



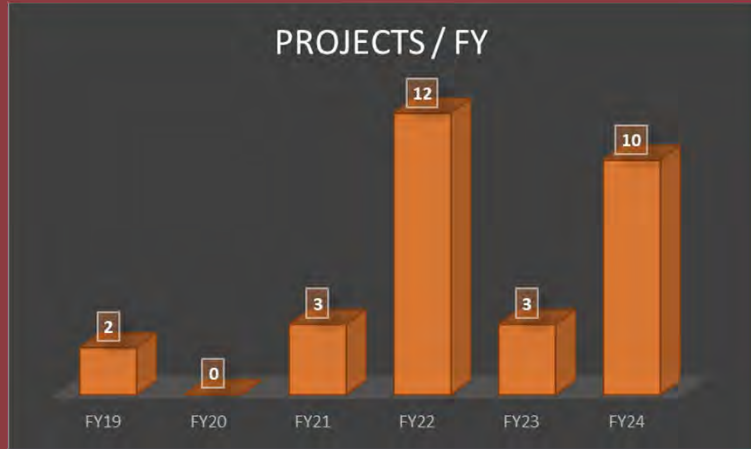
SEDONA IN MOTION

**SETTING INTO MOTION THE CITY OF SEDONA'S
TRANSPORTATION MASTER PLAN**



SIM History

- TMP 2016 - January 2018
- Sales Tax March 2018
- February 8, 2019, SIM 11
- October 12, 2020, SIM 1a
- December 2020 – Transit Admin Hired
- March 2022 – Transit Trailhead Shuttles Launched





Agenda

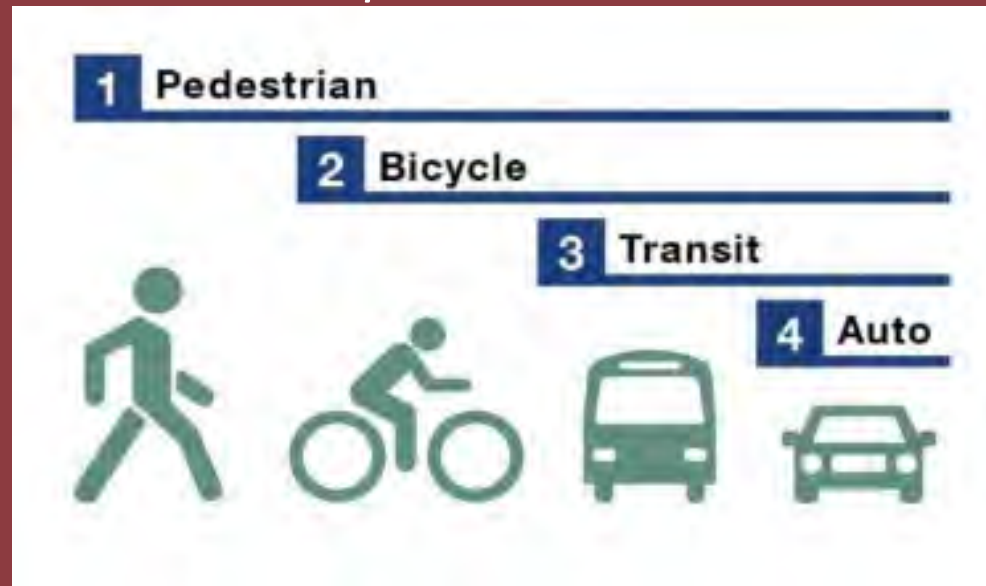
- 1 Modeling Overview
- 2 Brewer / SR 89A SIM Projects
- 3 Projects in Design / Pre-Construction
- 4 Projects in Study / Design Phase
- 5 Roadway/Transit Studies





TMP/SIM Focus

“Recommend a set of multi-modal transportation strategies and guidance to address congestion and mobility needs of residents, visitors, and commuters.” – Transportation Master Plan



TMP – Community Engagement



Table 3.3. Community Engagement Results – Transportation Strategies Ratings

Strategy	Likely to Support	Unlikely to Support
Strategy 12. Traveler Information	66.97%	20.75%
Strategy 8. Enhanced Transit Service - Tourism Focused Shuttle Service	66.40%	20.02%
Strategy 7. Enhanced Transit Service - Commuter/Resident Focused	65.14%	18.30%
Strategy 1. Uptown Sedona Roadway Improvements	62.18%	26.20%
Strategy 5. Major Roadway Connections	60.96%	26.17%
Strategy 6. Neighborhood Vehicular Connections	60.70%	24.83%
Strategy 11. Bicycle and Pedestrian Improvements	58.51%	26.20%
Strategy 4. SR 179 Improvements, Schnebly Hill roundabout to the "Y"	57.85%	31.97%
Strategy 10. SR 89A/West Sedona Access Improvements	57.37%	27.68%
Strategy 2. Uptown Sedona Pedestrian Improvements	49.52%	37.82%
Strategy 9. Neighborhood Vehicles - Tourism Focused	45.95%	34.34%
Strategy 3. Uptown Sedona Parking Improvements	43.54%	38.68%





Modeling – Travel Time

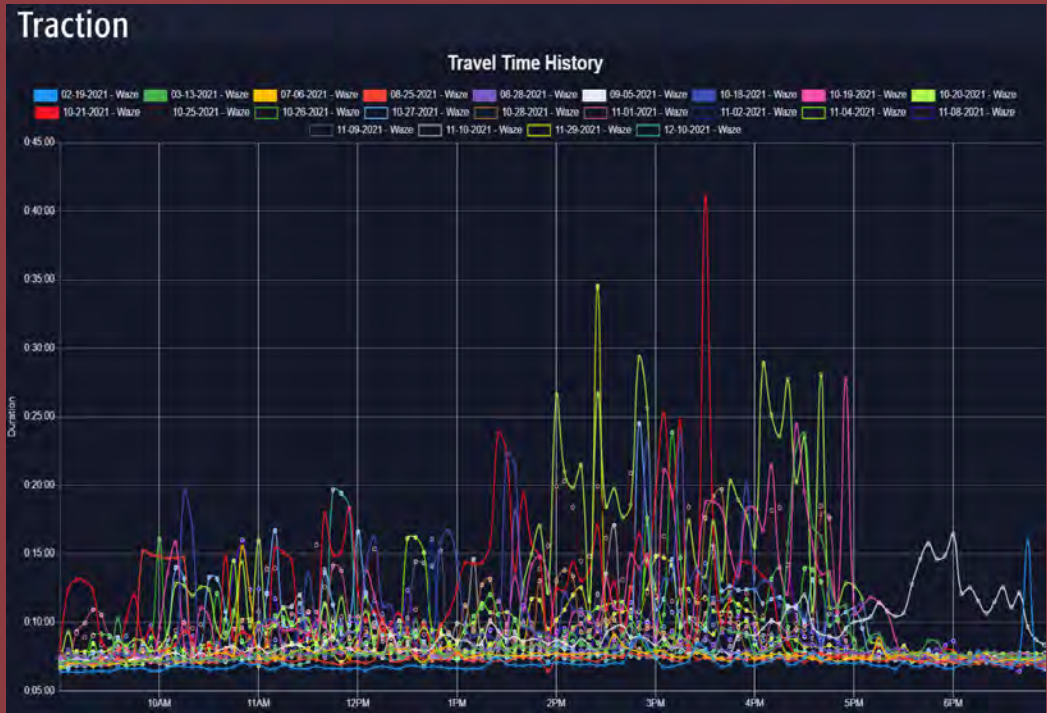
Travel Time Data

Using GPS-based applications, such as Google Travel Time, Waze, and Traction, the team gained a better understanding of both peak time of day and seasonal congestion, specifically in Sedona.

*Southbound SR 89A
(Trout Farms to "Y")
Google Travel Time*

Days Exceeding 15-min travel time
for SR 89A from Trout Farm to Y

<u>2018</u>	<u>2021</u>
115	22 (14 ADOT)



Modeling - VISSIM



Traffic Modeling

The project team used VISSIM to accurately model the existing conditions and applied SIM projects to model future conditions and gauge potential/anticipated improvements in travel time.

*VISSIM Model, SR 179/SR 89A
Intersection*





Brewer/SR 89A Corridor

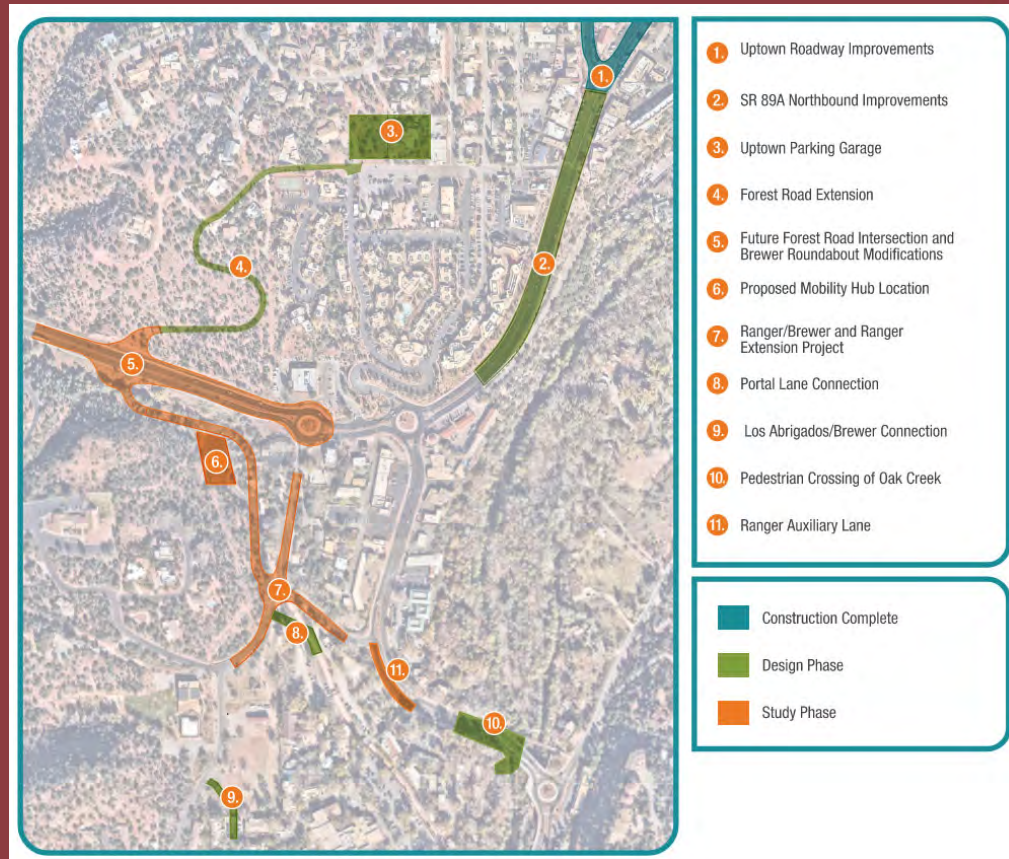
- Uptown Sedona to Ranger / Brewer Corridor
 - Design / Pre-Construction
 - Forest Road Connection – SIM 5B (Under Construction)
 - Uptown Sedona Parking Garage – SIM 3A
 - 89A Northbound Improvements
 - Amara Right Turn Lane
 - Pedestrian Crossing of Oak Creek – SIM 4C
 - Los Abridados/Brewer – SIM 5C
 - Study / Design Phase
 - Ranger / Brewer Intersection – SIM 5D
 - Ranger Extension – SIM 5D
 - Brewer RAB
 - Forest Road Connection / 89A Int.
 - Mobility Hub – SIM 7 and 8
 - Ranger Auxiliary Lane
 - Portal Lane Connection – SIM 5A





Brewer/SR 89A Corridor

- Design/Pre-Construction
 - Forest Road Connection
 - Uptown Sedona Parking Garage
 - 89A Northbound Improvements
 - Amara Right Turn Lane
 - Pedestrian Crossing of Oak Creek
 - Los Abrigados/Brewer

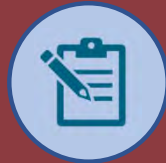




Project Specific Traffic Analysis



Traffic Counts



Field Observations



Travel Time



Driver Behavior



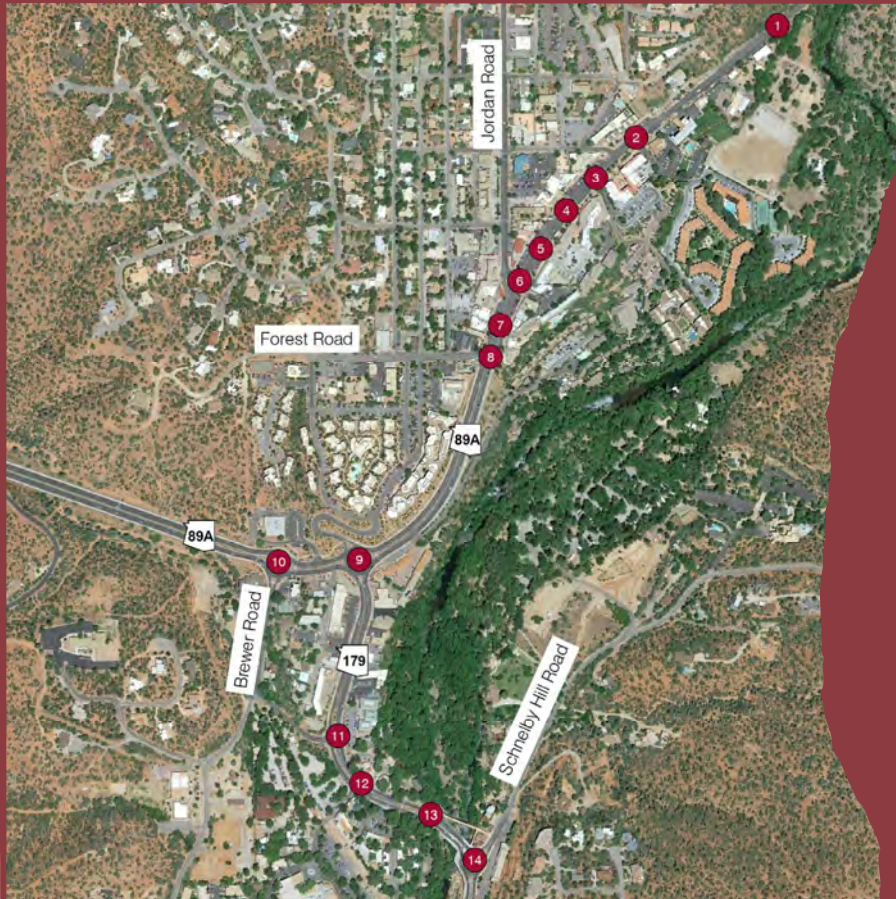
Video Footage



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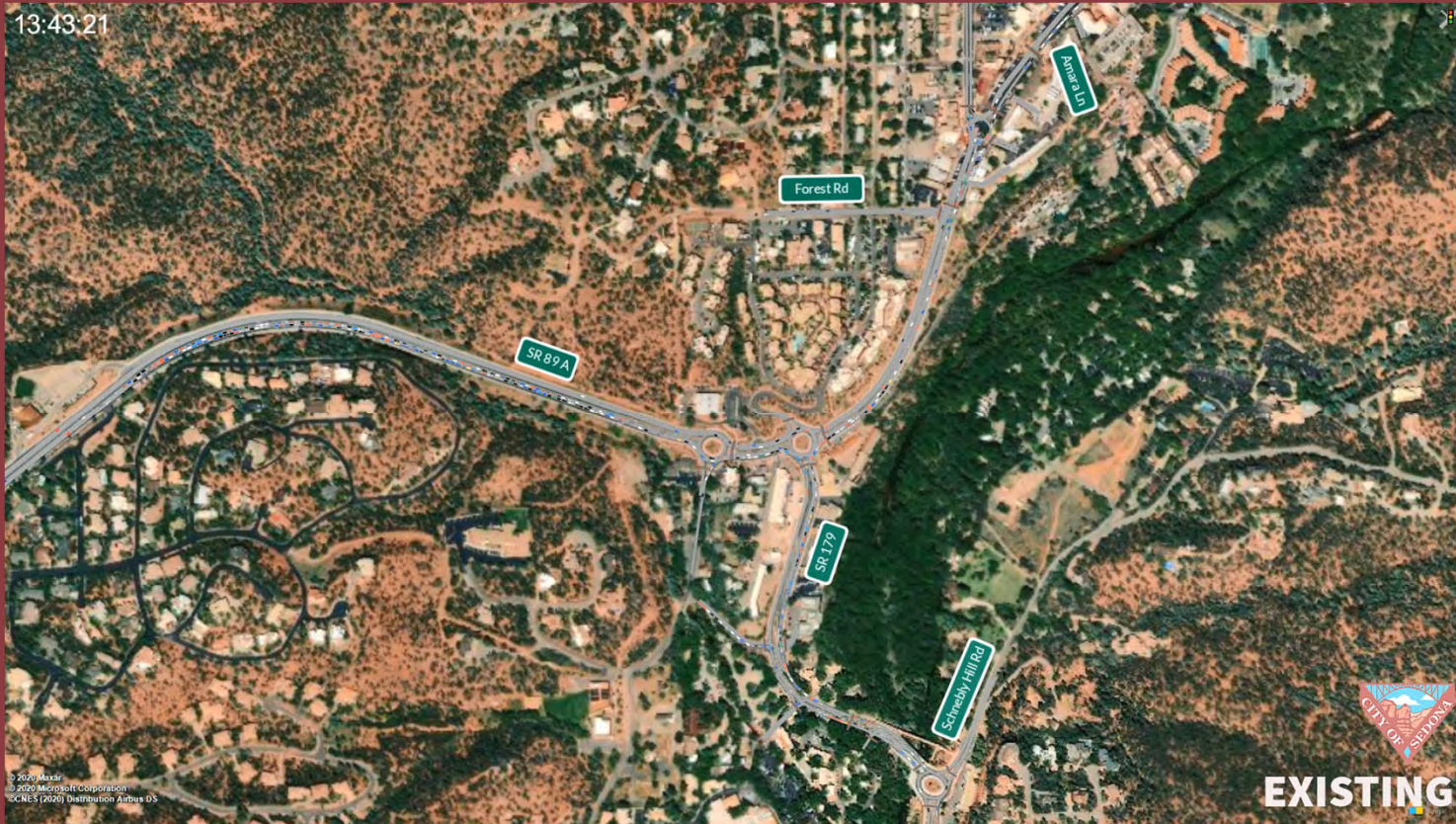
Study Overview



1. SR-89A / Owenby Way
2. SR-89A / Arroyo Roble Road
3. SR-89A / Amara Lane
4. SR-89A / Mid-block Crossing
5. SR-89A / Sedona Trolley Driveway
6. SR-89A / Jordan Road
7. SR-89A / Pink Jeep Driveway
8. SR-89A / Forest Road
9. SR-89A / SR 179
10. SR-89A / Brewer Road
11. SR-179 / Ranger Road
12. SR-179 / Portal Lane
13. SR-179 / SR 179 Driveway
14. SR-179 / Schnelby Hill Road



Existing Conditions



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Alternatives Overview

Alternative 0 – Forest Rd Connection + Uptown Garage

Alternative 1A – Right-turn lane at Amara Ln

Alternative 1B – Pedestrian crosswalk removal at Jordan Rd and Uptown midblock crossing

Alternative 1C – Uptown Combined (Alternative 1A + Alternative 1B modifications)

Alternative 2 – Geometric improvements at Forest Rd

Alternative 3 – Signal timing

Alternative 4 – Geometric improvements combined (Alternative 1A + Alternative 2)

Alternative 5A – Alternative 4 + SR 179 crosswalk removal

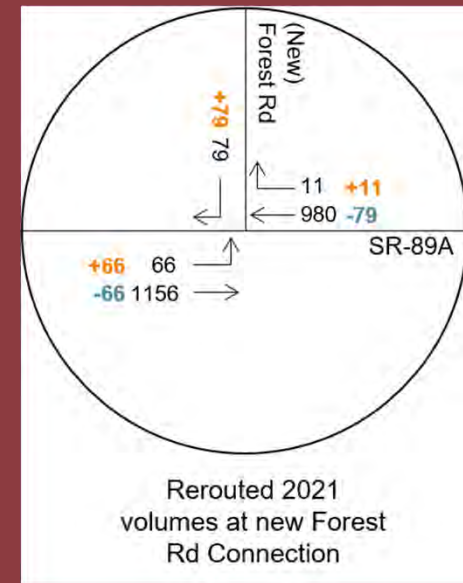
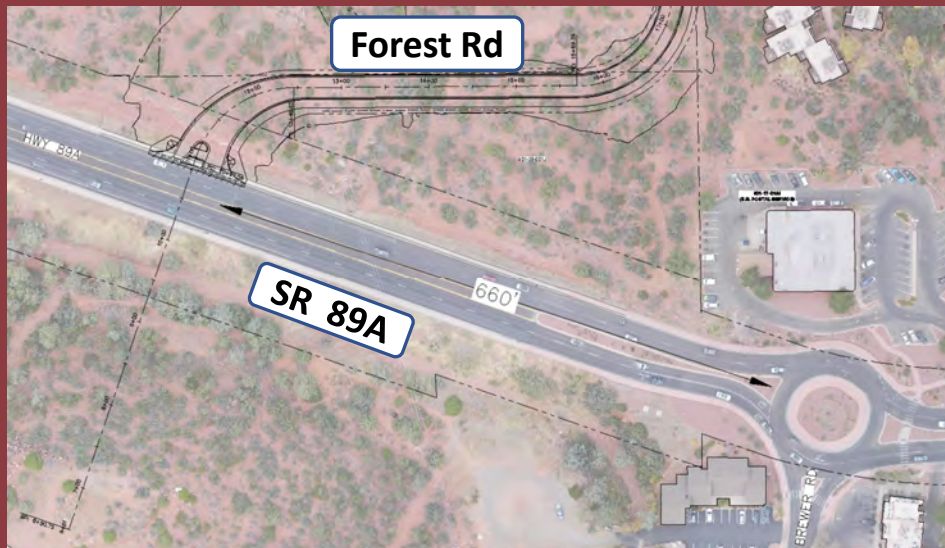
Alternative 5B – Alternative 4 + SR 179 Z-crossing

Alternative 6A – Removal of SR 179 crosswalk

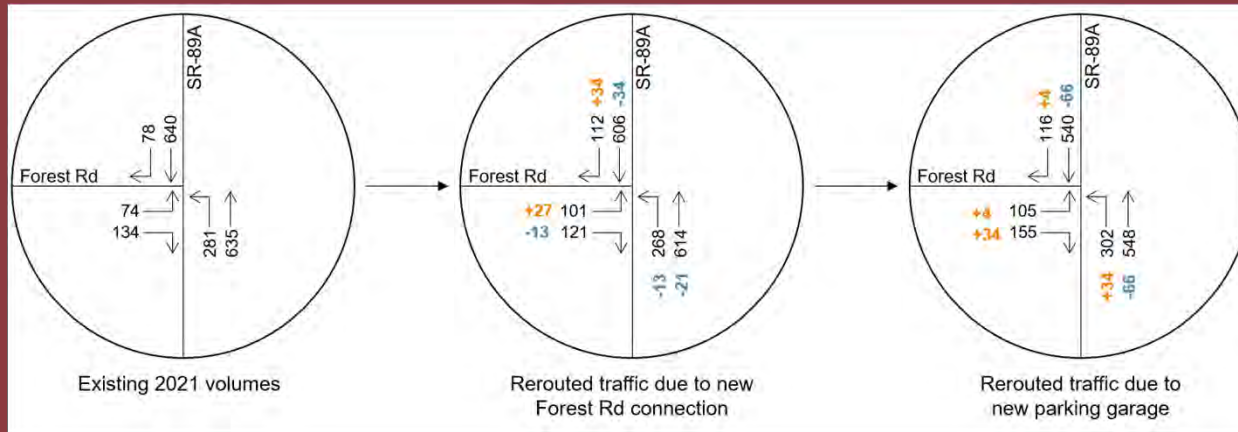
Alternative 6B – Z-crossing at SR 179



Forest Rd Connection + Uptown Garage



Forest Rd Connection + Uptown Garage



Existing and Alt 0 Comparison



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Alternatives Overview

Alternative 0 – Forest Rd Connection + Uptown Garage

Alternative 1A – Right-turn lane at Amara Ln

Alternative 1B – Pedestrian crosswalk removal at Jordan Rd and Uptown midblock crossing

Alternative 1C – Uptown Combined (Alternative 1A + Alternative 1B modifications)

Alternative 2 – Geometric improvements at Forest Rd

Alternative 3 – Signal timing

Alternative 4 – Geometric improvements combined (Alternative 1A + Alternative 2)

Alternative 5A – Alternative 4 + SR 179 crosswalk removal

Alternative 5B – Alternative 4 + SR 179 Z-crossing

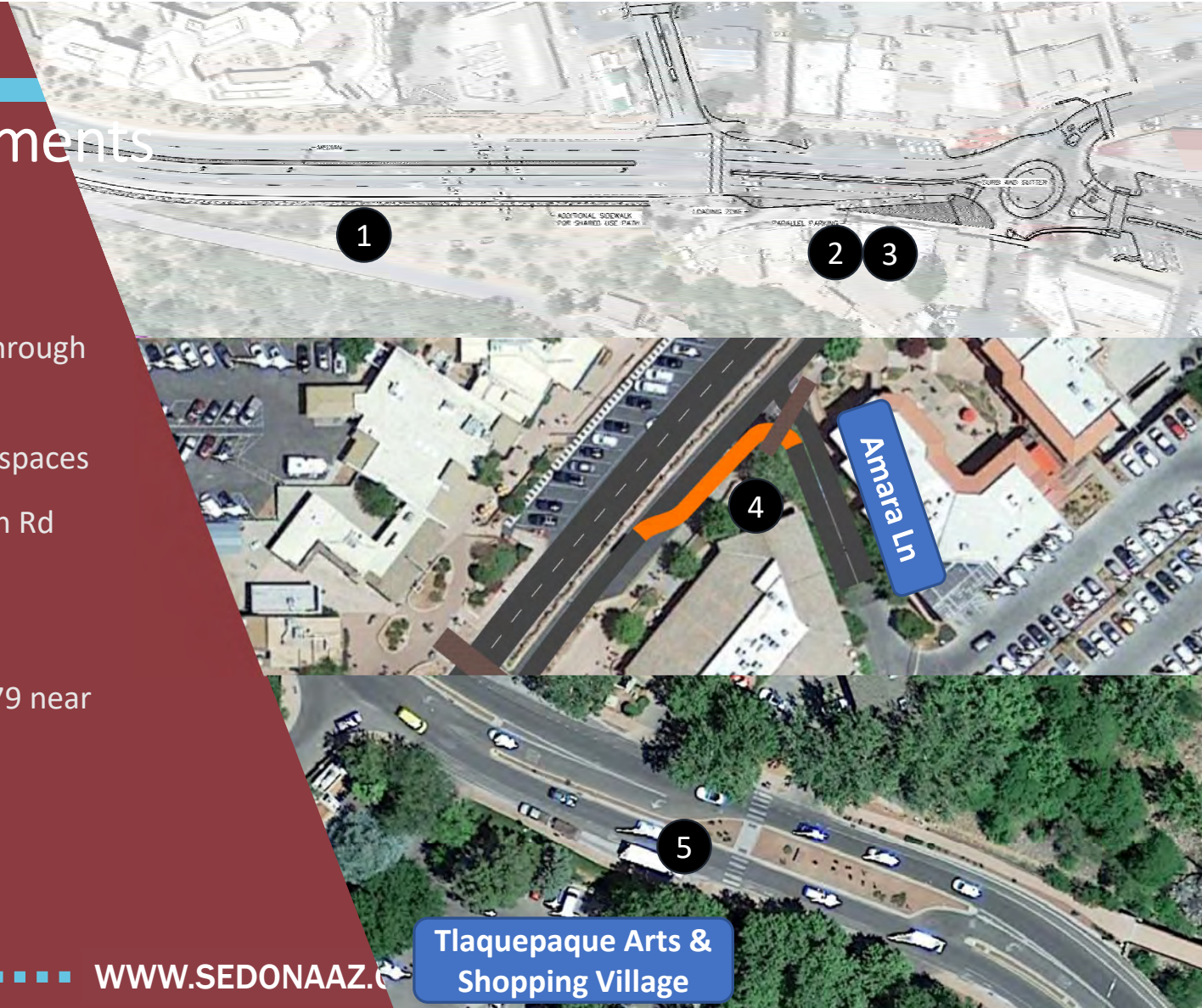
Alternative 6A – Removal of SR 179 crosswalk

Alternative 6B – Z-crossing at SR 179



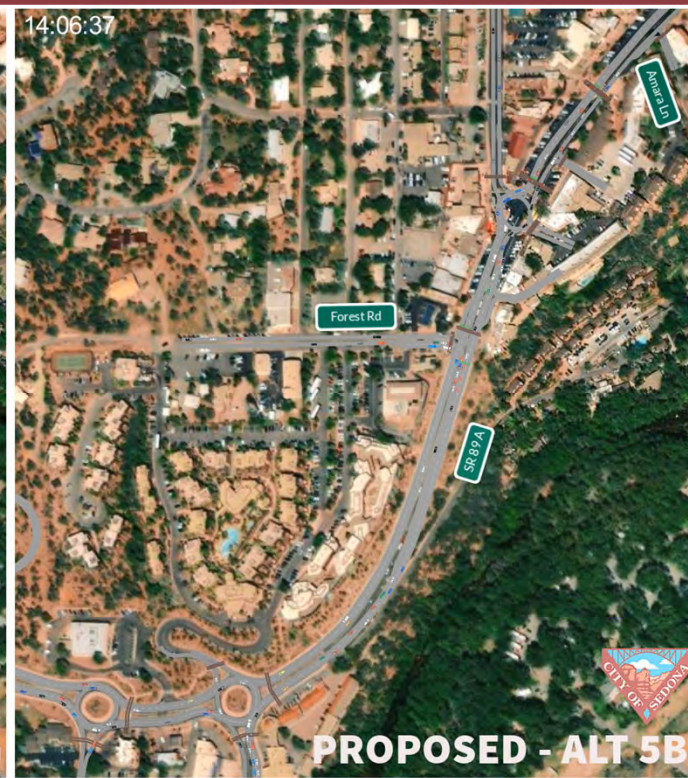
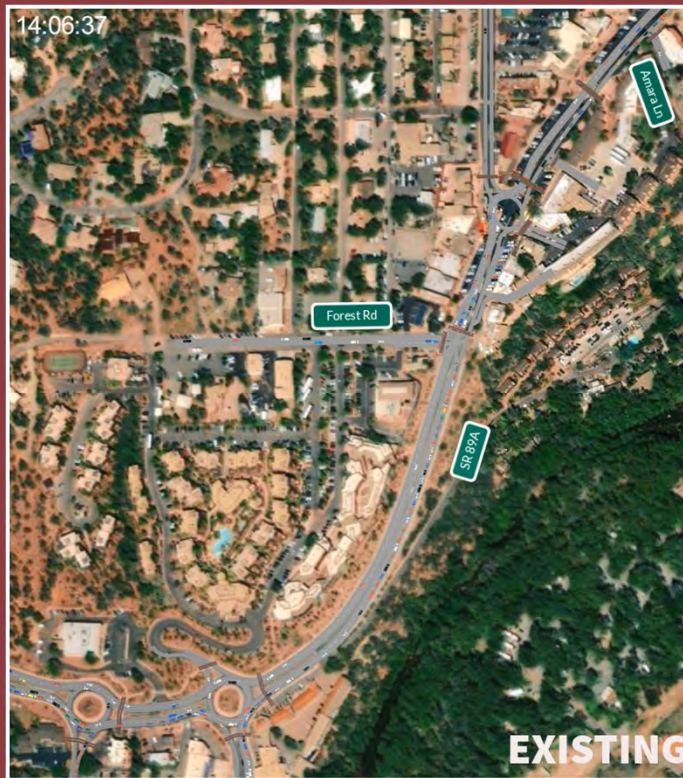
Geometric Improvements (5B)

- 1 Restriping SR 89A NB to two through lanes and a left-turn lane
- 2 Removal of 13 angled parking spaces
- 3 Taper merge just before Jordan Rd Roundabout
- 4 Amara Ln right-turn lane
- 5 Two-staged Z-crossing at SR 179 near Oak Creek



Tlaquepaque Arts & Shopping Village

Existing and Alt 5B Comparison

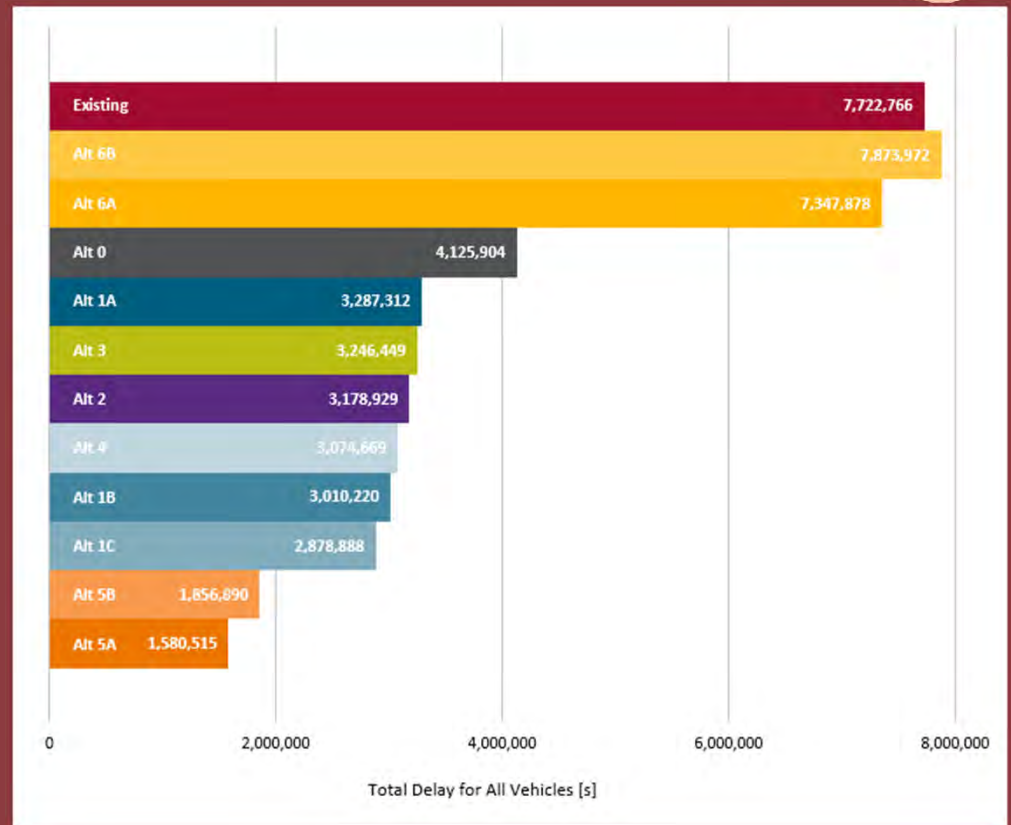


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Results

- Alt 0 – Forest Rd Connection + Uptown Garage
- Alt 1A – Right-turn lane at Amara Ln
- Alt 1B – Pedestrian crosswalk removal at Jordan Rd and Uptown Midblock crossing
- Alt 1C – Alt 1A + Alt 1B
- Alt 2 – Geometric Improvements at Forest Rd
- Alt 3 – Signal Timing
- Alt 4 – Geometric improvements combined (Alt 1A + Alt 2)
- Alt 5A – Alt 4 + SR 179 crossing removal
- Alt 5B – Alt 4 + SR 179 Z-crossing
- Alt 6A – Removal of SR 179 crosswalk
- Alt 6B – Z-crossing at SR 179





Summary of Findings

SR 89A NB congestion in Uptown stems from two points, pedestrian crosswalks and Forest Rd intersection.

Geometric improvements at Amara Ln and between “Y” and Forest Rd provide the most delay savings.

Improvements should be first implemented in Uptown prior to addressing issues on SR 179 due to downstream capacity constraints.





Brewer/SR 89A Corridor

- Study/Design Phase
 - Ranger / Brewer Intersection
 - Ranger Extension
 - Brewer RAB
 - Forest Road Connection / 89A Int.
 - Mobility Hub (Park)
 - Ranger Auxiliary Lane
 - Portal Lane Connection
 - Los Abrigados/Brewer
- Ranger/Brewer Intersection
 - Draft DCR Complete
 - Public Meeting Held
 - Traffic Modeling
 - Incorporate Future Projects



Ranger/Brewer Intersection Analysis



RANGER / BREWER
4-LEG ROUNDABOUT

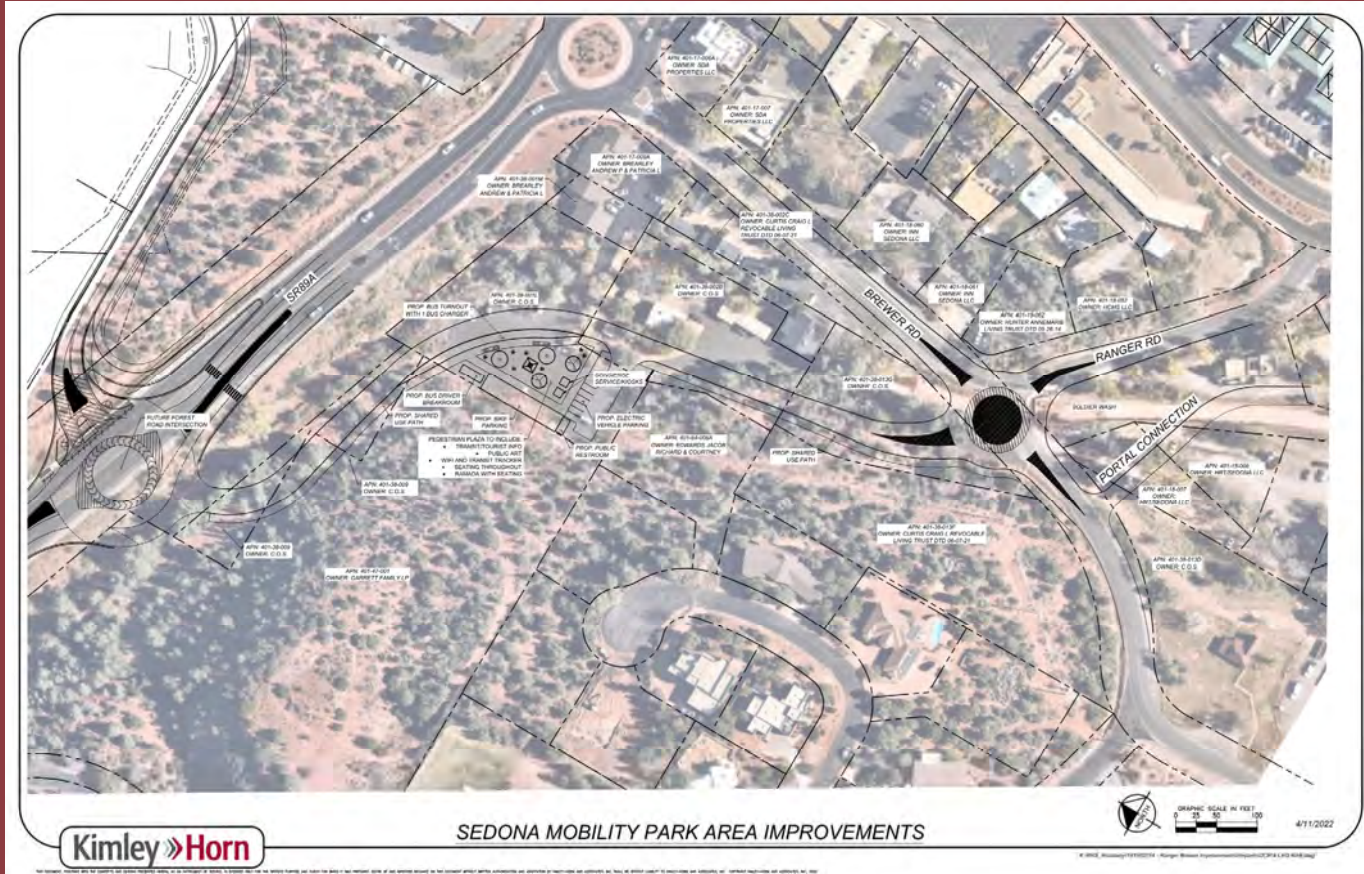


RANGER / BREWER
5-LEG ROUNDABOUT

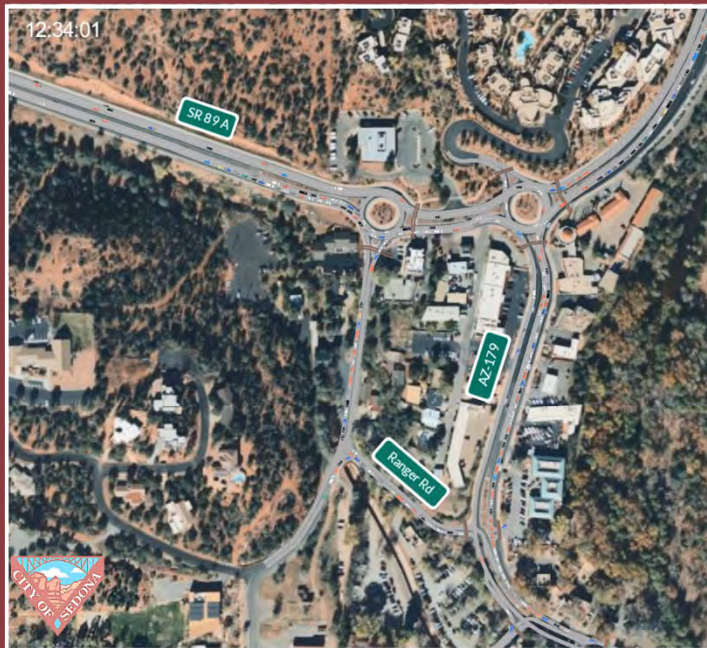


RANGER / BREWER
SIGNALIZED INTERSECTION

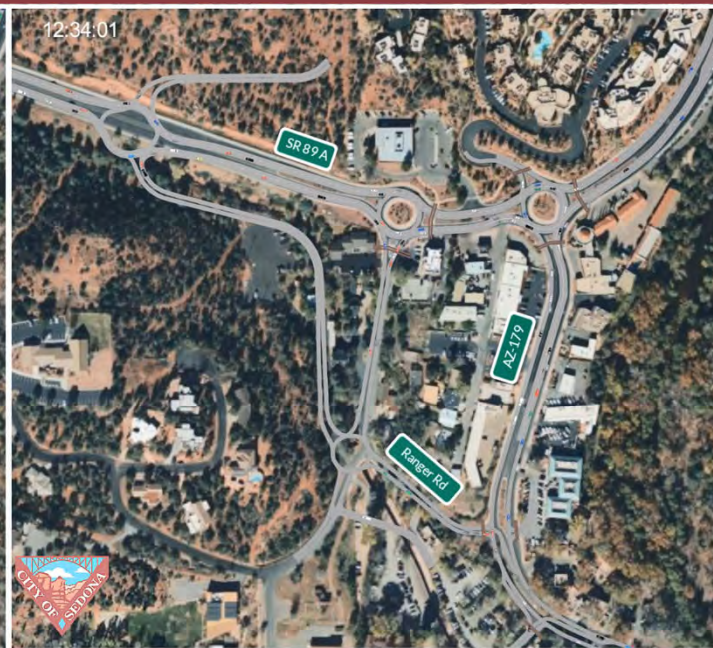
Ranger/Brewer and Ranger Ext.



Ranger/Brewer – Existing vs Proposed

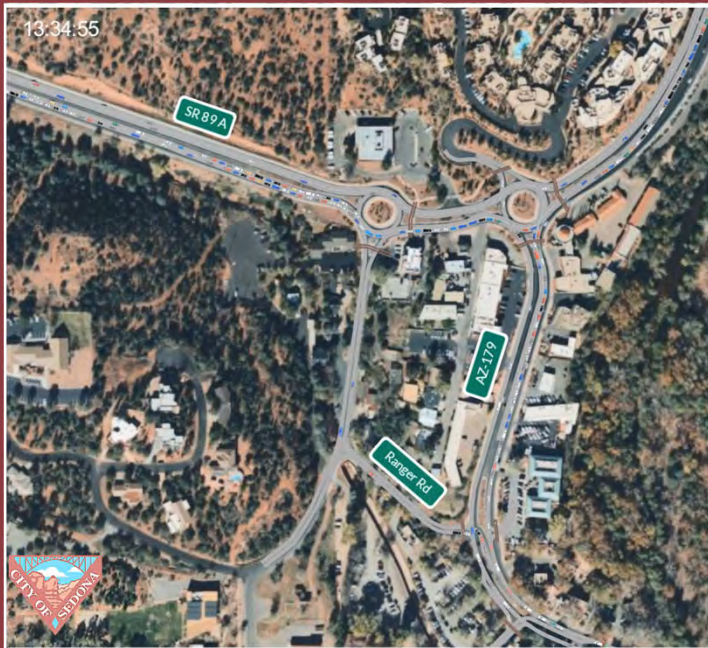


EXISTING

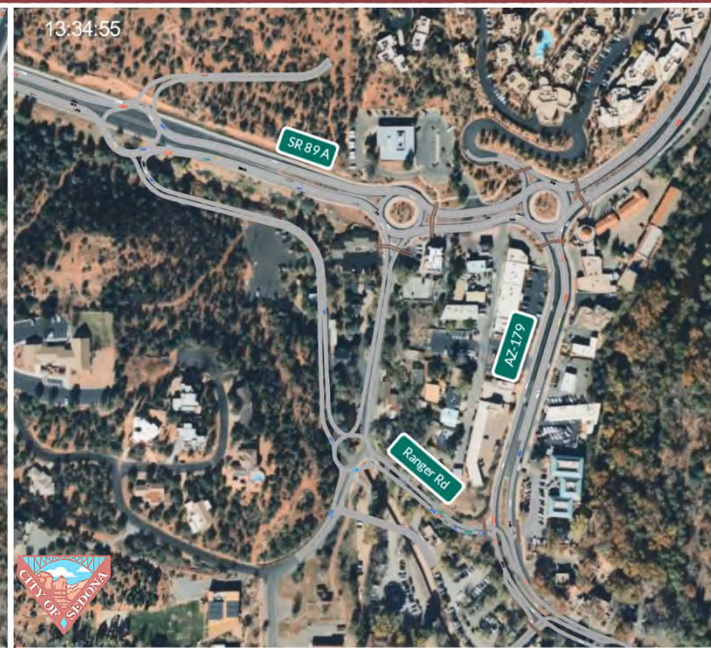


**ROUNDBOUT AT RANGER/BREWER
WITH UPTOWN IMPROVEMENTS**





EXISTING



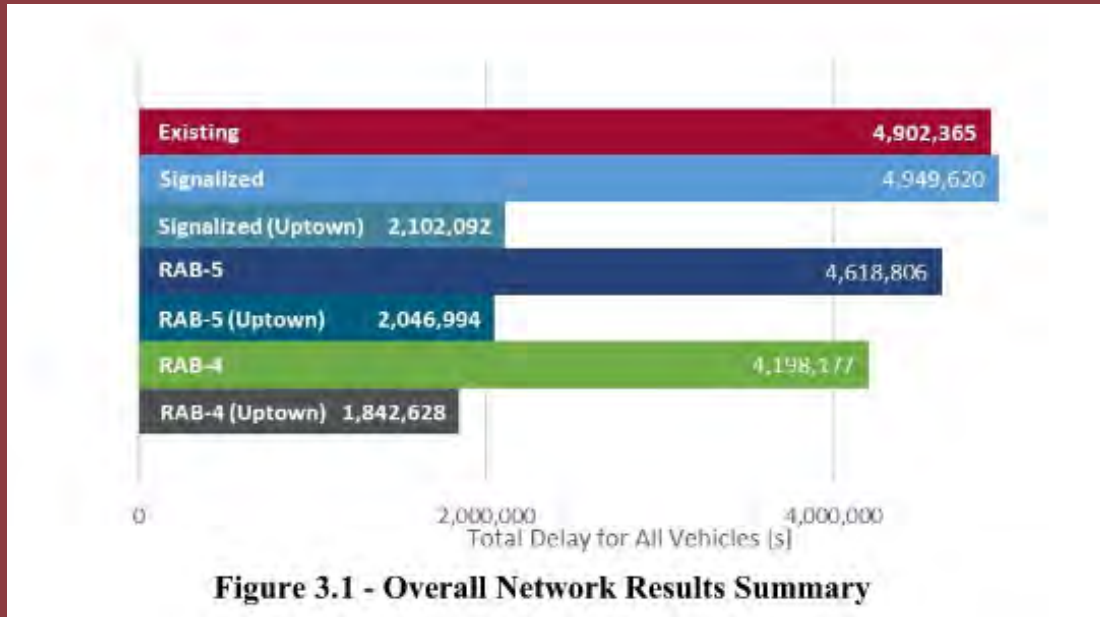
**RANGER/BREWER AND UPTOWN
IMPROVEMENTS**



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Ranger/Brewer System Results





Roadway/Transit Studies

- Transit Study
 - Hub
 - Maintenance and Operations Facility
- Forest/Ranger Extension Intersection
 - Cooks Hill Transit Lane
- Brewer RAB Modifications



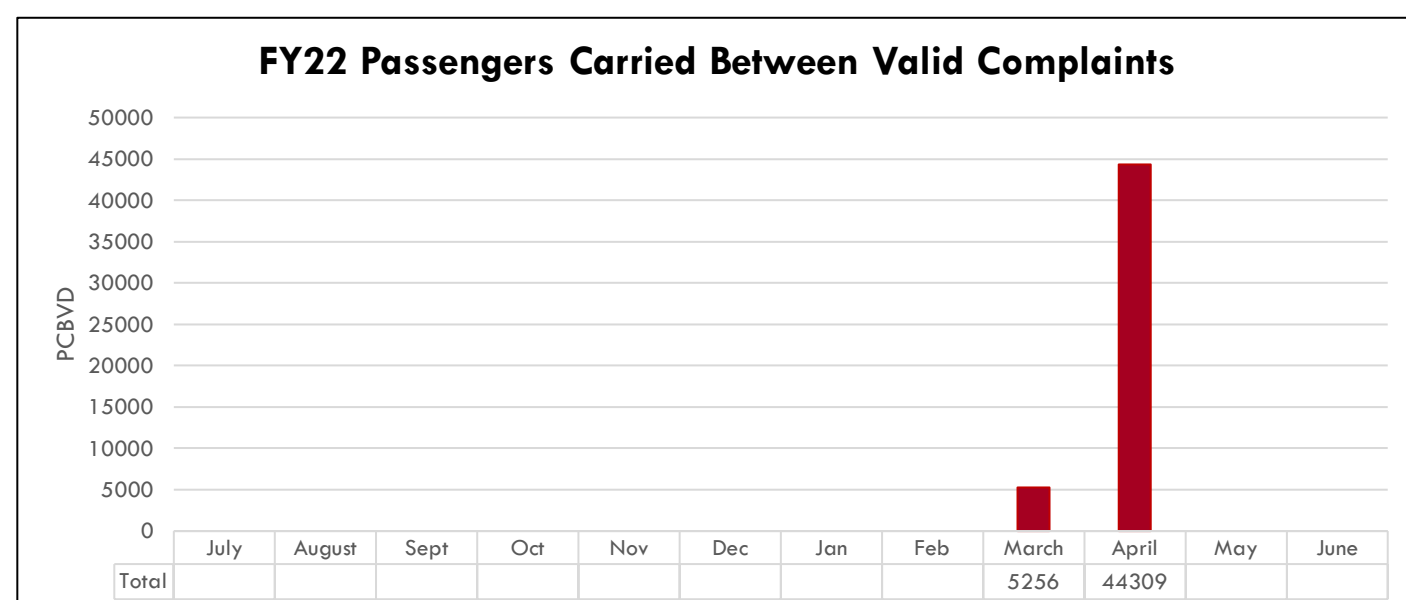
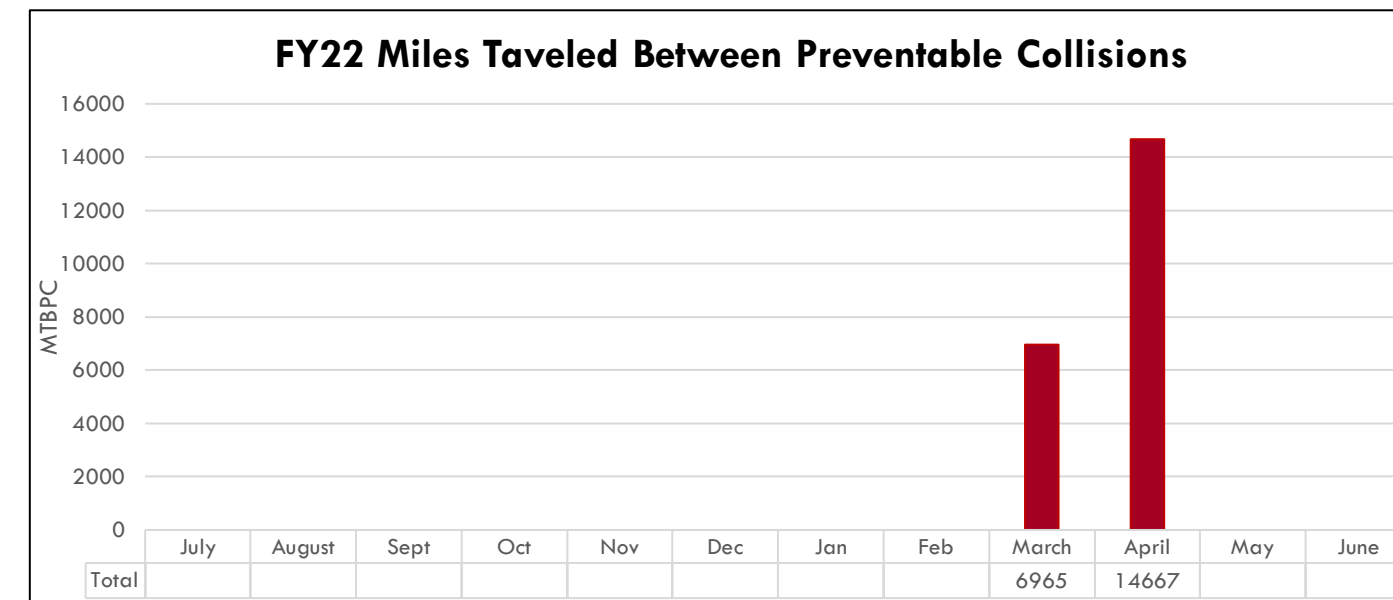
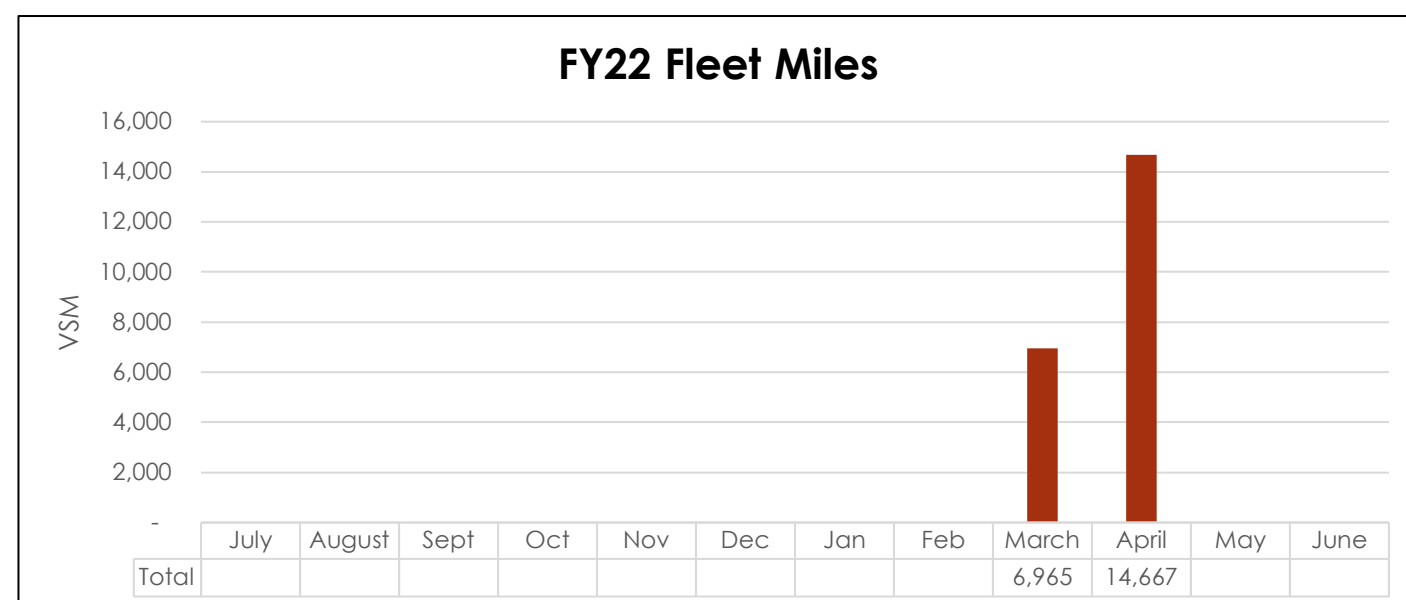
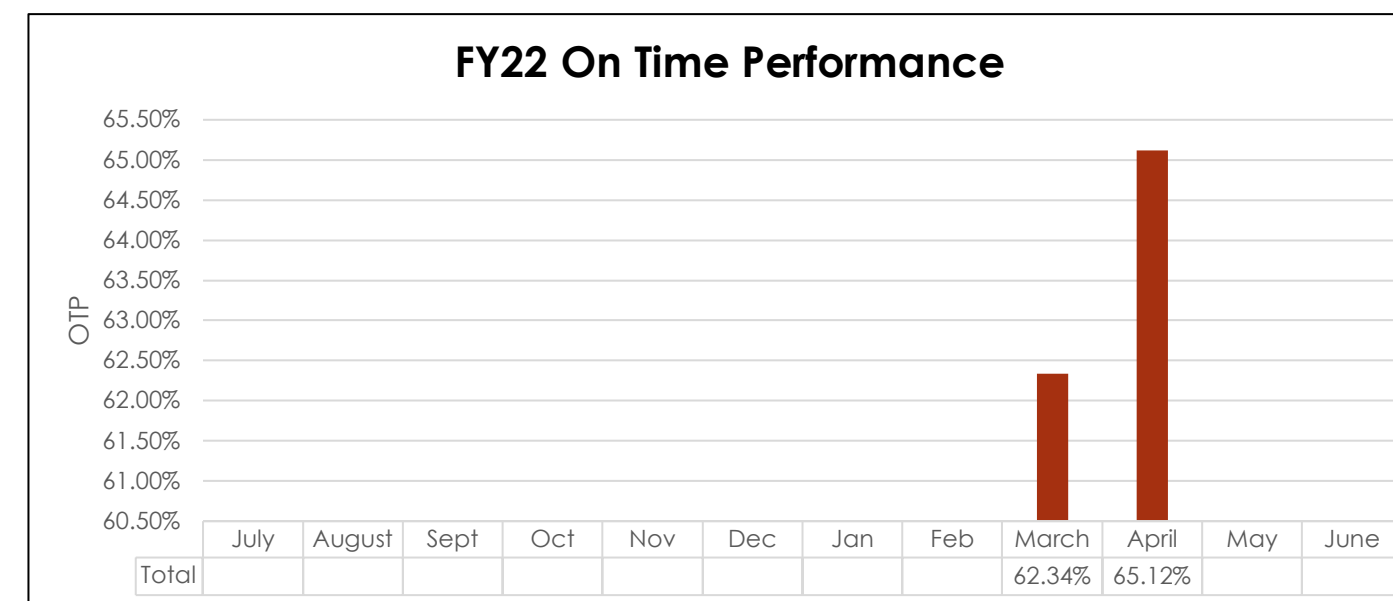
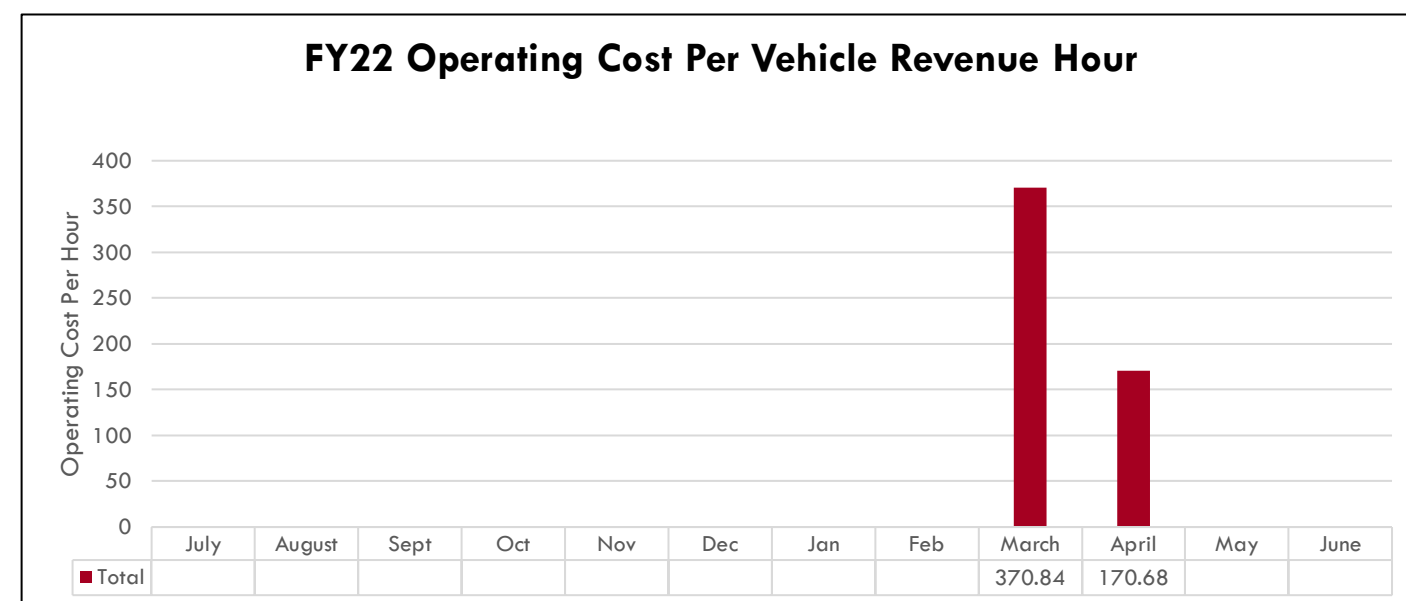
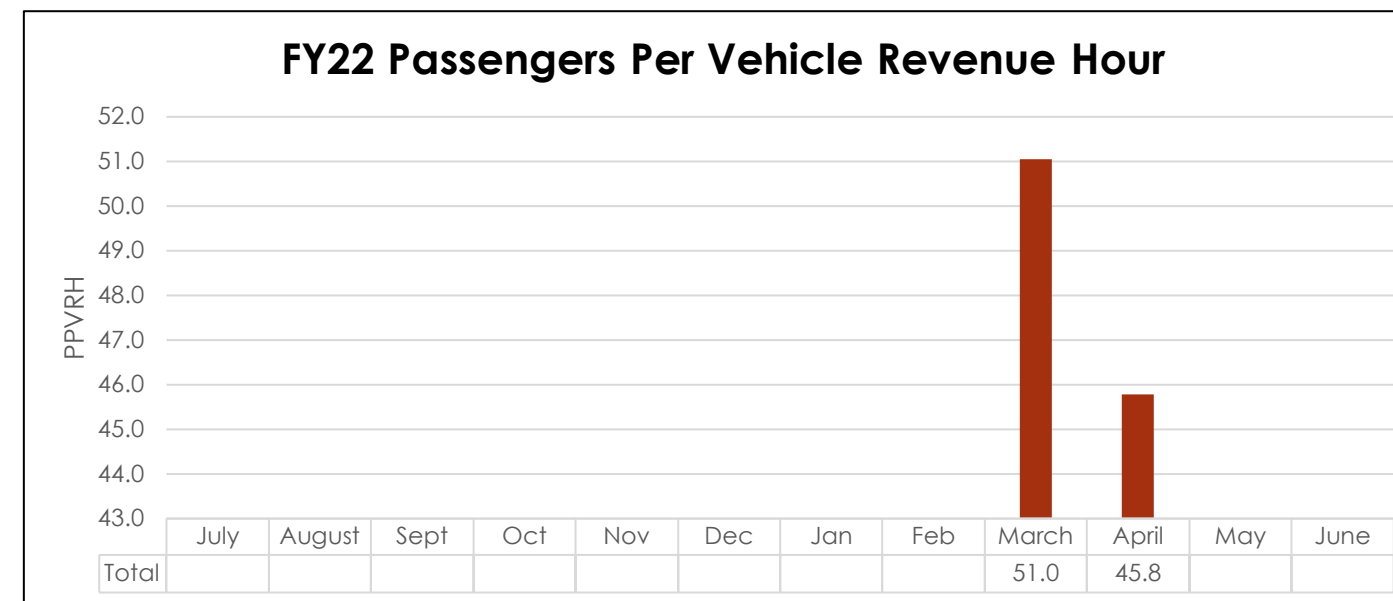
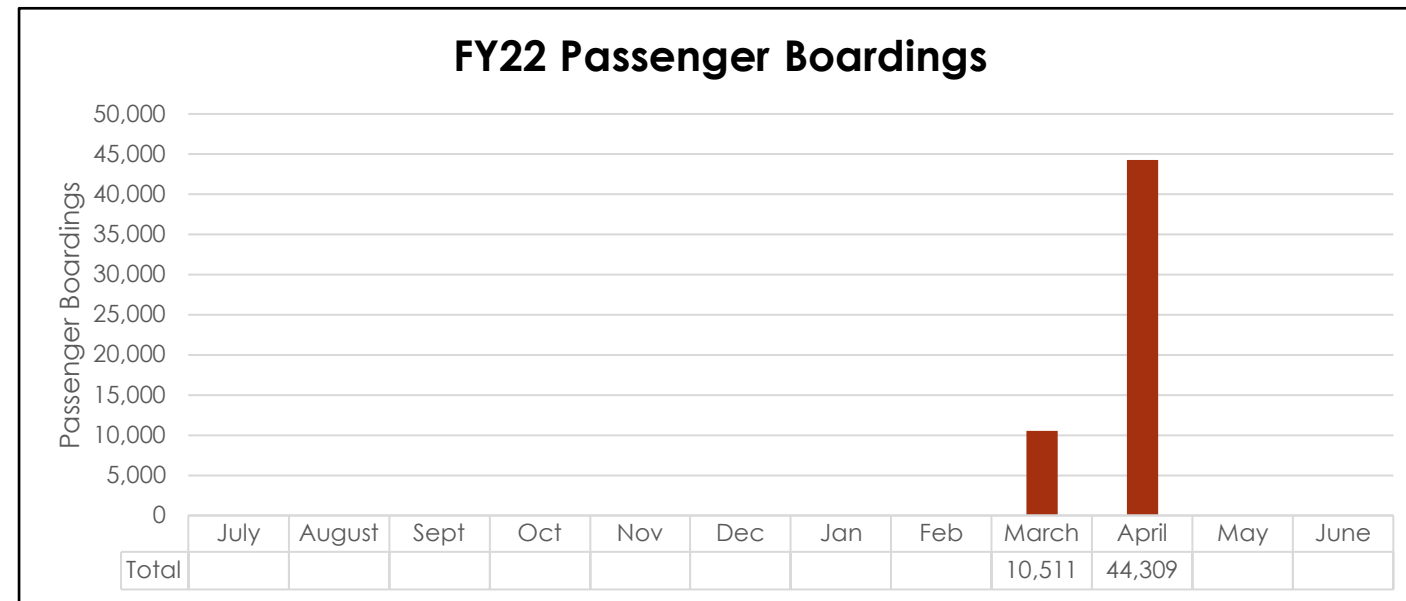


Key Performance Indicators

System Data

April

March





SEDONA SHUTTLE

Key Performance Indicators

Route Data

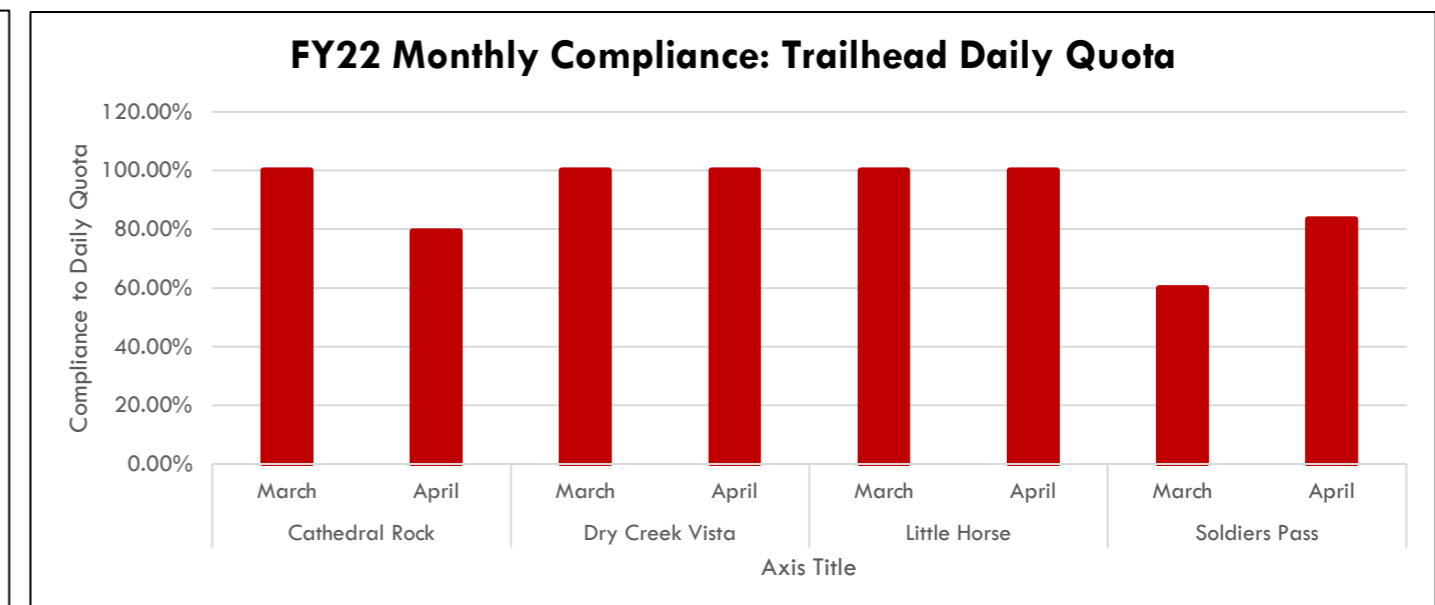
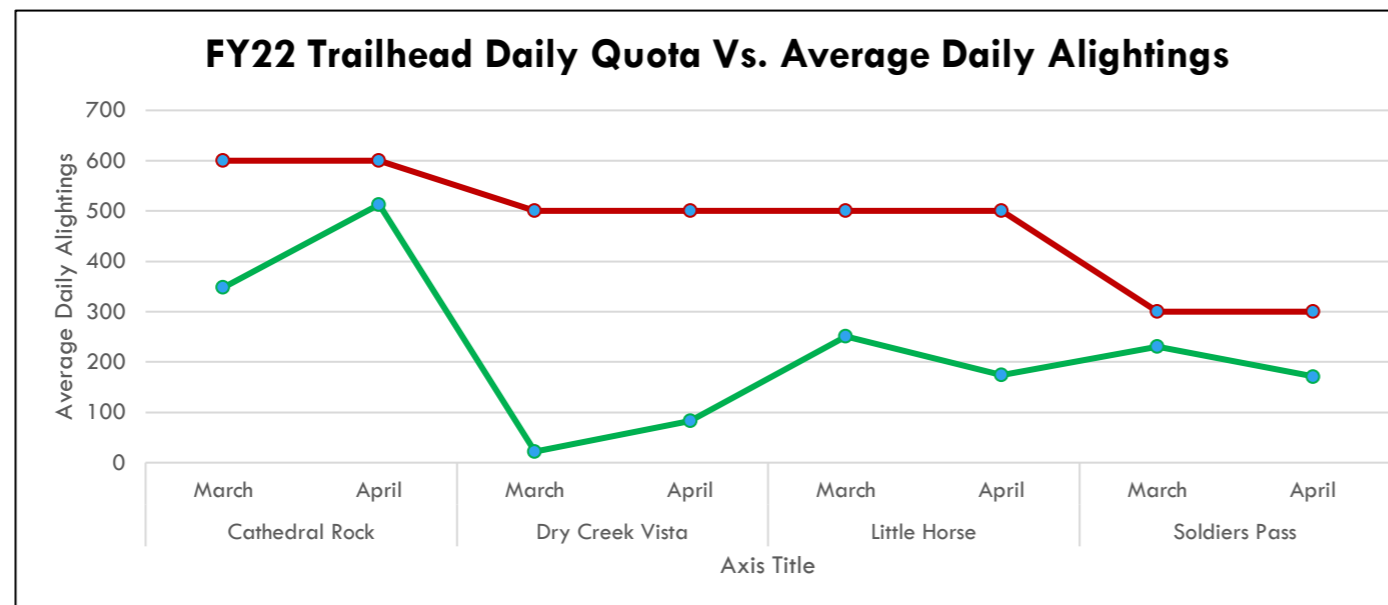
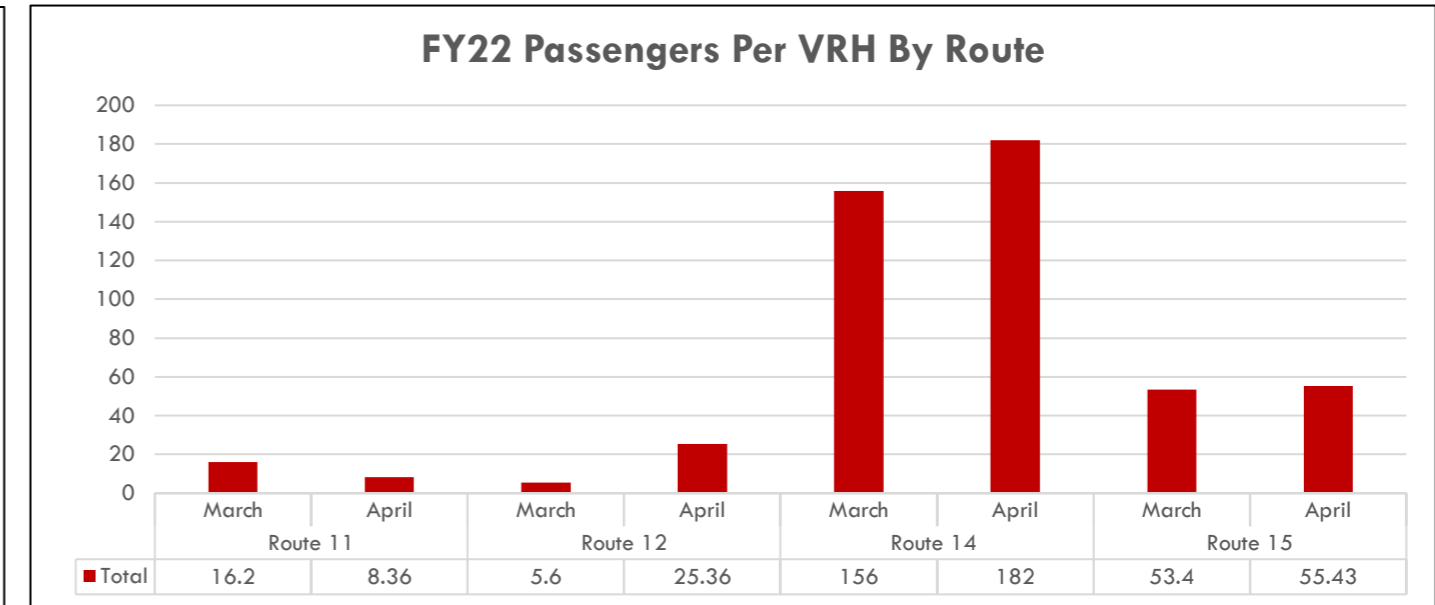
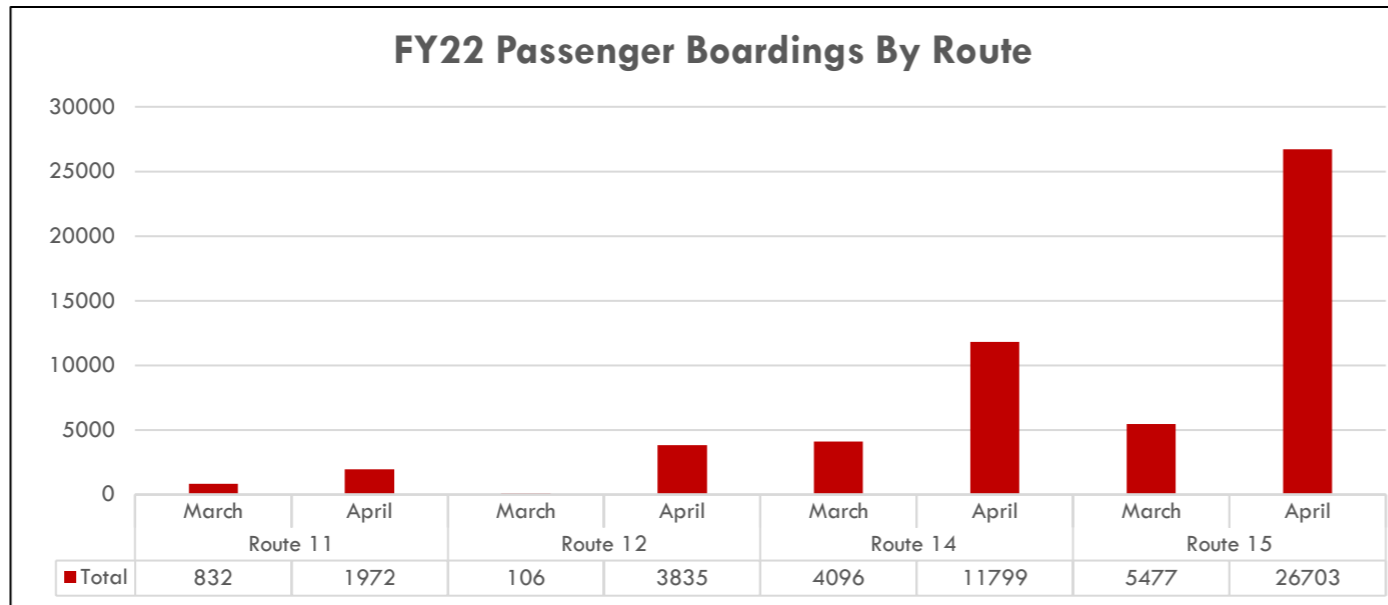
- Route 11
- Route 12
- Route 14
- Route 15

Route Data

- March
- April

Daily Quota Data

- March
- April





April Trailhead Shuttle Emissions

Prepared by
Bryce Beck, Sustainability Coordinator

Process and Assumptions

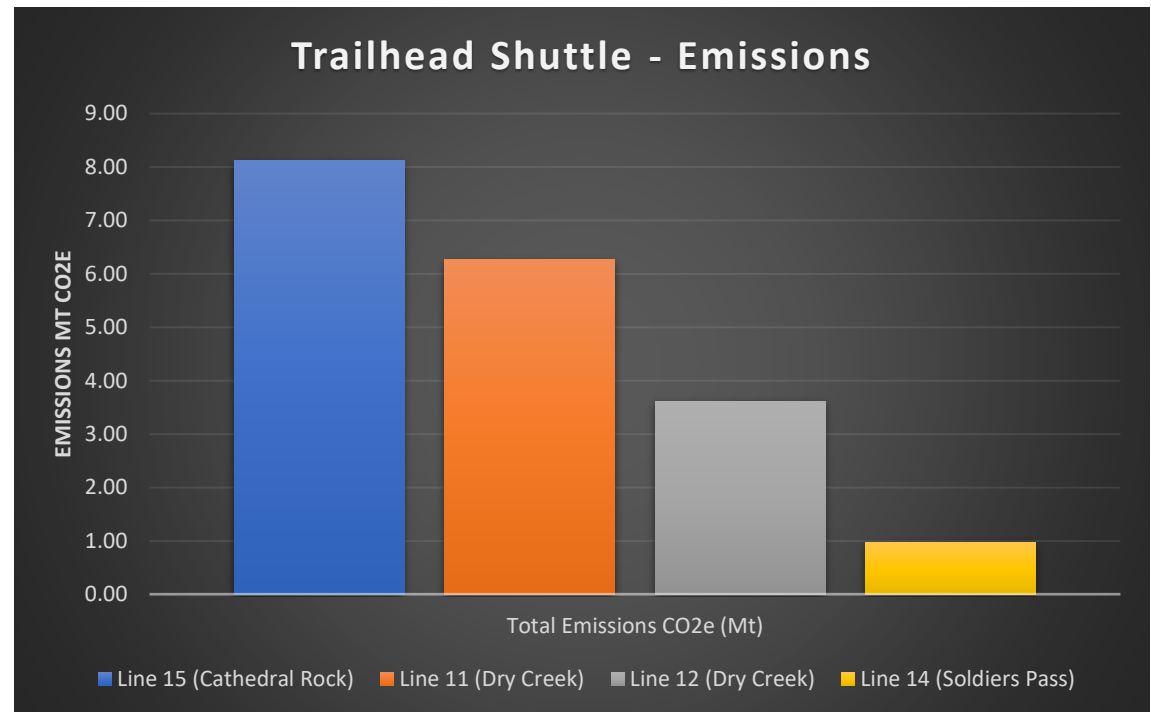
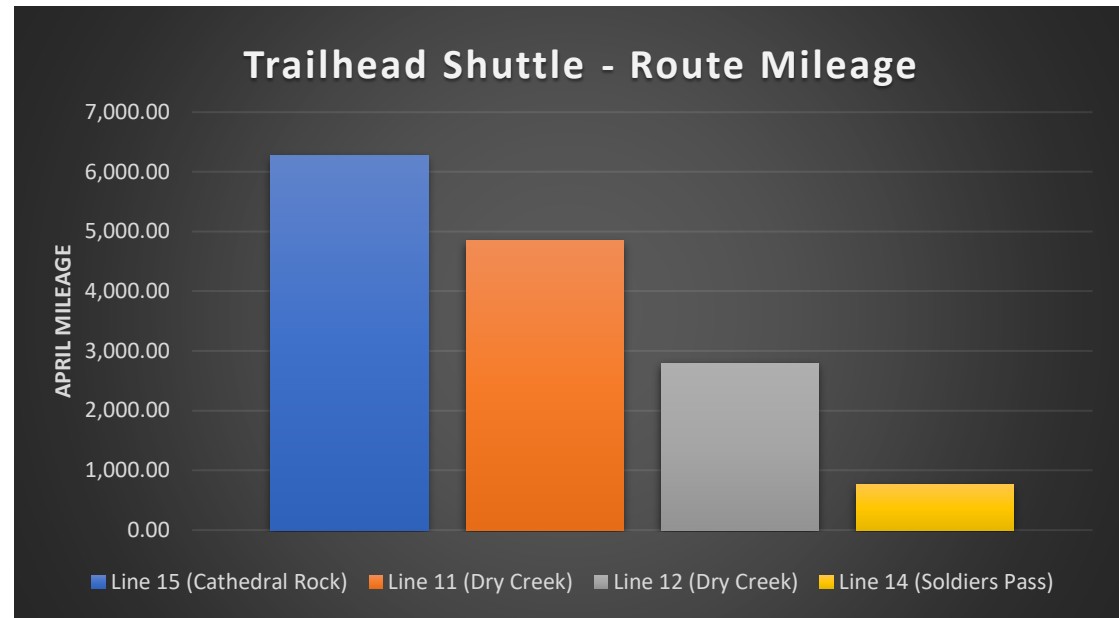
- **Methodology:**

- Created and compared four different methodologies
- Chosen methodology ultimately due to:
 - Available data
 - Conservative Emissions Estimations

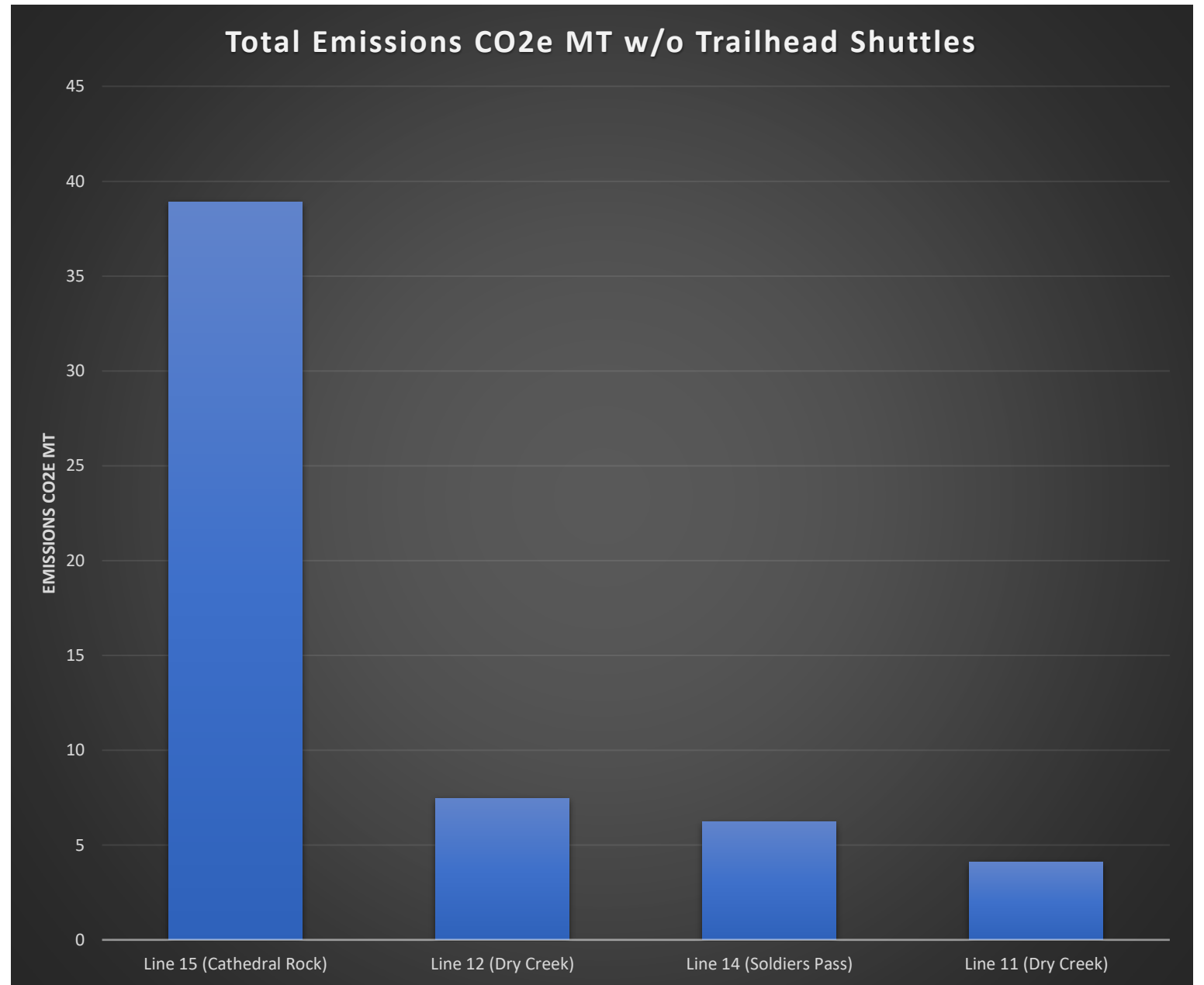
- **Calculation Process**

- Trailhead Shuttle Vehicles (Direct)
 - Vehicle Mileage and/or Fuel Consumed → Emissions
- Passenger Boardings (Indirect)
 - Emissions w/o Trailhead Shuttles: Passenger Boardings → Vehicles for Social/Recreation Trips → Vehicle Miles Traveled → Emissions

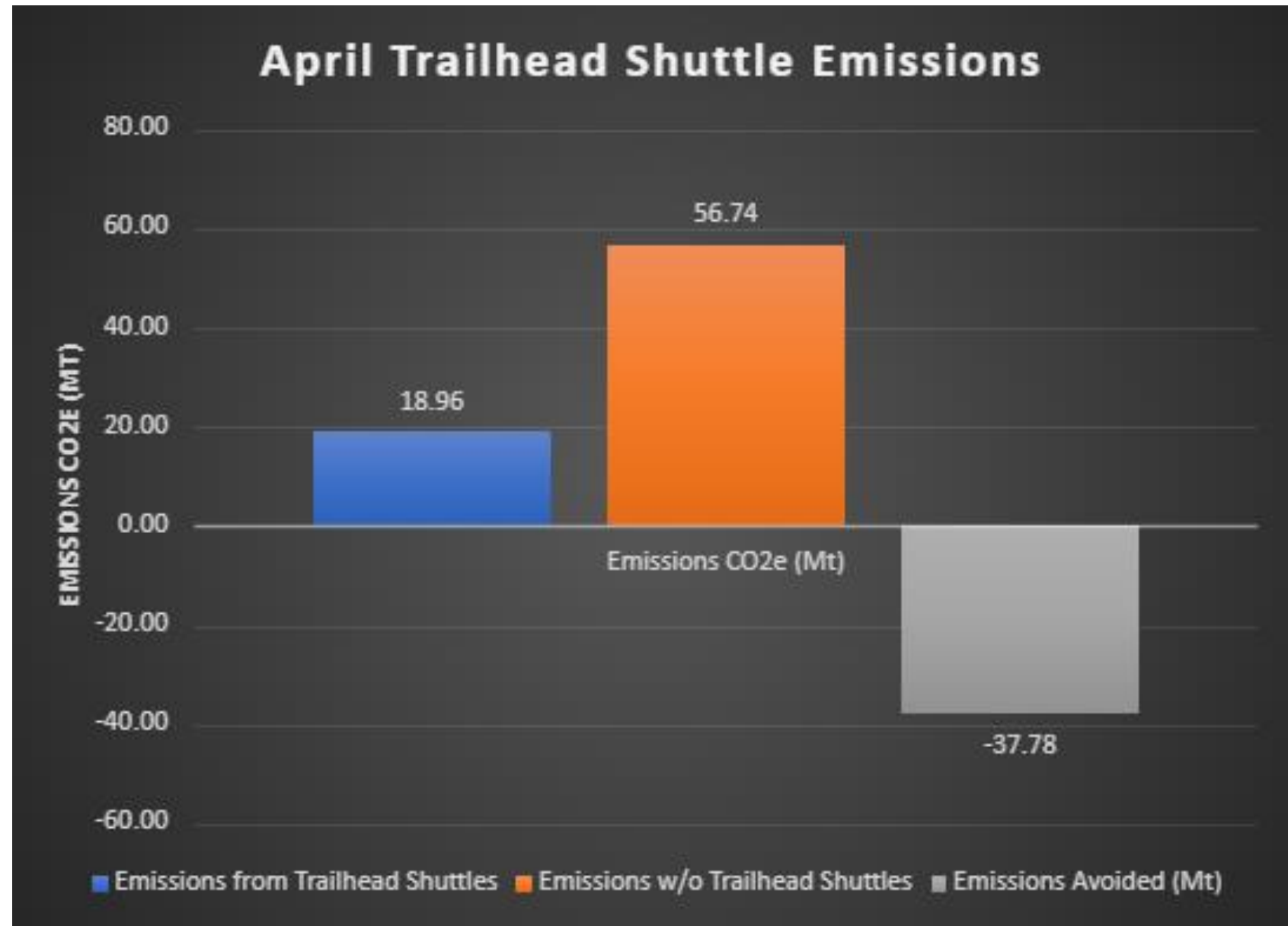
April Trailhead Shuttle Emissions – 19 MT CO₂e



April
Emissions w/o
Trailhead
Shuttles –
57 MT CO₂e



April
Emissions
Avoided –
38 MT CO₂e



What is 38 MT CO₂e
equivalent to?

Comparable Emissions



- 1,522 Propane Cylinders



- 42,044 lbs of Coal Burned



- 4,622,421 smartphones charged

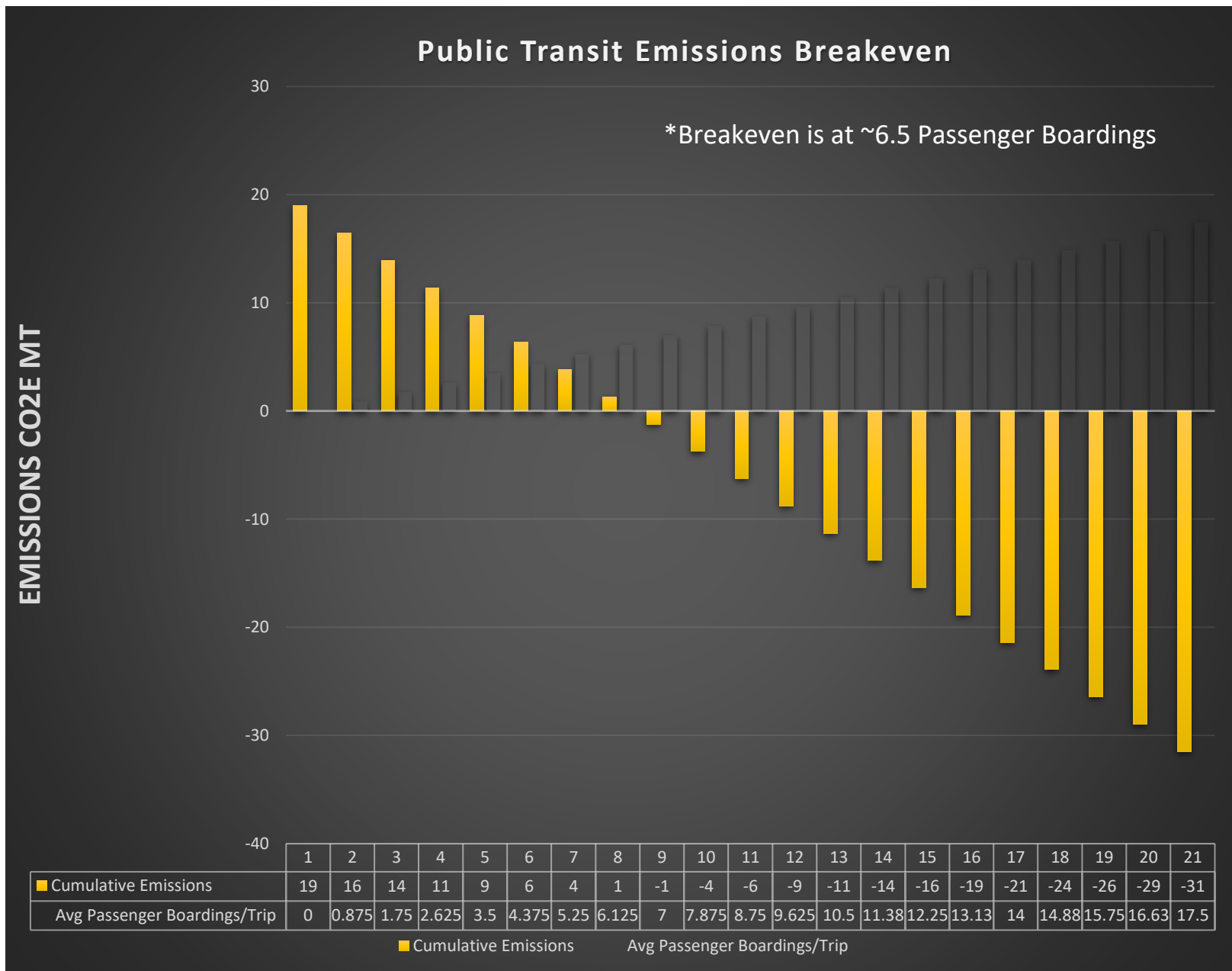
Comparable Emissions

- Switching 1,440 incandescent lamps to LEDs



- Carbon sequestered by 628 tree seedlings grown for 10 years

Breakeven –
 ~6.5
 Passenger
 Boardings per
 Shuttle Trip



It's a Start

- 2018 Community GHG Inventory
 - Transportation:
 - 73,362,445 total vehicle miles traveled
 - **29,456 MT CO₂e (Transportation Sector)**
- Trailhead shuttles traveling 14,667 vehicle miles in April avoided **38 MT CO₂e** from passenger cars
- Assuming April's emissions avoidance for 12 months:
 - Total 456 MT CO₂e Avoided (1.5% Reduction against 2018 Transportation Sector)

Thank You

Good afternoon, Mayor, Vice Mayor, Councilors. I am Gail Digate, residing at 201 Chapel Road, since 2004.

Thank you for allowing me to speak about Sedona in Motion-11 (Bicycle and Pedestrian Improvements) and, relatedly, comment on the proposed parking lot at Mystic Trailhead. As part of Chapel Neighbors Task Force, an ad hoc neighborhood group, I represent the views of my neighbors and my own. We have been studying the proposed Mystic parking lot for the past three months.

We are delighted to see the construction underway of the Chapel Road Shared-Use Path and appreciate installation of raised bumps and crosswalks at Geneva Street and Antelope Drive.

We are encouraged by the willingness of Andy Dickey and the Department of Public Works to meet with us and respond promptly to questions and inquiries.

We value conversations with representatives of the Forest Service and Council members who have given their time and attention to listen to our interests and concerns.

We continue to study and generate alternatives to this proposal. We recognize the challenges of designing solutions that address traffic and parking effectively and efficiently. And we understand the need to consider unintended consequences, like serious safety risks, traffic congestion, and possible degradation of the natural environment.

For these reasons, we respectfully ask the City Council to delay a decision to construct any parking lot at Mystic Trailhead for at least 90 days after completion of the shared-use path.

Such a pause affords time to assess the impact of the loss of parking on the north side of Chapel Road. A delay also allows time for further discussion among representatives of the City, US Forest Service, Chapel of the Holy Cross, and residents of Chapel area/Mystic Hills. Recently the City Manager offered a similar possibility in an email to me dated May 2 in which she suggested the need “to get on the same page in terms of what is happening in the future with ... parking at the Chapel . . . Once we do so, I think we will be in a much better position to collectively discuss the best path forward and next steps.”

We believe the situation on Chapel Road can be managed so that a balance is achieved with respect to tourism, community and environment.

Chapel Neighbors Task Force really is not NIMBY. We applaud the City and US Forest Service for doing their best to accommodate unprecedented visitor demand. We know that Sedona’s economy relies on creating a positive tourist experience. We enthusiastically support infrastructure projects that improve the experience for tourists without resulting in unnecessary harm to quality of life for residents and degrading the natural environment.

Chapel Road shared-use path has our complete endorsement. We ask you to consider alternatives to the proposed Mystic parking lot.

I grew up in Flagstaff and have known Sedona as a visitor and local for years. My husband and I recently relocated to Sedona full time. We live in Mystic Hills.

The Chapel Neighbors Task Force began after an online meeting with the Mystic Hills HOA, City of Sedona and US Forest Service representatives in January 2022 regarding the proposed 39-space parking lot at Mystic Trailhead.

From the shared perspectives of Chapel Neighbors, we do not see the need for a parking lot at this location for the following reasons:

- We have not seen any impact studies completed that address or document the need for this parking lot.**
- If constructed, this parking lot will be one of the largest parking lots in the city of Sedona – despite this being in a residential area.**
- Vehicle traffic on Chapel Road is already constant as people drive to the visit the second most popular site in Sedona – the Chapel of the Holy Cross.**
- A parking lot will only increase this traffic.**
- Emergency vehicle access will be impacted with more traffic on Chapel Road, the only access route for more than 100 homes. Any delay in response times could cost a loss of structure (due to fire) or a loss of lives.**
- Furthermore, public outreach by the City is needed to obtain feedback from residents and address neighborhood concerns. This principle is clearly stated in SIM documents.**

Chapel Neighbors Task Force members have consulted many documents, such as Sedona Community Plan, Transportation Master Plan, Sedona GO, and US Forest Service Decision Memos as well as met with representatives from the City, US Forest Service, administrator at the Chapel of the Holy Cross, Sedona residents in Back O' Beyond and Soldiers Pass neighborhoods, as well as residents in Mystic Hills and Chapel area.

Several recurring themes emerge in all the information we have gathered. These themes align with the City's goals as well as our shared interests and concerns:

- Better manage traffic for residents and visitors**
- Improve traffic flow, walkability and bike ability and public safety for pedestrians and bicyclists**
- Reduce traffic in neighborhoods by increasing the number of people who walk and bike versus drive**
- Expand routes and schedules for transit service**
- Preserve Sedona's beauty, environmental health and livability**

Clearly we need more time to truly understand what is needed to address the challenges of traffic and parking and to ensure that what is decided is appropriate to the need.

Thank you for your time, continued dedication to Sedona and for working with the residents in the Chapel area and Mystic Hills to find a way forward that works for everyone.

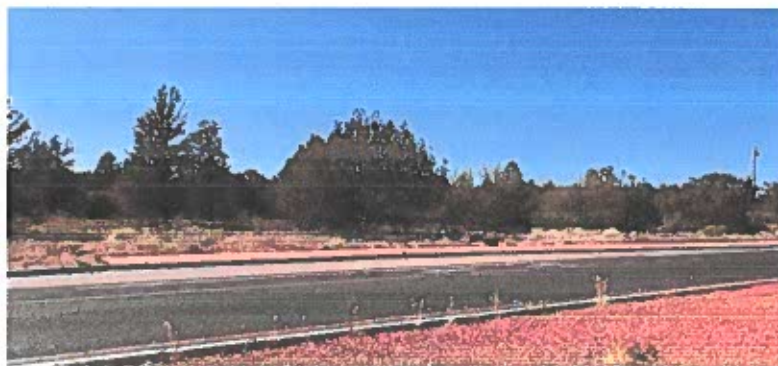
During the proposed 3-month interval between completing the pathway and deciding on any parking lot, please consider alternatives to constructing a permanent, 39-space parking area, such as:

1. Increase parking capacity where it is really needed at either the Chapel and/or other existing parking areas such as Little Horse. (Ernie says, one "No" is just a warm-up).
2. Give the shared-use path a chance to work by using the existing transit/shuttle stops at the SR 179 & Chapel Road roundabout. This would allow visitors to access Mystic Trail and the Chapel from the new pathway. *See existing transit stops below:*

Northbound



Southbound – Across from the Lutheran Church



3. Expand the Sedona Shuttle Service directly to the Chapel where visitors can use the new shared-use path to access the trailhead at Mystic. The distance from the Chapel entrance to Mystic Trailhead is 1/4 mile or a walk of about six minutes.

These alternatives reinforce the stated intent of the City *"to reduce traffic by increasing the number of people who walk and bike versus drive"* quoted from the 2020 GO plan, p. 27. Simultaneously, it improves public safety and traffic management. We will have a beautiful, 10-foot wide shared-use pathway from the existing transit stop on Hwy 179 along the north side of Chapel Road to both Mystic Trailhead and the Chapel. It is a mere 1/2 mile or 12 minutes so that pedestrians and bikers have a safe and convenient means to walk and bike. In addition, residents of Chapel Road and the surrounding neighborhoods would not experience significant increases in traffic volume, heightened levels of carbon emissions, and increased safety risk from response time delay.