Vertical Clearance	7 ft - 6 inches	7 feet.		
GRADIENT / DRAINAGE	Proper drainage required	Maximum longitudinal slope of 12% Maximum cross slope of 5% Drainage shall not create flooding and water quality impacts.		Maximum 4% for parking lots; Maximum 8% for driveways; Graded for proper drainage.
SURFACE TREATMENT	Durable all-weather surface or gravel, maintained; Paved parking shall be striped & graded for drainage.	Paved with all-weather surface of be covered with gravel.		All parking areas and driveways shall be paved;
UNOBSTRUCTED ACCESS	Except for SFD and DU, each space shall have unobstructed access to a street, driveway, or aisle.	Allows for stacking of vehicles for SFD & Dwelling Units; Off-street parking to be provided with entrance and exits.		All off street parking stalls shall have legal, unobstructed access to a public street or alleyway.
PARKING FOR RESIDENCES	SFD & DU may include garage area, parking strip or apron.			All required off street parking spaces are available for use on a daily basis (also applies to all uses). In residential areas, required off street parking spaces may not be used by vehicles that do not fit entirely
LIGHTING	Shielded sources required, & to prevent spill over onto adjacent properties or residential uses; Max. 20 ft. tall poles; Pedestrian scale encouraged	Not disturb adjacent residential areas; Compliance with outdoor lighting regulations.		Lighting plan required parking lots > 10 spaces.
PROHIBITED USES OF PARKING:	Vehicle sale or repair; Storage of earth moving machines, trailers, motor homes or construction related or similar heavy equipment	Not to be used for non-suto related uses such as storage and trash containers; No sale, repair, dismantling or servicing of any vehicles, equipment, materials & supplies, & no obstruction to access the off-street parking.		Parking shall not be used for inoperable vehicles, for storage of vehicles, or parking of trucks, including those used to conduct business of use. No parking or stroage of trailers, boats, detached campers, snwomobiles, disabled or inoperable vehicles or other uses that render the spaces unusable to park allowed vehicles. No required off street parking spaces shall be used for the sale, repair, dismantling or servicing of any vehicle, equipment, materials or supplies.
SETBACKS & SNOW STORAGE:	8 ft. around each side of parking lot, except next to building it serves; Adequate drainage required; Snow storage not to exceed 48 hours.	Per Special Review; or adequate to serve the needs of the development, including the availability of street parking.		No closer than 5 ft. to public area or right-of-way, and 3 ft. to any property line. Upon an accumulated snow depth of 4 inches of uncompacted snow, all off street parking facilities shall be substantially cleared of snow within 24 hours.
ACCESSIBLE PARKING SPACES:	ID sign required; Located close to use's entrance.			

LANDSCAPING	Prior minimum standard removed.	Parking areas greater than 8 spaces, 1 tree with planter of 20 sq. ft. every 4 spaces		A minimum of twenty five (25) square feet per parking stall shall be utilized for landscaping purposes.

STEAMBOAT SPRINGS	TELLURIDE	VAIL
SFD or Duplex at 2 spaces per Dwelling Unit.	Set by zone district: 1 space per unit or 1 space for dwellings with 2 bedrooms; 2 spaces for 2-3 bedrm units; 3 spaces for 4-5 bedrms; 4 spaces for 6-7 bdrms.	Within the Commercial Core: Dwelling unit with attached accommodation unit is 1.4 spaces per dwelling unit (or 0.1 space per 100 sq. ft. of gross residential area, with a maximum of 1 space per unit outside the core);
Multi-Family or Vacation Rental: < 2000 sq. ft. at 1.5 spaces per Unit; 2000-3000 sq. ft. at 2 space per Unit; > 3000 sq. ft. at 2.5 per Unit; or 1 bedroom at 1.5 spaces per Unit; 2-3 bedrooms at 2 spaces per Unit; & > 3 bedrooms at 1 per bedroom > 3 per Unit.	Set by zone district: 1 space per unit or 1 space for dwellings with 2 bedrooms; 2 spaces for 2-3 bedrm units; 3 spaces for 4-5 bedrms; 4 spaces for 6-7 bdrms.	See above
Per above.		See above
Retail / Service at 1 space per 300 sq. ft.; Restauant or Tavern at 1 space per 150 sq. ft.	Set by zone district: High-intensity use requires 1 space per 500 sq. ft.; Low-intensity use requires 1 space for every 1,000 sq. ft.; For Mixed-Use, depending on lot size between 3K & 10K sq. ft.: Single Family Dwelling Unit, 1 space. All other uses 2-3 spaces, except where commercial uses are present, then 3-4 spaces; Shall not be located on adjacent residential zone district.	Banks / Financial Offices: 1 space / 200 sq. ft. of net floor area; Eating & Drinking places: 1 space / 120 sq. ft. seating floor area;
Hotels: Underground parking at either 0.5 - 0.75 spaces per guestroom. B&Bs: 1 space per guestroom.	Set by zone district: Hotel / Lodging requires 1-2 spaces for every 3 units; 2 spaces for short-term rentals or 2 for every 3 units; Or, 4 space for Lots up to 3,000 sq. ft. or 5 spaces up to lots up to 6,000 sq. ft. for hotel/lodging uses only; Shall not be located on adjacent residential zone district.	Hotels / Lodges within the Commercial Core: 0.7 space / accommodation unit; (0.4 outside core)
Uses required to provide 24 or more parking spaces shall not provide surface parking that exceeds the required number of spaces by more than 25 percent.	Depending on lot size, when parking areas are enclosed the maximum site coverage ranges from 32-45%; but when not enclosed the site coverage ranges from 25-38%; The percentages of maximum coverage decrease when the lot size increases. The site coverage may increase from 3% to 10% meeting certain criteria depending on the zone district.	

STEAMBOAT SPRINGS	TELLURIDE	VAIL
A reduction in the minimum required off-street parking may be granted for parking facilities that serve multiple uses, based on certain criteria.	Where a single parking facility serves more than 1 use: 1 - 100 spaces - no reduction 101-200 spaces - 2.5 %; 201-300 - 5 %; 301-400 - 7.5%; 401-500 spaces - 10%, etc...up to 20% for up to 900 spaces;	
Reductions for mixed use and shared parking facilities ranges from 0 to 20% based on ranges of parking lot sizes in 50-space increments. (e.g., a 50-space lot achieves no reduction, while a > 400 space lot allows for a maximum 20% reduction).		
As approved through a PUD.		
See below. Also, Off-site parking facilities may be approved by City Council in lieu of on-site parking spaces upon certain code criteria.		
A reduction in the minimum required off-street parking may be granted for parking facilities that serve uses that are located within 660 feet of a transit line and where pedestrian connections to a transit stop exist or will be provided (e.g., a 50-space lot achieves no reduction, while a > 200-space lots allows for a maximum 20% reduction).		
Off-street parking spaces for residential uses may be stacked if assigned to specific dwelling units in a manner that will ensure safe and efficient circulation and access.	Planning Director may approve a tandem arrangement of parking; however tandem space of 3 or deeper require Planning Commission approval.	
May be approved by the City Council with amount following a fee schedule set by the City Manager.	A parking attendant shall be designated and shall be on duty during hours of operation for an institution, commercial or assembly use, and continuously for accommodations or residential use	
	The Planning Director may approve an application for payment-in-lieu of parking for up to two (2) parking spaces required for commercial use or accommodations use.	
STEAMBOAT SPRINGS	**TELLURIDE**	**VAIL**
9 ft. x 18 ft. long	8 ft. x 18 ft. long with 7 ft. height clearance; Unobstructed with access to street or alley	
9 ft. x 18 ft. long	same as above	
9 ft. x 18 ft. long	same as above	

8 feet	7 feet	
Be graded and drained to dispose of all surface water accumulated within the parking area. 10 or more spaces shall provide stormwater quality management treatment facilities.		
Be paved with asphalt, concrete, or similar permanent surfacing so as to provide a durable and dust-free surface.		
	Unobstructed access to street or alley.	
Prevent a shortage of vehicular parking areas.		
Parking spaces, aisles, and turning areas shall be located entirely within lot lines and shall not encroach on any public right-of-way.		

Provided in accordance with the Americans with Disabilities Act Accessibility Standards.		

INTEROFFICE MEMORANDUM

TO:	JIM WAHLSTROM, SENIOR PLANNER; DAVE SHINNEMAN, COMMUNITY DEVELOPMENT DIRECTOR
FROM:	BETSY CRUM, HOUSING DIRECTOR
SUBJECT:	PROPOSED DRAFT PARKING & TRANSPORTATION/TRAFFIC CODE AMENDMENTS
DATE:	NOVEMBER 10, 2022

I am writing to comment on the proposed draft changes to the parking and transportation/traffic standards within Chapter 16A, Land Use & Development Code. From my perspective as the TOSV Housing Director, I strongly support all of the proposed changes.

I appreciate the trade-off that the Commission is weighing. Parking requirements are necessary to ensure that residents have a dedicated place for their vehicles without creating negative impacts on public parking and roadways. At the same time - and especially in multifamily housing - parking increases the cost of developing housing by increasing the land area required, taking away from the area that could be used for additional residential development. As you indicate, there is a growing movement across the U.S. to reduce parking requirements for affordable housing, especially where it is close to public transit. The idea of "smart growth," which concentrates growth in compact walkable centers to avoid sprawl, is now considered a best practice and I am excited to see it being extended to parking regulations.

Current Town of Snowmass Village zoning requires at least one (1) space per bedroom for residential development and 1.5 spaces per bedroom for deed-restricted housing. These minimum standards have the result of applying a much higher requirement for affordable housing than for free market units, adding considerable cost and taking up a great deal of space. The proposed draft aligns restricted housing requirements with the non-restricted requirement, leveling the playing field and allowing for a greater balance between car ownership and the use of our excellent transit system. The call-out for tandem parking is also greatly appreciated, as it is yet another way to meet parking standards while also maximizing green space. I strongly support the recommendations around shared vehicles, EV-charging stations, and bicycle stations for larger multifamily developments. This will have the impact of encouraging these emerging technologies and trends and integrating them into our community going forward. Finally, I fully support the idea of capping parking. The more ways in which we incentivize people to use public and non-vehicular transportation, the better.

Concerning the Comprehensive Plan Goal amendment, I would like to add my support for an e-bike-sharing program and a community-wide car-sharing program. I can attest to the interest in such programs and would be interested in seeing them installed in or near our workforce housing properties. I have also had an excellent response to the recently-installed EV station at Mountain View, which has been used extensively since the day it was activated.

Thank you for the opportunity to comment. Please let me know if you have any questions.

Town of SNOWMASS Village

TRANSPORTATION DEPARTMENT MEMO

To: Jim Wahlstrom

From: Sam Guarino

CC: Dave Shinneman

Date: 11/23/2022

Re: Off Street Parking Standards and Comprehensive Plan Amendments

---

1. Off Street Parking Standards
    a. The Transportation and Parking Departments are supportive of the changes to the parking minimums and the introduction of parking maximums. We believe this is an important action for minimizing vehicle traffic in the Town and promoting the use of Transit.

Town of Snowmass Village

Agenda Item Summary

DATE OF MEETING:

March 16, 2023

AGENDA ITEM:

Brush Creek Culvert Project Updates

PRESENTED BY:

Anne Martens, Public Works Director

BACKGROUND:

The Public Works Department is continuing to work on infrastructure project for the summer of 2023.
Since the last update, the Highline Road – Gas, Fiber, and Multi-Modal project has been placed on hold.

As a reminder, during the summer of 2022, the 72" culvert under Brush Creek Road just below the intersection of Brush Creek Road and Owl Creek Road began to fail. The Public Works Department worked to stabilize the area to allow traffic to continue to use Brush Creek Road through the winter of 2022/2023.

Additionally, bids to design the replacement to the Corrugated Metal Pipe (CMP) were solicited. SGM was awarded the design, and Gould Construction was brought into the team for cost estimating and CMGC services due to the complexity of the project and tight time frame. This project will also partner with the utilities to replace aging infrastructure such as the new gas line, water, and sewer.

The 3-sided precast box culvert has been chosen as the replacement product type (replacing the existing failing corrugated metal pipe). A precast box culvert will also allow for a trail to be constructed inside the box culvert, under the road, adjacent to the Creek, allowing for further connectivity.

As the project is wrapping up design, further information has become available, such available of products and infrastructure needs. The first phase of the project will be an upgrade to the gas line on Owl Creek Road from just East of Meadow Ranch Road to the intersection of Owl Creek Road and Brush Creek Road (Exhibit A). Next will be the boring for the gas line in Brush Creek Road and following by the Deep Utility and culvert replacement. The gas line work is schedule to commence April 3 and wrap up by the End of May. The Brush Creek Culvert project is now expected to occur from June to

November 2023 and will require a full road closure of Brush Creek during much of that time. As the design continues more planning and coordination will be forthcoming. A open house as it relates to the Culvert Project will take place in early May.

A project website is being further developed to give project updates, and public outreach is taking place as these projects further develop. Meetings with stakeholders, emergency services, transit services, tourism talk update, and utility groups have been taking place as information develops.

FINANCIAL IMPACT:

This project was discussed during the 2023 Budget Process and funded in the Capital Improvement Fund.

- Brush Creek Culvert Project - $4,400,000

APPLICABILITY TO COUNCIL GOALS & OBJECTIVES:

These projects meet the goals of Safety, Connectivity, and Transit and Regionalism. Each project has elements of these goals.

COUNCIL OPTIONS:

This presentation is for information purposes only. No council action is required at this time.

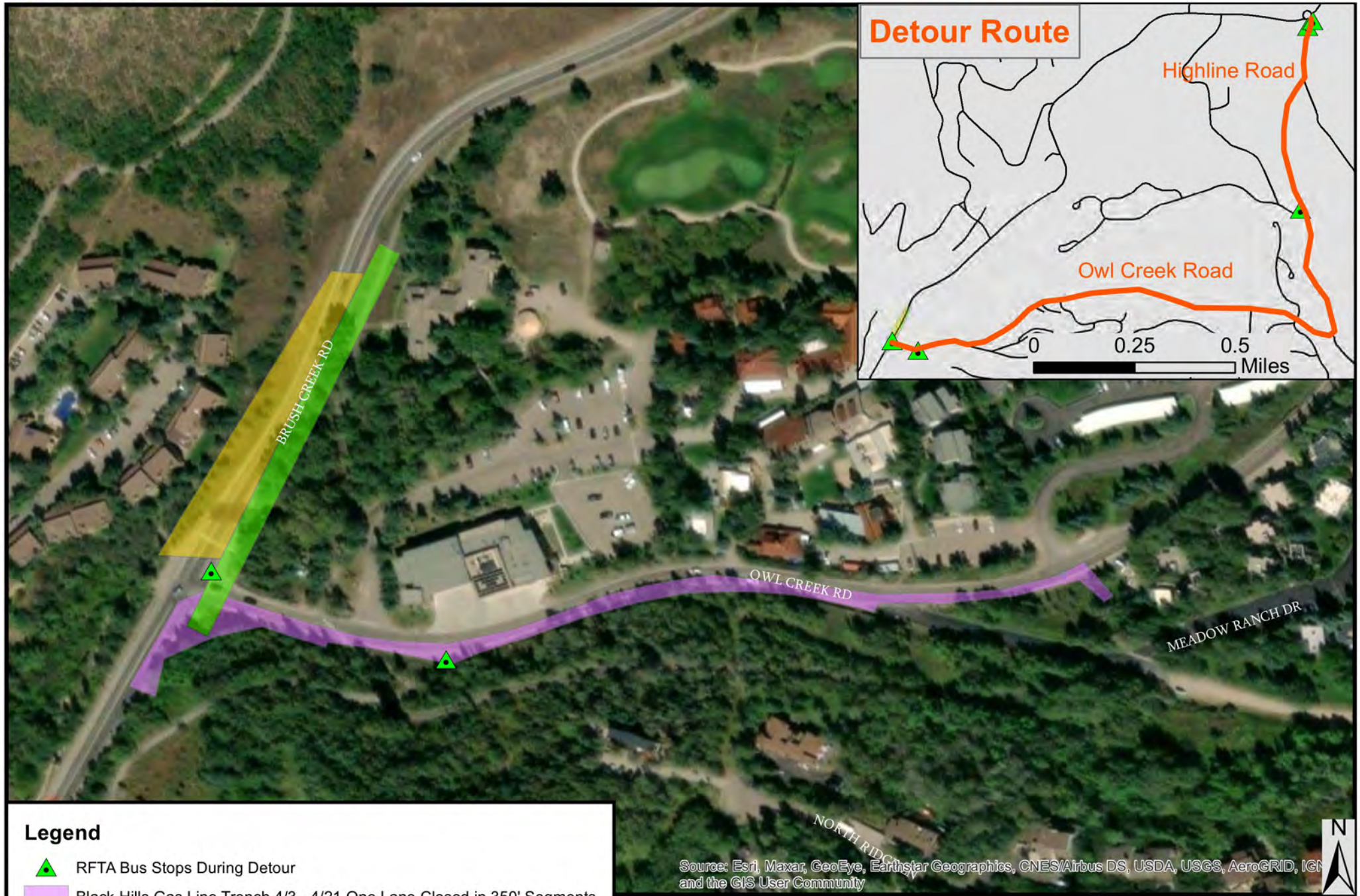
STAFF RECOMMENDATION:

This project will impact traffic circulation throughout the summer. Coordination with events, businesses and residents will be critical. While a tremendous amount of design and coordination remain to be completed, we wanted to ensure the Council was aware of the progress of this project. As details and facts are developed, we will be sure to share them as quickly as possible.

ATTACHMENTS:

A. Area Map of the Project Area and Detour route
B. 60% Design aerial view and cross section of the box culvert

2023 Brush Creek Culvert Project

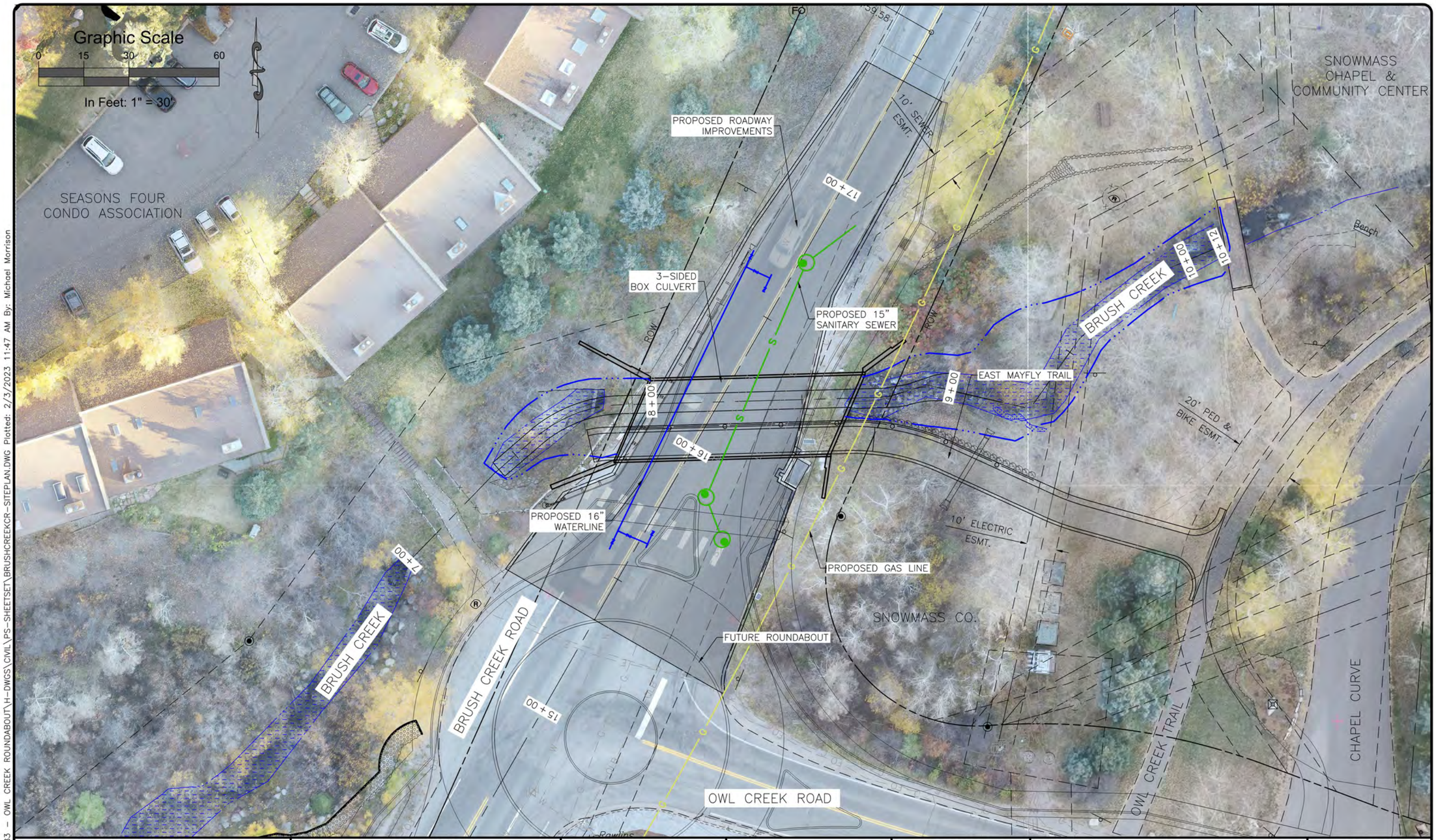


Legend

- RFTA Bus Stops During Detour
- Black Hills Gas Line Trench 4/3 - 4/21 One Lane Closed in 350' Segments
- Black Hill Gasline Bore 4/24 - 5/20 Periodic One Lane Closures
- Brush Creek Culvert Project 5/22 - 10/1 Full Closure use Detour Route

Date: 3/15/2023

The data on this map are provided 'as is' without warranty of accuracy, timeliness or completeness. The burden for determining appropriateness for use rests solely on the user. Town of Snowmass Village makes no warranties of merchantability or fitness. The data are in a constant state of maintenance, correction and revision. The maps and associated data do not represent a survey. No liability is assumed for this data.



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Print Date: 2/3/23	
Last Modification Date: 2/3/23	
Drawing File Name: BrushCreekCR-SitePlan	
Autocad Ver. 2022	Scale: As Shown
SGM Project No.: 91004D	Quality Control: MDF

Sheet Revisions

Rev.	Date	Comments	Init.
1			

Town of SNOWMASS Village

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

As Constructed

No Revisions:

Revised:

Void:

BRUSH CREEK CULVERT REPLACEMENT
OVERALL SITE PLAN

Engineer:	AMC	Structure Numbers	--
Drawn By:	AMC		--
Sheet Subset:	SITE	Subset Sheets:	1 of 1

Project No./Code: --

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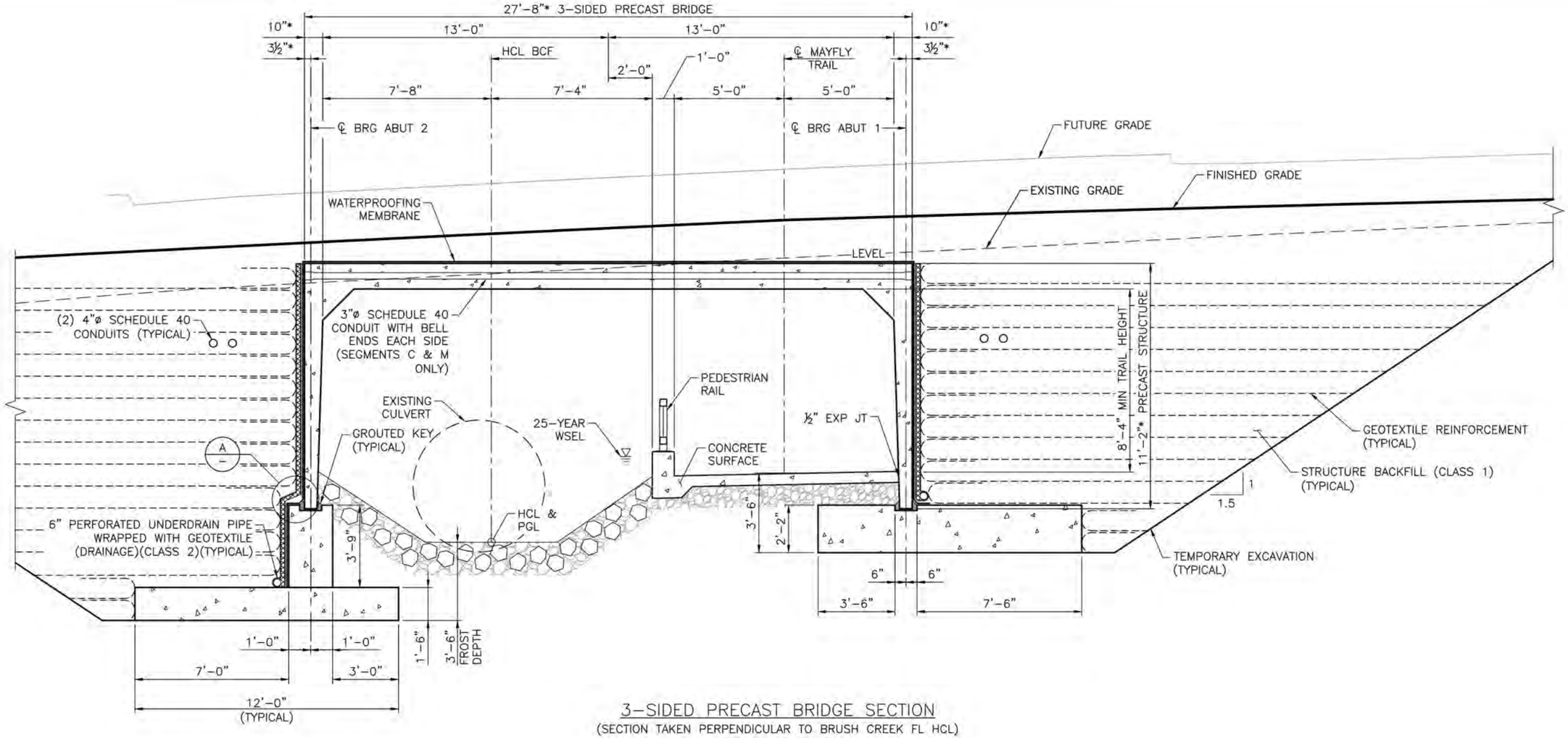
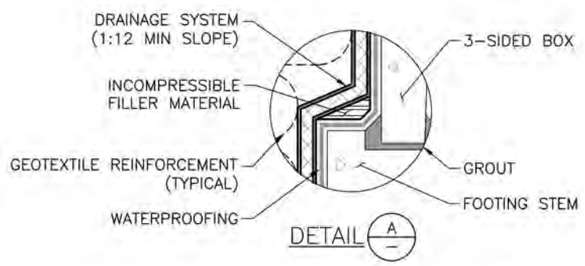
Sheet Number 6

03-20-23 TC Packet

J:\91991\91004\D\83 - OWL CREEK ROUNDABOUT\H-DWGS\CIVIL\PS-SHEETSET\BRUSHCREEKCR-SITEPLAN.DWG Plotted: 2/3/2023 11:47 AM By: Michael Morrison



3-SIDED PRECAST BRIDGE SECTION
(SECTION TAKEN PERPENDICULAR TO BRUSH CREEK FL HCL)
(SCALE: 1"=5'-0")



NOTES:

1. SEE CONSTRUCTION LAYOUT FOR LOCATION OF 3"ø CONDUITS.
2. DIMENSIONS NOTED WITH AN * INDICATE THAT THEY ARE TO BE VERIFIED WITH PRECASTER SHOP DRAWINGS AND ADJUSTED ACCORDINGLY.
3. 3-SIDED PRECAST TOP SLAB REINFORCING BARS SHALL BE EPOXY COATED. ALL OTHER 3-SIDED PRECAST REINFORCING ARE NOT REQUIRED TO BE EPOXY COATED.
4. PRECASTER IS ADVISED THAT SEGMENTS A AND M WILL HAVE DOWEL BARS FOR THE HEADWALL. THESE BARS WILL BE EPOXY COATED AND WILL BE COORDINATED PRIOR TO SHOP DRAWING APPROVAL.

Computer File Information		Sheet Revisions			
Print Date: 2/3/23	Rev.	Date	Comments	Init.	
Last Modification Date: 2/3/23	1				
Drawing File Name: Typical Section					
Autocad Ver. 2022 Scale: As Shown					
SGM Project No.: 91004D Quality Control: MCF					

Town of SNOWMASS Village

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Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

As Constructed
No Revisions:
Revised:
Void:

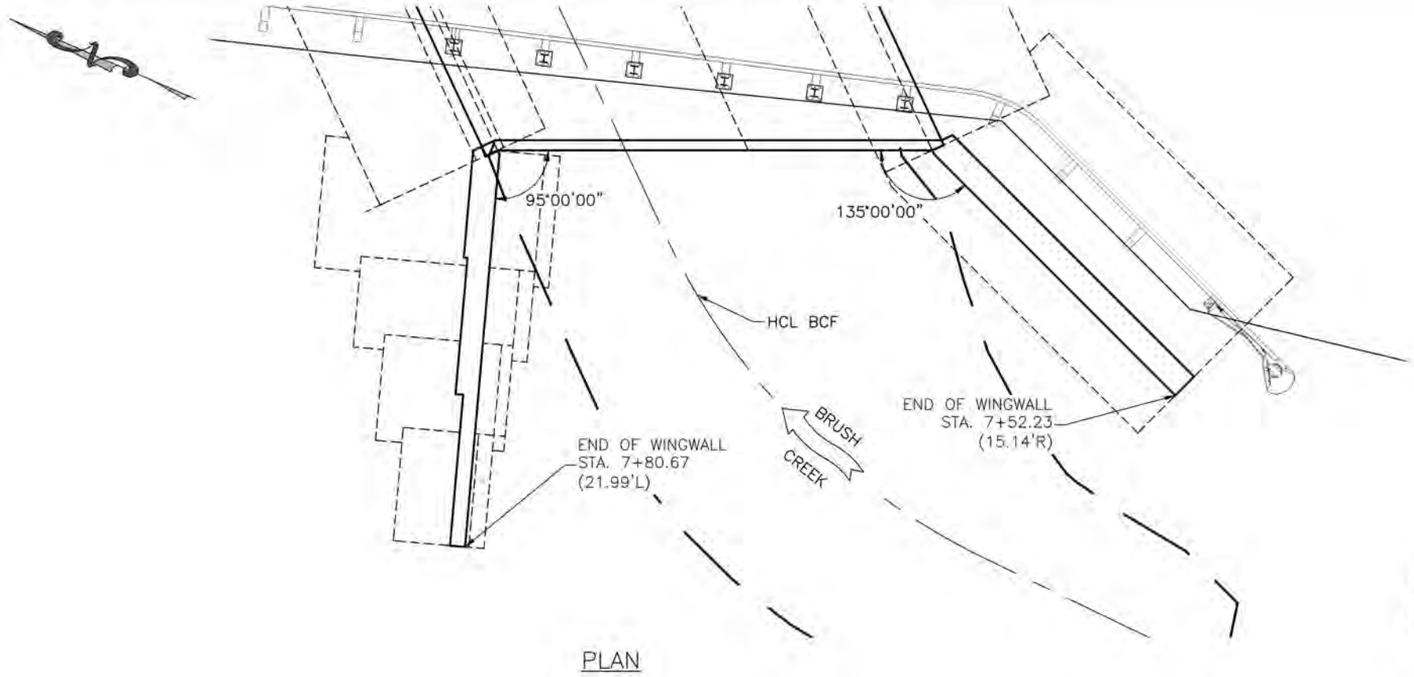
BRUSH CREEK CULVERT REPLACEMENT
TYPICAL SECTION

Engineer:	JNM	Structure Numbers	–
Drawn By:	JNM		–
Sheet Subset:	STRUCTURE	Subset Sheets:	S04 of 18

Project No./Code
–
–
Sheet Number 38

03-20-23 TC Packet

J:\991\91004\D\83 - OWL CREEK ROUNDABOUT\H-DWGS\STR(UC)\PS-SHEETSET\TYPICAL SECTION.DWG Plotted: 2/3/2023 11:50 AM By: Mark Frymoyer



PLAN

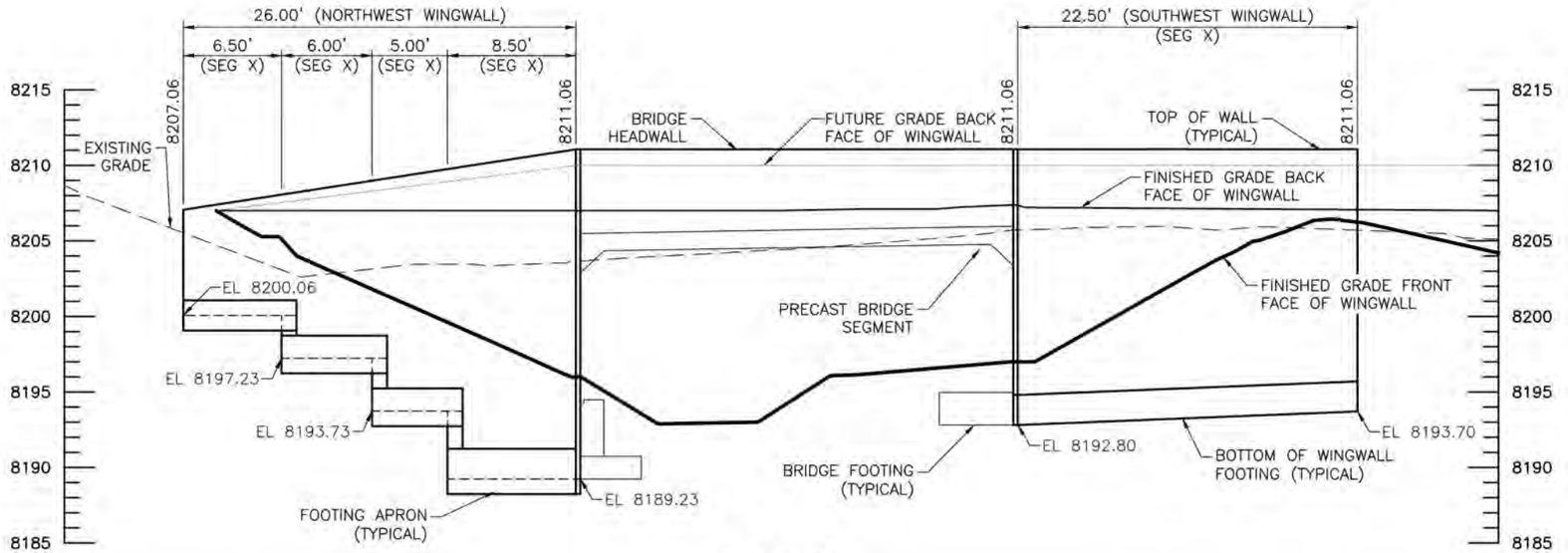
NOTES:

1. WINGWALL SECTIONAL DIMENSIONS ARE BASED ON PRELIMINARY SOIL DATA. DIMENSIONS MAY BE REVISED UPON REVIEW ON FINAL GEOTECHNICAL INFORMATION.
2. SEE SHEET S12 FOR TYPICAL SECTION AND DETAILS.

Graphic Scale

0 5 10 20

In Feet: 1" = 10'



ELEVATION
(LOOKING EAST)

Computer File Information	
Print Date:	2/3/23
Last Modification Date:	2/3/23
Drawing File Name:	Wingwall P&E
Autocad Ver. 2022	Scale: As Shown
SGM Project No.: 21991\91004D	Quality Control: MCF

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

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Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

As Constructed
No Revisions:
Revised:
Void:

BRUSH CREEK CULVERT REPLACEMENT
WEST WINGWALLS PLAN AND ELEVATION

Engineer:	JNM	Structure Numbers	–
Drawn By:	JNM		–
Sheet Subset:	STRUCTURE	Subset Sheets:	S10 of 18

Project No./Code	
–	
–	
Sheet Number	43

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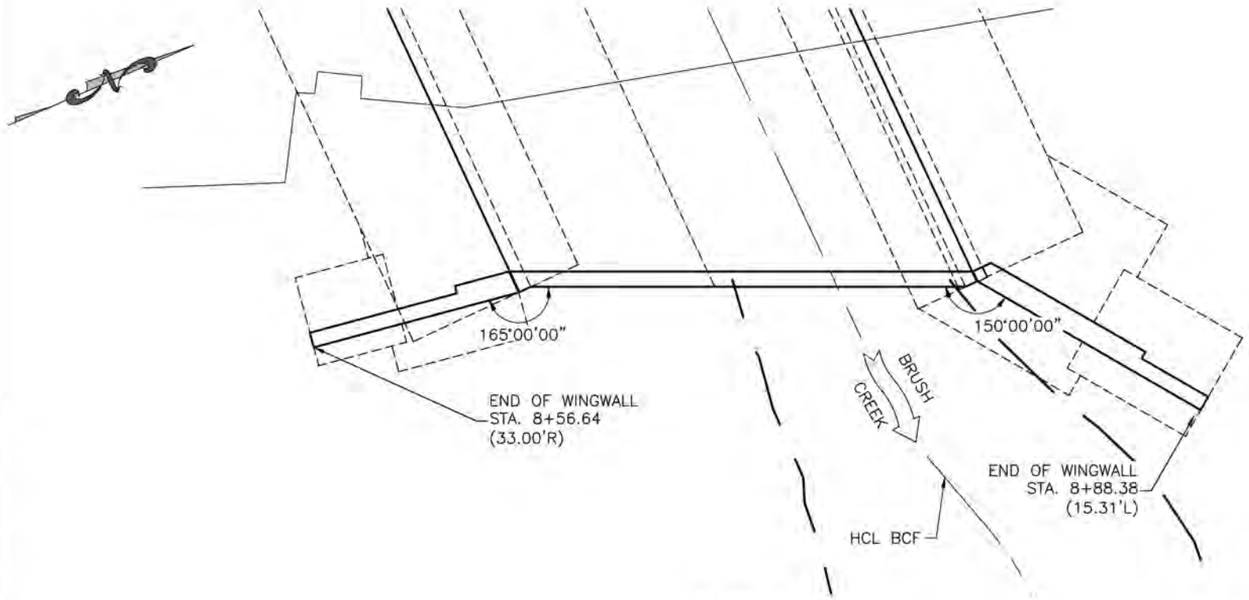
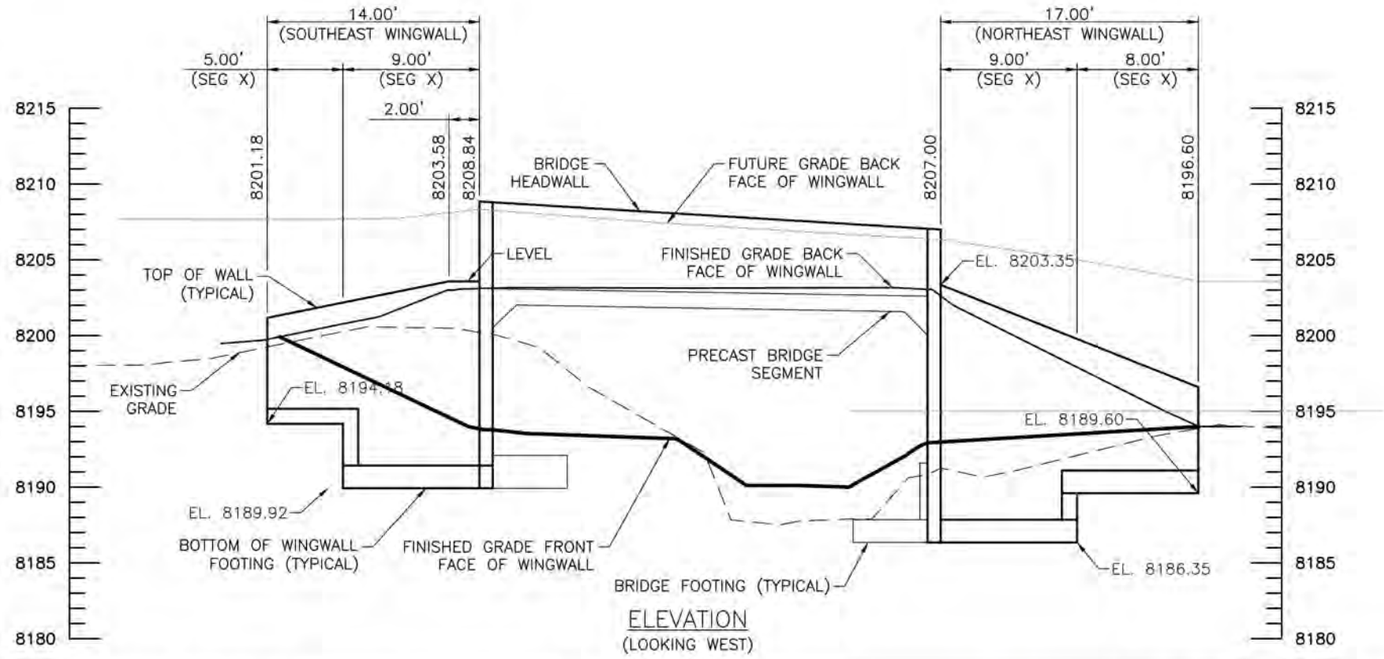


PLAN

Graphic Scale

0 5 10 20

In Feet: 1" = 10'



ELEVATION
(LOOKING WEST)

NOTES:

1. WINGWALL SECTIONAL DIMENSIONS ARE BASED ON PRELIMINARY SOIL DATA. DIMENSIONS MAY BE REVISED UPON REVIEW ON FINAL GEOTECHNICAL INFORMATION.
2. SEE SHEET S12 FOR TYPICAL SECTION AND DETAILS.

Computer File Information	
Print Date: 2/3/23	
Last Modification Date: 2/3/23	
Drawing File Name: Wingwall P&E	
Autocad Ver. 2022	Scale: As Shown
SGM Project No.: 91004D	Quality Control: MCF

Sheet Revisions			
Rev.	Date	Comments	Init.
1			

Town of SNOWMASS Village

SGM
118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

As Constructed
No Revisions:
Revised:
Void:

BRUSH CREEK CULVERT REPLACEMENT
EAST WINGWALLS PLAN AND ELEVATION

Engineer:	JNM	Structure Numbers	--
Drawn By:	JNM		--
Sheet Subset:	STRUCTURE	Subset Sheets:	S11 of 18

Project No./Code	
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Sheet Number	44

03-20-23 TC Packet

Plotted: 2/3/2023 11:53 AM By: Mark Frymoyer
I:\91004\D\83 - OWL CREEK ROUNDABOUT\H-DWGS\STRUC\PS-SHEETSET\WINGWALL P&E.DWG

Greg LeBlanc

From: Greg LeBlanc
Sent: Monday, March 13, 2023 1:16 PM
To: Greg LeBlanc
Subject: FW: Owl creek road

From: Anne Martens <AMartens@tosv.com>
Sent: Monday, March 13, 2023 12:07 PM
To: George Russell <gandmrussell@gmail.com>
Cc: Henry Schwartz <hgschwartz@sbcglobal.net>; Mike and Gigi Potter <migi@sopris.net>; Biege jones <biegejones@gmail.com>; Lance Clarke <lancesclarke@icloud.com>; John Howard <johnhoward@willowcreekms.com>; Megan Boucher <MBoucher@tosv.com>
Subject: RE: Owl creek road

Thanks George for the email. We are aware of the road conditions on Owl Creek Road. I am forwarding your email onto Megan in the Clerks office for you email to received as public comment for the Council.

Anne

From: George Russell <gandmrussell@gmail.com>
Sent: Saturday, March 11, 2023 4:58 PM
To: Anne Martens <AMartens@tosv.com>
Cc: Henry Schwartz <hgschwartz@sbcglobal.net>; Mike and Gigi Potter <migi@sopris.net>; Biege jones <biegejones@gmail.com>; Lance Clarke <lancesclarke@icloud.com>; John Howard <johnhoward@willowcreekms.com>
Subject: Fwd: Owl creek road

Dear Anne

Thanks to you and Dave for your time on Wednesday. The zoom meeting was most helpful and informative.

My colleagues on the Meadow Ranch HOA board believe that these pics of the road surface (and signs of subsidence) on the north side of Owl Creek Road just west of Lohrs Court need to be brought to the attention of the Town Council at the meeting on March 20. I imagine the Fairway Three residents are equally, or more, concerned about the extent, and weight, of anticipated construction traffic when Brush Creek Road is closed. Please forward this email to whomever you please and who, within the Town Council, you consider should be brought up to speed prior to the meeting.

Kindly acknowledge.

George

Sent from my iPhone

Begin forwarded message:

> **From:** George Russell <gandmrussell@gmail.com>
> **Date:** March 11, 2023 at 6:24:44 AM MST
> **To:** Mike and Gigi Potter <migi@sopris.net>, Biege jones <biegejones@gmail.com>, Lance Clarke <lancesclarke@icloud.com>, Henry G Schwartz <hgschwartz@sbcglobal.net>
> **Subject: Owl creek road**

Pics as requested . No way is this road currently fit for the purpose proposed in my view.
George

Sent from my iPhone

Town of Snowmass Village

Agenda Item Summary

DATE OF MEETING:

March 20, 2023

AGENDA ITEM:

April 6, 2023 EOTC Preparation Meeting

PRESENTED BY:

Linda DuPriest, Regional Transportation Director

BACKGROUND:

This goal of the March 20th EOTC prep meeting is to prepare Council for the upcoming EOTC meeting on April 6, 2023 and answer questions on this meeting packet. The April 6th EOTC meeting topics will include, a Snowmass Transit Enhancement Study presentation, and information updates on the Near Term Transit Improvement Program, Brush Creek Park and Ride, HOV Lane Enforcement, and Dynamic Road Pricing.

FINANCIAL IMPACT:

None.

APPLICABILITY TO COUNCIL GOALS & OBJECTIVES:

Community Engagement, Safety, and Regionalism

COUNCIL OPTIONS:

Meeting is informational and to answer questions only.

STAFF RECOMMENDATION:

Staff will provide an overview of the April 6, 2023 EOTC packet and answer questions.

ATTACHMENTS:

1. EOTC Powerpoint
2. EOTC Agenda Item Summary- 2023 Work Plan Updates April 6 2023_FINAL
3. EOTC Agenda Item Summary- Snowmass Regional Transit Service Analysis_ April 6 2023
4. April 6, 2023 EOTC Agenda – FINAL
5. OTC Decisions Reached Oct 27, 2022 – FINAL
6. Snowmass Summer Transit Service Report_Feb 2023
7. Snowmass Transit Service Analysis_Report_July 2022

April 6, 2023
EOTC Preparation Meeting

April 6 EOTC Meeting Prep - Overview

1. Meeting Logistics
2. October 27, 2022 - EOTC Decisions Reached
3. EOTC Agenda Items

- Snowmass Regional Transit Analysis Presentation

4. Updates - Information Only

April 6 EOTC Meeting

- Hosted by Pitkin County
- Starting at 4pm
- Meeting will be combination in-person / virtual
  Physical Location: Board of County Commissioners Mtg Room
- Public meeting link sent with packet. EOTC members and panelists link will be sent two weeks out and day before meeting.

October 27, 2022- Decisions Reached

- 2023 Work Plan and Budget Approved

Snowmass Regional Transit System Analysis

In-person presentation by Warner Transportation Consulting, Inc on:

- Alternative schedules for Snowmass shuttles at Brush Creek Park & Ride
- Feasibility of alternative routing of RFTA buses in Village core
- Productivity of direct bus service between Snowmass and downvalley communities
- Bus stop deficiencies along Brush Creek Road and Carriage Way
- Feasibility of direct summer service between Snowmass Village and Rubey Park.

Information Only: 2023 Work Plan Updates

- Near Term Transit Improvement Program

  -Transit Signal Bypass project not recommended by TAC and consultant; report at June 29 EOTC meeting

- Brush Creek Park & Ride

  -Includes new pavement, 200 new parking spaces, EV charging infrastructure and portion of bus turnaround lane
  -Construction begins by May 1
  -Food truck returning, placed in temporary parking area

Information Only: 2023 Work Plan Updates

- HOV Lane Enforcement

  -Legal opinion: Transit Sales Tax not eligible for non-transit projects

- Dynamic Road Pricing

  -Infrastructure conditions uncertain: Entrance to Aspen/New Castle Creek Bridge
  -Would require significant transit service increase and enhancement
  -Staff recommendation: delay until ETA determined.

Questions

AGENDA ITEM SUMMARY

EOTC MEETING DATE: April 6, 2023

AGENDA ITEM TITLE: 2023 Work Plan Updates

STAFF RESPONSIBLE: Linda DuPriest, Regional Transportation Director

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ISSUE STATEMENT: This memo includes key updates on projects from the 2023 Work Plan, approved by the EOTC on October 27, 2022.

A. Near Term Transit Improvement Program

One of the projects in the program, the Buttermilk Crossing and Transit Signal Bypass, has been underway since late 2022 with SGM engaged as lead consultant. The two elements of this project are located in the area at the intersection of Owl Creek Rd and Hwy 82, and include a feasibility study of a proposed bicycle/pedestrian crossing to serve the transit stops near Buttermilk ski area, and improvements at the Harmony Drive/Hwy 82 and Owl Creek Rd/Hwy 82 intersections improvements intended to ease movements of RFTA buses through the area and speed up transit times. The Buttermilk Crossing project is still underway, with an expected completion date of early June 2023, and will be presented to the EOTC at its June 29th meeting. However, the technical advisory team of staff from Pitkin County, City of Aspen, Town of Snowmass Village, and EOTC plus engineers with SGM recommend against the Transit Signal Bypass Project due to concerns about safety for buses, other vehicles and pedestrians, plus the determination that the ideas proposed would not achieve significant travel time savings for RFTA buses traveling through the area. A more complete explanation of the TAC's decision will be presented at the June 29th EOTC meeting along with the report on the Buttermilk Crossing.

B. Brush Creek Park & Ride

Partially funded by a grant from the Federal Highway Administration (FHWA) Federal Lands Access Program (FLAP) grant, this project will improve the Brush Creek Park & Ride with new pavement, lighting, EV charging infrastructure and the expansion from 200 to 400 parking spaces. The original scope of the project also included paving of a carpool/bus turnaround aisle and restroom facilities, but after construction bids came in exorbitantly high in late 2022, the project was scaled back to include the parking space expansion described above and access road. The project is on schedule to begin this May 2023. In addition, the Food Truck will be back this summer, again in an "experimental" capacity due to its temporary location during the FLAP grant construction, operating from May to early September.

C. HOV Lane Enforcement

The 2023 EOTC Work Plan and Budget included $95,000 for a program to achieve driver compliance with the HOV Lane from Basalt to Buttermilk, including funds for overtime for Pitkin County and Colorado State Patrol officers. HOV Lane Enforcement was one of the recommendations from the Integrated Mobility Study completed in 2021, following the work by the Community Mobility Task Force in 2016 and 2017. As its first project task, EOTC staff sought to confirm the legality of EOTC funds being used for projects that may not have a strong

"transit nexus". As the HOV lane project is primarily concerned with managing SOV traffic and is not directly serving public transportation, we sought a legal opinion from County Attorney, John Ely. His opinion is that Pitkin County sales tax fund designated for projects related to public transit cannot be used on motor vehicle enforcement, or the programming thereof (specifically, EOTC staff time). Based on General Counsel opinion, staff recommends removing HOV Lane Enforcement from the 2023 Work Plan.

D. Dynamic Road Pricing

While the EOTC staff is excited about this bold and innovative idea and acknowledge the work of the 2017 Community Mobility Task Force and subsequent 2021 Integrated Mobility Study, the project is premature until the Entrance to Aspen/Castle Creek Bridge alignment is determined. Any technical or human analysis of either tolling or cordon pricing could be a waste of funding if we do not know if there will be a dedicated bus lane all the way into Aspen, or if Cemetery Lane will be disconnected from the roundabout, as just two notable examples of unknowns. In addition, a discussion of road tolling or cordon pricing may be counterproductive without a simultaneous analysis of our transit system including the possibility of needing to greatly increase RFTA's funding to both increase and enhance current service (several peak hour BRT buses into Aspen are already at standing-room-only). Due to exorbitant housing costs plus an industry-wide driver shortage, RFTA could be facing years of continued service reductions such as it experienced this winter. Staff recommendation is to delay Dynamic Road Pricing from the 2023 workplan until the Entrance to Aspen/New Castle Creek Bridge alignment is determined.

AGENDA ITEM SUMMARY

EOTC MEETING DATE: April 6, 2023

AGENDA ITEM TITLE: Snowmass Regional Transit Service Analysis

STAFF RESPONSIBLE: Linda DuPriest, Regional Transportation Director

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ISSUE STATEMENT: In 2022 as one element of the Near Term Transit Improvement Program, the EOTC initiated the Snowmass Regional Transit Service Analysis, engaging Warner Transportation Consultants for the project. A report was submitted in July 2022 with initial findings and conclusions after which EOTC staff initiated additional work to analyze enhanced transit service during the summer between Aspen and Snowmass. This item is to discuss these reports.

Executive Summary:
The Snowmass Regional Transit Service Analysis project sought to identify feasible and cost-effective improvements to transit services for passengers heading to or from Snowmass Village. The research examined the following:

- assessment of the effects of alternative schedules and holding times for Snowmass shuttles at Brush Creek Park & Ride;

- potential benefits and feasibility of alternative routing of RFTA buses in the core of Snowmass Village;

- productivity and scheduling of buses operating directly between Snowmass Village and downvalley communities;

- deficiencies of bus stops along Brush Creek Road and Carriage Way

- feasibility of non-winter, direct service between Snowmass Village and Rubey Park.

The first report deals with the first four of these; a second report focuses on the last.

Marc Warner of Warner Transportation Consulting, Inc. will summarize the findings in his presentation to the EOTC on April 6, 2023. This will include RFTA's response and whether any recommendations are readily implementable or dependent on RFTA operational capabilities, available funding, and other factors.

ATTACHMENTS:

Snowmass Regional Transit Service Analysis – initial findings and conclusions
Snowmass Regional Transit Service Analysis – options for enhanced summer service

Elected Officials Transportation Committee (EOTC)

Thursday, April 6, 2023 - 4:00pm

Pitkin County Board of Commissioners Meeting Room
530 E. Main, 1st Floor, Aspen, CO 81611
Host and Chair – Pitkin County

MEETING IS VIRTUAL AND IN PERSON

You can view the livestream on Grassroots TV (Channel 11 CGTV) and on pitkincounty.com/374/County-Webcasts

View meeting via Zoom:
https://us02web.zoom.us/j/83545880013?pwd=WDFnQ3F4WHVPeHhlRlorb04zcFk0QT09
Passcode: 876072
Or One tap mobile : US: +17193594580; telephone: +17193594580
Webinar ID: 835 4588 0013
Passcode: 876072
International numbers available: https://us02web.zoom.us/u/kN17gKCFn

AGENDA

I.	**4:00 – 4:05**	**CALL TO ORDER AND ROLL CALL**
II.	**4:05 – 4:10**	**APPROVAL OF OCTOBER 27, 2022 ACTION MINUTES**
III.	**4:10 - 4:20**	**PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA** *(Comments limited to three minutes per person)*
IV.	**4:20 - 4:30**	**EOTC COMMITTEE MEMBER UPDATES**
V.	**4:30 – 5:15**	**SNOWMASS REGIONAL TRANSIT SERVICE ANALYSIS** Marc Warner, Warner Transportation Consulting Sam Guarino, Transportation Director, Town of Snowmass Village ***No decision needed at this time; information only***
VI.	**5:15 – 6:00**	**INFORMATION ONLY: UPDATES (Q&A)** A. Near Term Transit Improvement Program B. Brush Creek Park and Ride C. HOV Lane Enforcement D. Dynamic Road Pricing

VII. ADJOURN MEETING *(Motion, Second, and Roll Call Vote by Jurisdiction)*

*** Next Regular EOTC meeting is June 29, 2023 – Town of Snowmass Village, Host & Chair**

EOTC Background, Documents, and Packet Materials may be found here:
https://pitkincounty.com/1322/Elected-Officials-Transportation-Committ

EOTC Vision: We envision the Roaring Fork Valley as the embodiment of a sustainable transportation system emphasizing mass transit and mobility that contributes to the happiness and wellbeing of residents and visitors.

EOTC Mission: Work collectively to reduce and manage the volume of vehicles on the road and parking system and continue to develop and support a comprehensive multimodal, long-range strategy that will insure a convenient, equitable and efficient transportation system for the Roaring Fork Valley.

Summary of State Statue and Ballot Requirements: The 0.5% County Transit Sales and Use Tax shall be used for the purpose and financing, constructing, operating and managing a public, fixed route mass transportation system within the Roaring Fork Valley.

ELECTED OFFICIALS TRANSPORTATION COMMITTEE (EOTC)

AGREEMENTS & DECISIONS REACHED
REGULAR MEETING
October 27, 2022

Location (In Person and Virtual) – Pitkin County Board Room
Pitkin County - Host & Chair

- For a video production of this meeting, go to: https://www.youtube.com/watch?v=inty0tyyFvg&list=PLYAoFMw_qLSv-q6AcF02Zi07y-aPnU3Mp&index=2

- To access the Elected Officials Transportation Committee meeting packet material, go to: https://drive.google.com/drive/folders/1kPdv-lUJ4z8o9qM7BNVZzknWhqS73Abh (or https://www.pitkincounty.com/1322/Elected-Officials-Transportation-Committ, then 'EOTC Archived Packets')

Elected Officials in Attendance:

Aspen – 5	Pitkin County - 5	Snowmass - 3
Rachael Richards	Steve Child	Bill Madsen
Skippy Mesirow	Kelly McNicholas Kury	Tom Fridstein
John Doyle	Greg Poschman	Alyssa Shenk
Ward Hauenstein	Patti Clapper	
Mayor Torre	Francie Jacober	

Absent: Tom Goode, Bob Sirkus

CALL TO ORDER AND ROLL CALL

Commission Chair Patti Clapper called the meeting of the Elected Officials Transportation Committee (EOTC) to order at 4:21 p.m. followed by a roll-call for attendance.

APPROVAL OF THE MAY 26, 2022 ACTION MINUTES

Commissioner Steve Child made a motion to approve the Agreements and Decisions reached from May 26, 2022. The motion was seconded by Commissioner Clapper.

Pitkin County: The votes were: Kelly McNicholas Kury, yes; Greg Poschman, yes; Patti Clapper, yes; Steve Child, yes; Francie Jacober, motion carried.

Town of Snowmass Village: The votes were: Bill Madsen, yes; Tom Fridstein, yes; Alyssa Shenk, yes; motion carried.

City of Aspen: The votes were: Torre, yes; Skippy Mesirow, yes; John Doyle, yes; Ward Hauenstein, yes; Rachael Richards, yes; motion carried.

PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA

Commissioner Clapper requested any public comment for items not on the agenda. No comments from the public for items not on the agenda were identified.

EOTC COMMITTEE MEMBER UPDATES

There were no updates from EOTC members.

PUBLIC HEARINGS

EOTC PROPOSED BUDGET FOR 2023

EOTC Staff Brian Pettet, Pitkin County Public Works Director; Sam Guarino, Transportation Director for Town of Snowmass Village, and Pete Rice, Assistant City Engineer for City of Aspen.

As this was Linda DuPriest's first meeting as the new Regional Transportation Director, current EOTC staff from each member jurisdictions presented the proposed budget.

Commissioner Clapper made a motion to approve the 2023 Budget. Commissioner Child seconded the motion.

No public comment was received and the public hearing was closed.

The vote to approve the EOTC 2023 Budget was conducted by jurisdiction. The vote was as follows:

Pitkin County: Kelly McNicholas Kury, yes; Greg Poschman, yes; Patti Clapper, yes; Steve Child, yes; motion carried.

Town of Snowmass Village: Bill Madsen, yes; Tom Fridstein, yes; Alyssa Shenk, yes; motion carried.

City of Aspen: Torre, yes; Skippy Mesirow, yes; John Doyle, yes; Ward Hauenstein, yes; Rachael Richards, yes; motion carried.

EOTC PROPOSED WORK PLAN FOR 2023

EOTC Staff Brian Pettet, Pitkin County Public Works Director; Sam Guarino, Transportation Director for Town of Snowmass Village, and Pete Rice, Assistant City Engineer for City of Aspen

Commissioner Clapper made a motion to approve the 2023 Work Plan. Commissioner Child seconded the motion.

No public comment was received and the public hearing was closed.

The vote to approve the EOTC 2023 Work Plan was conducted by jurisdiction. The vote was as follows:

Pitkin County: Kelly McNicholas Kury, yes; Greg Poschman, yes; Patti Clapper, yes; Steve Child, yes; motion carried.

Town of Snowmass Village: Bill Madsen, yes; Tom Fridstein, yes; Alyssa Shenk, yes; motion carried.

City of Aspen: Torre, yes; Skippy Mesirow, yes; John Doyle, yes; Ward Hauenstein, yes; Rachael Richards, yes; motion carried.

ADJOURN REGULAR MEETING

Councilor Richards moved to adjourn the regular meeting of the Elected Officials Transportation Committee at 6:16 p.m. Councilor Fridstein seconded the motion. Motion passed with 11 yea votes.

City of Aspen

_____

Torre, Mayor
City Council

_____

Nicole Henning
City Clerk

Town of Snowmass Village

DRAFT

_____
Bill Madsen, Mayor
Town Council

_____
Megan Boucher
Town Clerk

Pitkin County

_____
Francie Jacober, Chair
Board of County Commissioners

_____
Julia Ely
Clerk to the Board of County Commissioners

_____
Linda DuPriest
Regional Transportation Director

DRAFT

WARNER TRANSPORTATION CONSULTING
177 Riverside Drive, Northampton, MA 01062 413 585-5026 warnertransportation.com

To: Linda DuPriest, Pitkin County

From: Marc Warner

Date: February 13, 2023

Re: Snowmass Regional Transit Service Analysis—options for enhanced summer service

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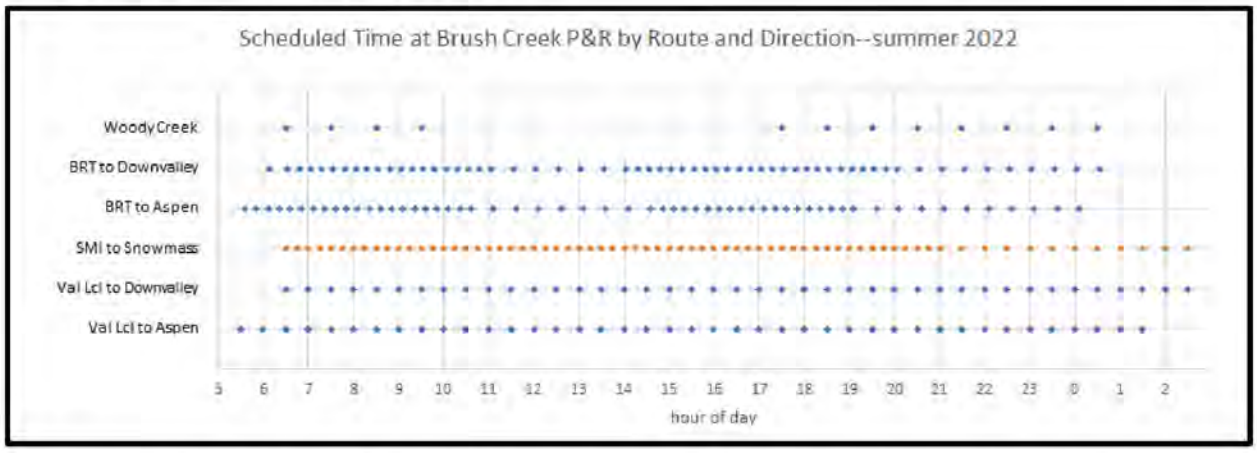
This memo looks at opportunities for enhanced service between Snowmass Village and Aspen during the summer season. It lists some ongoing operational questions on page 5 that I need to go over with RFTA staff.

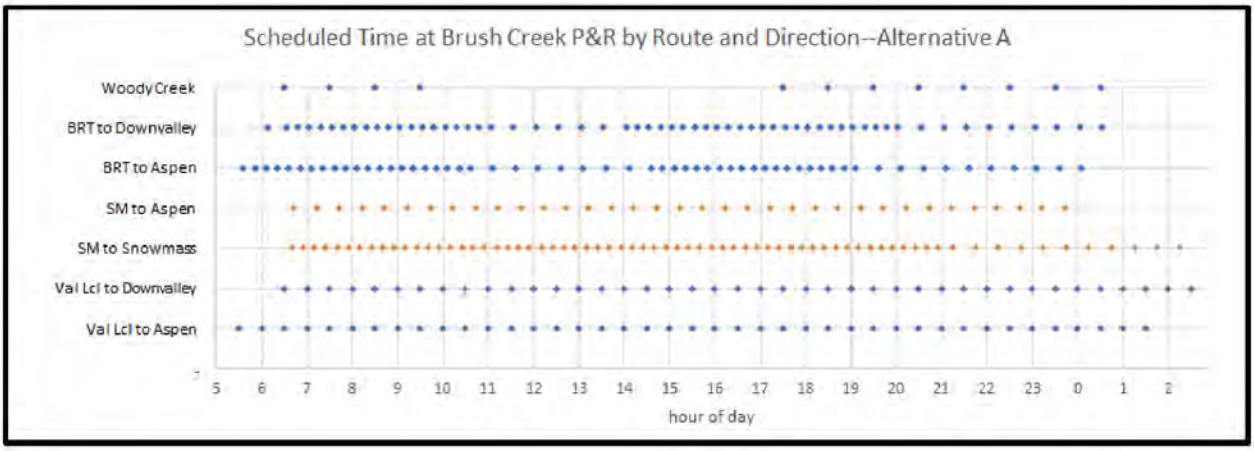
In 2022, and in other pre-Covid summers, RFTA operated all Snowmass service as a shuttle between the Snomwass Mall and the Brush Creek Park & Ride. Buses ran up and down Brush Creek Road every 15 minutes from early morning to evening, and then half hourly from 9 PM to 2:30 AM, as shown in the chart below. Travelers to and from Aspen (or downvalley) connected at the P&R to BRTs or Valley Locals for the part of their trip along Highway 82.



This approach is operationally efficient. For any given set of buses and operators, it allows the agency to run the greatest trip frequency and the widest service span for service to Snowmass Village. This gives transit travelers the greatest *choice* of travel times to get to and from Snowmass Village. The tradeoff is that travelers have to connect at Brush Creek Park & Ride. They must make a two-seat ride, and the unreliability of travel times along the Highway 82 corridor means that they will have an unpredictable delay in making the connection. Under bad luck situations, they could be waiting 20 minutes.

An earlier memo in the project showed the impacts on passenger wait times of alternative shuttle operating schemes: 15-minute headways with variable holds and fixed schedule departures at Brush Creek P&R, 12-minute headways without the variable holds, and 9-minute headways with a fourth bus assigned to the route.

This memo now considers another alternative: direct summer bus service between Snowmass Village and Aspen. This is less operationally efficient than the shuttle, but it gives transit travelers between Aspen and Snowmass Village the chance for a one-seat ride with no dwell or unpredictable wait time at Brush Creek Park & Ride. The chart below shows how this would fit among other buses at Brush Creek P&R. Buses to and from Snowmass would continue to run every 15 minutes to and from Snowmass Village. Every other bus from Snowmass would then continue from the P&R up to Aspen. The buses would be slotted into the schedule of BRTs and Valley Locals to provide a more even gap between buses to Aspen.



Current summer service			With SM bus every 30 minutes		
clock time (depart BCP&R for Aspen)	service	gap (minutes)	clock time (depart BCP&R for Aspen)	service	gap (minutes)
0	VL	9	0	VL	9
6	BRT	6	6	BRT	6
			13	**SM**	7
21	BRT	15	21	BRT	8
30	VL	9	30	VL	9
36	BRT	6	36	BRT	6
			43	**SM**	7
51	BRT	15	51	BRT	8

The service would require that RFTA operate a fourth bus from 6:30 AM to 9 PM on Snowmass service. The table below shows the morning service. You can see that operators would alternate between running the SMV-BCP&R-SMV pattern and the SMV-RP-SMV service. The travel times are consistent with those in past summer schedules: 18 minutes BCP&R to Rubey Park, and 15 minutes from Rubey Park back to BCP&R.

Operators would have 31 percent scheduled recovery/layovers, distributed as follows: 13 minutes at BCP&R on shuttle trip; 8 minutes at Rubey Park on Aspen trip; and 8 minutes at Snowmass Mall on both patterns. (This compares with 40 percent scheduled recovery on current Snowmass service with each operator having an 18 minute break at the Snowmass Mall every 45 minutes.)

bus	pattern	lv SMV	arr BC	lv BC to Aspen	arr Aspen	lv Aspen	arr BC	lv BC to SMV	arr SMV	next trip
1	1							6:40 AM	6:52 AM	7:00 AM
2	2	6:30 AM	6:42 AM	6:43 AM	7:01 AM	7:09 AM	7:24 AM	7:25 AM	7:37 AM	7:45 AM
3	1	6:45 AM	6:57 AM					7:10 AM	7:22 AM	7:30 AM
1	2	7:00 AM	7:12 AM	7:13 AM	7:31 AM	7:39 AM	7:54 AM	7:55 AM	8:07 AM	8:15 AM
4	1	7:15 AM	7:27 AM					7:40 AM	7:52 AM	8:00 AM
3	2	7:30 AM	7:42 AM	7:43 AM	8:01 AM	8:09 AM	8:24 AM	8:25 AM	8:37 AM	8:45 AM
2	1	7:45 AM	7:57 AM					8:10 AM	8:22 AM	8:30 AM
4	2	8:00 AM	8:12 AM	8:13 AM	8:31 AM	8:39 AM	8:54 AM	8:55 AM	9:07 AM	9:15 AM
1	1	8:15 AM	8:27 AM					8:40 AM	8:52 AM	9:00 AM
2	2	8:30 AM	8:42 AM	8:43 AM	9:01 AM	9:09 AM	9:24 AM	9:25 AM	9:37 AM	9:45 AM
3	1	8:45 AM	8:57 AM					9:10 AM	9:22 AM	9:30 AM
1	2	9:00 AM	9:12 AM	9:13 AM	9:31 AM	9:39 AM	9:54 AM	9:55 AM	10:07 AM	10:15 AM
4	1	9:15 AM	9:27 AM					9:40 AM	9:52 AM	10:00 AM
3	2	9:30 AM	9:42 AM	9:43 AM	10:01 AM	10:09 AM	10:24 AM	10:25 AM	10:37 AM	10:45 AM
2	1	9:45 AM	9:57 AM					10:10 AM	10:22 AM	10:30 AM
4	2	10:00 AM	10:12 AM	10:13 AM	10:31 AM	10:39 AM	10:54 AM	10:55 AM	11:07 AM	11:15 AM
1	1	10:15 AM	10:27 AM					10:40 AM	10:52 AM	11:00 AM
2	2	10:30 AM	10:42 AM	10:43 AM	11:01 AM	11:09 AM	11:24 AM	11:25 AM	11:37 AM	11:45 AM

Does SM-Aspen bus need to stop at Brush Creek P&R

The connection at Brush Creek P&R serves bus travelers between Snowmass Village and Aspen, but also between Snowmass Village and downvalley communities, and a very small number of transit travelers to and from Woody Creek. Motorists will also fill the Brush Creek P&R lot and take the bus to Snowmass Village during a few special events each summer. (RFTA or TOSV can provide supplemental, possibly chartered service on these occasions.)

Under non-special event conditions, the Snowmass transit connections at Brush Creek are overwhelmingly for travel to and from Aspen. Trips between Snowmass Village and downvaley communities are almost exclusively between 6 to 9 AM and 3 to 6 PM. This is evident from the charts on the next page, which shows the average demand by hour and by day-of-week and by connections with the BRT and Valley Locals in both directions. The source of this data is actual boarding and alighting data on the July 2022 buses at Brush Creek P&R. (Note that a very small share of these boardings and alightings would be connecting to Woody Creek, but these are assumed to be negligible.) The charts also show that peak period (commute hour) ridership drops off on the weekend, but that ridership patterns are otherwise fairly constant across all days of week.

This also means that there will be many times of day when there few people traveling to or from downvalley communities that will need a bus connection for the other leg of the trip to Snowmass Village. Thus, the turn-off of the Snowmass to Aspen bus to BCP&R will not have been needed; the bus could have saved about two minutes by not detouring into the park & ride. Unneeded connections in both directions would thus allow the bus to save four minutes on the round trip between Snowmass Village and Aspen.

This approach, however, does not seem like it should be a default even during non-peak hours. The issue is that *some* Snowmass travelers will still be waiting for a connection to or from downvalley, and others will have taken the BRT and Valley Local from Aspen. Both of these groups plus the occasional traveler between Snowmass Village and Woody Creek suggest that the Snowmass Village to Aspen bus in Alternative A would still need to take the detour into the BCP&R.

To Snowmass Village--Average passengers per hour, July 2022

	Monday to Thursday				Friday				Saturday				Sunday			
	from DV		from Aspen		from DV		from Aspen		from DV		from Aspen		from DV		from Aspen	
hour	on BRT	on VL	on BRT	on VL	on BRT	on VL	on BRT	on VL	on BRT	on VL	on BRT	on VL	on BRT	on VL	on BRT	on VL
5 AM	3	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0
6 AM	17	5	1	2	14	8	2	3	13	6	1	1	7	5	1	2
7 AM	29	12	3	4	28	11	3	3	26	9	3	3	30	13	3	6
8 AM	16	7	5	6	15	6	4	8	13	7	3	5	11	6	3	4
9 AM	9	3	5	7	9	2	3	7	11	4	4	4	7	4	5	5
10 AM	5	3	5	10	5	2	5	8	6	6	7	8	5	1	4	3
11 AM	6	3	2	10	4	3	1	10	3	5	1	11	2	4	2	8
12 PM	4	3	4	17	2	1	2	10	3	12	3	19	5	5	5	13
1 PM	5	5	5	19	4	6	3	14	6	6	2	22	5	5	3	11
2 PM	7	5	17	23	5	3	14	20	9	3	17	22	8	6	12	15
3 PM	6	2	21	16	7	4	22	19	7	5	21	22	6	2	15	20
4 PM	5	4	29	18	5	3	20	14	4	5	19	18	6	3	18	22
5 PM	5	3	35	25	3	1	22	20	5	1	22	17	4	2	17	19
6 PM	6	3	25	28	4	2	20	22	2	1	16	19	3	2	10	13
7 PM	3	3	15	18	5	2	10	13	2	2	9	16	2	2	11	14
8 PM	1	3	4	18	1	2	2	14	2	1	5	15	2	3	5	12
9 PM	2	2	4	24	2	1	3	24	2	1	5	13	1	2	3	13
10 PM	1	2	4	21	1	1	4	26	1	4	5	18	1	2	3	25
11 PM	2	2	4	30	2	3	6	34	1	4	3	33	1	3	2	22
12 PM	0	2	2	17	0	3	2	12	0	2	1	12	0	0	0	8
1 AM	0	1	0	9	0	2	0	0	0	1	0	0	0	1	0	0
2 AM	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0

From Snowmass Village--Average passengers per hour, July 2022

	Monday to Thursday				Friday				Saturday				Sunday			
	to DV		to Aspen		to DV		to Aspen		to DV		to Aspen		to DV		to Aspen	
hour	on BRT	on VL	on BRT	on VL	on BRT	on VL	on BRT	on VL	on BRT	on VL	on BRT	on VL	on BRT	on VL	on BRT	on VL
5 AM	0	0	1	4	0	0	2	3	0	0	1	2	0	0	0	1
6 AM	1	1	9	19	1	1	8	18	1	0	5	8	1	1	3	15
7 AM	2	3	27	15	2	3	21	18	2	2	8	22	2	4	6	16
8 AM	2	3	32	19	2	3	25	19	2	2	15	19	1	2	7	13
9 AM	3	2	28	26	4	3	22	19	4	2	25	27	2	2	10	22
10 AM	2	2	13	23	7	3	10	21	2	4	19	29	3	4	8	24
11 AM	1	2	7	23	0	3	8	31	2	4	2	41	1	2	6	27
12 PM	2	2	4	24	2	4	2	27	5	4	3	29	4	3	3	24
1 PM	3	4	5	25	4	2	5	26	2	4	2	30	2	1	6	25
2 PM	9	4	9	23	9	3	19	22	7	3	15	18	5	7	12	21
3 PM	14	5	22	20	10	6	17	14	13	6	16	20	11	3	8	18
4 PM	27	8	18	16	20	8	18	21	22	4	6	17	18	4	14	16
5 PM	22	10	13	21	18	10	16	15	17	13	12	15	17	9	15	10
6 PM	7	3	10	12	11	3	6	14	10	5	7	23	8	3	3	11
7 PM	7	2	2	12	6	5	5	18	8	4	3	18	4	3	0	8
8 PM	5	3	1	21	5	4	1	18	4	4	2	19	4	3	1	17
9 PM	8	8	0	21	3	7	0	17	6	5	0	16	5	4	0	9
10 PM	8	6	0	14	7	5	1	12	4	7	1	17	9	5	0	10
11 PM	5	6	2	8	4	5	1	11	5	5	0	14	5	5	0	7
12 PM	2	3	1	6	1	3	1	6	2	1	0	4	0	1	0	1
1 AM	0	1	0	2	0	0	0	2	0	0	0	2	0	0	0	2
2 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Charts at the end of this memo show this data in greater detail. RFTA operations planners should note that AM peak period BRT trips from downvalley generate far more people waiting for a connection to Snowmass Village than do the Valley Locals from downvalley. The agency's current approach, however, is to minimize the connection time with the Valley Local from downvalley rather than with the BRT.

Passenger benefits

The key benefit is that travelers between Snowmass Village and Aspen would now have half-hourly direct service in both directions. These travelers would not have an unpredictable—or any—wait at Brush Creek P&R. This would prompt many travelers between Snowmass Village and Aspen to favor these trips, and thus would reduce by more than 50 percent the overall delay for these travelers. The continuation of 15-minute service would not have an adverse effect on the travelers between Snowmass Village and downvalley communities.

The added half-hourly service between Rubey Park and Brush Creek P&R would increase buses in this corridor from 6 buses to 8 buses per hour in each direction. Travelers would have a bus scheduled a maximum of every 9 minutes under the new scenario, compared with up to a 15 minute gap under the current service. This would add to transit attractiveness on the main trunk of the Aspen free zone, and would likely induce added transit demand.

Together, these benefits make Alternative A a more beneficial option than the enhanced SMI shuttle options tested in earlier project memo. This includes the use of a fourth Snowmass service bus for higher frequency shuttle service.

Operational questions

1. Does RFTA have a fourth operator to dedicate this summer to the Snowmass service? Lack of operators was a serious constraint in 2022.
2. Are there any labor constraints or facility issues that would preclude a recovery/layover time at Brush Creek P&R? Is there a bathroom here for operator use?
3. Are there any labor issues that would preclude the reduced total recovery/layover time on the Snomwass service from the current 40 percent (18 minutes every 45 minutes), to 31 percent (37 minutes in chunks of 8 to 13 minutes every 120 minutes).

From Snowmass Village to DV, connection: BRT																
	average passenger per hour				average per trip				max trip				std dev			
hour	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun
5 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
6 AM	1	1	1	1	0.3	0.4	0.4	0.4	2	2	2	2	0.5	0.6	0.7	0.7
7 AM	2	2	2	2	0.5	0.5	0.7	0.4	5	2	3	1	0.9	0.6	1.1	0.5
8 AM	2	2	2	1	0.5	0.6	0.5	0.4	3	2	5	2	0.7	0.7	1.1	0.7
9 AM	3	4	4	2	0.7	1.1	0.9	0.7	3	10	5	3	0.8	2.4	1.4	1.0
10 AM	2	7	2	3	0.5	1.7	0.5	0.7	4	5	3	3	1.0	1.5	0.9	0.9
11 AM	1	0	2	1	0.7	0.2	0.9	0.8	3	1	5	2	0.8	0.4	1.8	0.8
12 PM	2	2	5	4	1.0	0.8	2.3	2.1	4	4	8	9	1.1	1.2	2.6	2.8
1 PM	3	4	2	2	1.5	2.0	1.4	1.2	4	10	3	3	1.3	2.8	1.2	1.0
2 PM	9	9	7	5	2.3	2.5	1.6	1.3	20	7	5	4	3.1	2.0	1.4	1.4
3 PM	14	10	13	11	3.7	2.5	3.5	2.8	20	15	15	8	3.9	3.7	3.8	2.1
4 PM	27	20	22	18	6.3	5.5	5.9	4.6	20	13	14	12	5.1	3.6	4.0	3.4
5 PM	22	18	17	17	5.5	4.9	4.9	4.8	27	10	14	12	5.0	2.2	3.7	3.1
6 PM	7	11	10	8	1.8	3.0	3.1	2.1	6	10	6	7	1.6	2.3	1.7	1.8
7 PM	7	6	8	4	1.8	1.6	2.3	1.2	16	4	6	7	2.3	1.3	2.0	1.7
8 PM	5	5	4	4	2.7	2.8	2.2	2.1	12	6	8	6	3.0	2.0	2.5	1.8
9 PM	8	3	6	5	4.1	1.7	3.2	2.6	14	6	5	5	3.4	1.8	1.8	1.4
10 PM	8	7	4	9	3.8	3.6	2.4	4.7	12	7	6	12	3.0	2.1	2.1	3.5
11 PM	5	4	5	5	2.5	2.0	2.5	2.6	9	4	5	6	1.9	0.9	1.6	1.8
12 PM	2	1	2	0	0.8	0.8	2.0	0.4	5	2	7	1	1.3	0.7	2.6	0.5
1 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
2 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0

From Snowmass Village to DV, connection: Valley Local																
	average passenger per hour				average per trip				max trip				std dev			
hour	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun
5 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
6 AM	1	1	0	1	1.4	0.8	0.0	1.2	6	1	0	4	1.4	0.4	0.0	1.5
7 AM	3	3	2	4	1.5	1.6	0.9	1.8	6	4	2	5	1.1	1.2	0.7	1.3
8 AM	3	3	2	2	1.7	1.6	0.9	1.3	6	5	3	4	1.9	1.4	0.9	1.3
9 AM	2	3	2	2	1.1	1.3	1.2	1.0	4	4	4	5	1.2	1.1	1.3	1.7
10 AM	2	3	4	4	1.0	1.4	1.9	2.2	3	2	4	4	1.1	0.7	1.4	1.2
11 AM	2	3	4	2	1.1	1.6	2.1	1.1	6	4	5	4	1.5	1.4	1.2	1.7
12 PM	2	4	4	3	1.1	1.9	2.0	1.3	4	7	4	3	1.1	2.1	1.4	0.8
1 PM	4	2	4	1	1.8	1.0	2.1	0.4	4	3	6	1	1.3	0.9	1.9	0.5
2 PM	4	3	3	7	1.9	1.4	1.4	3.6	7	5	5	9	1.8	1.9	1.6	2.5
3 PM	5	6	6	3	2.6	3.1	3.6	1.3	7	8	10	4	2.3	2.3	3.5	1.5
4 PM	8	8	4	4	4.0	4.1	1.8	2.1	9	9	5	6	2.1	2.6	1.3	1.7
5 PM	10	10	13	9	5.4	5.0	6.5	4.3	17	9	12	11	3.7	3.0	3.9	2.9
6 PM	3	3	5	3	1.5	1.5	2.5	1.5	5	4	5	4	1.4	1.5	1.9	1.3
7 PM	2	5	4	3	0.9	2.3	2.1	1.6	4	7	8	5	0.9	2.0	2.5	1.4
8 PM	3	4	4	3	1.3	2.2	2.3	1.5	5	4	6	5	1.2	1.0	2.3	1.9
9 PM	8	7	5	4	4.0	3.6	2.9	2.1	12	7	7	4	2.9	2.6	2.2	1.0
10 PM	6	5	7	5	3.4	2.6	3.6	2.6	9	6	11	6	2.2	1.4	3.4	1.9
11 PM	6	5	5	5	3.0	2.7	2.6	2.3	17	5	5	4	2.8	1.4	1.4	1.3
12 PM	3	3	1	1	1.5	2.6	0.8	1.0	7	12	3	3	1.4	4.7	1.2	1.2
1 AM	1	0	0	0	0.4	0.0	0.0	0.0	3	0	0	0	0.7	0.0	0.0	0.0
2 AM	2	0	0	0	1.0	0.0	0.0	0.0	11	0	0	0	2.3	0.0	0.0	0.0

From Snowmass Village to Aspen, connection: BRT

	average passenger per hour				average per trip				max trip				std dev			
hour	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun
5 AM	1	2	1	0	0.6	1.0	0.4	0.0	2	3	1	0	0.7	1.2	0.5	0.0
6 AM	9	8	5	3	2.4	2.0	1.4	0.9	11	12	6	10	2.3	2.8	2.1	2.3
7 AM	27	21	8	6	6.7	5.3	2.2	1.5	23	22	7	8	5.5	4.9	2.2	2.0
8 AM	32	25	15	7	8.2	6.3	3.9	2.1	26	18	11	9	5.9	5.2	3.1	2.5
9 AM	28	22	25	10	7.1	5.6	6.5	2.9	41	18	16	12	7.4	4.4	5.1	2.9
10 AM	13	10	19	8	4.5	3.3	6.3	2.8	18	10	22	11	4.7	2.9	7.0	3.4
11 AM	7	8	2	6	3.4	4.1	1.0	2.8	26	11	2	10	5.7	3.4	0.8	3.6
12 PM	4	2	3	3	2.2	1.0	1.9	1.6	8	3	5	4	2.4	1.1	1.7	1.6
1 PM	5	5	2	6	2.6	2.3	1.4	3.8	12	8	8	7	3.1	2.7	2.6	2.1
2 PM	9	19	15	12	3.4	6.3	5.4	3.9	19	18	18	10	3.9	5.3	4.5	3.4
3 PM	22	17	16	8	6.0	5.4	4.8	2.1	20	15	13	11	6.0	4.7	3.7	2.9
4 PM	18	18	6	14	4.6	4.7	2.1	3.8	19	13	10	15	5.0	4.0	2.7	4.6
5 PM	13	16	12	15	3.4	4.4	3.3	4.5	14	13	14	17	3.8	4.1	3.7	4.9
6 PM	10	6	7	3	2.7	1.6	1.9	0.9	17	7	11	3	3.8	2.4	2.8	1.1
7 PM	2	5	3	0	0.9	2.3	1.3	0.0	10	7	6	0	2.2	2.3	1.9	0.0
8 PM	1	1	2	1	0.4	0.3	0.9	0.7	3	2	9	6	0.9	0.7	2.7	1.8
9 PM	0	0	0	0	0.2	0.2	0.0	0.1	1	1	0	1	0.4	0.4	0.0	0.3
10 PM	0	1	1	0	0.2	0.4	0.3	0.0	1	2	2	0	0.4	0.8	0.6	0.0
11 PM	2	1	0	0	0.8	0.6	0.0	0.2	22	4	0	1	3.8	1.3	0.0	0.4
12 PM	1	1	0	0	0.6	0.8	0.2	0.0	3	2	1	0	1.1	0.8	0.4	0.0
1 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
2 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0

From Snowmass Village to Aspen, connection: Valley Local

	average passenger per hour				average per trip				max trip				std dev			
hour	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun
5 AM	4	3	2	1	3.6	2.8	2.4	1.4	7	5	10	3	1.6	1.3	3.9	1.0
6 AM	19	18	8	15	9.7	9.2	4.8	8.2	27	23	14	19	9.9	9.4	5.6	7.7
7 AM	15	18	22	16	7.7	9.8	10.8	8.0	19	19	19	18	5.4	5.0	4.4	4.9
8 AM	19	19	19	13	9.7	10.8	10.6	6.3	22	29	20	13	6.0	8.1	5.6	3.4
9 AM	26	19	27	22	13.7	12.0	14.9	12.3	54	17	25	18	10.5	4.6	4.6	3.6
10 AM	23	21	29	24	11.8	11.8	14.6	11.9	37	20	30	27	6.9	5.6	7.0	6.4
11 AM	23	31	41	27	11.7	15.7	22.9	13.3	22	30	36	25	5.7	6.9	7.5	5.8
12 PM	24	27	29	24	12.4	14.8	14.7	12.0	26	28	25	19	6.0	7.3	5.6	4.6
1 PM	25	26	30	25	13.3	14.7	14.9	13.7	28	31	23	23	5.8	7.2	4.6	5.9
2 PM	23	22	18	21	12.8	12.3	11.5	10.7	23	20	18	21	4.9	4.4	3.0	4.9
3 PM	20	14	20	18	9.8	7.0	9.8	8.9	24	14	20	15	6.6	4.5	6.6	4.2
4 PM	16	21	17	16	8.7	10.7	8.7	7.8	21	16	15	16	6.0	5.4	3.7	3.5
5 PM	21	15	15	10	10.9	8.2	7.4	5.4	22	21	14	12	5.3	6.3	4.6	3.4
6 PM	12	14	23	11	7.2	7.8	14.2	5.5	24	14	25	15	5.0	4.3	5.5	4.2
7 PM	12	18	18	8	6.0	10.2	10.1	4.1	22	18	23	8	5.3	5.2	5.9	2.6
8 PM	21	18	19	17	11.4	10.0	10.6	8.3	51	19	25	15	11.1	4.4	8.1	4.9
9 PM	21	17	16	9	11.6	8.7	9.0	4.7	41	14	14	16	10.5	3.3	4.5	5.2
10 PM	14	12	17	10	7.2	6.0	8.6	5.0	23	11	23	17	6.1	2.6	5.3	4.8
11 PM	8	11	14	7	4.5	5.3	7.1	3.7	11	11	12	9	2.9	2.8	3.8	3.5
12 PM	6	6	4	1	3.1	3.4	2.4	0.7	11	10	6	3	3.3	2.9	1.8	1.1
1 AM	2	2	2	2	1.2	1.3	2.0	1.4	6	3	5	3	1.5	1.0	1.4	0.9
2 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0

From DV to Snowmass Village, connection: BRT																
	average passenger per hour				average per trip				max trip				std dev			
hour	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun
5 AM	3	2	1	1	1.5	1.1	0.7	0.7	6	3	3	1	1.3	0.9	0.9	0.5
6 AM	17	14	13	7	4.3	3.6	3.5	1.8	9	10	22	6	2.1	2.3	4.9	2.0
7 AM	29	28	26	30	7.2	7.0	6.9	7.8	21	13	22	15	4.4	2.9	5.0	3.7
8 AM	16	15	13	11	4.2	3.6	3.4	3.1	14	12	9	9	3.7	4.0	2.7	2.9
9 AM	9	9	11	7	2.2	2.2	2.9	2.1	9	5	7	7	1.8	1.5	2.2	1.6
10 AM	5	5	6	5	1.6	1.8	1.9	1.9	5	8	6	4	1.3	1.9	1.4	1.4
11 AM	6	4	3	2	2.8	2.1	1.4	1.0	14	3	3	2	2.6	0.8	1.0	0.9
12 PM	4	2	3	5	2.4	0.9	1.4	2.6	8	3	4	8	2.2	0.9	1.3	2.2
1 PM	5	4	6	5	2.3	1.9	4.0	2.9	9	4	5	6	2.2	0.8	0.9	1.8
2 PM	7	5	9	8	2.7	1.6	3.1	2.5	11	4	12	5	2.0	1.1	3.8	1.2
3 PM	6	7	7	6	1.7	2.2	2.1	1.6	9	8	12	5	2.0	2.3	2.9	1.5
4 PM	5	5	4	6	1.4	1.3	1.4	1.6	8	4	9	3	1.7	1.3	2.4	1.0
5 PM	5	3	5	4	1.3	0.9	1.3	1.2	8	3	4	6	2.0	0.9	1.1	1.5
6 PM	6	4	2	3	1.6	1.2	0.6	0.8	11	7	4	5	2.1	1.8	1.0	1.5
7 PM	3	5	2	2	1.4	2.3	1.0	0.9	7	4	3	2	1.6	1.5	1.1	0.8
8 PM	1	1	2	2	0.7	0.6	1.2	0.8	3	1	5	2	0.9	0.5	1.9	0.7
9 PM	2	2	2	1	0.9	1.0	1.0	0.7	3	5	5	3	1.0	1.6	1.6	1.1
10 PM	1	1	1	1	0.7	0.3	0.5	0.4	3	2	2	3	0.9	0.6	0.7	0.9
11 PM	2	2	1	1	0.8	0.9	0.3	0.4	5	2	3	2	1.2	0.9	0.9	0.7
12 PM	0	0	0	0	0.4	0.2	0.0	0.0	3	1	0	0	0.8	0.4	0.0	0.0
1 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
2 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0

From DV to Snowmass Village, connection: Valley Local																
	average passenger per hour				average per trip				max trip				std dev			
hour	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun
5 AM	0	0	0	0	0.1	0.2	0.0	0.0	1	1	0	0	0.2	0.4	0.0	0.0
6 AM	5	8	6	5	2.6	4.0	3.5	2.8	8	10	7	7	2.5	3.5	3.0	2.7
7 AM	12	11	9	13	6.4	6.1	4.4	6.4	14	10	8	10	4.2	2.6	2.9	1.9
8 AM	7	6	7	6	3.7	3.1	3.8	3.1	9	7	6	7	2.0	1.8	1.7	1.9
9 AM	3	2	4	4	1.5	1.4	2.1	2.3	4	3	4	5	1.2	0.9	1.3	1.6
10 AM	3	2	6	1	1.3	1.2	3.1	0.7	5	3	19	2	1.4	0.9	5.4	0.6
11 AM	3	3	5	4	1.4	1.3	2.8	2.0	8	4	20	6	1.7	1.2	6.2	1.5
12 PM	3	1	12	5	1.5	0.8	5.9	2.4	5	3	34	6	1.2	1.0	10.2	1.9
1 PM	5	6	6	5	2.7	3.6	3.1	2.6	7	7	8	4	1.7	2.5	2.3	1.5
2 PM	5	3	3	6	2.7	1.7	2.1	2.8	5	5	4	6	1.4	1.5	1.3	1.5
3 PM	2	4	5	2	1.1	2.0	2.6	1.0	5	7	7	3	1.1	2.2	1.7	0.9
4 PM	4	3	5	3	2.4	1.5	2.3	1.3	6	4	7	3	1.8	1.1	1.8	1.0
5 PM	3	1	1	2	1.4	0.6	0.6	1.3	7	2	2	3	1.6	0.8	0.8	0.9
6 PM	3	2	1	2	1.9	0.9	0.9	1.1	12	3	3	5	2.8	1.0	0.9	1.5
7 PM	3	2	2	2	1.4	1.1	0.9	0.9	6	3	4	5	1.7	1.2	1.3	1.4
8 PM	3	2	1	3	1.4	1.1	0.8	1.3	7	4	2	5	1.7	1.3	0.8	1.7
9 PM	2	1	1	2	1.3	0.7	0.8	1.0	5	2	3	3	1.3	0.6	1.0	1.1
10 PM	2	1	4	2	0.9	0.6	2.1	1.2	4	2	8	4	1.0	0.8	2.3	1.2
11 PM	2	3	4	3	1.2	1.3	2.0	1.7	6	3	9	5	1.4	0.8	2.5	1.7
12 PM	2	3	2	0	0.9	1.4	1.0	0.3	4	6	3	2	1.1	2.0	1.1	0.7
1 AM	1	2	1	1	0.4	1.3	0.8	1.0	3	3	2	2	0.8	1.0	0.7	0.5
2 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0

From Aspen to Snowmass Village, connection: BRT

	average passenger per hour				average per trip				max trip				std dev			
hour	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun
5 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
6 AM	1	2	1	1	0.4	0.6	0.3	0.5	3	2	2	2	0.7	0.8	0.6	0.7
7 AM	3	3	3	3	0.7	0.8	0.8	0.8	3	5	3	4	0.8	1.2	0.8	1.0
8 AM	5	4	3	3	1.2	1.0	0.6	0.7	5	4	3	4	1.4	1.2	0.8	1.1
9 AM	5	3	4	5	1.4	0.7	1.1	1.4	8	3	4	5	1.8	1.0	1.1	1.5
10 AM	5	5	7	4	1.3	1.2	1.9	1.1	12	4	9	13	1.8	1.2	2.3	2.9
11 AM	2	1	1	2	1.0	0.3	0.3	1.0	7	1	1	2	1.7	0.5	0.5	0.8
12 PM	4	2	3	5	1.8	1.1	1.5	2.4	11	3	4	6	2.6	1.3	1.3	2.1
1 PM	5	3	2	3	2.7	1.7	1.2	1.4	32	4	3	5	5.7	1.6	1.0	1.6
2 PM	17	14	17	12	4.2	3.7	4.2	3.4	15	8	14	10	3.8	2.2	3.5	3.1
3 PM	21	22	21	15	5.7	5.5	5.4	3.8	27	16	17	11	4.6	4.3	4.8	3.5
4 PM	29	20	19	18	6.9	5.6	5.0	4.7	26	13	14	11	5.0	3.4	3.4	3.0
5 PM	35	22	22	17	9.1	6.1	6.6	4.7	27	14	13	8	6.0	3.2	3.9	1.9
6 PM	25	20	16	10	6.5	5.6	4.6	2.6	18	15	14	6	4.2	3.5	4.4	1.9
7 PM	15	10	9	11	4.1	2.8	2.6	3.0	15	9	4	7	3.4	2.6	1.4	2.3
8 PM	4	2	5	5	2.1	1.3	2.8	2.6	10	3	8	9	2.6	0.9	2.9	2.9
9 PM	4	3	5	3	2.0	1.7	2.3	1.7	6	4	6	5	1.6	1.4	1.9	1.9
10 PM	4	4	5	3	2.0	1.8	2.6	1.3	10	3	5	7	2.2	1.1	1.8	2.1
11 PM	4	6	3	2	2.0	2.8	1.6	1.1	12	6	8	3	2.6	1.7	2.3	1.1
12 PM	2	2	1	0	1.1	2.4	1.0	0.0	9	6	3	0	2.2	1.9	1.1	0.0
1 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
2 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0

From Aspen to Snowmass Village, connection: Valley Local

	average passenger per hour				average per trip				max trip				std dev			
hour	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun	M-Th	F	Sat	Sun
5 AM	0	0	0	0	0.0	0.0	0.0	0.0	0	0	0	0	0.0	0.0	0.0	0.0
6 AM	2	3	1	2	2.1	3.0	0.6	1.8	3	4	2	3	0.8	0.9	0.8	1.0
7 AM	4	3	3	6	1.9	1.7	1.5	2.8	7	3	4	7	1.4	0.9	1.2	2.2
8 AM	6	8	5	4	3.0	4.0	2.3	2.3	6	7	4	4	1.6	1.5	0.8	0.8
9 AM	7	7	4	5	4.1	3.5	1.9	2.5	15	13	3	5	3.3	3.4	1.0	1.6
10 AM	10	8	8	3	4.9	3.8	4.1	1.9	11	7	8	4	3.4	2.0	2.2	1.4
11 AM	10	10	11	8	5.2	4.8	5.4	4.1	17	12	12	12	3.8	3.0	4.1	3.0
12 PM	17	10	19	13	8.6	4.8	9.5	6.4	37	8	17	12	6.3	2.0	3.6	2.9
1 PM	19	14	22	11	9.4	7.7	10.9	6.1	37	11	24	11	6.9	2.3	6.1	3.4
2 PM	23	20	22	15	11.5	10.1	10.9	7.7	30	19	20	14	7.3	5.5	6.4	4.4
3 PM	16	19	22	20	8.5	9.3	12.1	9.8	17	16	20	22	4.0	3.9	4.9	4.5
4 PM	18	14	18	22	9.5	6.9	8.8	11.0	23	13	27	19	4.7	3.3	6.8	4.3
5 PM	25	20	17	19	13.4	9.9	8.7	9.3	29	16	19	17	5.9	3.7	4.1	4.6
6 PM	28	22	19	13	15.2	11.2	9.4	6.6	30	17	19	11	7.8	2.6	4.6	2.5
7 PM	18	13	16	14	9.2	6.6	8.7	6.9	24	14	26	12	4.8	3.4	6.6	2.5
8 PM	18	14	15	12	9.1	7.1	8.2	6.0	21	16	17	10	4.4	3.4	3.8	2.4
9 PM	24	24	13	13	12.6	12.0	8.0	6.6	21	21	12	16	4.3	4.6	2.3	3.6
10 PM	21	26	18	25	11.7	13.1	8.9	12.6	36	21	19	25	6.5	5.3	5.6	7.0
11 PM	30	34	33	22	15.5	16.8	18.2	10.8	30	23	33	21	7.0	3.6	8.3	4.9
12 PM	17	12	12	8	9.0	11.8	12.2	10.5	20	22	16	19	3.9	6.1	2.8	5.5
1 AM	9	0	0	0	4.3	0.0	0.0	0.0	13	0	0	0	3.6	0.0	0.0	0.0
2 AM	6	0	0	0	3.4	0.0	0.0	0.0	21	0	0	0	4.5	0.0	0.0	0.0

WARNER TRANSPORTATION CONSULTING
177 Riverside Drive, Northampton, MA 01062 413 585-5026 warnertransportation.com

To: David Pesnichak, Pitkin County

From: Marc Warner

Date: July 2, 2022

Re: Snowmass Regional Transit Service Analysis—Initial findings and conclusions

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This memo lays out the following preliminary recommendations to improve transit service to and from Snowmass Village:

- Route RFTA buses along Carriage Way in both directions (page 2)
- In non-winter seasons from 6 AM to 8 PM, stop holding SM-I or Valley Local buses at Brush Creek P&R, and use the time saved to cut SM-I headway from 15 minutes to 12 minutes; add a fourth bus on SM-I service during periods of highest demand (page 4)
- Run the small set of Snowmass-Valley direct buses during peak seasons as resources allow (page 14)
- Fix some deficiencies at particular Snowmass Village bus stops (page 21)

The memo also includes key results of a survey of commuters to Snowmass Village (page 22), and traveler characteristics: Snowmass Village vs. Aspen (page 39).

Preliminary recommendation 1: Route RFTA buses along Carriage Way in both directions

RFTA buses to Snowmass Village now operate from Wood Road to the Mall one way up Brush Creek Road, and then one-way down Carriage Way from the Mall back to Wood Road. It would make more sense *from a ridership perspective* to aligning these buses on Carriage Way in both directions. To see this, consider the RFTA boardings and alightings on the stops affected:

	March 17 boardings	March 17 alightings
Brush Creek Rd + Wood Rd Uphill and Downhill	162	1,196
Brush Creek Rd + Hawk Ridge Ln Uphill	34	38
Brush Creek Rd + Divide Rd Uphill	39	55
Snowmass Mall	2,929	3,640
Stonebridge Inn Downhill	996	79
Base Village	1,719	465
Sum of these stops	5,879	5,473

While the total boardings and alightings at these stops are about the same over the course of the day, there are huge imbalances by stop. This suggests that about 700 riders who get off at the layover stop at the Mall are walking down to destinations closer to the Stonebridge Inn. Likewise, about 1,000 riders are getting off at Wood Road uphill and then walking across the Wood Road bridge to destinations closer to Base Village.

Aligning the buses on Carriage Way in both directions would eliminate these imbalances and allow 1700 or so current riders to have shorter walks between the bus stop and their Snowmass Village destination in both directions. It would also eliminate the accident risk for pedestrians and delays to motorists by significantly reducing the number of people crossing Brush Creek Road by the Wood Road rotary. The proposed change would lead to *longer* walks to the bus stop for travelers heading to Hawk Ridge or

Divide Road, but these stops currently get bus service only in the uphill direction and account for only 1.4 percent of the total RFTA boardings and alightings in the core part of Snowmass Village.

Is this change operationally feasible?

Here's what this change would require:

- RFTA would have to relocate the Wood Road Uphill bus stop to a spot east of the Wood Road rotary. The proposed location shown at right would also allow easy access to the walkway at the edge of the parking lot to Clark's Market.

- New bus loading and unloading locations in the Base Village tunnel to allow for bi-directional bus movements.

- New Stonebridge Uphill bus stop. The spot marked would allow about 100 feet of pullout space outside the uphill traffic lane.

- Confirmation that full-size RFTA buses can make the tight turn into the bus bays at the Mall. The TOSV buses already make this turn, but they are smaller than the RFTA buses.

Preliminary recommendation 2: In non-winter seasons from 6 AM to 8 PM, stop holding SM-I or Valley Local buses at Brush Creek P&R, and use the time saved to cut SM-I headway from 15 minutes to 12 minutes; add a fourth bus on SM-I service during periods of highest demand

The benefits of connecting at Brush Creek Park & Ride from an operational perspective

Snowmass Village is at the top of Brush Creek Road, and anyone heading to it will never be on the way to anywhere else. The amount of regional transit service to Snowmass Village must therefore be what it can justify on its own. At its busiest--in ski season—it can justify a fair amount. During these months, and with significant funding from the Aspen Ski Co, RFTA operates frequent direct buses between Aspen and Snowmass Village. It also runs a few direct buses between Downvalley communities and Snowmass Village during peak hours in the peak direction.

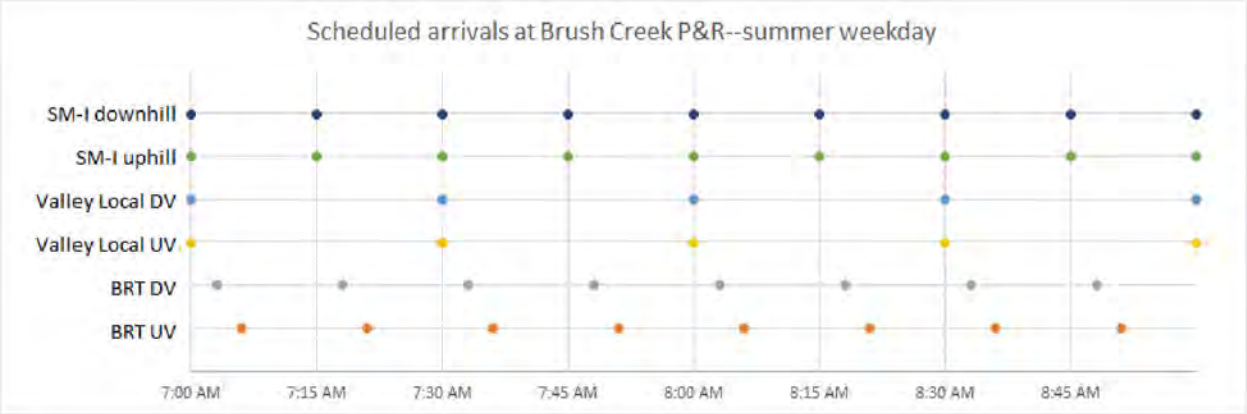
In other seasons, with less activity and travel demand, RFTA does not run direct buses from Aspen to Snowmass Village. The agency would have run peak period, peak direction buses to Snowmass Village from Downvalley Communities this summer, but cancelled them due to lack of bus operators. Thus, outside of the winter season, the only option for regional transit access to Snowmass Village is the "SM-I" bus running between the Mall and the bottom of Brush Creek Road, where riders can connect to the BRT and Valley Local routes at the Brush Creek Park & Ride.

From an operational perspective, this approach of running a connecting service at Brush Creek P&R is an efficient way to provide Snowmass service. For any given operating budget, or more directly, number of buses, vehicle miles, operating hours, or this year's particular constraint--bus operators, it offers the highest trip frequency and/or the longest service span of buses to and from Snowmass Village. Diverting some Valley Locals or BRTs to Snowmass Village instead of to Aspen would also be an option, but Aspen has much heavier travel and transit demand, and this would thus be a net loss systemwide productivity.

The disadvantages of connecting at Brush Creek Park & Ride from a passenger perspective

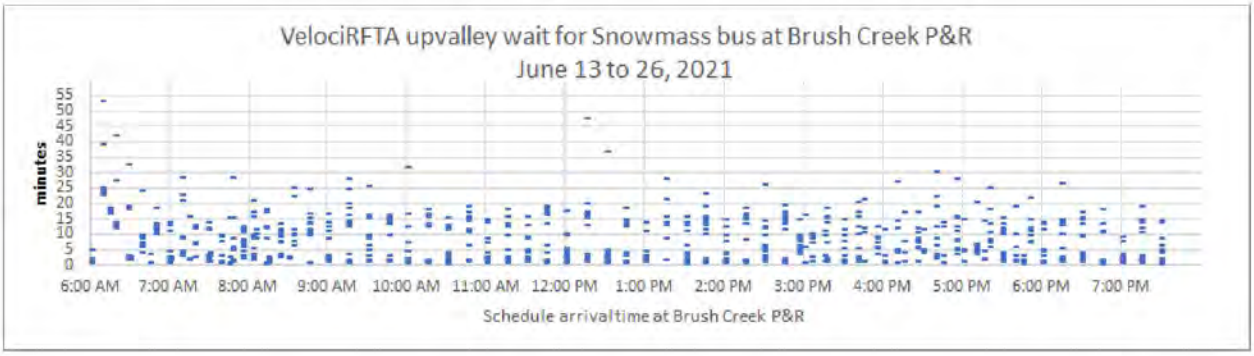
From a passenger perspective, however, the benefits of the connection—more frequency, longer service span, *more trip choices*—are not always evident, and are in any case offset in part by the need for a two-seat ride and the time spent waiting for the next bus at Brush Creek P&R. The goal of RFTA, then, is to make the connection as painless as possible. In key ways, it already has: the detour to the park-and-ride is less than 1,000 feet; the passengers have an attractive semi-enclosed shelter with benches and heat lamps, and the walk from one bus to another is a few steps without any need to cross a road.

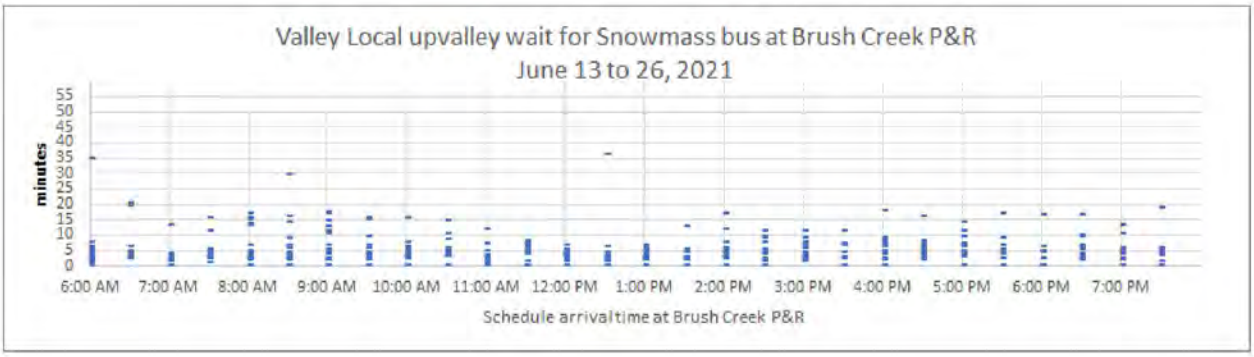
RFTA also coordinates the schedules for the Snowmass and Valley Local buses (in both directions). The chart below shows the current scheduled arrival times at Brush Creek P&R between 7 and 9 AM for the SM-I, Valley Local, and BRT buses. You can see the match up of the Valley Local and SM-I buses on the hour and the half hour, and that travelers on the BRT would have a *scheduled* wait time of 9 to 12 minutes for the next bus to Snowmass Village.



This 9-minute (upvalley BRT) and 12-minute (downvalley BRT) connection time from the BRT to the Snowmass bus would eliminate much of the time advantage of the BRT's shorter travel time compared with the Valley Local. A more important issue is that these *scheduled* connection times are unreliable. Buses do not arrive at Brush Creek P&R with anywhere near perfect schedule adherence, and a bus rider waiting for the Snowmass bus—after getting off either the BRT or the Valley Local--may get very unlucky.

The charts below, based on AVL/APC data, show the number of minutes at Brush Creek P&R between the actual arrival of the upvalley BRT or Valley Local, and the actual next departure of an SM-I bus to Snowmass over 13 days in June 2021. The period shown from 6 AM to 8 PM is when RFTA operates the most service in the SH 82 corridor.



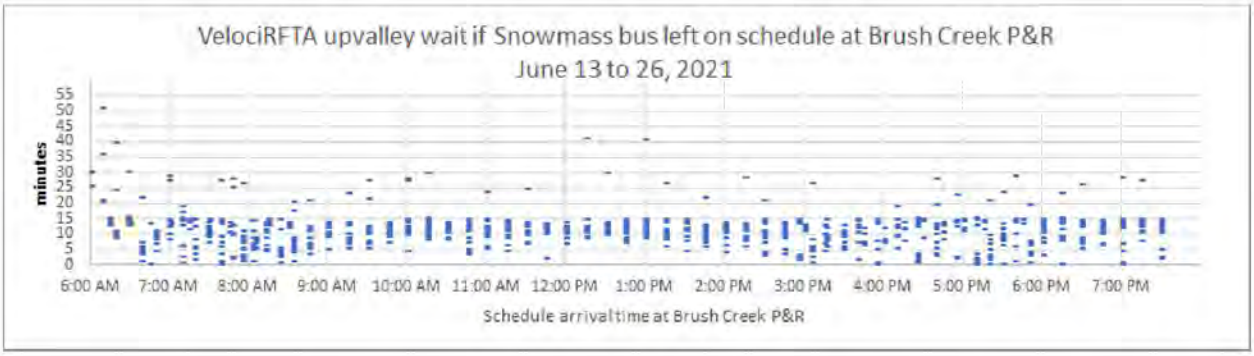


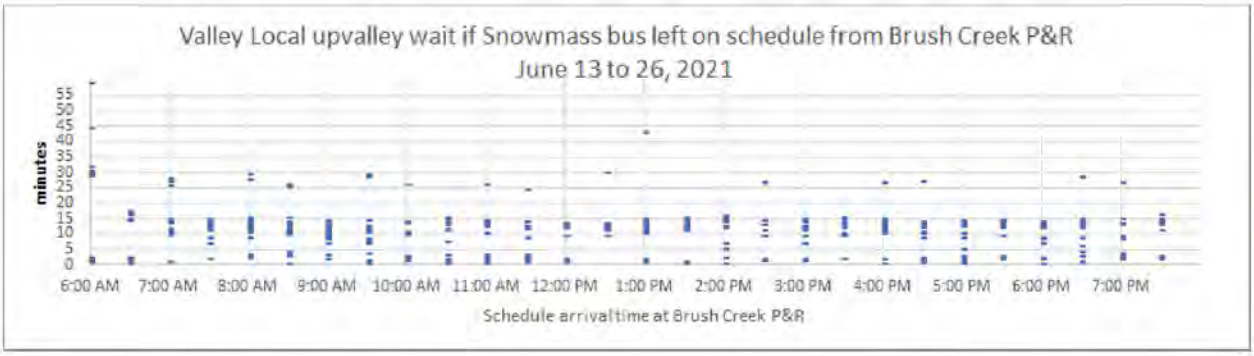
You can see that a BRT rider heading upvalley to Snowmass cannot count on the nine-minute connection specified in the timetable. In fact, the average connection time over these hours is 8.13 minutes, and the common statistical measure of dispersion, the standard deviation, is 7.33 minutes. Given this, the BRT upvalley traveler couldn't be 95 percent confident of leaving on the Snowmass bus in less than 22.50 minutes after arriving at Brush Creek P&R.

Snowmass-bound travelers on the upvalley Valley Local buses have a shorter and somewhat more predictable connection time at Brush Creek P&R. This is in part a reflection of the *scheduled* common time for both the Valley Local and Snowmass bus on the hour and half hour. It also reflects RFTA's practice of monitoring the arrival times at Brush Creek P&R and holding the Snowmass or (less frequently) the Valley Local bus for up to eight minutes to ensure that travelers from the upvalley *and* downvalley Valley Local can make the connection. This leads to a connection time for riders on the upvalley Valley Local that averages 5.01 minutes, with a standard deviation of 5.49. Given the occasional cancelled bus trip, though, the upvalley traveler on the Valley Local could still not be 95 percent confident of departing on the Snowmass bus until 15.76 minutes after arriving at Brush Creek P&R. Note that the RFTA does *not* hold the Snowmass bus or the BRT to facilitate a connection between these two routes.

The decision to hold the Snowmass bus at Brush Creek P&R

With a 15-minute headway on the Snowmass bus, RFTA's policy of holding the bus to wait for the Valley Locals makes sense. The charts below show the wait time for passengers on the BRT and the Valley Locals given their actual arrival times, but with the assumption that the Snowmass buses left Brush Creek P&R as scheduled, on the 15, 30, 45, and top of the hour. The assessment still includes the same cancelled trips, but assumes that the subsequent bus does operate on schedule.





If you compare these charts to the ones on page 5, you can see that the wait time for the Brush Creek P&R connection to the Snowmass bus is worse for the upvalley rider on the Valley Local—the cluster of points around the five-minute mark under RFTA's current policy of holding the buses jumps to around ten minutes under the scenario of the Snowmass bus departing as scheduled. The leave-on-schedule scenario also offers no improvement in the connection time for upvalley travelers off the BRT. Here's the statistical comparison based on the data in these charts (again, June 13 to 26 from 6 AM to 8 PM):

Connecting from SH82 buses headed upvalley

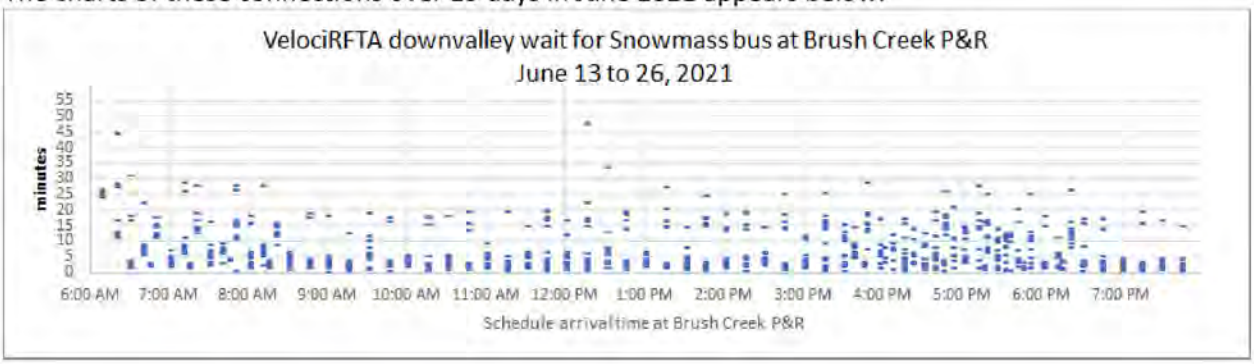
	SM-I bus as currently held at BC P&R			if SM-I bus left as scheduled		
	BRT	Local	all UV	BRT	Local	all UV
Average wait time	8.13	5.01	7.05	10.91	10.75	10.85
Standard deviation	7.33	5.49	6.91	5.70	7.24	6.28
95% CI upper bound	22.50	15.76	20.60	22.08	24.94	23.15
99% CI upper bound	26.98	19.11	24.82	25.56	29.35	26.98

The situation in the Downvalley direction (travelers coming from Aspen and heading to Snowmass Village) similarly shows the advantage of RFTA's policy of holding the Snowmass bus.

Connecting from SH82 buses headed downvalley

	SM-I bus as currently held at BC P&R			if SM-I bus left as scheduled		
	BRT	Local	all DV	BRT	Local	all DV
Average wait time	6.70	4.12	5.90	12.14	13.72	12.63
Standard deviation	6.58	4.19	6.06	5.27	7.24	5.09
95% CI upper bound	19.60	12.34	17.79	22.48	24.94	22.60
99% CI upper bound	23.61	14.89	21.49	25.69	29.35	25.70

The charts of these connections over 13 days in June 2021 appears below.



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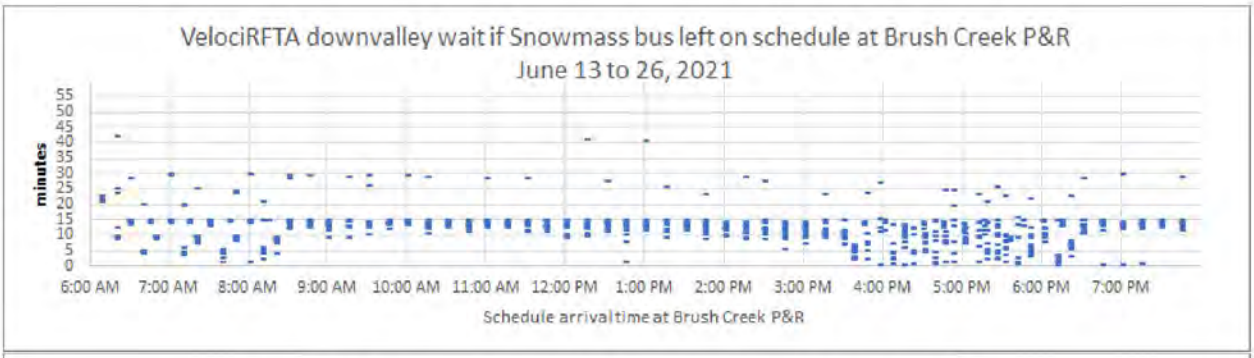
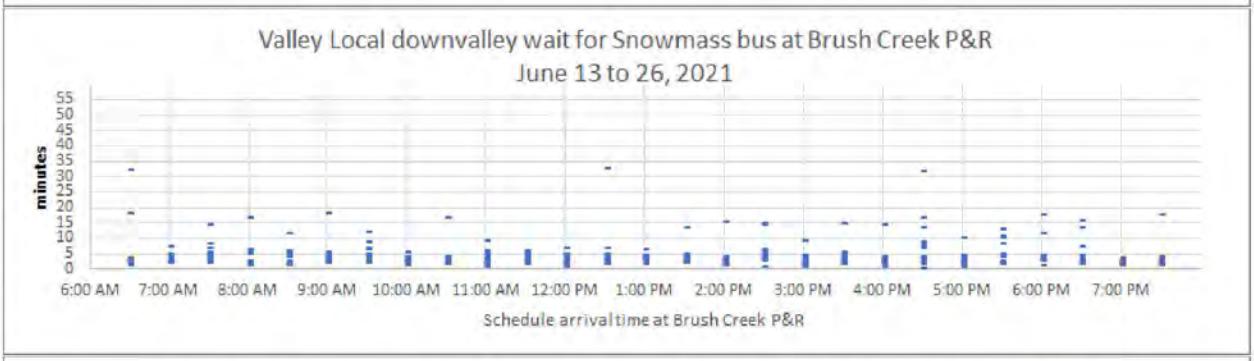
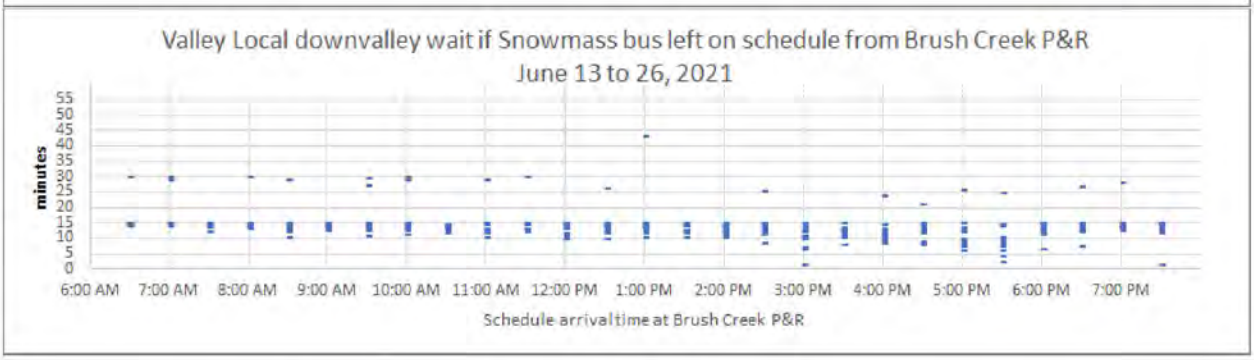






What if RFTA used the time it reserves for holds at Brush Creek P&R to cut the cycle time instead?

Running the Snowmass bus with the hold at Brush Creek P&R is better than running the Snowmass bus on a 15-minute headway without it. But what if RFTA ran the Snowmass bus without a hold at Brush Creek and used the time it currently reserves for the hold to cut the cycle time instead? Here's what this would mean:

	Current conditions (hold at BCP&R) minutes	Alternative: (no hold at BCP&R) minutes
Mall to BC P&R time	10 to 14	10 to 14
BC P&R dwell time	3 to 10	1 to 2
BC P&R to Mall time	9 to 13	9 to 13
Round trip time with BC dwell	22 to 37	20 to 29
Recovery/layover time at Mall	8 to 13	7 to 16
Reasonable cycle time	45	36

Achievable headway with 3 buses on route	*15*	*12*

These travel and dwell times are realistic; they are the actual times for the SM-I service during the summer period analyzed, June 13 to 26, 2021, as shown on the charts on the next page.

The key point is that it is operationally quite feasible to run 12-minute headways on the SM-I route with the same three buses and the same three operators. Moreover, the more frequent service without the hold at Brush Creek is better for connecting Valley Local and BRT passengers than is the 15-minute headway with time allotted for the hold. This is evident from the charts on page 11 and the table below:

Connecting from SH82 buses headed upvalley

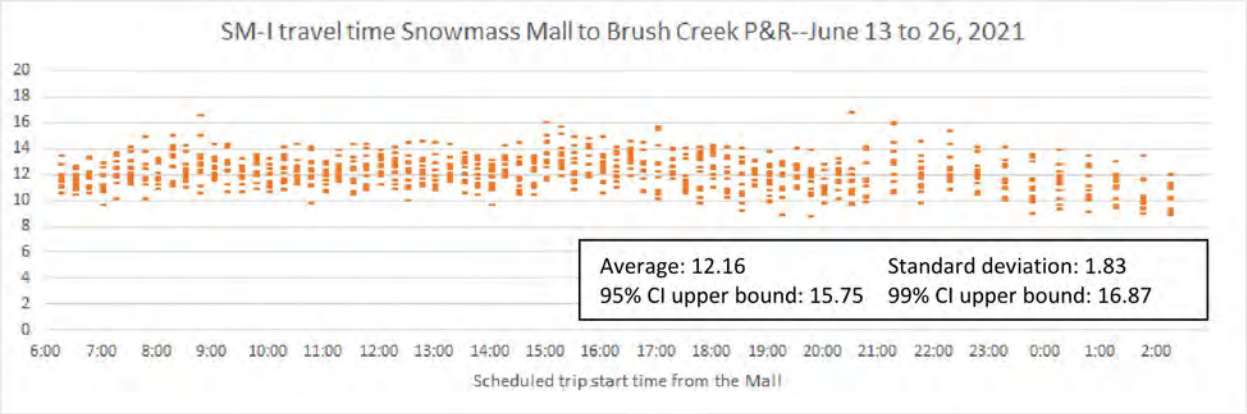
	SM-I bus as currently held at BC P&R			**if SM-I bus left on 12-minute headway**		
	BRT	Local	all UV	BRT	Local	all UV
Average wait time	8.13	5.01	7.05	6.52	6.66	6.57
Standard deviation	7.33	5.49	6.91	4.16	3.70	4.00
95% CI upper bound	22.50	15.76	20.60	14.66	13.90	14.41
99% CI upper bound	26.98	19.11	24.82	17.20	16.15	16.85

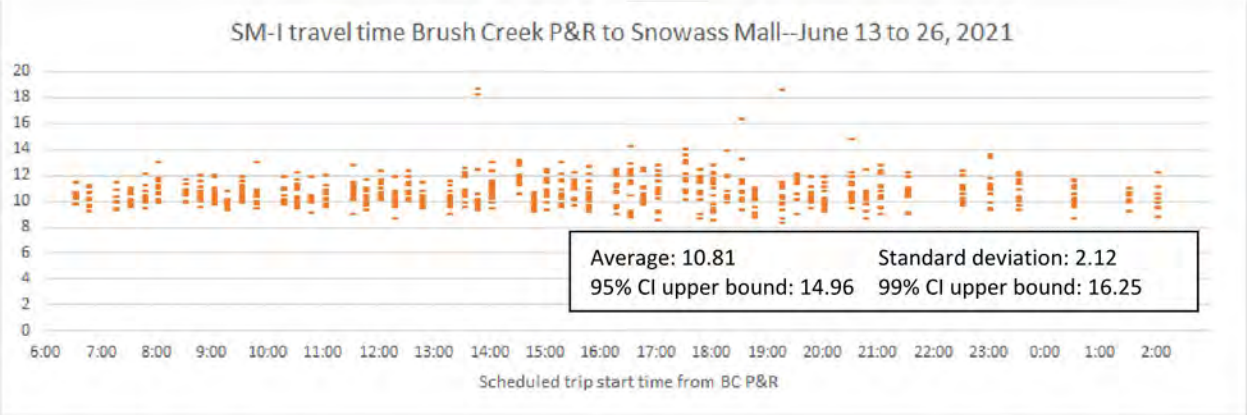
Connecting from SH82 buses headed downvalley

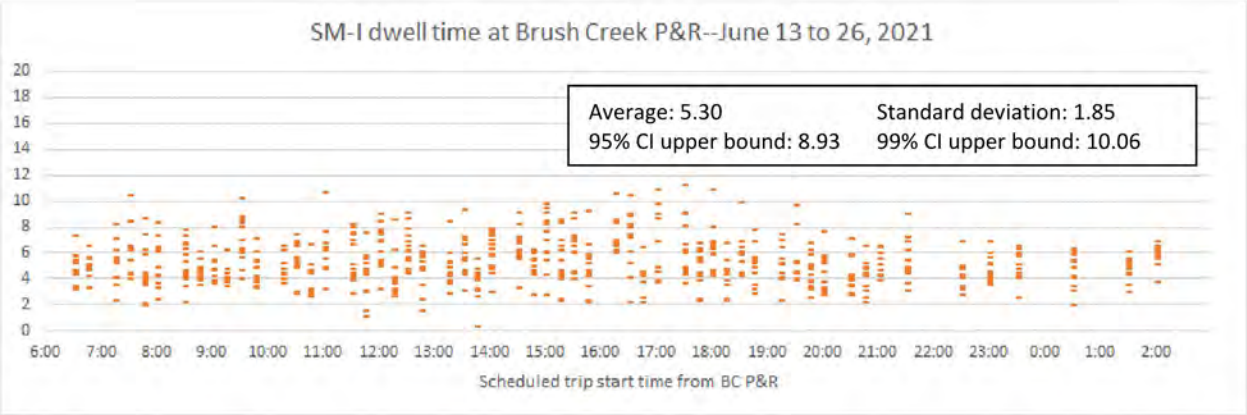
	SM-I bus as currently held at BC P&R			**if SM-I bus left on 12-minute headway**		
	BRT	Local	all DV	BRT	Local	all DV
Average wait time	6.70	4.12	5.90	6.42	7.15	6.65
Standard deviation	6.58	4.19	6.06	3.96	3.37	3.80
95% CI upper bound	19.60	12.34	17.79	14.18	13.75	14.10
99% CI upper bound	23.61	14.89	21.49	16.60	15.81	16.42

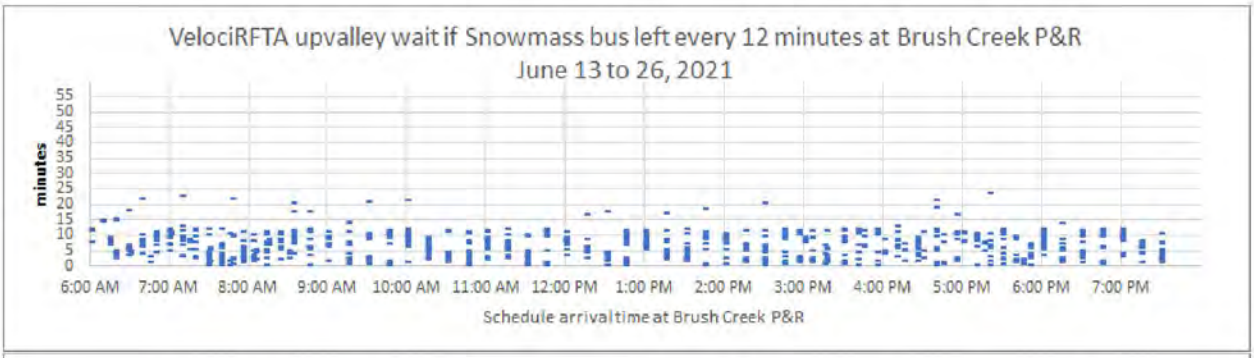
The table shows that dropping the hold and going to a fixed 12-minute headway for the SM-I bus leads to a small change in the average wait time for the BRT and Valley Local buses combined, but a much more significant drop in the standard deviation. This means that wait time is more predictable, and the unlucky travelers under the worst conditions, now have much shorter waits at Brush Creek P&R.

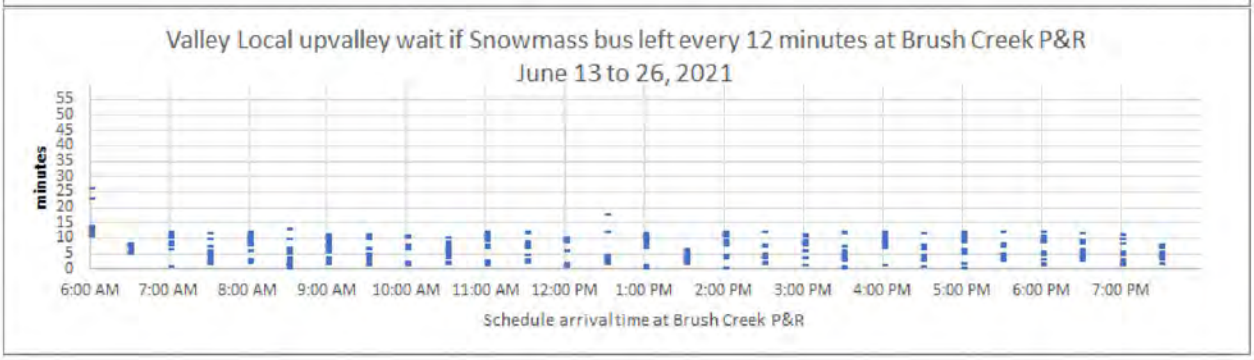
Duration of SM-I travel times and dwell at Brush Creek P&R

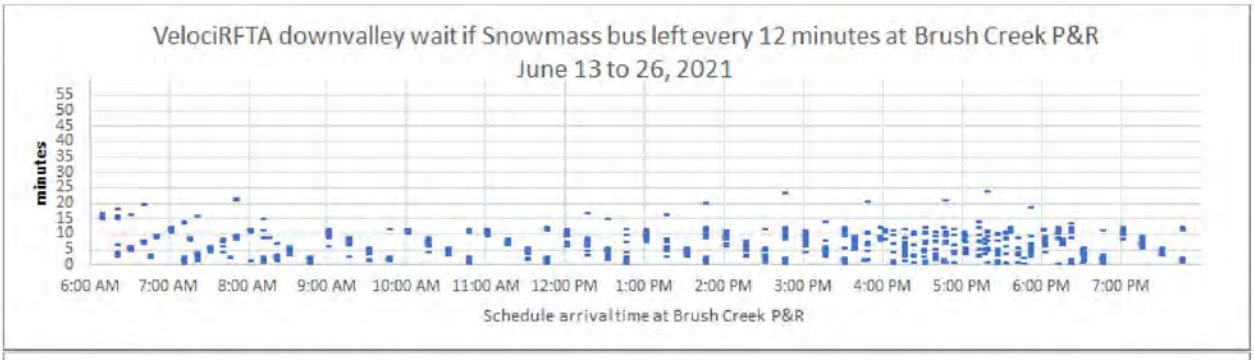


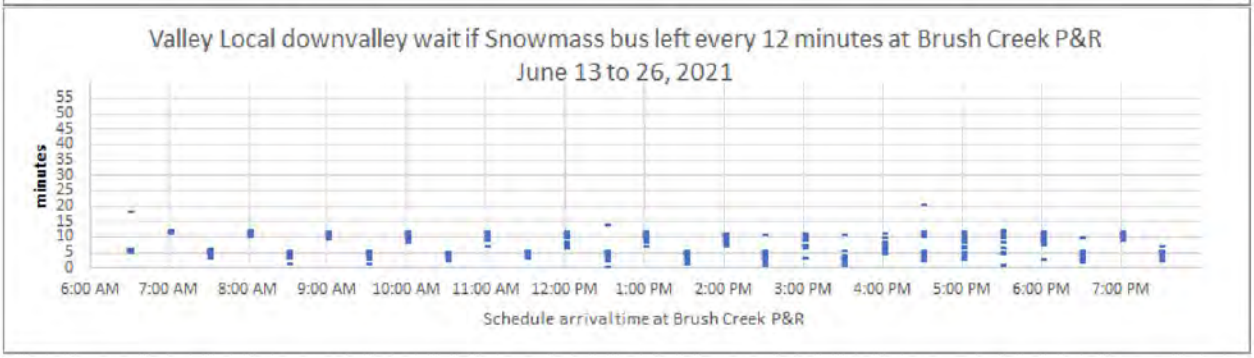












Again, these charts are based on a simulation of SM-I buses leaving at a fixed headway applied on top of the actual arrival times of the BRT and Valley Local buses at Brush Creek P&R. The added cost to run this scenario would only be for the added milage related to the extra round-trip up Brush Creek Road per hour. This would be an added 168 vehicle miles if RFTA ran this level of service over a 14-hour service span. The service would use the same number of operators it now uses for the 15-minute headway, thus there would be no added pay hours for operating staff.

Impact of a fourth bus on the route

With a 36-minute cycle time, the SM-I could operate on nine-minute headways with a fourth bus on the route. The table below summarizes the benefits for Snowmass-bound passengers relative to the current conditions and other scenarios examined.

Connecting from SH82 buses headed upvalley

	SM-I bus as currently held at BC P&R			**if SM bus left as scheduled**		
	BRT	Local	all UV	BRT	Local	all UV
Average wait time	8.13	5.01	7.05	10.91	10.75	10.85
Standard deviation	7.33	5.49	6.91	5.70	7.24	6.28
95% CI upper bound	22.50	15.76	20.60	22.08	24.94	23.15
99% CI upper bound	26.98	19.11	24.82	25.56	29.35	26.98

	if SM bus left on 12-minute headway			**if SM bus left on 9-minute headway**		
	BRT	Local	all UV	BRT	Local	all UV
Average wait time	6.52	6.66	6.57	5.00	4.76	4.91
Standard deviation	4.16	3.70	4.00	3.35	2.87	3.20
95% CI upper bound	14.66	13.90	14.41	11.57	10.38	11.18
99% CI upper bound	17.20	16.15	16.85	13.61	12.13	13.13

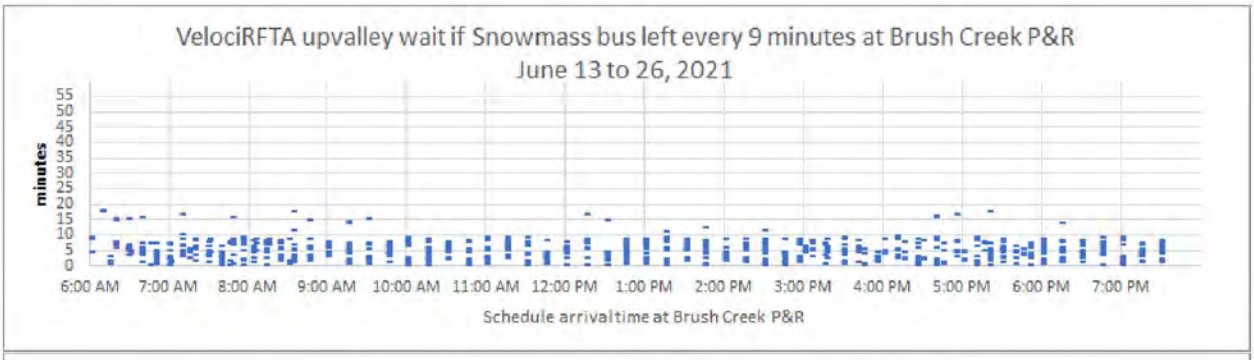
Connecting from SH82 buses headed downvalley

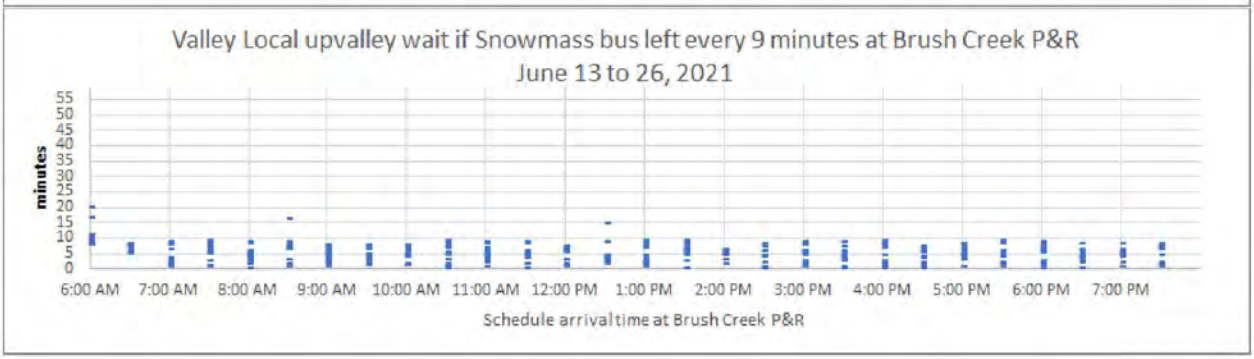
	SM-I bus as currently held at BC P&R			**if SM bus left as scheduled**		
	BRT	Local	all UV	BRT	Local	all UV
Average wait time	6.70	4.12	5.90	12.14	13.72	12.63
Standard deviation	6.58	4.19	6.06	5.27	7.24	5.09
95% CI upper bound	19.60	12.34	17.79	22.48	24.94	22.60
99% CI upper bound	23.61	14.89	21.49	25.69	29.35	25.70

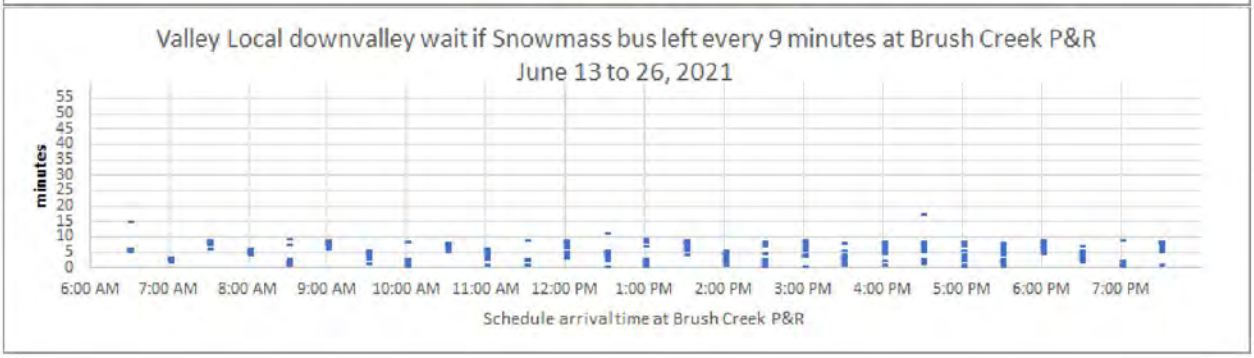
	if SM bus left on 12-minute headway			**if SM bus left on 9-minute headway**		
	BRT	Local	all UV	BRT	Local	all UV
Average wait time	6.42	7.15	6.65	4.83	4.63	4.74
Standard deviation	3.96	3.37	3.80	2.92	2.65	2.82
95% CI upper bound	14.18	13.75	14.10	10.55	9.82	10.26
99% CI upper bound	16.60	15.81	16.42	12.33	11.44	11.98

You can see that the nine-minute headway cuts the average wait time for the BRT or the Valley Local to five minutes or less, and—more importantly—it cuts the wait time under the worst-case conditions (the 95 and 99% upper bounds) in half.

The addition of a fourth bus on the SM-I route for the full period between 6 AM and 8 PM would entail 448 more vehicle miles and 14 more operator pay hours (plus deadhead time and miles). Operating this route with a fourth bus for fewer hours each day would be less expensive.







Other passenger and operational benefits

The analysis so far has examined only the connection time at Brush Creek P&R for travelers *going to* Snowmass Village. For riders looking to connect *from* Snowmass Village, the connection time does not depend on whether RFTA holds the SM-I bus; riders will get off the SM-I bus when it arrives at Brush Creek P&R, not when it leaves. The connection time from Snowmass Village, however, does depend on whether RFTA holds the SH82 buses. The agency's policy is not to hold the BRT, but it will hold the Valley Local to facilitate the connection for travelers from the Snowmass bus. This approach is good for the Snowmass riders heading to the Valley Local, but does mean unnecessary *dwell time* at Brush Creek P&R for Valley Local riders who are traveling between Downvalley communities and Aspen.

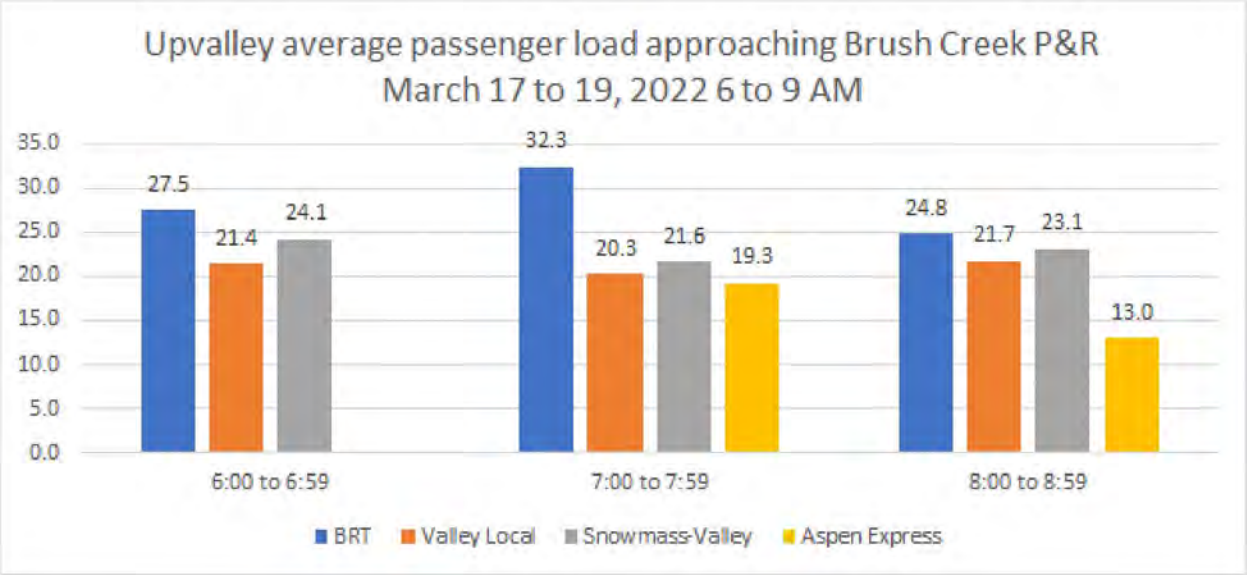
Moreover, RFTA may be able to achieve *travel time* savings on the Valley Local affecting all riders on this route (to Snowmass or Aspen) if it could relax the scheduling constraint of trying to meet the bus from Snowmass. This is not to suggest that RFTA relax its goal of *schedule adherence*, but rather that the attempt to meet the Snowmass bus may have led to some padding of the Valley Local schedule at the stops leading up to Brush Creek P&R. The charts comparing schedule adherence of the BRT and the Valley Local in both winter and summer (next page), suggest that this is the case. Many of the Valley Local trips are arriving early at Brush Creek P&R, and the average and standard deviation for the delay are significantly lower for the Valley Local than for the BRT. It is also possible that RFTA is not padding the Valley Local schedule as much as it is being optimistic about the schedule for the BRT—the data does not rule this out. In that case, it might make sense to add two or three minutes for the upvalley BRT travel time while cutting two minutes from the travel time for the upvalley Valley Local. This would still allow a fairly even interarrival time of upvalley SH82 buses at Brush Creek P&R.

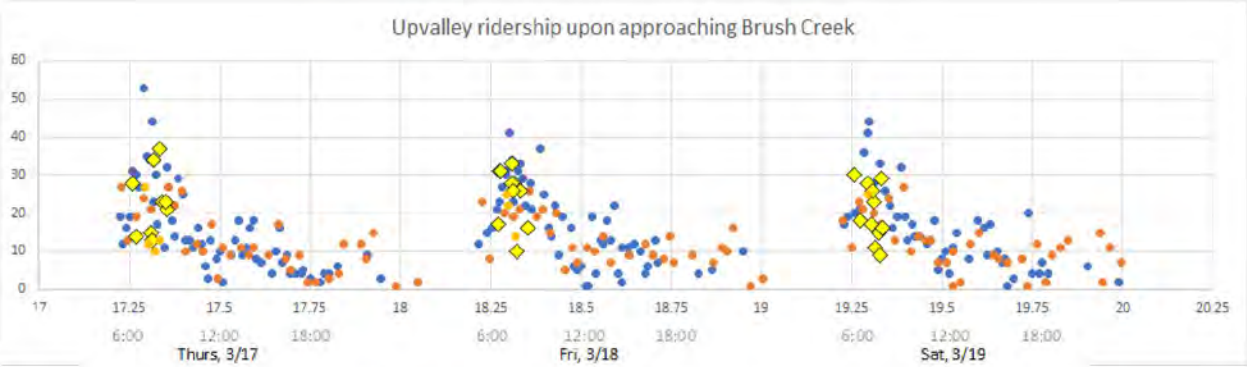
In any case, a quick connection with the upvalley Valley Local for riders coming off the Snowmass bus does not seem all that critical. Except for the very small share of these riders who might be going to Truscott or Aspen Country Inn, any of these riders do not have to wait for the half-hourly Valley Local; they could also take the much more frequent upvalley BRT.

Preliminary recommendation 3: Run the small set of Snowmass-Valley direct buses during peak seasons as resources allow

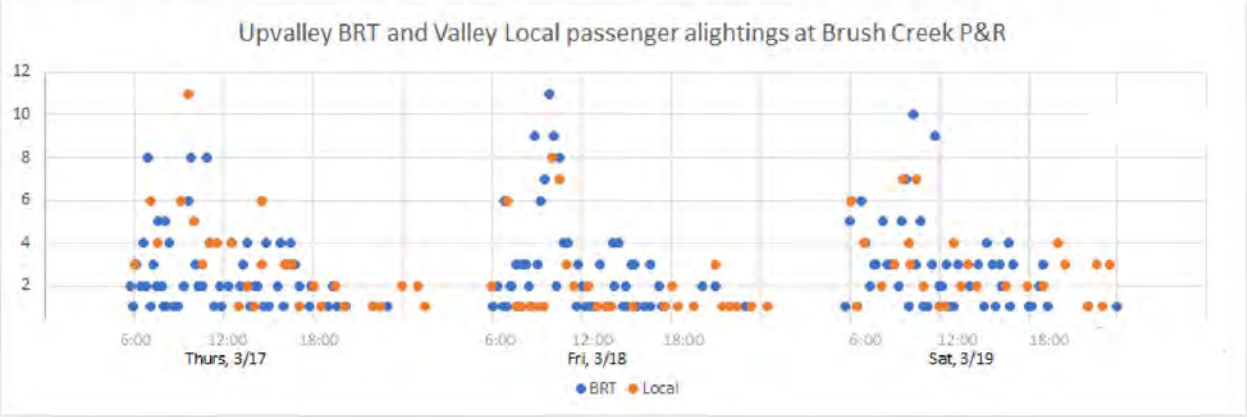
RFTA this past winter ran 15 trips with direct service between Snowmass Mall and downvalley communities (eight upvalley to Snowmass in the AM peak, and seven downvalley from Snowmass in the PM peak). The schedules for these trips are on the next two pages. Note that these RFTA had planned to run Snowmass-Valley direct buses this summer, but cancelled them because of a shortage of operators. Transit to and from Snowmass Village thus requires a connection at Brush Creek P&R since the winter schedule ended on April 17th.

The Snowmass-Valley trips are productive; i.e., they carry a reasonably high number of riders per trip. This is evident by noting that the average passenger load at Brush Creek (the point where the Snowmass-Valley service diverts from the other SH82 services) compares favorably with that of the Valley Local and the Aspen Express. You can see this on the charts on the next page.

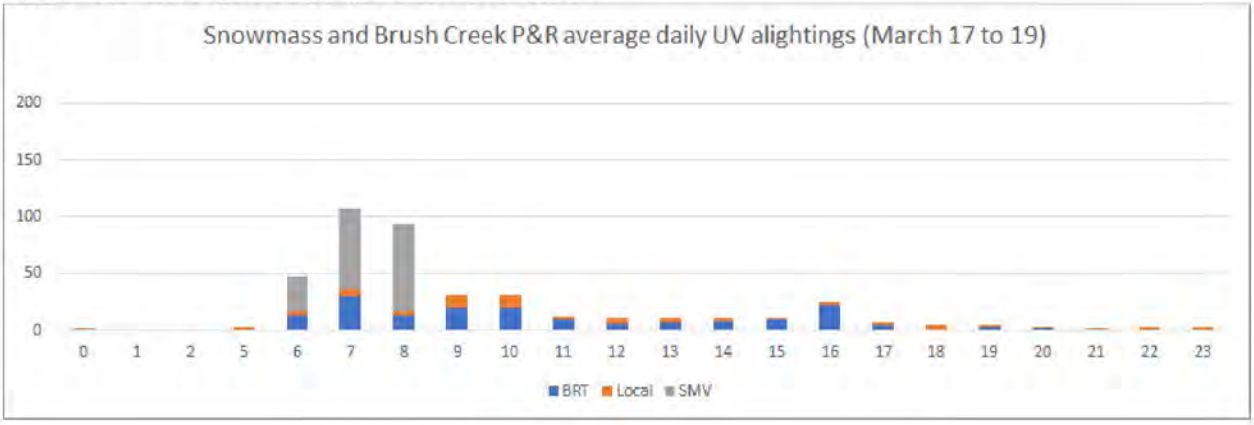


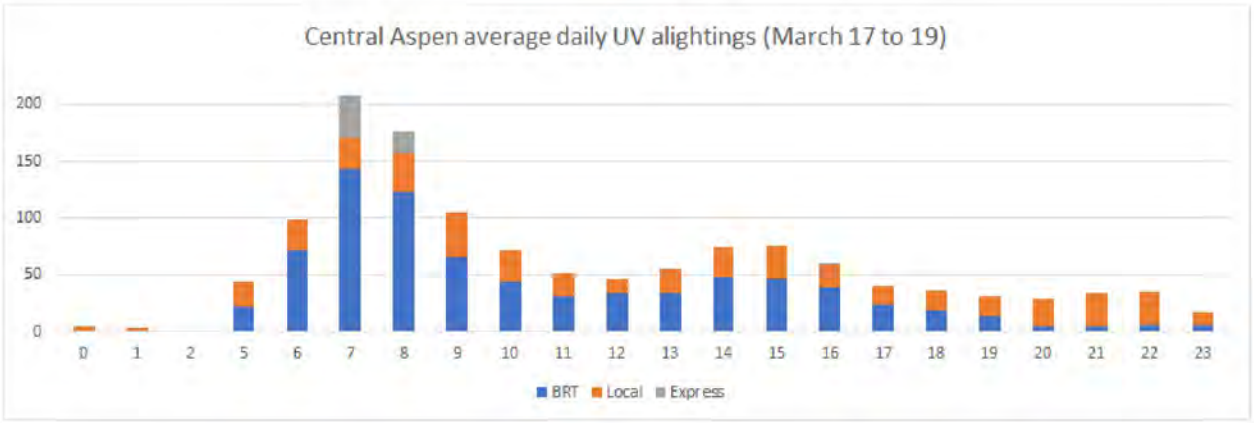


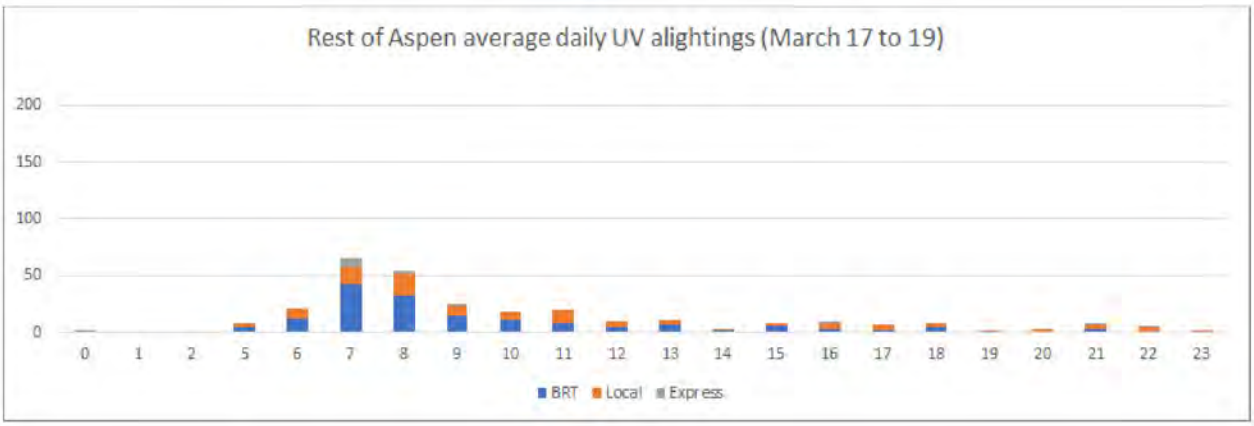
The current importance of the Snowmass-Valley service is also evident by the fact that the 676 passengers carried up Brush Creek Road by the AM Snowmass-Valley services on March 17 through 19 is more than all the passengers who got off upvalley BRTs and Valley Locals over the same period at Brush Creek Park & Ride. The chart below shows that most of these buses dropped off four or fewer riders at Brush Creek P&R, for a total of only 629 Snowmass-bound riders—140 per day for the upvalley BRT, and 60 per day for the upvalley Valley Local—from March 17 to 19.



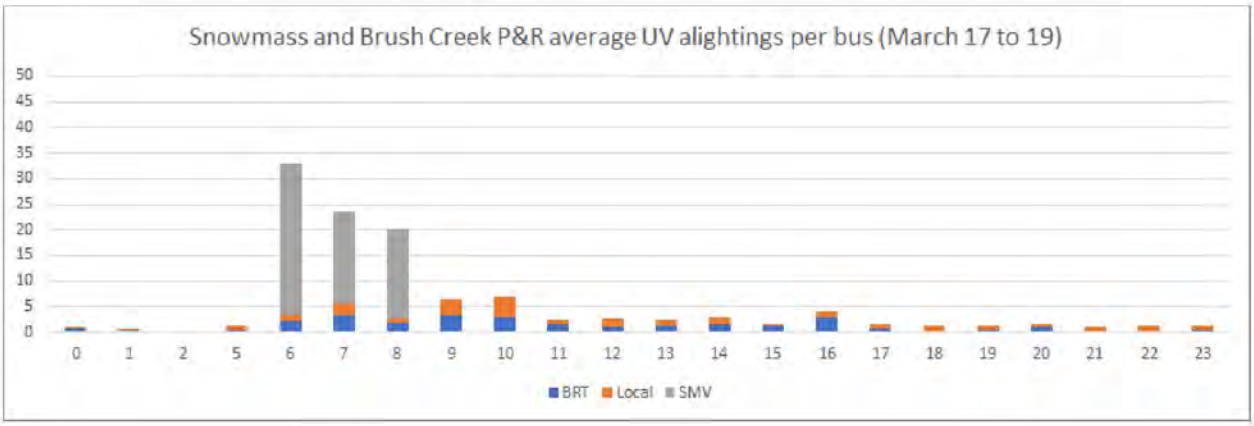
The following charts show the alightings per hour from upvalley buses in Snowmass Village, Brush Creek P&R, and, for comparison, Aspen—March 17 to 19

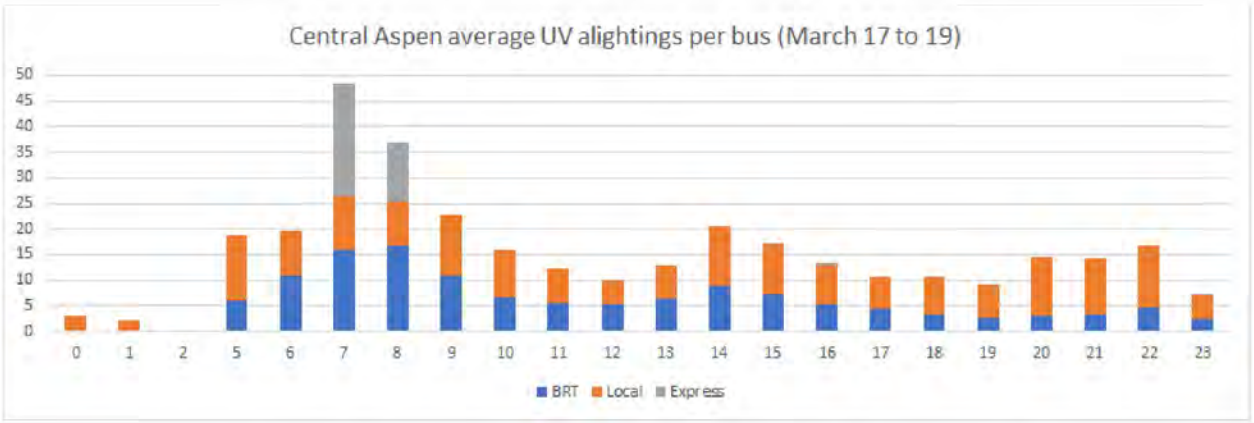


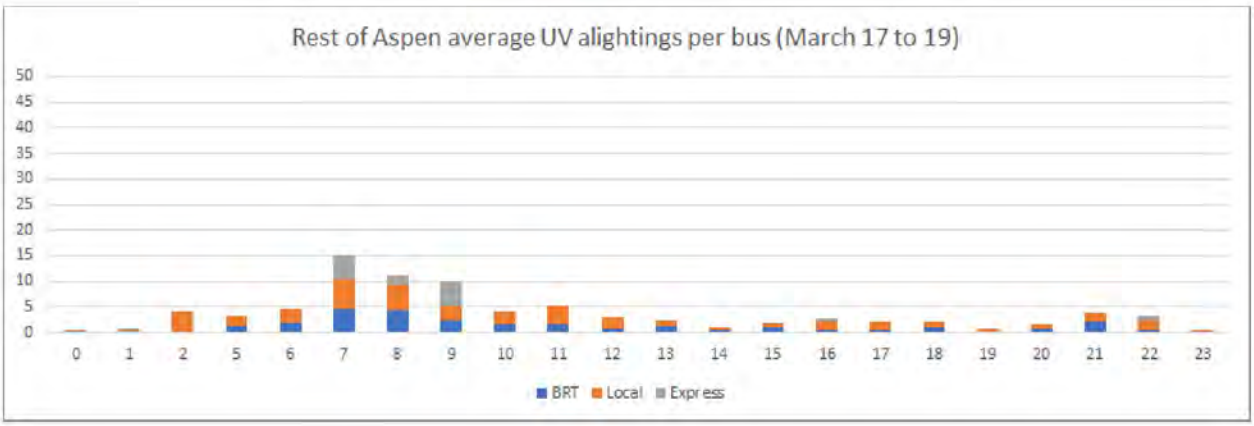




This is the same information on a *per trip* basis.







By all of these measures, the Snowmass-Valley buses are a success, and RFTA schedulers seem to have fit them into the timetable with a minimum of unproductive deadhead time. This adds to the route's efficiency.

Average passenger load per bus per hour of Upvalley buses approaching Brush Creek P&R

hour	BRT	Valley Local	Snowmass-Valley	Aspen Express
5	15.7	16.7		
6	27.5	21.4	24.1	
7	32.3	20.3	21.6	19.3
8	24.8	21.7	23.1	13.0
9	22.0	18.8		
10	13.8	12.3		
11	9.5	9.7		
12	8.0	8.4		
13	11.8	9.2		
14	12.3	13.0		
15	10.6	10.4		
16	6.2	8.2		
17	8.0	7.0		
18	4.0	5.8		
19	4.5	7.2		
20	5.0	10.7		
21	7.5	10.3		
22	6.5	12.0		
23	2.0	5.0		
0		3.0		
1		2.0		

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Upvalley Snowmass-Valley schedules (winter 2021/22)

Pattern	GW-SM L	CDP/BL-SM	GW624-SMX	EJ-SM L	GEJ624-SMX	AJ/BS-SML	B/EJ/B-SML	GW/CS-SM X
West Glenwood Park & Ride	5:08 AM		6:06 AM		6:36 AM			7:08 AM
West Glenwood Mall			6:08 AM		6:38 AM			
Hwy 6 + Soccer Field Rd			6:09 AM		6:39 AM			
Hwy 6 + 135 Rd			6:10 AM		6:40 AM			
Hwy 6 + Traver Trail			6:15 AM		6:45 AM			
Ramada			6:16 AM		6:46 AM			
Glenwood Meadows	5:10 AM							7:10 AM
Glenwood Rec Center	5:11 AM							7:11 AM
8th St + Colorado Ave	5:15 AM							7:15 AM
Grand Ave + 9th St	5:16 AM		6:18 AM		6:48 AM			7:16 AM
Grand Ave + 14th St	5:17 AM		6:19 AM		6:49 AM			7:17 AM
Grand Ave + 20th St	5:18 AM		6:20 AM		6:50 AM			7:18 AM
27th St Station	5:23 AM		6:23 AM		6:53 AM			7:23 AM
Roaring Fork Marketplace	5:26 AM		6:26 AM		6:56 AM			7:26 AM
Hwy 82 + Spring Valley Rd	5:31 AM		6:31 AM		7:01 AM			7:31 AM
Aspen Glen	5:36 AM		6:36 AM		7:06 AM			7:36 AM
Carbondale Park & Ride	5:40 AM				7:10 AM			7:40 AM
Carbondale Pool		6:36 AM						
6th St + Colorado Ave		6:36 AM						
Main St + Hwy 133		6:37 AM						
JW Dr + El Jebel Rd		6:40 AM						
Ranch at Roaring Fork	5:44 AM	6:44 AM			7:14 AM			7:46 AM
Hwy 82 + Catherine Store Rd	5:45 AM	6:45 AM			7:15 AM			7:48 AM
JW Dr + Buckskin Dr	5:49 AM	6:49 AM			7:19 AM		7:49 AM	
JW Dr + Deer Run	5:50 AM	6:50 AM			7:20 AM		7:50 AM	
JW Dr + El Jebel Rd	5:56 AM	6:51 AM			7:26 AM		7:56 AM	
El Jebel Park & Ride	6:00 AM			7:00 AM	7:30 AM		8:00 AM	
Willits	6:01 AM			7:01 AM	7:31 AM		8:01 AM	
Hwy 82 + Original Rd	6:03 AM			7:03 AM	7:32 AM		8:03 AM	
Two Rivers Rd + Hillcrest Dr	6:04 AM			7:04 AM		7:34 AM	8:04 AM	
Downtown Basalt	6:09 AM			7:09 AM		7:39 AM	8:09 AM	
Basalt Park & Ride	6:09 AM			7:09 AM		7:39 AM	8:09 AM	
Holland Hills	6:12 AM			7:12 AM		7:42 AM	8:12 AM	
Wingo Junction	6:13 AM			7:13 AM		7:43 AM	8:13 AM	
Hwy 82 + Lazy Glen Way	6:14 AM			7:14 AM		7:44 AM	8:14 AM	
Old Snowmass	6:16 AM			7:16 AM		7:46 AM	8:16 AM	
Hwy 82 + Watson Divide Rd	6:21 AM			7:21 AM		7:51 AM	8:21 AM	
Hwy 82 + Aspen Village Rd	6:22 AM			7:22 AM		7:52 AM	8:22 AM	
Hwy 82 + Twining Flats Rd	6:27 AM			7:27 AM		7:57 AM	8:27 AM	
Hwy 82 + Juniper Hill Rd	6:29 AM			7:29 AM		7:59 AM	8:29 AM	
Brush Creek Rd + Med Bow	6:31 AM	7:20 AM	7:25 AM	7:31 AM	7:57 AM	8:01 AM	8:31 AM	8:25 AM
Brush Creek Ranch	6:33 AM	7:22 AM	7:27 AM	7:33 AM	7:58 AM	8:03 AM	8:33 AM	8:27 AM
Town Park Station	6:38 AM	7:25 AM	7:30 AM	7:38 AM	8:01 AM	8:08 AM	8:38 AM	8:30 AM
Brush Creek Rd + Meadow Rd	6:39 AM	7:26 AM	7:31 AM	7:39 AM	8:02 AM	8:09 AM	8:39 AM	8:31 AM
Brush Creek Rd + Sinclair Rd	6:40 AM	7:27 AM	7:32 AM	7:40 AM	8:03 AM	8:10 AM	8:40 AM	8:32 AM
Brush Creek Rd + Owl Creek	6:41 AM	7:27 AM	7:33 AM	7:41 AM	8:03 AM	8:11 AM	8:41 AM	8:33 AM
Brush Creek Rd + Faraway Rd	6:42 AM	7:28 AM	7:33 AM	7:42 AM	8:04 AM	8:12 AM	8:42 AM	8:33 AM
Brush Creek Rd + Wood Rd	6:42 AM	7:28 AM	7:34 AM	7:42 AM	8:04 AM	8:12 AM	8:42 AM	8:34 AM
Brush Creek Rd + Hawk Ridge	6:44 AM	7:29 AM	7:35 AM	7:44 AM	8:05 AM	8:14 AM	8:44 AM	8:35 AM
Brush Creek Rd + Divide Rd	6:44 AM	7:29 AM	7:35 AM	7:44 AM	8:05 AM	8:14 AM	8:44 AM	8:35 AM
Snowmass Mall	6:45 AM	7:30 AM	7:36 AM	7:45 AM	8:06 AM	8:15 AM	8:45 AM	8:36 AM

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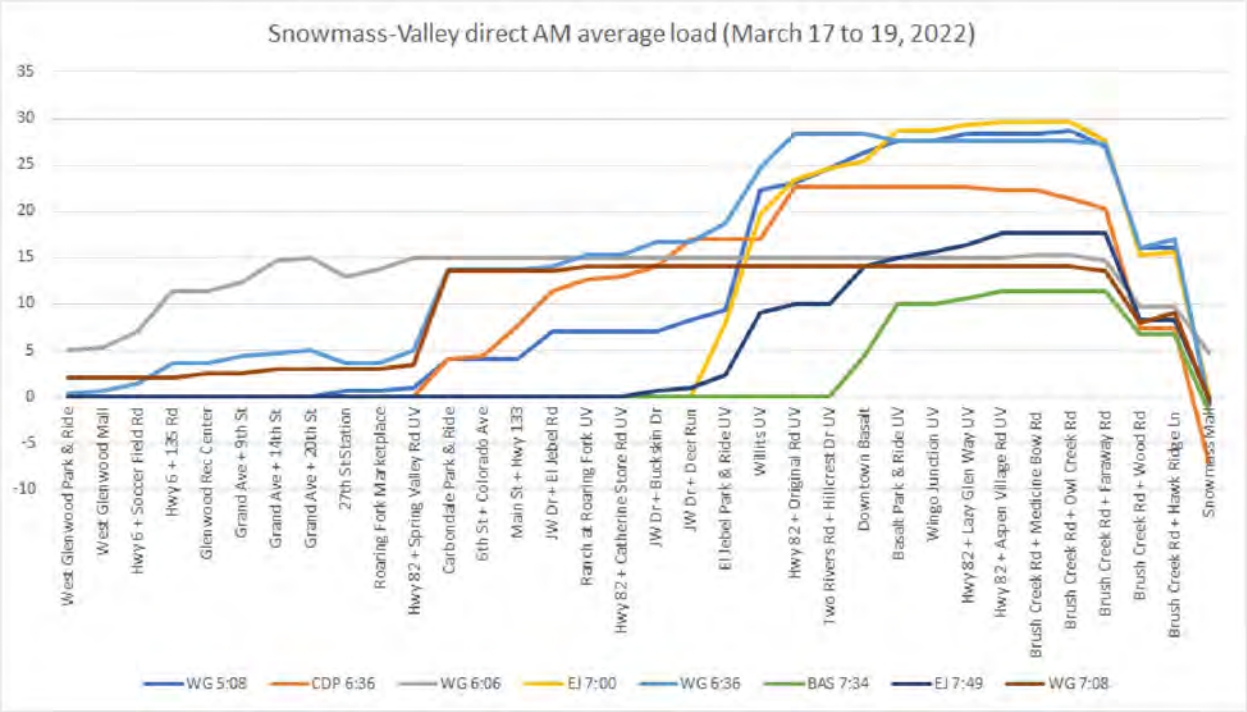
Downvalley Snowmass-Valley schedules (winter 2021/22)

	SM-27/GWX	SM-27/GWX	SM-GW/NCL	SM-27/GWX	SM-27/GWX	SM-GW/R L	SM-27/GWX
Snowmass Mall	3:15 PM	3:45 PM	4:15 PM	4:15 PM	4:45 PM	4:45 PM	5:15 PM
Stonebridge Inn	3:15 PM	3:45 PM	4:15 PM	4:15 PM	4:45 PM	4:45 PM	5:15 PM
Base Village	3:16 PM	3:46 PM	4:15 PM	4:16 PM	4:46 PM	4:45 PM	5:16 PM
Brush Creek Rd + Wood Rd	3:16 PM	3:46 PM	4:16 PM	4:16 PM	4:46 PM	4:46 PM	5:16 PM
Brush Creek Rd + Faraway Rd	3:16 PM	3:46 PM	4:16 PM	4:16 PM	4:46 PM	4:46 PM	5:16 PM
Brush Creek Rd + Owl Creek	3:17 PM	3:47 PM	4:17 PM	4:17 PM	4:47 PM	4:47 PM	5:17 PM
Brush Creek Rd + Sinclair Rd	3:18 PM	3:48 PM	4:17 PM	4:18 PM	4:48 PM	4:47 PM	5:18 PM
Brush Creek Rd + Meadow Rd	3:19 PM	3:49 PM	4:18 PM	4:19 PM	4:49 PM	4:48 PM	5:19 PM
Town Park Station	3:20 PM	3:50 PM	4:19 PM	4:20 PM	4:50 PM	4:49 PM	5:20 PM
Brush Creek Ranch	3:24 PM	3:54 PM	4:23 PM	4:24 PM	4:54 PM	4:53 PM	5:24 PM
Brush Creek Park & Ride	3:27 PM	3:57 PM		4:27 PM	4:57 PM		5:27 PM
Hwy 82 + Smith Way			4:26 PM			4:56 PM	
Hwy 82 + Twining Flats Rd			4:28 PM			4:58 PM	
Hwy 82 + Aspen Village Rd			4:33 PM			5:03 PM	
Hwy 82 + Watson Divide Rd			4:33 PM			5:03 PM	
Old Snowmass			4:38 PM			5:08 PM	
Hwy 82 + Lazy Glen Way			4:40 PM			5:10 PM	
Wingo Junction			4:41 PM			5:11 PM	
Holland Hills			4:41 PM			5:11 PM	
Basalt Park & Ride	3:39 PM	4:09 PM	4:44 PM	4:39 PM	5:09 PM	5:14 PM	5:39 PM
Downtown Basalt			4:44 PM			5:14 PM	
Two Rivers Rd + Hillcrest Dr			4:48 PM			5:18 PM	
Hwy 82 + Original Rd			4:49 PM			5:19 PM	
Willits	3:44 PM	4:14 PM	4:51 PM	4:44 PM	5:14 PM	5:21 PM	5:44 PM
El Jebel Park & Ride	3:45 PM	4:15 PM	4:52 PM	4:45 PM	5:15 PM	5:22 PM	5:45 PM
JW Dr + El Jebel Rd			4:53 PM			5:23 PM	
JW Dr + Deer Run			4:56 PM			5:26 PM	
JW Dr + Buckskin Dr			4:56 PM			5:26 PM	
Hwy 82 + Catherine Store Rd			5:00 PM			5:30 PM	
Ranch at Roaring Fork			5:01 PM			5:31 PM	
Carbondale Park & Ride	3:55 PM	4:25 PM	5:07 PM	4:55 PM	5:25 PM	5:37 PM	5:55 PM
Aspen Glen			5:10 PM			5:40 PM	
Hwy 82 + Spring Valley Rd			5:14 PM			5:44 PM	
Roaring Fork Marketplace			5:20 PM			5:50 PM	
27th St Station	4:12 PM	4:42 PM	5:21 PM	5:12 PM	5:42 PM	5:51 PM	6:12 PM
Grand Ave + 20th St	4:13 PM	4:43 PM	5:22 PM	5:13 PM	5:43 PM	5:52 PM	6:13 PM
Grand Ave + 14th St	4:14 PM	4:44 PM	5:23 PM	5:14 PM	5:44 PM	5:53 PM	6:14 PM
9th St + Colorado Ave	4:16 PM	4:46 PM	5:24 PM	5:16 PM	5:46 PM	5:54 PM	6:16 PM
8th St + Pitkin Ave	4:16 PM	4:46 PM	5:25 PM	5:16 PM	5:46 PM	5:55 PM	6:16 PM
Glenwood Rec Center	4:20 PM	4:50 PM	5:27 PM	5:20 PM	5:50 PM	5:57 PM	6:20 PM
Glenwood Meadows	4:21 PM	4:51 PM	5:28 PM	5:21 PM	5:51 PM	5:58 PM	6:21 PM
West Glenwood Park & Ride	4:24 PM	4:54 PM	5:30 PM	5:24 PM	5:54 PM	6:00 PM	6:24 PM



Preliminary recommendation 4: Fix some deficiencies at particular Snowmass Village bus stops

This study included an inventory of Brush Creek Road and Snowmass Village bus stops. Here are the most notable observations:

- Snowmass Mall has no route info or even a schedule
- Stonebridge and Wood Road downhill almost certainly have enough boarding passengers to merit benches. Woodbridge could probably also have a larger, lit shelter
- Town Park Station downhill missing some stones and spalling concrete on front left footing;
- Meadow Road has a foot-deep gully by sign and bus pull-out (and bus operator says buses occasionally sink into it).

Operators otherwise report that stops have sufficient lighting and clearances for safe pullouts. Survey respondents also commented about dangerous pedestrian crossing on Wood Road bridge over Brush Creek.

Commuters to Snowmass Village survey

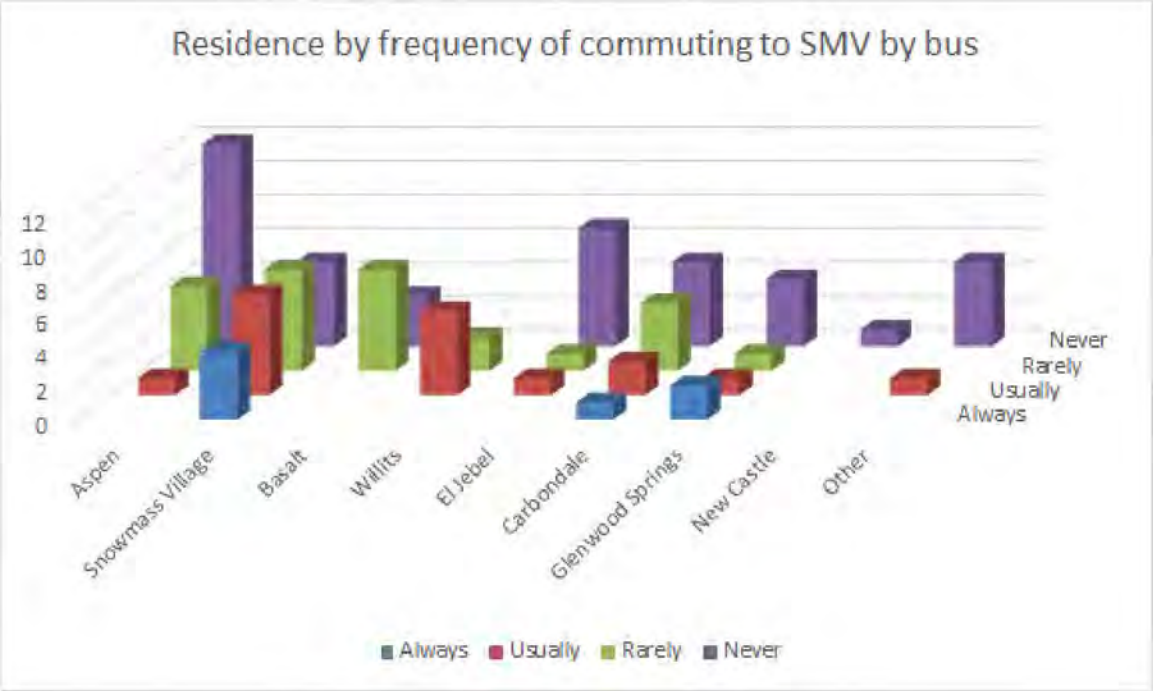
So far, 92 respondents have completed the survey. The pace of responses is dropping, but I expect to get more in the coming week. I can also see that all 92 filled out the survey in English. There is a Spanish version and it works, but I'm concerned that the Spanish speakers don't notice that there's an option in the top right of the survey introduction page to click on "español." Or maybe the Spanish speakers just haven't filled out the survey for other reasons. I do know that the human resources office at the Viewline--with many Spanish speaking staff--has notified all their employees of the survey.

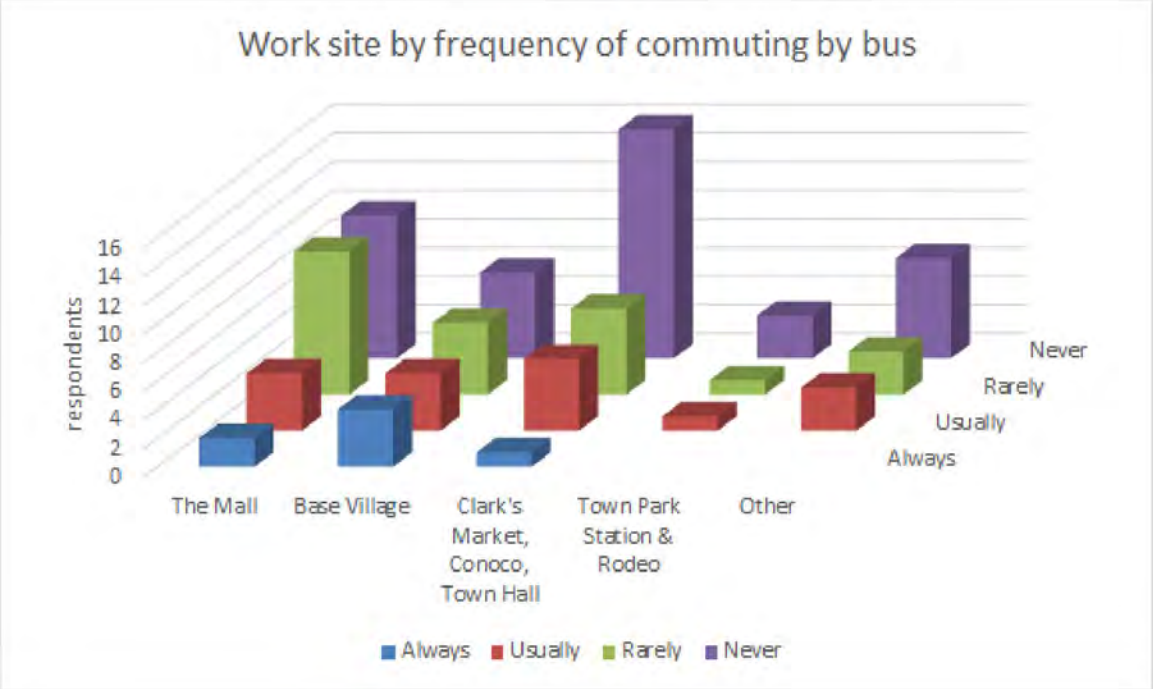
Of the 91 responses I received as of June 27 . . ..

- 73 percent of respondents rarely or never commute to Snowmass Village by bus
- 57 percent are from Downvalley communities; 21% are from Aspen, and 23% are from Snowmass.

I've attached key cross-tabs based on the 91 responses. Many of these focus on the commuters from Downvalley communities and showing the differences between those who regularly commute by bus and those who do not.

This attachment also shows the comments people wrote, and the results of the 18 scenarios tested--both as the derived coefficients from the statistical (multi-nomial logit) analysis, and a simpler table of the responses to each of the scenarios. The table statistical analysis will likely be more conclusive as more responses show up.


Residence by frequency of commuting to SMV by bus
12
10
8
6
4
2
0
Aspen
Snowmass Village
Basalt
Willits
El Jebel
Carbondale
Glenwood Springs
New Castle
Other
Never
Rarely
Usually
Always
Always
Usually
Rarely
Never


Work site by frequency of commuting by bus
respondents
16
14
12
10
8
6
4
2
0
The Mall
Base Village
Clark's Market, Conoco, Town Hall
Town Park Station & Rodeo
Other
Never
Rarely
Usually
Always
Always
Usually
Rarely
Never

Frequency of commuting to Snowmass Village by bus this past month

	Always	Usually	Rarely	Never	Total
Aspen		1	5	12	18
Snowmass Village	4	6	6	5	21
Basalt			6	3	9
Willits		5	2		7
El Jebel		1	1	7	9
Carbondale	1	2	4	5	12
Glenwood Springs	2	1	1	4	8
New Castle				1	1
Silt					
Rifle					
Other		1		5	6
Grand Total	7	17	25	42	91
	8%	19%	27%	46%	100%

Frequency of commuting by bus relative to Snowmass Village work destination

	Always	Usually	Rarely	Never	Total
The Mall	2	4	10	10	26
Base Village	4	4	5	6	19
Clark's Market, Conoco area (incl. Town Hall)	1	5	6	16	28
Town Park Station & Rodeo		1	1	3	5
Other		3	3	7	13
Grand Total	7	17	25	42	91
	8%	19%	27%	46%	100%

	emp provides pkg or RFTA fare		emp provides pkg only		emp provides RFTA only		emp provides no pkg or fare	
commute by bus:	*rarely*	*regularly*	*rarely*	*regularly*	*rarely*	*regularly*	*rarely*	*regularly*
The Mall	12	1	3		3		2	5
Base Village	1		2	2	5	5	3	1
Clark's Market, Conoco area	17	3	5	2		1		
Town Park Station & Rodeo	3				1			1
Other	7		2			1	1	2
Grand Total	40	4	12	4	9	7	6	9

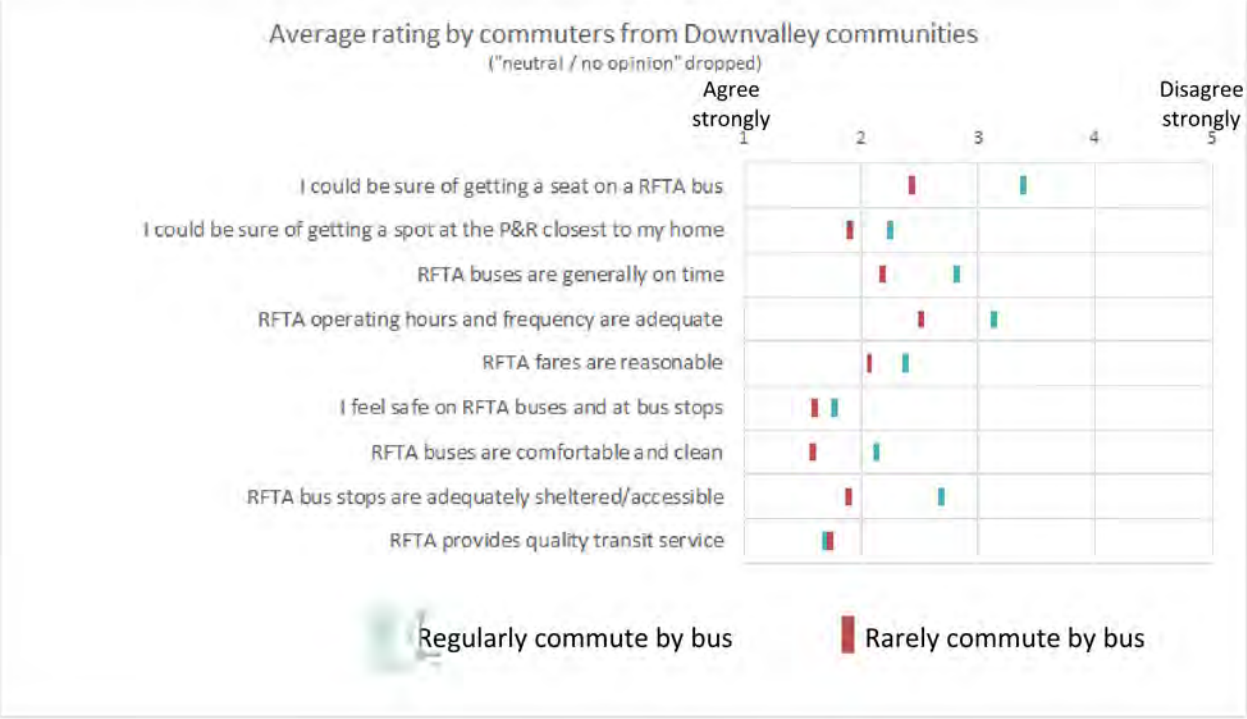
Typical START time of job in Snowmass Village

	Flexibility to arrive late?		Commute by bus?		
	no	yes	regularly	rarely	total
5:30 AM	1		0	1	1
5:45 AM	2		0	2	2
6:00 AM	2	1	0	3	3
6:15 AM	1		1	0	1
6:30 AM	1	1	0	2	2
6:45 AM	1	1	0	2	2
7:00 AM	5	3	1	7	8
7:30 AM	5	3	3	5	8
7:45 AM	3	1	1	3	4
8:00 AM	18	15	8	25	33
8:15 AM		1	0	1	1
8:30 AM	2	1	1	2	3
9:00 AM	6	12	6	12	18
10:00 AM	1		1	0	1
11:00 AM	1		0	1	1
1:00 PM		1	1	0	1
2:00 PM	1		1	0	1
2:30 PM	1		0	1	1
total	51	40	24	67	91

Typical END time of job in Snowmass Village

	Flexibility to leave early?		Commute by bus?		
	no	yes	regularly	rarely	total
2:30 PM		1	0	1	1
3:00 PM		2	0	2	2
3:30 PM		2	0	2	2
4:00 PM	8	8	7	9	16
4:15 PM	1		1	0	1
4:30 PM	4	3	1	9	7
4:45 PM	1		0	1	1
5:00 PM	15	21	7	29	36
5:15 PM	3	1	1	3	4
5:30 PM	1	3	1	3	4
6:00 PM	2	7	2	7	9
6:30 PM	1	1	1	1	2
7:45 PM		1	0	1	1
8:45 PM	1		0	1	1
9:00 PM		1	1	0	1
10:00 PM	1		1	0	1
11:00 PM	1	1	1	1	2
total	39	52	24	67	91

Commuters from Downvalley who rarely if ever take the bus have a much more positive view of RFTA service attributes than do those who regularly take the bus. (The one exception to this is for the overall measure, "RFTA provides quality transit service," for which both groups have the same—and very positive—average rating.)



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days commuting to SMV last week

	did not commute last week	1	2	3	4	5	6	7		Valid responses
Downvalley rare bus commuter	12.2	0	7.3	17.1	9.8	48.8	2.4	2.4		41
Downvalley regular bus commuter	7.1	7.1	7.1	7.1	7.1	42.9	7.1	14.3		14

days commuting to SMV last winter

	did not commute last winter	1	2	3	4	5	6	7		Valid responses
Downvalley rare bus commuter	7.3	0	4.9	14.6	12.2	43.9	4.9	12.2		41
Downvalley regular bus commuter	14.3	0	0	21.4	7.1	28.6	7.1	21.4		14

Where is your work destination in Snowmass Village?

	The Mall	Base Village	Clark's Market, Conoco area	Town Park Station & Rodeo	Other		Valid responses
Downvalley rare bus commuter	35.3	20.6	35.3	8.8	0		34
Downvalley regular bus commuter	41.7	25	25	8.3	0		12

Where is your home?

	Basalt	Willits	El Jebel	Carbondale	Glenwood Springs	New Castle	Silt	Rifle	Other		Valid responses
Downvalley rare bus commuter	22	4.9	19.5	22	12.2	2.4	0	0	17.1		41
Downvalley regular bus commuter	0	35.7	7.1	21.4	21.4	0	0	0	14.3		14

Do you have any flexibility to arrive late?

	no	yes		Valid responses
Downvalley rare bus commuter	43.9	56.1		41
Downvalley regular bus commuter	85.7	14.3		14

Values in the tables in this section are percentages and add across to 100%

Do you have any flexibility to leave early?

	no	yes		Valid responses
Downvalley rare bus commuter	34.1	65.9		41
Downvalley regular bus commuter	71.4	28.6		14

How often THIS PAST MONTH do you take the a bus as part of your trip to or from your job in Snowmass Village?

	Always	Usually	Rarely	Never		Valid responses
Downvalley rare bus commuter	0	0	34.1	65.9		41
Downvalley regular bus commuter	28.6	71.4	0	0		14

How often THIS PAST WINTER did you take a bus as part of your trip to or from your job in Snowmass Village?

	Always	Usually	Rarely	Never		Valid responses
Downvalley rare bus commuter	7.7	2.6	23.1	66.7		39
Downvalley regular bus commuter	35.7	50	0	14.3		14

Does your employer offer you a free, nearby parking space?

	Yes, winter and spring	Yes, winter only	Yes, spring only	No		Valid responses
Downvalley rare bus commuter	67.5	5	0	27.5		40
Downvalley regular bus commuter	7.7	7.7	0	84.6		13

Does your employer offer you a RFTA subsidy?

	Yes, winter and spring	Yes, winter only	Yes, spring only	No		Valid responses
Downvalley rare bus commuter	72.5	5	0	22.5		40
Downvalley regular bus commuter	21.4	21.4	7.1	50		14

license and car

	yes	no		Valid responses
Downvalley rare bus commuter	97.6	2.4		41
Downvalley regular bus commuter	69.2	30.8		13

Are you concerned about the spread of Covid on public transit?

	Yes, very	Yes, somewhat	No		Valid responses
Downvalley rare bus commuter	14.6	34.1	51.2		41
Downvalley regular bus commuter	28.6	42.9	28.6		14

I could be sure of getting a seat on a RFTA bus

	agree strongly - 1	2	neutral / no opinion - 3	4	disagree strongly - 5		Valid responses
Downvalley rare bus commuter	12.2	26.8	43.9	14.6	2.4		41
Downvalley regular bus commuter	14.3	14.3	14.3	42.9	14.3		14

I could be sure of getting a parking spot at the RFTA park & ride lot closest to my home

	agree strongly - 1	2	neutral / no opinion - 3	4	disagree strongly - 5		Valid responses
Downvalley rare bus commuter	24.4	19.5	46.3	9.8	0		41
Downvalley regular bus commuter	21.4	35.7	28.6	7.1	7.1		14

RFTA buses are generally on time

	agree strongly - 1	2	neutral / no opinion - 3	4	disagree strongly - 5		Valid responses
Downvalley rare bus commuter	12.2	46.3	31.7	4.9	4.9		41
Downvalley regular bus commuter	7.1	50	7.1	28.6	7.1		14

RFTA operating hours and frequency are adequate

	agree strongly - 1	2	neutral / no opinion - 3	4	disagree strongly - 5		Valid responses
Downvalley rare bus commuter	14.6	31.7	29.3	22	2.4		41
Downvalley regular bus commuter	7.1	28.6	21.4	35.7	7.1		14

RFTA fares are reasonable

	agree strongly - 1	2	neutral / no opinion - 3	4	disagree strongly - 5		Valid responses
Downvalley rare bus commuter	22	31.7	34.1	9.8	2.4		41
Downvalley regular bus commuter	14.3	35.7	35.7	7.1	7.1		14

I feel safe on RFTA buses and at bus stops

	agree strongly - 1	2	neutral / no opinion - 3	4	disagree strongly - 5		Valid responses
Downvalley rare bus commuter	39	29.3	26.8	4.9	0		41
Downvalley regular bus commuter	21.4	57.1	21.4	0	0		14

RFTA buses are comfortable and clean

	agree strongly - 1	2	neutral / no opinion - 3	4	disagree strongly - 5		Valid responses
Downvalley rare bus commuter	39	26.8	29.3	4.9	0		41
Downvalley regular bus commuter	21.4	50	14.3	14.3	0		14

RFTA bus stops are adequately sheltered/accessible

	agree strongly - 1	2	neutral / no opinion - 3	4	disagree strongly - 5		Valid responses
Downvalley rare bus commuter	19.5	43.9	31.7	2.4	2.4		41
Downvalley regular bus commuter	7.1	42.9	21.4	28.6	0		14

RFTA provides quality transit service

	agree strongly - 1	2	neutral / no opinion - 3	4	disagree strongly - 5		Valid responses
Downvalley rare bus commuter	32.5	35	27.5	5	0		40
Downvalley regular bus commuter	28.6	57.1	14.3	0	0		14

biggest concern about bus

	Distance to the bus stop	Parking availability at a park & ride lot near my home	Travel time on the bus	Bus frequency	Bus reliability	Wait time for a connecting bus at Brush Creek Park & Ride	Cost	None of the above		Valid responses
Downvalley rare bus commuter	7.5	0	45	15	2.5	25	0	5		40
Downvalley regular bus commuter	0	0	14.3	28.6	21.4	28.6	7.1	0		14

least concern about bus

	Distance to the bus stop	Parking availability at a park & ride lot near my home	Travel time on the bus	Bus frequency	Bus reliability	Wait time for a connecting bus at Brush Creek Park & Ride	Cost	None of the above		Valid responses
Downvalley rare bus commuter	10.8	35.1	0	0	2.7	5.4	21.6	24.3		37
Downvalley regular bus commuter	30.8	30.8	0	0	0	7.7	7.7	23.1		13

Average travel time from home to SMV (minutes)

	Basalt	Willits	El Jebel	Carbondale	Glenwood Springs	New Castle	Silt	Rifle
Downvalley rare bus commuter	36	36	37	52	62	75		
Downvalley regular bus commuter		49	40	59	73			

Count of travelers in each group

	Basalt	Willits	El Jebel	Carbondale	Glenwood Springs	New Castle	Silt	Rifle
Downvalley rare bus commuter	9	2	8	8	5	1		
Downvalley regular bus commuter		4	1	3	3			

Hypothetical scenarios

The survey presented each respondent with one of 18 combinations of three scenarios, and asked them to rate their preference and whether they would ride RFTA if the scenario existed. The scenarios included the following:

- An assured parking space at the BRT spot nearest your home (Downvalley communities only)
- A local bus that left from the center of the community and arrived in Snowmass Village 10, 20, or 30 minutes before the job start
- An express bus that left from the center of the community and arrived in Snowmass Village 10, 20, or 30 minutes before the job start
- A connection at Brush Creek Park & Ride that was a maximum of 1, 5, or 10 minutes.

The chart on the next page shows the results (so far) of this analysis. The higher the points, the more the preference for the particular scenario.

The experimental design also allowed for multinomial logit analysis for evaluating factors affecting discrete preferences. This is the ideal method for analyzing these choices, but the statistical results are neither particularly strong, nor particularly revealing. A bigger survey sample size may make this effort more robust.

	RFTA if pkg	RFTA if lcl dir bus early 10	RFTA if lcl dir bus early 20	RFTA if lcl dir bus early 30	RFTA if exp dir bus early 10	RFTA if exp dir bus early 20	RFTA if exp dir bus early 30	RFTA if 1 max wt	RFTA if 5 max wt	RFTA if 10 max wt
all respondents										
definitely	3	9	2	7	5	4	4	7	7	6
probably	6	3	10	4	3	1	2	10	10	10
not	10	4	5	2	2	2	4	7	6	5
points	0.63	1.31	0.82	1.38	1.30	1.29	1.00	1.00	1.04	1.05
Downvalley resident and rare bus users										
definitely	0	3	1	0	2	0	1	0	0	0
probably	0	2	5	1	2	0	0	6	5	4
not	3	1	1	1	0	1	2	2	3	1
points	0.00	1.33	1.00	0.50	1.50	0.00	0.67	0.75	0.63	0.80
Downvalley resident and regular bus users										
definitely	2	2	0	2	2	1	1	3	2	2
probably	1	0	0	0	0	0	0	0	1	2
not	2	1	1	1	0	0	0	1	0	0
points	1.00	1.33	0.00	1.33	2.00	2.00	2.00	1.50	1.67	1.50

Based on 86 observations

Maximum likelihood converged after 11 iterations.

Estimation results

Parameter	Estimate	Std. Error	t Test	Global Corr
express bus	-0.487099	0.438691	-1.1103	1
arrive early	-0.269591	0.270929	-0.9951	1
BC max wait	-0.085602	0.055184	-1.5512	1
car and license	-0.50044	1.111801	-0.4501	1
arrive flex?	-0.156231	0.403427	-0.3873	1
Const(park car)	-1.586399	1.356494	-1.1695	1
Const(direct bus)	0.589525	0.949331	0.621	1

Log-Likelihood at Zero	-135.1929
Log-Likelihood at Start	-161.2193
Log-Likelihood at End	-100.9042
-2 (LL(Zero) - LL(End))	68.5773
-2 (LL(Start) - LL(End))	120.6302
Asymptotic rho squared	0.2536
Adjusted rho squared	0.2018

Maximum likelihood converged after 7 iterations.

Estimation results

Parameter	Estimate	Std. Error	t Test	Global Corr
express bus	-0.378426	0.428461	-0.8832	1
arrive early	-0.324422	0.267863	-1.2112	1
BC max wait	-0.07592	0.052539	-1.445	1
Const(park car)	-1.849964	0.397311	-4.6562	1
Const(direct bus)	0.975334	0.688252	1.4171	1

Log-Likelihood at Zero	-138.7764
Log-Likelihood at Start	-165.5698
Log-Likelihood at End	-102.8408
-2 (LL(Zero) - LL(End))	71.8712
-2 (LL(Start) - LL(End))	125.4580
Asymptotic rho squared	0.2589
Adjusted rho squared	0.2229

Maximum likelihood converged after 7 iterations.

Estimation results

Parameter	Estimate	Std. Error	t Test	Global Corr
arrive early	-0.339873	0.26783	-1.269	1
BC max wait	-0.079221	0.053228	-1.4884	1
Const(park car)	-1.861089	0.401014	-4.641	1
Const(direct bus)	0.842035	0.676297	1.2451	1

Log-Likelihood at Zero	-138.7764
Log-Likelihood at Start	-165.5698
Log-Likelihood at End	-103.2221
-2 (LL(Zero) - LL(End))	71.1086
-2 (LL(Start) - LL(End))	124.6954
Asymptotic rho squared	0.2562
Adjusted rho squared	0.2274

Bus commuter?	Where home?	Where work in SMV?	suggestions
Never	Aspen	Clark's Market, Conoco area	15 minute DIRECT service to Snowmass in winter and SUMMER from Aspen! It takes FOREVER to get to Snowmass from Aspen in the summer (nearly 45 min-1 hour). I could drive in 25 minutes. The time it takes deters people from coming to concerts, to events, to ride the bike park, etc. It is confusing to transfer and takes forever! Direct 15-minute service please!
Never	Aspen	Clark's Market, Conoco area	Thank you for the awesome service! I am lucky enough to get free service from Aspen to Snowmass, but the length of the trip, the lack of availability of seats in the winter, and the fact that I have to pick up kids from after school activities mean I rarely use it for work. I often use it as a skier shuttle on the weekends.
Never	Aspen	Base Village	I solely don't take the bus cause my Dog
Never	Aspen	Other	larger capacity bike racks on rfta busses, no charge to bring bike on rfta bus
Never	Snowmass Village	The Mall	Seats
Never	Basalt	Other	As many direct busses as possible during peak hours. No stops on Brush Creek
Never	El Jebel	Base Village	Bus service is pretty great here. My main problem with taking the bus is the total travel time it takes from El Jebel. If I drive from my house its 30-45 minutes. Bus will take me more than an hour. Another problem for me is the fact I have two kids in school in basalt. sometimes I need to pick up early or drop off kids at school. It's harder to take the bus on those days
Never	El Jebel	Clark's Market, Conoco area	There are some people that have to work year-round and do not get the off-season's off. When RFTA goes on off-season schedules it reduced its services to those that work year-round. We then then we get used to not taking the bus as a result.
Never	Carbondale	Clark's Market, Conoco area	gear on the bus is challenge. skis work ok, but bikes, change of clothes etc. for recreation pre or post work
Never	Carbondale	Clark's Market, Conoco area	If I did not have to transport my kids to/from day care, I would take the bus in the winter and only look to add other seasonal ridership if the connection from Brush Creek improved.

Bus commuter?	Where home?	Where work in SMV?	suggestions
Never	Glenwood Springs	Other	I need to arrive to Snowmass earlier that their current schedule therefore I can't use Rfta. Rfta doesn't run in the off seasons, I work during the off seasons therefore I can't use Rfta. The bus ride from Glenwood to Snowmass is much longer than driving my own car. I'm not in the habit of using Rfta because of these three issues.
Never	Glenwood Springs	The Mall	Having the downvalley bus drivers be more aware to wait for the Snowmass bus to get there if it is a few minutes away rather than just leaving and then you wait for 15-20 minutes
Never	New Castle	Town Park Station & Rodeo	When traffic occurs on 82, for any reason, I would rather be in my own vehicle than on a bus with others. If buses had the convenience of their own express lane to bypass difficult traffic times, or a consistently dedicated buses-only lane between the various Towns, I would be very interested in RFTA services.
Never	Other	Base Village	More direct buses into Snowmass instead of having to connect at Brush Creek
Never	Other	Clark's Market, Conoco area	A BRT to Snowmass
Never	Other	The Mall	Not have transfer 3 times to get to Snowmass from Highlands.
Never	Other	Town Park Station & Rodeo	After looking at the bus schedule, the access to Snowmass Village (no stops) getting to work by 530 am is not possible. Even with buses leaving down valley frequently at 430am and going directly to Aspen. I think moving forward there needs to be increased access with added stops first thing in the morning so that people who work early in the morning can utilize the bus system.
Rarely	Aspen	Base Village	I live at castle ridge on the castle maroon line and the biggest challenge for me is transferring from one bus to the other and the difficulty of timing it right to avoid missing the Snowmass bus.
Rarely	Aspen	Base Village	Please train or make sure some of the drivers are a little more friendly and understandingy/lenient. I've had too many rude drivers. And I've had a driver (with a half full bus) close the door as I was waking up to the bus, start to pull away, look out at me as I'm banging on the door to stop it and just keep going like I'm in the wrong for trying to stop him. This bus wasn't late, he could have easily stopped to let me on quickly, it was just the driver being lame in my opinion. This is their job, to give people rides, why this guy

Bus commuter?	Where home?	Where work in SMV?	suggestions
			couldn't stop for 5 seconds to give me a ride is beyond me. This doesn't put a good taste in my mouth for trying to take a bus and get somewhere on time.
Rarely	Aspen	Other	quit having some of the rfta drivers consistently breaking the speed limit on brush creek road!!!
Rarely	Aspen	The Mall	Stop at Base Village first, then go to Mall
Rarely	Snowmass Village	Clark's Market, Conoco area	Please add more "stop" buttons on the bus. When the bus is packed it is hard to reach the stop buttons. Please add more hand-hold on the aisles and find a way to add hand-hold for short people standing in the aisles of front of the bus where the disable seat are.... lot of short people like me stand in there when the bus is packed and it's hard to balance when the bus is running. Please have your drivers announce that passengers' feet should not occupy a vacant seat so they can sleep comfortably while people stand.
Rarely	Basalt	The Mall	I don't understand why sagewood stop is not a BRT with all the employee housing right there. Seem the buses are already full by the time it leaves the BRT in El Jebel. this seems to be more of a problem in the winter then summer time. I don't take the bus as much in the summer. I also think on your survey you should leave a space for people to write in comments on questions as they are a bit vague. My other complaint and or question would be the bus stop in Snowmass that lets people off by the roundabout by the gas station is an accident waiting to happen. you have people crossing the road in a busy car area. holds up traffic and is in the worst spot!!!! Why would you not route buses up thru the mall area???? instead you make people walk to work as you only drop at the top of the mall and off brush creek road. So any one who works at Stonebridge and or any of the condos have to walk forever to get to work. I think this is the stupidest route you guys have in the RFV!!! What the point of a bus when you have to walk 20 min uphill or down to get to work. these buses should be routed thru the parking garage bus stop to keep the herd of people off the main streets. it is dangerous and causes traffic and road rage. Let think and plan out the bus route in Snowmass village a bit better! As a driver and a bus passenger it annoys me needs to be changed!!!

Bus commuter?	Where home?	Where work in SMV?	suggestions
Rarely	Basalt	The Mall	N/A
Rarely	Willits	Base Village	Primarily that there is no bus lane from down valley to Snowmass, like there is at buttermilk, meaning transit is too long, much easier to just drive as of now
Rarely	Carbondale	Base Village	Brush Creek Park & Ride to Snowmass should be frequent, reliable and space available.
Usually	Aspen	Clark's Market, Conoco area	Direct Aspen to Snowmass busses!!!!!!!!!!
Usually	Snowmass Village	Clark's Market, Conoco area	I know it's tough to track but potentially have an extra bus "on call" for times when the bus is fully crowded
Usually	Snowmass Village	Clark's Market, Conoco area	I usually take the bus more during winter because there is every 15mins from Snowmass Center to Villas North. During summer its less because when I get home, I have to wait for 25 mins.
Usually	Snowmass Village	Other	My biggest issue last winter was having skico employee housing at highlands and working at Snowmass. There was not a direct bus between the two and a chance the bus I needed in the mornings would.be full.
Usually	Willits	Base Village	Just adding more buses as buses are still filling up completely even past standing room.
Usually	Willits	Other	Also include buses out of Snowmass so getting home in a timely manner is possible.
Usually	El Jebel	Clark's Market, Conoco area	Have a bus arrive in Snowmass by 6 am so it is possible to workout before work
Usually	Carbondale	The Mall	The direct that comes through Carbondale during the winter should continue throughout the summer. Direct from Main St. in Carbondale to the Village Mall is very useful
Always	Other	Clark's Market, Conoco area	thank you for all the hard work and dedication

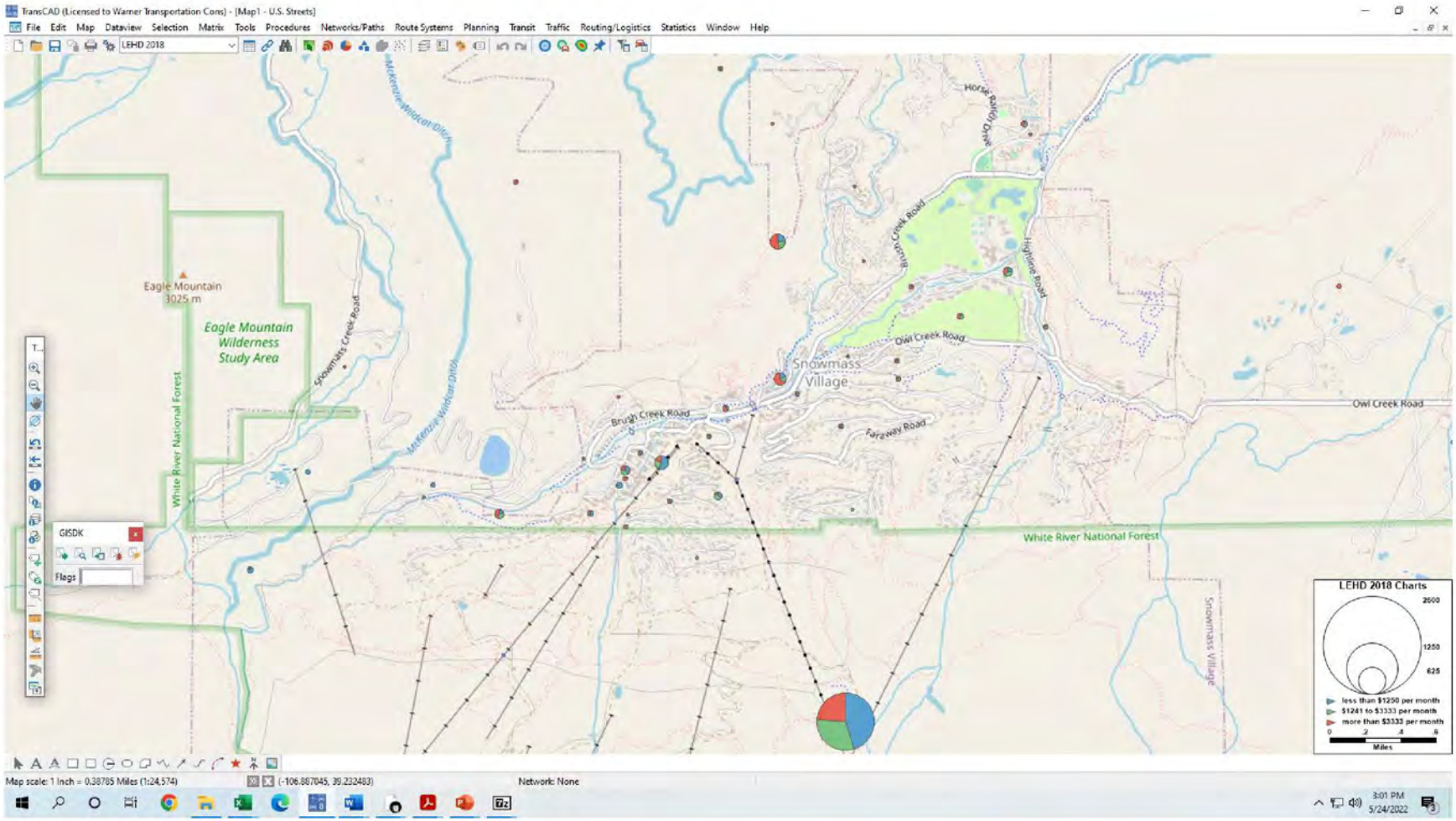
Traveler characteristics: Snowmass Village vs. Aspen

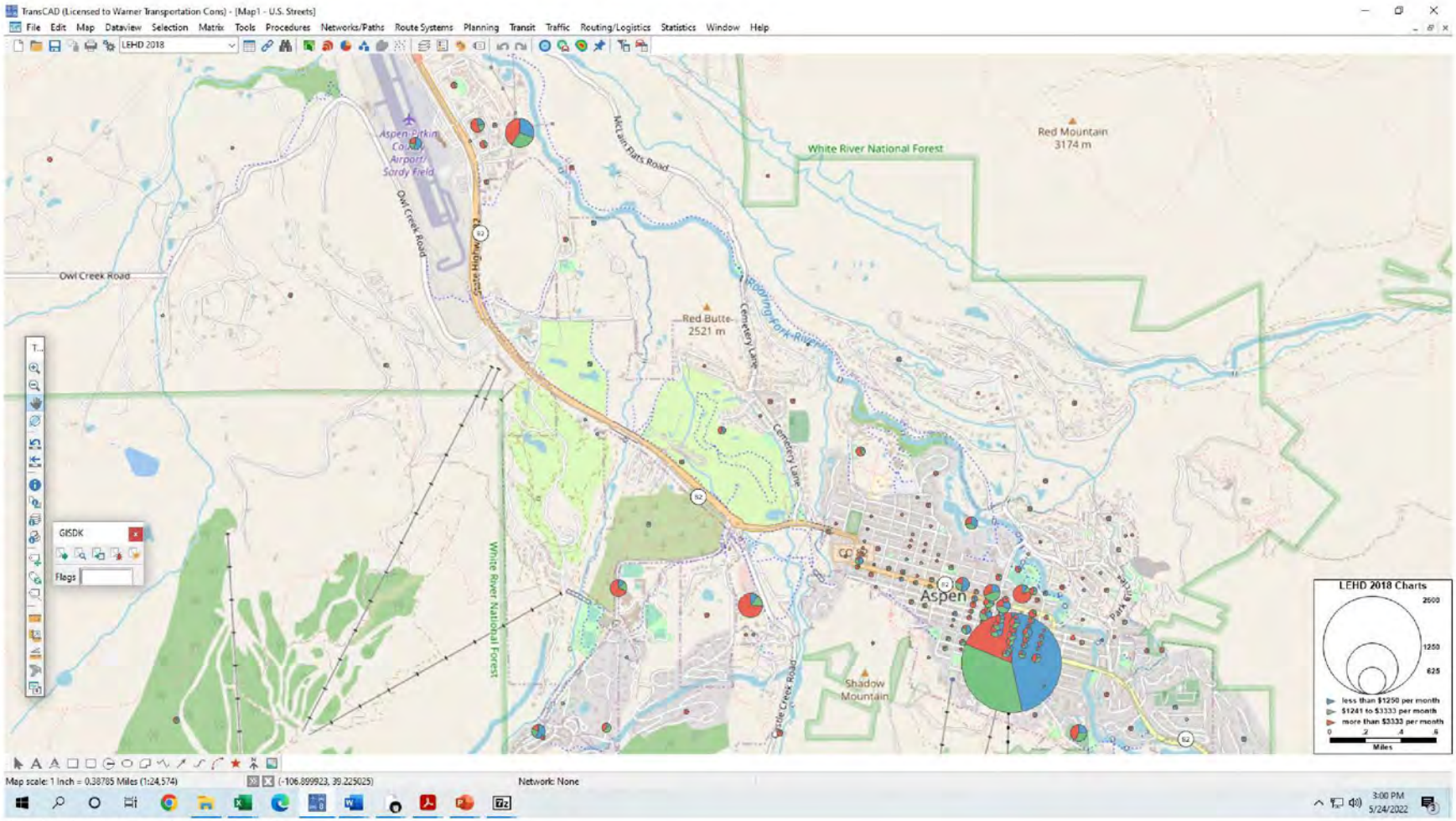
2019 all jobs in Snowmass Village and Aspen

		Snowmass Village	central Aspen	all Aspen
c000	Total All Jobs	3480	9668	12929
ca01	Age 29 or younger	972	2622	3167
ca02	Age 30 to 54	1773	4930	6818
ca03	Age 55 or older	735	2116	2944
ce01	$1,250 per month or less	1361	3268	4107
ce02	$1,251 to $3,333 per month	1011	3035	3785
ce03	More than $3,333 per month	1108	3365	5037
ct01	Not Hispanic or Latino	2841	8286	11045
ct02	Hispanic or Latino	639	1382	1884
cd01	Less than high school	446	1026	1400
cd02	High school or equivalent, no college	643	1669	2285
cd03	Some college or Associate degree	736	2033	2844
cd04	Bachelor's degree or advanced degree	683	2318	3233
cg01	Male	2102	5233	6812
cg02	Female	1378	4435	6117

2019 all jobs in Snowmass Village and Aspen—job type

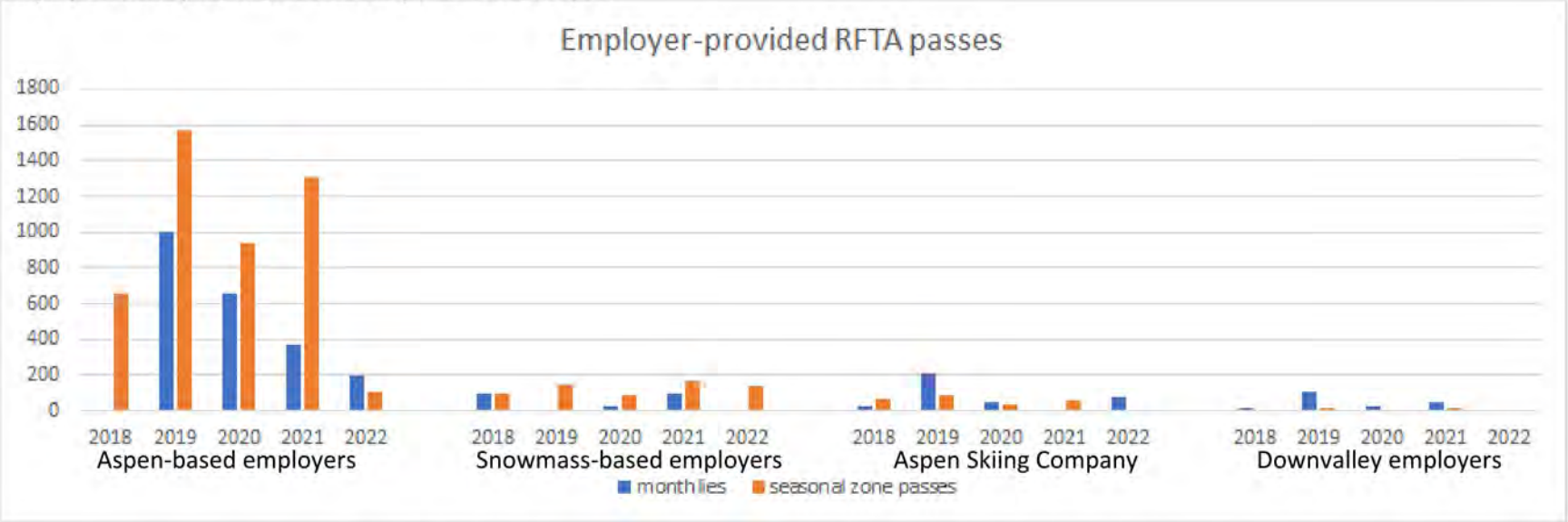
		Snowmass Village	central Aspen	all Aspen
c000	Total All Jobs	3480	9668	12929
cns01	Agriculture, Forestry, Fishing and Hunting	8	4	9
cns02	Mining, Quarrying, and Oil and Gas Extraction	0	0	0
cns03	Utilities	35	3	15
cns04	Construction	115	142	320
cns05	Manufacturing	0	8	41
cns06	Wholesale Trade	0	37	106
cns07	Retail Trade	122	1047	1144
cns08	Transportation and Warehousing	0	30	276
cns09	Information	3	81	105
cns10	Finance and Insurance	115	158	184
cns11	Real Estate and Rental and Leasing	529	568	787
cns12	Professional, Scientific, and Technical Services	47	523	587
cns13	Management of Companies and Enterprises	16	75	94
cns14	Administration & Support, Waste Management and Remediation	111	231	635
cns15	Educational Services	41	50	564
cns16	Health Care and Social Assistance	47	171	752
cns17	Arts, Entertainment, and Recreation	1029	1736	2120
cns18	Accommodation and Food Services	935	4134	4369
cns19	Other Services (excluding Public Administration)	153	362	513
cns20	Public Administration	174	308	308

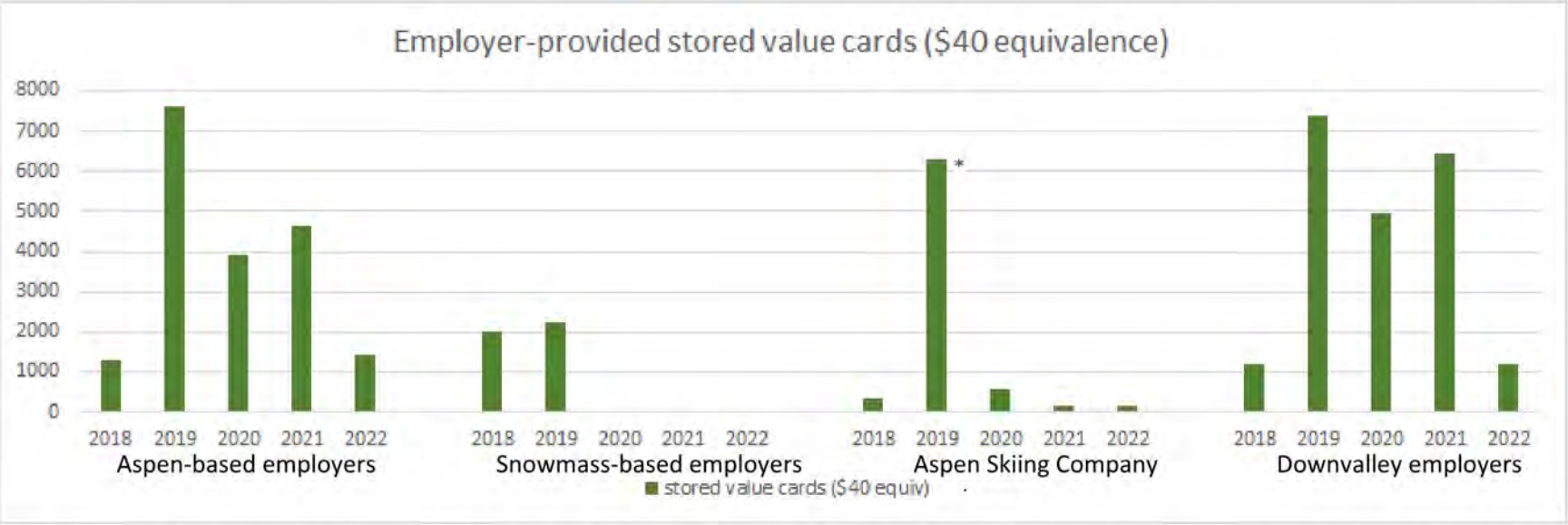

TransCAD (Licensed to Warner Transportation Cons) - [Map1 - U.S. Streets]
File Edit Map Dataview Selection Matrix Tools Procedures Networks/Paths Route Systems Planning Transit Traffic Routing/Logistics Statistics Window Help
LEHD 2018
Eagle Mountain
3025 m
Eagle Mountain
Wilderness
Study Area
White River National Forest
Snowmass Creek Road
McKenzie Willow Ditch
Brush Creek Road
Owl Creek Road
Snowmass
Village
Faraway Road
Highline Road
Horse Ranch Drive
White River National Forest
Snowmass Village
GISDK
Flags
LEHD 2018 Charts
2500
1250
625
less than $1250 per month
$1241 to $3333 per month
more than $3333 per month
Miles
Map scale: 1 inch = 0.38785 Miles (1:24,574)
(-106.867045, 39.232483)
Network: None
3:01 PM
5/24/2022



Analysis Type Area Profile
Selection area as Work
Year(s) 2019
Job Type All Jobs
Labor Market Segment All Workers
Selection Area Pitkin County, CO from Counties
Selected Census Blocks 1,164

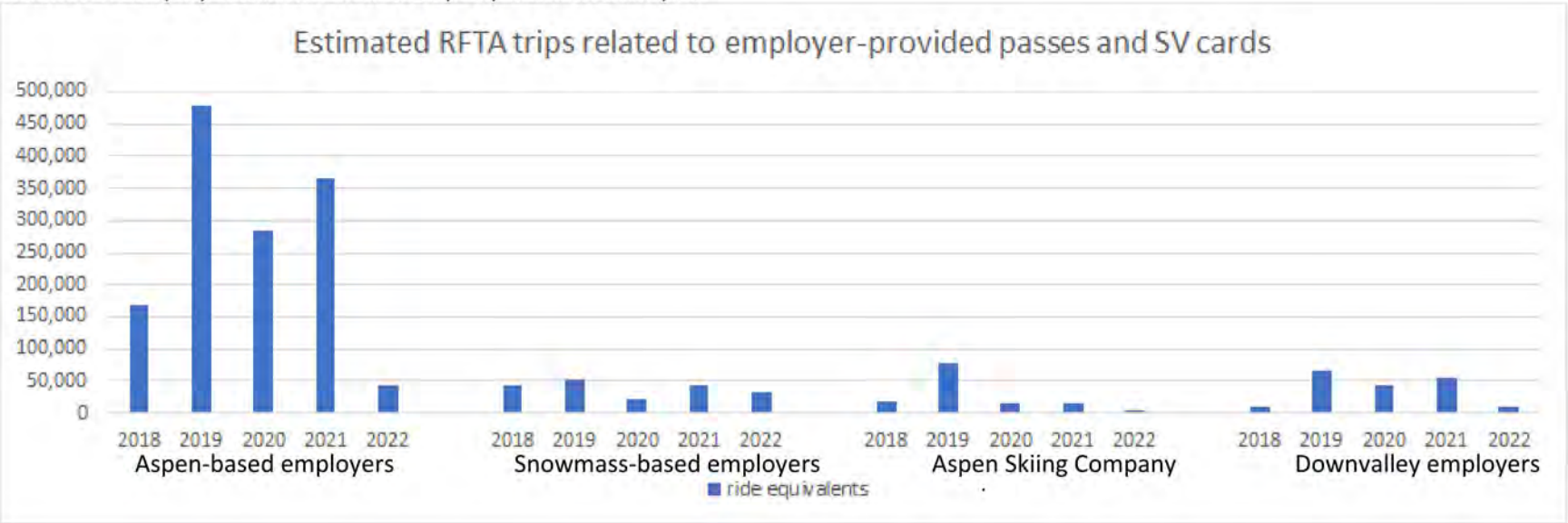
Employer subsidy for RFTA services by work site and year





* RFTA provides Aspen Ski Co with 2881 $20 SVC in exchange for ski passes. In November 2019, Ski Co received 3894 $40 SVCs for SVCs that they should have received--but did not--in 2016,17,18. The lack of Ski Co sales after 2019 reflects this abundance of SVCs and no need for further orders.

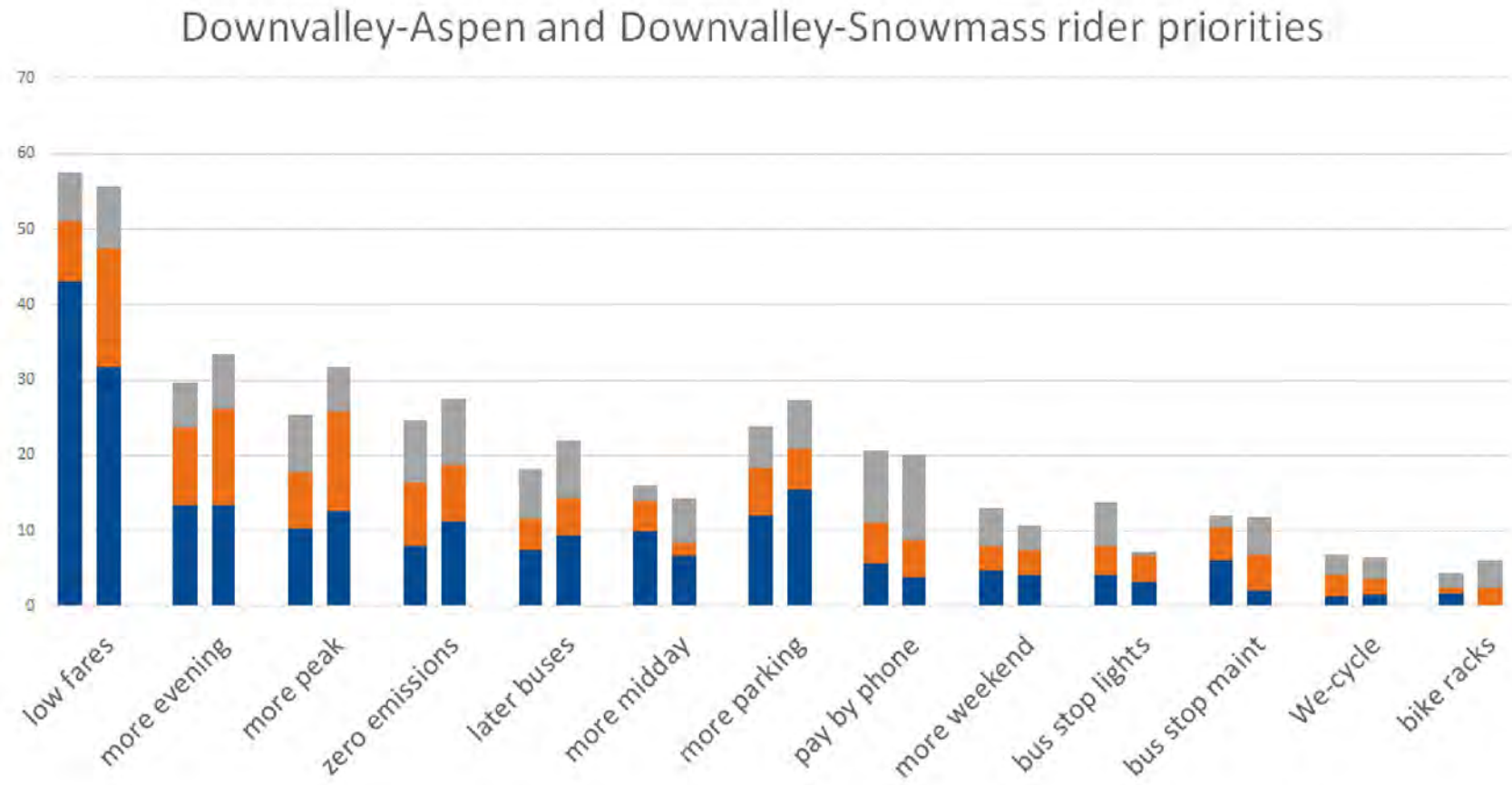
Estimate of employer-subsidized RFTA trips by work site and year

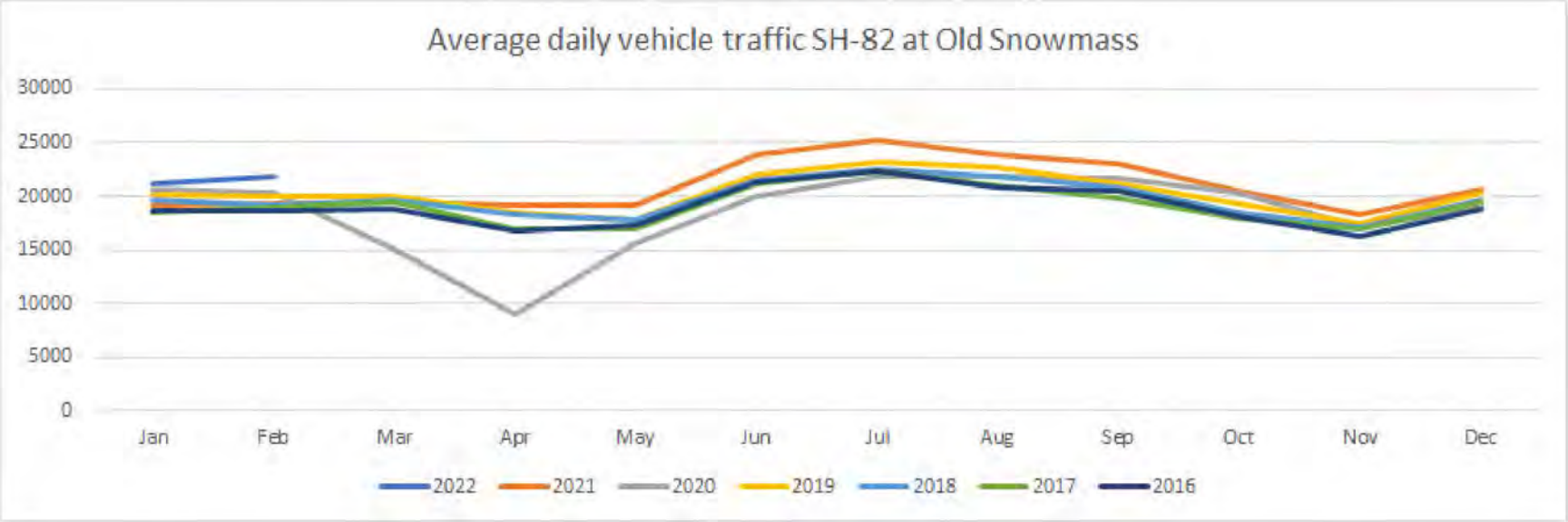


From 2022 on-board passenger survey

	I feel safe on buses and at bus stops	Buses are comfortable and clean	Drivers do a good job collecting fares	Fares are reasonable	Bus stops sheltered/ accessible	Op hours, frequency are adequate	Buses are generally on time	Drivers courteous, profssional	Info readily available and clear	RFTA is convenient for my needs	I am overall satisfied with RFTA
both ends in Aspen	1.27	1.39	1.36	1.37	1.55	1.55	1.67	1.66	1.83	1.36	1.42
Aspen - Snowmass	1.31	1.31	1.39	1.32	1.53	1.55	1.55	1.48	1.76	1.42	1.47
Aspen - Downvalley, Hogback	1.40	1.51	1.49	1.58	1.58	1.78	1.71	1.84	1.83	1.44	1.50
Snowmass - Downvalley, Hogback	1.37	1.31	1.36	1.51	1.61	1.65	1.80	1.82	1.94	1.37	1.43
both ends Downvalley	1.38	1.62	1.46	1.44	1.61	1.64	1.60	1.53	1.60	1.46	1.51
Hogback (no trip end Upvalley)	1.58	1.35	1.49	1.85	1.85	2.62	1.47	1.94	2.14	1.54	1.48

From 2022 on-board passenger survey




Average daily vehicle traffic SH-82 at Old Snowmass
30000
25000
20000
15000
10000
5000
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
2022
2021
2020
2019
2018
2017
2016

Town of Snowmass Village

Agenda Item Summary

DATE OF MEETING:
March 20, 2023

AGENDA ITEM:
Consideration and Possible Adoption of the 2023 Council Goal Setting Statement

PRESENTED BY:
Clint Kinney, Town Manager

BACKGROUND:
Over the course of the last several months, the Town Council held several goal setting meetings and discussions. Following the meetings, Town Staff worked to incorporate the thoughts and ideas of Council into a proposed 2023 Council Goal Statement. After a number of reviews, the 2023 Council Goal Statement is ready for formal approval and adoption.

FINANCIAL IMPACT:
Once adopted, the Goal Statement becomes the cornerstone of Council policy and is heavily utilized in the development of the annual budget. This statement significantly impacts where and how future spending occurs.

APPLICABILITY TO COUNCIL GOALS & OBJECTIVES:
Once adopted, these goals and policies are heavily utilized.

COUNCIL OPTIONS:

1. Adopt the Goal Statement
2. Modify, then adopt the Goal Statement.

STAFF RECOMMENDATION:
It is the recommendation of Town Staff that the Council pass a motion to:

Formally adopt the 2023 Council Goal Setting Statement

ATTACHMENTS:

2023 Statement

SNOWMASS VILLAGE
TOWN COUNCIL
GOAL STATEMENT
ADOPTED MARCH 20, 2023

The Town Council remains firmly committed to the Aspiration Statement, Guiding Principles, Just Big Enough economic analysis, Plan Framework, and Strategic Initiatives found in the 2018 Comprehensive Plan.

GUIDING PRINCIPLES

Stewardship Vibrant Genuine Active & Healthy Balanced
Connected Inclusive

STRATEGIC INITIATIVES OF SNOWMASS VILLAGE

- Preserve and protect open spaces and our environment to ensure that nature is and remains the dominate feature on the landscape.
- Promote environmental and economic sustainability and resiliency.
- Focus on improved access and safety to make Snowmass Village more walkable and bikeable.
- Continue to improve the multi-modal connections between Base Village, the Mall, and the Center.
- Manage parking and transit to encourage efficient, effective, and sustainable mobility choices.
- Focus new development and/or redevelopment within the identified CPAs.
- Encourage the update and renovation of older buildings Village-wide.
- Strengthen local economic opportunities to assure vibrancy.
- Continue to support a viable workforce and our commitment to workforce housing by exploring opportunities that best balance the character and resources of the Town.

These initiatives are of the utmost importance to the Town Council and, as such, the Council remains committed to moving them forward. Safety, Connectivity, Transit, Environmental Activism, Resiliency, Regionalism, Risk Taking and Recruiting & Retaining high quality staff all remain critical components to the Village's success.

The overarching priority for this Town Council is:

Passionately Protecting the Village's Community Character to Promote Balance and Emotional Connectivity

The Town Council will focus on this priority by looking for creative solutions to address the many opportunities before us. The Town Council continues to recognize that we are not a traditional town, but rather a unique welcoming Village. We are Villagers, and we strive to bond and connect at a community level. The Village's community character is based on a fundamental connection to and respect for nature, an excitement to explore the outdoors, and a focus on emotional connectivity to each other and to place. Snowmass Villagers are gritty, thrive on authentic experiences, adventure, and curiosity. Our Village character continues to be defined as: fun, community-focused, family-friendly, thriving, charming, resilient, safe, emotionally connected, accessible, nimble, adaptable, balanced, and unique.

To protect the unique character of the Village and to enhance emotional and physical connections to the community, this Town Council has identified four areas of emphasis:

1) Identify & Provide More Affordable, Community, Workforce Housing

Providing more affordable workforce housing options within the Village enables community members to contribute to the local economy AND helps to build a strong, emotionally connected and engaged community. Town Council remains committed to implementing the 2021 Housing Master Plan.

Understanding that Village residents are served by local governmental organizations that are physically outside of the town, TOSV will work closely with those partner entities to create a more inclusive workforce housing framework that will integrate additional people/positions/organizations into our housing program. TOSV will endeavor to leverage additional financial resources from these partners to help meet our respective housing needs.

2) Preserve, Protect and Retain Locally Owned AND Locally Serving Businesses

The Council recognizes that the Village is a tourist economy and that locally owned and locally serving businesses need support. The Council firmly believes that such businesses build community through relationships, creating places and reasons for people to gather, and are critical to the community's character. The Council will work to prioritize and incentivize the needs of our local business community and will safeguard a high-quality visitor experience while focusing efforts to serve local residents first and foremost. If it is good for local residents, then it also benefits our guests.

3) Increase Community Engagement to Foster Emotional Connectivity

The Council will strive to increase effective community engagement to foster relationships, emotional connectivity and to protect community character. The Council will protect the community's character by ensuring that public amenities, events, facilities, and services enhance the local community and are designed to meet local community interests.

A sense of community is created through meaningful connections and a welcoming atmosphere. These types of connections are critical. Knowing that a variety of issues (especially increased housing costs) are negatively impacting the community, the Council will find ways to have all residents and guests be more committed and emotionally connected to the Village and our community. The Council desires to build community among all long-time residents, new residents, part-time residents, and guests with the goal of everyone feeling comfortable, welcome, and engaged in the Village.

This Town Council is focused on offering a variety of opportunities to receive feedback, create connections, and listen. It is imperative to expand citizen access to the

Council thus elevating community conversation, collaboration, and emotional connection to the Village.

The Council desires to maintain high quality communications with its citizen Boards and Commissions. The Council will do this by asking for guidance and feedback from them. The Council will explore a change to the Town Charter to allow Councilors to serve as *ex-officio* members of Boards and Commissions.

4) Ensure Public Spaces and Facilities Meet Our Community's Unique Character

The Town Council will strive to create and improve public spaces and facilities that promote health, safety, education, happiness, and enhance community character and connectivity. Understanding there are many needs and opportunites within the community, this Town Council remains open to them and is committed to focusing on the following projects. These are places where emotional connectivity "happen" and grow:

1) Implement the approved enhancements to Town Park.
2) Continue to evaluate the need for childcare options and plan for the expansion of the Little Red Schoolhouse. Town Council will also continue to explore other resources for expanding childcare and early childhood learning.
3) Reinvigorate the Ice Age Discovery as a source of pride for the community.
4) Encourage transit ridership by providing a Mall Transit experience that balances improved levels of service, safety and functionality with high quality aesthetics that satisfies community needs and meets our rural village character.
5) Partner with Pitkin County to expand library services in the Village, including building a library facility adjacent to, or connected to the Recreation Center.
6) Expand recreational opportunities for our trail network, including Nordic skiing.
7) Commit to maintaining, renewing, identifying, and developing spaces for local community connections.

Public Comment

Date	3/20/2023
Name	Betty Schou
Address (optional)	Street Address 241 Meadow Ranch Drive Address Line 2 5206 City Snowmass Village State / Province / Region CO Postal / Zip Code 81615 Country US
Would you like a follow-up,?	Yes (provide your email)
Email (Optional)	schou.betty@gmail.com
Does it apply to an upcoming Town Council Meeting	Yes
Date of Town Council Meeting	3/20/2023
Comment Topic	Owl Creek Road and Fairway 3 Crosswalk with appropriate signage
Public comments	It is my understanding that the Brush Creek Culvert project will take place beginning May through October 2023. With increased traffic on Owl Creek Road I am asking for a crosswalk at the Fairway 3 Bus Stop with proper signage including flashing lights so that pedestrians and local neighborhood children may cross safely to take the school bus or the Snowmass town shuttle. This is not a new request. I have been asking for a crosswalk at this location for several years. We finally saw progress this past fall when a local woman was verbally assaulted by a driver while crossing the street with her son. Soon after, a crosswalk was painted on the street but no signage. With winter conditions, the lines quickly faded. Since then there has been at least one car accident and one very close call right on this specific stretch of Owl Creek Road by the Meadow Ranch complex by the Fairway 3 bus stop. With anticipated significant increase in traffic, I sincerely hope that a proper crosswalk with flashing light signage will be implemented as soon as possible. Thank you.