

**REGIONAL TRANSPORTATION COMMISSION (RTC)
REGIONAL ROAD IMPACT FEE (RRIF)
TECHNICAL ADVISORY COMMITTEE**

Meeting Minutes

Thursday, May 27, 2021

Members Present:

Amy Cummings, Regional Transportation Commission

Brian Stewart, Regional Transportation Commission

Jim Rundle, City of Sparks

John Krmpotic, Private Sector

Jon Ericson, City of Sparks

Kelly Mullin, City of Reno

Kraig Knudsen, Private Sector

Larry Chesney, Washoe County

Mike Mischel, City of Reno

Mitchell Fink, Washoe County

Randy Walter, Private Sector

Shelley Read, City of Sparks

Ted Erkan, Private Sector

Members Absent:

Alex Velto, City of Reno

Guests:

Jeremy Smith, TMRPA

RTC Staff:

Adam Spear

Bill Thomas

Blaine Petersen

Dale Keller

Dan Doenges
Lee Anne Olivas
Xuan Wang

Jelena Williams
Stephanie Haddock
Yeni Russo

Item 1: Call to Order

The meeting was called to order at 8:38am. Roll call was taken to ensure there was a quorum.

Item 2: Public Comment

There were no public comments received.

Item 3: Approval of Agenda

The agenda was approved as presented.

Item 4: Approval of the April 22, 2021 Meeting Minutes

The April 22, 2021 Meeting Minutes were approved as presented.

Item 5.1: RRIF General Administrative Manual (GAM) update and the draft fee schedule proposed to be included in the Capital Improvement Plan (CIP)

Dale Keller of the RTC Engineering Department provided a presentation to brief the committee on the final steps for development of the RRIF Fees focusing on the Cost side. Dale discussed the RRIF Cost Inputs used to calculate the dollar per VMT that is proposed for the 7th Edition and the RRIF net cost per service unit. Some of the differences and comparisons between the 6th Edition and the 7th Edition RRIF Fees were discussed. For example, the 2030 VMT per development unit has significantly increased based on the new travel demand model, the ITE Trip Lengths now reflect the updated 10th Edition, the updated RRIF CIP projects will reflect the new 2050 RTP, the CIP Cost attributed to new development is less, and the RRIF Fees reflect more growth within the North Benefit Area.

For next steps, staff would like to receive the committee's input on the presented draft 7th Edition Regional Road Impact Fee Schedule (Attachment A). In June and/or July 2021, the revised and

updated RRIF GAM and Capital Improvement Program (CIP) Manuals will be presented to the committee for review and input.

Kelly Mullin with the City of Reno commented on the City of Reno's continued interest in exploring potential strategies for incentivizing affordable housing construction. Possibly, through options related to reducing impact fees for affordable housing construction projects. Dale responded the local RRIF Administrators would need to meet to discuss and analyze the potential strategies for using impact fees as incentives for affordable housing construction and if incorporating the incentives in a future 7th Edition would be beneficial.

Randy Walter from the Private Sector requested clarification on differences between the 6th Edition and 7th Edition, specifically the increase of 30% for the average trip length, and the differences listed on the Draft RRIF Fee schedule for Residential and Public Parks for the North and South benefit areas.

Dale explained the application of the ITE update from the 9th Edition to the 10th Edition changed the overall trip generation length for Public Parks and it significantly decreased roughly 60%. The increase of roughly 36% for VMTs per housing unit for Residential Housing can be credited to the application of regional VMTs per dwelling specific to Washoe County. It also includes the application of the 2016 Community Survey with changes for vehicles per household that reflect the increase versus the 2012 Community Survey that was used for the 5th and 6th Editions. Dale proposed bringing back to the committee a comparison between the 2009, 2012 and 2016 Community Surveys to clarify the factors that are used in calculating the residential development.

A motion to acknowledge receipt of a report on the RRIF General Administrative Manual (GAM) update and the draft fee schedule proposed to be included in the Capital Improvement Plan (CIP) including for RTC Staff to address concerns with the 30% increase of the average trip length at a future meeting was approved unanimously.

Item 5.2: Average Trip Length, measured in miles, included in the regional travel demand-forecasting model

Xuan Wang of the RTC provided a presentation on the methodology for calculating the average trip lengths in the RTC regional travel demand-forecasting model for the North and South Service Areas. Xuan explained that trip lengths by service area represents travel on the regional road network, excluding travel on local residential streets and freeways. The draft average trip length calculated for the 7th Edition of the RRIF GAM is 3.58 miles for the North Service Area and 3.36 miles for the South Service Area. Xuan discussed factors that possibly generated changes in the average trip length between the 2040 Model and the 2050 Model. These include the 2030 land use forecast that used the 2016 consensus forecast data for the 2040 RTP model runs, and the 2020 consensus forecast data for the 2050 RTP model runs. There were differences between the 2016 and the 2020 consensus data that could have had an impact on trip length calculation. On the network side, the 2030 Planned Improvements maps presented show the 2050 RTP has various capacity improvement projects planned that are not included in the 2040 RTP, and these differences changed the trip length calculation results. Lastly, a model comparison between the 2040 RTP and the 2050 RTP shows the average trip length increased for the 2050 RTP model update. The reason for the differences in average trip length is due to the data input from two different regional travel surveys. For the 2040 RTP update, the travel demand model was calibrated with data from the 2005 regional household travel survey and for the 2050 RTP, the 2015 survey data was used.

There was discussion on the household travel surveys and the type of data collected and used in the calibration of the regional travel demand-forecasting model. Xuan explained the surveys are generally conducted every ten years to document travel behavior in Washoe County. Typically, one percent of households are surveyed for travel information for all household members during a specific 24-hour period. Demographic information about the household, its members and its vehicles is collected. Household members provide travel activity including address information for all locations visited, trip purpose, mode, and travel times.

Jim Rundle from the City of Sparks expressed concern on the data depicted on the map for the 2030 Land Use Forecast that shows a substantial population growth for 2050 in rural areas.

Jeremy Smith with TMRPA clarified that the magnitude of change, depicted with the color orange on the 2030 Land Use maps for population and employment, is small even though they appear to cover large rural areas on the maps. Jeremy stated creating versions of the maps spatially depicting the amount or percentage of growth would clarify the changes.

A motion to acknowledge receipt of a report on the Average Trip Length, measured in miles, included in the regional travel demand-forecasting model was approved unanimously.

Item 6: Member Items

There were no member items presented.

Item 7: Public Comment

There were no public comments received.

Item 8: Adjournment

There being no further business, the meeting adjourned at 9:36am.

Respectfully Submitted,

Yeni Russo



REGIONAL TRANSPORTATION COMMISSION

Metropolitan Planning • Public Transportation & Operations • Engineering & Construction

Metropolitan Planning Organization of Washoe County, Nevada

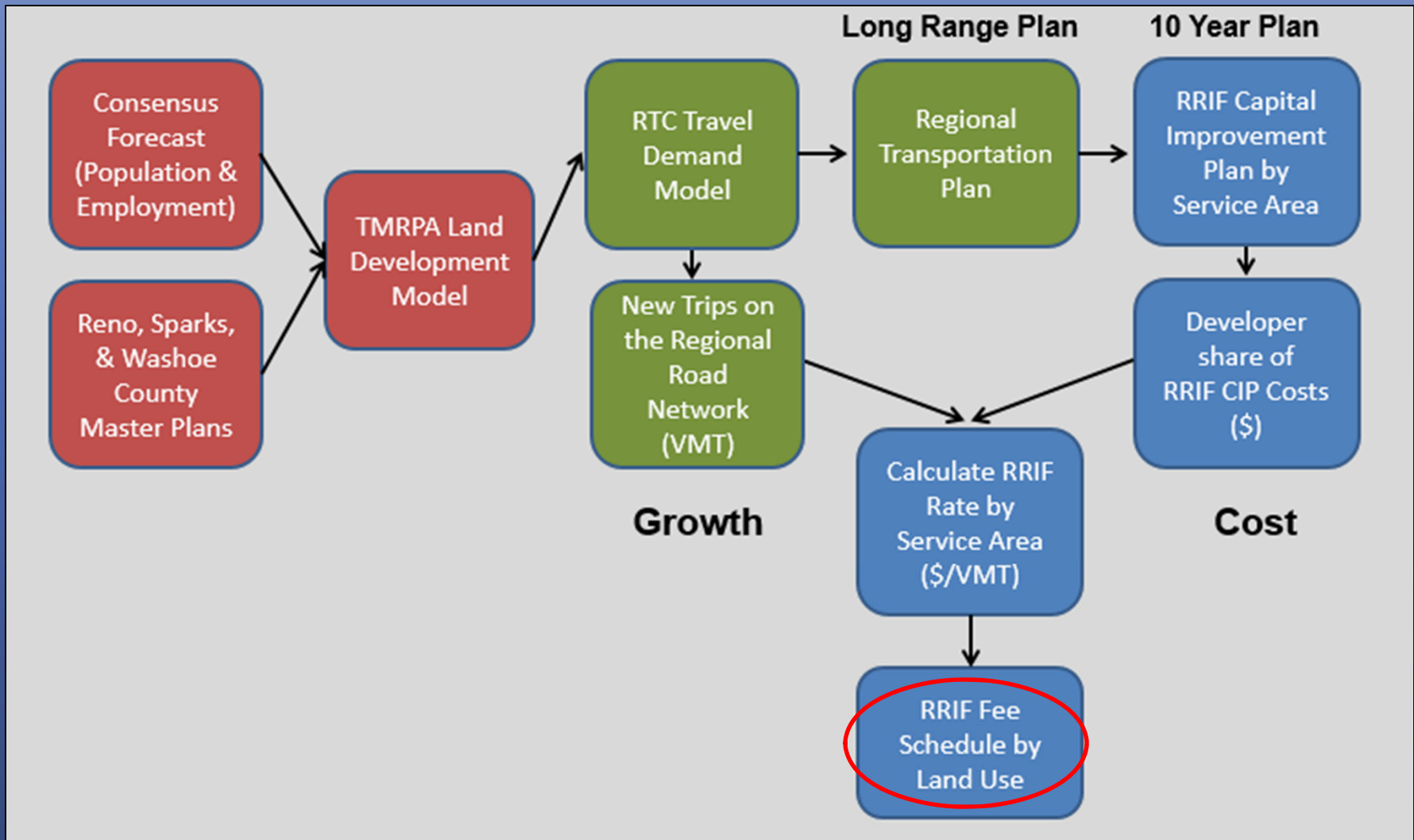
7th Edition RRIF GAM Update

May 27, 2021





Development of RRIF Fees





RRIF Growth Inputs

- Population (Consensus Forecast)
- Employment (Consensus Forecast)
- Trip Lengths by Service Area (Travel Demand Model)
- Trip Generation Rates by Land Use (ITE 10th Edition)
- VMTs for Development Units



RRIF Growth Inputs

- 2030 Daily Average Trip Length
 - North Area: 3.58
 - South Area: 3.36

- VMT Growth by Service Area
 - North Area: 325,369
 - South Area: 194,434



RRIF Cost Inputs

- Capital Improvement Plans by Service Area
- Cost Analysis attributed to new development
- Consideration of other revenue – Fed, State, Local
- Trip Generation Rates by Land Use (ITE 10th Edition)

$$\frac{\$}{\text{VMT}}$$



RRIF Capital Improvement Costs

	North Service Area	South Service Area	2021-2030 Total
2021-2030 RTP	\$663,111,300	\$431,337,700	\$871,900,000
Capacity Related RTP	\$452,103,200	\$263,510,650	\$715,613,850
% of Capacity Related RTP	63.18%	36.82%	100%



RRIF Share

Total Fund Source	2021-2030 Total
Federal	\$573,972,000
State	\$502,942,000
Regional (Fuel, Sales, RRIF)	\$1,200,682,000
Other Revenues (Waiver Offsets)	\$55,673,000
Total	\$2,333,269,000

Regional Fund Source	2021-2030 Total
Fuel Tax	\$1,061,312,417
Sales Tax	\$62,479,164
RRIF	\$76,890,419
Regional Total	\$1,200,682,000

RRIF Share	2021-2030 Total
Total RRIF Share	\$132,563,419



RRIF Net Cost per Service Unit

Description	North Service Area	South Service Area
Total RRIF Share	\$132,563,419	
% RRIF Eligible RTP	63.18%	36.82%
RRIF Share by Service Area	\$83,749,561	\$48,813,858
VMT Growth by Service Area	325,369	194,434
\$/VMT for RRIF Share	\$257.40	\$251.06

RRIF Share (\$) / VMT Growth = \$/VMT Rate



RRIF Net Cost per Service Unit (Attachment A)

		North – Draft 7 th Ed.		South – Draft 7 th Ed.	
Average Trip Length (Mi)		3.58		3.36	
RRIF Share of CIP		\$83,749,561		\$48,813,858	
VMT Increase Over Ten Years		325,369.28		194,434	
Capital Cost per VMT		\$257.40		\$251.06	
Development Type	Development Unit	VMT North	7 th Ed RRIF North	VMT South	7 th Ed RRIF South
Residential					
Single Unit	Dwelling	20.55	\$5,289.57	19.29	\$4,841.89
3+ Units per structure	Dwelling	13.09	\$3,369.37	12.29	\$3,085.10
Industrial					
Light Industrial	1000 Sq Ft	6.48	\$1,668.27	6.08	\$1,527.18
Manufacturing	1000 Sq Ft	5.14	\$1,321.83	4.82	\$1,210.05
Warehouse	1000 Sq Ft	2.27	\$585.24	2.13	\$535.75
Mini-Warehouse	1000 Sq Ft	1.97	\$507.88	1.85	\$464.93
Commercial					
Retail/Eating/Drinking Places	1000 Sq Ft	29.43	\$7,576.46	27.63	\$6,935.72
Casino Gaming Area	1000 Sq Ft	60.17	\$15,488.67	56.48	\$14,178.79
Office & Other Services					
Lodging	Room	4.38	\$1,126.75	4.11	\$1,031.46
Public Parks	Acre	1.02	\$262.35	0.96	\$240.16
Schools & Daycare	1000 Sq Ft	16.83	\$4,333.19	15.80	\$3,966.74
Hospital	1000 Sq Ft	14.01	\$3,605.61	13.15	\$3,300.69
Nursing Homes	1000 Sq Ft	8.68	\$2,233.33	8.14	\$2,044.46
Office & Other Services	1000 Sq Ft	12.73	\$3,276.00	11.95	\$2,998.95
Medical Office	1000 Sq Ft	45.47	\$11,704.79	42.68	\$10,714.92



Comparison of RRIF Fees

- 2030 VMT per development unit significantly increased
- ITE Trip Lengths reflect updated 10th Edition
- Updated RRIF CIP projects to reflect 2050 RTP
- CIP Cost attributed to new development is less
- RRIF Fees reflect more growth within North Benefit Area



Other Items - Status

- Next Steps
 - Update GAM/CIP Manuals

- Schedule
 - June/July 2021: Review of RRIF GAM/CIP Manuals



Questions

Dale Keller, P.E. Engineering Manager

Regional Transportation Commission
of Washoe County

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rtcwashoe.com
Your RTC. Our Community.



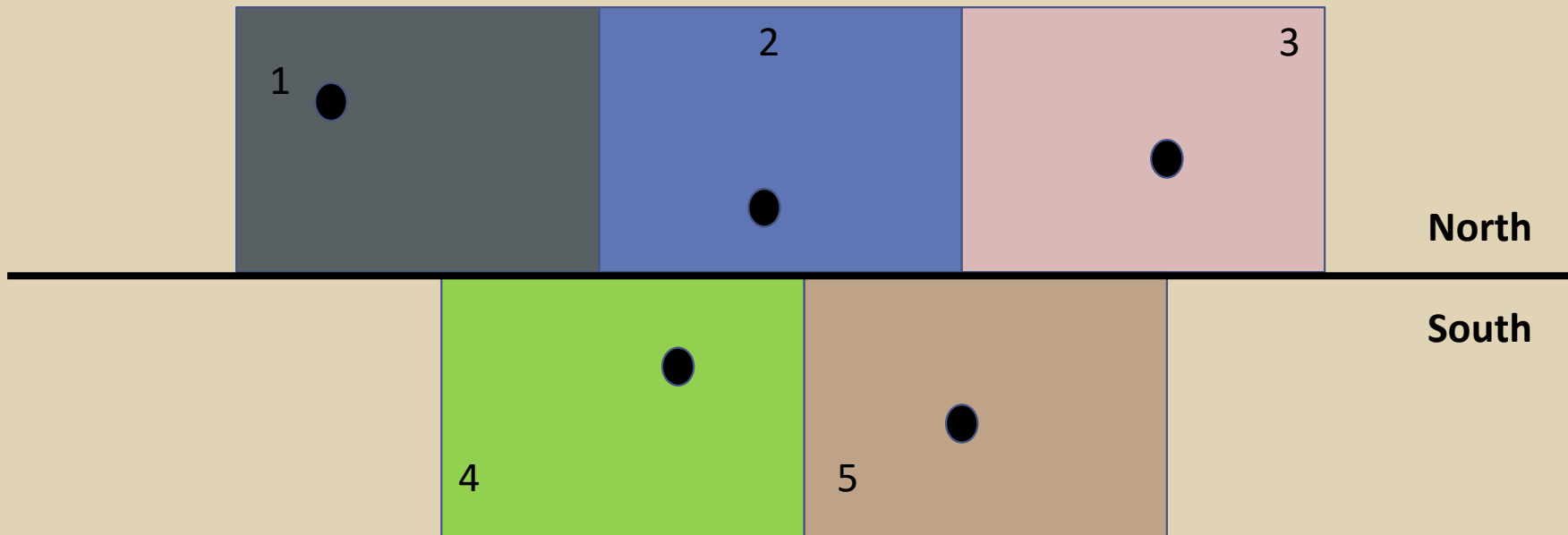
DRAFT REGIONAL ROAD IMPACT FEE SCHEDULE (7TH EDITION)

		North – Draft 7 th Ed.		South – Draft 7 th Ed.		North – 6 th Ed		South – 6 th Ed.			
Average Trip Length (Mi)		3.58		3.36		2.79		2.64			
RRIF Share of CIP		\$83,749,561		\$48,813,858		\$103,283,121		\$72,767,044			
VMT Increase Over Ten Years		325,369.28		194,434		322,046		232,352		Difference between 7 th and 6 th Editions	
Capital Cost per VMT		\$257.40		\$251.06		\$328.34		\$320.63			
Development Type	Development Unit	VMT North	7 th Ed RRIF North	VMT South	7 th Ed RRIF South	VMT North	6 th Ed RRIF North	VMT South	6 th Ed RRIF South	% North	% South
Residential											
Single Unit	Dwelling	20.55	\$5,289.57	19.29	\$4,841.89	15.03	\$4,934.95	14.22	\$4,559.36	7.19%	6.20%
3+ Units per structure	Dwelling	13.09	\$3,369.37	12.29	\$3,085.10	10.23	\$3,358.92	9.68	\$3,103.70	0.31%	-0.60%
Industrial											
Light Industrial	1000 Sq Ft	6.48	\$1,668.27	6.08	\$1,527.18	5.05	\$1,658.12	4.78	\$1,532.61	0.61%	-0.35%
Manufacturing	1000 Sq Ft	5.14	\$1,321.83	4.82	\$1,210.05	4.00	\$1,313.36	3.79	\$1,215.19	0.64%	-0.42%
Warehouse	1000 Sq Ft	2.27	\$585.24	2.13	\$535.75	1.77	\$581.16	1.68	\$538.66	0.70%	-0.54%
Mini-Warehouse	1000 Sq Ft	1.97	\$507.88	1.85	\$464.93	1.54	\$505.64	1.46	\$468.12	0.44%	-0.68%
Commercial											
Retail/Eating/Drinking Places	1000 Sq Ft	29.43	\$7,576.46	27.63	\$6,935.72	22.94	\$7,532.12	21.71	\$6,960.88	0.59%	-0.36%
Casino Gaming Area	1000 Sq Ft	60.17	\$15,488.67	56.48	\$14,178.79	46.90	\$15,399.15	44.37	\$14,226.35	0.58%	-0.33%
Office & Other Services											
Lodging	Room	4.38	\$1,126.75	4.11	\$1,031.46	3.41	\$1,119.64	3.23	\$1,035.63	0.64%	-0.40%
Public Parks	Acre	1.02	\$262.35	0.96	\$240.16	2.32	\$761.75	2.20	\$705.39	-65.56%	-65.95%
Schools & Daycare	1000 Sq Ft	16.83	\$4,333.19	15.80	\$3,966.74	13.12	\$4,307.82	12.41	\$3,979.02	0.59%	-0.31%
Hospital	1000 Sq Ft	14.01	\$3,605.61	13.15	\$3,300.69	10.92	\$3,585.47	10.33	\$3,312.11	0.56%	-0.34%
Nursing Homes	1000 Sq Ft	8.68	\$2,233.33	8.14	\$2,044.46	6.76	\$2,219.58	6.40	\$2,052.03	0.62%	-0.37%
Office & Other Services	1000 Sq Ft	12.73	\$3,276.00	11.95	\$2,998.95	9.92	\$3,257.13	9.39	\$3,010.72	0.58%	-0.39%
Medical Office	1000 Sq Ft	45.47	\$11,704.79	42.68	\$10,714.92	35.44	\$11,636.37	33.53	\$10,750.72	0.59%	-0.33%



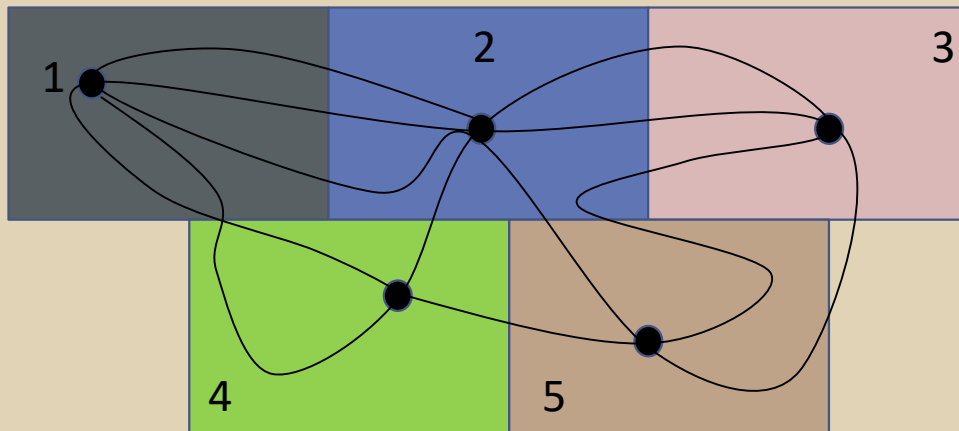
**Regional Road Impact Fee (RRIF)
Technical Advisory Committee
5/27/2021**

Trip Lengths Calculation



5 TAZs connected by regional roads – 3 TAZs in the North, 2 TAZs in the South

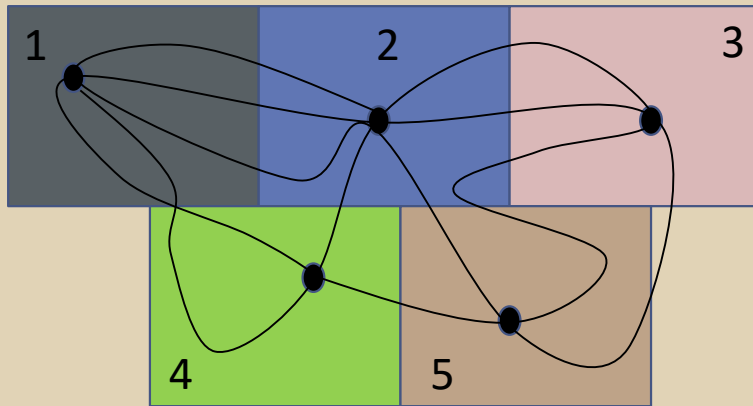
Trip Lengths Calculation



From – To trips between zones

		TO ZONE				
		Zones in North			Zones in South	
		1	2	3	4	5
FROM ZONE	1	564	27	12	9	3
	2	588	1282	102	35	41
	3	844	154	1368	100	48
	4	333	109	203	522	45
	5	554	386	303	141	1476

Trip Lengths Calculation



From – To distances across the network.

Distance (mi)

		TO ZONE				
		1	2	3	4	5
FROM ZONE	1	5.0	11.0	19.0	20.0	17.0
	2	11.0	5.0	17.0	17.0	14.0
	3	19.0	17.0	8.0	16.0	18.0
	4	20.0	17.0	16.0	8.0	16.0
	5	17.0	14.0	18.0	16.0	7.0

Trip Lengths Calculation



Number of Trips

TO ZONE

Zones in North

Zones in South

		1	2	3	4	5
FROM ZONE	1	564	27	12	9	3
	2	588	1282	102	35	41
	3	844	154	1368	100	48
	4	333	109	203	522	45
	5	554	386	303	141	1476

Distance (mi)

TO ZONE

		1	2	3	4	5
FROM ZONE	1	5.0	11.0	19.0	20.0	17.0
	2	11.0	5.0	17.0	17.0	14.0
	3	19.0	17.0	8.0	16.0	18.0
	4	20.0	17.0	16.0	8.0	16.0
	5	17.0	14.0	18.0	16.0	7.0

Weighted Distance (Trips x Distance)

		TO ZONE				
		1	2	3	4	5
FROM ZONE	1	2820.0	297.0	228.0	180.0	51.0
	2	6468.0	6410.0	1734.0	595.0	574.0
	3	16036.0	2618.0	10944.0	1600.0	864.0
	4	6660.0	1853.0	3248.0	4176.0	720.0
	5	9418.0	5404.0	5454.0	2256.0	10332.0

Trip Lengths Calculation



	TO ZONE				
	Zones in North			Zones in South	
Total Distance	1	2	3	4	5
	79,592			21,348	

	TO ZONE				
	Zones in North			Zones in South	
Total Trips	1	2	3	4	5
	6,829			2,420	

Avg. Trip Length to the North (miles per trip)

=

(Sum of weighted distances to zones 1, 2 & 3) ÷ (Sum of trips to zones 1, 2 & 3)

=

11.65 miles per trip

Avg. Trip Length to the South (miles per trip)

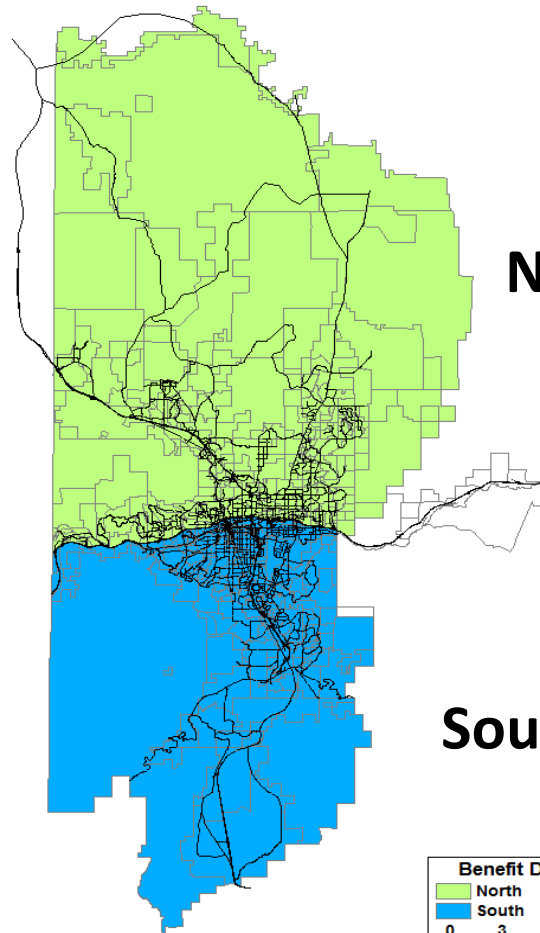
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(Sum of Weighted Distances to Zones 4 & 5) ÷ (Sum of Trips to Zones 4 & 5)

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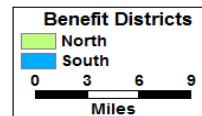
8.82 miles per trip

Service Areas

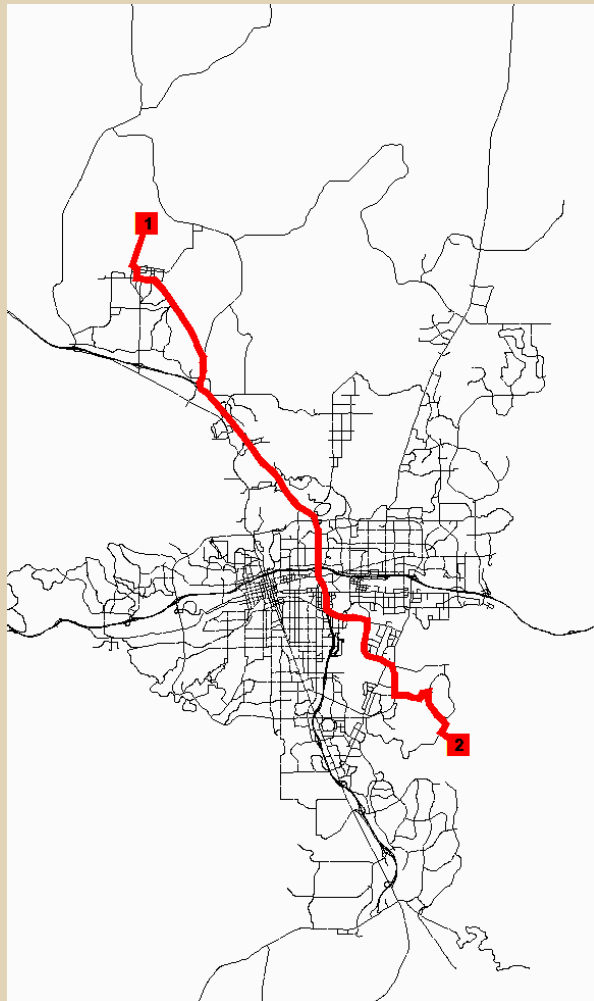


North Service Area

South Service Area



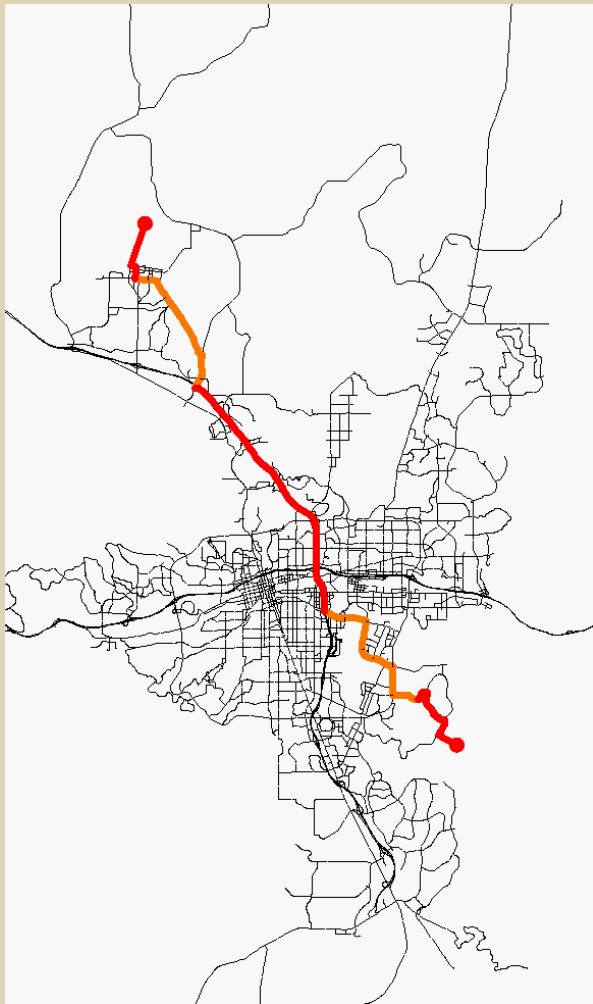
Trip Distance on All Roads



Model determines the quickest route between points 1 and 2

Total Distance 20.6 mi

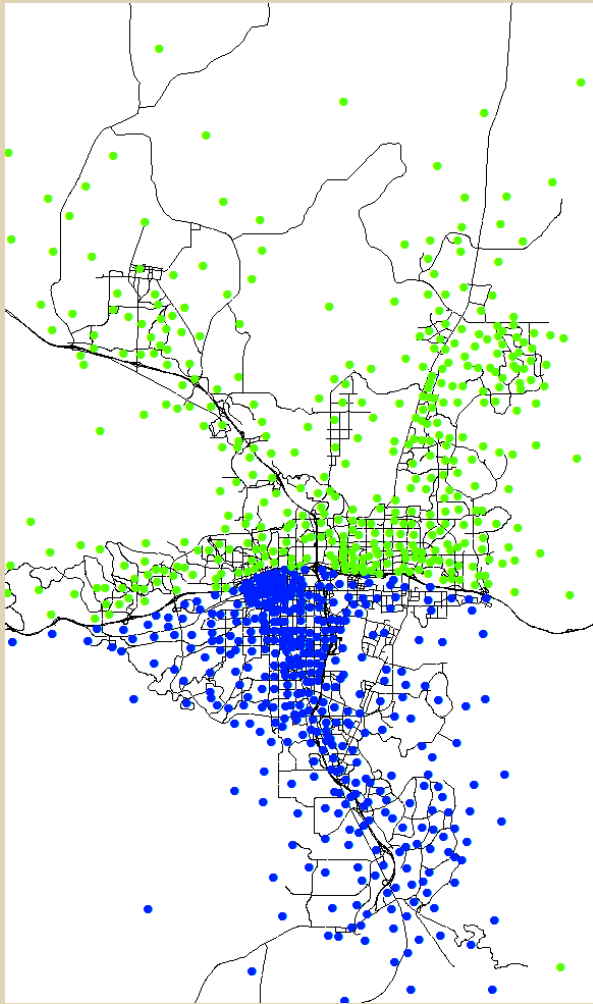
Trip Distance on Regional Roads



The **ORANGE** sections of the route are used for the regional road distance.

Regional Distance 8.8 mi

Trip Lengths in the Region



The process of calculating the distance between zones is repeated between every zone.

With the distance, and the trips between zones, the average trip length to the NORTH or to the SOUTH can be calculated.

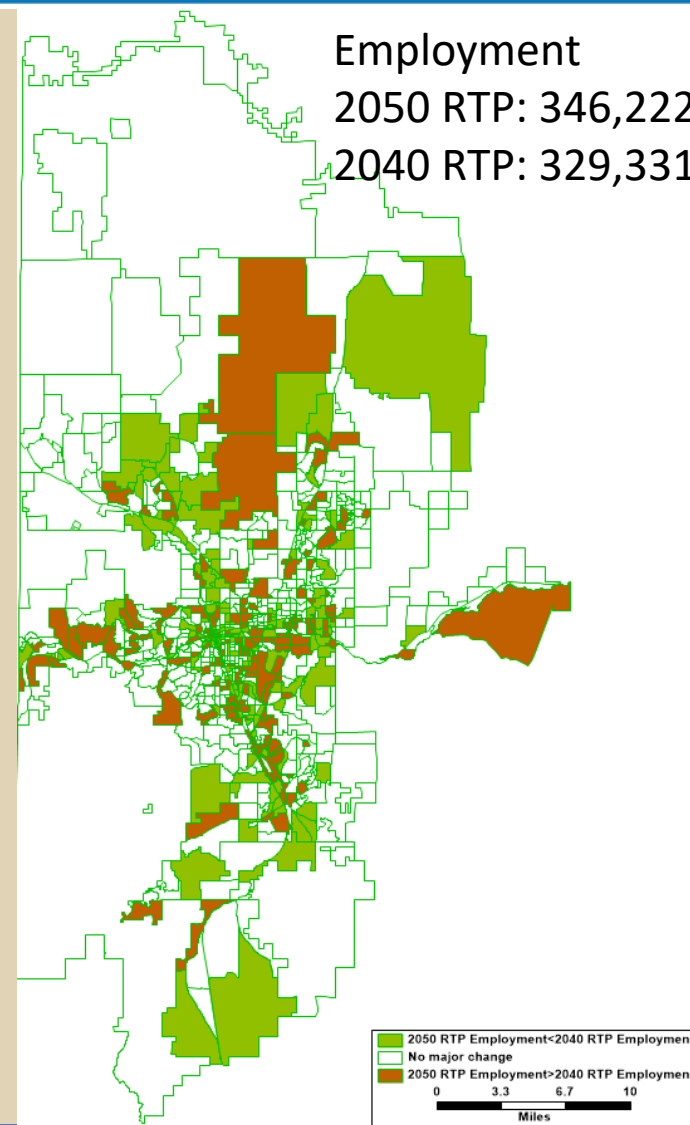
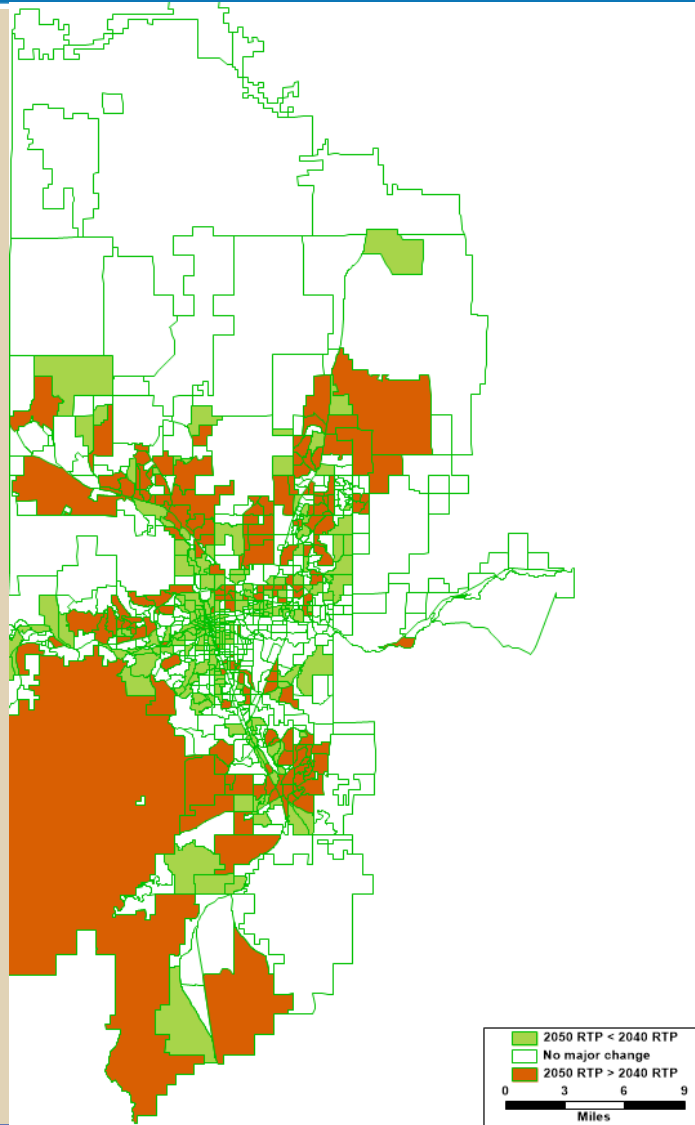
Trip Lengths Comparison



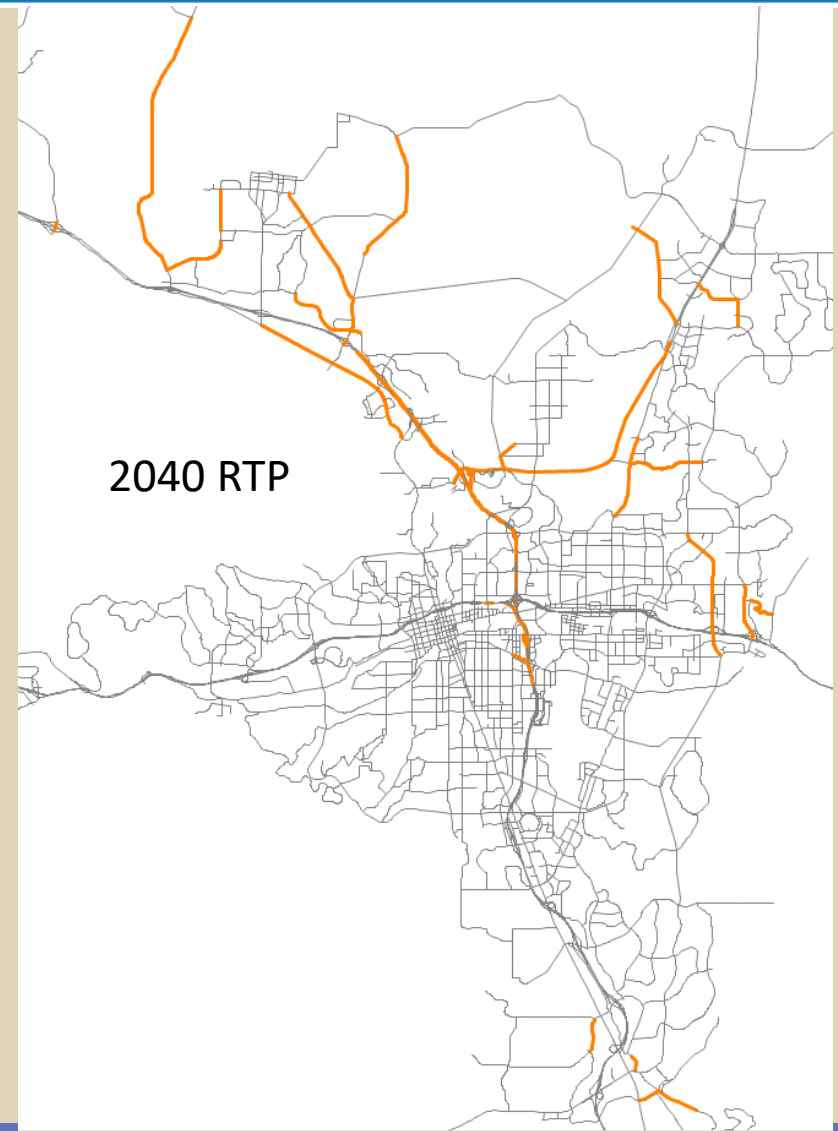
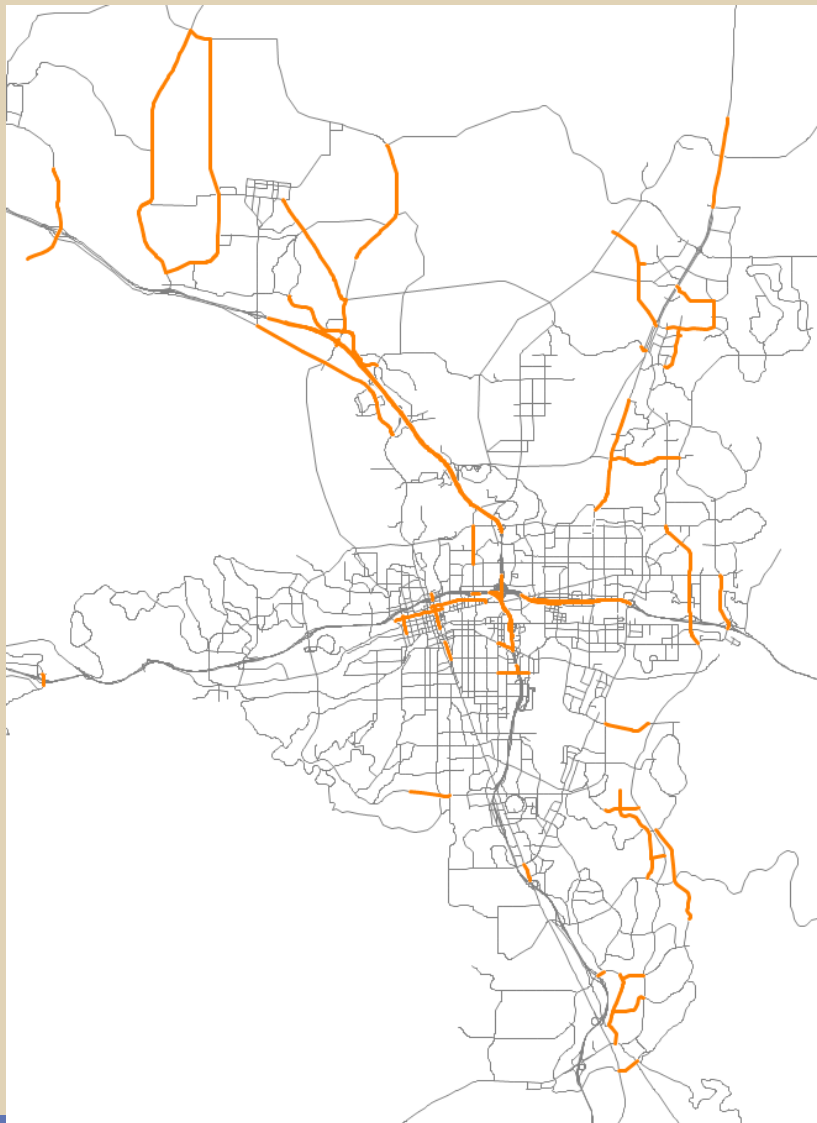
Trip Lengths change potential factors

- Land use forecast
- Planned improvements
- Model versions 2040 vs. 2050

2030 Land Use forecast



2030 Planned Improvements



Model 2040 RTP vs. 2050 RTP



- Average trip length from survey
 - 2005: 3.6 miles
 - 2015: 8 miles
- Data from model

	2040 Model	2050 Model
2030 VMT	10,121,750	11,549,545
2030 Trips	1,737,448	1,515,861
2030 Trip Length	5.83	7.62

	2040 Model	2050 Model
Average Trip Length to North	2.79	3.58
Average Trip Length to South	2.64	3.36