

BRIEFING

Subject: Summer Transportation Overview 2023



Presented to: Council

Date: November 27, 2023

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Item #: 7.3

This Briefing is submitted for acceptance into the Corporate Record.

BACKGROUND

Reason for Report

To provide Council with an overview of summer 2023 transportation data.

SUMMARY OF ISSUE

July & August traffic 2023 versus 2019

1. Main entrances volumes down 1% from 2019
2. Banff Ave Bridge volume down 17% from 2019
3. Mountain Ave volume down 17% from 2019
4. Fewer days with greater than 15 minutes northbound travel times versus 2019
5. Traffic back-ups and delays continued to occur on busy afternoons
6. Local and regional transit ridership increased 47% from 2019
7. Pedestrian crossings over the Bow River exceeded 1 million versus 730,000 in 2019
8. VPP / RPP/ intercept parking – continued to achieve most intended goals

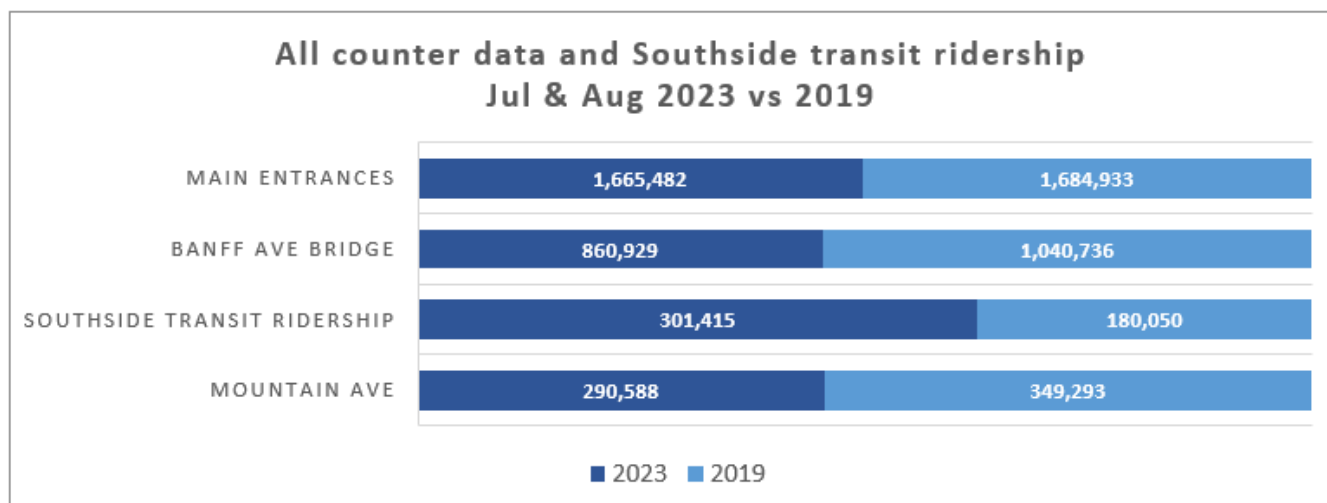
Further detail on each of these metrics is provided in the report and attached presentation
All statistics refer to July and August combined, unless otherwise noted

All Counter Data

1. Main Entrances

As shown in the charts below, July and August 2023 Main Entrances vehicle volumes were down 1% from 2019. The maximum Vehicles per Day (VPD)* was 32,342, versus 32,423 in 2019. The average VPD was 26,862, versus 27,176 in 2019. Year to date volumes to the end of August were up 4% from 2022 and down 2% from 2019.

The Main Entrances decrease versus 2019 may be attributable to successful communications and messaging tactics by Town of Banff and stakeholders resulting in uptake of sustainable transportation.



2. Banff Ave Bridge

- July and August 2023 vehicle volume decreased 17% from 2019, with a maximum of 14,900 Vehicles per Day (VPD) versus 19,022 VPD in 2019
- Bridge weekend volume 49% of Main entrances versus 61% in 2019 (Source: Banff GIS)
- Roam southside transit ridership (Routes 1, 2 and 4) increased 67% from 2019, contributing significantly to keeping the daily Banff Ave Bridge vehicle volumes under 16,000

3. Mountain Avenue

- July and August 2023 vehicle volumes decreased 17% from 2019, with the maximum of 5,629 Vehicles per Day (VPD) versus 7,259 VPD in 2019
- Mountain Ave weekend volume 17% of Main entrances versus 22% in 2019 (Source: Banff GIS)

Effective messaging at town entrances and throughout town to provide Sulphur Mountain parking lot status, promote intercept parking and transit, combined with increased transit frequency, have successfully reduced some Mountain Ave vehicle volume and associated congestion and delays.

In summary, a significant shift away from private vehicle travel over the Banff Ave Bridge and on Mountain Ave versus the significant increase in southside transit ridership is a substantial transition to the sustainable transportation model in Town Council goals over the past 10 years. Continued focus on this transition will be required to increase transit and active transportation uptake and improve travel time metrics.

4. JULY and AUGUST DAYS OVER CONGESTION THRESHOLD versus TRAVEL TIMES and GREEN OVERRIDES

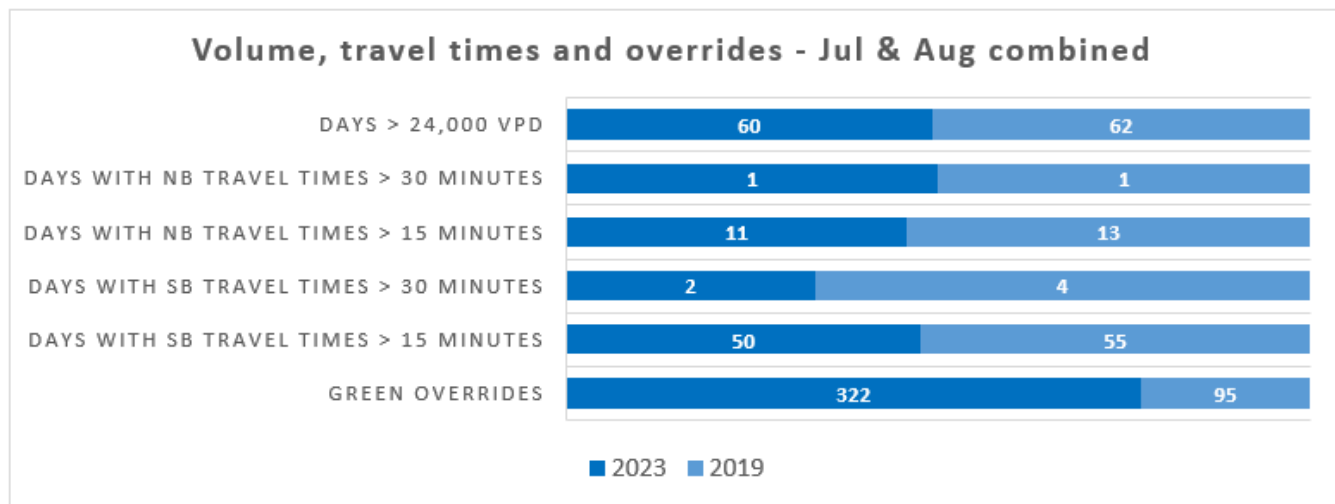
As shown in the chart below:

- Days over Banff's 24,000 VPD congestion threshold* were 60 versus 62 in 2019
- Days with Northbound travel times >30 minutes between the Rimrock and Banff-Buffalo intersection were 1 versus 1 in 2019
- Days with Northbound travel times >15 minutes between the Rimrock and Banff-Buffalo intersection were 11 versus 13 in 2019
- Days with Southbound travel times >30 minutes between East Entrance and Banff-Buffalo intersection were 2 versus 4 in 2019
- Days with Southbound travel times >15 minutes, between East Entrance and Banff-Buffalo intersection were 50 versus 55 in 2019
- Days with Southbound travel times >15 minutes, <30 minutes between West Entrance and Banff-Buffalo intersection were 6 versus 8 in 2019. There were no days over 30 minutes travel time.
- Green overrides*** increased 240% to 322 from 95 in 2019 with 15% required to expedite Southbound Beaver and Westbound Buffalo Street traffic

* When Main Entrances vehicle volumes exceed the 24,000 VPD congestion threshold then traffic back-ups and travel time delays occur on 1 or more of Banff's main travel corridors (Mountain Ave, Spray Ave, Norquay Rd, Lynx St, Bear St, Buffalo St, Beaver St, Banff Ave Bridge)

*** In part the increase in green overrides is due to a frequent shorter duration (2 minutes versus 3 minutes), necessary because of limited vehicle capacity on Buffalo St between Banff Ave and Bear St.

Greater pedestrian traffic at the Bear-Buffalo intersection due to the new Nancy Pauw Bridge is also a limiting factor to traffic flow during an override.



Abbreviations:

NB North Bound

SB South Bound

VPD Vehicles per day (two-way count, both entrances)

Overall, days with high travel times (>15 minutes) in both Northbound and Southbound directions were fewer than in 2019. There are many contributing factors to these improved statistics, including:

- 1% decreased main entrances volume (19,000 vehicles), therefore fewer vehicles driving within the townsite and contributing to congestion
- 17% decreased volumes over the Banff Ave Bridge (180,000 vehicles)
- 17% decreased volumes on Mountain Ave (60,000 vehicles)
- 60% increased regional transit ridership (25,000 more Banff-Canmore and On-It riders)
- 67% increased southside transit ridership (120,000 more riders)
- 38% increased Bow River pedestrian crossings (280,000 more people crossings)
- 240% increased green overrides for both Southbound / Westbound and Northbound traffic
- availability of the Train Station intercept parking lots (85,000 vehicles diverted from downtown)
- optimized signal timing at key intersections
- Traffic Control Personnel (TCPs) at key intersections to expedite turning movements

5. TRAFFIC BACK-UPS and DELAYS

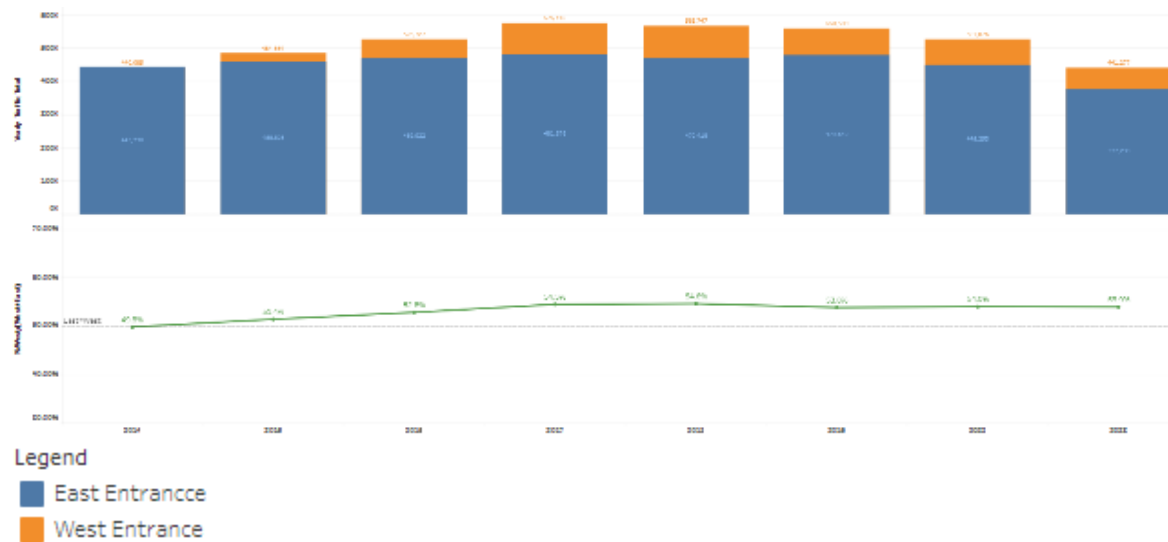
Multiple strategies since 2013 have had a positive effect on traffic flow in town. However, back-ups and delays continue to occur regularly throughout the summer due to a combination of high vehicle volumes entering and moving within the townsite and the finite capacity of Banff's road network.

High incoming **West entrance** vehicle volume combined with train traffic across Norquay Road has exacerbated West entrance traffic back-ups and delays dating back to at least 2015, often resulting in summer traffic backed up onto the Eastbound Highway 1 exit ramp and onto the highway itself.

High incoming **East entrance** vehicle volume caused back-ups on Beaver St from Buffalo to Wolf with overflow onto Muskrat and Otter Streets, in particular when Banff Ave 100 and 200 blocks were closed to accommodate the pedestrian zone. These back-ups predictably occurred when the Banff Ave entrance incoming volume reached and/or exceeded 700 vehicles per hour (VPH*) (5 occurrences in July and August 2023) and were occasionally caused and/or exacerbated by Parks Canada waving traffic through at the East Gate. When Banff Ave incoming volumes remained above 700 VPH* for multiple consecutive hours, coinciding with high afternoon Northbound traffic over the Banff Ave Bridge, then effective gridlock and delays resulted, as green overrides for the benefit of one direction would come at the direct expense of all the other backed up corridors. See photos on following pages.

Communication strategies in cooperation with stakeholders have been somewhat successful in directing visitors to the appropriate Banff entrance for their destination (campgrounds, hotels, day visitors), reducing some cross-town traffic and related congestion. **As shown in the graph below, the East-West entrance incoming vehicle volume split in July and August combined was 50%-50% in 2014 (far left of green line) versus 46%-54% in 2023 (far right of green line).** While these improvements have had a beneficial impact on reducing congestion, they cannot compensate for high traffic volumes which overwhelm both entrances on busy days and further sustainability strategies will be required to keep traffic flows to a manageable level.

Banff East Entrance Incoming Traffic vs Banff West Entrance Incoming Traffic - Overview



The upper graph (orange and blue columns) illustrates the incoming traffic count comparison between the Banff West Entrance (Mt Norquay Road) and East Entrance (Banff Avenue).

The lower graph (green line) illustrates the percentages of the incoming traffic at the West Entrance compared to the total incoming traffic at both entrances. 50% indicates that traffic volumes are the same between both entrances. >50% indicates more incoming traffic on the West Entrance, <50% indicates more incoming traffic on the East Entrance.

Source: Banff GIS

High **Northbound vehicle volume on Mountain and Spray Avenues** continued to cause back-ups and delays on both corridors. The back-ups on Mountain Ave predictably begin to occur when the Northbound volume approaches and/or exceeds 200 VPH* and when they coincide with high Southbound volume over the Banff Ave Bridge and in the downtown core then heavy congestion, delays, and even gridlock results. In those situations the use of green overrides for the benefit of Northbound southside traffic is restricted as it would come at the direct expense of all the other backed up corridors. See photos on following pages.

In addition to the above restrictions a reliance on green overrides to mitigate congestion and delays has its limits, which was demonstrated on the afternoon of July 6, 2023 when a controller network card failure led to the green override function not being available. Northbound travel times in excess of 15 minutes occurred for 2.5 hours duration and in excess of 30 minutes for 8 minutes between 2:00pm to 5:30pm. Northbound hourly volume reached 267 VPH, 34% above the congestion threshold.

In July and August 2023 town staff performed 10 one-hour audits of vehicles per hour (VPH) arriving and being turned away at the **Sulphur Mountain roundabout** due to the parking lots being full. As shown in the chart below, turnarounds ranged from 20% to 47% of hourly Southbound volume, which in turn contributed to Northbound volumes approaching and/or exceeding the 200 VPH congestion threshold on Mountain Ave in 4 of the 10 hours. Analysis of Northbound Mountain Avenue vehicle volume has shown that congestion and delays begin to occur when hourly volumes approach 200 VPH. Using the 4 cells outlined in red in the chart below as examples, between 5 and 17 fewer vehicles per hour would have kept the volume below the congestion threshold. During these same hours between 56 and 97 vehicles were turned around due to the parking lots being full.

Data and observations confirm that collaborating on strategies and tactics with stakeholders to reduce the vehicle volume on Mountain Ave presents the most effective means of managing congestion and delays.

Sulphur Mountain roundabout traffic

Date			Vehicle Counts				Mountain Ave Northbound VPH*
DoW	Day	Time	Up	Parked	Down	% turned around	
Sat	2023-07-01	11am-12pm	153	110	43	28%	152
Sat	2023-07-01	12pm-1pm	138	110	28	20%	147
Sat	2023-07-01	1pm-2pm	130	101	29	22%	154
Sun	2023-07-02	10am-11am	165	128	37	22%	157
Sun	2023-07-02	11am-12pm	184	133	51	28%	185
Sun	2023-07-02	12pm-1pm	163	97	66	40%	167
Sat	2023-07-08	1pm-2pm	176	120	56	32%	205
Sat	2023-08-05	12pm-1pm	179	104	75	42%	217
Sun	2023-08-06	10am-11am	206	109	97	47%	199
Sun	2023-08-06	11am-12pm	204	131	73	36%	208

*VPH - Vehicles per hour

In addition to the traffic back-ups due to high volumes on North and South corridors another significant factor contributes to downtown congestion; **Westbound Buffalo St back-ups** as far as the Banff Cemetery due to campground, Tunnel Mountain resort and Otter St traffic constitute up to 26% of Westbound Buffalo St volume, up to 10% of Southbound volume on Banff Ave Bridge / 13% of East Entrance Southbound volume. See photos below.

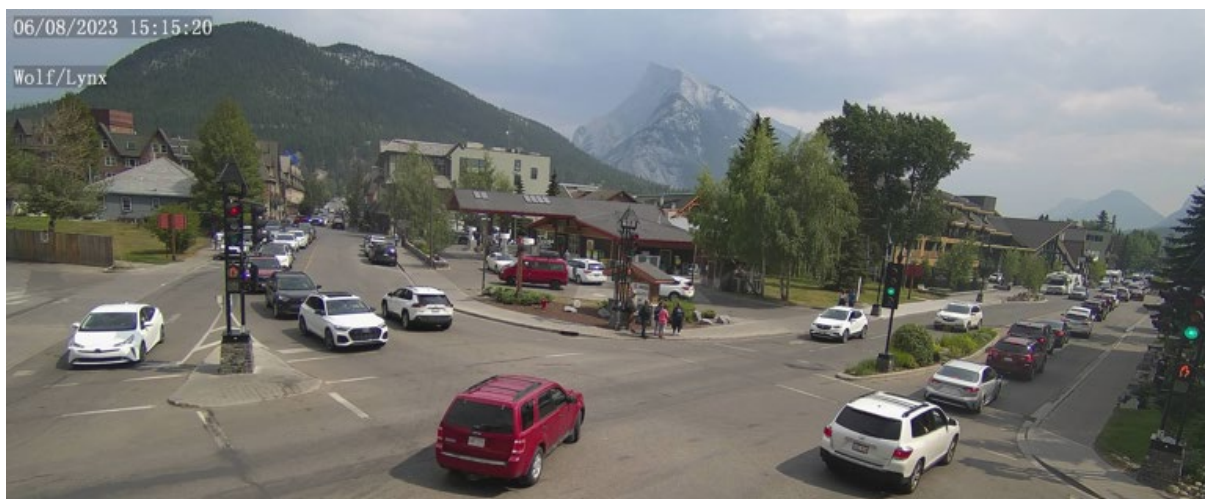
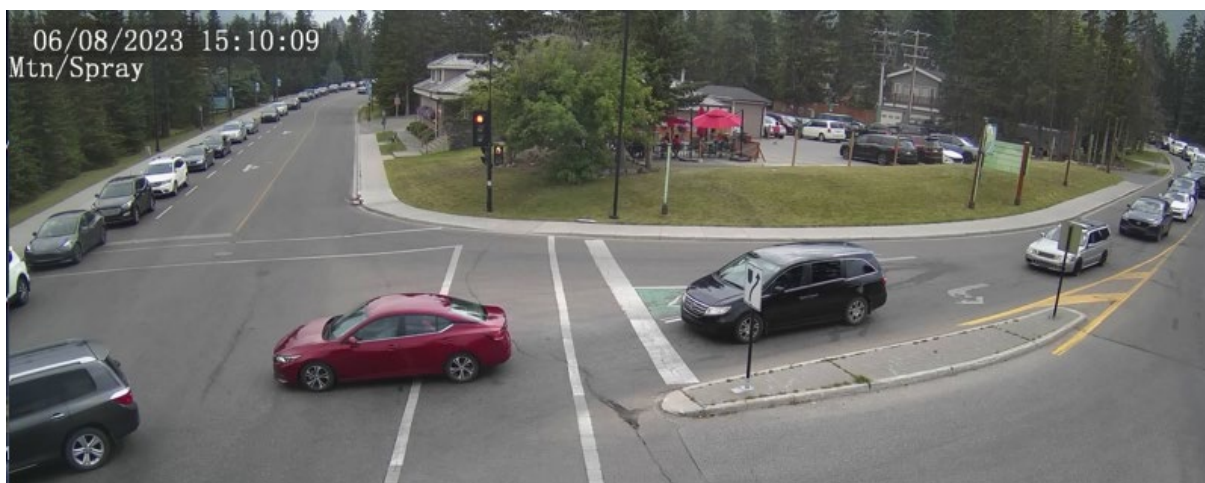
The **Westbound Buffalo St back-ups** to the cemetery have occurred since summer 2017. The **Southbound Beaver St back-ups** filling the 100 and 200 blocks from Buffalo to Wolf with traffic bypassing Beaver onto Muskrat began on the September long weekend 2021. These back-ups have lasted for hours on some weekends even with the use of green overrides and the work of Traffic Control Personnel (TCPs).

In summary, various strategies, tactics and infrastructure changes implemented to date, while mitigating a considerable amount of congestion, have not been sufficient to eliminate traffic back-ups or travel time delays and any annual increase in summer vehicle volume will continue to exacerbate these conditions.

Traffic backed up on Beaver St and Buffalo St, Sunday, July 2, 2023, 2:35 - 2:45pm



Traffic backed up simultaneously on Beaver, Buffalo, Lynx and Wolf Streets, Mountain and Spray Avenues – Gridlock Sunday, August 6, 2023, 3:00pm until 5:00pm



6. ROAM TRANSIT

Banff local transit had the highest July and August ridership on record with 440,875 riders on routes 1, 2 and 4 combined, a 28% increase from 343,000 riders in 2022 and a 47% increase from 301,000 riders in 2019.

- Banff residents took over 75,102 fare-free transit rides versus 26,445 in 2022
- Campground fare-free transit riders – 24,042 versus 19,141 in 2022 and 22,620 in 2019
- Banff local ridership reached 1 million in August versus December of 2022 and 984,000 in all of 2019.
- 7.5% of Route 1 trips and 6% of Route 2 trips were overloaded – for a total 740 overload trips in July and August.

Banff Local (Route 1, 2 & 4)					
	2019	2022	2023	% Change 2022-23	% Change 2019-23
July	149,250	175,448	223,387	27%	50%
August	151,601	167,878	217,488	30%	43%
Jul & Aug	300,851	343,326	440,875	28%	47%

Banff-Canmore Route 3 also had the highest July and August ridership on record with 56,000 riders, a 34% increase from 42,000 riders in 2022 and a 39% increase from 40,500 riders in 2019.

Calgary On-It regional transit also had the highest July and August ridership on record with 20,420 riders, a 44% increase from 14,185 riders in 2022 and an 83% increase from 11,129 riders in 2019. This increase is significant in percentage terms and proves the effectiveness of mass transit as a concept. In terms of scale however, the numbers are modest with around 20,400 On-It passengers in July and August versus 4.129M people arriving in private vehicles; so only around 0.5% of people arrived on the On-It system versus around 0.2% in 2022.

Increasing service hours and capacity could be methods to help improve ridership increases but these would need to be of a significant scale in order to have a meaningful impact on vehicle volumes, and the effectiveness of service increases may be limited without a more widespread use of driving disincentives (such as paid parking at visitor attractions).

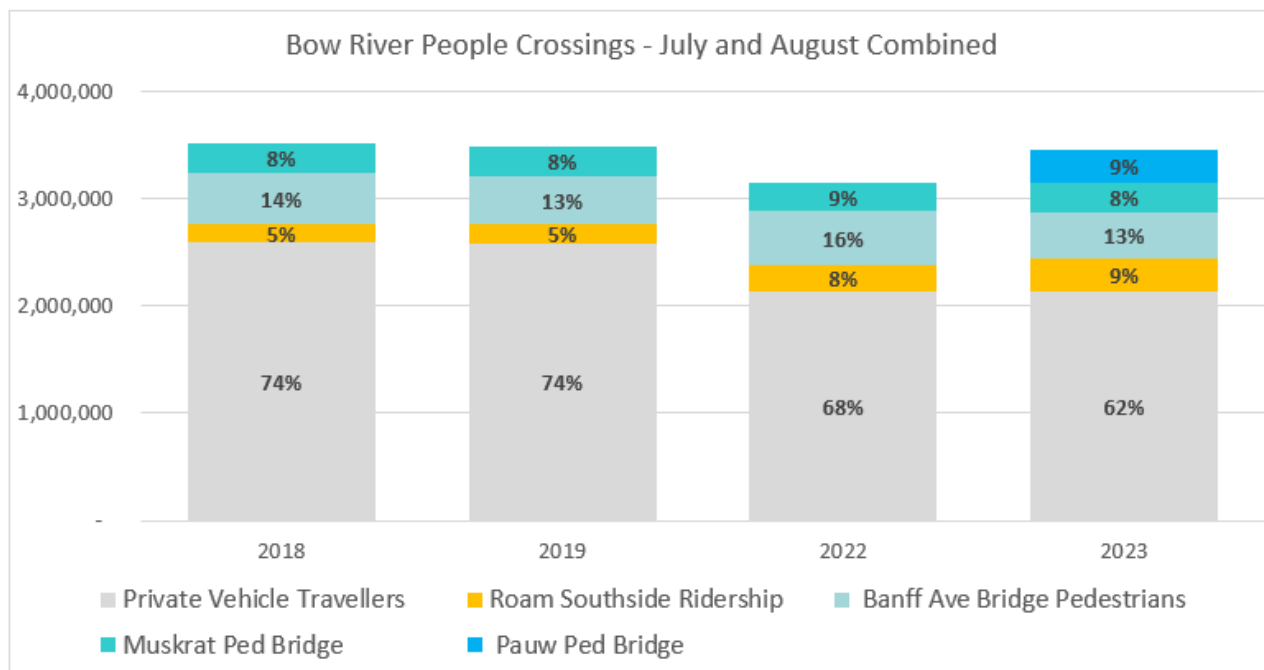
Ridership on the above 3 transit groups combined increased 47% to 518,000 in 2023 versus 350,000 in 2019. This is the equivalent of removing 3,300 vehicles per day from Banff's road system; without transit we would have experienced gridlock for most of the summer.

In summary, local and regional transit continues to do the heavy lifting in terms of reducing vehicle volumes in excess of Banff's congestion threshold of 24,000 vehicles per day and increasing ridership will need to be a key component in the short-term and long-term strategies for optimizing our road network functionality.

7. BOW RIVER PEOPLE CROSSINGS

As shown in the graph and chart below a substantial mode shift occurred between July and August 2019 and 2023, with a 67% increase in southside transit ridership, a 38% increase in pedestrian crossings and a 17% decrease in private vehicle travellers. This very positive change is attributed to several factors including increased transit service frequency, free transit for locals, intercept parking, communication tactics in cooperation with stakeholders and stand alone, signage and the new Nancy Pauw Pedestrian Bridge.

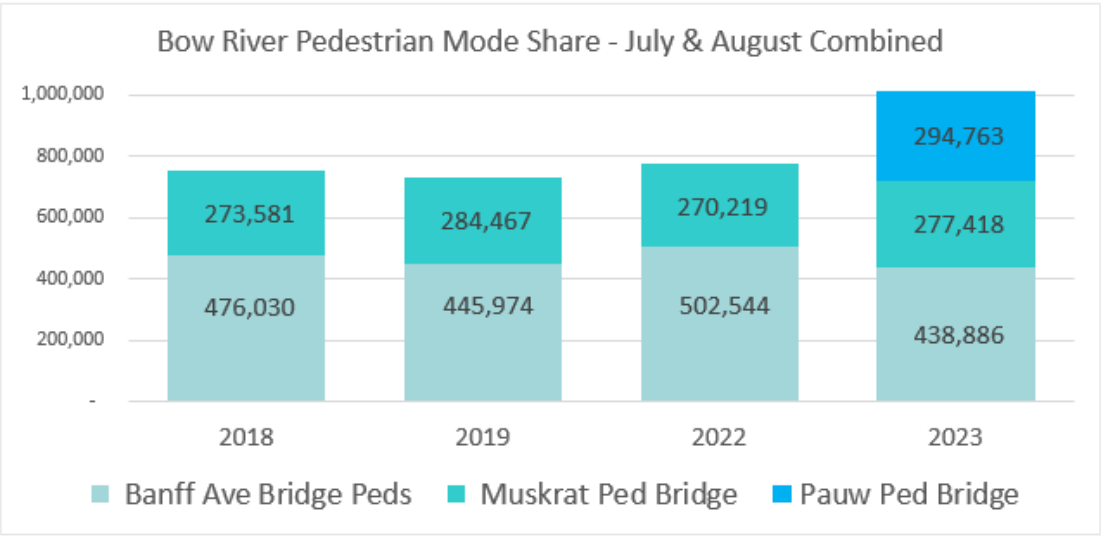
- Nancy Pauw pedestrian bridge traffic was 9% of total people crossings
- Bow River pedestrian crossings represented 30% of total people crossings versus 21% in 2019
- Southside transit ridership was 9% of total people crossings versus 5% in 2019
- Private vehicle occupants represented 62% of total people crossings versus 74% in 2019
- Pursuit also ran free shuttles but data is not available at the time of writing. 2019 was the last year data was available, when shuttle ridership was 49,000, 1% of people crossings



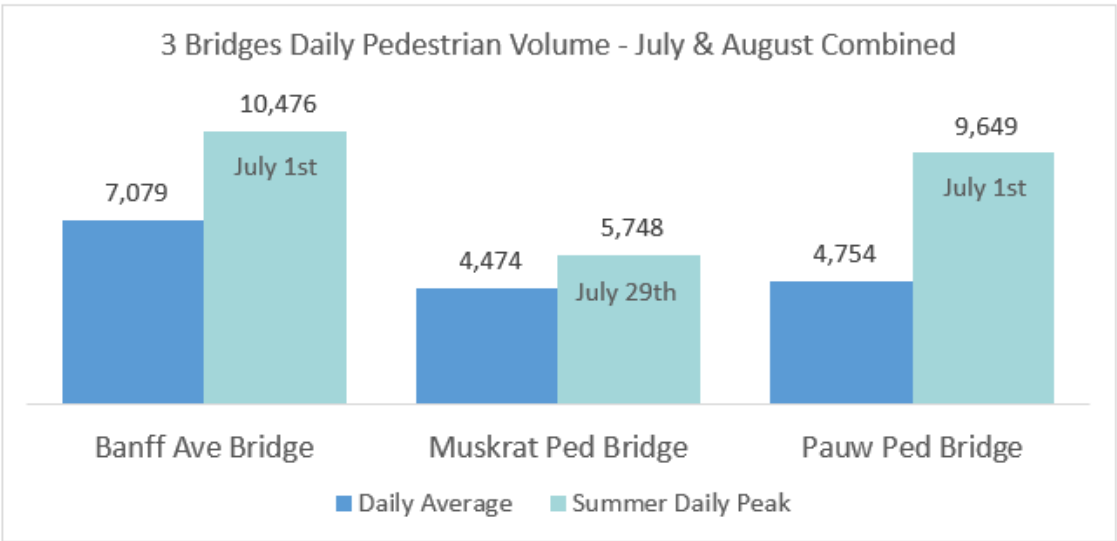
July & August	2018	2019	2022	2023
Muskrat Ped Bridge	273,581	284,467	270,219	277,418
Pauw Ped Bridge	-	-	-	294,763
Banff Ave Bridge Pedestrians	476,030	445,974	502,544	438,886
Roam Southside Ridership	163,860	180,050	242,338	301,415
Private Vehicle Travellers	2,599,391	2,581,024	2,137,452	2,135,104
Total	3,512,862	3,491,515	3,152,553	3,447,586

NANCY PAUW BRIDGE EFFECT

As shown in the graph below, during the first summer of the Nancy Pauw Bridge operation it captured 29% of Bow River pedestrian traffic (294,763 crossings), some of it from the Muskrat Pedestrian Bridge and Banff Ave Bridge, which lost some pedestrian volume versus previous years. Impressively, the new pedestrian bridge option induced a 100% increase in pedestrian bridge crossings versus 2019. Pedestrian crossings over the Bow River were 1,011,067, a 38% increase from 730,441 in 2019.



The graph below shows daily average and daily peak Bow River pedestrian volume for July and August, with the Nancy Pauw and Banff Ave Bridge attracting high July 1st traffic versus the Muskrat St Bridge.



In summary, the new Nancy Pauw bridge and increased transit service have had a huge “build it and they will come” effect on people crossings over the river, demonstrating the benefits of investment in sustainable transportation.

8. VISITOR-PAY, RESIDENT, INTERCEPT, FREE and PRIVATE PARKING

Visitor-Pay Parking and the Resident Parking Permit systems were launched on July 5, 2021, with the following intended goals:

- Encouraging a mode shift to sustainable transportation
- Freeing some space on residential streets and in parking lots
- Displacing commuters to longer term underutilized spaces
- Filling the intercept lot
- Generating revenue to help support sustainable transportation initiatives
- Allowing residents some free access to complete errands, appointments and shorter-term trips

The effectiveness of those systems is as follows.

Visitor Pay Parking Zone On-Street occupancy

As shown in the chart below VPP On-street maximum occupancy between 1:00-3:00pm for comparable blocks was 97% in 2023 versus 95% in pre-VPP 2019 and well above the 85% goal in the 2013 Transportation Master Plan.

	Capacity Stall Count - 2023	Max occupancy Aug 1-7, 2023	2019 (no VPP)	2022	2023
0 BANFF AVE	4	3	N/A	75%	75%
0 CARIBOU ST	13	13	100%	100%	100%
0 WOLF ST	15	15	100%	100%	100%
100 BEAR ST	16	16	100%	100%	100%
100 BEAVER ST	20	16	100%	95%	80%
100 BUFFALO ST	12	12	N/A	100%	100%
100 CARIBOU ST	6	6	100%	100%	100%
100 LYNX ST	18	18	100%	100%	100%
100 WOLF ST	10	10	85%	100%	100%
200 BEAVER ST	13	13	100%	100%	100%
200 BUFFALO ST	3	3	100%	100%	100%
200 CARIBOU ST	0	N/A	100%	100%	N/A
200 ELK ST	8	8	100%	100%	100%
200 LYNX ST	18	18	100%	100%	100%
200 MOOSE ST	6	6	69%	100%	100%
300 BANFF AVE	0	N/A	80%	100%	N/A
300 CARIBOU ST	0	N/A	100%	100%	N/A
300 MARTEN ST	21	21	82%	100%	100%
300 WOLF ST	12	12	100%	100%	100%
Total On-Street Occupancy	195	190	95%	99%	97%

Note: Both On-Street and Parking Lot annual surveys were conducted on the following dates, by a consultant in 2019, by town staff in 2022 and 2023

2019 surveys – 7 days, Aug 1-7 including the highest vehicle volume day of August

2022 surveys – 7 days, Jul28–Aug3 including the highest vehicle volume day of July and August

2023 surveys – 7 days, Aug 1-7 including the highest vehicle volume day of August

Visitor Pay Parking (VPP) Lot occupancy

As shown in the chart below VPP Parking Lot peak occupancy between 1:00-3:00pm was 98% in 2023 versus 100% in pre-VPP 2019 and well above the 90% goal in the 2012 Transportation Master Plan.

	Bear St	Bear St Parkade Lower	Beaver- Buffalo	Central Park	Fire Hall	Health Unit	Mt Royal	Town Hall	Total Down Town Lots
7 day Maximum* 2023	95%	100%	100%	100%	100%	100%	100%	100%	98%
7 day Maximum* 2022	93%	85%	100%	100%	100%	100%	104%	100%	96%
7 day Maximum* 2019 (no VPP)	100%	100%	98%	100%	100%	100%	100%	100%	100%
7 day Average** 2023	81%	84%	99%	99%	98%	100%	95%	98%	95%
7 day Average** 2022	82%	74%	97%	99%	99%	99%	99%	91%	94%
7 day Average 2019** (no VPP)	60%	58%	46%	37%	43%	78%	61%	62%	56%

*Maximum occupancy is on the day with the highest occupancy at peak times (1:00 - 3:00pm) of the days studied.

**Average occupancy is the average of the occupancy at peak times (1:00 - 3:00pm) of the days studied.

Note: Occupancy includes disabled stalls

Combined VPP On-street and Parking Lot occupancy

As shown in the chart below combined VPP On-Street and Parking Lot maximum occupancy between 1:00-3:00pm was 98% in 2023, unchanged from 2019 despite the summer season 2023 parking rate increase from \$3 to \$5 per hour versus 2022. Summer rates will be in effect from May through October.

VPP Maximum* Occupancy	2019 % (no VPP)	2022 %	2023 %
On-Street %	95%	99%	97%
Parking lots %	100%	96%	98%
Combined %	98%	97%	98%

*Maximum occupancy is on the day with the highest occupancy at peak times (1:00 - 3:00pm) of the days studied.

The unchanged maximum occupancy despite the Main Entrances vehicle volume decrease of 1% since 2019 are indicators of the following:

- Visitors are willing to pay for parking at increased rates if free parking stalls are full
- The RPP system goal of reserving residential parking stalls for residents is effective

VPP Rate Change Effect

May through October hourly rates were increased from \$3/hr in 2022 to \$5/hr in 2023. Parking session data for July and August 2023 versus 2022 is as follows:

- Percentage of incoming vehicles starting sessions decreased from 9% to 8.4% - so an increment of 0.6% of incoming vehicles chose to not pay to park downtown when the rate went up.
- Percentage of transactions that were extended decreased from 7.1% to 6.7% - indicating that 0.6% (860 of 151,000 transactions in 2023) chose to pay for a shorter duration and extend.
- The average time paid for decreased by 3 minutes from 121 minutes in 2022 to 118 minutes in 2023.

In summary, the rate increase appears to have had only minimal effect on parking behaviour – indicating that a further increase and/or expansion to the parkade would be needed to further disincentivize driving downtown.

Residential Parking Permit (RPP) zone street occupancy

As shown in the chart below the RPP system continued to be effective in relocating visitors from some residential streets. Between pre-RPP 2019 and 2023 in the RPP areas**:

- Average maximum* occupancy decreased from 91% in 2019 to 49% in 2023***
- The number of streets with greater than maximum* 90% occupancy decreased from 14 to 2 (of 21 in the study area)***
- Vacant stalls at peak times* increased from 60 in 2019 to 304 in 2023***

2023 RPP Zone occupancy decreased significantly from 2019 due to factors such as increased enforcement and suspected non-RPP permit drivers parking outside the RPP Zone. There were 2,300 RPP Zone tickets issued in summer 2023, a 41% increase versus 1,650 in 2022. The very large variance for 200 Otter between 2019-2022 and 2023 may be due in part to the license plates of some nose in parked vehicles not being captured by the scanner.

RPP Maximum Occupancy 2019 - 2023

	Maximum* Occupancy %			Vacant stalls at Peak Time*		
	2019	2022	2023	2019	2022	2023
100 BEAVER ST	100%	48%	70%	0	26	7
100 MUSKRAT ST	91%	73%	54%	5	15	26
100 OTTER ST	88%	64%	25%	7	20	51
200 BEAVER ST	100%	51%	63%	0	18	9
200 MOOSE ST	69%	31%	67%	5	11	1
200 MUSKRAT ST	91%	83%	38%	4	8	30
200 OTTER ST	100%	100%	8%	0	0	54
300 BEAVER ST	81%	62%	42%	9	18	25
300 MARTEN ST	82%	58%	47%	11	26	16
300 MOOSE ST	100%	75%	18%	0	3	9
300 MUSKRAT ST	81%	42%	48%	6	18	14
300 OTTER ST	62%	85%	80%	5	2	2
300 SQUIRREL ST - B	100%	92%	100%	0	3	0
400 BEAVER ST	93%	41%	45%	4	34	22
400 BUFFALO ST	100%	86%	14%	0	1	6
400 CARIBOU ST	100%	55%	100%	0	9	0
400 MOOSE ST	100%	50%	23%	0	4	10
400 WOLF ST	100%	88%	41%	0	2	10
500 BUFFALO ST	100%	67%	27%	0	3	8
500 CARIBOU ST	100%	80%	46%	0	2	7
500 MOOSE ST	75%	50%	69%	4	8	4
Total				60	205	304
Average Max RPP % occupancy	91%	66%	49%			
Streets with >90% occupancy	14	2	2			

*Maximum occupancy is on the day with the highest occupancy at peak times (1:00 - 3:00pm) of the days studied.

**From 2014 to 2019 a consultant was engaged to carry out a 7-day Licence Plate Recognition (LPR) study, however, the consultant study was not carried out in 2020, 2021, 2022 or 2023 due to cost savings adjustments in response to the pandemic. The 2022 data above are from manual surveys by town staff. The 2023 LPR data was collected by Municipal Enforcement.

***Annual surveys were conducted on different date ranges in each year, which may result in lower occupancy for 2022 and 2023.
 2019 surveys – 7 days – including the highest vehicle volume day of August
 2022 surveys – 3 days – non-historical survey dates in July and August
 2023 survey – 1 day only – not the highest vehicle volume day of the week

Train Station Public Intercept Parking Lot and West gravel lot

In July and August:

- The East paved intercept lot shown in the webcam screenshot below reached peak occupancy of 100% of the 456-vehicle capacity every weekend and on most weekdays.
 - Maximum peak occupancy on the September long weekend was 100% versus 65% on the September long weekend of 2019 when the parking lot opened
- The West gravel lot at the Train Station was again made available by Liricon Capital and was also filled to peak occupancy of 100% of the 105-vehicle capacity every weekend and on most weekdays
- Both parking lots were full by 1:00 pm on weekends and most weekdays
- Approximately 10% of incoming vehicles per day were estimated to use the 2 lots, reducing downtown congestion*
- Visitor Pay Parking and the Resident Parking Permit systems have had a positive impact on uptake of parking at both intercept lots combined with messaging to promote parking and transit

*Values varied between 6% and 12% on 3 days studied in previous years



Free Parking Lots occupancy

As shown in the chart below:

Maximum occupancy of 100% in the **Upper Bear St Parkade and Bow Ave parking lots** remained unchanged since 2019

Maximum occupancy of 100% in the **Train Station intercept lots** remained unchanged since 2022 (they were not open in July and August 2019)

Average occupancy in the **Upper Bear St Parkade and Bow Ave** combined increased to 99% in 2023 versus 68% in pre-VPP 2019, confirming the effectiveness of the RPP and VPP systems in relocating visitors from some residential streets. While Bow Ave average occupancy remained unchanged from 2022 to 2023, the Upper Bear St Parkade average occupancy increased from 95% in 2022 to 99% in 2023, indicating uptake due to increased VPP rates.

	***Bear St Parkade Upper	***Bow Avenue	Train Station West gravel lot	Train Station paved intercept lot	Total Occupancy Free Lots
Multi day Maximum* 2023	100%	100%	100%	100%	100%
Multi day Maximum* 2022	99%	100%	100%	100%	100%
Multi day Maximum* 2019 (no VPP)	100%	100%	n/a	n/a	100%
Multi day Average** 2023	99%	99%	92%	99%	98%
Multi day Average** 2022	95%	99%	99%	84%	89%
Multi day Average 2019** (no VPP)	58%	77%	n/a	n/a	68%

*Maximum occupancy is on the day with the highest occupancy at peak times (1:00 - 3:00pm) of the days studied.

**Average occupancy is the average of the occupancy at peak times (1:00 - 3:00pm) of the days studied.

***Annual surveys were conducted on the following dates, by a consultant in 2019, by town staff in 2022 and 2023, with Bear St Parkade and Bow Ave only on 3 and 4 days respectively in 2022:

2023 surveys – 7 days, Aug 1-7 including the highest vehicle volume day of August

2022 surveys – 3-7 days, Jul28–Aug3 including the highest vehicle volume day of July and August

2019 surveys – 7 days, Aug 1-7 including the highest vehicle volume day of August

Private Parking occupancy

As shown in the charts and map below, average private parking occupancy in zones A and B decreased by 25 vehicles to 45% in 2023 versus 50% in 2019***:

	2019	2023
Zone A & B total stalls	1186	1127
Zone A & B combined average occupancy	50%	45%
Free stalls in Zone A & B	593	618

Private hotel parking represents 63% of private parking in zones A and B. Occupancy only increased in the zone B surface category, by 16 percentage points versus 2019***, as shown below:

Hotel Parking - Surface vs Underground	2019	2023	
Zone A Hotels - surface	62%	45%	-17%
Zone A Hotels - Underground	46%	35%	-11%
Zone B Hotels -Surface	29%	45%	16%
Zone B Hotels - Underground	33%	32%	-1%

***Annual surveys were conducted between 1:00 and 2:00 pm on the following dates by Eng Dept staff:

2023 surveys – 7 days, Aug 1-7 including the highest vehicle volume day of August

2019 surveys – 7 days, Aug 1-7 including the highest vehicle volume day of August



In summary, the VPP and RPP systems implemented in July 2021 did not generate the anticipated increase in private parking occupancy, which decreased 11% from 2019. Reasons for the decrease might include:

- Mode shift to sustainable transportation including free transit for locals, more tourists arriving by tour buses, E-bike rebates
- Hybrid work arrangements versus pre-pandemic resulting in fewer commuters
- Active parking lot management by owners to discourage use by non-customers
- Height restrictions for big trucks in underground parkades
- Brief use of parking / driver remaining in vehicles to avoid enforcement / tickets

VPP, RPP, Intercept, Free and Private Parking Summary

The VPP/RPP systems have continued to achieve some of the desired results since implementation in July 2021, notably an uptake of underutilized parking in the intercept lots, Bear St parkade and Bow Ave, and a mode-shift to transit, which in turn reduced vehicle volume related congestion and delays.

- Maximum occupancy in the VPP zone was 98%, unchanged from 2019
- Maximum occupancy in the RPP zone was 47% versus 91% in 2019
- The number of empty stalls in the RPP zone increased to 304 from 60 in 2019
- Maximum occupancy in the intercept lots was 100% versus 65% on Sept long weekend 2019
- Both Train Station intercept lots were full by 1:00pm on weekends and most weekdays
- Maximum occupancy in the free parking lots was 100%, unchanged from 2019
- Maximum occupancy in private lots was 45% versus 50% in 2019

Not achieved was the increased downtown stall availability during busy days and times, with maximum VPP occupancy of 98% remaining unchanged from 2019 versus the 2012 Transportation Master Plan goal of 85-90%.

Displacing visitors from residential areas to intercept parking was one of the goals of the VPP/RPP system implementations. However, one negative consequence is that when the intercept lot, downtown and peripheral parking spaces are full then options for visitor parking to be accommodated are more limited. To accommodate future visitor volumes then initiatives such as a continued shift to mass transit from Calgary, more intercept parking, increased driving disincentives, increased mass transit options and/or quotas & reservation systems will be required.

SUMMARY OF FINDINGS

Trends from 2014 to 2023 demonstrate that the combined investments of stakeholders and Town of Banff are improving traffic flow and reducing congestion and delays. Continued proactive development and deployment of strategies and tactics to manage traffic volume will be required to accommodate visitation without compromising the significant gains made thus far.

Increased transit capacity and service frequency combined with free transit for locals has provided the greatest share of resident and visitor mode shift since 2014, in terms of numbers, and is anticipated to be a key component of further improvements in traffic flow.

Administration will continue to work with stakeholders to further improve transportation metrics and will continue to develop long-term options for infrastructure changes which would enable increases in visitation without worsening the effects of congestion for residents and visitors.

RESPONSE OPTIONS

Council have provided valuable strategic direction through the previous and current four-year strategic plan and no further direction is required at this time.

Internal Resources

- Data collected and compiled by Engineering, Municipal Enforcement and GIS Departments

Banff Community Plan

- Provide a transportation system that encourages and complements pedestrian movements and cycling.
- Provide a transportation system that enhances the resident and visitor experience.

Environment

- Natural environment
- Transportation
- Visitor experience

Council Strategic Priorities

- Better Banff for Residents
- Lead Climate Action
- Moving into the Future
- Foster Connections

Legislation/Policy

Other

ATTACHMENTS

Attachment: Summer 2023 Transportation Data Overview Presentation Slides

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