviewJournal

DISCUSSION

Research application

Identifying the geographic distribution of populations that are particularly vulnerable to extreme heat is an important element of reducing adverse health outcomes associated with extreme heat and a warming climate. Understanding where the populations most vulnerable to extreme heat exist can help local government agencies and service providers prevent negative health outcomes by targeting resources in priority areas.

The results of the spatial analysis, for instance, can help guide the location of cooling stations throughout the region. Furthermore, by utilizing the component maps, the analysis can also inform the types of strategies that might be appropriate or most effective in reducing vulnerability in specific areas. For example, in an area where vulnerability is driven largely by exposure factors, interventions aimed at heat mitigation – such as cool infrastructure and additional vegetation and green space – could be considered. See the Strategies for Addressing Extreme Heat section of this report for a survey of interventions and best practices for addressing extreme heat from across the country.

Limitations

While the maps produced as the result of this analysis offer a clear and easily interpretable illustration of the distributions of extreme heat vulnerability factors, this analysis is best viewed as preliminary, pointing to areas where additional investigation is warranted. This study is not intended to provide a complete picture of the strengths and vulnerabilities of the

region's residents, or of the capacity of service networks to meet the most pressing needs of the community during an extreme heat crisis. No single assessment can quantify all the important aspects that contribute to extreme heat vulnerability, but this approach offers a clarifying picture.

As with any approach to assessment that relies on indicators and variables that act as proxies – in this case, for heat vulnerability – there is some subjectivity involved with regard to the selection and weighting of variables, as well as with spatial transformations. And data constraints, including availability and access, also serve as a complicating factor. As such, the findings presented in this report should be used in conjunction with contextual knowledge, other datasets and research, and wider discussion with relevant stakeholders. It should also be noted that this research should only be interpreted within the context of extreme heat vulnerability. Any attempt to broaden its applicability to related or unrelated subject matters is inadvisable.

Opportunities for continued study

The approach taken in this study can be considered an important early step toward the development of resources that can help stakeholders better understand heat vulnerability in the region and where resources could be allocated to help save lives. However, continued analysis and regional collaboration is recommended to more comprehensively understand and address the threat of extreme heat across Southern Nevada.

As with any study, data limitations could be further explored and addressed. New or more precise data could result in methodological refinement and potentially yield more accurate estimates. For instance, greater access to and examination of health data, which is generally restricted due to privacy concerns, could yield important insight into demographic and socio-economic factors and their relation to heat-related health outcomes. And a more thorough study of temperature data could replace the land surface temperature dataset used in this study, which represents a specific locally occurring heatwave[11].

Recent focus in Southern Nevada on climate change provides a unique opportunity to magnify the significance of extreme heat and its health implications for the region. This analysis should be used in conjunction with existing efforts, including ongoing heat-related studies, to explore and implement interventions – from new policies, programs, and activities – that could result in lives being saved and

Photo source: Michael Quine/Las Vegas-ReviewJournal

a more sustainable community. The region is renowned for the innovative and aggressive measures it has taken in the interest of water conservation; a similar approach is certainly worth considering given the expectation of rising temperatures in the near future.

[11] The Land Surface Temperature dataset used in this study is composed of the average values of clear-sky land surface temperatures from June 18 – 25, 2017. This range was selected because it was a contemporary heatwave that included the hottest day recorded at the McCarran Airport Weather Station since 2014 and occurs concurrent with ACS estimates. While this data was visually compared with other local heatwaves and satellite imagery of surface temperature to assess its applicability – little variation was found – a more scientific approach is certainly recommended for future study.

ADDRESSING EXTREME HEAT

Cities and regions across the globe have taken steps in recent years aimed at cooling temperatures and protecting residents from heat's negative impacts. This section includes a survey of strategies and best practices that have been explored and implemented.

The actions presented in this section should not be seen as a complete or exhaustive inventory of interventions, but as a broad sampling of strategies that could be considered and further explored in Southern Nevada. Included strategies are limited to those deemed appropriate or feasible for the region. Green roofs, for example, are not included because they are generally water intensive, which would present a challenge given the valley's limited water resources.

Included actions are sorted into four categories:

- Mitigation – Strategies aimed at temperature reduction
- Adaptation – Strategies aimed at helping people adapt to or cope with extreme heat
- Education & Outreach – Strategies aimed at raising awareness, improving social cohesion, and building capacity of residents and stakeholders
- Planning & Policy – Strategies aimed at creating or shifting policies to address extreme heat and environmental injustice

Each action noted below is accompanied by a brief description, as well as examples of where they have been implemented. Additionally, a qualitative assessment of how well each strategy addresses each component of heat vulnerability is included. Several actions are called out in greater detail.

For more case studies related to heat mitigation, adaptation, and policy, see ULI's "Scorched" report.

WATTS SERENITY PARK

For decades, 1.13 acres of land on Monitor Avenue in the Watts neighborhood of Los Angeles lay vacant, overgrown with weeds and strewn with garbage and broken glass. When plans for a housing development fell through, the prospect of giving local children and their parents a safe place to meet and play motivated neighbors to step forward and support the creation of a community park.

Local residents actively participated in the park planning process. At a series of community workshops, they suggested special features and refined initial input into a coherent concept for the entire park. When Watts Serenity Park opened it 2015, it included features residents prioritized most: The final design includes play equipment for kids, an exercise area for adults, and a skate park.

The park also includes shaded picnic areas, natural green space and trees, and light-colored pavement, all of which combat the urban heat island effect. On sunny days, much of the infrastructure in urban areas — from asphalt roads and dark shingles on rooftops to blacktop on basketball courts — traps heat and drives up the temperature. That's why cities are often so much hotter than surrounding rural areas.

Photo source: Breen Engineering & EPT Design

Photo source: Trust for Public Land

(Above) Watts Serenity Park.

(Left) Watts residents in the vacant lot that became Watts Serenity Park.

ACTION	DESCRIPTION	EXAMPLES OF IMPLEMENTATION	HEAT VULNERABILITY DIMENSIONS ADDRESSED
MITIGATION			
Cool infrastructure	Altering or constructing city surfaces (i.e., pavements, roofs, and walls) with coatings and seals that reflect solar energy can help combat the urban heat island effect in the right conditions. Conventional dark pavements, like asphalt, absorb 80-95 percent of sunlight. Cool roofs can be as much as 50 degrees cooler than a standard roof on a hot summer day.	City of Phoenix's Cool Pavement Pilot Program (2020); State of California's Cool Roof requirement	Adaptive Capacity ◔ Exposure ● Sensitivity ○
Parks & open space	Parks and open spaces can help reduce surrounding air temperatures, creating "cool park islands," when vegetation and other impermeable surfaces are adequately incorporated. They can also provide outdoor refuge and help improve air quality.	Watts Serenity Park (Los Angeles); Tulsa's Gathering Place Park (Tulsa, Okla.)	Adaptive Capacity ◑ Exposure ● Sensitivity ◑
Shade structures	Shade sails, awnings and other artificial canopies can be installed on buildings or incorporated into landscape design to enhance comfort and reduce the impact of extreme heat. Studies find that shade can lower temperatures in excess of 20°F in certain conditions.	Skysong (ASU Scottsdale Innovation Center); Sundance Square Plaza (Fort Worth, Tex.)	Adaptive Capacity ◔ Exposure ● Sensitivity ○
Tree canopy expansion	Trees are one of the best and cheapest ways to combat the impacts of heat in urban areas. Healthy tree canopies provide shade and water transpiration that can mitigate the heat island effect, as well as improve air quality.	Cincinnati's urban forestry program; Trees for Tucson program; Baltimore's TreeBaltimore program; Greening of Detroit's tree-planting program	Adaptive Capacity ◑ Exposure ● Sensitivity ◑
Urban design	The geometry and design of cities and neighborhoods can play an important role in cooling. For instance, linear parks and green corridors help to enhance the movement of air through a city, and varied building forms can promote ventilation and the release of trapped heat.	Edison Eastlake housing development (Phoenix); Skysong (ASU Scottsdale Innovation Center)	Adaptive Capacity ○ Exposure ● Sensitivity ○
ADAPTATION			
Climate-adapted bus shelters	Transit shelters can be designed and/or retrofitted with technology and cooling elements – such as air conditioning, hydration stations, and enhanced canopy designs – that provide a safer and more comfortable experience for transit riders.	Dubai's fully air-conditioned transit shelters; JCDecaux's Natural Cooling bus shelter; UTS's Climate Adapted People Shelters	Adaptive Capacity ● Exposure ◑ Sensitivity ○
Cooling centers	Cooling centers are generally air conditioned public spaces, often community centers and libraries, that provide respite from heat. Locating cooling centers in areas of high vulnerability can reduce heat-related morbidity and mortality.	Maricopa County's Heat Relief Network, which includes cooling centers, hydration stations, and emergency heat relief stations operated by a nonprofit partner	Adaptive Capacity ◑ Exposure ● Sensitivity ○
Cooling appliance distribution	Distribution of appliances like fans and air conditioning units can provide needed relief from high temperatures to low-income households and populations most vulnerable to heat.	Philadelphia's Beat the Heat initiative; City of Chelsea, Mass.; Society of St. Vincent de Paul - Cincinnati's (SVDP) heat relief assistance	Adaptive Capacity ● Exposure ◑ Sensitivity ○
Energy assistance (targeted)	For low-income households, energy bills as a portion of income are three times higher than for the average customer. Energy assistance programs make energy bills more affordable generally through direct financial assistance (e.g., bill discounts, lower rates, etc.). Targeted assistance for areas of high vulnerability could contribute to a reduction in heat-related illness and death.	State of Utah's Home Energy Assistance Target (HEAT) program	Adaptive Capacity ● Exposure ◑ Sensitivity ○
Microtransit	Microtransit services and small-scale circulators can limit exposure to heat in areas with high pedestrian activity. For instance, in areas with high transit ridership, microtransit can offer connections to and from public transit stops. And in dense urban environments, circulators can provide convenient access to popular destinations.	King County Metro Microtransit (Washington); Las Vegas Downtown Loop; Charm City Circulator (Downtown Baltimore);	Adaptive Capacity ● Exposure ○ Sensitivity ○
Mobile cooling stations	Air conditioned vehicles, such as public transit buses, can be deployed during heat waves or power outages to serve as mobile cooling stations, especially is areas with high vulnerability.	Austin, Tex. (Capital Metro); New York City (MTA)	Adaptive Capacity ● Exposure ○ Sensitivity ○
Water features	Spray showers and splash pads are recreation areas with water-spraying jets or nozzles with minimal standing water. Generally incorporated into parks and community centers, they provide relief from heat and recreation opportunities, especially for children.	Grand Park (Los Angeles); Henderson Multigenerational Center (Henderson, Nev.); Sundance Square Plaza (Fort Worth, Tex.); City of Capetown's spray parks (South Africa)	Adaptive Capacity ● Exposure ◑ Sensitivity ○
Weatherization assistance (targeted)	Increasing the energy efficiency of housing through weatherization programs can reduce energy costs. Typical weatherization measures include: Insulation, air sealing, solar screens, replacing inefficient heating and cooling systems, etc. Targeting assistance in areas with populations most vulnerable to heat could reduce negative heat-related health outcomes		Adaptive Capacity ● Exposure ◑ Sensitivity ○
OUTREACH & EDUCATION			
Culturally-specific engagement	Communication and outreach methods should be tailored to target communities and be appropriate for the reading level, age range, and ethnic or cultural background of the audience. Information should be shared in multiple languages. Partnering with local community organizations can help remove barriers and enhance understanding and retention of messaging.	Los Angeles Department of Transportation	Adaptive Capacity ◑ Exposure ○ Sensitivity ◔
First responder and caregiver training and educaton	Educating first responders and caregivers (especially those who care for vulnerable populations) on the health risks associated with extreme heat and the signs of heat-related illness can help ensure proper assessment and aid is administered. For instance, in treating hyperthermia, moving a person off of hot surfaces, like asphalt, can help lower body temperature.	New York City's climate-risk training for home health aids (as part of Cool Neighborhoods NYC)	Adaptive Capacity ◔ Exposure ○ Sensitivity ●

SKYSONG (ASU SCOTTSDALE INNOVATION CENTER)

Located in Scottsdale, Ariz., a desert city just east of Phoenix, SkySong is a 1.2-million-square-foot mixed-use project that prioritized sustainable design and heat mitigation features to help attract and retain tenants and improve the city's resiliency. SkySong includes commercial office space, Arizona State University's SkySong incubator, retail shops and restaurants, luxury apartments, a hotel, and an urban park. The center is a hub for academic and private entrepreneurship that has revived a previously declining neighborhood.

The SkySong shade structure has become one of Scottsdale's most recognized icons.

Skysong features a heat-conscious site layout organized in four quadrants, centered around a 150-foot-tall shade structure covering a central plaza. The development is oriented around shaded and landscaped pedestrian scale boulevards with public gathering places and open spaces, water features and bike paths. SkySong's heat-conscious landscaping and design help ensure its outdoor amenity spaces can be enjoyed year-round. Additionally, all of the site's buildings are LEED Silver certified and have achieved Energy Star certification.

Landlord outreach	Because many of the households most vulnerable to heat live in rental units, they are unable to take advantage of weatherization and energy efficiency upgrade programs without landlord authorization. Educating and working with landlords in priority areas could result benefits to both tenants and landlords.		Adaptive Capacity ◕ Exposure ○ Sensitivity ○
Phone-a-neighbor program	Social cohesion is a critical but difficult-to-measure component of heat vulnerability. Establishing neighborhood-level check-in programs, like creating phone trees, can help prevent heat-related illness and death, especially among vulnerable populations, like seniors who live alone.	AARP's Create the Good project; Be a Buddy NYC (New York City)	Adaptive Capacity ◑ Exposure ○ Sensitivity ◑
Public health campaigns	Because certain conditions (e.g., diabetes, heart disease, and respiratory illness) are particularly sensitive to extreme heat, public health campaigns that aim to educate communities on potential risk factors and encourage them to adopt healthier behaviors could help reduce heat-related health incidents.	Oklahoma City's "This City is Going on a Diet" initiative; Get Healthy Clark County initiatives (Southern Nevada Health District)	Adaptive Capacity ○ Exposure ○ Sensitivity ●
PLANNING & POLICY			
Climate action planning	Climate action plans are comprehensive frameworks for measuring, planning, and reducing greenhouse gas emissions and other climate impacts. They often include actions that can be taken to help meet those goals.	Tempe's Climate Action Plan (Tempe, Ariz.); Riverside's Climate Action Plan (Riverside, Calif.); San Diego's Climate Action Plan	Adaptive Capacity ◑ Exposure ◑ Sensitivity ○
Designated personnel	Cities and community organizations across the country have been hiring staff specifically tasked with tackling extreme heat. Common responsibilities include engaging with neighborhoods, coordinating efforts between stakeholders, and conducting research and data analysis to help inform local plans and policies.	City of Philadelphia's Heat Team	Adaptive Capacity ◑ Exposure ○ Sensitivity ○
Heat relief plans	Community-driven neighborhood heat-relief plans can not only result in mitigation of negative extreme heat impacts, but have also shown to improve social cohesion and civic engagement.	Cool Neighborhoods NYC (New York City); Philadelphia's Community Heat Relief Plan	Adaptive Capacity ◑ Exposure ● Sensitivity ○

COOL NEIGHBORHOODS NYC/BE A BUDDY NYC

New York City Mayor de Blasio launched Cool Neighborhoods NYC in June 2017 to minimize the effects of extreme heat on the city by implementing projects such as cool roofs, city-wide tree plantings, and climate risk training for home health aides, among others. The comprehensive resilience program aims to reduce heat-related health impacts by lowering temperatures in heat-vulnerable neighborhoods and strengthening social networks.

As part of "Cool Neighborhoods NYC", the city launched Be a Buddy NYC to create a community-led preparedness model that promotes social cohesion. The program aims to address heat-related health impacts by enhancing the response capacity, climate preparedness and communication tools of local community-based organizations, while increasing neighborhood volunteerism through the creation of buddy systems.

A resident checks on a neighbosd as part of the Be a Buddy NYC program.

Through the program, city staff work with neighborhoods to foster buddy systems between social service and community organizations, volunteers, and vulnerable New Yorkers, to be deployed during emergencies to conduct telephone and, if necessary, door-to-door and building level checks on vulnerable individuals.

REFERENCES

Aminipouri, M., Knudby, A., and Ho, H.C. (2016). "Using multiple disparate data sources to map heat vulnerability: Vancouver case study." *The Canadian Geographer*, 60: 356-368. https://doi.org/10.1111/cag.12282

Bandala, E.R., Kebede, K., Jonsson, N., Murray R., Green, D., Meija J.F., and Martinez-Austria, P.F. (2019). "Extreme heat and mortality rates in Las Vegas, Nevada: inter-annual variations and thresholds." *International Journal of Environmental Science and Technology*, 16: 7175-7186. https://doi.org/10.1007/s13762-019-02357-9

Benz, S.A. and Burney, J.A. (2021). "Widespread race and class disparities in surface urban heat extremes across the United States." *Earth's Future*, 9(7). https://doi.org/10.1029/2021EF002016

City of Cambridge, Massachusetts (2015). "Vulnerable Population Ranking Memorandum" [Memorandum]

Climate Central (2019). "American Warming: The Fastest-Warming Cities and States in the U.S."

Flavelle, C., and Popovich, N. (2019). "Heat Deaths Jump in Southwest United States, Puzzling Officials." *The New York Times*. Aug. 26, 2019; Updated May 31, 2021. https://www.nytimes.com/2019/08/26/climate/heat-deaths-jump-in-southwest-united-states-puzzling-officials.html

Graham, D., Vanos, J., Kenny, N., and Brown, R. (2016). "The relationship between neighbourhood tree canopy cover and heat-related ambulance calls during extreme heat events in Toronto, Canada." *Urban Forestry & Urban Greening*, 20: 180-186. http://dx.doi.org/10.1016/j.ufug.2016.08.005 Retrieved from https://escholarship.org/uc/item/53v4h0ph

Hoffman, J., Shandas, V., and Pendleton, N. (2020). "The Effects of Historical Housing Policies on Resident Exposure to Intra-Urban Heat: A Study of 108 US Urban Areas." *Climate*, 8(1): 12-26. https://doi.org/10.3390/cli8010012

Jones, B., O'Neill, B.C., McDaniel, L., McGinnis, S.A., Mearns, L.O., and Tebaldi, C. (2015). "Future population exposure to US heat extremes". *Nature Climate Change*, 5: 652-655. https://doi.org/10.1038/nclimate2631

Muttarak, R. and Lutz, W. (2014). "Is education a key to reducing vulnerability to natural disasters and hence unavoidable climate change?" *Ecology and Society*, 19(1): 42-49. http://dx.doi.org/10.5751/ES-06476-190142

Peters, A. and Schneider, A. (2021). "Cardiovascular risks of climate change." *Nature Reviews Cardiology*, 18: 1-2. https://doi.org/10.1038/s41569-020-00473-5

Reid, C.E., O'Neill, K.S., Gronlund, C.J., Brines, S.J., Brown, D.G., Diez-Roux, A.V., and Schwartz, J. (2009). "Mapping community determinants of heat vulnerability." *Environmental Health Perspectives*, 117(11): 1730–-1736. https://ehp.niehs.nih.gov/doi/10.1289/ehp.0900683

Seneviratne, S.I., Nicholls, N., Easterling, D., Goodess, C.M., Kanae, S., Kossin, J., Luo, Y., Marengo, J., McInnes, K., Rahimi, M., Reichstein, M., Sorteberg, A., Vera, C., and Zhang, X. (2012). "Changes in climate extremes and their impacts on the natural physical environment." In: "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation" [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. *A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC)*. Cambridge University Press, Cambridge, UK, and New York, NY, USA. 109-230.

San Francisco Department of Public Health (2013). "Climate and health: An assessment of San Francisco's vulnerability to extreme heat events." San Francisco, CA: San Francisco Department of Public Health.

Sherman, A. (2020). "The Heat is On." *Planning Magazine*. 86(8): 18-25.

Tibbetts, J. (2015). "Air quality and climate change: a delicate balance." *Environmental Health Perspectives*, 123(6) A148-153. (2015). https://doi.org/10.1289/ehp.123-A148

Burgess, K., and Foster, E. (2019) "Scorched: Extreme Heat and Real Estate." Washington D.C.: Urban Land Institute.

U.S. Environmental Protection Agency (2006; Updated 2016). "Excessive Heat Events Guidebook."

Vaidyanathan, A., Malilay, J., Schramm, P., and Saha, S. (2020). "Heat-Related Deaths – United States, 2004–2018." *Morbidity and Mortality Weekly Report*, 69:729–734. http://dx.doi.org/10.15585/mmwr.mm6924a1

Appendix A

Indicators

Southern Nevada Extreme Heat Vulnerability Analysis indicators

Selected indicators act as proxies to understanding the complex, interconnected nature of extreme heat vulnerability, and provide an initial approach for discerning the critical indicators that may be associated with greater relative impact and longer recovery times. Our preliminary list of indicators, organized around the three dimensions of heat vulnerability – exposure, sensitivity, and adaptive capacity – are presented below.

EXPOSURE TO EXTREME HEAT – Weather patterns, as well as both the natural and built environments can influence levels of exposure to extreme heat. The following indicators help identify areas in Southern Nevada that are expected to have the greatest exposure to extreme heat.

- Land surface temperature – While Southern Nevada's desert climate is among the hottest in the country, certain areas within the region experience hotter temperatures due to a variety of factors, including elevation, proximity to bodies of water, and the urban heat island effect.
- Vegetated land cover – Vegetation, such as trees and shrubs, can be a natural source of shade and facilitate evaporation, which results in a cooling effect. Therefore, neighborhoods with more vegetated land cover are less exposed to extreme heat. Vegetation can also improve air quality – by absorbing carbon dioxide, producing oxygen, and trapping and filtering other pollutants – which is negatively impacted during extreme heat events.
- Developed land – Developed land replaces natural land and vegetation cover with impervious surfaces (such as paved roads, parking lots, and buildings) that retain heat and take longer to cool than natural surfaces. These surfaces have been shown to be strongly related to increased surface temperatures and a contributor to urban heat islands.
- Elevation – While most of Southern Nevada experiences extreme heat conditions given the region's climate, its geography can impact the extent to which impacts are felt. Temperatures are hotter in areas of lower elevation. The temperature drops 3.6 degrees for every 1,000-foot increase in elevation, on average, according to the National Weather Service Forecast Office in Las Vegas. This means there can be a difference of approximately 7-10 degrees from one side of the valley to the other.
- Air conditioning – Because most of the health impacts of extreme heat occur indoors, air conditioning is an important indicator. Air conditioning is among the most impactful ways to limit the effects of exposure to extreme heat conditions. Several studies, including an analysis of a 1995 Chicago heat wave, have demonstrated that access to air conditioning greatly reduced the risk of heat-related mortality.
- Mobile homes – Mobile and manufactured homes are approximately 20% less likely to have central air conditioning than other types of housing units in Las Vegas. Additionally, mobile homes can be more isolated than other housing types, limiting the adaptive capacity of their inhabitants. In Maricopa County, Arizona (which includes Phoenix), 27.5% of heat-related deaths occurred among mobile home residents, though they only make up 5% of the region's population.

ADAPTIVE CAPACITY – The ability to prepare for or cope with extreme heat impacts, whether through economic, political, or social resources. The following indicators help identify areas in Southern Nevada where populations are expected to have the least capacity to adapt to extreme heat.

- Disability – Populations with a mobility or cognitive disability may require significant support during extreme heat events, including transportation and specialized care.
- Education attainment – The percentage of the population without a high school education is among the socioeconomic indicators associated with increased heat stress, mortality from high temperatures, and increased risk of heat-related morbidity. Studies have also found correlation between education level and access to and understanding of weather forecasts and warnings, as well as the technologies used to access weather information.
- Language – Households with limited English proficiency or a language may have a more difficult time becoming aware of or understanding public information relating to extreme heat events that hasn't been appropriately translated. While non-English populations may have strong social networks, language may be a barrier to accessing emergency or response services.
- Poverty – Individuals below the poverty level have fewer resources, which reduces their ability to prevent, cope with, and adapt to climate change impacts. This population is more likely to reside in housing that may lack adaptive features, such as insulation or air conditioning, or may be less likely to use available air conditioning because of the cost. They are also more likely to live in neighborhoods that lack important amenities like grocery stores and safe open space.
- Race – Non-white populations have consistently been found to have been disproportionately impacted by extreme heat. This disparity is not just a function of racial and ethnic income inequality, as they occur across income levels. The difference in impacts has been attributed to current and historical systemic inequities in economic, political, and cultural power.
- Unsheltered homeless – Unsheltered homeless populations are among the most exposed and the most vulnerable during extreme heat events. This population lacks many of the key resources needed to prepare for and endure extreme heat events. In Maricopa County, Arizona (which includes Phoenix), data compiled by the public health department show that the homeless represent a fast-growing share of heat-related deaths.
- Vehicleless households – Households without access to a vehicle may have a more difficult time accessing appropriately cooled locations and other important mitigation resources. Additionally, walking, bicycling, or utilizing public transportation during extreme heat events increases heat exposure.

SENSITIVITY TO EXTREME HEAT – Demographic, physiological, and health factors that may predispose individuals to greater risk from exposure during extreme heat events. The following indicators help identify areas in Southern Nevada that are expected to have population with the greatest sensitivity to extreme heat.

- Adults age 50+ – Older adults are among the most vulnerable to the health impacts of extreme heat. This population is more likely to have chronic physical or cognitive health conditions, and are at greater risk of dehydration due to a reduced sense of thirst. A recent paper published by a Desert Research Institute (DRI) researcher found that 76 percent of those who died from heat-related causes in Southern Nevada between 2007 and 2016 were older than 50.
- Isolated older adults – Adults 65 and older who live alone are more likely to have limited ability to access adequately cooled locations during extreme heat events due to physical limitations, lack of social support, and lack of transportation. An analysis of the deadly 1995 Chicago heat wave found that social isolation increased risk for heat-related morbidity and mortality. This risk was compounded for those who were bedridden or elderly, among other factors.
- Diabetes – Populations with diabetes are particularly vulnerable to extreme heat. Higher temperatures can negatively impact glucose metabolism, and diabetes also affects the body's ability to regulate body temperature. Diabetes medications can also cause dehydration. Additionally, hospital admissions for cardiovascular disease (such as hypertension, high cholesterol, and obesity), which are commonly associated with diabetes, often increase during extreme heat events.
- Heart disease – Intense heat adds strain on the heart that can be dangerous for those with cardiovascular issues. Higher temperatures increases heart rate and blood

pressure, and significantly impact on those with preexisting hypertension caused by cardiovascular problems. Extreme heat can also lead to increased resistance to blood flow, making it harder for the heart to pump. Additionally, some medications prescribed to patients with heart conditions can reduce the ability to cool off in the heat. A study of heat-related deaths in Southern Nevada found that almost all deaths of those over the age of 50 (which made up 76 percent of heat-related deaths in the region) were described as being related to heart disease.

- Respiratory disease – Because extreme heat events are associated with poor air quality and increases in ozone pollution, individuals with chronic lower respiratory disease (CLRD) – a group of conditions that affect the lungs – can be particularly vulnerable. CLRD includes conditions such as COPD, emphysema, asthma, pulmonary hypertension, and certain lung diseases, among others.

Appendix B
Spatial Analysis Details

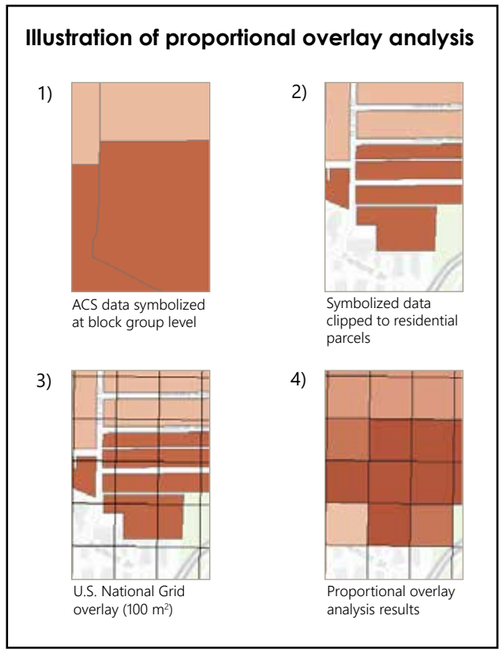
Index & spatial analysis

Prior to analysis, some considerations were taken into account for data collection. A principal consideration was an operational definition of extreme heat events. Based on a literature review of other extreme heat event studies and given the relatively extreme climate of the Mojave Desert, the following EHE parameters were followed: greater than or equal to 8 consecutive days of greater than 75 degrees Fahrenheit minimum temperatures and greater than 105 degrees Fahrenheit maximum temperatures. In addition, an effort was made to ensure (when possible) that the data in the analysis was collected in a time period contemporaneous with 5 year American Community Survey Estimates derived between the dates of January 1st, 2014 and December 31st, 2018. Lastly, satellite data had to have been incidentally collected during a qualifying extreme heat event with little cloud cover. With these qualitative and temporal limitations taken into consideration, a ten day extreme heat event occurring June 18th through June 27th, 2017 was an ideal representative candidate of an extreme heat event in Southern Nevada. At the time of analysis, this time period included the hottest date at McCarran Airport since 2014 and the hottest Clark County minimum and maximum temperatures from Oregon State University's Parameter-elevation Regressions on Independent Slopes Model. Fortuitously, NASA's MODIS satellites happened to capture 8 day temperature averages during this time frame which could be made ingestible into commonly used GIS applications through the use of the HDF-EOS to GeoTIFF Conversion Tool.

Having tracked down an appropriate heat specific indicator, the remaining 17 indicators were fairly straight forward to collect, process, and prepare for analysis. To overcome differences in the variables' spatial units of measurement (e.g., zip code, block group, census tract, or pixel resolution), which do not allow for direct comparison, the data was disaggregated into a uniform grid using the U.S. National Grid (USNG). Doing so divided the urbanized region into 129,100 1000-square-meter cells, each with a disaggregated estimate of the 18 variables.

[8] With the exception of the unsheltered homeless population counts

FIGURE 3



The method of disaggregation applied depended on the data format of each variable. Non-population based data (e.g., land surface temperature and elevation) was disaggregated by calculating a zonal statistic of the pixels falling within each cell or the pixel value present at the center of each grid cell. Population-based and parcel-specific data (e.g., demographic and health variables) was disaggregated by calculating a proportional overlay, which derives a value for each cell based on the percentage of area each cell spatially overlaps the underlying data (see Figure 3).

To improve proportion overlay estimates, population-based data was clipped to residential parcels8 since they refer to data centered around places of residence. This also prevented areas of vacant land, right-of-way, and commercial development from being identified as highly vulnerable areas, as the purpose of the study was to identify areas where people are most vulnerable to extreme heat.

With the disaggregation complete, the study grid was prepared for an analysis of relationships between the variables using a Forest-Based Regression statistical technique. Three regressions were calculated using each framework component's grouping of variables against reported rates of heat-related health outcomes (i.e., hospitalizations and deaths). As an output, the regressions quantitatively describe the relative importance of each variable's inclusion in successful prediction equations.

When forming the index, these percentages of variable importance within each framework component, was the basis for weighing certain variables more heavily than others. As described in the following paragraph, weights were applied within framework components but not between them. This approach avoided de-emphasizing any of the three components of heat vulnerability framework.

While varying units of measurement between variables do not preclude regression analysis, they are a barrier to forming an index score. To eliminate units of measurement, every variable was normalized using min-max scaling9. Having applied this transformation, the weighted sum of all the variables within each framework component for each cell were calculated, and the weighted sum was rescaled once more, due to the fact that some components having more variables than the others. The normalized grand totals for each framework component were then aggregated, with equal weighting, then rescaled a final time to create a composite extreme heat vulnerability index.

After the extreme heat vulnerability index was finalized, it was then mapped, producing a grid cell-based visualization of the results. While the grid had been useful for regression, its 100 meter granularity presented both cartographic and data sensitivity concerns. In an attempt to abate these concerns without data loss, the results were processed first within spatial statistics tools and then visually generalized using inverse distance weighting. To identify statistically significant spatial clusters of high index values, hot spot analyses were performed on selections of cells lying within each municipality's boundary. This form of analysis provides confidence that clusters of cells with high index scores perceived (or not perceived) on the regional map are not the result of random chance or symbological limitations. To address data sensitivity concerns, hot spot boundaries were simplified in shape or otherwise removed from the map if their area were smaller than half a city block. Having preserved the underlying data through statistical summary within hot spots, the vulnerability index scores could be generalized by interpolating index values between cell centroids using an inverse distance weighting (closer cell values are given more weight than distant cell values) technique. The interpolated values shown on the map are the weighted mean of the index values of each cell's nearest 48 neighbors within the grid. The outputs of the hot spot analyses and weighted distance averages were then published to an ArcGIS Server to create an interactive web-based map application. Demographic data was added to the web-based map to provide additional neighborhood-level context for users.

[9] Min-max scaling performs a linear transformation on original data, rescaling the range of features to between 0 and 1. For this analysis, a value of 0 was assigned to the grid cell with the minimum variable value in the region and a value of 1 to the grid cell with the maximum value. Remaining cells were transformed to a decimal value between 0 and 1 based on their original value.

[10] Sharing health-related data and demographic characteristics at micro-scale geographies comes with privacy and confidentiality concerns.

Appendix C

Project Factsheets

Project factsheet v1 (front)

Outlines the purpose of the project and provides an overview of preliminary research.

RTC REGIONAL PLANNING PROJECT FACTsheet

EXTREME HEAT VULNERABILITY

Southern Nevada has been identified as one of the fastest warming regions in the U.S., and recent research indicates a substantial risk of heat-related deaths from an increasing number of extreme heat events in the valley.

Despite the history of adverse health impacts associated with extreme heat in our region, experts hold that many of these outcomes are preventable. Reducing future adverse outcomes will require developing effective and coordinated responses, as well as improving the awareness of public health officials and the general public about the health risks associated with extreme heat. This is especially critical in areas with high concentrations of those most vulnerable during extreme heat events.

WHAT WE'RE DOING:

- Identifying local demographic and environmental factors that increase vulnerability to extreme heat
- Analyzing relevant data to pinpoint areas in Southern Nevada with high concentrations of at-risk populations
- Identifying targeted responses and interventions that could help save lives during extreme heat events

WHAT DOES THE SNS REGIONAL PLAN SAY ABOUT THIS ISSUE?

The SNS Regional Plan provides a few recommendations for mitigating the negative impacts of our region's high temperatures, including:

Include shade and other design features in transit stops that provide relief from extreme heat

Invest in streetscape amenities that provide respite from the heat in neighborhoods with higher transit ridership and pedestrian rates

Encourage new development to incorporate design features that mitigate heat impacts

568

Heat-related deaths in Southern Nevada between 2009 and 2018 [1]

104°F

Average daytime high during summer months in Southern Nevada between 2015 and 2019 [2]

23

Excessive heat warnings issued in Southern Nevada between 2015 and 2019 [3]

84

Days exceeding 100°F in Southern Nevada in 2019 [4]

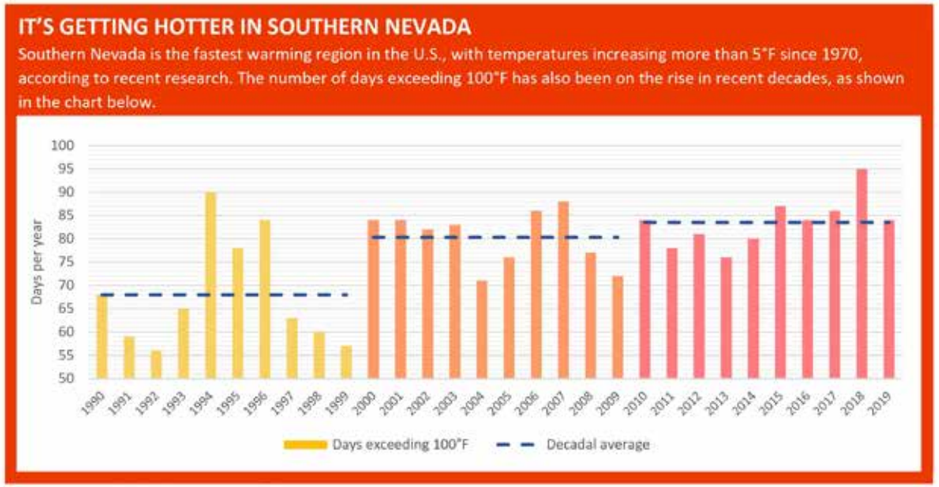
SOUTHERNNEVADASTRONG

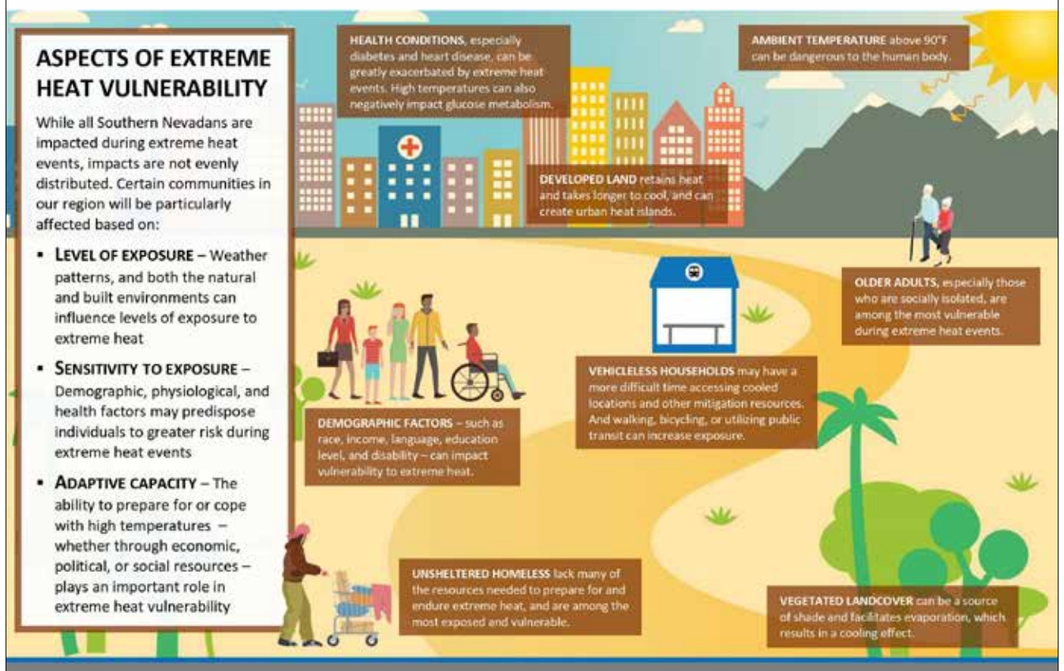
RTC

5-2021 v01.3

C2

Project factsheet v1 (back)





Data sources:
[1] Southern Nevada Health District, Office of Epidemiology and Disease Surveillance
[2,3,4] National Weather Service, Las Vegas Office

5-2021 v01.3

C3

Project factsheet v2 (front)

Outlines the purpose of the project and provides an overview of study findings.

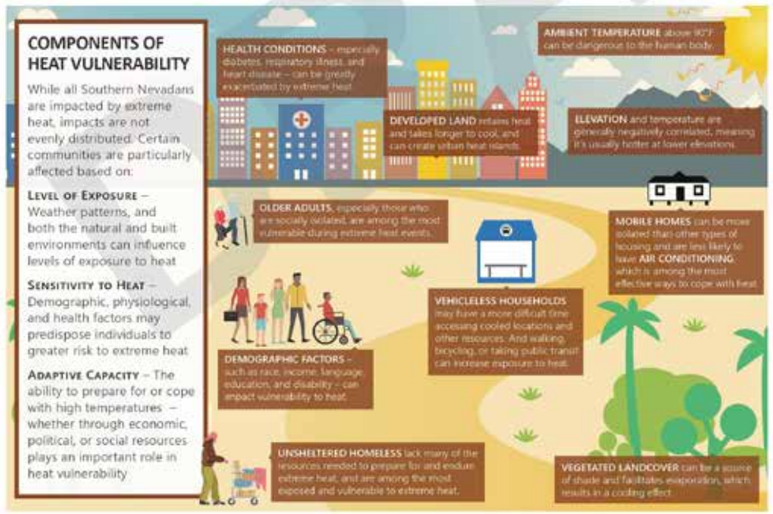
RTC REGIONAL PLANNING PROJECT FACTSheet

EXTREME HEAT VULNERABILITY

Southern Nevada has among the hottest climates in the U.S. and has been identified as one of the fastest warming regions in the country[1]. And recent research predicts the region, and the southwestern United States generally, to experience a significant increase in the frequency and intensity of extreme heat events in the coming decades[2].

Increasing temperatures in the region are associated with and contribute to a host of negative impacts – from poorer air quality to added wear and tear on infrastructure. But, most importantly, studies have found a clear link between increasing temperatures and increasing heat-related deaths and hospitalizations[3].

Despite the history of adverse health impacts associated with extreme heat in our region, experts hold that many of these outcomes are preventable. Reducing future adverse outcomes require developing effective and coordinated responses, as well as improving the awareness of public health officials and the general public about the health risks associated with extreme heat. This is especially critical in areas with high concentrations of those most vulnerable during extreme heat events.



568

Heat-related deaths in Southern Nevada between 2009 and 2018[4]

104°F

Average daytime high during summer months in Southern Nevada between 2015 and 2019[5]

23

Excessive heat warnings issued in Southern Nevada between 2015 and 2019[6]

84

Days 100°F or higher in Southern Nevada in 2019[7]

For more information, visit www.rtcsnv.com/extremeheat

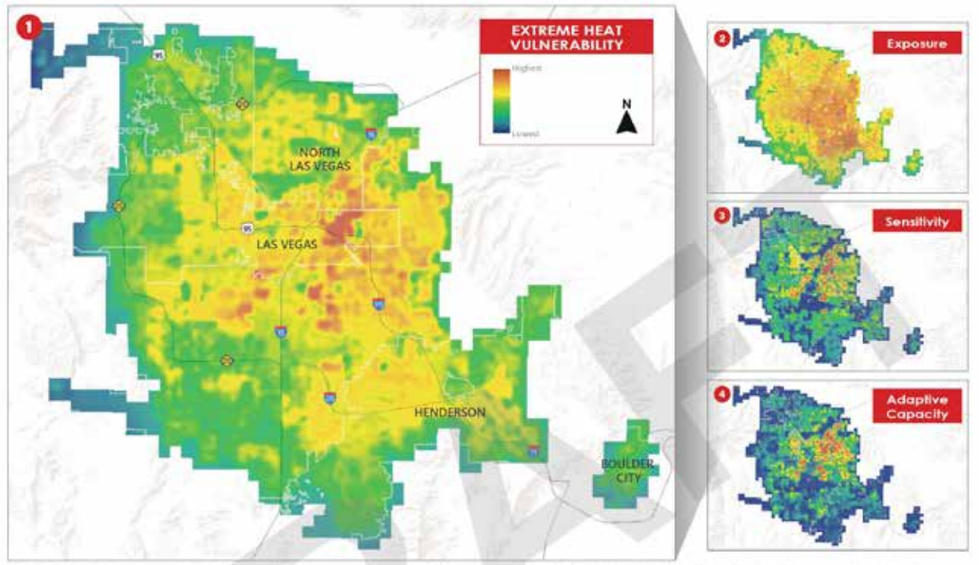
SOUTHERN NEVADA STRONG RTC

F-2021 v2.0

Project factsheet v2 (back)

Southern Nevada Extreme Heat Vulnerability Map

The Southern Nevada Extreme Heat Vulnerability Map (MAP 1) visualizes the spatial distribution of extreme heat vulnerability among the region's population, according to our analysis. Red areas represent those with populations most vulnerable to extreme heat. In the three component maps (MAPS 2-4), red areas represent those with populations most vulnerable to each respective component. See graphic on opposite page for additional details on the components of heat vulnerability.



Note: This analysis measured relative vulnerability to extreme heat, not absolute vulnerability. So it should not be inferred that there is little or no vulnerability in areas at the lower end of the spectrum (blue areas), just that there are lower levels of vulnerability relative to other areas of the region.

❶ ***Extreme Heat Vulnerability.*** The areas in Southern Nevada with populations most vulnerable to extreme heat are largely concentrated in and around the region's urban core and east side. These areas include many of the region's older neighborhoods. The populations in these areas are typically more racially and ethnically diverse than other parts of the region, and more economically challenged. And because these areas are also at lower elevations than much of the western half of the urbanized region, they experience naturally higher temperatures.

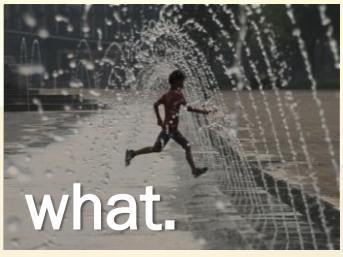
❷ ***Exposure.*** The spatial distribution of *EXPOSURE* factors is more evenly dispersed across the region than the *SENSITIVITY* and *ADAPTIVE CAPACITY* components. However, *EXPOSURE* is more intense in the eastern half of the valley, and is closely correlated with the region's elevation, the most influential variable in this set, according to our analysis. Elevation in the region's urbanized area drops by more than 2,500 feet from west to east, resulting in naturally higher temperatures in the valley's east side, especially east of the I-515 freeway.

❸ ***Sensitivity.*** Populations most sensitive to extreme heat in Southern Nevada are concentrated in the region's urban core – largely in and around downtown Las Vegas, downtown North Las Vegas, and the resort corridor. The most influential *SENSITIVITY* indicators, based on our analysis, were the three related to health: Heart disease, diabetes, and chronic lower respiratory disease. The prevalence of each, not surprisingly, is highest in the same areas. These health conditions are particularly sensitive to extreme heat.

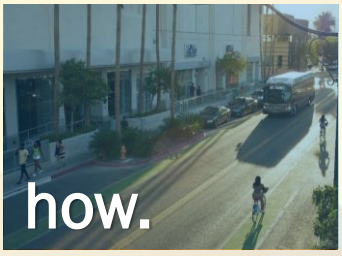
❹ ***Adaptive Capacity.*** Populations least able to adapt to or cope with the impacts of extreme heat in the region are primarily concentrated in the valley's urban core and east side. The three most influential *ADAPTIVE CAPACITY* indicators, based on our analysis, are educational attainment, race, and homelessness. Unsurprisingly, the general geographic distributions of each of these indicators reflect that of the *ADAPTIVE CAPACITY* map, although race is more dispersed regionally than the other two factors.

Project background

- Southern Nevada is one of fastest warming regions in the U.S.
- Heat-related deaths on rise
- Deaths attributed to heat are largely preventable



- Identify areas with populations most vulnerable to heat
- Help develop effective and coordinated responses in most vulnerable target areas



- Analyzing demographic, health, and environmental data
- Consulting and coordinating with local experts

Framework

EXTREME HEAT VULNERABILITY

exposure

Levels of exposure impacted by both the natural and built environment

- Elevation
- Temperature
- Vegetated land cover
- Developed land
- Air conditioning
- Mobile homes

adaptive capacity

Ability to prepare for or cope with extreme heat (whether through economic, political, or social resources)

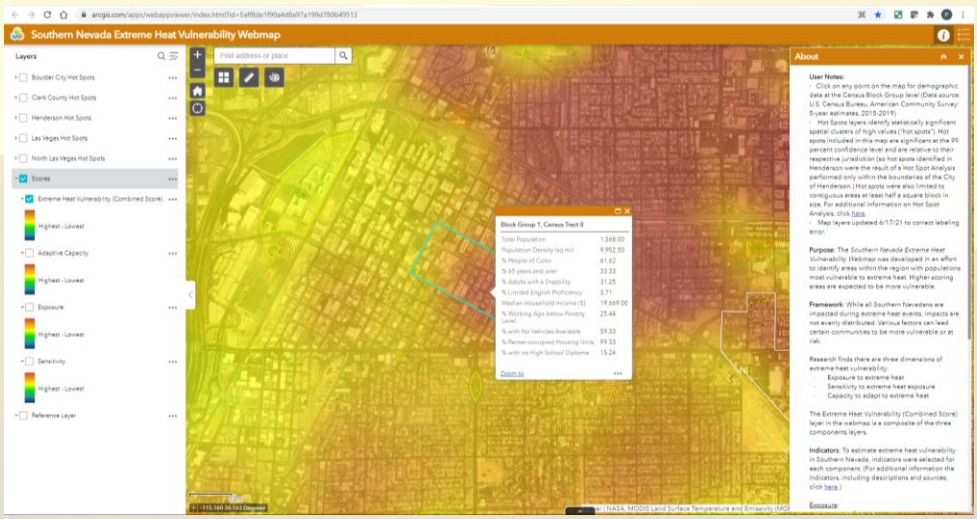
- Educational attainment
- Race (non-white)
- Unsheltered homeless
- Disability
- Limited English proficiency
- Poverty
- Vehicleless households

sensitivity

Demographic, physiological, and health factors that may predispose certain individuals to greater risk

- Cardiovascular disease
- Respiratory disease
- Diabetes
- Older adults (50 and older)
- Isolated seniors

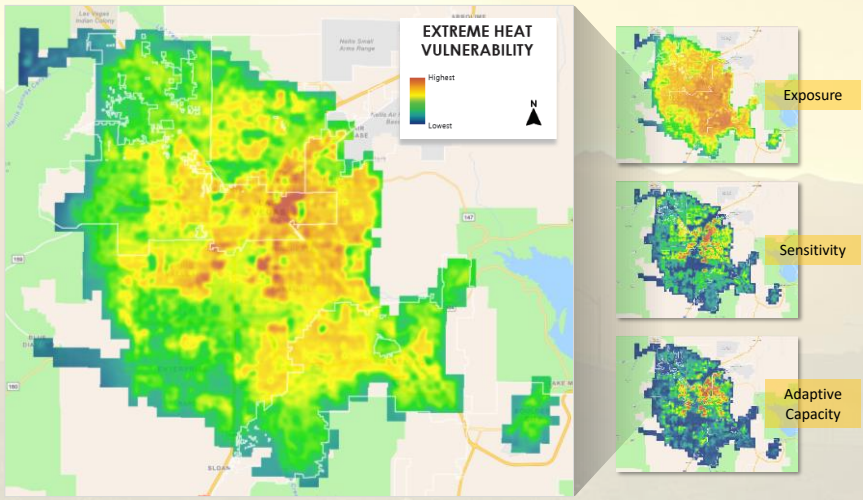
Analysis



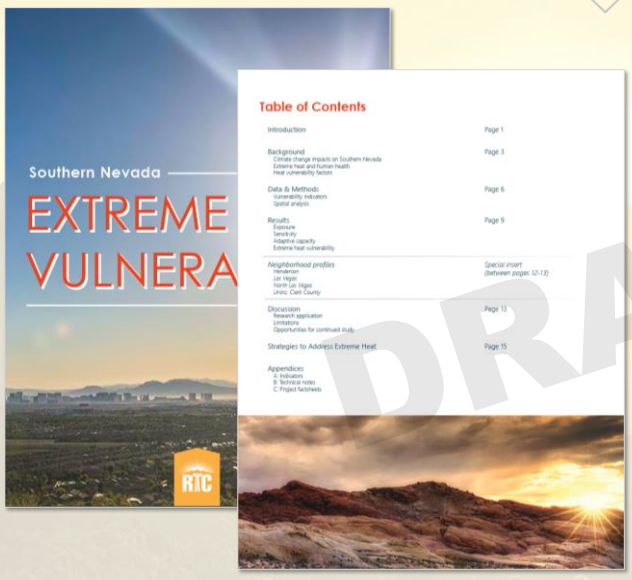
https://bit.ly/2SRhAvC

Final results

Spatial Analysis



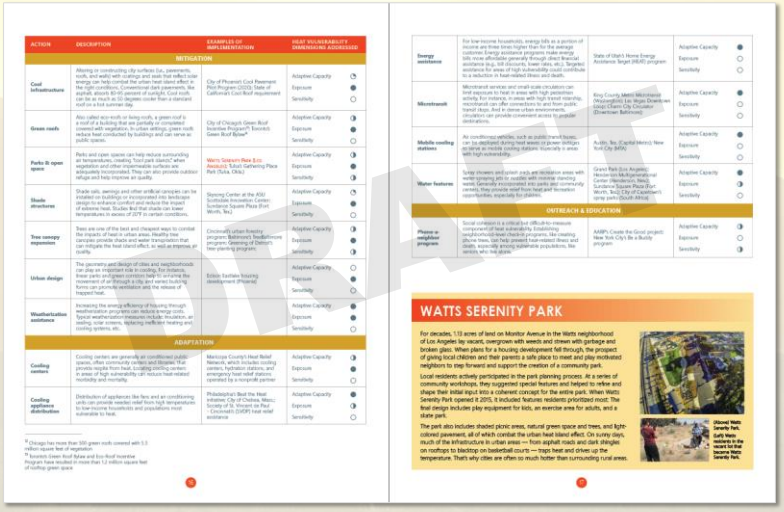
Final report



https://www.rtcsnv.com/extremeheat

Strategies & best practices

Strategies for Addressing Extreme Heat



ACTION	DESCRIPTION	EXAMPLES OF IMPLEMENTATION	HEAT VULNERABILITY DIMENSIONS ADDRESSED
MITIGATION			
Cool infrastructure	Altering or constructing city surfaces (i.e., pavements, roofs, and walls) with coatings and seals that reflect solar energy can help reduce the urban heat island effect. Cool roofs, like the ones pictured, have special light-colored materials (e.g., asphalt, absorb 30–45 percent of sunlight. Cool roofs can be as much as 50 degrees cooler than a standard roof on a hot summer day.	City of Phoenix's Cool Pavement Pilot Program (2020); State of California's Cool Roof requirement	Adaptive Capacity Exposure Sensitivity
Green roofs	Also called eco-roofs or living roofs, a green roof is the roof of a building that is partially or completely covered with vegetation. In urban settings, green roofs reduce heat conducted by buildings and can serve as public spaces.	City of Chicago's Green Roof Incentive Program;[1] Envirotech Green Roof Bylaw[2]	Adaptive Capacity Exposure Sensitivity
Parks & open space	Parks and open spaces can help reduce surrounding air temperatures, creating "cool park islands" when vegetation and other impermeable surfaces are adequately incorporated. They can also provide outdoor refuge and help improve air quality.	Watts Solarium Pace Eco Awards; Tulsa's Gathering Place Park (Tulsa, Okla.)	Adaptive Capacity Exposure Sensitivity
Shade structures	Shade sails, awnings and other artificial canopies can be installed on buildings or incorporated into landscape design to enhance comfort and reduce the impact of extreme heat. Studies find that shade can lower temperatures in excess of 20°F in certain conditions.	Stanning Center at the JGU Scottsdale Innovation Center; Sundance Square Plaza (Fort Worth, Tex.)	Adaptive Capacity Exposure Sensitivity
Tree canopy expansion	Trees are one of the best and cheapest ways to combat the UHI effect. Through the process of shading, their canopies provide shade and water transpiration that can mitigate the heat island effect, as well as improve air quality.	Cincinnati's urban forestry program; Baltimore's Tree Baltimore program; Greening of Detroit's tree-planting program.	Adaptive Capacity Exposure Sensitivity
Urban design	The geometry and design of cities and neighborhoods can play an important role in cooling. For instance, the spacing and height of buildings can influence the movement of air through a city and varied building forms can promote ventilation and the release of trapped heat.	Ecleto Taichee housing development (Phoenix)	Adaptive Capacity Exposure Sensitivity
Weatherization assistance	Increasing the energy efficiency of housing through weatherization programs can reduce energy costs. Typical weatherization measures include insulation, air sealing, solar screens, replacing inefficient heating and cooling systems, etc.		Adaptive Capacity Exposure Sensitivity
ADAPTATION			
Cooling centers	Cooling centers are generally air-conditioned public spaces, often community centers and libraries, that provide respite from heat. Locating cooling centers in areas with high vulnerability can reduce heat-related mortality and morbidity.	Maricopa County's Heat Relief Network, which includes cooling centers, hydration stations, and misting stations; all activities operated by a nonprofit partner	Adaptive Capacity Exposure Sensitivity
Cooling appliance distribution	Distribution of appliances like fans and air conditioning units can provide needed relief from high temperatures to low-income households and populations most vulnerable to heat.	Philadelphia's Beat the Heat initiative; City of Chelsea, Mass.; Society of St. Vincent de Paul – Cincinnati's (SVDP) heat relief assistance	Adaptive Capacity Exposure Sensitivity
Energy assistance	For low-income households, energy bills as a portion of income are three times higher than for the average household. Energy assistance can help make energy bills more affordable generally through direct financial assistance (e.g., bill discounts, lower rates, etc.). Targeted assistance for areas of high vulnerability could contribute to a reduction in heat-related illness and death.	State of Utah's Home Energy Assistance Target (HEAT) program	Adaptive Capacity Exposure Sensitivity
Microtransit	Microtransit services and small-scale circulation can limit exposure to heat in areas with high pedestrian activity. For instance, in areas with high transit ridership, microtransit can offer connections to and from public transit stops. And in dense urban environments, circulators can provide convenient access to popular destinations.	King County Metro Microtransit (Mockingbird); Las Vegas Downtown Loop; Charm City Circulator (Downtown Baltimore)	Adaptive Capacity Exposure Sensitivity
Mobile cooling stations	Air conditioned vehicles, such as public transit buses, can be deployed during heat waves or power outages to serve as mobile cooling stations especially in areas with high vulnerability.	Austin, Tex. (Capital Metro); New York City (MTA)	Adaptive Capacity Exposure Sensitivity
Water features	Spray showers and splash pads are recreation areas with water flowing and jetting from the ground. When present, generally incorporated into parks and community centers, they provide relief from heat and recreation opportunities, especially for children.	Grand Park (Los Angeles); Henderson Multigenerational Center (Henderson, Nev.); Sundance Square Plaza (Fort Worth, Tex.); Freedom Park's spray park (South Africa)	Adaptive Capacity Exposure Sensitivity
OUTREACH & EDUCATION			
Phone-a-neighbor program	Social cohesion is a critical but difficult-to-measure component of heat vulnerability. Establishing connections with neighbors, especially before a heating phone lines, can help prevent heat-related illness and death, especially among vulnerable populations, like seniors who live alone.	AARP's Create the Good project; New York City's Be a Buddy program	Adaptive Capacity Exposure Sensitivity

WATTS SERENITY PARK

For decades, 1.13 acres of land on Monitor Avenue in the Watts neighborhood of Los Angeles lay vacant, overgrown with weeds and strewn with garbage and broken glass. When plans for a housing development fell through, the prospect of giving local children and their parents a safe place to meet and play motivated neighbors to step forward and support the creation of a community park.

Local residents actively participated in the park planning process. At a series of community workshops, they suggested special features and helped to refine and shape their initial input into a coherent concept for the entire park. When Watts Serenity Park opened it 2015, it included features residents prioritized most: The final design includes play equipment for kids, an exercise area for adults, and a skate park.

The park also includes shaded picnic areas, natural green space and trees, and light-colored pavement, all of which combat the urban heat island effect. On sunny days, much of the infrastructure in urban areas — from asphalt roads and dark shingles on rooftops to blacktop on basketball courts — traps heat and drives up the temperature. That's why cities are often so much hotter than surrounding rural areas.

(Above) Watts Serenity Park. (Left) Watts residents in the vacant lot that became Watts Serenity Park.

Southern Nevada

EXTREME HEAT VULNERABILITY

Analysis

Executive Advisory Committee

Sept. 30, 2021

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [X]	Transit [ ]	Administration and Finance [ ]

SUBJECT: TOPICS OF INTEREST

PETITIONER: M.J. MAYNARD, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE EXECUTIVE ADVISORY COMMITTEE DISCUSS TOPICS OF INTEREST

GOAL: ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM

FISCAL IMPACT:
None

BACKGROUND:
The Executive Advisory Committee (Committee) members can share information about activities, meetings, news, and other topics of interest in an informal manner.

While no action may be taken on the subjects discussed, this item provides an opportunity for the exchange of information and may serve as the forum to recommend future Committee agenda items.

Respectfully submitted,

DocuSigned by:
John Peñuelas
79E5AF522AE1479...

JOHN R. PEÑUELAS, JR., P.E.
Senior Director of Engineering

dbg

EAC Item #23
September 30, 2021
Non-Consent

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

AGENDA ITEM

Metropolitan Planning Organization [ ]	Transit [ ]	Administration and Finance [X]

SUBJECT: CITIZENS PARTICIPATION

PETITIONER: M.J. MAYNARD, CHIEF EXECUTIVE OFFICER
REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA

RECOMMENDATION BY PETITIONER:
THAT THE EXECUTIVE ADVISORY COMMITTEE CONDUCT A COMMENT PERIOD FOR CITIZENS PARTICIPATION

GOAL: ENHANCE PUBLIC AWARENESS AND SUPPORT OF THE REGIONAL TRANSPORTATION SYSTEM

FISCAL IMPACT:
None

BACKGROUND:
In accordance with State of Nevada Open Meeting Law, the Regional Transportation Commission of Southern Nevada Executive Advisory Committee (Committee) shall invite interested persons to make comments. For the initial Citizens Participation, the public should address items on the current agenda. For the final Citizens Participation, interested persons may make comments on matters within the Committee's jurisdiction, but not necessarily on the current agenda.

No action can be taken on any matter discussed under this item, although the Committee can direct that it be placed on a future agenda.

Respectfully submitted,

DocuSigned by:
John Penuelas
79E5AF522AE1479...

JOHN R. PEÑUELAS, JR., P.E.
Senior Director of Engineering

dbg

EAC Item #24
September 30, 2021
Non-Consent