



PUBLIC MEETING AGENDA

Transportation Commission

MEETING DATE

Tuesday, December 11, 2018
7:30 a.m.

MEETING LOCATION

Tempe Transportation Center, Don Cassano Room
200 E. 5th Street, 2nd floor
Tempe, Arizona

AGENDA ITEM	PRESENTER	ACTION or INFORMATION
1. Public Appearances The Transportation Commission welcomes public comment for items listed on this agenda. There is a three-minute time limit per citizen.	Ryan Guzy, Commission Chair	Information
2. Approval of Meeting Minutes The Commission will be asked to review and approve meeting minutes from the November 13, 2018 meeting.	Ryan Guzy, Commission Chair	Action
3. Commission Business The Chair will recognize outgoing Commissioners Cassano, Olson, Huellmantel and Redman for their service as their terms end Dec. 31, 2018.	Ryan Guzy, Commission Chair	Information
4. Transportation Market Research Survey The consultant from WestGroup Research will present the findings from the 2018 transportation survey.	Kathy DeBour, WestGroup Research	Information and Possible Action
5. Orbit System Including Saturn Route Staff will make a presentation regarding the performance of the Orbit System including the Saturn route which began in October 2017.	Sam Stevenson, Public Works	Information and Possible Action
6. Free Area Local Shuttle (FLASH) Service Staff will make a presentation possible changes to the FLASH route.	Eric Iwersen, Public Works	Information and Possible Action
7. Alameda Drive Streetscape Project Staff will make a presentation regarding the status of the Alameda Drive Streetscape Project and next steps.	Bonnie Richardson, Public Works	Information and Possible Action
8. Transit Extension Study An update will be made on the progress of the transit extension study.	Eric Iwersen, Public Works	Information and Possible Action
9. Department & Regional Transportation Updates Staff will provide updates and current issues being discussed at regional transit agencies.	Public Works Staff	Information

10. Future Agenda Items Commission may request future agenda items.	Ryan Guzy, Commission Chair	Information and Possible Action
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According to the Arizona Open Meeting Law, the Transportation Commission may only discuss matters listed on the agenda. The city of Tempe endeavors to make all public meetings accessible to persons with disabilities. With 48 hours advance notice, special assistance is available at public meetings for sight and/or hearing-impaired persons. Please call 350-4311 (voice) or for Relay Users: 711 to request an accommodation to participate in a public meeting.



Minutes
City of Tempe Joint Meeting of the
Transportation Commission and Sustainability Commission
November 13, 2018

Minutes of the joint meeting of Tempe Transportation Commission and Sustainability Commission held on Tuesday, November 13, 2018, 7:30 a.m. at the Tempe Transportation Center, Don Cassano Community Room, 200 E. Fifth Street, Tempe, Arizona.

(MEMBERS) Present:

Ryan Guzy (Chair)
Jeremy Browning
Kevin Olson
Bonnie Gerepka
Paul Hubbell
David A. King
John Kissinger
Arnim Wiek
Alix Monty
Gretchen Reinhart

Brian Fellows
Lloyd Thomas (via phone)
Charles Huellmantel (via phone)
Cyndi Streid
Shana Ellis
Don Cassano
Charles Redman
Corey Hawkey
Kendon Jung
John Kane (via phone)

(MEMBERS) Absent:

Susan Conklu
Ryan Mores
Anne Gill

Stephanie Milam-Edwards
Rayna Olvey

City Staff Present:

Shelly Seyler, Deputy Public Works Director
Vanessa Spartan, Transportation Planner
Tony Belleau, Streetcar Manager
Braden Kay, Sustainability Director
Cara Nassar, Planning Intern

Sue Taaffe, Public Works Supervisor
Robert Yabes, Principal Planner
Laura Kajfez, Neighborhood Services Specialist
Grace Kelly, Public Works Supervisor
Rosa Inchausti, Strategic Management/Diversity Director

Guests Present:

John Federico
Friederike Schwarz
Lars Geest
Ashley Mack
Cliff Anderson
Lucy Johnson
Lauren Keeler

Brooke Nelson
Nick Guenero
Robin Bruck
Thad Miller
Steve Bass
Huri Eischen

Commission Chair Guzy called the meeting to order at 7:40 a.m.

Agenda Item 1 – Public Appearances

Cliff Anderson spoke about air pollution, carbon pricing and collaboration.

Agenda Item 2 – Minutes

Chair Ryan Guzy introduced the minutes of October 9, 2018 meeting of the Transportation Commission and asked for a motion.

Motion: Commissioner Don Cassano

Second: Commissioner Paul Hubbell

Decision: Approved by Commissioners:

Ryan Guzy (Chair)

Jeremy Browning

Kevin Olson

Bonnie Gerepka

Paul Hubbell

David A. King

John Kissinger

Brian Fellows

Lloyd Thomas (via phone)

Charles Huellmantel (via phone)

Cyndi Streid

Shana Ellis

Don Cassano

Charles Redman

Agenda Item 3 – Annual Report

Shelly Seyler presented the 2018 annual report for approval which included the mission statement of the Transportation Commission and the Commission's goals for 2019.

A motion was made to approve the 2018 Transportation Commission Annual Report.

Motion: Commissioner Don Cassano

Second: Commissioner Kevin Olson

Decision: Approved.

Decision: Approved by Commissioners:

Ryan Guzy (Chair)

Jeremy Browning

Kevin Olson

Bonnie Gerepka

Paul Hubbell

David A. King

John Kissinger

Brian Fellows

Lloyd Thomas (via phone)

Charles Huellmantel (via phone)

Cyndi Streid

Shana Ellis

Don Cassano

Charles Redman

Agenda Item 4 – Climate Action Plan + Transportation

Vanessa Spartan made a presentation regarding 20-minute city. Topics of the presentation included:

- Overview of Tempe
- Growth accommodation
- Factors to consider
- Public forum results
- Roadway configurations
- Transportation demand management

Professors and staff from Arizona State University led a workshop on the future of transportation including electric vehicles, autonomous vehicles and 20-minute city. Members of the commissions were assigned one of three topics as listed below. At the end of the breakout discussion, each area reported their suggestions as listed below.

Autonomous Vehicles

- Possibility of using autonomous vehicles for people with disabilities, first/last mile trips, people with limited car access
- Implement a pilot program with an existing transit user

Electric Vehicles

- Placement of electric capacity at places of work
- Changes to building codes
- Incentives for commercial buildings

20-Minute City

- Behavioral changes
- Structural changes to roadway

Discussion was limited to input and consensus was not requested.

Agenda Item 5 – Department & Regional Transportation Updates

This item was not addressed.

Agenda Item 6 - Future Agenda Items

This item was not addressed.

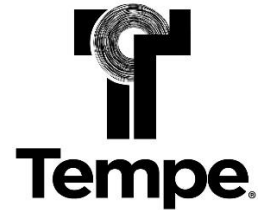
The next meeting is scheduled for December 11, 2018.

The meeting was adjourned at 9:00 a.m.

Prepared by: Sue Taaffe

Reviewed by: Shelly Seyler

CITY OF TEMPE TRANSPORTATION COMMISSION



STAFF REPORT

AGENDA ITEM 4

DATE

December 11, 2018

SUBJECT

2018 Tempe Transportation Survey

PURPOSE

The purpose of this memo is to provide the Commission with an overview of the key findings from the 2018 Tempe Transportation Survey

The City of Tempe commissioned WestGroup Research to complete a telephone survey of Tempe residents in an effort to gain insights into perceptions about public transit among both riders and non-riders, and perception and usage of other transportation programs. This report analyzes the data collected by the survey and, where appropriate, compares responses of the residents by meaningful demographic variables, as well as to data from studies conducted in September of 2008, 2010, 2012 and September/October 2014 and September of 2016. The most recent data collection was completed with 400 Tempe residents in September and October 2018. The margin of error for this sample size is $\pm 4.9\%$ at a 95% level of confidence.

Telephone calls with Tempe residents were made from WestGroup's interviewing center in Phoenix, Arizona. Households were selected by means of random digit dialing (RDD) according to Tempe zip codes. A quota was set to achieve equal representation of men and women as well as a representative distribution of the sample by age. A combination of RDD sample to contact "land line" households" along with cell-phone sample database to reach cell-phone only households was used to access potential respondents.

Rider Characteristics and Opinions

- Two-thirds (66%) of Tempe residents reported riding Tempe's transit service, including light rail, Orbit, Flash, and local bus/express. Although up slightly, it is statistically consistent with usage in 2016, 2014 and 2012.
- Although the proportion of Tempe residents riding transit increased slightly and the number reporting riding transit under special circumstances increased significantly, frequent or regular usage of Tempe's transit services continued to decline.
 - In 2018, only 2% of Tempe residents reported riding transit daily which is down significantly from 5% two years ago. Currently, 5% of residents indicate riding transit at least weekly,

significantly fewer than 10% in 2016 and 16% in 2014. The proportion riding at least monthly dipped to 11% from 16% in 2016 and 25% in 2014.

- Although a majority of transit riders reported riding light rail in the past year (73%), it is significantly fewer than those who reported doing so in 2016 (84%). Past year usage of Orbit or Flash neighborhood shuttles (32%) and local or express buses (25%) are statistically consistent with 2016.
- More than one-third (35%) of transit riders have been using Tempe’s transit system for more than ten years.
- *Convenience* and *getting to and from recreation* continue to be the most popular reasons for riding public transit (mentioned by 26% and 18%, respectively). Of note, mentions of the desire “to avoid parking” more than doubled this year (11% vs. 5% in 2016).
- Phoenix/Downtown Phoenix continues to increase in popularity as a public transit destination as does Downtown Tempe. Phoenix/Downtown Phoenix was by far the most popular destination for transit trips (48%), distantly followed by recreational activities (24%) and Downtown Tempe (21%).
- Riders rated their level of satisfaction with 12 different aspects of riding the bus. Riders were most satisfied with the comfort on the bus and driver courtesy and professionalism (93% and 92% very + somewhat satisfied). Riders were least satisfied with security and amenities at bus stops (66% and 67%, respectively).

Overall Perceptions and Satisfaction with Tempe’s Transit System

- The most common “top of mind” impression was positive with 14% of residents describing it with words such as “good,” “excellent” and “cool.” Nearly one in ten immediately thought: they “do not use it” (9%), more and improved public transit is needed (8%), they like the free Orbit neighborhood shuttles (7%), the system is “fine,” “adequate” or “average” (7%) or just thought of the light rail system in general (7%).
- Three in five (60%) residents with an opinion report being highly satisfied with the Tempe transit system, which is significantly lower than in 2016, 2014 and 2012.
 - Residents satisfied with the transit system attributed their satisfaction to good service (32%), and frequent and reliable service (23%).
 - Residents who provided lower satisfaction ratings most often mentioned the need for better/more routes (18%) and more frequent buses with extended hours (10%) as reasons for their ratings.

Potential Use of Tempe’s Transit System

- Preference for a personal vehicle was by far the most common reason given by non-riders as an explanation for not using public transit (49%).

- The two most effective benefits for persuading non-riders to use public transit appear to be *helps reduce air pollution* and *helps improve the environment* (both at 62% somewhat or very effective).
- The two least effective benefits for persuading non-transit users to use public transit were *reduces your stress* and *saves time* with only three in ten rating them as effective.

Tempe in Motion (TIM)

- Total awareness of Tempe in Motion (TIM) increased significantly to hit a ten-year high of 57% (up from 44% in 2016).
- Residents aware of TIM recalled hearing about it through signs on buses (20%), street banners (12%), bill inserts (10%) and online (8%).
- More than two in five (43%) of those who heard about TIM via TV, online ads, direct mail, street banners, Pandora/Spotify, and ASU indicated the advertising had a positive impact on their impression of transportation options in Tempe. One in five (21%) indicated the advertising message persuaded them to try public transit in Tempe.

Tempe Bicycling and Walking

- Nearly two-thirds of residents (64%) reported having access to a bicycle.
- Among those with access to a bike, two thirds (66%) reported riding their bike at least once a month, which is similar to the 71% measured in 2016. Among the one-third who never or only occasionally ride a bike, almost half (47%) blamed hot weather for not riding it more often.
- More than one-third (35%) of those who ride a bike at least once a month report they ride for *exercise*, while 17% ride a bike *to the store* and 16% ride their bike to *parks*.
- Residents who bicycle at least monthly say they do so primarily to get *exercise* (57%) and/or *to have fun* (22%).
- Consistent with the prior two study periods, in 2018, two thirds (66%) of residents reported being satisfied with the quality of walking and biking paths in Tempe.
- After being read a list of three possible sidewalk improvements in Tempe, survey participants were asked to rate how high of a priority each improvement should be for the City.
 - *Security and comfort on sidewalks, such as addressing hazards, obstructions and width* received the highest percentage of priority ratings (70%).
- After being read a list of six possible improvements to bikeways in Tempe, survey participants were asked to rate how high of a priority each improvement should be for the City.
 - *Security and comfort on multi-use paths, ease of travel around barriers, miles of multi-use paths and dedicated bike lanes* received the highest percentage of priority ratings (67%, 65% and 62% respectively).

- Three in five residents (59%) have heard of Tempe’s bike share system and 4% of all residents have ridden a GRID bike.

Tempe Youth Free Transit Pass Program

- In 2018, more than one-half (56%) of residents who have children ages 6 to 18 have heard of the Tempe Youth Free Transit Pass.
- Among parents aware of the program, one half (52%) indicated they heard about it through *school* followed distantly by *word-of-mouth and/or the library* (both mentioned by 12%).

Conclusions

1. While overall transit usage among Tempe residents increased slightly, there was a shift in the “mix” of users. There were more infrequent or casual users, but fewer regular users. Additionally, those who used public transit in the past are continuing to use it, however, there was a continued decrease in the percentage of residents who are newer riders. Finally, fewer transit users reported using light rail in 2018 than in previous years, while the percent using Orbit/Flash and City bus remained relatively constant.
2. Measures pertaining to *comfort on the bus, driver courtesy and professionalism, and ease of use* received a higher proportion of high satisfaction ratings than in 2016. However, the percentage of users giving high satisfaction ratings for all other evaluated attributes declined from previous years. Improvements suggested by users who are not satisfied with the system focus on a need for an improved transit environment (e.g., shade, lighting, safety, cleanliness, benches, bus driver courtesy) or increased services (e.g., more frequency and more routes).
3. Overall satisfaction with the transit system in Tempe continued to decline this year and perhaps is a reflection of a shift toward more casual usage of transit as well as a decrease in satisfaction of many of the transit elements evaluated this year. Concerns among those giving lower ratings fall into the two same categories as those cited by the smaller population of transit users: a level of discomfort with the transit environment (e.g., population using transit, cleanliness, security) and a need for more/better service. It is possible this general decline in satisfaction is leading some users to alter their usage to a more casual frequency.
4. Awareness of Tempe in Motion (TIM) increased significantly in 2018, with increased awareness of the messaging through multiple sources. The impact of the campaign continues to be positive, although there is a shift toward a neutral response.
5. A majority of residents indicate they are highly satisfied with the quality of the walking and biking paths in Tempe and would like to see more biking and walking paths. However, security and comfort on both the sidewalks and bike paths rank highest among residents as the top priority for improvement. This is consistent with the general sense of concern regarding safety and comfort that is beginning to surface with increased frequency among residents.

FISCAL IMPACT

The cost of the survey was \$23,400 which is budgeted in cost center 3916-6737.

RECOMMENDATION

For information.

CONTACT

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ATTACHMENTS

PowerPoint
Market Research Report

2018 Transit/Transportation Survey Results

Transportation Commission

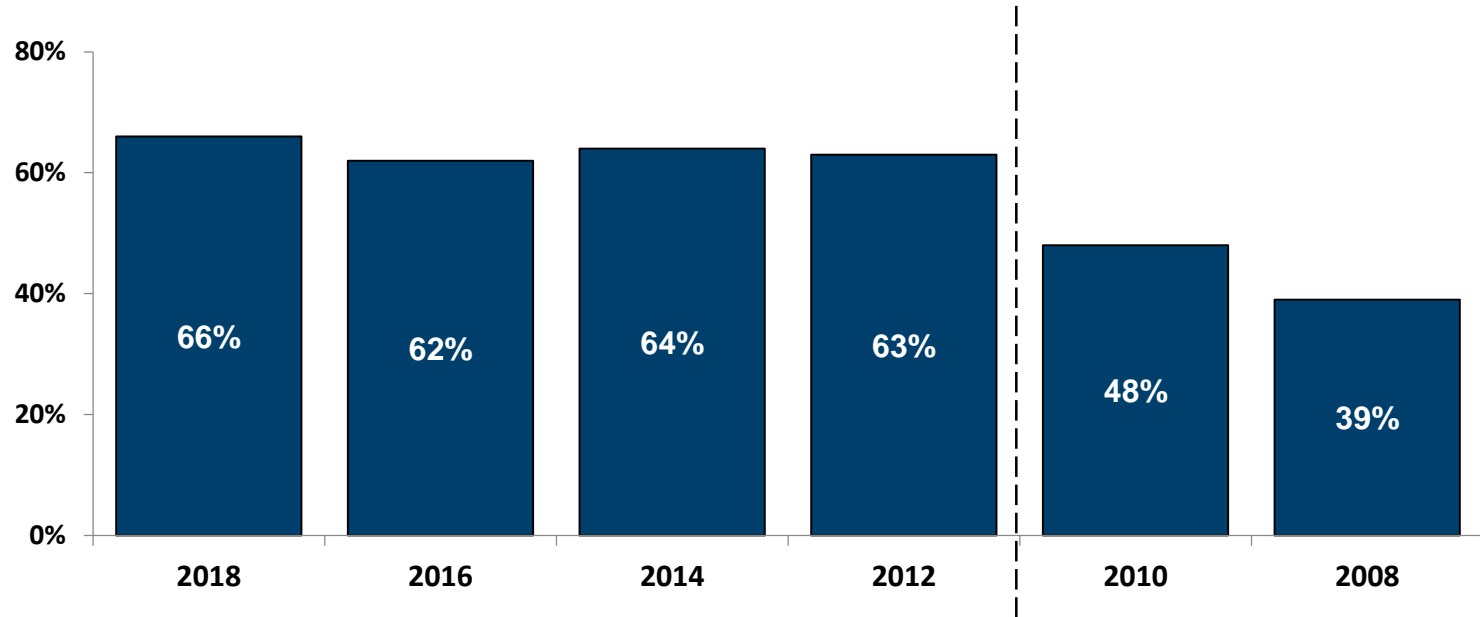
December 11, 2018





- Gain insights into perceptions about:
 - public transit among riders and non-riders
 - advertising
 - bicycle and pedestrian facilities
 - special programs
- 400 Tempe residents surveyed (land and cell lines)
- Margin of error for this sample size is approximately $\pm 4.9\%$ at a 95% level of confidence

Transit Service Usage in Tempe



Who Are Our Daily & Weekly Riders?



- Residents aged 18 to 54 vs. older residents (7% vs. 2%)
- Zip codes 85281 and 85282 vs. other zip codes (7% vs. 5% for 85283 and 2% for 85284)
- Tempe Residents for 10 years or less vs. long time residents (9% vs. 4%)
- Men and women were equally likely to use transit (63% and 64%)

	2018 (n=400)	2016 (n=401)	2014 (n=409)
Net Ride Daily or Weekly	5%*	10%	16%
Net Ride at least Monthly	11%	16%	25%
Daily	2%*	5%	6%
Weekly	3%	5%	10%
Monthly	6%	6%	9%
Every few months	10%	9%	8%
Special/unique circumstances	42%*	37%	31%
Don't Use Transit	34%	38%	35%

*Indicates significant difference compared to 2016 at a 95% confidence level.

Length of Use of Transit System



	2018 (n=253)	2016 (n=246)	2014 (n=256)
Light Rail	73%*	84%	79%
Orbit or Flash neighborhood shuttles	32%	37%	36%
Local or express bus	25%	28%	30%
Don't Know/Refused	12%*	7%	7%

Time Riding	2018 (n=253)	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)
Less than a year	4%	5%	6%	9%	14%	31%
1 – 2 years	6%	9%	10%	13%	27%	13%
2 – 4 years	13%	15%	24%	29%	13%	19%
4 – 6 years	19%	19%	23%	16%	10%	13%
6 – 10 years	14%*	22%	13%	13%	25%	20%
>10 years	35%*	25%	18%	12%	NA	NA
Don't know	11%*	4%	7%	8%	11%	4%

Why Do They Ride?



Responses	2018 (n=253)	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)
Convenient	26%	24%	27%	16%	24%	15%
Get to/from recreation	18%	22%	18%	14%	7%	4%
To avoid parking	11%*	5%	3%	10%	7%	3%
To go downtown	9%*	3%	3%	6%	5%	-
Vehicle not available/car problems	6%	3%	1%	-	-	-
Do not have a car	5%	8%	12%	11%	9%	16%
Dislike Driving/ Take a break from driving	5%	4%	1%	-	-	-
Get to/from school	4%	5%	4%	2%	2%	7%
To avoid drinking and driving	4%	3%	2%	-	-	-
To get to/from work	4%	3%	2%	-	-	-
Need to get to Phoenix	2%	4%	3%	-	-	-
Saves money	2%	3%	6%	7%	4%	17%
A way to get around	2%	3%	3%	2%	-	-
Protects the environment	2%	1%	2%	1%	4%	2%

Where Do They Ride?



Responses	2018 (n=253)	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)
DT Phoenix/Phoenix	48%*	25%	15%	26%	15%	5%
Recreational activities	26%*	35%	39%	34%	38%	14%
Downtown Tempe	21%*	14%	11%	13%	7%	13%
Work	13%	14%	19%	13%	20%	31%
ASU	12%	14%	15%	16%	16%	29%
Shopping	9%*	4%	15%	12%	11%	24%
Airport	3%	4%	-	-	-	-
Community College	3%	3%	2%	-	-	-
Visit friends/family	3%	2%	4%	5%	2%	5%
Errands	3%	1%	6%	8%	5%	7%
Library	2%	2%	4%	3%	2%	7%
High School/school	2%	4%	1%	-	-	-
Downtown (general)	-	6%	1%	-	-	-
Around Tempe	-	3%	<1%	-	-	-

Satisfaction with Bus Service



Attribute	2018 (n=87*)			% Very/somewhat satisfied			
	Very/ somewhat Satisfied	Very Satisfied	Somewhat Satisfied	2016 (n=128)	2014 (n=109)	2012 (n=141)	2010 (n=203)
Comfort on the bus	93%	56%	37%	90%	92%	92%	95%
Driver courtesy and professionalism	92%	63%	29%	89%	90%	93%	93%
Ease of using the bus	87%	56%	31%	81%	84%	93%	91%
Cleanliness of bus stops	85%	43%	42%	91%	87%	85%	NA
Cleanliness of the bus	85%	51%	34%	89%	91%	88%	92%
Route frequency	80%	38%	42%	81%	79%	79%	74%
Safety on the bus	79%	36%	43%	86%	79%	82%	95%
Hours of operation	79%	46%	33%	80%	81%	84%	NA
Reliability/on-time performance of buses	77%	46%	31%	80%	85%	86%	80%
Bus service during major events	70%	41%	29%	76%	72%	70%	NA
Amenities of bus stops	67%	30%	37%	74%	76%	72%	NA
Security at bus stops	66%	33%	33%	72%	65%	65%	NA

Suggested Improvements



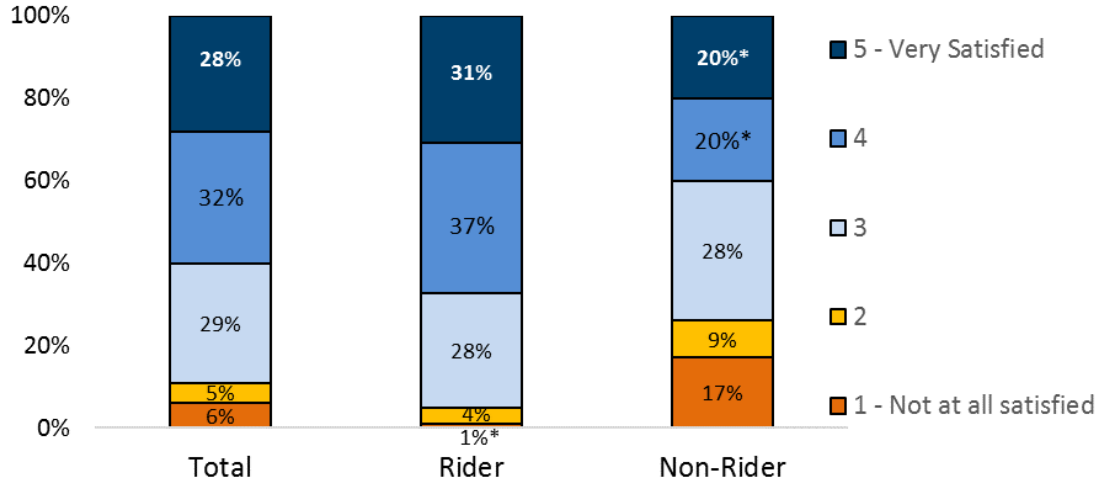
	2018 (n=45)	2016 (n=69)	2014 (n=57)
Bus stops need shade	21%	13%	17%
More/better lighting at bus stops	20%	8%	9%
More frequent buses	17%	32%	42%
Security on the bus/safer buses	15%	11%	11%
Easier schedules to read/understand/accurate	10%	5%	6%
Need better/more routes	9%	15%	7%
More courteous/professional bus drivers	7%	5%	6%
More/better benches at bus stops	7%	5%	4%
Don't like the type of people that use the bus	4%	8%	2%
Inside of bus/bus stops need to be cleaner	2%	9%	10%
Avoid having bus pass us by at bus stop	2%	5%	4%
Don't know	5%	5%	6%

Impression of Tempe Transportation System



	2018 (n=400)	Transit Rider (n=253) A	Non- Rider (n=136) B
Good/excellent/cool (general positive)	14%	19% ^B	7%
Never used it/ don't use it	9%	5%	18% ^A
Need more public transit/improved transit	8%	8%	9%
Like free neighborhood shuttles/Like Orbit/ Mercury/ Venus/ Blue busses	7%	7%	8%
Adequate/fine/average	7%	9% ^B	3%
Light Rail (unspecified)	7%	6%	9%
Inconvenient/takes too long/not frequent enough	6%	8% ^B	2%
The bus system/ bus (unspecified)	6%	5%	7%
General negative/ terrible/ don't like it	6%	5%	7%
Need street improvements (more bus pull outs, better timing of lights, better or more bike lanes, more park and rides)	5%	5%	4%
Traffic/ congestion	5%	6%	4%
Convenient/ easy	4%	5%	2%
Lots of options/ can choose between bus, light rail, shuttles	4%	4%	3%
It's free	3%	2%	4%
It's improving/ progressing	3%	3%	2%
Dissatisfied that they closed McClintock/Broadway	2%	2%	2%
Don't like the transients/ homeless people on light rail/buses	2%	1%	3%

Overall Satisfaction with Transit System Among those with an opinion



Total n=362, Rider: n=248, Non-Rider: n=106

*Indicates significant differences compared to other sub-group at the 95% level.

Satisfaction	2018 (n=362)	2016 (n=352)	2014 (n=376)	2012 (n=355)	2010 (n=377)
NET very + somewhat satisfied	60%*	69%	72%	69%	66%
5 – Very satisfied	28%*	36%	37%	39%	29%
4	32%	33%	35%	30%	37%
3	29%*	21%	17%	21%	22%
2	5%	5%	6%	5%	5%
1 – Very dissatisfied	6%	6%	5%	5%	6%
Don't know (excluded from %)	10%	12%	8%	11%	12%

Reasons for Satisfaction Level



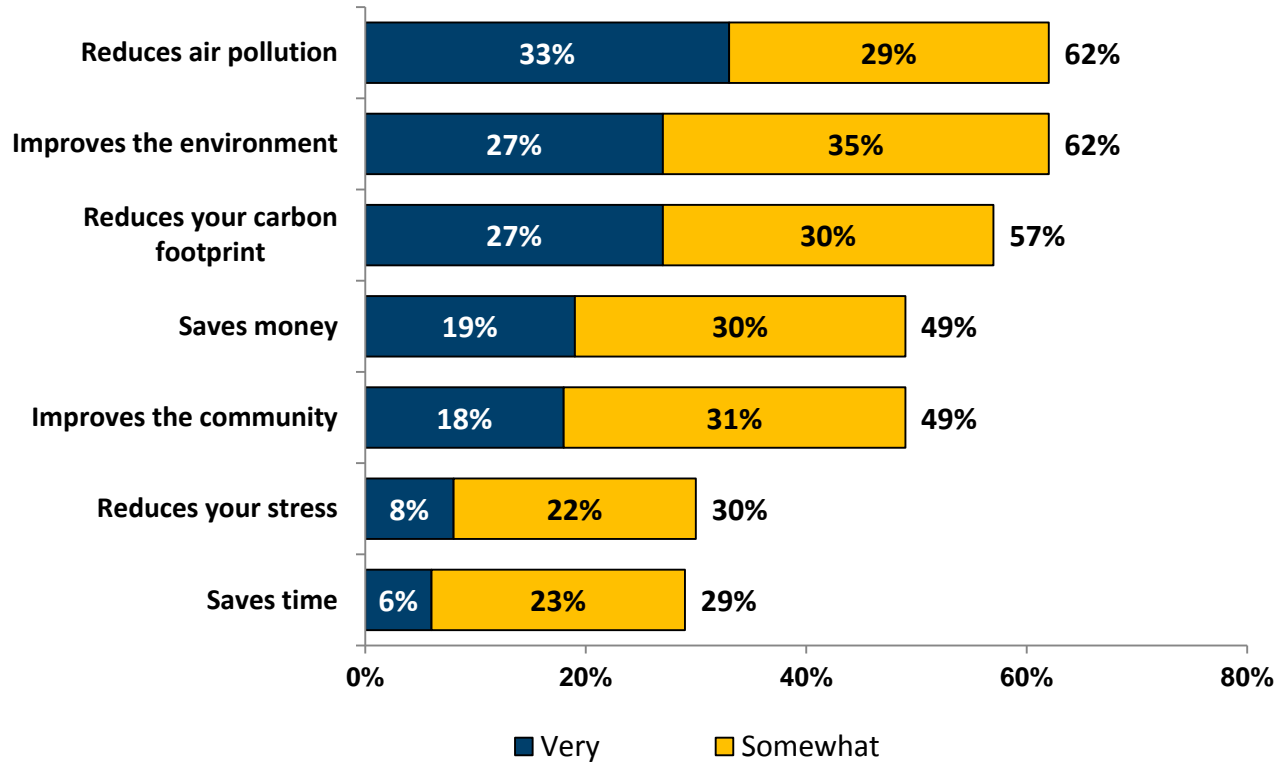
Responses	Satisfaction Level		
	Total (n=362)	4,5 (n=215)	1,2,3 (n=147)
Positive			
Satisfied, good service	23%	32%	8%
Frequent, available, reliable	15%	23%	4%
Good routes, convenient routes	7%	10%	2%
Buses/light rail are clean	7%	10%	2%
Convenient (general)	6%	9%	2%
Like the light rail/light rail is good	5%	6%	3%
Saves money, cheap, free	2%	3%	-
It's safe/I feel safe	2%	3%	-
Neutral			
Always room for improvement	11%	11%	10%
Don't use it, never used it	9%	4%	16%
It's average/okay	3%	1%	6%
Negative/Suggestions			
Need better/more routes, connections, doesn't go where I need to	9%	3%	18%
Uncomfortable with people who ride transit	8%	5%	12%
More frequent buses, more hours	8%	6%	10%
Bus driver does not stop at bus stops	5%	4%	8%
Need more security	3%	1%	6%
It was dirty/needs to be cleaned up a little bit	3%	2%	5%
Extend the light rail/more routes	2%	1%	3%
It costs too much/too expensive	2%	<1%	4%
Don't know	6%	7%	5%

Reasons for Not Riding



Reasons	2018 (n=136)	2016 (n=152)	2014 (n=143)	2012 (n=148)	2010 (n=123)
Prefer car	49%	59%	58%	46%	45%
Don't need to, don't have the need to use	15%*	4%	9%	6%	15%
Inconvenient (general)	14%*	6%	4%	5%	8%
Takes too long	13%	8%	6%	10%	11%
Doesn't go where they need to go	9%	7%	7%	12%	10%
Transit is not secure/safety	9%*	3%	1%	--	--
Health/disability	6%	3%	3%	5%	7%
Don't have to go far distances	6%	3%	3%	5%	5%
Need car for business	4%	7%	1%	--	--
Would rather take an Uber/Lyft	4%	--	--	--	--
Not frequent enough	4%	2%	2%	3%	3%
Weather concerns/ too hot/cold/ raining	4%	1%	<1%	1%	1%
Bus stop far away	3%*	11%	11%	12%	10%
Inconvenient bus schedule times	3%	1%	1%	2%	--
Don't like the type of people on transit	2%	1%	--	--	--
Don't have anywhere to go	2%	--	1%	2%	5%
Don't know	3%	2%	2%	2%	2%

Persuasive Arguments (Very/Somewhat Effective)



Awareness of TIM



	2018 (n=400)	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)	2008 (n=424)
Total Awareness (Unaided + Aided)	57%*	44%	50%	53%	54%	48%
Unaided Awareness	12%*	19%	18%	21%	24%	27%
Aided Awareness	45%*	25%	32%	32%	30%	21%

Total awareness was significantly higher among:

- Residents aged 35 to 54 (65% vs. 49% of older residents, and compared to 56% of those under 35)
- Transit riders (65% vs. 42% non-riders)
- Long time Tempe residents (62% who have lived in Tempe for more than 10 years vs. 41% of newer residents)
- Residents of the 85282 zip code (66% vs. 47% in 85284 and compared to 56% living in the other two zip codes)

Awareness of TIM



Responses	2018 (n=227)	2016 (n=178)	2014 (n=204)	2012 (n=211)	2010 (n=230)	2008 (n=202)
Signs on the buses	20%*	11%	15%	13%	18%	20%
Street banner	12%*	20%	24%	29%	17%	20%
Bill inserts	10%	7%	3%	9%	2%	2%
Internet/online ads	8%*	3%	3%	3%	4%	3%
Sign (general)	7%	6%	1%	--	--	--
Flyers/brochures	6%*	2%	3%	2%	6%	4%
TV	5%	4%	3%	6%	9%	10%
Word of mouth	4%	6%	4%	6%	3%	4%
Newspaper/Print Ads	4%	6%	5%	6%	6%	7%
ASU/School	4%	4%	5%	--	3%	2%
The city	4%	--	1%	1%	--	--
Direct mail	3%	4%	3%	5%	5%	2%
Radio	3%	1%	--	<1%	<1%	1%
Billboard	3%	2%	1%	--	--	--
Library	2%	4%	--	--	--	--
Pandora/ Spotify	2%	3%	2%	--	--	--
I live here/lived here a long time	2%	2%	2%	--	--	--
On the light rail	2%	2%	--	--	--	--
Work	2%	--	2%	1%	1%	3%
Don't know	14%*	7%	13%	16%	12%	14%



Impacts of Advertising & Effect on Transit Usage

	2018 (n=63)	2016 (n=71)	2014 (n=88)	2012 (n=94)	2010 (n=79)	2008 (n=120)
Make you think more positively about transportation options in Tempe	43%	54%	52%	42%	58%	57%
Have no effect on your perceptions	55%	39%	41%	52%	38%	42%
Make you think negatively about transportation options in Tempe	1%	2%	2%	2%	1%	1%
Don't know	2%	5%	5%	4%	3%	--

Advertising Effect on Transit Usage

	2018 (n=61)	2016 (n=71)	2014 (n=83)	2012 (n=88)
Yes	21%	25%	20%	28%
No	78%	75%	79%	72%

Advertising Source	2018 (n=12)*
Online ads/web	4
Street banners	3
Signs on the buses	2
Flyers/ brochures	1
TV	1
Don't know/ Not aware of program	1
Other	1

Monthly Bike Usage



	2018 (n=400)	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)	2008 (n=424)
Have access to bike	64%	62%	61%	62%	58%	56%
Frequency						
Never/only occasionally	33%	28%	30%	32%	35%	29%
Once or twice	22%	23%	18%	18%	17%	19%
Three to five times	19%	20%	17%	11%	13%	19%
Six to ten times	10%	8%	8%	12%	9%	10%
>10 times	15%	20%	27%	24%	24%	23%
Don't know/not sure	2%	1%	1%	2%	2%	--

Residents more likely to indicate having access to a bike include:

- Male residents (70% vs. 58% for females)
- Transit riders (69% vs. 53% non-transit rider)
- Residents aged 35 to 54 (78% vs. 63% of those under 35 and compared to 51% of older residents)
- Those with annual household incomes of \$40,000 or more (72% vs. 45% with lower incomes)
- Married residents (74% vs. 55% of single residents)

Reasons for NOT Riding a Bike



Responses	2018 (n=84)	2016 (n=70)	2014 (n=74)
Too hot outside/hot weather	47%	38%	32%
Too dangerous	12%*	1%	12%
Physical condition/my health	11%	9%	5%
Inconvenient/too busy	10%	4%	8%
Lazy/don't want to ride it	10%	4%	10%
Have a car/rather take car	7%	6%	1%
Too much traffic	7%	3%	2%
Distance/too far	6%	9%	1%
Bike not working properly/bike not functional	3%	6%	5%
Too much to carry	3%	1%	-
Takes too long	2%	7%	3%
Have little kids/drive kids around	2%	6%	3%
Injury	1%	1%	2%
Too old	1%	-	2%
No need/nowhere to go	1%	-	-
Not enough bike lanes/paths	-	2%	2%
Other (responses <.5%)	2%	9%	7%
Don't know/no answer	-	9%	6%

Reasons FOR Riding a Bike



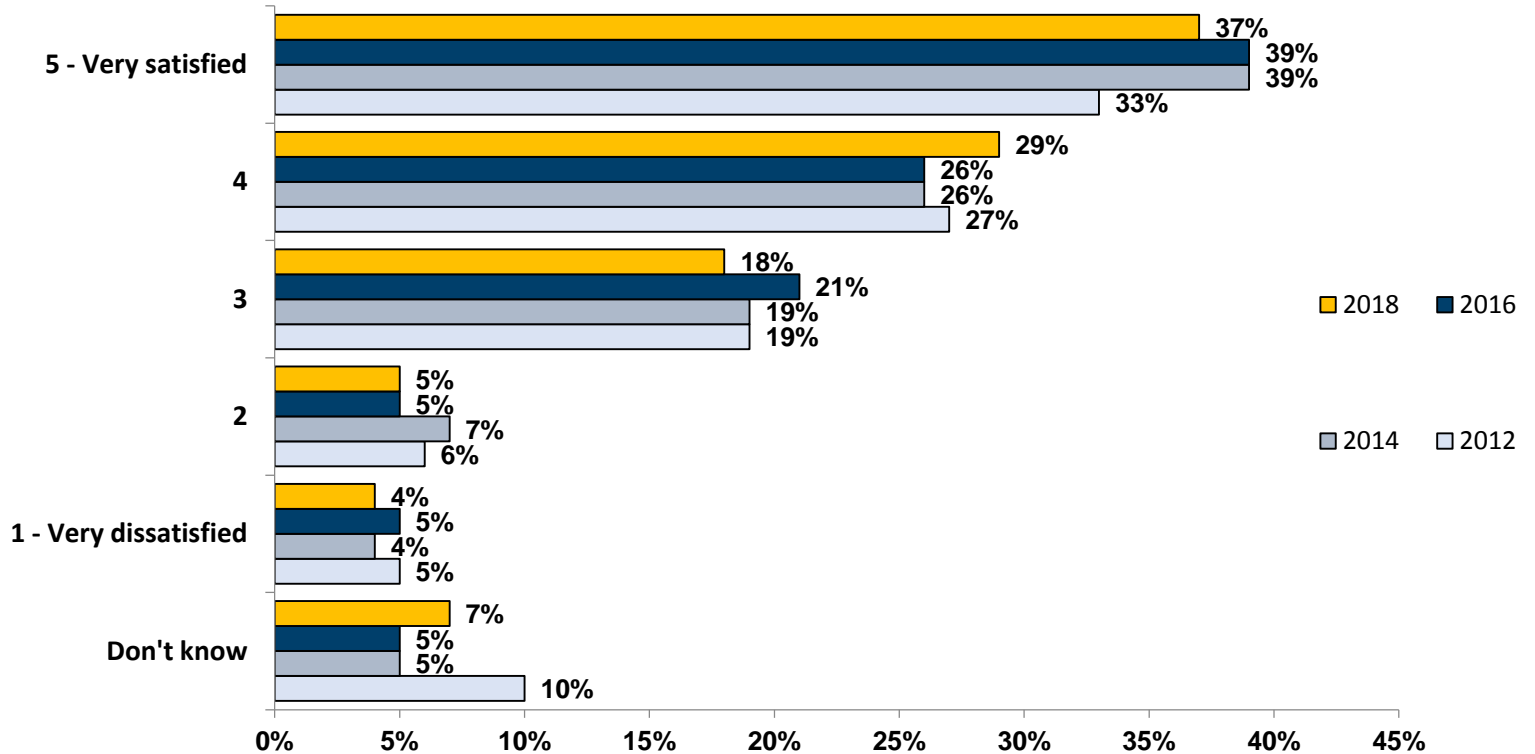
Responses	2018 (n=167)	2016** (n=176)
Exercise	57%	54%
Fun/Recreation/leisure	22%	26%
Convenient/easy	3%*	8%
Good for health/medical reasons	3%	5%
For the fresh air	3%	1%
Saves money	2%	4%
It's faster than walking/driving	2%	-
To go shopping	2%	1%
Saves wear and tear on car/don't want to drive	1%	4%
To get to school/work	1%	4%
Do not have a car	1%	2%
Protects environment	1%	1%
Other	1%	2%
No answer	-	1%

Destinations on Bike



Responses	2018 (n=167)	2016 (n=176)	2014 (n=174)	2012 (n=163)	2010 (n=155)	2008 (n=169)
Exercise	35%	44%	53%	58%	60%	56%
Store	17%	13%	14%	15%	16%	19%
Parks	16%	10%	4%	6%	4%	6%
Mill Avenue/Downtown Tempe	13%*	5%	3%	5%	3%	1%
Work/school/ASU	12%	14%	29%	18%	27%	31%
Along the canal	11%	9%	4%	--	--	--
Restaurant/dinner	9%	4%	3%	2%	1%	2%
Tempe Town Lake	7%	5%	4%	6%	7%	4%
Friend's house	4%	4%	9%	7%	3%	6%
Everywhere	8%	3%	3%	2%	1%	1%
Run errands	3%	2%	2%	3%	1%	2%
The bar/when I've been drinking	2%	3%	3%	1%	--	--
Other	2%	2%	2%	5%	2%	1%

Overall Satisfaction with Tempe Walking and Bike Paths



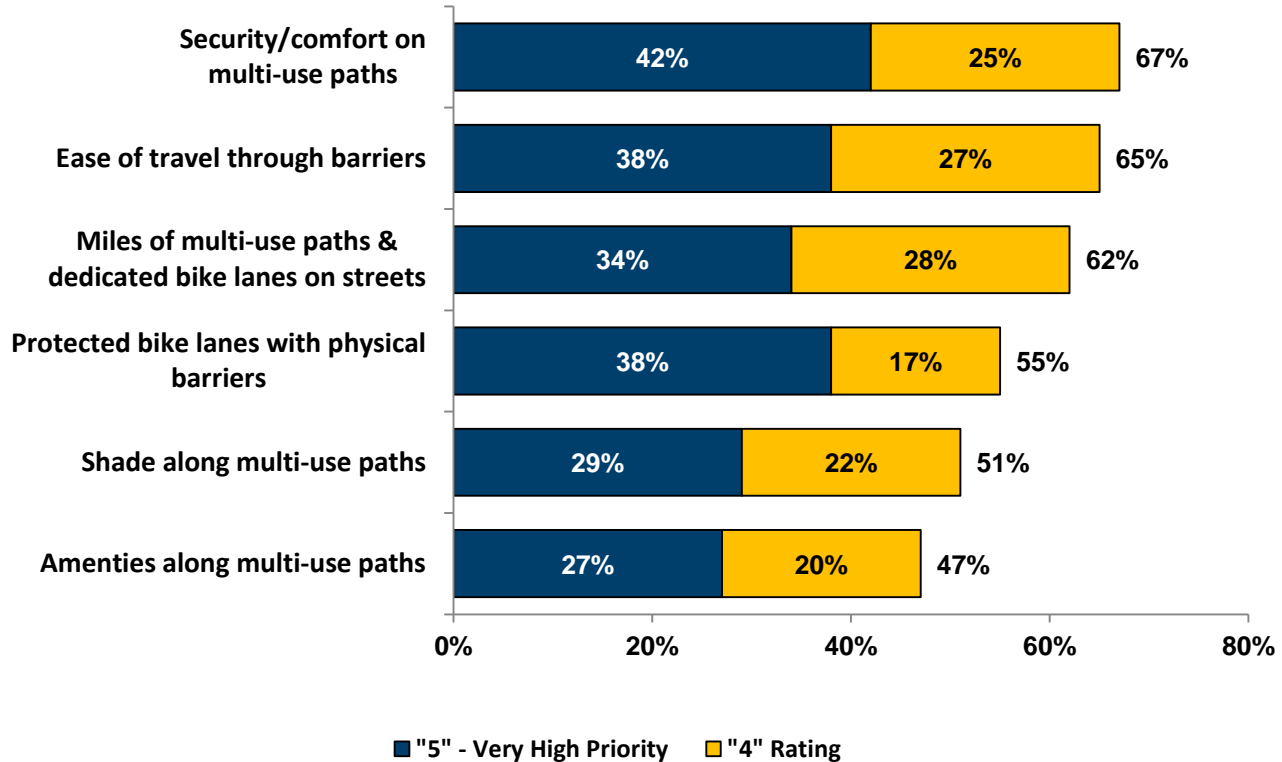
Main Reasons Satisfaction of Bikeways & Paths



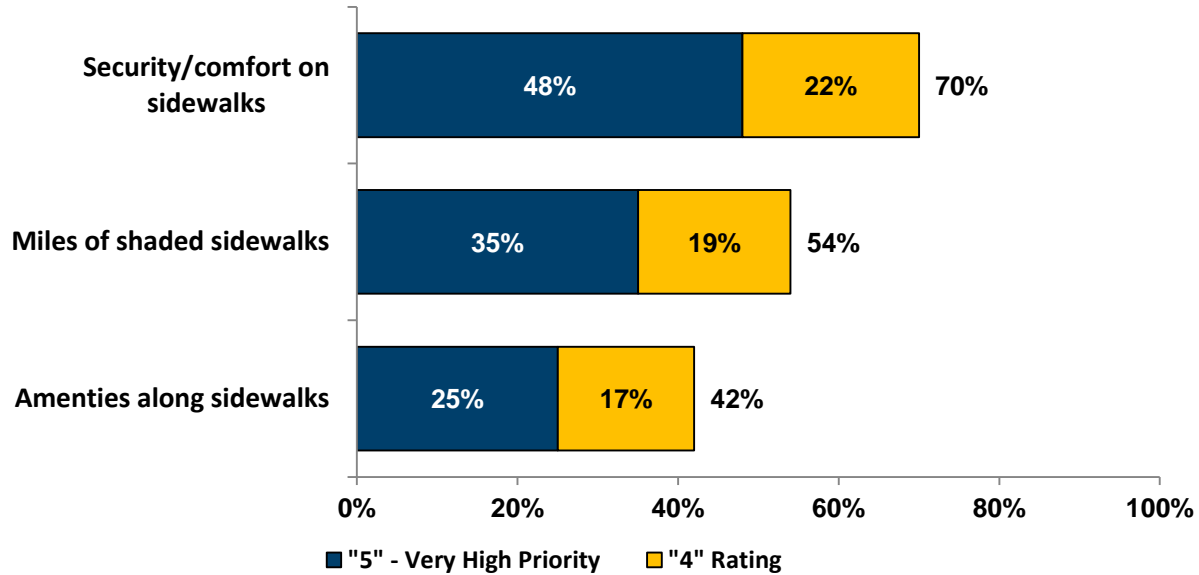
Responses	2018 (n=370)	2016 (n=380)	2014 (n=390)	2012 (n=362)
Positive				
They are everywhere, plenty of paths	15%	12%	12%	15%
They are fine the way they are, no problems	12%*	18%	29%	23%
Have good routes, connect well	9%	6%	3%	6%
Easy to use, accessible	7%	5%	6%	6%
They are properly maintained, well landscaped	6%	6%	4%	12%
Have seen/noticed improvements/upgrades	5%	5%	2%	--
They are safe	4%	7%	5%	6%
Paths are well lit	2%	4%	5%	5%
Good for exercising/walking	2%	--	--	<1%
They added more paths	2%	2%*	1%	--
Paths are scenic/beautiful	1%	1%	3%	2%
Neutral				
Never use them, no knowledge of them	4%	6%	5%	4%
Neither satisfied nor dissatisfied	2%	1%	<1%	1%
There is always room for improvement	1%*	4%	4%	3%
Negative/Suggestions				
Don't seem safe enough, make them safer	9%	9%	8%	10%
Need more bike lanes	6%	4%	9%	11%
Could use more of them	2%	7%	6%	4%
Need more education on "sharing the road"	1%	--	--	--
Some routes end abruptly/have disconnects	1%	1%	2%	1%
They are not maintained	1%	2%	2%	2%
Traffic congestion is getting higher	1%	2%	--	--
Don't know	3%	5%	6%	6%

Priority of Bikeway Improvements

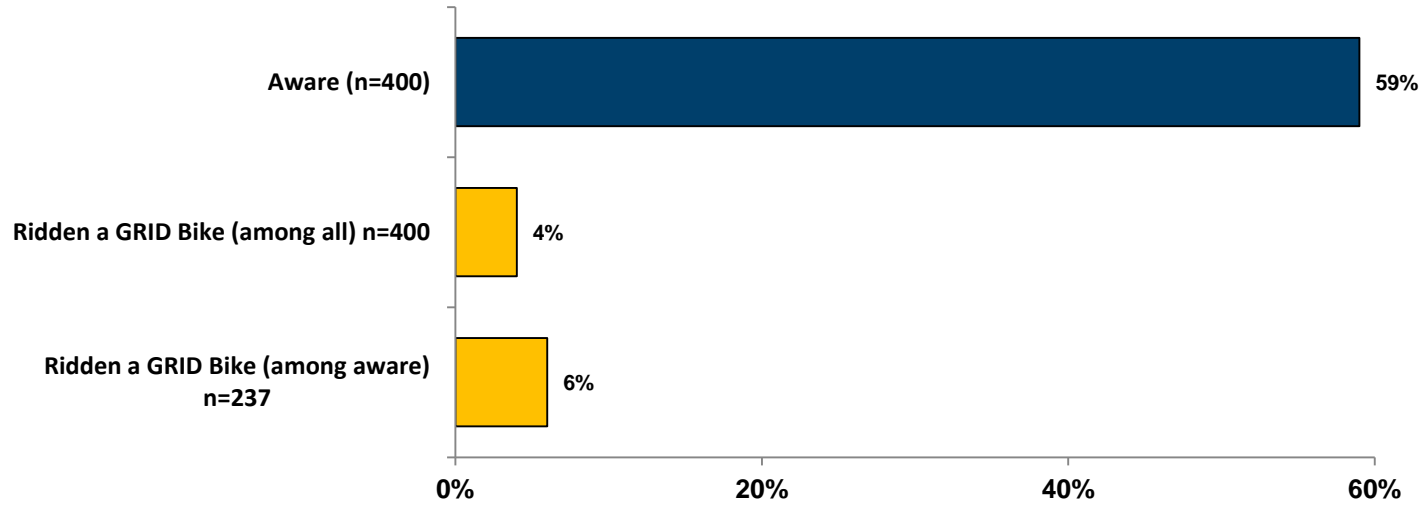
(Top Two Ratings 4 + 5 "Very high priority")



Priority of Sidewalk Improvements (Top Two Ratings 4 + 5 "Very high priority")



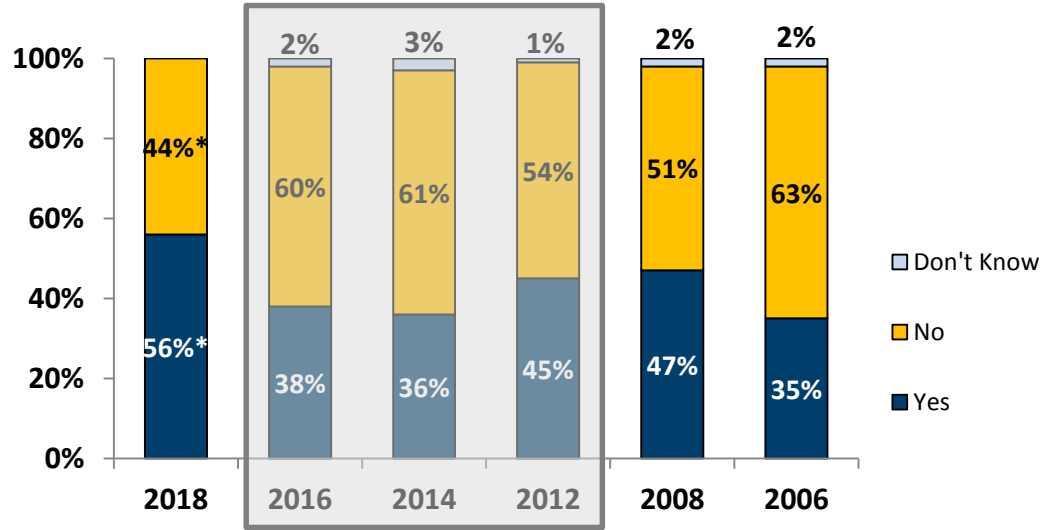
Tempe's Bike Share System - GRID Bike



Satisfaction of Bike Share System

	2018 (n=15)*
5 - Very satisfied	9
4	2
3	3
2	1
1 - Very dissatisfied	-

Awareness of Tempe Youth Free Transit Pass



Note: 2018, 2008 and 2006: question was asked only of people with children ages 6 years and old.
 In 2012, 2014, and 2016 this question was asked of all residents.
 This data is available in earlier reports.



- Overall satisfaction with transit system continued to decline.
 - (68% among rides, 40% among non-riders)
- While overall transit usage increased slightly, there was a shift in the “mix” of users. There were more infrequent or casual users, but fewer regular users.
- Those who used public transit in the past are continuing to use it, however, there was a continued decrease in the percentage of residents who are newer riders.
- Fewer transit users reported using light rail in 2018 than in previous years, while the percent using Orbit/Flash, or bus remained relatively constant.

Conclusions



- Measures pertaining to *comfort on the bus, driver courtesy and professionalism, and ease of use* received a higher proportion of high satisfaction ratings than in 2016.
- The percentage of users giving high satisfaction ratings for all other evaluated attributes declined from previous years. Improvements suggested by users who are not satisfied with the system focus on a need for an improved transit environment or increased services.
- Awareness of Tempe in Motion increased significantly in 2018, with increased awareness of the messaging through multiple sources.
- A majority of residents indicate they are highly satisfied with the quality of the walking and biking paths in Tempe.

City of Tempe Transit Survey Report

Prepared For:



October 2018



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Questionnaire Appendix A
 Cross Tabulations (Available under separate cover)

Executive Summary

The City of Tempe commissioned WestGroup Research to complete a telephone survey of Tempe residents in an effort to gain insights into perceptions about public transit among both riders and non-riders, and perception and usage of other transportation programs. This report analyzes the data collected by the survey and, where appropriate, compares responses of the residents by meaningful demographic variables, as well as to data from studies conducted in September of 2008, 2010, 2012 and September/October 2014 and September of 2016. The most recent data collection was completed with 400 Tempe residents in September and October 2018. The margin of error for this sample size is $\pm 4.9\%$ at a 95% level of confidence.

Rider Characteristics and Opinions

- Two-thirds (66%) of Tempe residents reported riding Tempe's transit service, including light rail, Orbit, Flash, and local bus/express. Although up slightly, it is statistically consistent with usage in 2016, 2014 and 2012.
- Although the proportion of Tempe residents riding transit increased slightly and the number reporting riding transit under special circumstances increased significantly, frequent or regular usage of Tempe's transit services continued to decline.
 - In 2018, only 2% of Tempe residents reported riding transit daily which is down significantly from 5% two years ago. Currently, 5% of residents indicate riding transit at least weekly, significantly fewer than 10% in 2016 and 16% in 2014. The proportion riding at least monthly dipped to 11% from 16% in 2016 and 25% in 2014.
- Although a majority of transit riders reported riding light rail in the past year (73%), it is significantly fewer than those who reported doing so in 2016 (84%). Past year usage of Orbit or Flash neighborhood shuttles (32%) and local or express buses (25%) are statistically consistent with 2016.
- More than one-third (35%) of transit riders have been using Tempe's transit system for more than ten years.
- *Convenience* and *getting to and from recreation* continue to be the most popular reasons for riding public transit (mentioned by 26% and 18%, respectively). Of note, mentions of the desire "to avoid parking" more than doubled this year (11% vs. 5% in 2016).
- Phoenix/Downtown Phoenix continues to increase in popularity as a public transit destination as does Downtown Tempe. Phoenix/Downtown Phoenix was by far the most popular destination for transit trips (48%), distantly followed by recreational activities (24%) and Downtown Tempe (21%).

- Riders rated their level of satisfaction with 12 different aspects of riding the bus. Riders were most satisfied with the comfort on the bus and driver courtesy and professionalism (93% and 92% very + somewhat satisfied). Riders were least satisfied with security and amenities at bus stops (66% and 67%, respectively).

Overall Perceptions and Satisfaction with Tempe's Transit System

- The most common "top of mind" impression was positive with 14% of residents describing it with words such as "good," "excellent" and "cool." Nearly one in ten immediately thought: they "do not use it" (9%), more and improved public transit is needed (8%), they like the free Orbit neighborhood shuttles (7%), the system is "fine," "adequate" or "average" (7%) or just thought of the light rail system in general (7%).
- Three in five (60%) residents with an opinion report being highly satisfied with the Tempe transit system, which is significantly lower than in 2016, 2014 and 2012.
 - Residents satisfied with the transit system attributed their satisfaction to good service (32%), and frequent and reliable service (23%).
 - Residents who provided lower satisfaction ratings most often mentioned the need for better/more routes (18%) and more frequent buses with extended hours (10%) as reasons for their ratings.

Potential Use of Tempe's Transit System

- Preference for a personal vehicle was by far the most common reason given by non-riders as an explanation for not using public transit (49%).
- The two most effective benefits for persuading non-riders to use public transit appear to be *helps reduce air pollution* and *helps improve the environment* (both at 62% somewhat or very effective).
- The two least effective benefits for persuading non-transit users to use public transit were *reduces your stress* and *saves time* with only three in ten rating them as effective.

Tempe in Motion (TIM)

- Total awareness of Tempe in Motion (TIM) increased significantly to hit a ten-year high of 57% (up from 44% in 2016).
- Residents aware of TIM recalled hearing about it through signs on buses (20%), street banners (12%), bill inserts (10%) and online (8%).

- More than two in five (43%) of those who heard about TIM via TV, online ads, direct mail, street banners, Pandora/Spotify, and ASU indicated the advertising had a positive impact on their impression of transportation options in Tempe. One in five (21%) indicated the advertising message persuaded them to try public transit in Tempe.

Tempe Bicycling and Walking

- Nearly two-thirds of residents (64%) reported having access to a bicycle.
- Among those with access to a bike, two thirds (66%) reported riding their bike at least once a month, which is similar to the 71% measured in 2016. Among the one-third who never or only occasionally ride a bike, almost half (47%) blamed hot weather for not riding it more often.
- More than one-third (35%) of those who ride a bike at least once a month report they ride for *exercise*, while 17% ride a bike *to the store* and 16% ride their bike to *parks*.
- Residents who bicycle at least monthly say they do so primarily to get *exercise* (57%) and/or *to have fun* (22%).
- Consistent with the prior two study periods, in 2018, two thirds (66%) of residents reported being satisfied with the quality of walking and biking paths in Tempe.
- After being read a list of three possible sidewalk improvements in Tempe, survey participants were asked to rate how high of a priority each improvement should be for the City.
 - *Security and comfort on sidewalks, such as addressing hazards, obstructions and width* received the highest percentage of priority ratings (70%).
- After being read a list of six possible improvements to bikeways in Tempe, survey participants were asked to rate how high of a priority each improvement should be for the City.
 - *Security and comfort on multi-use paths, ease of travel around barriers, miles of multi-use paths and dedicated bike lanes* received the highest percentage of priority ratings (67%, 65% and 62% respectively).
- Three in five residents (59%) have heard of Tempe's bike share system and 4% of all residents have ridden a GRID bike.

Tempe Youth Free Transit Pass Program

- In 2018, more than one-half (56%) of residents who have children ages 6 to 18 have heard of the Tempe Youth Free Transit Pass.
- Among parents aware of the program, one half (52%) indicated they heard about it through *school* followed distantly by *word-of-mouth and/or the library* (both mentioned by 12%).

Conclusions

1. While overall transit usage among Tempe residents increased slightly, there was a shift in the “mix” of users. There were more infrequent or casual users, but fewer regular users. Additionally, those who used public transit in the past are continuing to use it, however, there was a continued decrease in the percentage of residents who are newer riders. Finally, fewer transit users reported using light rail in 2018 than in previous years, while the percent using Orbit/Flash and City bus remained relatively constant.
2. Measures pertaining to *comfort on the bus, driver courtesy and professionalism, and ease of use* received a higher proportion of high satisfaction ratings than in 2016. However, the percentage of users giving high satisfaction ratings for all other evaluated attributes declined from previous years. Improvements suggested by users who are not satisfied with the system focus on a need for an improved transit environment (e.g., shade, lighting, safety, cleanliness, benches, bus driver courtesy) or increased services (e.g., more frequency and more routes).
3. Overall satisfaction with the transit system in Tempe continued to decline this year and perhaps is a reflection of a shift toward more casual usage of transit as well as a decrease in satisfaction of many of the transit elements evaluated this year. Concerns among those giving lower ratings fall into the two same categories as those cited by the smaller population of transit users: a level of discomfort with the transit environment (e.g., population using transit, cleanliness, security) and a need for more/better service. It is possible this general decline in satisfaction is leading some users to alter their usage to a more casual frequency.
4. Awareness of Tempe in Motion (TIM) increased significantly in 2018, with increased awareness of the messaging through multiple sources. The impact of the campaign continues to be positive, although there is a shift toward a neutral response.
5. A majority of residents indicate they are highly satisfied with the quality of the walking and biking paths in Tempe and would like to see more biking and walking paths. However, security and comfort on both the sidewalks and bike paths rank highest

among residents as the top priority for improvement. This is consistent with the general sense of concern regarding safety and comfort that is beginning to surface with increased frequency among residents.

I. Introduction

A. Background

The City of Tempe commissioned WestGroup Research to complete a telephone survey of Tempe residents in an effort to gain insights into perceptions about public transit among both riders and non-riders, and perception and usage of other transportation programs. This report analyzes the data collected by the survey and, where appropriate, compares responses of the residents by meaningful demographic variables, as well as to data from studies conducted over the past ten years - 2008, 2010, 2012, 2014, and 2016. The most recent data collection was completed with 400 Tempe residents during September and October 2018. Due to size limitations, tables in the report do not show data from the studies conducted from 1998 to 2006.

Telephone calls with Tempe residents were made from WestGroup's interviewing center in Phoenix, Arizona from September 6 and October 2, 2018. Households were randomly selected according to Tempe zip codes. A quota was set to achieve equal representation of men and women as well as a representative distribution of the sample by age. A combination of random-digit dial (RDD) sample to contact "land line" households" along with cell-phone sample database to reach cell-phone only households was used to access potential respondents. All phone numbers were manually dialed.

The survey was completed with 400 Tempe residents. The margin of error for this sample size is $\pm 4.9\%$ at a 95% confidence level. Cross tabulations of the data collected in this survey are included under a separate cover.

B. Sample Sizes and Associated Sampling Error

There is a certain amount of sampling "error" that occurs with survey research because of the variability that is present whenever a portion of a population is examined to provide insight into attitudes, opinions, and behaviors of the total population. This "error" does not imply an "error" on the part of the researcher, but reflects the likelihood that the estimates derived from interviewing a sample of the population differ from the numbers that would be obtained if the entire population were interviewed using the identical questions.

The amount of sampling error is determined almost entirely by the size of the subgroup of the sample and not by the size of the total sample interviewed. In other words, the sampling error associated with respondents who are males residents vs. female residents is dictated by the size of these subgroups (n=208 and $\pm 6.9\%$ for males, for example).

Based on a sample size of 400, **the overall sampling error for the total sample** (at the conventional 95% confidence level) is $\pm 4.9\%$. This means that the probability is 95% that our estimates are within 5 percentage points of the numbers we would have obtained had we

interviewed every qualified resident in Tempe. If a response differs from the overall response of the sample by more than this percentage, the difference is said to be "statistically significant." Throughout this report, each sub-group in a table or chart may be identified with a superscript letter (such as ^A, ^B, and ^C). A letter after a number indicates that the number is statistically higher than the number in the column with that letter. This indicates a statistically significant difference and is referred to throughout the report as being "significantly" higher or lower than a comparative figure.

For example, in the table below, the 41% in the second row of column C is significantly higher than the figure in column E (24%) at the 95% confidence level. Similarly, residents ages 18 to 34 (36%, column C) were significantly more likely than those ages 35 to 54 (15%, column D) to report riding the local or express bus. Another example in the table below is that households with annual incomes of \$40,000 or more were significantly more likely than those earning less to report riding light rail (76% in column G vs. 62% in column F). Conversely, residents with lower incomes were significantly more likely to ride local or express buses (43% in column F vs. 19% in column G).

	2018 (n=253)	Gender		Age			Income	
		Male (n=126) (A)	Female (n=127) (B)	18-34 (n=91) (C)	35-54 (n=89) (D)	55+ (n=71) (E)	<\$40K (n=61) (F)	\$40K+ (n=174) (G)
Light Rail Orbit or Flash neighborhood shuttles	73%	70%	75%	70%	76%	73%	62%	76% ^F
Local or express bus	25%	23%	28%	36% ^D	15%	25%	43% ^G	19%
Don't Know/Refused	12%	14%	10%	14%	11%	11%	13%	13%

For trend tables and charts displaying yearly data (rather than sub-groups of the current year), significant differences between 2018 and 2016 figures are shown using an asterisk. For example, in the table below, the 2% and 42% in the 2018 column is significantly different than the 5% and 37% in the 2016 column at the 95% confidence level. Statistical testing between earlier years is not shown in this report; however, important trends over time are called out when appropriate.

	2018 (n=253)	2016 (n=246)
Daily	2%*	5%
Weekly	4%	5%
Monthly	6%	6%
Every few months	10%	9%
Special circumstances	42%*	37%
Don't Use Transit	34%	38%

C. Demographics

The total data were weighted in 2018, 2016, 2014 and 2012 to match the age categories from 2010. An overview of respondent demographics follows in Table 1A.

Table 1A: Demographics

	2018 (n=400)	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)	2008 (n=424)
Gender						
Male	50%	52%	51%	50%	49%	50%
Female	50%	48%	49%	50%	51%	50%
Years Lived in Tempe						
<1 year	<1%	1%	2%	2%	2%	3%
1 – 2 years	3%	4%	5%	6%	5%	7%
3 – 5 years	10%	9%	13%	6%	10%	12%
6 – 10 years	10%	15%	14%	13%	15%	17%
11 – 20 years	24%	24%	22%	25%	19%	22%
20+ years	52%	48%	44%	49%	49%	39%
Age						
18 – 34	32%	32%	32%	32%	33%	31%
35 – 54	34%	34%	34%	33%	34%	35%
55+	33%	33%	33%	32%	33%	34%
Average Age	47.8	47.3	47.1	49.4	47.7	47.6
Education						
Some high school	1%	2%	2%	1%	2%	1%
High school graduate	10%	10%	11%	10%	9%	9%
Some college	25%	26%	33%	24%	30%	31%
College graduate	38%	33%	32%	32%	29%	31%
Post graduate	25%	27%	19%	32%	29%	26%
No answer/ Refused	1%	2%	2%	1%	1%	2%
Marital Status						
Married	49%	52%	46%	54%	61%	53%
Single	48%	45%	50%	43%	36%	44%
Refused	3%	3%	3%	3%	3%	3%

*No significant differences compared to 2016

Table 1B: Demographics

	2018 (n=400)	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)	2008 (n=424)
Income						
<\$20,000	7%	7%	13%	9%	10%	12%
\$20 - \$40,000	15%	18%	18%	14%	14%	19%
\$40 - \$60,000	16%	19%	18%	11%	16%	15%
\$60 - \$80,000	18%	13%	8%	14%	14%	12%
\$80 - \$100,000	11%	7%	8%	10%	11%	10%
\$100,000+	24%	20%	20%	20%	17%	19%
\$100K to \$150,000	12%	n/a	n/a	n/a	n/a	n/a
\$150,000+	12%	n/a	n/a	n/a	n/a	n/a
No answer/refused	9%	16%	14%	21%	16%	13%
Average Income	\$79,072	\$67,325	\$63,700	\$70,304	\$67,047	\$64,500
Marital Status						
Married	49%	52%	46%	54%	61%	53%
Single	48%	45%	50%	43%	36%	44%
Refused	3%	3%	3%	3%	3%	3%
Occupation						
Full-time	60%	57%	46%	46%	47%	51%
Part-time	11%	6%	11%	8%	12%	12%
Retired	16%	20%	21%	28%	23%	20%
Stay at home Spouse	6%	3%	4%	6%	7%	5%
Student	3%	6%	8%	4%	7%	8%
Unemployed/disabled	3%	5%	7%	6%	6%	4%
Refused	2%	3%	3%	2%	1%	2%
Zip Code						
85281	18%	21%	23%	19%	19%	19%
85282	32%	33%	32%	44%	38%	38%
85283	29%	24%	26%	22%	29%	29%
85284	22%	22%	19%	15%	14%	14%

*No significant differences compared to 2016

n/a = not applicable for these years; prior to 2018 the category was only "more than \$100,000"

II. Rider Characteristics and Opinions

A. Current Use of Public Transit

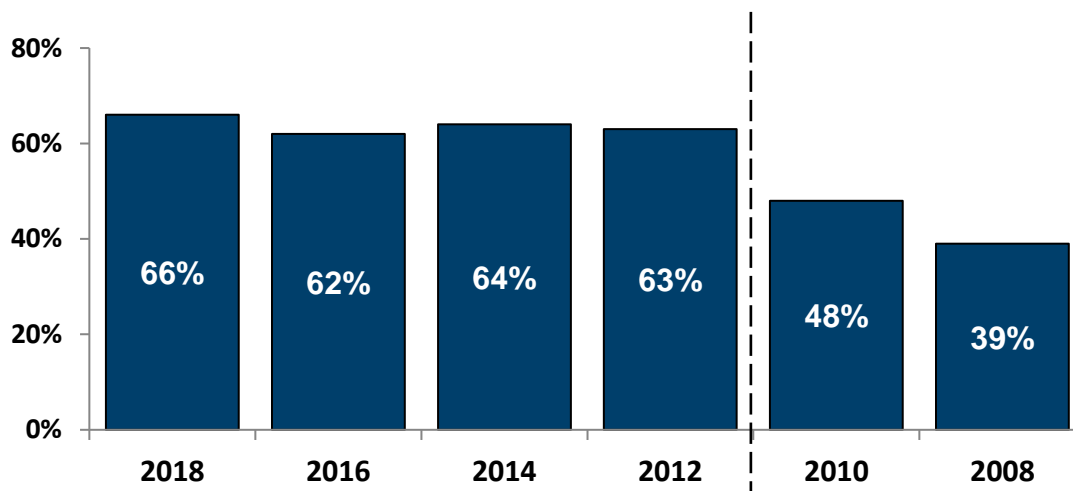
1. Tempe Transit Service Usage – Among All Residents

Two-thirds (66%) of Tempe residents reported riding Tempe’s transit service, including light rail, Orbit, Flash, and local bus/express. Although up slightly, it is statistically consistent with usage in 2016, 2014 and 2012.

While men and women were equally likely to ride public transit (63% and 64%), the following groups were significantly more likely to ride transit than their comparative groups:

- Residents under the age of 55 (71% aged 18-34, 66% aged 35-54 % vs. 54% of those 55+)
- College graduates (68% vs. 55% with some college or less education)
- Residents of the 85281 and 85282 zip codes (73% and 68% compared to 59% in 85283 and 55% in 85284)

Transit Service Usage in Tempe
 Percentage of residents who ride Tempe transit service at all



Note: Beginning in 2012, respondents were asked about *Tempe Transit Service* usage; in previous years, the question was about *Tempe city bus* usage.

2018 n=400, 2016 n=401, 2014 n=409, 2012 n=400, 2010 n=427, 2008 n=424

Q5: In general would you say you use Tempe’s transit system (including light rail, Orbit, Flash and local bus/express)... [daily, weekly, monthly, every few months, only under special or unique circumstances]

2. General Public Transit Use – Among All Residents

The proportion of Tempe residents riding transit increased slightly; this is likely due in part to the fact that the percent reporting riding transit only under special circumstances increased significantly. However, frequent or regular usage of Tempe’s transit services continued to decline.

The positive change is the increase in the proportion of residents who indicate they are taking advantage of public transit in Tempe under unique circumstances. 42% ride transit under special circumstances which is up significantly from 37% in 2016 and 31% in 2014.

However in 2018, only 2% of Tempe residents reported riding transit daily which is down significantly from 5% two years ago. Currently, 5% of residents indicate riding transit at least weekly, significantly fewer than 10% in 2016 and 16% in 2014. The proportion riding at least monthly dipped to 11% from 16% in 2016 and 25% in 2014.

Bus, Orbit/Flash and Express riders were significantly more likely than rail only riders to report riding at least weekly (17% vs. 2%), and as expected light rail only riders were significantly more likely to say they ride transit under special or unique circumstances (77% vs. 49% of other riders).

Riders significantly more likely to report riding weekly or daily include those aged 18 to 54 (7% vs. 1% age 55+). Of note, there were no demographic groups more likely to report using transit for special/unique circumstances. It was consistent across all residents.

Table 2a: Frequency of Transit Usage

	2018 (n=400)	2016 (n=401)	2014 (n=409)
Net Ride Daily or Weekly	5%*	10%	16%
Net Ride at least Monthly	11%	16%	25%
Daily	2%*	5%	6%
Weekly	3%	5%	10%
Monthly	6%	6%	9%
Every few months	10%	9%	8%
Special/unique circumstances	42%*	37%	31%
Don't Use Transit	34%	38%	35%

*Indicates significant difference compared to 2016 at a 95% confidence level.
Q5: In general would you say you use Tempe’s transit system (including light rail, Orbit, Flash and local bus/express)...

Table 2b: Frequency of Transit Usage Demographic Breakdown

	2018 (n=400)	Age		
		18-34 (n=128) (A)	35-54 (n=136) (B)	55+ (n=132) (C)
Net Ride Daily or Weekly	5%	10% ^C	5%	2%
Net Ride at least Monthly	11%	15%	11%	7%
Daily	2%	5%	-	1%
Weekly	3%	5%	5%	1%
Monthly	6%	5%	6%	5%
Every few months	10%	13%	10%	8%
Special/unique circumstances	42%	43%	45%	39%
Don't Use Transit	34%	27%	32%	43% ^{AB}

^{A-E} Indicates significant differences compared to other sub-group at the 95% level.

3. Type of Transit Used in Tempe in Past Year - Among Transit Riders

Although a majority of transit riders reported riding light rail in the past year (73%), it is significantly fewer than the proportion who reported doing so in 2016 (84%). Past year usage of Orbit/Flash neighborhood shuttles (32%) and local or express buses (25%) declined slightly but are statistically consistent with 2016. Notably, a significantly higher percentage of residents responded that they “didn’t know” if they had ridden transit in the past year which may, in part, explain the shifts. Of note and as expected, residents of the 85281 and 85282 zip codes were significantly more likely to report riding Orbit or Flash neighborhood shuttles than those in 85283 and 85284 (42% and 50% vs. 19% and 9%, respectively).

Table 2c: Type of Transit Ridden in Tempe in Past Year Trending Breakdown

	2018 (n=253)	2016 (n=246)	2014 (n=256)
Light Rail	73%*	84%	79%
Orbit or Flash neighborhood shuttles	32%	37%	36%
Local or express bus	25%	28%	30%
Don't Know/Refused	12%*	7%	7%

*Indicates significant difference compared to 2016 at the 95% confidence level.

Q5a: Which of the following have you used in Tempe in the past year?

Younger riders were significantly more likely to report riding buses. Specifically, residents ages 18 to 34 were significantly more likely to ride Orbit or Flash than those 55 and older (41% vs. 24%) and significantly more likely than those 35 to 54 to report riding a local or express bus in the past year (36% vs. 15%).

Table 2d: Type of Transit Ridden in Tempe in Past Year Demographic Breakdown

	2018 (n=253)	Age			Income	
		18-34 (n=91) (A)	35-54 (n=89) (B)	55+ (n=71) (C)	<\$40K (n=61) (D)	\$40K+ (n=174) (E)
Light Rail	73%	70%	76%	73%	62%	76% ^D
Orbit or Flash neighborhood shuttles	32%	41% ^C	31%	24%	38%	28%
Local or express bus	25%	36% ^B	15%	25%	43% ^E	19%
Don't Know/Refused	12%	14%	11%	11%	13%	13%

^{A-E} Indicates significant differences compared to other sub-group at the 95% level.

B. Length of Use of Transit System

More than one-third (35%) of transit riders have been using Tempe’s transit system for more than ten years. This represents a significant increase over the 25% measured in 2016 and continues the natural progression expected as the system ages. Of note, only 4% indicated being new transit riders who have been using the system for less than a year which is similar to the prior two measurements but continues the steady decline.

Table 3a: Length of Use of Transit System

Time Riding	2018 (n=253)	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)
Less than a year	4%	5%	6%	9%	14%	31%
1 – 2 years	6%	9%	10%	13%	27%	13%
2 – 4 years	13%	15%	24%	29%	13%	19%
4 – 6 years	19%	19%	23%	16%	10%	13%
6 – 10 years	14%*	22%	13%	13%	25%	20%
>10 years	35%*	25%	18%	12%	NA	NA
Don't know	11%*	4%	7%	8%	11%	4%

Q8: How long have you been using the transit system in Tempe?

*Indicates significant difference compared to 2016 at the 95% confidence level.

C. Main Reasons for Using Public Transit

Convenience and getting to and from recreation continue to be the most popular reasons for riding public transit (mentioned by 26% and 18%, respectively).

Interestingly, the desire “to avoid parking” was mentioned by 11% -- more than twice as many that mentioned it in 2016 (5%). Of note, this is most frequently mentioned by those ages 35-54 (19% vs. 5% of younger transit users and 10% of those 55+.)

Transit riders were also significantly more likely to report riding transit “to go downtown” (mentioned by 9% in 2018 vs. 3% in 2016 and 2014.) Light rail only riders were significantly more likely than other transit riders to report using transit to “go downtown” (16% vs. 2%). This reason was also elevated among 35 to 54-year olds (14% vs. 4% of those 18-34 and 8% age 55 or older).

Table 3b: Main Reasons for Using Public Transit

Responses	2018 (n=253)	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)
Convenient	26%	24%	27%	16%	24%	15%
Get to/from recreation	18%	22%	18%	14%	7%	4%
To avoid parking	11%*	5%	3%	10%	7%	3%
To go downtown	9%*	3%	3%	6%	5%	-
Vehicle not available/car problems	6%	3%	1%	-	-	-
Do not have a car	5%	8%	12%	11%	9%	16%
Dislike driving/Take a break from driving	5%	4%	1%	-	-	-
Get to/from school	4%	5%	4%	2%	2%	7%
To avoid drinking and driving	4%	3%	2%	-	-	-
To get to/from work	4%	3%	2%	-	-	-
Need to get to Phoenix	2%	4%	3%	-	-	-
Saves money	2%	3%	6%	7%	4%	17%
A way to get around	2%	3%	3%	2%	-	-
Protects the environment	2%	1%	2%	1%	4%	2%

Q9: What is the main reason you ride public transit?

*Indicates significant difference compared to 2016 at the 95% confidence level.

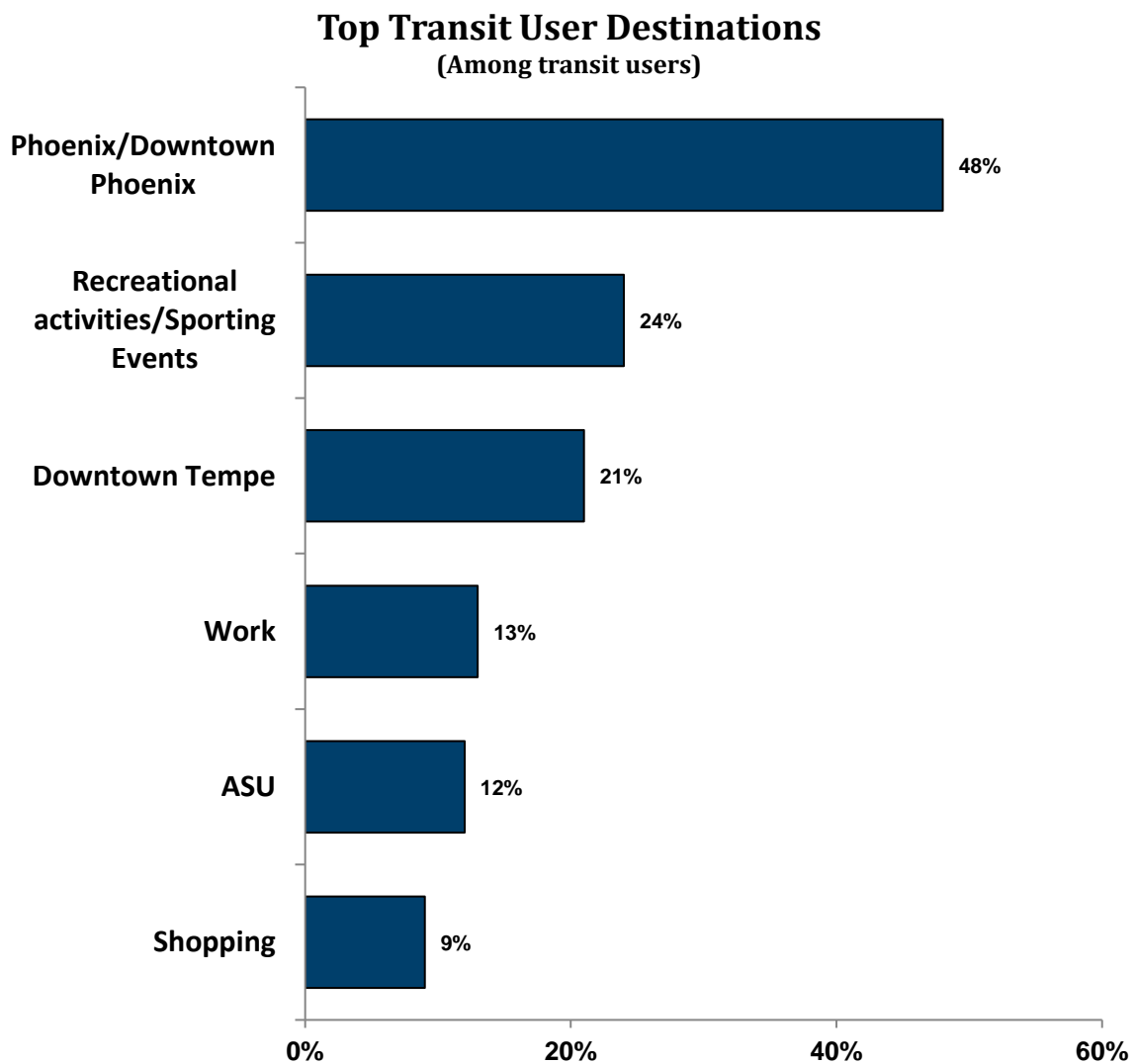
Note: In years prior to 2010, the question was worded: *What is the main reason you ride the bus?*

Note: Response categories with less than 2% mentions in 2018 not shown in table.

D. Public Transit Destinations

Phoenix/Downtown Phoenix was by far the most popular destination for transit trips; 48% of all transit riders surveyed named it as a destination. Light rail only riders were significantly more likely to report Phoenix/Downtown Phoenix as a destination than were those who ride local buses and Orbit/Flash neighborhood shuttle either solely or in addition to riding light rail (66% vs. 36%).

Recreational activities and Downtown Tempe round out the top three destinations for transit riders (24% and 21%, respectively). Work, ASU and shopping were also mentioned frequently (13%, 12% and 9% mentions, respectively).



Q10: Where do you go when you use public transit? 2018 n=253

Over the past few years, Phoenix/Downtown Phoenix continues to increase in popularity as a public transit destination as does Downtown Tempe. Nearly one-half of transit users (48%) reported using public transit to go to Phoenix (up from 25% in 2016) and 21% named Downtown Tempe as a destination year (up from 14% two years ago). Of note, the proportion reporting riding transit to a recreational activity decreased significantly this year to 26% down from 35% in 2016. Additionally, in 2016, there were open end categories for just “downtown” and “around Tempe,” but those were not recorded as destinations this year. Thus, a partial explanation for some of the shifting may simply be a function of research design and the process of coding the open ends, which was adjusted this year.

Finally, the proportion of transit riders reporting “shopping” as their destination rebounded to 9% after dropping significantly to 4% in 2016 from 15% in 2014.

Table 4: Top Public Transit Trip Destinations
(Among public transit users)

Responses	2018 (n=253)	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)
DT Phoenix/Phoenix	48%*	25%	15%	26%	15%	5%
Recreational activities	26%*	35%	39%	34%	38%	14%
Downtown Tempe	21%*	14%	11%	13%	7%	13%
Work	13%	14%	19%	13%	20%	31%
ASU	12%	14%	15%	16%	16%	29%
Shopping	9%*	4%	15%	12%	11%	24%
Airport	3%	4%	-	-	-	-
Community College	3%	3%	2%	-	-	-
Visit friends/family	3%	2%	4%	5%	2%	5%
Errands	3%	1%	6%	8%	5%	7%
Library	2%	2%	4%	3%	2%	7%
High School/school	2%	4%	1%	-	-	-
Downtown (general)	-	6%	1%	-	-	-
Around Tempe	-	3%	<1%	-	-	-

Q10: Where do you go when you use public transit?

*Indicates significant difference compared to 2016 at the 95% confidence level.

Note: In years prior to 2010, question was worded: *Where do you go when you use the bus?*

Note: Destinations with less than 2% mentions in 2018 not displayed unless necessary for prior

E. Satisfaction with Bus Service

Bus riders were asked to rate their level of satisfaction with twelve different aspects of riding the bus. Riders rated the attributes by using four-point nominal scales (“very satisfied,” “somewhat satisfied,” “not very satisfied,” and “not at all satisfied.”)

Riders were most satisfied with the *comfort on the bus* and *driver courtesy and professionalism* (93% and 92% very + somewhat satisfied, respectively). Despite relatively high satisfaction with bus stops for cleanliness (85%), riders expressed the lowest level of satisfaction with *security at bus stops* and *amenities at bus stops* (66% and 67%, respectively).

There were no statistically significant shifts between 2016 and 2018 bus satisfaction ratings.

Table 5a: 2016 Satisfaction with Bus Service
(Among bus riders)

Attribute	2018 (n=87*)			% Very/somewhat satisfied			
	Very/ somewhat Satisfied	Very Satisfied	Somewhat Satisfied	2016 (n=128)	2014 (n=109)	2012 (n=141)	2010 (n=203)
Comfort on the bus	93%	56%	37%	90%	92%	92%	95%
Driver courtesy and professionalism	92%	63%	29%	89%	90%	93%	93%
Ease of using the bus	87%	56%	31%	81%	84%	93%	91%
Cleanliness of bus stops	85%	43%	42%	91%	87%	85%	NA
Cleanliness of the bus	85%	51%	34%	89%	91%	88%	92%
Route frequency	80%	38%	42%	81%	79%	79%	74%
Safety on the bus	79%	36%	43%	86%	79%	82%	95%
Hours of operation	79%	46%	33%	80%	81%	84%	NA
Reliability/on-time performance of buses	77%	46%	31%	80%	85%	86%	80%
Bus service during major events	70%	41%	29%	76%	72%	70%	NA
Amenities of bus stops	67%	30%	37%	74%	76%	72%	NA
Security at bus stops	66%	33%	33%	72%	65%	65%	NA

Q11: In general how satisfied are you with...

*Due to a programming error, only 87 of the 115 bus/shuttle riders were asked this series of questions.

No significant differences compared to 2016

Among riders who indicated dissatisfaction with one or more attribute, the most common suggestions of what could be done to improve their satisfaction with buses was the addition of *shade at bus stops* (21%), *more or better lighting at bus stops* (20%), *more frequent buses* (17%), *safer buses* (15%) and *improved schedules* (10% mentioned easier to read/understand and more accurate schedules).

Table 5b: Suggested Improvements

	2018 (n=45)	2016 (n=69)	2014 (n=57)
Bus stops need shade	21%	13%	17%
More/better lighting at bus stops	20%	8%	9%
More frequent buses	17%	32%	42%
Security on the bus/safer buses	15%	11%	11%
Easier schedules to read/understand/accurate	10%	5%	6%
Need better/more routes	9%	15%	7%
More courteous/professional bus drivers	7%	5%	6%
More/better benches at bus stops	7%	5%	4%
Don't like the type of people that use the bus	4%	8%	2%
Inside of bus/bus stops need to be cleaner	2%	9%	10%
Avoid having bus pass us by at bus stop	2%	5%	4%
Don't know	5%	5%	6%

Q11a: You indicated dissatisfaction with some of the attributes, what could be done to improve your satisfaction with the bus service?

Note: Response categories with less than 2% mentions in 2018 not shown in table.

No significant differences compared to 2016

III. Overall Perception and Satisfaction with Tempe’s Transit System

A. Top of Mind Impression of Transportation System in Tempe

Tempe residents have a variety of initial thoughts when thinking about transportation in Tempe. The most common impression was generally positive with 14% of residents describing it with words such as “good,” “excellent” and “cool.” Nearly one in ten immediately thought about how they “do not use it” (9%), the need for more and improved public transit (8%), they like the free Orbit neighborhood shuttles (7%), felt the system is “fine,” “adequate” or “average” (7%) or just thought of the light rail system in general (7%).

Unsurprisingly, transit riders were significantly more likely than non-riders to think of Tempe’s transportation system as good/cool/excellent (19% vs. 7%) or adequate/fine/average (9% vs 3%). Transit riders were also significantly more likely to immediately think of it being inconvenient and taking too long (8% vs. 2%).

Table 6: Top of Mind Impression of Tempe Transportation System

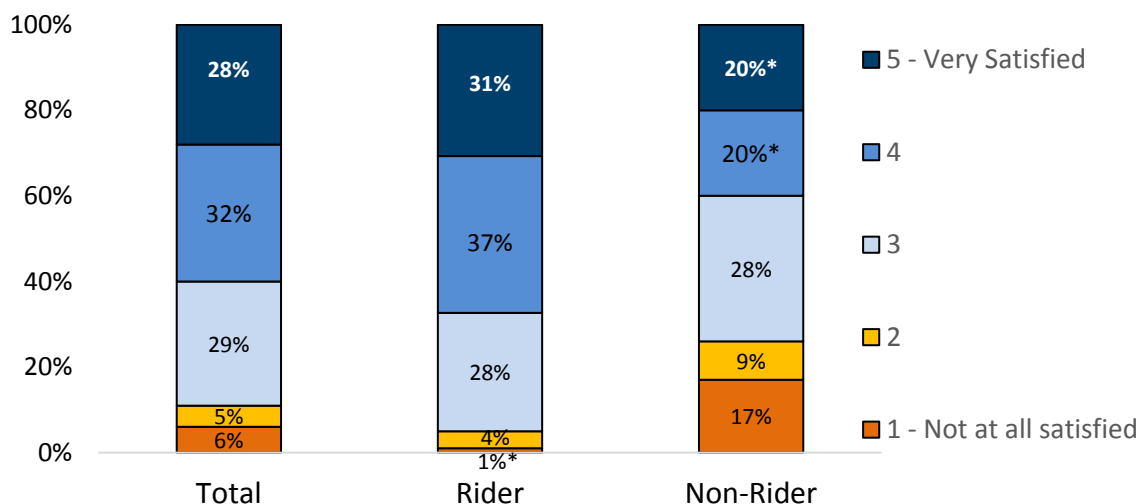
	2018 (n=400)	Transit Rider (n=253) A	Non-Rider (n=136) B
Good/excellent/cool (general positive)	14%	19% ^B	7%
Never used it/don’t use it	9%	5%	18% ^A
Need more public transit/improved transit	8%	8%	9%
Like free neighborhood shuttles/Like Orbit/Mercury/Venus/Blue buses	7%	7%	8%
Adequate/fine/average	7%	9% ^B	3%
Light Rail (unspecified)	7%	6%	9%
Inconvenient/takes too long/not frequent enough	6%	8% ^B	2%
The bus system/ bus (unspecified)	6%	5%	7%
General negative/ terrible/don’t like it	6%	5%	7%
Need street improvements (more bus pull outs, better timing of lights, better or more bike lanes, more park and rides)	5%	5%	4%
Traffic/congestion	5%	6%	4%
Convenient/easy	4%	5%	2%
Lots of options/ an choose between bus, light rail, shuttles	4%	4%	3%
It’s free	3%	2%	4%
It’s improving/progressing	3%	3%	2%
Dissatisfied that they closed McClintock/Broadway	2%	2%	2%
Don’t like the transients/homeless people on light rail/buses	2%	1%	3%

Q4: What is the first thing that comes to mind when you think about the transportation system in Tempe? (As needed: by transportation system we are talking about the way people can travel around Tempe by walking, riding a bike, or using public transit). *Responses less than 2% not shown (WG will provide all open ends under separate cover). ^{AB} Indicates significant differences compared to other sub-group at the 95% level.

B. Overall Satisfaction with Tempe Transit System

Three in five (60%) residents with an opinion report being highly satisfied with the Tempe transit system. This figure is significantly lower than the prior three waves of research. As in the past, current riders were more likely to provide a top-two rating (68% vs. 40% of non-riders).

Overall Satisfaction with Transit System
Among those with an opinion



Total n=362, Rider: n=248, Non-Rider: n=106

*Indicates significant differences compared to other sub-group at the 95% level.

Table 7: Overall Satisfaction with Transit System in Tempe
(Among those with an opinion)

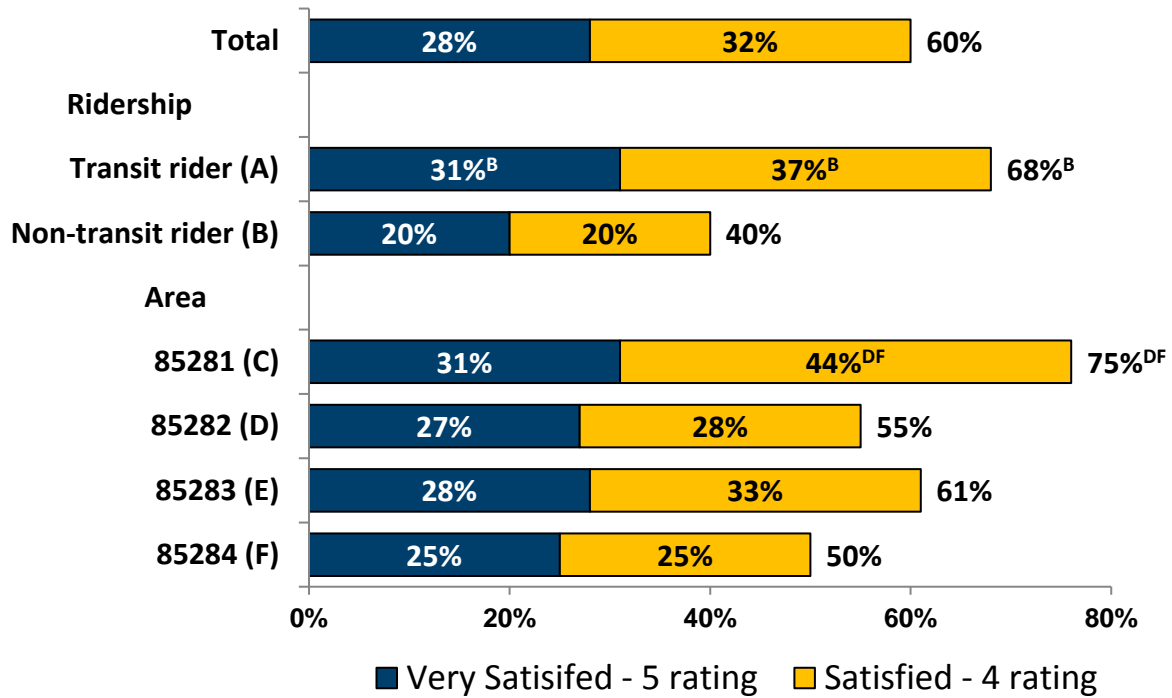
Satisfaction	2018 (n=362)	2016 (n=352)	2014 (n=376)	2012 (n=355)	2010 (n=377)
NET very + somewhat satisfied	60%*	69%	72%	69%	66%
5 – Very satisfied	28%*	36%	37%	39%	29%
4	32%	33%	35%	30%	37%
3	29%*	21%	17%	21%	22%
2	5%	5%	6%	5%	5%
1 – Very dissatisfied	6%	6%	5%	5%	6%
Don't know (excluded from %)	10%	12%	8%	11%	12%

Q12. How satisfied are you with the quality of the transit system in Tempe?

*Indicates significant differences compared to 2016

While the difference in satisfaction between transit riders and non-riders is significant and expected, it is important to note that both of these values are significantly lower than those reported in 2016 (transit rider satisfaction 2016 78% vs. 68% 2018; non-rider 2016 50% vs. 40% in 2018). Satisfaction was significantly higher among residents living in the 85281 zip code than for residents in 85282 and 85284 (75% vs. 55% and 50%, respectively).

Overall Satisfaction with Transit Service (Top Two Ratings)



n=362 (Among those with an opinion)

Residents were asked to explain the reason(s) for their overall satisfaction ratings.

Residents satisfied with the transit system (rating it a “4” or “5”) attributed their satisfaction to good service (32%), and frequent and reliable service (23%). These were also the top two mentions in 2016 and 2014.

Residents who provided “1,” “2,” or “3” ratings most often mentioned the need for better/more routes (18%) and more frequent buses with extended hours (10%) as reasons for their ratings. These were the top two mentions in 2016 and 2014. Of note, 12% simply expressed feeling uncomfortable with people who ride transit.

Table 8: Reason for Satisfaction Level

Responses	Satisfaction Level		
	Total (n=362)	4,5 (n=215)	1,2,3 (n=147)
Positive			
Satisfied, good service	23%	32%	8%
Frequent, available, reliable	15%	23%	4%
Good routes, convenient routes	7%	10%	2%
Buses/light rail are clean	7%	10%	2%
Convenient (general)	6%	9%	2%
Like the light rail/light rail is good	5%	6%	3%
Saves money, cheap, free	2%	3%	-
It’s safe/I feel safe	2%	3%	-
Neutral			
Always room for improvement	11%	11%	10%
Don’t use it, never used it	9%	4%	16%
It’s average/okay	3%	1%	6%
Negative/Suggestions			
Need better/more routes, connections, doesn’t go where I need to	9%	3%	18%
Uncomfortable with people who ride transit	8%	5%	12%
More frequent buses, more hours	8%	6%	10%
Bus driver does not stop at bus stops	5%	4%	8%
Need more security	3%	1%	6%
It was dirty/needs to be cleaned up a little bit	3%	2%	5%
Extend the light rail/more routes	2%	1%	3%
It costs too much/too expensive	2%	<1%	4%
Don’t know	6%	7%	5%

Q12a: Please explain your rating.

Note: Response categories with less than 2% total mentions in 2018 not shown in table.

IV. Potential Use of Tempe's Transit System

A. Reasons for Not Riding Transit

Preference for a personal vehicle was by far the most common reason given by non-riders as an explanation for not using public transit (49% mentioned). An additional 4% reported needing a car for business. Other popular reasons were that they simply do not need to use transit (15%) and/or find it to be inconvenient (14%) and taking too long (13%).

Compared to 2016, non-riders were significantly more likely in 2018 to cite a lack of necessity for transit, inconvenience, and a lack of safety on transit as reasons for not using public transit. Significantly fewer non-riders blamed their lack of use on bus stops being too far away (3% vs. 11% in 2016).

Table 9: Top Reasons for Not Using Public Transit

Reasons	2018 (n=136)	2016 (n=152)	2014 (n=143)	2012 (n=148)	2010 (n=123)
Prefer car	49%	59%	58%	46%	45%
Don't need to, don't have the need to use	15%*	4%	9%	6%	15%
Inconvenient (general)	14%*	6%	4%	5%	8%
Takes too long	13%	8%	6%	10%	11%
Doesn't go where they need to go	9%	7%	7%	12%	10%
Transit is not secure/safety	9%*	3%	1%	--	--
Health/disability	6%	3%	3%	5%	7%
Don't have to go far distances	6%	3%	3%	5%	5%
Need car for business	4%	7%	1%	--	--
Would rather take an Uber/Lyft	4%	--	--	--	--
Not frequent enough	4%	2%	2%	3%	3%
Weather concerns/ too hot/cold/ raining	4%	1%	<1%	1%	1%
Bus stop far away	3%*	11%	11%	12%	10%
Inconvenient bus schedule times	3%	1%	1%	2%	--
Don't like the type of people on transit	2%	1%	--	--	--
Don't have anywhere to go	2%	--	1%	2%	5%
Don't know	3%	2%	2%	2%	2%

Q6: People tell us different reasons why they do not use public transit like riding the bus or light rail. What are some of the reasons why you currently do not use public transit?

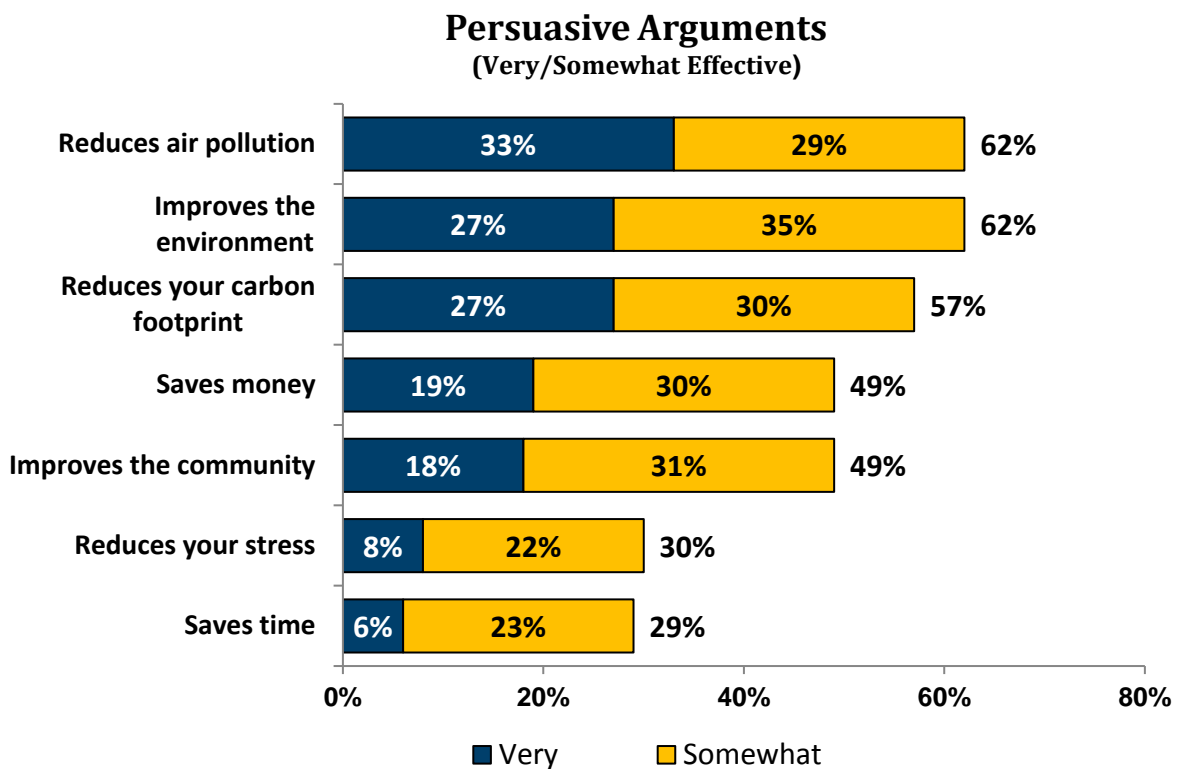
*Indicates significant difference compared to 2016 at the 95% confidence level.

Note: Reasons with less than 2% mentions in 2018 not shown in table.

B. Effectiveness of Persuasive Arguments

Residents who do not use public transit in Tempe were asked to rate the effectiveness of seven arguments of using public transit for persuading them to use the bus or light rail instead of their current mode. Ratings were completed on a four-point nominal scale (“very effective,” “somewhat effective,” “not very effective,” and “not at all effective”).

- **The two most effective arguments for persuading non-riders to use public transit appear to be *helps reduce air pollution* and *helps improve the environment*.** These were perceived as either “somewhat effective” or “very effective” by 62% of residents.
- **The two least effective arguments for persuading non-transit users to use public transit were *reduces your stress* and *saves time*** with approximately three in ten rating them as “very” or “somewhat” effective (30% and 29%, respectively).



Q7: For each of the following benefits to using public transit, please indicate how effective it would be in persuading you to use the bus or light rail instead of using your current mode of transportation.
2018 n=136 (Do not use transit in Tempe)

Younger non-riders were generally more likely than older ones to rate all of the arguments as “effective” in persuading them to ride public transit. The exceptions were for reducing stress and saving time.

Men were significantly more likely than women to rate the arguments of *improves the environment* and *saves money* as “not effective.”

Table 10: Effectiveness of Arguments to Persuade Transit Usage
(Among those who do not use transit)

	Total* 2018 (n=136)	Gender		Age		
		Male (n=68) (A)	Female (n=68) (B)	18-34 (n=34) (C)	35-54 (n=43) (D)	55+ (n=57) (E)
Reduces air pollution						
Effective*	62%	56%	68%	76% ^E	65%	51%
Not effective**	34%	41%	27%	19%	33%	44% ^C
Improves the environment						
Effective*	62%	54%	70%	76%	56%	60%
Not effective**	32%	41% ^B	22%	14%	41% ^C	35% ^C
Reduces carbon footprint						
Effective*	57%	53%	60%	76% ^{DE}	52%	49%
Not effective**	35%	42%	28%	14%	44% ^C	40% ^C
Saves money						
Effective*	49%	44%	55%	62%	52%	40%
Not effective**	42%	53% ^B	31%	24%	44%	51% ^C
Improves the community						
Effective*	49%	46%	52%	62%	43%	47%
Not effective**	41%	45%	38%	24%	52% ^C	44%
Reduces stress						
Effective*	30%	31%	29%	29%	41% ^E	23%
Not effective**	62%	63%	61%	57%	52%	72% ^D
Saves time						
Effective*	29%	31%	26%	24%	35%	26%
Not effective**	64%	65%	63%	57%	65%	67%

Q7: For each of the following benefits to using public transit, please indicate how effective it would be in persuading you to ride the bus or light rail instead of using your current mode of transportation. Would it be very effective, somewhat effective, not very effective, or not at all effective? (Don't know and no answer percentages not shown.)

Note: In 2018, all of the benefits were re-worded thus there is no tracking data for this question.

* Very + Somewhat effective

** Not very + Not at all effective

V. Tempe in Motion (TIM)

A. Awareness of Tempe in Motion

Total awareness of Tempe in Motion (TIM) increased significantly to hit a ten-year high of 57% (up from 44% in 2016). Although unaided awareness was down significantly with only 12% able to name Tempe’s transit program in an unaided manner (vs. 19% in 2016), 45% reported recognizing the name when they were asked in an aided manner (up significantly from 25%).

Total awareness was significantly higher among:

- Residents aged 35 to 54 (65% vs. 49% of older residents, and compared to 56% of those under 35)
- Transit riders (65% vs. 42% non-riders)
- Long time Tempe residents (62% who have lived in Tempe for more than 10 years vs. 41% of newer residents)
- Residents of the 85282 zip code (66% vs. 47% in 85284 and compared to 56% living in the other two zip codes)

Table 11: Awareness of TIM

	2018 (n=400)	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)	2008 (n=424)
Total Awareness (Unaided + Aided)	57%*	44%	50%	53%	54%	48%
Unaided Awareness	12%*	19%	18%	21%	24%	27%
Aided Awareness	45%*	25%	32%	32%	30%	21%

Q13/14: What is the name of Tempe’s transit/transportation program? Have you ever heard of TIM/Tempe in Motion?

B. Source of Awareness

Residents aware of TIM recalled hearing about it through **signs on buses (20%) street banners, (12%), bill inserts (10%) and online (8%)**. Mentions of signs on buses, online ads, and flyers or brochures were up significantly over 2016. However, significantly fewer people mentioned seeing a street banner (12% down from 20%).

Table 12: Top Sources of TIM Awareness
(Among those aware of TIM)

Responses	2018 (n=227)	2016 (n=178)	2014 (n=204)	2012 (n=211)	2010 (n=230)	2008 (n=202)
Signs on the buses	20%*	11%	15%	13%	18%	20%
Street banner	12%*	20%	24%	29%	17%	20%
Bill inserts	10%	7%	3%	9%	2%	2%
Internet/online ads	8%*	3%	3%	3%	4%	3%
Sign (general)	7%	6%	1%	--	--	--
Flyers/brochures	6%*	2%	3%	2%	6%	4%
TV	5%	4%	3%	6%	9%	10%
Word of mouth	4%	6%	4%	6%	3%	4%
Newspaper/Print Ads	4%	6%	5%	6%	6%	7%
ASU/School	4%	4%	5%	--	3%	2%
The City	4%	--	1%	1%	--	--
Direct mail	3%	4%	3%	5%	5%	2%
Radio	3%	1%	--	<1%	<1%	1%
Billboard	3%	2%	1%	--	--	--
Library	2%	4%	--	--	--	--
Pandora/ Spotify	2%	3%	2%	--	--	--
I live here/lived here a long time	2%	2%	2%	--	--	--
On the light rail	2%	2%	--	--	--	--
Work	2%	--	2%	1%	1%	3%
Don't know	14%*	7%	13%	16%	12%	14%

Q15: How did you hear about it?

*Indicates significant difference compared to 2016 at the 95% confidence level.

Note: Sources with less than 2% mentions in 2018 not shown in table.

C. Advertising Effect on Perception of Tempe Transportation Options

More than two in five (43%) of those who heard about TIM via TV, online ads, direct mail, street banners, Pandora/Spotify, and ASU indicated the advertising had a positive impact on their impression of transportation options in Tempe. More than one-half, 55%, said the advertising had *no effect*. Only 1% reported the advertising had a negative impact on their perceptions of the transportation system in Tempe.

Among those who indicated TIM advertising had a positive or neutral impact about their feelings of transportation options in Tempe, **one in five (21%) indicated the advertising message persuaded them to try public transit in Tempe**. Among these 12 people, four reported that online ads had the most influence on their decision to try transit, three said street banners influenced them most and two credited signs on buses as having the most influence.

Table 13: Advertising Effect on Perception
(Among those aware of TIM advertising through specified media)

	2018 (n=63)	2016 (n=71)	2014 (n=88)	2012 (n=94)	2010 (n=79)	2008 (n=120)
Make you think more positively about transportation options in Tempe	43%	54%	52%	42%	58%	57%
Have no effect on your perceptions	55%	39%	41%	52%	38%	42%
Make you think negatively about transportation options in Tempe	1%	2%	2%	2%	1%	1%
Don't know	2%	5%	5%	4%	3%	--

Q16: How did the messages affect your perception of the transportation system in Tempe?

*No significant differences compared to 2016

Table 14: Advertising Effect on Transit Usage
(Among those who said impact of message was positive/neutral)

	2018 (n=61)	2016 (n=71)	2014 (n=83)	2012 (n=88)
Yes	21%	25%	20%	28%
No	78%	75%	79%	72%

Q17: Did the advertising messages persuade you to try public transit in Tempe?

Table 14a: Advertising Source with Most Influenced to Use Transit
 (Among those who said message persuaded them to try transit)

Advertising Source	2018 (n=12)*
Online ads/web	4
Street banners	3
Signs on the buses	2
Flyers/ brochures	1
TV	1
Don't know/ Not aware of program	1
Other	1

Q18: What was the advertising source that most influenced your decision to try public transit in Tempe?

**Due to the small sample size, responses are listed as numbers instead of percentages*

VI. Tempe Bicycling and Walking

A. Bicycle Usage

Nearly two-thirds of residents (64%) reported having access to a bicycle. This is statistically similar to the past six years, but remains somewhat elevated over 2008 and 2010.

Residents more likely to indicate having access to a bike include:

- Male residents (70% vs. 58% for females)
- Transit riders (69% vs. 53% non-transit rider)
- Residents aged 35 to 54 (78% vs. 63% of those under 35 and compared to 51% of older residents)
- Those with annual household incomes of \$40,000 or more (72% vs. 45% with lower incomes)
- Married residents (74% vs. 55% of single residents)

Among those with access to a bike, two thirds (66%) reported riding their bike at least once a month, which is similar to the 71% measured in 2016.

Table 15: Access to and Frequency of Bike Use

	2018 (n=400)	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)	2008 (n=424)
Have access to bike	64%	62%	61%	62%	58%	56%
Frequency						
Never/only occasionally	33%	28%	30%	32%	35%	29%
Once or twice	22%	23%	18%	18%	17%	19%
Three to five times	19%	20%	17%	11%	13%	19%
Six to ten times	10%	8%	8%	12%	9%	10%
>10 times	15%	20%	27%	24%	24%	23%
Don't know/not sure	2%	1%	1%	2%	2%	--

Q19: Do you have access to a bicycle that you can ride when you want to?

Q20: How many times in a month do you ride your bike?

**No significant differences compared to 2016*

B. Reasons Do Not Ride Bicycle More Often

Those who have access to a bike but never or only occasionally ride it (33%) most often blamed hot weather for not riding it more often (47% mentioned it being “*too hot outside*”).

Reasons given by approximately one in ten respondents include: *it is too dangerous, have health issues, it is inconvenient, and being “lazy”* (mentioned by 10% to 12%).

A notable and growing percentage of residents indicate they never or rarely ride their bike because of safety related factors – *too dangerous* (12%) and *too much traffic* (7%).

Table 16: Reasons for Not Riding More Often

(Among those who have access to a bicycle but only ride it occasionally or never)

Responses	2018 (n=84)	2016 (n=70)	2014 (n=74)
Too hot outside/hot weather	47%	38%	32%
Too dangerous	12%*	1%	12%
Physical condition/my health	11%	9%	5%
Inconvenient/too busy	10%	4%	8%
Lazy/don't want to ride it	10%	4%	10%
Have a car/rather take car	7%	6%	1%
Too much traffic	7%	3%	2%
Distance/too far	6%	9%	1%
Bike not working properly/bike not functional	3%	6%	5%
Too much to carry	3%	1%	-
Takes too long	2%	7%	3%
Have little kids/drive kids around	2%	6%	3%
Injury	1%	1%	2%
Too old	1%	-	2%
No need/nowhere to go	1%	-	-
Not enough bike lanes/paths	-	2%	2%
Other (responses <.5%)	2%	9%	7%
Don't know/no answer	-	9%	6%

Q20a: What are some reasons you don't ride you bike more often?

*Indicates significant difference compared to 2016 at the 95% confidence level.

Note: Question added in 2014

C. Bicycle Destinations

More than one-third (35%) of those who indicated riding their bikes at least once a month reported riding for *exercise*, while 17% ride a bike to *the store* and 16% ride their bike to parks (continuing an upward trend). This year a significantly higher percentage of bicyclists reported that Mill Avenue/Downtown Tempe were their destinations.

Table 17: Bike Riding Destinations

(Among those who have access to a bicycle and ride it at least 1x a month)

Responses	2018 (n=167)	2016 (n=176)	2014 (n=174)	2012 (n=163)	2010 (n=155)	2008 (n=169)
Exercise	35%	44%	53%	58%	60%	56%
Store	17%	13%	14%	15%	16%	19%
Parks	16%	10%	4%	6%	4%	6%
Mill Avenue/Downtown Tempe	13%*	5%	3%	5%	3%	1%
Work/school/ASU	12%	14%	29%	18%	27%	31%
Along the canal	11%	9%	4%	--	--	--
Restaurant/dinner	9%	4%	3%	2%	1%	2%
Tempe Town Lake	7%	5%	4%	6%	7%	4%
Friend's house	4%	4%	9%	7%	3%	6%
Everywhere	8%	3%	3%	2%	1%	1%
Run errands	3%	2%	2%	3%	1%	2%
The bar/when I've been drinking	2%	3%	3%	1%	--	--
Other	2%	2%	2%	5%	2%	1%

Q21: Where do you go when you ride your bike?

*Indicates significant difference compared to 2016 at the 95% confidence level.

Note: Destinations with less than 2% mentions in 2018 not shown in table.

D. Main Reason for Riding a Bicycle

Residents who bicycle at least monthly say they do so primarily to get *exercise* (57%) and/or to *have fun* (22%). Notably, significantly fewer bicyclists mentioned riding a bike because it is convenient or easy to do so (3% down from 8% in 2016).

Residents of the 85284 and 85283 zip codes were more likely than those who reside in other Tempe zip codes to report bike riding exercise (72% and 64% vs. 37% in 85281 and 50% in 85282).

Table 18: Main Reason Ride a Bike
(Among those who have access to a bicycle and ride it at least 1x a month)

Responses	2018 (n=167)	2016** (n=176)
Exercise	57%	54%
Fun/Recreation/leisure	22%	26%
Convenient/easy	3%*	8%
Good for health/medical reasons	3%	5%
For the fresh air	3%	1%
Saves money	2%	4%
It's faster than walking/driving	2%	-
To go shopping	2%	1%
Saves wear and tear on car/don't want to drive	1%	4%
To get to school/work	1%	4%
Do not have a car	1%	2%
Protects environment	1%	1%
Other	1%	2%
No answer	-	1%

Q22: What is the main reason you ride a bicycle?

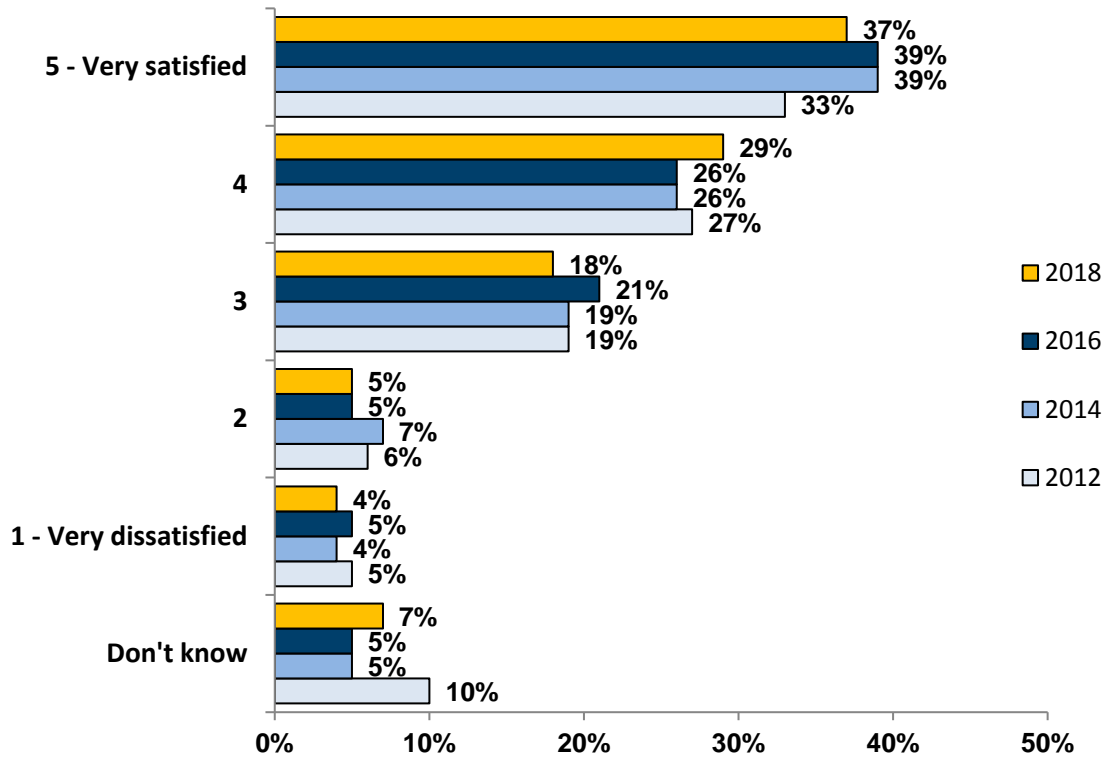
*Indicates significant difference compared to 2016 at the 95% confidence level.

**Question added in 2016.

E. Overall Satisfaction with Bicycle and Pedestrian Paths

Consistent with the prior two study periods, in 2018, two thirds (66%) of residents reported being satisfied with the quality of walking and biking paths in Tempe. All other ratings remained stable, as well.

Overall Satisfaction with Tempe Walking and Bike Paths



2018 n=400, 2016 n=401, 2014 n=409, 2012 n=400

Q23: How satisfied are you with the quality of the walking and biking paths in Tempe?

*No significant differences compared to 2016

Residents were asked to explain the reason(s) for their satisfaction ratings for bike and pedestrian paths. **Among those with an opinion, the most common positive reasons for ratings included *they are everywhere, there are plenty of paths (15%) and they are fine the way they are/no problems (12%)***. These were the top responses in 2016 as well. Again this year, 5% commented they recognized improvements or upgrades to bike and pedestrian paths. **Top negative reasons included *don't seem safe enough/make them safer (9%) and need more bike lanes (6%)***.

Table 19: Reasons for Satisfaction Rating
(Among those with an opinion)

Responses	2018 (n=370)	2016 (n=380)	2014 (n=390)	2012 (n=362)
Positive				
They are everywhere, plenty of paths	15%	12%	12%	15%
They are fine the way they are, no problems	12%*	18%	29%	23%
Have good routes, connect well	9%	6%	3%	6%
Easy to use, accessible	7%	5%	6%	6%
They are properly maintained, well landscaped	6%	6%	4%	12%
Have seen/noticed improvements/upgrades	5%	5%	2%	--
They are safe	4%	7%	5%	6%
Paths are well lit	2%	4%	5%	5%
Good for exercising/walking	2%	--	--	<1%
They added more paths	2%	2%*	1%	--
Paths are scenic/beautiful	1%	1%	3%	2%
Neutral				
Never use them, no knowledge of them	4%	6%	5%	4%
Neither satisfied nor dissatisfied	2%	1%	<1%	1%
There is always room for improvement	1%*	4%	4%	3%
Negative/Suggestions				
Don't seem safe enough, make them safer	9%	9%	8%	10%
Need more bike lanes	6%	4%	9%	11%
Could use more of them	2%	7%	6%	4%
Need more education on "sharing the road"	1%	--	--	--
Some routes end abruptly/have disconnects	1%	1%	2%	1%
They are not maintained	1%	2%	2%	2%
Traffic congestion is getting higher	1%	2%	--	--
Don't know	3%	5%	6%	6%

Q23a: Please explain your rating

*Indicates significant difference compared to 2016 at the 95% confidence level.

Note: Response categories with less than 1% total mentions in 2018 not shown in table.

F. Priority of Possible Sidewalk Improvements

Residents were read a list of three possible sidewalk improvements in Tempe and asked to rate how high of a priority each improvement should be for the City.

Security and comfort on sidewalks, such as addressing hazards, obstructions and width received the highest percentage of priority ratings (70% rated a “4” or “5”). Notably, approximately one-half (48%) rated it as a “very high priority.”

Just over one-half placed a high priority on the need for *miles of shaded sidewalks* (54% rated a “4” or “5”). *Amenities along sidewalks like water fountains, lighting, art and signage* ranked as the lowest priority with 42% assigning a priority rating of “4” or “5.”

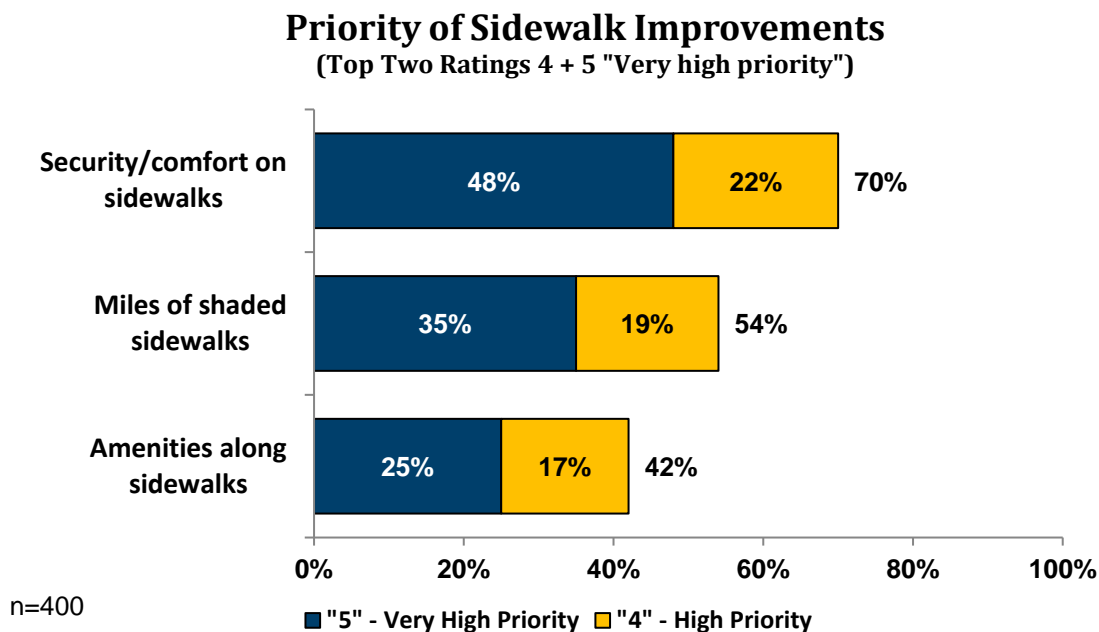


Table 20: Priority of Possible Sidewalk Improvements

Responses	Very High	High	Some-what	Low	Very Low	DK/No answer
Security/comfort on sidewalks such as addressing hazards, obstructions and width	48%	22%	15%	7%	6%	2%
Miles of shaded sidewalks	35%	19%	22%	10%	11%	4%
Amenities along the sidewalks like water fountains, lighting, art, and signage	25%	17%	28%	12%	15%	3%

Q24-26: Now I'm going to read you a list of possible sidewalk improvements. Please indicate how high of a priority each improvement should be for the City of Tempe.

G. Priority of Possible Bikeway Improvements

Residents were read a list of six possible improvements to bikeways in Tempe and asked to rate how high of a priority each improvement should be for the City.

Security and comfort on multi-use paths, ease of travel around barriers, and miles of multi-use paths and dedicated bike lanes received the highest percentage of priority ratings (67%, 65% and 62% rated a “4” or “5”). Just over one-half gave high priority ratings to *protected bike lanes with physical boundaries* (55%) and *shade along multi-use paths and bike lanes* (51%). With just under one-half (47%) rating the need for *amenities along multi-use paths like water fountains, lighting, art and signage* as a “4” or “5,” this attribute ranked as the lowest priority.

Priority of Bikeway Improvements
(Top Two Ratings 4 + 5 "Very high priority")

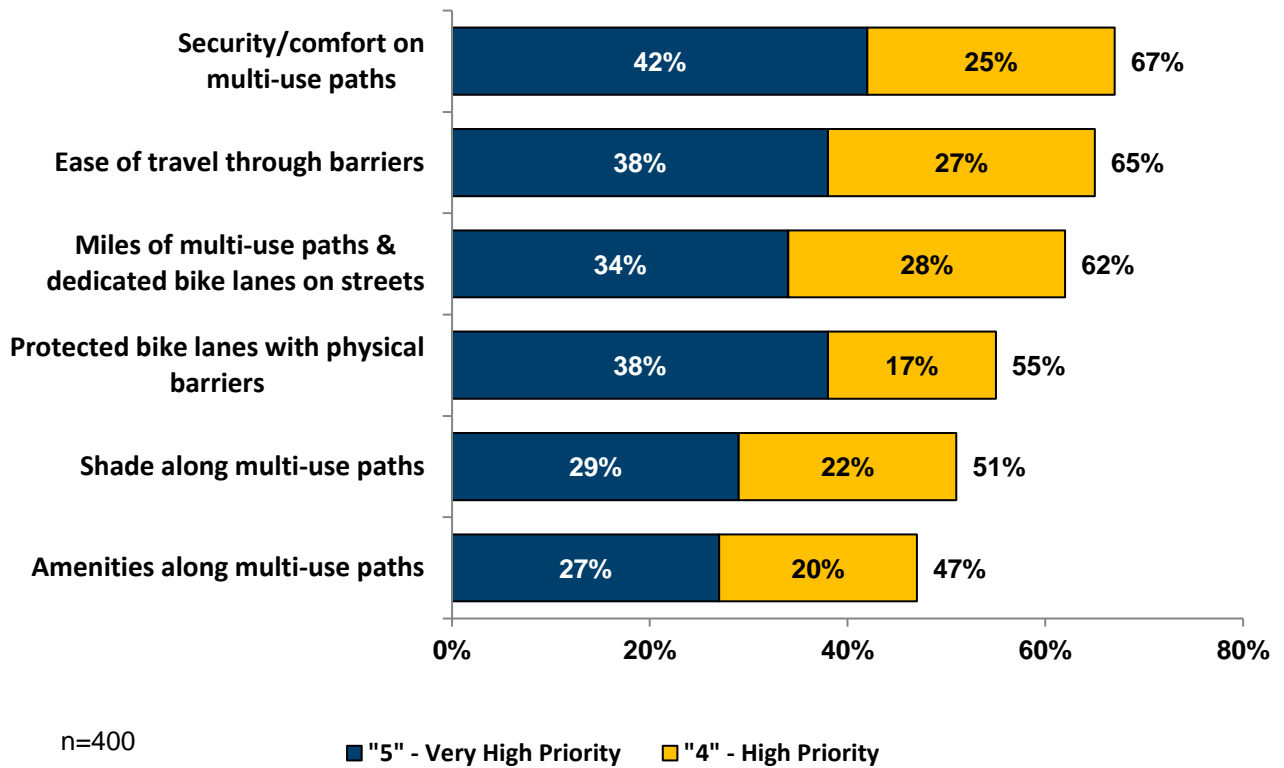


Table 21: Priority of Possible Bikeway Improvements

Responses	Very High	High	Some-what	Low	Very Low	DK/No answer
Security/comfort on multi-use paths	42%	25%	18%	8%	6%	3%
Ease of travel through or around barriers such as railroad crossings, freeways, roads, the lake, etc.	38%	27%	22%	4%	6%	3%
Miles of multi-use paths and dedicated bike lanes on streets	34%	28%	19%	7%	9%	3%
Protected bike lanes that have a physical barrier between traffic and bikes	38%	17%	17%	12%	14%	3%
Shade along the multi-use paths and bike lanes	29%	22%	26%	11%	11%	2%
Amenities along the multi-use paths like water fountains, lighting, art and signage	27%	20%	28%	11%	14%	1%

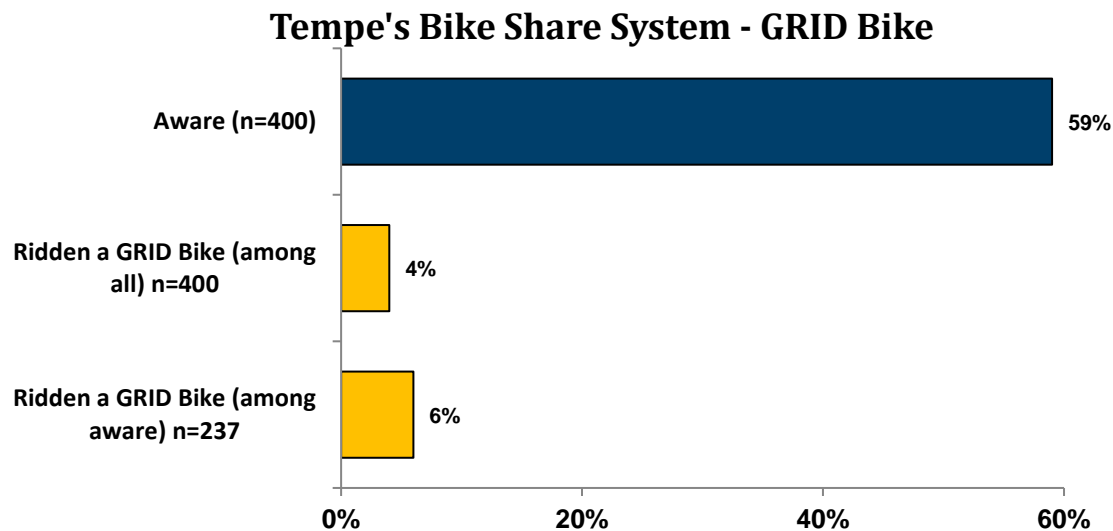
Q27-32: Now I'm going to read you a list of possible bikeway improvements. Please indicate how high of a priority each improvement should be for the City of Tempe.

H. Bike Share System – GRID Bike

Three in five residents (59%) have heard of Tempe’s bike share system and 4% of all residents have ridden a GRID bike (6% of those aware).

Among the 15 residents who have ridden a GRID bike, **9 reported being “very satisfied” with the quality of the bike share system in Tempe.** The remaining six rated it as a “4” (2 GRID riders), “3” (3 GRID riders) or “2” (1 GRID rider) on the 1 to 5 scale where “5” means “very satisfied” and “1” means “not at all satisfied.”

Residents primarily report being satisfied with GRID Bike because they are *easy to access* (7 mentions) and *convenient* to use (5 mentions). Three people expressed concern that they are or would become *disorganized*, a *nuisance* and *all over the place*. One person complained that *pick up/drop off locations were limited* and another complained about the cost.



Q33: Have you ever heard of Tempe's bike share system?

Q34: Have you ridden on a green GRID bike?

Table 22: Satisfaction of Bike Share System Among those who have ridden on a GRID bike

	2018 (n=15)*
5 - Very satisfied	9
4	2
3	3
2	1
1 – Very dissatisfied	-

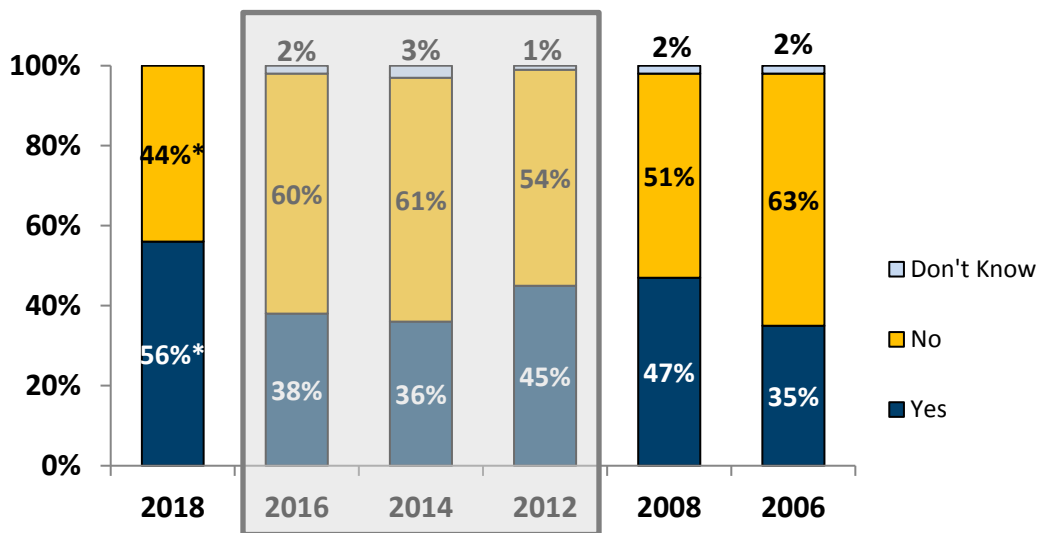
Q35: How satisfied are you with the quality of the bike share system in Tempe?

*Unweighted frequencies shown due to very small sample size.

VII. Tempe Youth Free Transit Pass Program

In 2018, more than one-half (56%) of residents who have children ages 6 to 18 have heard of the Tempe Youth Free Transit Pass. This is significantly higher than 47% measured ten years ago, which was the last time the question was asked only of those with children age 6+. Awareness was significantly higher among parents who use public transit (68%), but one-third of non-riders have heard of it as well (34%). Parents residing in 85282 are most likely to be aware of the pass (77%) and those in 85284 are the least likely to be familiar with them (21%).

Awareness of Tempe Youth Free Transit Pass



2018 n=84, 2016 n=401, 2014 n=409, 2012 n=400, 2008 n=98, 2006 n=

QD5: Have you ever heard of the Tempe Youth Free Transit Pass Program?

*Indicates significant difference compared to 2014 at the 95% confidence level.

Note: 2018, 2008 and 2006: question was asked only of people with children ages 6 years and old. In 2012, 2014, and 2016 this question was asked of all residents.

Among parents aware of the program, one half (52%) indicated they heard about it *through school* followed by *word-of-mouth* and/or *the library* (both mentioned by 12%).

Table 23: Sources for Tempe Youth Transit Pass Program Information
(Among those aware of the program)

Sources	2018* (n=47)	2008* (n=46)		2016 (n=150)	2014 (n=148)	2012 (n=179)
Through school	52%	28%		24%	20%	24%
Word-of-mouth (friends/family)	12%	33%		16%	20%	19%
Library	12%	7%		11%	7%	7%
Advertisement	5%	--		4%	8%	6%
Bill insert	3%	2%		8%	3%	7%
Mail/ flyer	3%	--		--	--	1%
Web site	3%	4%		1%	2%	3%
Letter from the City	2%	4%		3%	5%	5%
Radio	2%	--		--	--	--
Don't know	3%	11%		7%	5%	10%

QD5a: How did you first hear about the Tempe Youth Free Transit Pass Program?

*In 2008 and again in 2018, question was asked only of people with children aged 6 years and older.

Data for 2016-2014-2012 is shown for easy reference.

Note: Sources with less than 2% mentions in 2018 not shown

APPENDIX A: Questionnaire

**City of Tempe – Tempe in Motion
2018 Questionnaire**

Sample: 85281, 85282, 85283, 85284 = 400

Quotas: Males/Females 50/50 each quota group

Age distribution will be monitored for representativeness of sample English and Spanish

Good _____, may I please speak with _____? This is _____ calling from WestGroup Research on behalf the City of Tempe. We are conducting a survey with Tempe residents about important issues affecting the City's transportation system. This is not a telemarketing call; we simply want your opinions on a variety of issues important to Tempe residents.

1. Are you a Tempe resident?
Yes – CONTINUE
No – THANK AND TERMINATE
- 1a. Did you answer this call using a cell phone?
 - a. Yes
 - b. no
2. What is your zip code?
 - a. 85281
 - b. 85282
 - c. 85283
 - d. 85284
 - e. Other/Don't know/Refused – THANK AND TERMINATE
3. What is your age?
- 3.a How long have you lived in Tempe?
 - a. Less than one year
 - b. One to two years
 - c. Three to five years
 - d. Six to ten years
 - e. Eleven to 20 years
 - f. More than 20 years
 - g. Refused/don't know/NA
4. What is the first thing that comes to mind when you think about the transportation system in Tempe? IF NECESSARY, by transportation system we are talking about the way people can travel around Tempe by walking, riding a bike, or using public transit.
5. In general would you say you use Tempe's transit system (including light rail, Orbit, Flash and local bus/express)?
 - a. Daily
 - b. Weekly
 - c. Monthly
 - d. Every few months
 - e. Only under special or unique circumstances
 - f. I don't use transit
 - g. Don't know /NA

- 5a. IF a, b, c, or d IN Q5: Which of the following have you used in Tempe in the past year?
MULTIPLE RESPONSES ALLOWED
- Local or express bus
 - Orbit or Flash neighborhood shuttles
 - Light rail
6. ASK IF “e- don’t use transit” IN Q5: People tell us different reasons why they do not use public transit like riding the bus or light rail. What are some of the reasons why you currently do not use public transit? What other reasons? DO NOT READ LIST (Multiple responses allowed)
- Prefer to drive my car
 - Bus stops far away
 - Takes too long
 - Need car for business
 - Doesn’t go where need to go
 - Inconvenient (general): Specify
 - No need to use it
 - Health reasons/disability
 - Don’t have to go far distances
 - Ride bike instead
 - Work from home/Telecommute/Don’t commute
 - Don’t feel safe/secure on transit
 - Service isn’t frequent enough
 - Other: Specify _____
 - Don’t know
7. ASK IF “e- don’t use transit” IN Q5: For each of the following benefits to using public transit, please indicate how effective it would be in persuading you to use the bus or light rail instead of using your current mode. Would it be very effective, somewhat effective, not very effective, or not at all effective in persuading you to ride bus or light rail?
- Helps reduce air pollution
 - Helps improve the environment
 - Saves money
 - Saves time
 - Reduces your stress
 - Improves the community
 - Reduces your carbon footprint
 - DO NOT READ - None/DK/No answer

ASK IF a, b, c, d in Q5: ALL OTHERS SKIP TO Q12

8. How long have you been using the transit system in Tempe? DO NOT READ LIST
- Less than a year
 - 1 to 2 years
 - 2 to 4 years
 - 4 to 6 years
 - 6 to 10 years
 - More than 10 years
 - Don’t know/NA

9. What is the main reason you use public transit? DO NOT READ LIST
- a. Convenient
 - b. Get to/from places
 - c. Don't have a car
 - d. Get to/from school
 - e. To avoid parking
 - f. Need to get to Phoenix
 - g. Dislike driving/Take a break from driving
 - h. Saves money
 - i. To go downtown
 - j. A way to get around
 - k. To avoid drinking and driving
 - l. To get to/from work
 - m. Vehicle not available/Having car problems
 - n. Other (SPECIFY: _____)
10. Where do you go when you use public transit? DO NOT READ LIST. (Multiple responses allowed)
- a. ASU
 - b. Community College
 - c. High School
 - d. Work
 - e. Shopping
 - f. Errands
 - g. Medical appointment
 - h. Visit friends/family
 - i. Recreational activities
 - j. Library
 - k. Downtown Phoenix
 - l. Phoenix (general)
 - m. Downtown Tempe
 - n. Airport
 - o. Other (SPECIFY: _____)
11. ASK ONLY OF THOSE WHO ANSWER "A" OR "B" IN Q5a. In general, how satisfied are you with: ROTATE LIST

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied	DK/ no answer
a. Cleanliness of buses	4	3	2	1	0
b. Cleanliness of bus stops	4	3	2	1	0
c. Amenities at bus stops (e.g. shade, seating, bike racks)	4	3	2	1	0
d. Reliability/on-time performance of buses	4	3	2	1	0
e. Driver courtesy and professionalism	4	3	2	1	0
f. Route frequency	4	3	2	1	0
g. Hours of operation	4	3	2	1	0
h. Comfort on the bus	4	3	2	1	0
i. Ease of using the bus (e.g., using schedules,	4	3	2	1	0

getting to the bus stop, paying fares)					
j. Security at bus stops	4	3	2	1	0
k. Security on the bus	4	3	2	1	0
l. Bus service during major City events	4	3	2	1	0

11a. ONLY ASK IF ANSWER IS SOMEWHAT DISSATISFIED OR VERY DISSATISFIED IN Q11: You indicated dissatisfaction with some of the attributes, what could be done to improve your satisfaction with the bus service? DO NOT READ LIST.

- a. More frequent buses
- b. Need better/more routes
- c. Bus stops need shade
- d. Security in the bus/safer
- e. Inside of the bus/bus stops need to be cleaner
- f. Don't like the type of people that use the bus
- g. More/better lighting at bus stops
- h. More courteous/professional bus drivers
- i. Easier schedules to read/understand/accurate
- j. More/better benches at bus stops
- k. Avoid having bus pass us by at bus stop
- l. Other (SPECIFY: _____)
- m. Don't know/Not sure
- n. Nothing

ASK ALL:

12. How satisfied are you with the quality of the transit system in Tempe? Please rate your satisfaction level on a 1 to 5 scale where 5 means "very satisfied" and "1" means "very dissatisfied"

12a. Please explain your rating. DO NOT READ LIST.

- a. Satisfied/Good service
- b. Frequent/Available/Reliable Service
- c. Don't use it/Never used it
- d. Good routes/convenient routes
- e. Need better routes/need more routes/need more connections/doesn't go where I need to go
- f. More frequent buses/longer hour
- g. Always room for improvement
- h. Convenient (general- probe for specifics)
- i. Clean
- j. Dirty/needs to be cleaned up
- k. Like Light rail/Light rail is good
- l. Needs more security
- m. Uncomfortable with people who ride transit
- n. Other (Specify)

13. What is the name of Tempe's transit/transportation program? DO NOT READ LIST

- a. Tempe in Motion – SKIP TO 15
- b. Valley Metro – ASK Q14
- c. Orbit – ASK Q14
- d. Other (SPECIFY: _____) – ASK Q14
- e. Don't know ASK Q14

14. Have you ever heard of Tempe in Motion? a. YES b. NO (IF NO SKIP TO Q19)
15. IF YES IN Q14 or “Tempe in Motion” in Q13: How did you hear about it? DO NOT READ LIST
- a. Street Banners
 - b. Signs on the Buses
 - c. Bill inserts
 - d. Word of Mouth
 - e. Newspaper / Print ads
 - f. Sign (general)
 - g. Direct mail
 - h. TV
 - i. ASU / School
 - j. Library
 - k. Pandora or Spotify
 - l. Internet / Online ads / web
 - m. Just know / I live here / Lived here a long time
 - n. Billboard
 - o. Flyers / Brochure
 - p. On Light Rail
 - q. Other (SPECIFY:)
 - r. Don’t know/Not aware of the program
16. IF a through p selected in Q15: How did the messages affect your perception of the transportation system in Tempe? Did it. READ LIST
- a. Make you think more positively about transportation options in Tempe
 - b. Have no effect on your perceptions
 - c. Make you think negatively about transportation options in Tempe
 - d. DON’T READ – Don’t know
17. If a or b in Q16: Did the advertising messages persuade you to try public transit in Tempe?
- a. Yes
 - b. No
 - c. Don’t know
18. IF “a” in Q17: What was the advertising source that most influenced your decision to try public transit in Tempe? ONLY SHOW ITEMS SELECTED IN Q15. SINGLE RESPONSE.
- a. Street Banners
 - b. Signs on the Buses
 - c. Bill inserts
 - d. Word of Mouth
 - e. Newspaper / Print ads
 - f. Sign (general)
 - g. Direct mail
 - h. TV
 - i. ASU / School
 - j. Library
 - k. Pandora or Spotify
 - l. Internet / Online ads / web
 - m. Just know / I live here / Lived here a long time
 - n. Billboard
 - o. Flyers / Brochure
 - p. On Light Rail
 - q. Other (SPECIFY:)

- r. Don't know/Not aware of the program
19. Do you have access to a bicycle that you can ride when you want to?
- a. Yes
 - b. No – SKIP TO Q23
20. IF YES IN Q19: How many times in a month do you ride your bike?
- a. None/never ride it/only ride it occasionally
 - b. Once or twice
 - c. Three to five times
 - d. Six to 10 times
 - e. More than 10 times
 - f. Don't know/NA
- 20a. If none/never ride it in Q20: What are some reasons why you don't ride your bike more often? DO NOT READ LIST
- a. Too hot outside / hot weather
 - b. Physical condition / my health
 - c. Distance / Too far
 - d. Takes too long
 - e. Bike not working properly / bike not functional
 - f. Have little kids / drive kids around
 - g. Prefer Car
 - h. Time / Convenience / Too busy
 - i. Lazy / Don't want to ride it
 - j. Too much traffic
 - k. Not enough bike lanes / paths
 - l. Injury
 - m. Have too much to carry
 - n. Too dangerous
 - o. Other
 - p. Don't know/NA
21. IF RIDE BIKE 1+ times in Q20: Where do you go when you ride your bike? DO NOT READ LIST
- a. Exercise
 - b. Store
 - c. Work / school / ASU
 - d. Parks
 - e. Along the canals
 - f. Tempe Town Lake
 - g. Mill Avenue / Downtown Tempe
 - h. Friend's house
 - i. Restaurant / Dinner
 - j. Everywhere
 - k. The bar / when I've been drinking
 - l. The light rail
 - m. Run errands
 - n. Nowhere/just riding for exercise
 - o. Other (SPECIFY:)

22. What is the main reason you ride a bicycle? (DO NOT READ LIST)

- a. Exercise
- b. Fun/Recreation/Leisure
- c. Convenient/Easy
- d. Health reasons/Good for health/Medical reasons
- e. Saves money
- f. Saves wear and tear on my car
- g. To get to school/work
- h. Don't have a car
- i. Not have to walk
- j. Other (SPECIFY:)

ASK ALL:

23. How satisfied are you with the quality of the walking and biking paths in Tempe? Please rate your satisfaction level on a 1 to 5 scale where 5 means "very satisfied" and "1" means "very dissatisfied"

23a. Please explain your rating. DO NOT READ LIST.

- a. No problems/Fine the way they are
- b. Plenty of paths/Paths are everywhere
- c. Make Paths safer/Paths need to be safer/Paths don't seem safe enough
- d. Paths are safe/Paths seem safe
- e. Good routes/routes connect well
- f. Paths are properly maintained/paths are well-landscaped
- g. Paths are easy to use/Paths are easy to access
- h. Improvements have been made/Noticed or seen upgrades
- i. Well-lit
- j. Need more bike lanes
- k. Need more walking paths
- l. More lanes/paths have been added
- m. No one uses bike lanes
- n. NEVER USE PATHS/NO KNOWLEDGE
- o. Other (Specify:)

24-26. Now I am going to read you a list of possible sidewalk improvements. Please indicate how high of a priority each improvement should be for the City of Tempe. Please use a 1 to 5 scale where “1” means “a very low priority” and a “5” means it should be a “very high priority” for the City of Tempe. The first one is....

RANDOM ORDER 24-26	Very high priority	High priority	Somewhat of a priority	Low priority	Very low priority	DK / Refused
24. Miles of shaded sidewalks	5	4	3	2	1	0
25. Security/comfort on sidewalks such as addressing hazards, obstructions and width	5	4	3	2	1	0
26. Amenities along the sidewalks like water fountains, lighting, art, and signage	5	4	3	2	1	0

27-32. Now I am going to read you a list of possible bikeway improvements. Please indicate how high of a priority each improvement should be for the City of Tempe. Please use a 1 to 5 scale where “1” means “a very low priority” and a “5” means it should be a “very high priority” for the City of Tempe. The first one is....

RANDOM ORDER 27-32	Very high priority	High priority	Somewhat of a priority	Low priority	Very low priority	DK / Refused
27. Miles of multi-use paths and dedicated bike lanes on streets	5	4	3	2	1	0
28. Security/comfort on multi-use paths	5	4	3	2	1	0
29. Amenities along the multi-use paths like water fountains, lighting, art and signage	5	4	3	2	1	0
30. Ease of travel through or around barriers such as railroad crossings, freeways, roads, the lake, etc.						
31. Shade along the multi-use paths and bike lanes	5	4	3	2	1	0
32. Protected bike lanes that have a physical barrier between traffic and bikes	5	4	3	2	1	0

33. Have you heard of Tempe's bike share system?
- Yes
 - No
 - Don't know
34. If Yes in Q33, have you ridden on a green GRID bike?
- Yes
 - No
 - Don't know
35. If Yes in Q34, how satisfied are you with the quality of the bikeshare system in Tempe? Please rate your satisfaction level on a 1 to 5 scale where 5 means "very satisfied" and "1" means "very dissatisfied"
- 35a. Please explain your rating.

Demographics

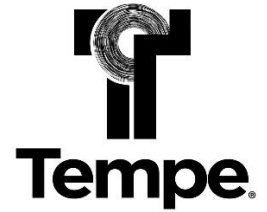
I have just a couple more questions about you so that we can classify your responses with other people who answered the survey. All of this information will be kept confidential.

- D1. Gender: 1 Male 2 Female
- D2.
- D2. What is the highest grade of school or year of college that you have completed:
- Some high school
 - High school graduate
 - Some college
 - College graduate
 - Post graduate
 - No answer
- D3. Are you married or single?
- Married
 - Single
 - No answer
- D4 . Do you have children ages 6 to 18?
- Yes
 - No
 - Don't know
- D5. If yes in D4, have you ever heard of the Tempe Youth Free Transit Pass Program?
- Yes
 - No
 - Don't know

- D5a. IF YES IN D5: How did you first hear about the Tempe Youth Free Transit Pass Program? DO NOT READ LIST. SINGLE RESPONSE
- a. Through the school
 - b. Received a letter from the City
 - c. Advertisement
 - d. Web site
 - e. Twitter/Facebook
 - f. Other: (SPECIFY _____)
 - g. Don't know/Don't recall
- D6. Are you employed full-time, employed part-time, retired, a stay at home caregiver, a student or unemployed?
- a. Full-time
 - b. Part-time
 - c. Retired
 - d. Stay at Home Spouse
 - e. Student
 - f. Unemployed
 - g. Refused/NA
- D7. Was your annual household income before taxes last year:
- a. Less than \$20,000
 - b. \$20,000 to \$40,000
 - c. \$40,000 to \$60,000
 - d. \$60,000 to \$80,000
 - e. \$80,000 to \$100,000
 - f. \$100,000 to \$150,000
 - f. More than \$150,000
 - g. No answer

Thanks for your time. That concludes our interview.

CITY OF TEMPE TRANSPORTATION COMMISSION



STAFF REPORT

AGENDA ITEM 5

DATE

December 11, 2018

SUBJECT

Orbit System Update

PURPOSE

The purpose of this memo is to provide the Commission with a status of the Orbit system in Tempe.

Staff will present an Orbit system update including ridership, costs related to operations of the system, new Orbit bus purchases, specific information related to the Orbit Saturn route, and upcoming important dates and events for the system.

FISCAL IMPACT

The Orbit system is mostly funded through the Tempe Transit Tax at approximately \$10 million for the current fiscal year.

RECOMMENDATION

For information.

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ATTACHMENTS

PowerPoint

Orbit System Update Including Saturn Route

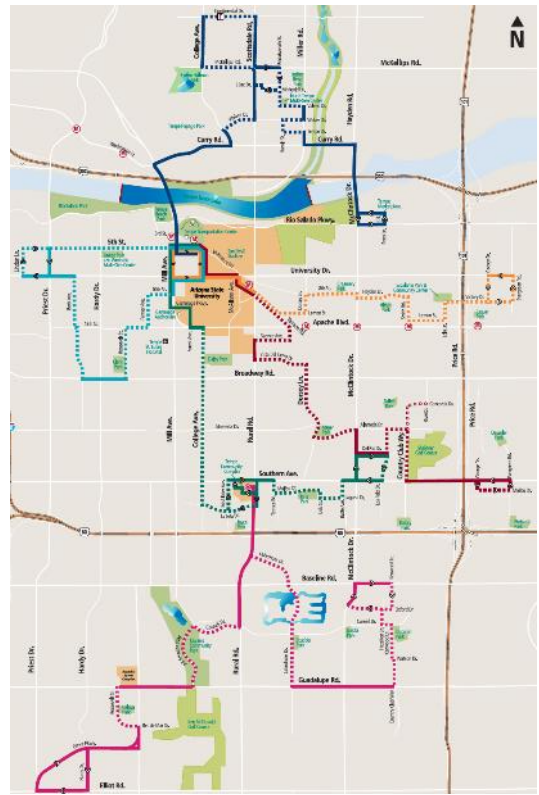
**Transportation Commission
December 11, 2018**



Orbit Overview



- Key 1996 Transit Tax Initiative Element
- Outstanding Residential Bus In Tempe
- Free Neighborhood Circulator Service
 - Connections to regional transit network and activity centers
 - 7 days/week, Frequent, Convenient
- 6 Routes
 - Mars, Venus, Earth, Mercury, Jupiter, Saturn
 - 2007: Mercury, Venus, Earth, Mars
 - 2008: Jupiter
 - 2017: Saturn
- Smaller (30 foot) than local fixed-route buses on major arterials (40-60 feet)
 - Alternative fuels, ADA accessible, bike racks



Orbit Ridership



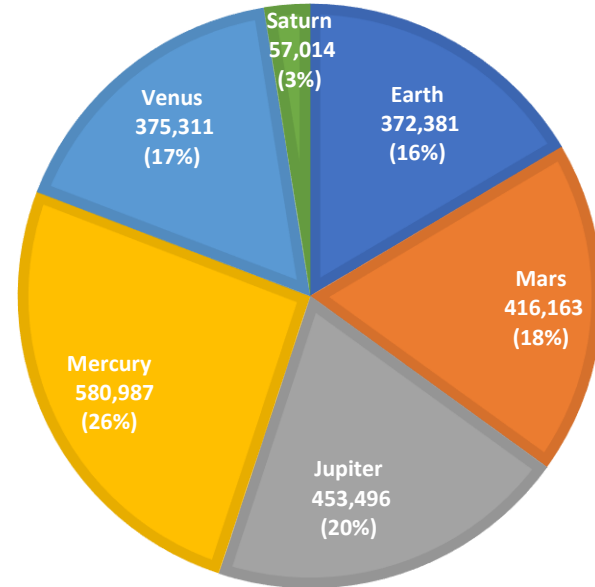
- 2,255,352 annual boardings (FY 2018)

- Mercury: 580,987
- Jupiter: 453,496
- Mars: 416,163
- Venus: 375,311
- Earth: 372,381
- Saturn: 57,014 (~7 months)

- Ridership

- Nationwide & local ridership decline
- Strong economy, Uber/Lyft, fuel prices, car ownership
- Strong boardings per mile, future growth
- All Orbit routes planned through community process

RIDERSHIP BY ROUTE (FY 2018)

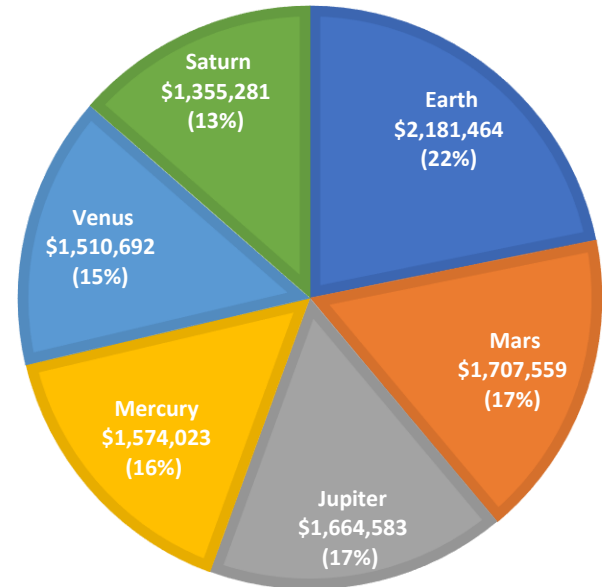


Cost and Budget



- Annual Operating Budget: \$10 million
 - \$9.5 million Locally Funded (Tempe Transit Tax)
 - \$500,000 Federal Operating Assistance
- Capital Expenses (Fleet Replacement)
 - 80 – 85% Federally Funded
 - 15 - 20% Locally/Regionally Funded (Prop 400)
 - Expires 2025
 - ~ \$500,000 / Orbit bus
 - 12 year life cycle

OPERATING COST BY ROUTE (FY 2019)



Orbit Saturn



- Introduced October 23, 2017
- First Orbit route south of US-60
- Service to:
 - 12 bus route connections (local, express, Orbit)
 - 9 schools
 - 4 parks (including Kiwanis Park)
 - Tempe Public Library Complex
- Over 78,000 boardings (as of September, 2018)
- Public Feedback
 - Negative Feedback: On-time performance, speeding, infrastructure (adding bus bays)
 - Positive Feedback: Route, connections, destinations, convenience



Tempe Playlist: Saturn Sessions



- Collaboration with AZ Creative Communities & Tempe Arts
- Integrates transit with arts and culture in South Tempe
- Audio performances submitted by local creatives
 - Musicians, poets, spoken word artists
- Podcast and live performances at route locations
- Promotional partnership
- www.tempe.gov/tempeplaylist



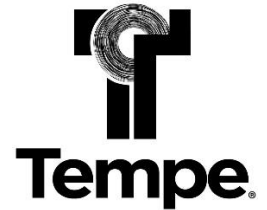
Next Steps



- Monitor Saturn and Other Orbit Circulator Routes
 - Ridership & Community Feedback
 - Integration with regional CAD/AVL system
 - Improved data collection capabilities
- New Orbit Vehicle Testing
 - Consider options to replace aging Orbit vehicles
- Downtown Tempe Transit Study & Streetcar Integration
- Autonomous Vehicle Partnership?
 - Valley Metro & Waymo
- Next Orbit Route?
 - Transportation Master Plan (long term 2040)
 - South Tempe 2



CITY OF TEMPE TRANSPORTATION COMMISSION



STAFF REPORT

AGENDA ITEM 6

DATE

December 11, 2018

SUBJECT

Free Local Area Shuttle (FLASH) Service Update and Proposed Changes

PURPOSE

The purpose of this memo is to provide the Commission with an update and next steps for the FLASH circulator.

PROJECT

The first circulator to operate in Tempe after the passage of the 1996 Tempe Transit Tax, FLASH is an Arizona State University and downtown Tempe shuttle historically connecting parking lots to the campus and downtown Tempe. As Tempe's transit options have grown, and the campus and Tempe have seen high density growth, the FLASH has conversely seen a loss of ridership. Riders have shifted to other routes, other modes of travel. The current route is serving shrinking parking lots and is not connecting to the areas of large growth on campus or downtown Tempe.

As part of the proposed service changes for the first half of 2019 Tempe, Valley Metro and ASU have partnered to conduct survey work with riders and potential riders, propose a new route and hours of service, and are currently going through the public process for community review. Obviously, the goal is to re-energize the FLASH service, increase ridership through a stronger and better linked mobility service, and support decreased traffic congestion in Tempe.

Attached are visuals of the proposed route and service changes, including survey results and public comments. In short, the changes are to have a longer route with improved connections, to decrease the frequency from 10 to 12 minutes (matches light rail) and shorten the span of service to end earlier in the night on Monday through Thursday (ending at 10pm instead of 1am) which is when the lowest ridership was experienced.

It is anticipated that when the Streetcar opens the FLASH route service will need to be reviewed and likely altered in order to complement each other.

FISCAL IMPACT

The FLASH system is entirely funded by ASU and contracted for service through Tempe, who contracts to Valley Metro for service operated by First Transit. Last years' operations cost was just under \$800,000. The new route proposed is longer and will require additional funding.

RECOMMENDATION

For information only.

CONTACTS

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Senior Planner

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ATTACHMENTS

FLASH Fact Sheet

PowerPoint

FLASH Survey Results



Fact Sheet: Proposed Route Changes (for Summer 2019)

Background The Free Local Area Shuttle (FLASH) is operated and funded through a partnership between ASU, the City of Tempe, and Valley Metro, and funded entirely by ASU. An on-board and online survey was conducted during fall 2018 to collect feedback related to the current FLASH service and to understand if the FLASH route could be modified to better serve ASU and Downtown Tempe. The proposed route modification incorporates feedback gathered during the survey.

Goals: The proposed route aims to better connect ASU campus with several locations suggested by survey participants and new construction in downtown Tempe, including the Brickyard/Mill Avenue, Tempe Transportation Center, University Center, Gammage Auditorium, east campus and new residential housing, and the University Services Building.

Proposed Changes: Proposed route modifications are shown on the map below. A reduction in service span (hours of operation) is also being considered. Frequency would change from every 10 minutes to 12 minutes Monday through Thursday and operating hours would be reduced slightly per chart below (green). The route will continue to operate in both directions (clockwise and counter-clockwise).

Tempe FLASH

Current Route



Proposed Route



Existing Service

Service Span

	Monday - Thursday	Friday	ASU Semester Breaks
Flash Forward	7am - 1am	7am - 10pm	7am - 6pm
Flash Back	7am - 10pm	7am - 10pm	7am - 6pm

Service Frequency

	7am - 6pm	6pm and later	ASU Semester Breaks
Flash Forward	Every 10 minutes	Every 15 minutes	Every 15 minutes
Flash Back	Every 10 minutes	Every 15 minutes	Every 15 minutes

Proposed Service

Service Span

	Monday - Thursday	Friday	ASU Semester Breaks
Flash Forward	7am - 10pm	7am - 10pm	7am - 6pm
Flash Back	7am - 10pm	7am - 10pm	7am - 6pm

Service Frequency

	7am - 6pm	6pm and later	ASU Semester Breaks
Flash Forward	Every 12 minutes	Every 15 minutes	Every 15 minutes
Flash Back	Every 12 minutes	Every 15 minutes	Every 15 minutes

Timeline: If approved, changes will become effective during summer, 2019. Additional FLASH routing changes will likely take place in coordination with the opening of Tempe Streetcar in 2021 following additional public outreach.

More information/to comment: www.tempe.gov/flash



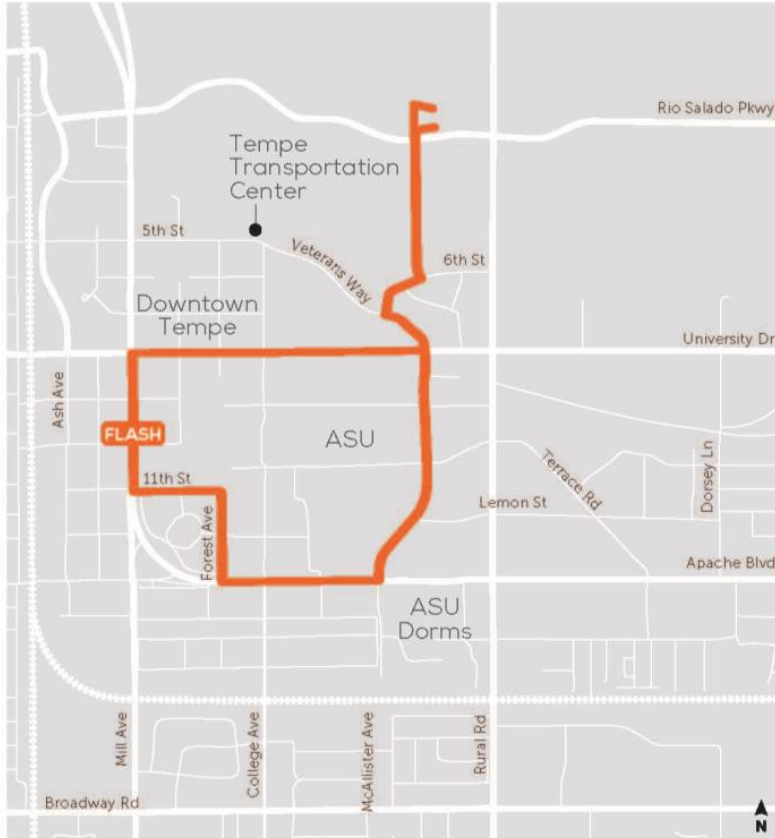
FLASH Update

Transportation Commission
December 11, 2018



Tempe FLASH

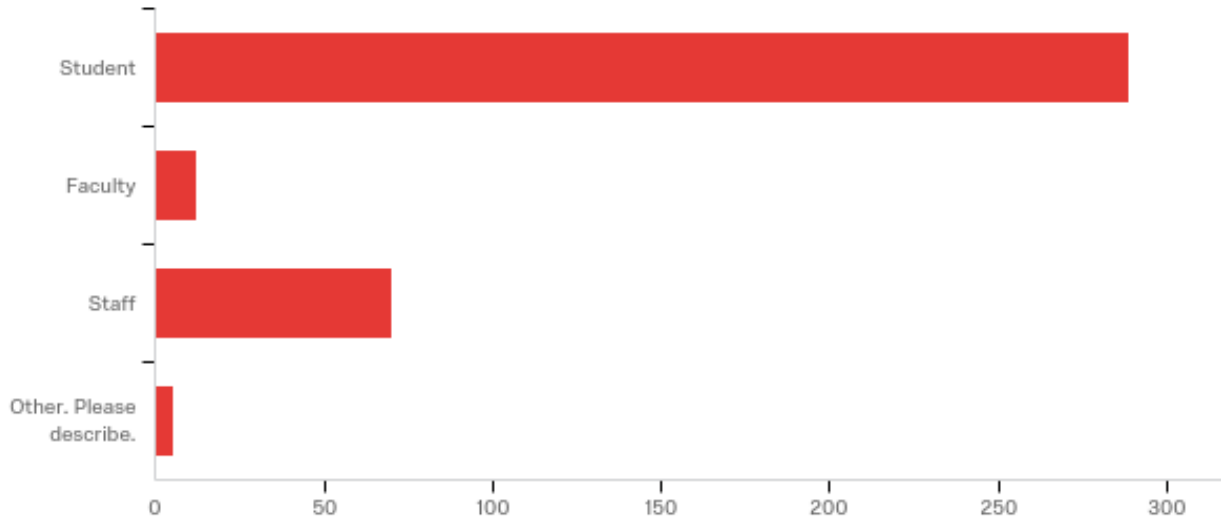
Current Route



Proposed Route

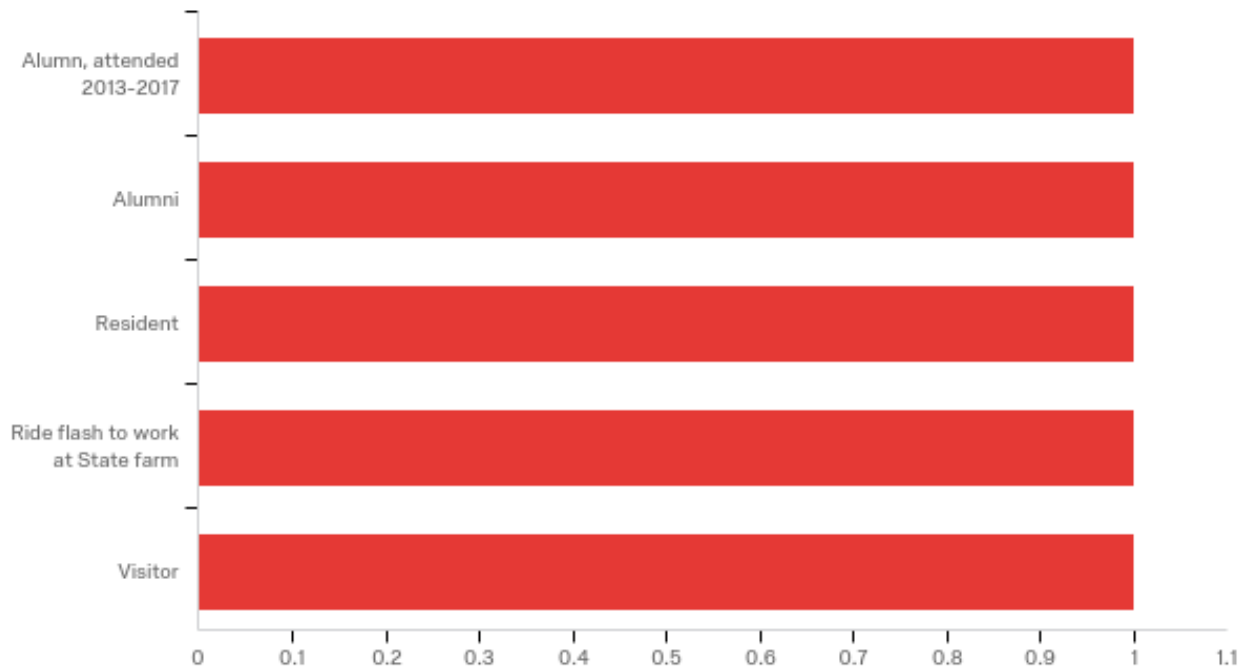


Q2 - Which of the following best describes your affiliation with Arizona State University?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Which of the following best describes your affiliation with Arizona State University? - Selected Choice	1.00	4.00	1.44	0.84	0.70	376

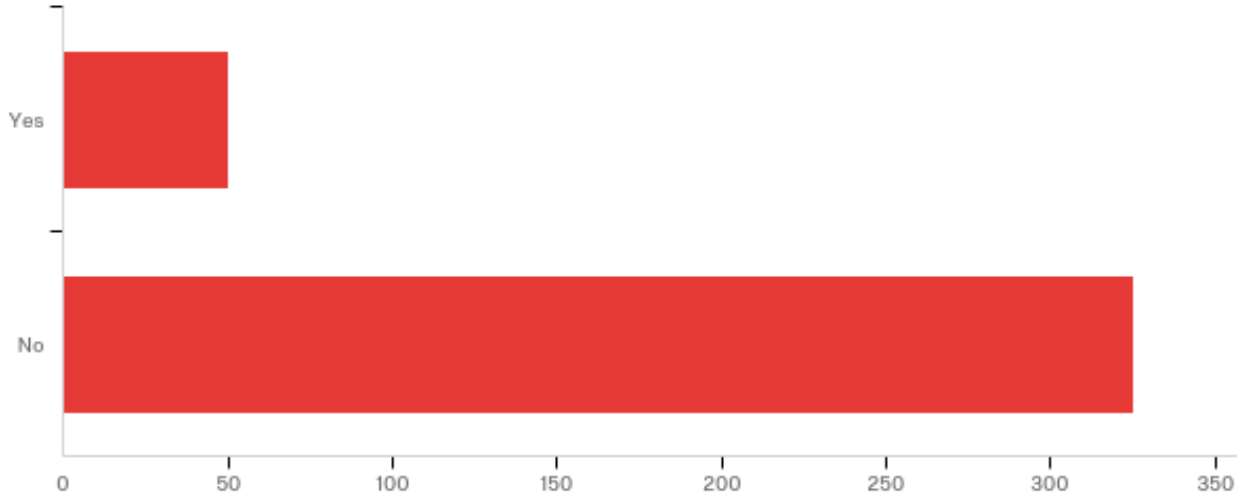
#	Answer	%	Count
1	Student	76.86%	289
2	Faculty	3.19%	12
3	Staff	18.62%	70
4	Other. Please describe.	1.33%	5
	Total	100%	376



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Answer	%	Count
Alumn, attended 2013-2017	20.00%	1
Alumni	20.00%	1
Resident	20.00%	1
Ride flash to work at State farm	20.00%	1
Visitor	20.00%	1
Total	100%	5

Q3 - Do you live on an ASU campus?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you live on an ASU campus?	1.00	2.00	1.87	0.34	0.12	375

#	Answer	%	Count
1	Yes	13.33%	50
2	No	86.67%	325
	Total	100%	375

Q4 - In which residence hall do you live?

In which residence hall do you live?

Hayden

Manzanita

Manzanita

Barrett Residential Complex

Cereus

Tucker

Manzy

Manzy

Manzy

Aldelfi

Pv west

Hassy

Tucker over flow

Of east

Manzy

Manzanita

San Pablo

Manzanita

San pablo

University towers

Hassyampa

Best

GLV

HAV

Cereus

Adelphi

Cereus

Cereus

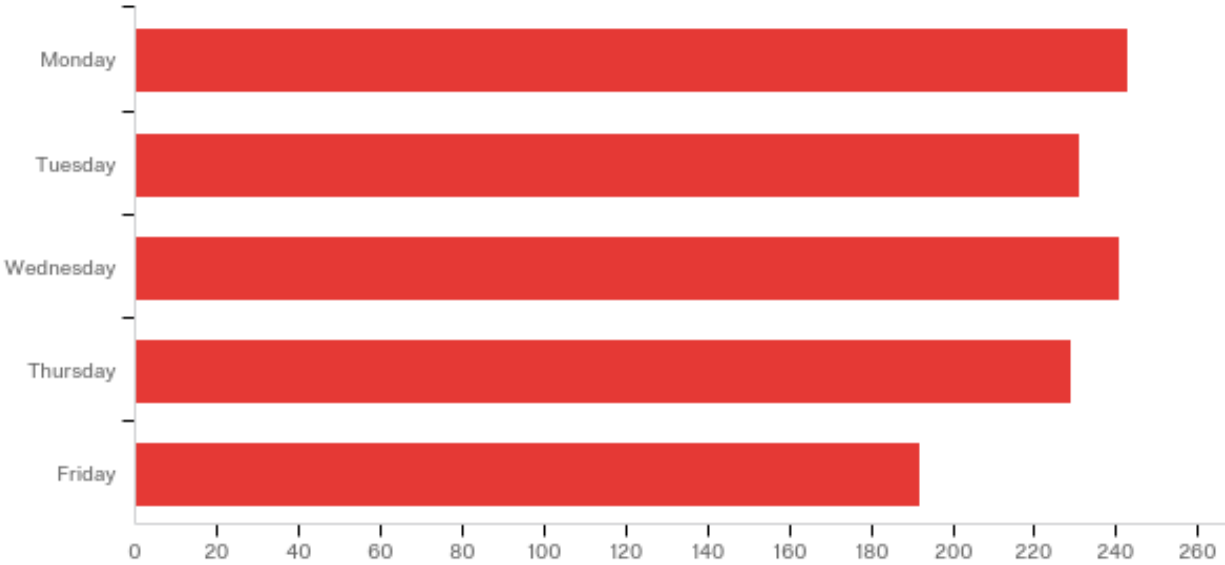
Vista

Aldephi II

Sonora

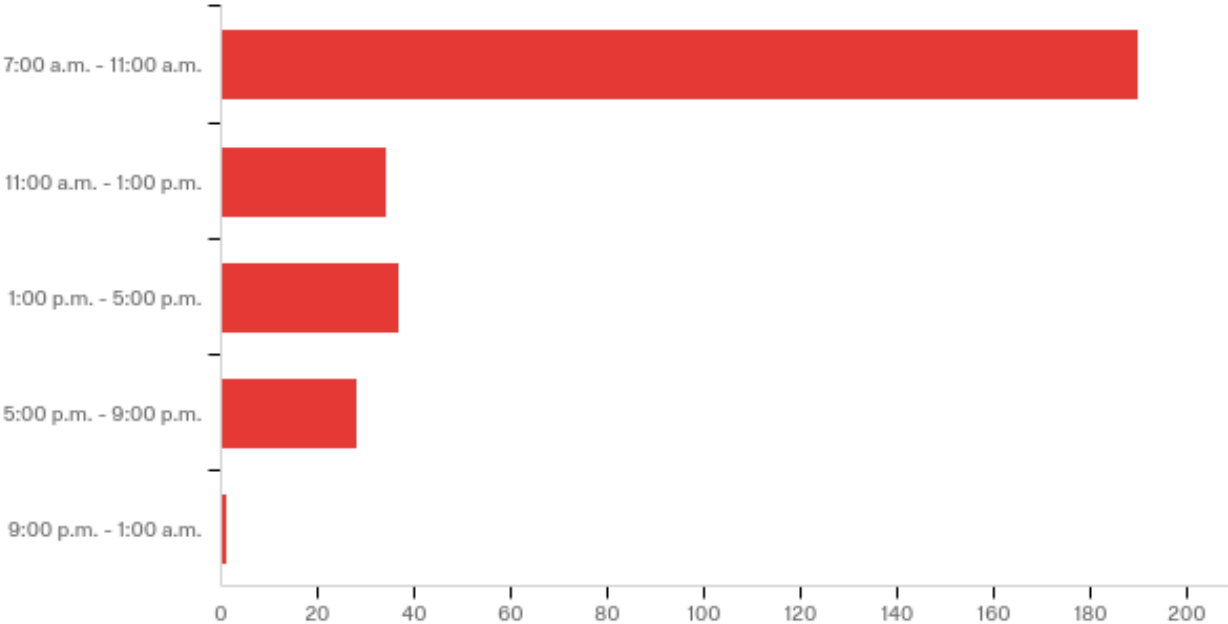
Vista Del Sol

Q5 - Which days of the week do you ride the FLASH shuttle? Please select all that apply.



#	Answer	%	Count
1	Monday	21.39%	243
2	Tuesday	20.33%	231
3	Wednesday	21.21%	241
4	Thursday	20.16%	229
5	Friday	16.90%	192
	Total	100%	1136

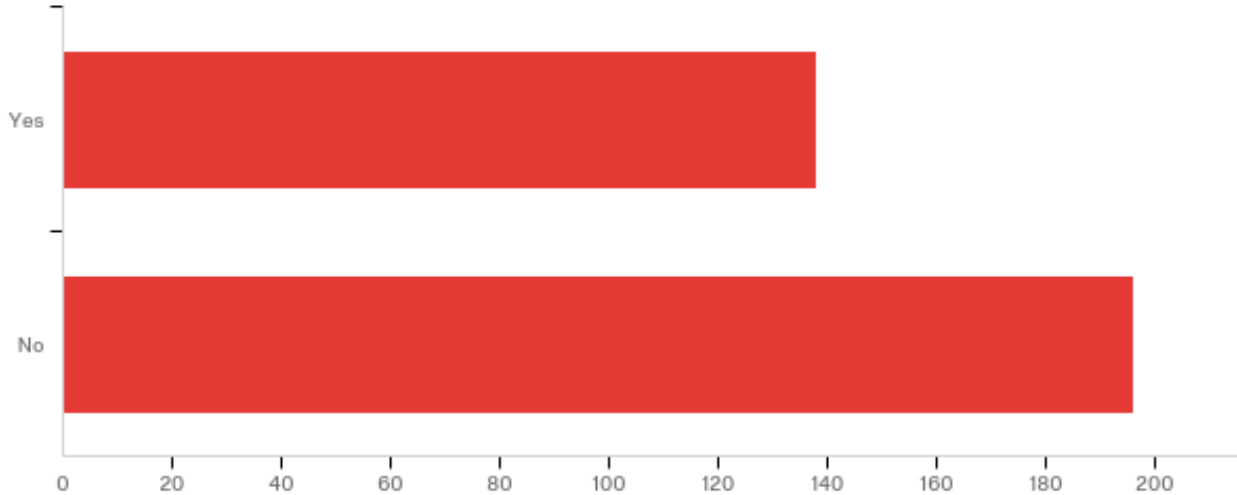
Q6 - At which time of day do you normally ride the FLASH shuttle? Please select all that apply.



Data source misconfigured for this visualization

#	Answer	%	Count
1	7:00 a.m. - 11:00 a.m.	65.52%	190
2	11:00 a.m. - 1:00 p.m.	11.72%	34
3	1:00 p.m. - 5:00 p.m.	12.76%	37
4	5:00 p.m. - 9:00 p.m.	9.66%	28
5	9:00 p.m. - 1:00 a.m.	0.34%	1
	Total	100%	290

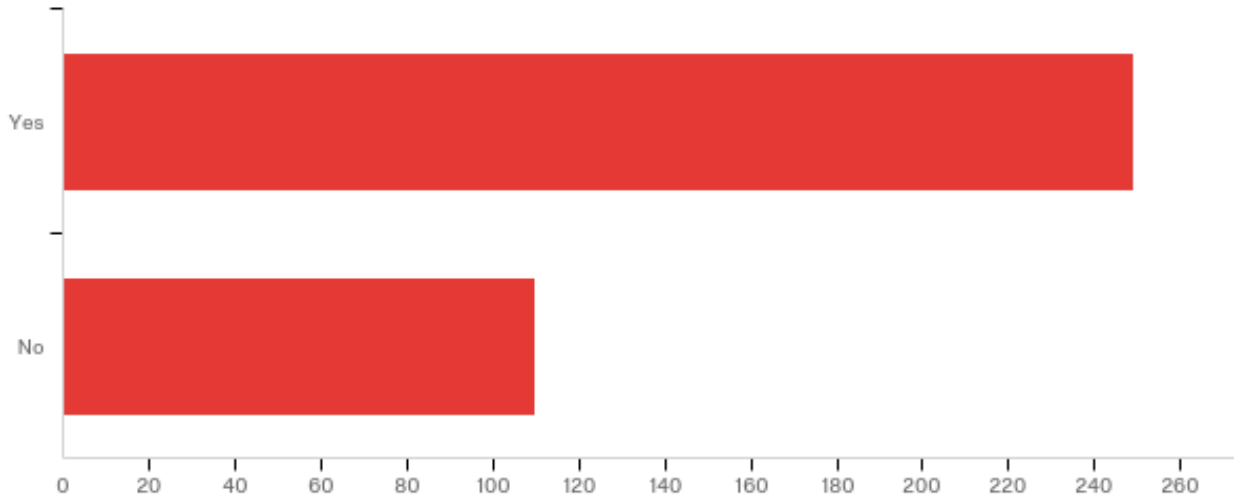
Q7 - If FLASH service is extended to run on weekends, would you use the service?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	If FLASH service is extended to run on weekends, would you use the service?	1.00	2.00	1.59	0.49	0.24	334

#	Answer	%	Count
1	Yes	41.32%	138
2	No	58.68%	196
	Total	100%	334

Q8 - Do you use the Flash shuttle to travel to | from your personal vehicle?

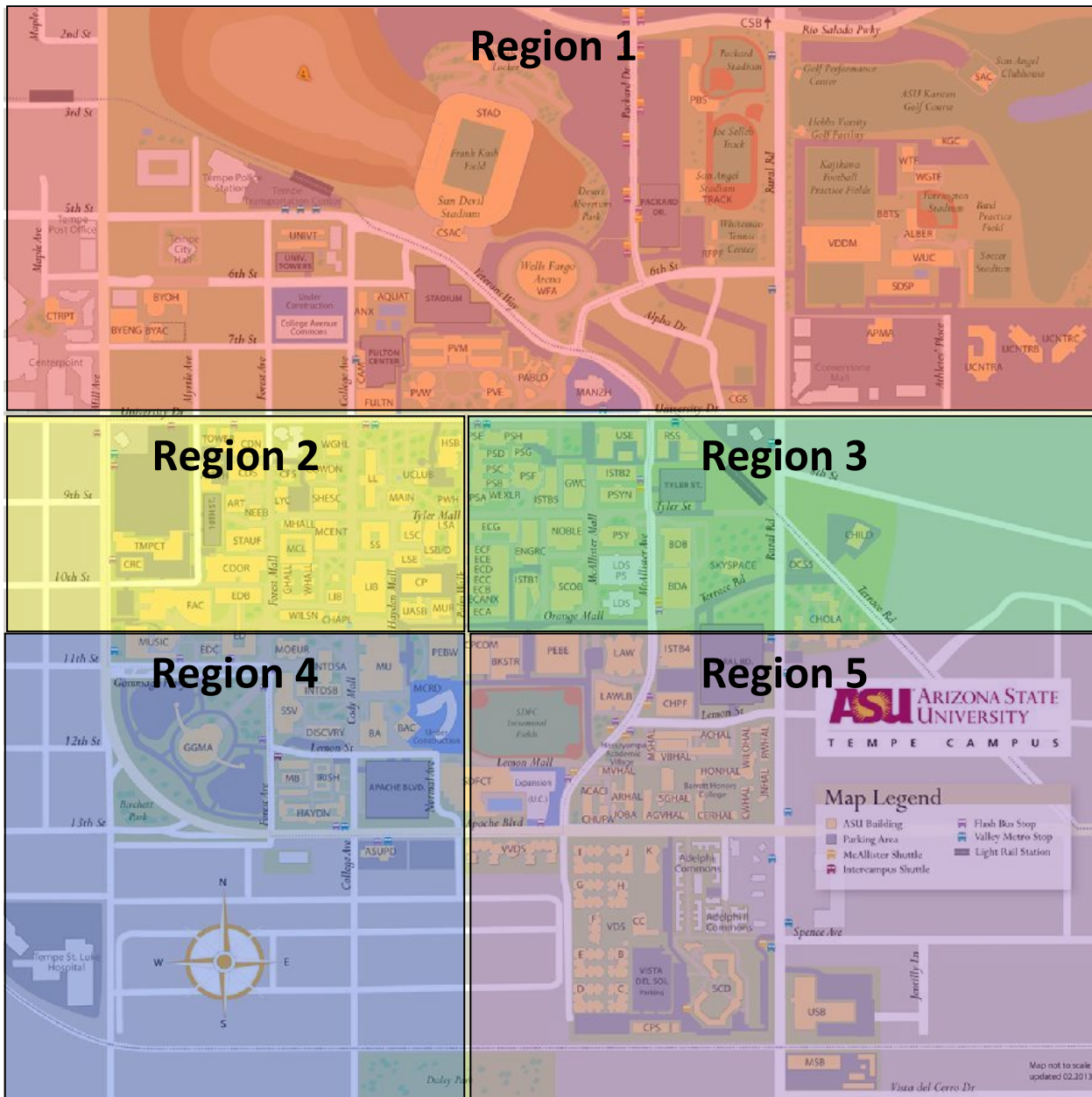


#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you use the Flash shuttle to travel to from your personal vehicle?	1.00	2.00	1.31	0.46	0.21	359

#	Answer	%	Count
1	Yes	69.36%	249
2	No	30.64%	110
	Total	100%	359

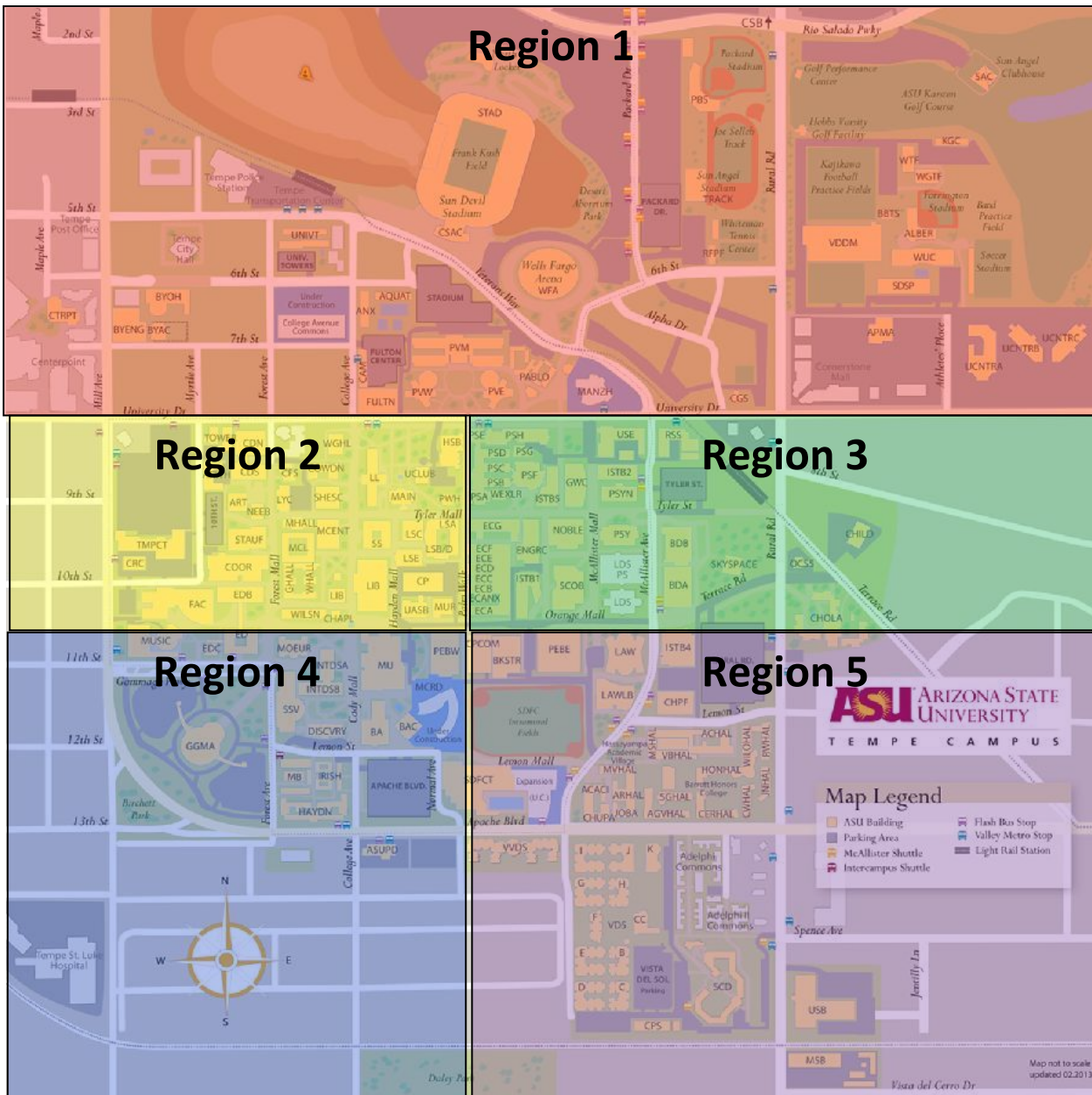
Q9 - In what area of campus do you normally park?

#	Question	Off	On	Total
1	Region #1	19.59%	77	316
2	Region #2	98.98%	389	393
3	Region #3	96.69%	380	393
4	Region #4	98.22%	386	393
5	Region #5	97.96%	385	393

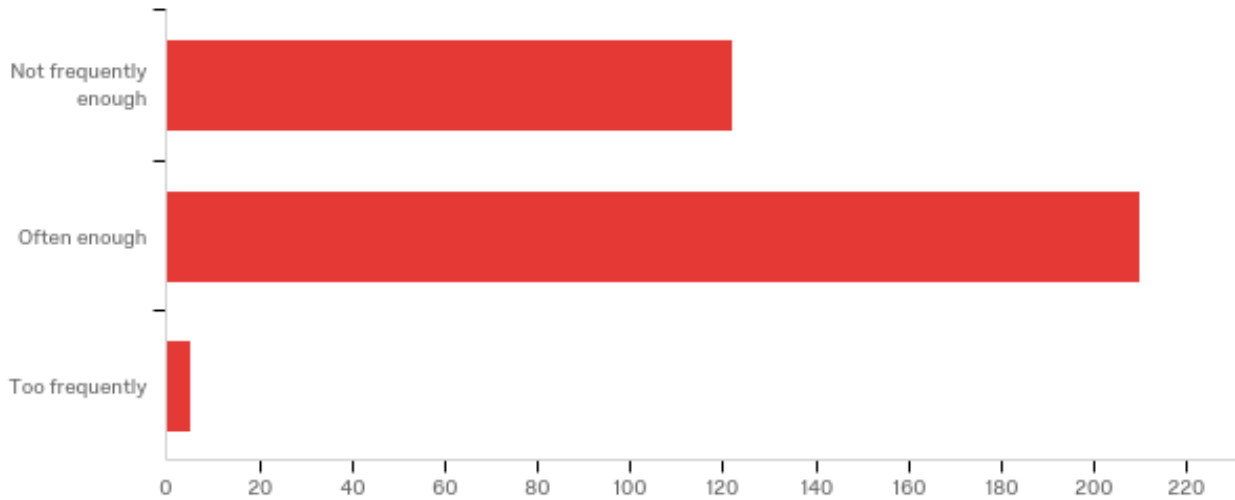


Q10 - In what area of campus do you normally attend class or work?

#	Question	Off	On	Total
1	Region #1	84.22%	331	393
2	Region #2	61.32%	241	393
3	Region #3	67.43%	265	393
4	Region #4	66.67%	262	393
5	Region #5	77.86%	306	393



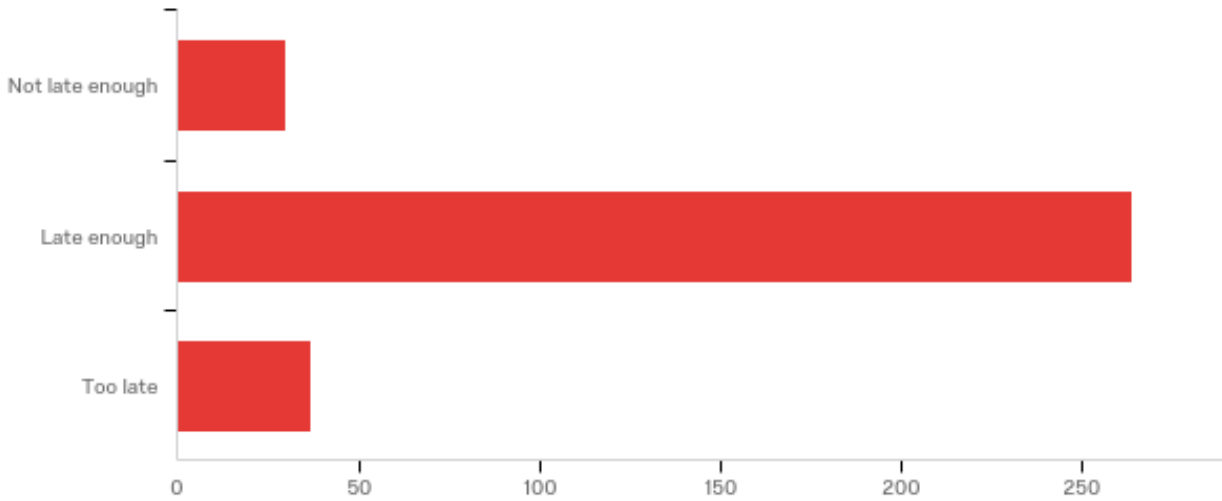
Q11 - FLASH Forward and Back currently operate every ten minutes during the day, and every fifteen minutes during the evening. Would you say that during the day the FLASH comes:



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	FLASH Forward and Back currently operate every ten minutes during the day, and every fifteen minutes during the evening. Would you say that during the day the FLASH comes:	1.00	3.00	1.65	0.51	0.26	337

#	Answer	%	Count
1	Not frequently enough	36.20%	122
2	Often enough	62.31%	210
3	Too frequently	1.48%	5
	Total	100%	337

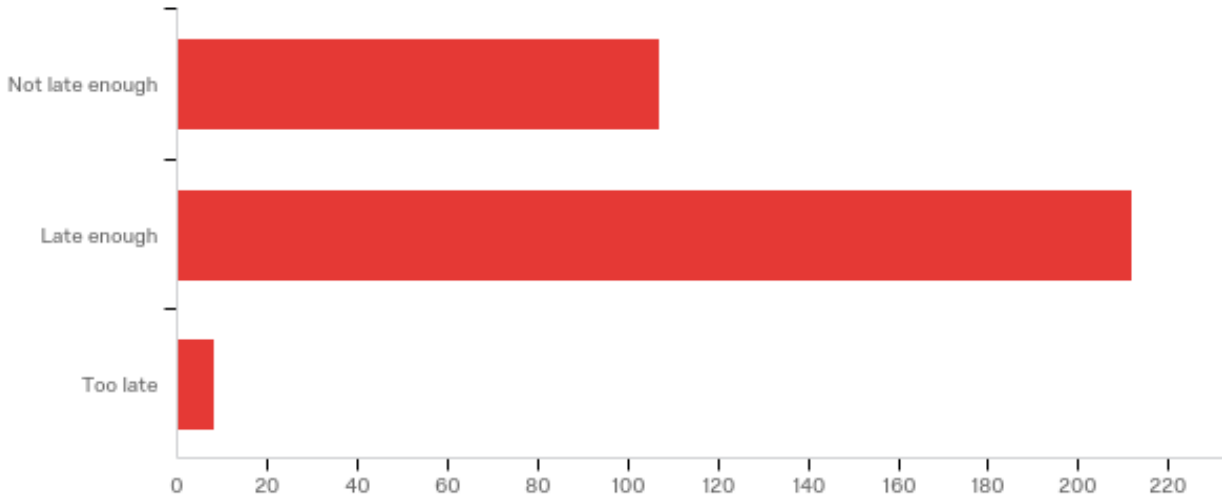
Q12 - FLASH Forward currently operates until 1:00 a.m. Would you say the FLASH Forward runs:



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	FLASH Forward currently operates until 1:00 a.m. Would you say the FLASH Forward runs:	1.00	3.00	2.02	0.45	0.20	331

#	Answer	%	Count
1	Not late enough	9.06%	30
2	Late enough	79.76%	264
3	Too late	11.18%	37
	Total	100%	331

Q13 - FLASH Back currently operates until 10:00 p.m. Would you say the FLASH Back runs:



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	FLASH Back currently operates until 10:00 p.m. Would you say the FLASH Back runs:	1.00	3.00	1.70	0.51	0.26	327

#	Answer	%	Count
1	Not late enough	32.72%	107
2	Late enough	64.83%	212
3	Too late	2.45%	8
	Total	100%	327

Q14 - Are there any locations on or within two miles of the Tempe campus that you think could be better served by the FLASH shuttle? Please describe.

Are there any locations on or within two miles of the Tempe campus that you think could be better served by the FLASH shuttle? Please describe.

Rural

NA

Garage at night

No

Na

Closer to the Sun Devil Athletic Complex

Yes

N/a

No

No

No

Rural, Dorsey lane

Thinks it's pretty cool

Not for myself. I normally stay within campus grounds.

No

Broadway road

Tempe market place

Brickyard, centerpoint

Closer to MU

No

On mill north of university

ASU HR BUILDING

NA

Mill Ave

Tempe Marketplace

No

Yes

No

Na

No

I'm not sure

No

No.

Blick art store

Tempe Marketplace

None

Tempe Marketplace

No

No

NA

A stop on normal Ave for WPC students

Lot 59

Mill Avenue and the shopping center on University and Rural.

Mill ave, because the brickyard building is there

none at this time

No, it's always taken me to the closest road to the building I needed.

No

Sorona

College Avenue Commons or Brickyard

Mill Ave.

Tempemarket place

No

NA

UCNTRA building where there are a lot of events and a lot of staff work.

No

NA

Lot 59 by blicks

No

I would think the mill ave area from Tempe beach park to the Tempe transit center would be good for additional stops for the flash

Brickyard, closest stop with flash back starting at lot 59 takes another 5 minutes to get to after riding the flash.

Less then a quarter mile

University Services Building, on Rural Road

n/a

None.

South Mill Ave

No

The brickyard on Mill

No

Brickyard, building by chompie's

No

No

memorial union

NA

It would be nice to have one from the Brickyard area going to south/main campus, since it's so far away

Tempe Marketplace

University Center

Mill Ave like it used to

No

No

No

Not that I can think of

Tempe market place

Nope just get here on time.

Yes! You could use another stop on Mill between University and Apache for the Flash back. I've had so many buses pass me at the one stop there and a few drivers tell me that they aren't supposed to stop there, but it's the only stop close to where I am. Otherwise I'll end up walking half a mile-a mile just to get on the bus in the first place.

Mill ave and further down apache blvd

No

Campus center, business center

Block art supplies

I'm not sure

No

Lot 59 E

No

Dance building by canes

Inside Campus and Rural Road

Tempe Marketplace

Any of the existing transit stops for every other bus route serving campus. Context: I do not own a car, and I commute to campus by Light Rail or by Orbit depending on the day. Neither of those services has good connections with the FLASH shuttle, yet there are plenty of locations on campus that are still a long walk from any of the light rail stations or Orbit stops. The lack of timed connections means it is functionally impossible to reliably connect to the FLASH, and the circuitous nature of the route means that it is faster to walk for most trips across campus. Either additional FLASH routes or a reroute of the existing circuit to better connect with other transit routes is sorely needed.

E University Dr

To Mclintock and Broadway

Mesa area

I think the flash should go to the Tempe transportation center, that would make it easier for students to connect to other buses and the lightrail.

Child day care center on terrence

A stop closer to Marina Heights. I carpool with my husband from there, and often the bus passes me while I'm trying to walk to the bus stop.

Rural and University Station

The big Walmart down Rural Rd.

Brickyard buildings!

State farm

Brickyard Building

Tempe transit center

No

University services building

Tempe marketplace

Vista Del Sol, Adelphi, Sonora, Light rail stations, Tempe market place,

Mill & 7th

The child center off Terrance rd area

Q15 - Is there any additional information or feedback you would like for us to know related to the FLASH service?

Is there any additional information or feedback you would like for us to know related to the FLASH service?

I don't know how this works. A guide or a flyer would be helpful

It would be great if there was some way to know or be warned if a flash was canceled. Sometimes when calling the next ride number doesn't work because it'll say the flash is scheduled but the bus never comes.

More bike racks on the bus

On breaks still need to run so I'm not waiting and it's not there.

Make more known service

Advertise more of service didn't know we had it and where it goes

Not aware of service and where it goes

Not sure of service make more known

Be more clear more clear when rout ends

Not to aware of service

Advertise more. And show accuracy times takes to long between buses

Often times, the flash does not stop even while I am waiting at the bus stop. The schedule is also not followed approximately some days.

It has been really great for me to not have to walk to istb4 from lot 59

What happened to the announced new bus stop shelters?

Didnt know to much about services and wher it went around campus

Schedules not clear so walks

Comes in the early morning and didn't know flash comes that early

Needs to be more consistent. And during breaks show accurate times of arrival

Not to fimilar with servic so doesn't take it

Bus is irregular never on time come more like every 20 mins

Do ant take flash because doesn't bing him closer to MU where it stops

The bus stops need shade and seating. It was removed and not brought back.

I use my skateboard generally to travel from my car to the class.

Extend till 12am or 24*7

Job is close to parking lot don't need to use it

I drive to campus and am not aware of FLASH

Doesn't ride flash because prefer to walk

I don't take it because I prefer to exercise. Otherwise service is great.

Knowledge of routes is not really communicated to potential travelers

Please add weekends

Mornings are very nice but it is difficult to catch a bus in the afternoon. Sometimes I wait 30-45 minutes for a bus. At that point I could have walked the mile to my car :(

It's very useful and adds to my life satisfaction.

Better maintenance

Try and coordinate better with class period times

Extend run time to weekends

Please clean more

There are 2 drivers who display really nasty attitudes. One is an African American woman with blonde hair, who drives before everyone is seated and has closed the door on me before as I was entering. The other is an older gentleman, perhaps Italian, with a large nose. He skips stops, refuses to open either door for no reason, and also drives before everyone is seated. I feel unsafe with them in operation of the flash vehicles that transport students all day every day.

Extending the Flash later on Friday nights would be very helpful. Also, it would be tough for a lot of people to reduce bus service - many of my colleagues use the Flash as well.

They are hardly ever on time. Almost always leave early and I miss it

I really like the Flash! It makes my commute much easier to manage!

Changing the flash busses to 20 minutes would be very inconvenient, I think 10 minutes within each ride it a good amount of time.

Changing to 20 mins would be a bad idea because at 10 mins the buses aren't always punctual.

The FLASH says it's comes every 10 minutes, but I've waited up to 30 minutes for it before.

Due to traffic (rush hour in morning and late afternoon on University Drive), the Flash around campus can take up to 30 minutes of a wait at some stops (usually Flash Back). With the hot weather, no covering, and long wait times, this can be almost unbearable. Lengthening the time from 10 to 20 minutes means the wait times can go even longer than 30 minutes.

Bus stop shelters are needed. Better drivers are needed. I witness a driver refuse service to a staff member last week for no reason. Some drivers are too aggressive in their driving. Most are driver are very nice.

If the Flash is detoured due to construction, etc., an email should be sent to all those parking in Lot 59. I once waited on University for an hour and finally found out that it was detoured north on Mill.

Shade at the bus stops

covered stops would be nice. seating is unnecessary but often standing in direct sun for prolonged periods

The covered areas to wait under need to be re-installed. It is too hot in Phoenix to wait in the sun for 10-20 minutes.

Its perfect. Leave it running every 10 minutes please so im not late to class.

Cleanliness is important!

Please do not increase the wait time between Flash services, as 10 minutes is adequate given the number of students and staff on campus at all times. I, along with my office, depend on the Flash getting around campus - especially during the warmer months - and it is already difficult enough trying to find room to sit or stand during busy class times.

Staff, students, and faculty all need the FLASH to run every 10 minutes. 20 minutes is a long time to wait, especially for those of us who have after work/school obligations and need to get to our vehicles quickly.

Please do not decrease the frequency of Flash shuttles. I believe a shuttle every ten minutes is not frequent enough; many times I have to wait longer than ten minutes to catch a shuttle. There is not much shade at the bus stops and the heat is intense, particularly for staff who have to dress professionally (slacks and long sleeves). Most affordable parking options for staff are across campus, which means timely pick ups/drop offs are extremely important. If shuttles only ran every 20 min (and many times they are not on time), it might make more sense to walk across campus despite the heat because punctuality for work and meetings is necessary to remain employed. PLEASE do not reduce the amount of shuttles that run on campus and do not increase the wait times.

I believe it would be better for the flash bus to come every 10 minutes from morning until 8 pm. Some students such as myself have classes late until the evening and rather go home as soon as possible instead of waiting extra time for the flash to come.

Great job at keeping clean

Perhaps wiping off the scalp oils on the windows before/after each day.

I would not like a 20 min wait time between buses. I think there are a compelling number of people who park in lot 59 and that is far for most of campuses. I also think about people who need access to transportation for health or mobility reasons.

Love this service, glad it's every 10 minutes

Please remind the drivers to stop at every stop where there are riders that want to get on, especially during the time when there's High temperatures.

When parking out at the lot beyond Rio Salado, there is zero shade at the stop. The buses wait out in the far parking area, but it would be better if they stopped at the actual Flash Stop and let passengers on so that they could wait in the air conditioned bus - or at least when they see that there are passengers waiting in the heat at the stop. It's not that far away, but would make a big difference to passengers who are waiting for the Flash that is just sitting in the parking lot.

During the evening hours, the buses sometimes take at least 30 minutes to complete around, which can make some people late. There should be like some mobile app where we can track buses.

More frequently during 8-10 am and 4-6 pm, more seating/shade structures, better tracking system- the text message is never accurate, crosswalk needed at last Lot 59 FlashBack stop

You should have an APP that people can download so they can see where the flash buses are...kind of like UBER. Also, the Flash Back stop at the corner of Orange/McAllister by ISTB4, it needs an area that is shaded by the sun. It is very hot standing there anytime after 3:00 pm. Please put in some shade feature at the stop. Please. I take the bus everymornig and afternoon from ISTB4 to Lot 59 and I don't think the bus runs every 10 mins. It is more like 15 to 20 mins.

I love the service and am so thankful to not have to walk all the way to lot 59!

I wish there was a flash service that ran up and down Rio from Riverview to Tempe Transit Center for shopping.

With the service times now (bus every 10-15 mins), I have waited more that 25 mins, most days, for a bus to come around. Often times it depends on traffic, number of buses in service. Still, it is a very long wait time if buses run every 10mins.

Shaded areas to wait. More buses because they are never consistent or on time.

It's perfect how it is

I think a better tracking system for where the busses are would be useful. The tracking system doesn't accurately track them and they are often missed or you wait for an excessive amount of time. Also, I think more busses and less time in between busses would be helpful, especially in the heat of the summer.

Covered areas/benches needed at Flash stops, more frequent stops 8-10am, (more buses)

Come every 5 minutes

Shaded bus stop locations would be nice

Just the fact that it should run more often- I ride every morning around 9am and every afternoon around 3:15pm and the shuttle is frequently too full to have seating.

Please don't make the flash service run at 20 min intervals. 10 mins is perfect to get me to work and class on time.

Flash is great! And saves me a lot of time when I am coming in to work or going to classes

I come from the west side, it takes me an hour to get to campus and I usually have to wait for than 10-15 for the bus and get late to class. Y'all drivers do not come around on time!!!!!!

Allow us to check arrival times of the flash buses like we can with other transit

1. GPS app for know where bus is . 2. Drivers not stop for riders , buses late or early and not due to traffic but lateness or trying finish earlier.

Yesterday, a bus driver started driving before I was seated. This resulted in me slamming my knee into a metal bar, and bruising my kneecap. I did not appreciate this.

I really enjoy that this is a free service, as I have to park very far from where I take classes and this helps me get there much faster and with ease.

An essential service due to weather

I use FLASH for commuting to other areas of campus for meetings and events during the work day (side note, I use the light rail for commuting to work). I have found that the FLASH system is largely unreliable, often late and sometimes with a skipped scheduled time altogether. The texting system has great intentions, but is rendered useless if the buses don't stay on schedule or have a way to update the text system of their ETA.

Please add the flash to Tempe transportation center.

Ensure the flash back and forward alternate. I have seen 3 of one bus pass by while waiting for the other.

Never on time during rush hour

I'm glad this service is offered, it's very convenient.

I think that in general, most students and staff are not aware that the flash shuttles are free or do not know how they work. The campus community could be better served with more visibility and outreach.

More consistent service timing is needed. You can't count on 10 minute service.

Be more on time since the schedule is very unreliable. Either too early or too late

Very inconsistent times, can take 30 minutes between busses

Can the bus be required to stop at every stop, regardless of patrons?

Since the semester began, we've been waiting upwards of an hour to catch the shuttle busses back to the parking lot in the afternoon!

The 3:50 flash back bus I was waiting for didn't stop to pick up any of us

It's a great program thank you

The shuttles for the ASU college that take students between each major location have a website so that you can see where they are relative to you which helps to determine whether you should wait or try and use an alternative method to leave sooner (walking, etc.). I wish the buses (Flash Forward and Back) had something similar because sometimes I wish I could see how far out the buses are from my stop which then makes me decide whether to skip the buss or wait in the sun (which is not fun).

GET SHADE FOR STOPS. WHY WERE THE SHELTERS REMOVED

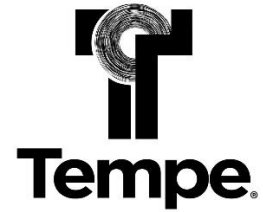
Sometimes the bus runs late

Some of the stops for both flash forward and back could use more shade. The flash back stop at McCallister Av & Terrace Dr has no shade at all.

Reinstate the McAllister Flash route!

General comment: Covered bus stops at ALL stops would be nice. 10-30 minutes of baking in the Arizona sun is not very pleasant. Currently only very few of the bus stops have sun protection. Specific comment: The Flash Back stop on McAllister northeast of the Psy building (directly south of University) is just a patch of dirt with a Flash sign. You have to walk through the bushes or utilize the parking garage entry way in order to access the area where the bus stops. I think this bus stop deserves some TLC. Note, my complaint does not mean that I am suggesting you chop down the trees and shrubs. I am not! The trees and shrubs should remain because they are providing shade and a cool breeze. However, you might want to consider redesigning this bus stop so that it incorporates existing natural infrastructure while also a) becoming more visible and accessible from the existing sidewalk (connect the existing sidewalk to the bus stop waiting area (maybe providing a sidewalk that branches off the main sidewalk and letting it meander around the trees and bushes to the waiting area?), b) providing a bench and cover for waiting passengers, and c) flattening (not paving over) the waiting area so that you're not standing on a slope while waiting for the bus. There is no need to cement over the area, just flatten the earth.

CITY OF TEMPE TRANSPORTATION COMMISSION



STAFF REPORT

AGENDA ITEM 7

DATE

December 11, 2018

SUBJECT

Alameda Drive Bicycle/Pedestrian Streetscape (Alameda Drive Project)

PURPOSE

The purpose of this memo is to provide the Commission with an update on the Alameda Drive Project. Included in this memo is background information and a report on the current status of the project, including planned public meetings.

BACKGROUND

The Alameda Drive Project is identified in the Tempe Transportation Master Plan as the Wheel Bikelt route. The goal of the Alameda Drive Project is to provide an enhanced east/west bicycle and pedestrian connection in Tempe between Rural Road and 48th Street, connecting to existing bike lanes at the Phoenix border. The project began in 2015 with concept studies re-characterizing three miles of a wide collector street with no bicycle or pedestrian amenities other than signage and inconsistent sidewalks. A public process led by the City and a design consultant developed a design recommendation for the corridor.

As part of the 2015 process, a public meeting was held May 6, 2015 with public comment available from May 6 to June 14, 2015. A second public meeting was held September 16, 2015 with public comment available from September 16 through October 7, 2015. The final design was used to seek federal funding to develop engineering drawings and construct the project.

The existing corridor has some of the highest east/west bicycle ridership counts in Tempe, according to annual bicycle counts conducted by Tempe Bicycle Action Group. The project connects to 10 transit routes, including some of the busiest bus routes (72) and Tempe's Orbit system. This collector street also provides access to two schools, established neighborhoods, and major industrial/employment areas like Fountainhead.

The project will integrate with the ADOT I-10 Bike/Pedestrian Bridge, which will include switchback paths that connect to Alameda Drive on both sides of the I-10, providing access to Tempe Diablo Stadium. East of Rural Road, the Wheel Bikelt route will eventually link to the City of Mesa including a future bicycle/pedestrian bridge over the 101 freeway. The two bicycle/pedestrian bridges over I-10 and

the 101 freeway will be coordinated with ADOT as a separate project in the future. The Wheel Bikelt route east of Rural Road will be funded as a separate project.

CURRENT STATUS

The current Alameda Drive Project, the formal design process, was initiated in summer 2018. Daniel Hartig with Ayres Associates has completed the pre-design phase of data collection, survey and mapping, field review and utility coordination. The City is currently assessing easements on a property to the west of the Union Pacific Railroad tracks to provide a seamless bicycle and pedestrian connection. Because Alameda Drive crosses the railroad west of Mill Avenue, we are coordinating this project with the North/South Rail Spur Multi-use Path Project (www.tempe.gov/northsouthrailroadpath), a 7-mile, non-motorized path from Knox Road on the south to a planned pathway north of University Drive. Construction of the North/South Rail Spur Multi-use Path is expected to begin Winter 2019.

As part of this current project, two public meetings are scheduled with stakeholders:

- For residents and public:
 - December 12, 6:00-7:30 p.m.
Broadmor Elementary School, 311 E. Aepli
- For businesses:
 - December 17, 11:00-12:30 p.m.
Sundt Construction, 2620 S. 55th Street

Public Comment will be taken from December 12 through January 2, 2019 at www.tempe.gov/alamedadrive.

Staff will return to the Commission in March 2019 for review of the 60% construction plans and will hold two additional public meetings in spring 2019. Construction is scheduled to begin in early 2020.

FISCAL IMPACT

This project will eventually transform Alameda Drive from a wide corridor to a walkable, bikeable street with new landscaping, sidewalk improvements, lighting, enhanced street crossings, traffic calming, and enhanced bike lanes like other Tempe street projects. A Maricopa Association of Governments Design Assistance grant of \$75,000 was secured for the 2015 conceptual design project.

This current project includes finalization of engineering design and construction. This effort is funded by a federal Congestion Mitigation and Air Quality Improvement grant with a required local match contribution from the Tempe Transit Tax funds:

\$ 110,000	Tempe Transit Tax funds
\$1,500,000	Congestion Mitigation and Air Quality Improvement Grant
Total: \$1,610,000	

RECOMMENDATION

This item is for information and input and possible recommendation.

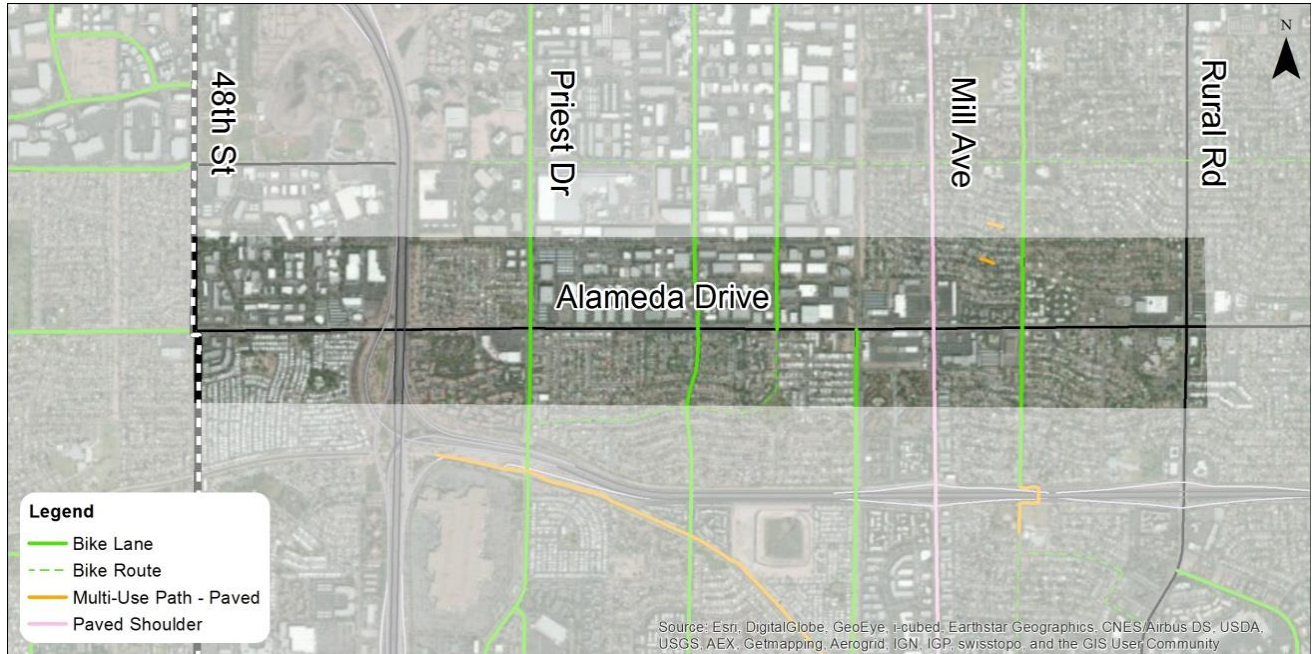
CONTACT

Bonnie Richardson
Architect/Urban Planner
480-350-8628

bonnie_richardson@tempe.gov

ATTACHMENTS

1. PowerPoint Presentation



Alameda Drive Bicycle & Pedestrian Streetscape Update

Transportation Commission

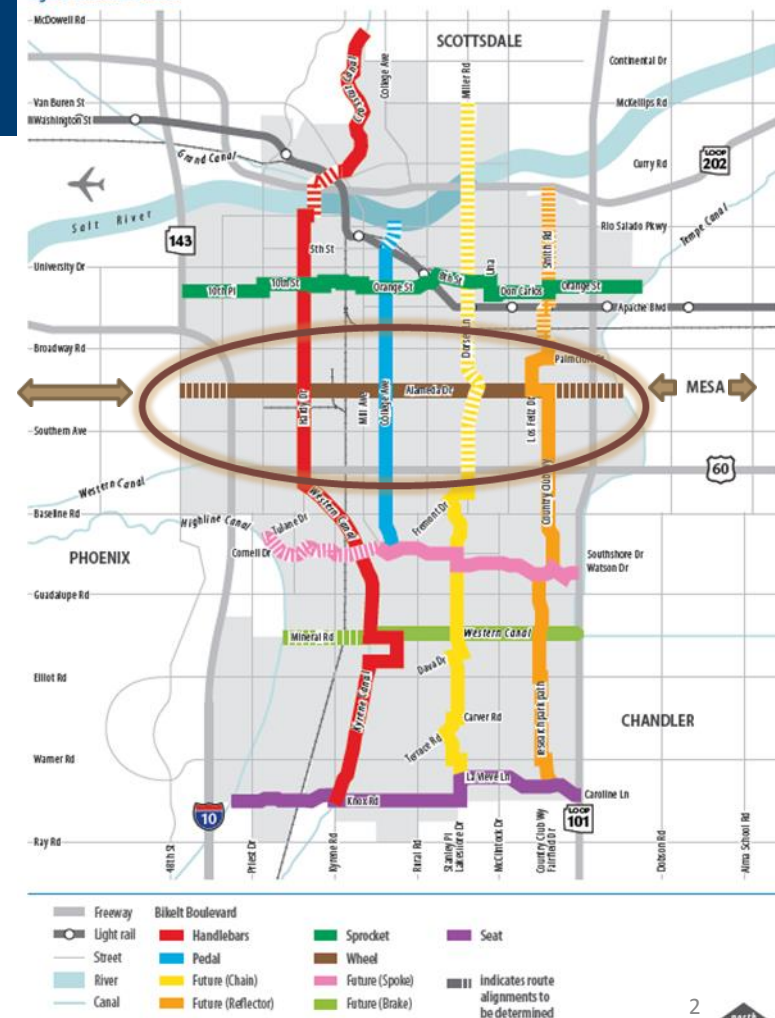
December 11, 2018



Background

- Alameda Drive Bicycle & Pedestrian Streetscape corridor is part of the Bikelt Boulevard network in the Transportation Master Plan
- Funding for conceptual design in 2015 was obtained from the Maricopa Association of Governments (MAG)
- Prior project scope:
 - Collect and analyze transportation data
 - Solicit public input on potential improvements
 - Develop pedestrian/bicycle concepts
 - Create a 'Preferred Alternative'
 - Use Preferred Alternative to pursue federal construction funding

Figure 45: BIKEIT Routes



Background: Analysis of Conditions

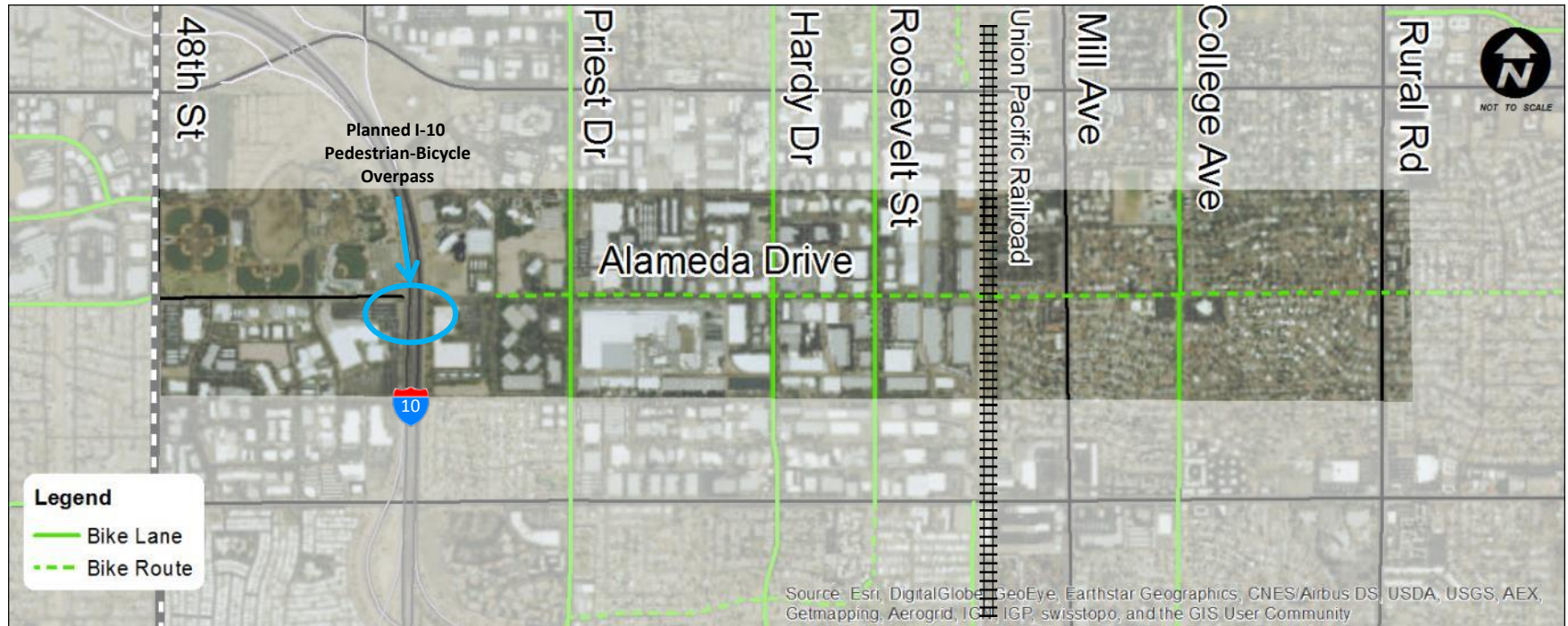


Alameda Drive traffic characteristics are ideal for pedestrian/bicycle movements:

Low vehicle traffic volumes

Regional pedestrian/bicycle connectivity

Non-continuous vehicular route



Background: Public Input



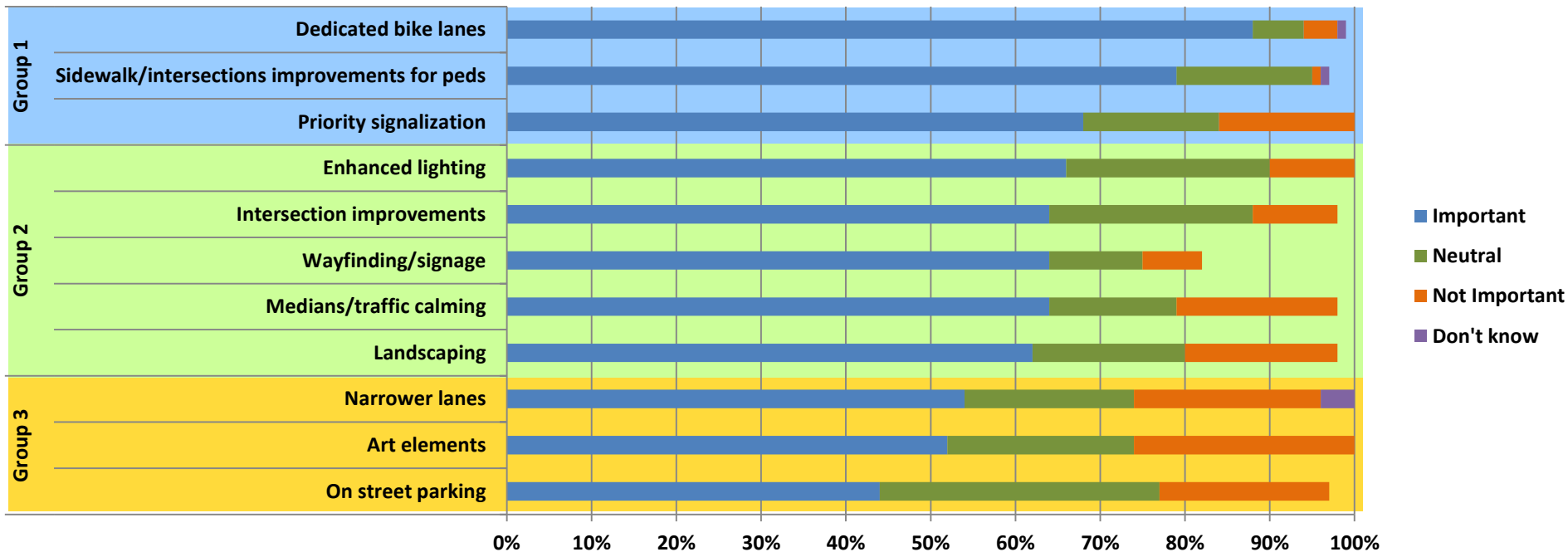
- **Public Meeting: May 6, 2015**
 - 45 people attended the meeting
 - Comment period: May 6 – June 14, 2015
 - 56 responses were submitted by the public
- **Public Meeting: Sept. 16, 2015**
 - 28 people attended the meeting
 - Comment period: Sept. 16 – Sept. 30, 2015
 - 25 responses were submitted by the public



Background: Public Input, cont.



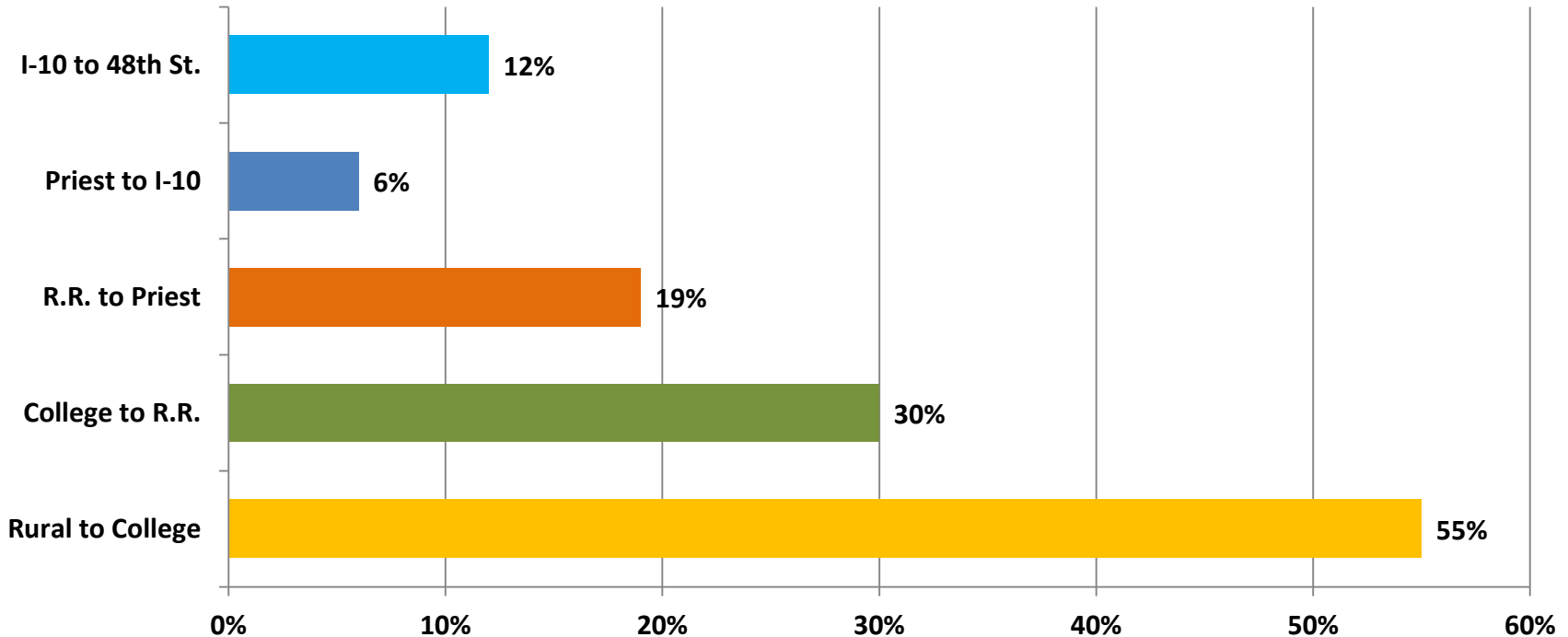
Public opinion on potential improvement elements



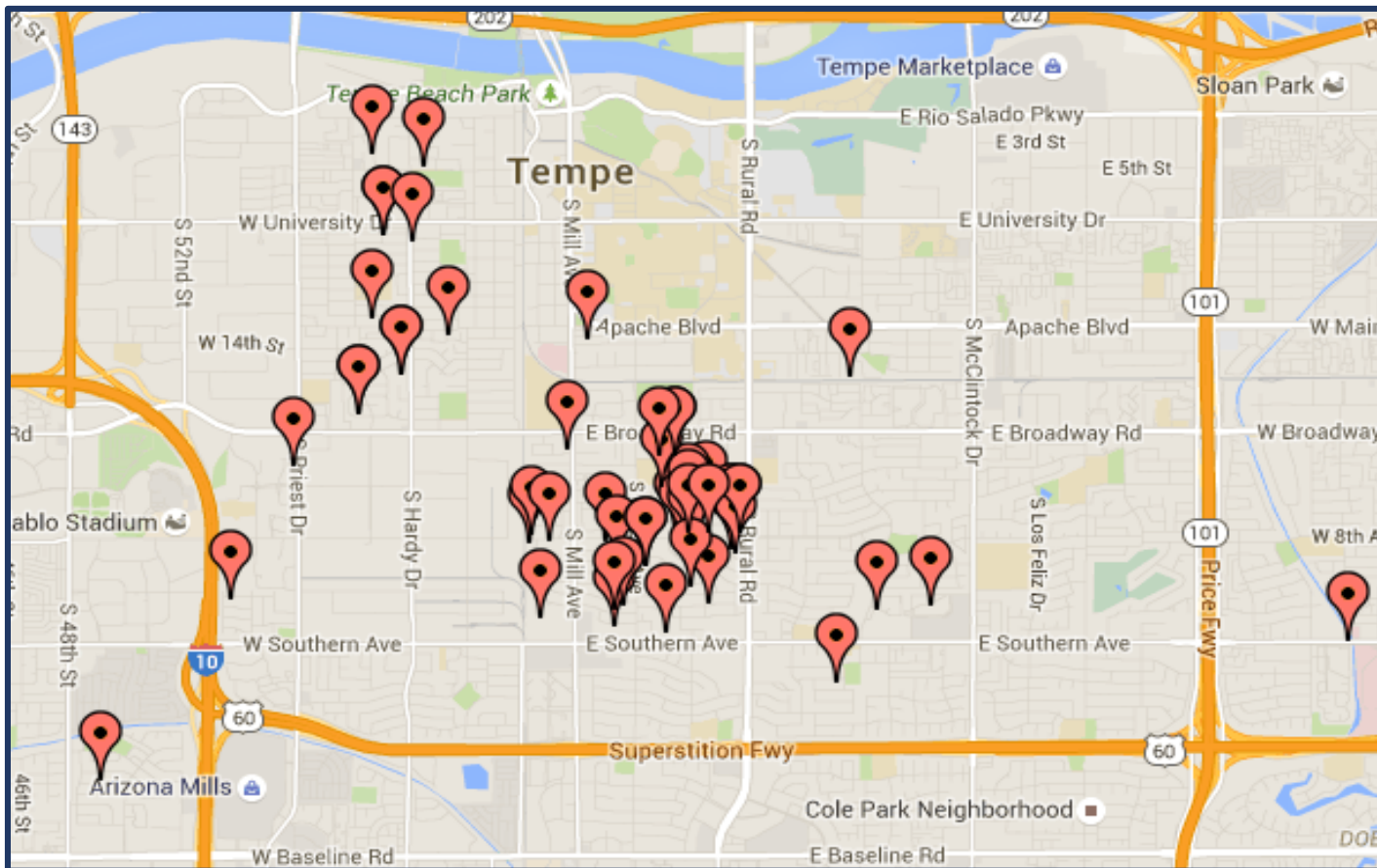
Background: Public Input, cont.



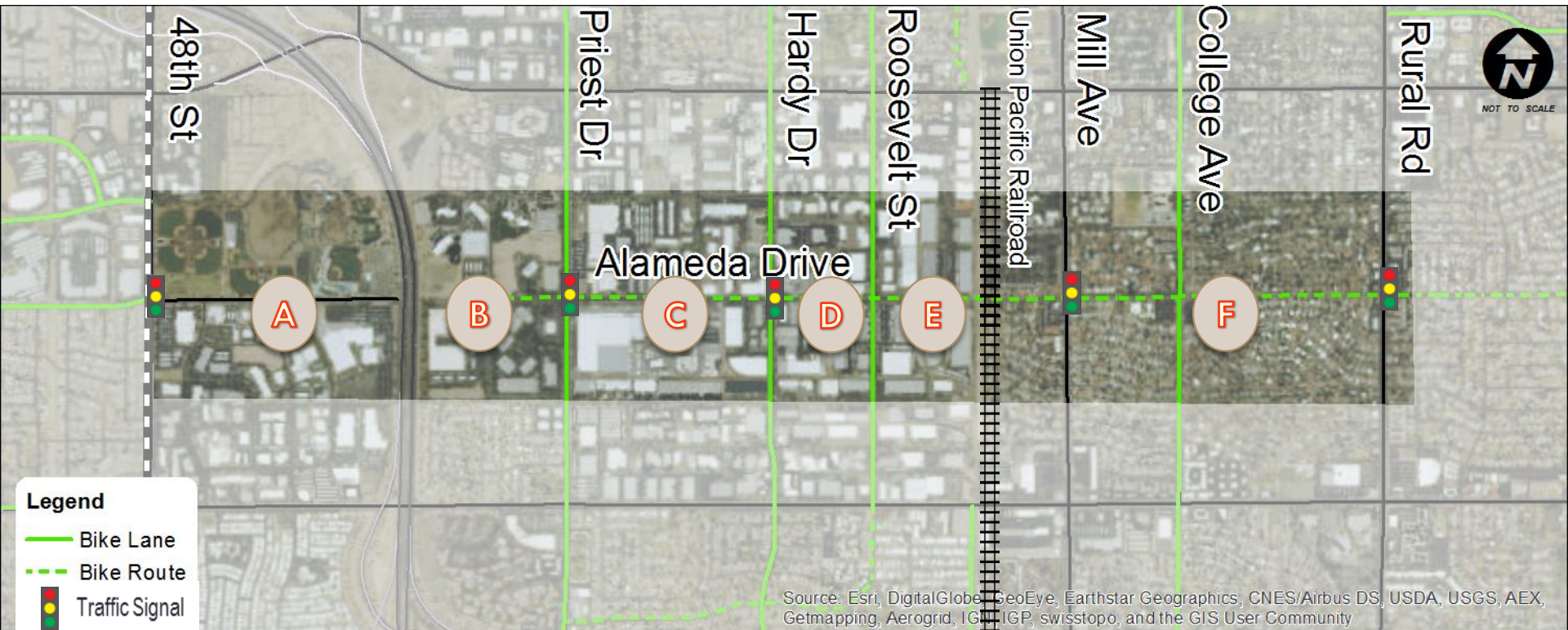
Public opinion on improvement segments priority



Background: Public Input by Location



Concept Development Process **Bold**





Preferred Cross Section A: Tempe Diablo

- 48th Street to I-10 Overpass
 - 48' – Curb to Curb Paved Width
 - 66' – Right-of-Way Width
- Concept highlights
 - Adds buffered bike lanes
 - Improves sidewalk ramps & driveway aprons to meet ADA standards
 - Adds on-street parking for special events & traffic management

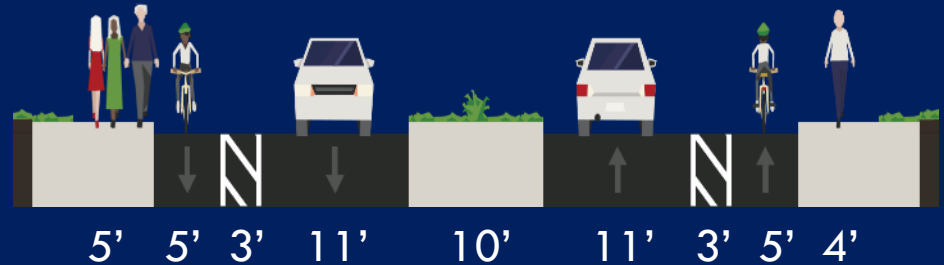


Preferred Cross Section B: Fountainhead



10

- I-10 Overpass to Priest Drive
 - ▣ 48' – Curb to Curb
 - ▣ 66' – Total Right-of-Way
- Concept highlights
 - ▣ Adds buffered bike lanes
 - ▣ Adds landscaped median islands
 - ▣ Maintains left turn movements
 - ▣ Improves sidewalk ramps & driveway aprons to meet ADA standards

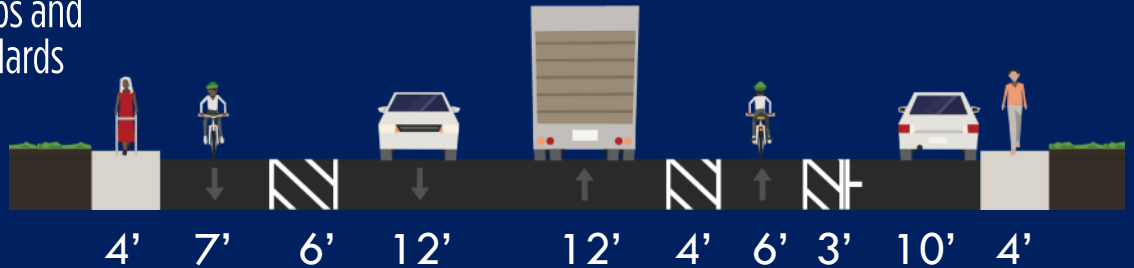




Preferred Cross Section C: Industrial District

11

- **Priest Drive to Hardy Drive**
 - ▣ 60' – Curb to Curb
 - ▣ 80' – Total Right-of-Way
- **Concept highlights**
 - ▣ Adds buffered bike lanes
 - ▣ Maintains truck parking & staging on the south side of the street
 - ▣ Maintains full truck access to industrial sites
 - ▣ Fills sidewalk gaps & improves ramps and driveway aprons to meet ADA standards

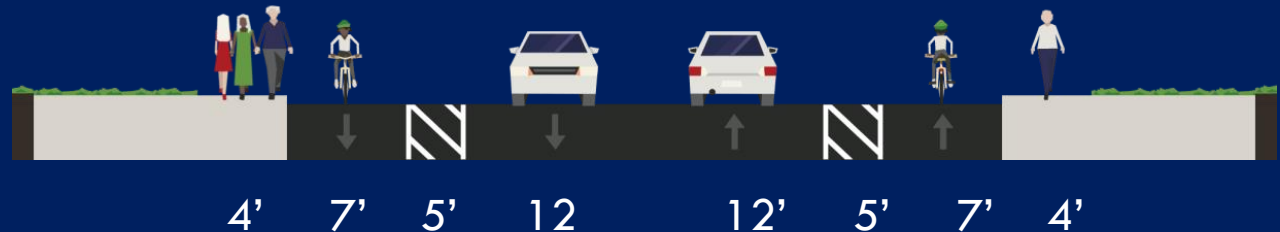




Preferred Cross Section D: Industrial District

12

- **Hardy Drive to Roosevelt Street**
 - ▣ 48' – Curb to Curb
 - ▣ 82' – Total Right-of-Way
- **Concept highlights**
 - ▣ Adds buffered bike lanes
 - ▣ Maintains full truck access to industrial sites
 - ▣ Improves sidewalk ramps and driveway aprons to meet ADA standards

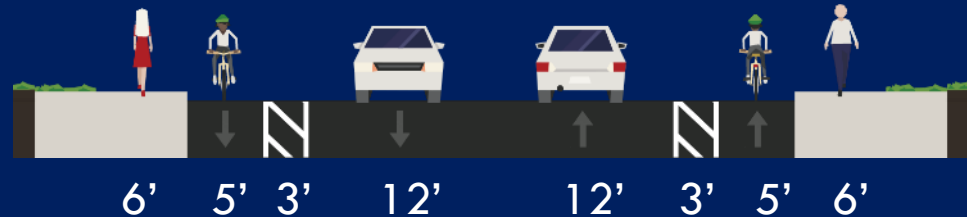




Preferred Cross Section E: Industrial District

13

- Roosevelt Street to Wilson Street
 - 40' – Curb to Curb
 - 60' – Total Right-of-Way
- Concept highlights
 - Adds buffered bike lanes
 - Adds new sidewalks
 - Improves sidewalk ramps & driveway aprons to meet ADA standards
 - Maintains full truck access to industrial sites

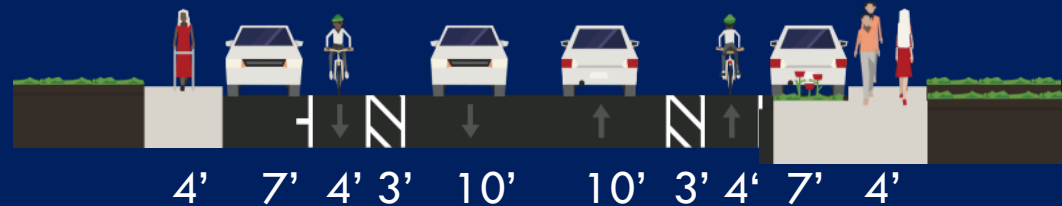


Preferred Cross Section F: East of College Ave. (Alt. A)



14

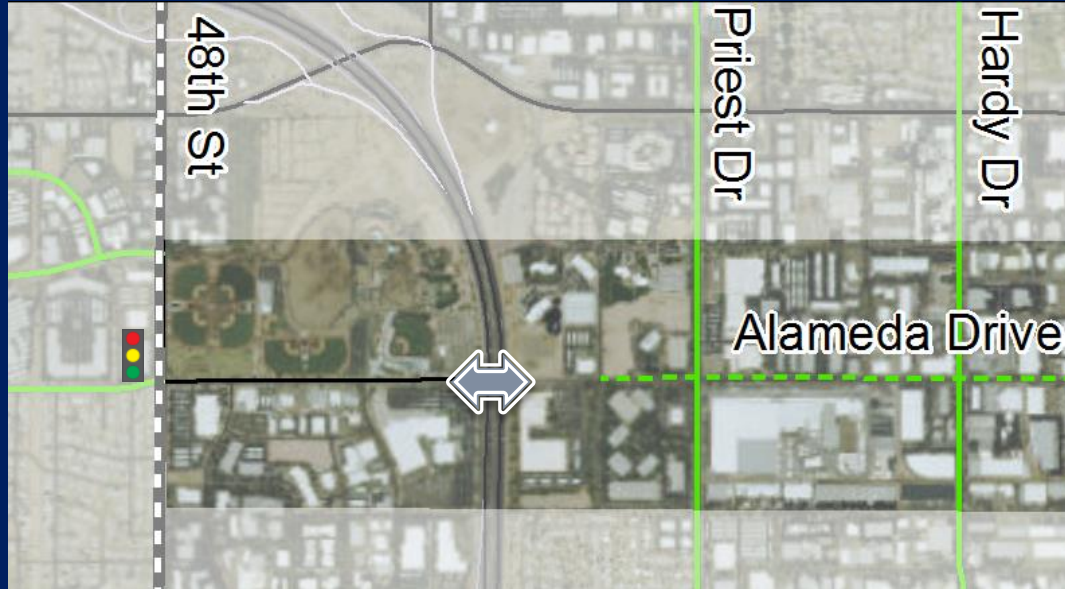
- UPRR to Rural Road – Alternative A
 - 48' – Curb to Curb Paved Width
 - 80' – Right-of-Way Width
- Concept highlights
 - Adds buffered bike lanes
 - Improves sidewalk ramps & driveway aprons to meet ADA standards
 - Improves bike crossing at Mill Avenue
 - Maintains on-street parking
 - Adds mid-block bulb-outs for traffic calming & landscaping



I-10 Overpass



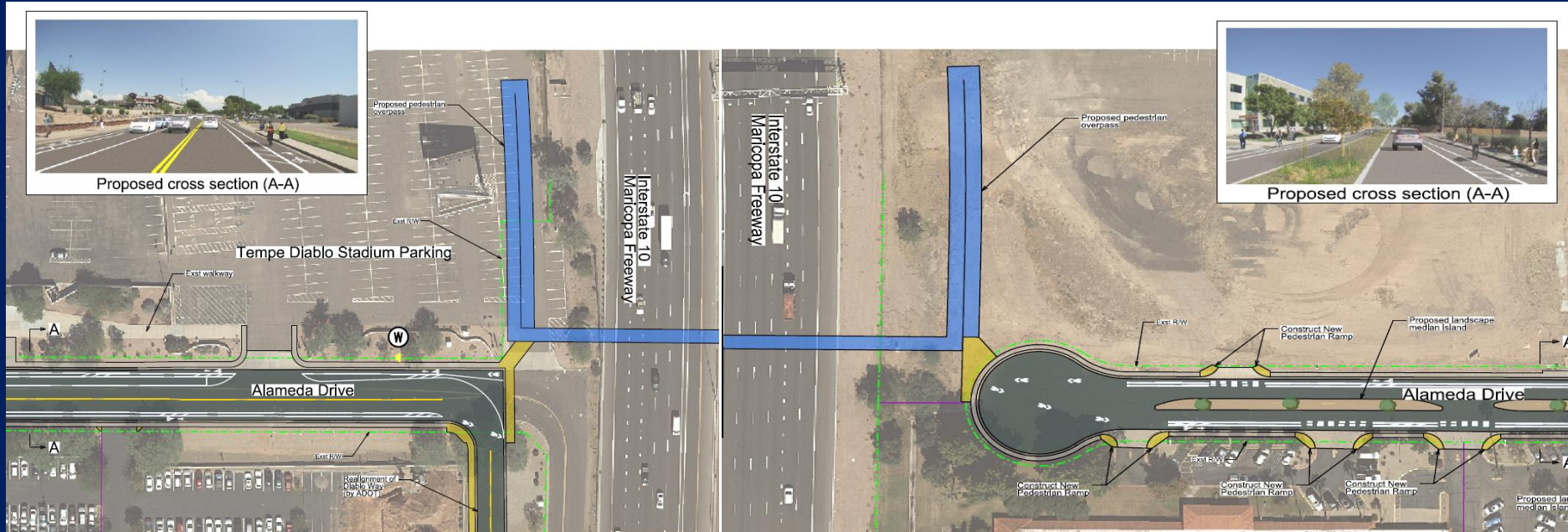
15



Arizona Department of Transportation (ADOT) is planning to construct a new pedestrian overpass connecting Alameda Drive on both sides of I-10.

The overpass is part of a larger improvement to the interstate constructed by ADOT.

I-10 Overpass Preliminary Layout



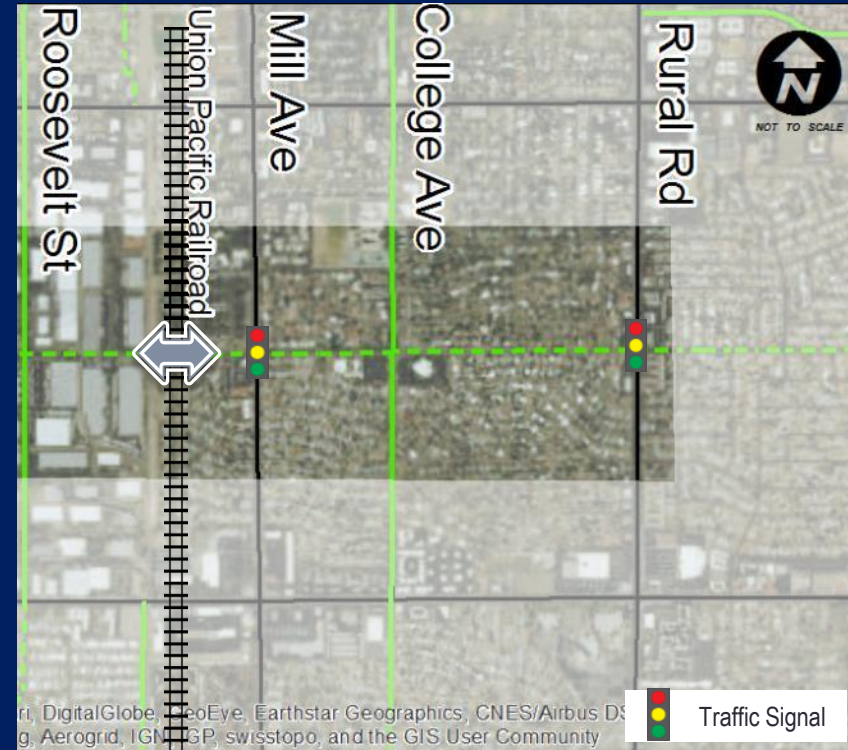
Union Pacific Railroad Crossing



17

Bollards installed in the late 1980's allowed public pedestrian crossing (DOT 748300H) of the UP Tempe Branch railroad.

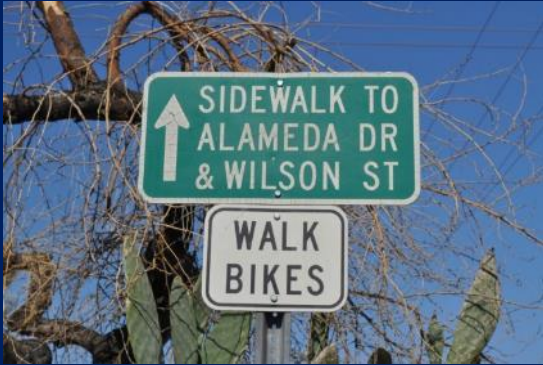
Improvements for this crossing location will be identified in the North/South Rail Spur Multi-Use Path Project that is currently underway.



Union Pacific Railroad Crossing



18



Budget



Tempe Transit Tax Funds: \$ 110,000

Construction Mitigation &
Air Quality Grant (CMAQ): \$ 1,500,000

Total: \$ 1,610,000





- **Public Meetings:**
 - Residents & Public
 - December 12, 6:00-7:30 p.m.
 - Broadmor Elementary School, 311 E. Aepli
 - Businesses
 - December 17, 11:00-12:30 p.m.
 - Sundt Construction, 2620 S. 55th Street
 - Public Comment: December 12 – January 2, 2019
- **On-going coordination with North/South RR Spur Multiuse Path**
- **Return to Commission – March 12, 2019**

Questions + Comments



Contact:
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CITY OF TEMPE TRANSPORTATION COMMISSION



STAFF REPORT

AGENDA ITEM 8

DATE

December 11, 2018

SUBJECT

Tempe Mesa Streetcar Feasibility Study

PURPOSE

The purpose of this memo is to provide the Commission with an introduction to the Tempe Mesa Streetcar Feasibility Study (TMSFS) and future possible rail extensions in Tempe and Mesa.

BACKGROUND & PURPOSE

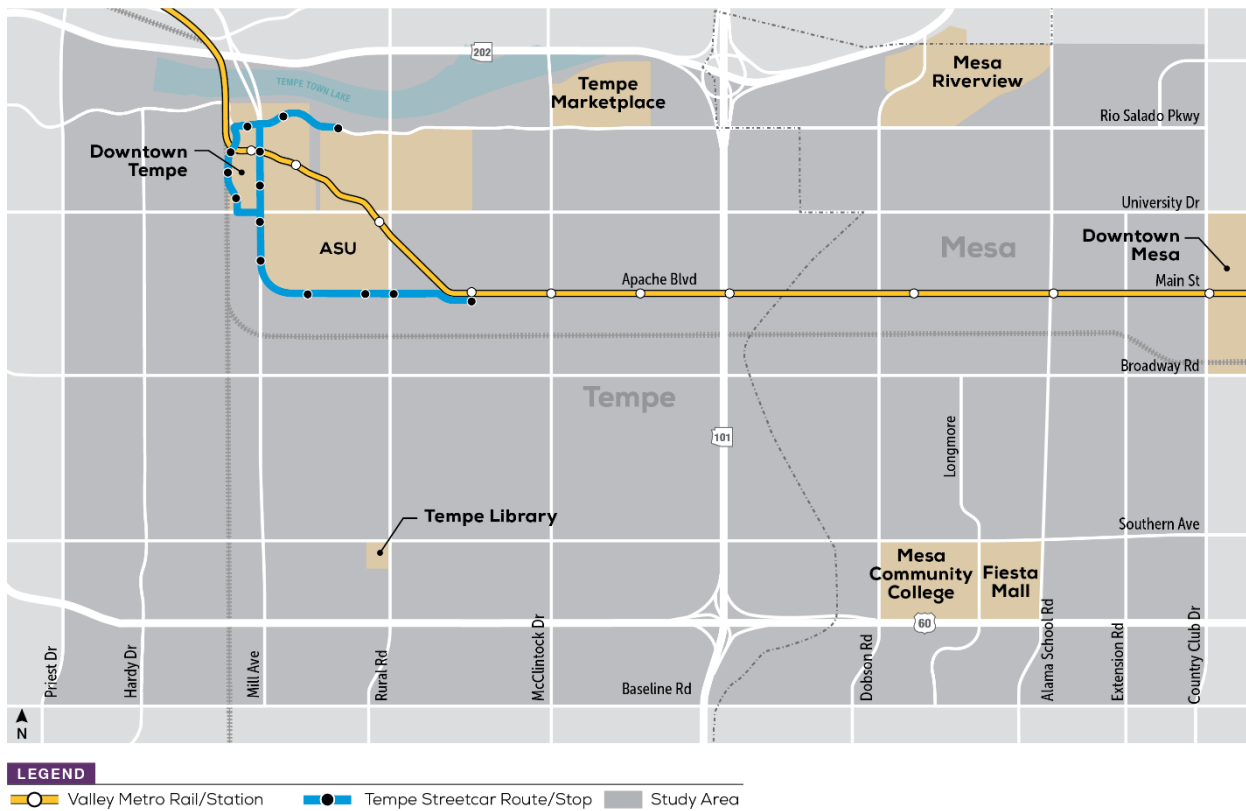
Valley Metro, with the cities of Tempe and Mesa, is evaluating the potential of a future streetcar system to connect the current Tempe Streetcar project in downtown Tempe with other points of interest, planned development and emerging transit corridors in Tempe and Mesa. The Tempe and Mesa study will identify potential corridors as part of a future streetcar system to serve both communities of Mesa and Tempe and inform a future possible regional funding initiative and public vote (or extension to “Prop 400”) for transit capital investments in both cities and the region.

The study area is defined as the area bounded by State Route 202 (Loop 202) to the north, Country Club Road to the east, Baseline Road to the south and Priest Drive to the west. The area includes Arizona State University main campus, Mesa Community College, downtown Tempe, Cubs Stadium, Tempe Marketplace, Mesa’s Riverview and the Rio Salado Parkway/Tempe Town Lake employment corridor. Both cities identify this study area as having key community points of interest with growing employment destinations, multi-unit residential areas and emerging transit corridors. The TMSFS will include a series of preliminary recommended streetcar corridors and potential phasing considerations, contributing to an overarching streetcar system.

The study will evaluate which corridors are most appropriate for rail/streetcar extensions in the two cities, based upon ridership potential, land use, employment and population density, projected growth, utility conflicts and more. The corridors will complement the Tempe General Plan and Tempe Transportation Master Plan. A public outreach program will engage the community throughout the process. The study will be complete at the end of 2019.

The ultimate goal of the project is to develop a streetcar extension plan that will enhance mobility in the two cities, while encouraging sustainable transportation and economy.

Tempe/Mesa Streetcar Feasibility Study Area Map



NEXT STEPS

City staff will continue to present the streetcar study to a wide variety of stakeholders, working towards corridor recommendations in late 2019.

FISCAL IMPACT

The Study is \$600,000 shared between Tempe and Mesa.

RECOMMENDATION

This is for information only.

CONTACT

Eric Iwersen
Transit Manager
480-350-8810
Eric_iwersen@tempe.gov

ATTACHMENTS

PowerPoint Presentation

Tempe/Mesa Streetcar Feasibility Study

Winter 2018



Agenda

- Study Overview
 - Purpose
 - Study Area
 - Evaluation Criteria
- Process and Timeline
- Related Projects
- Public Information



Overview



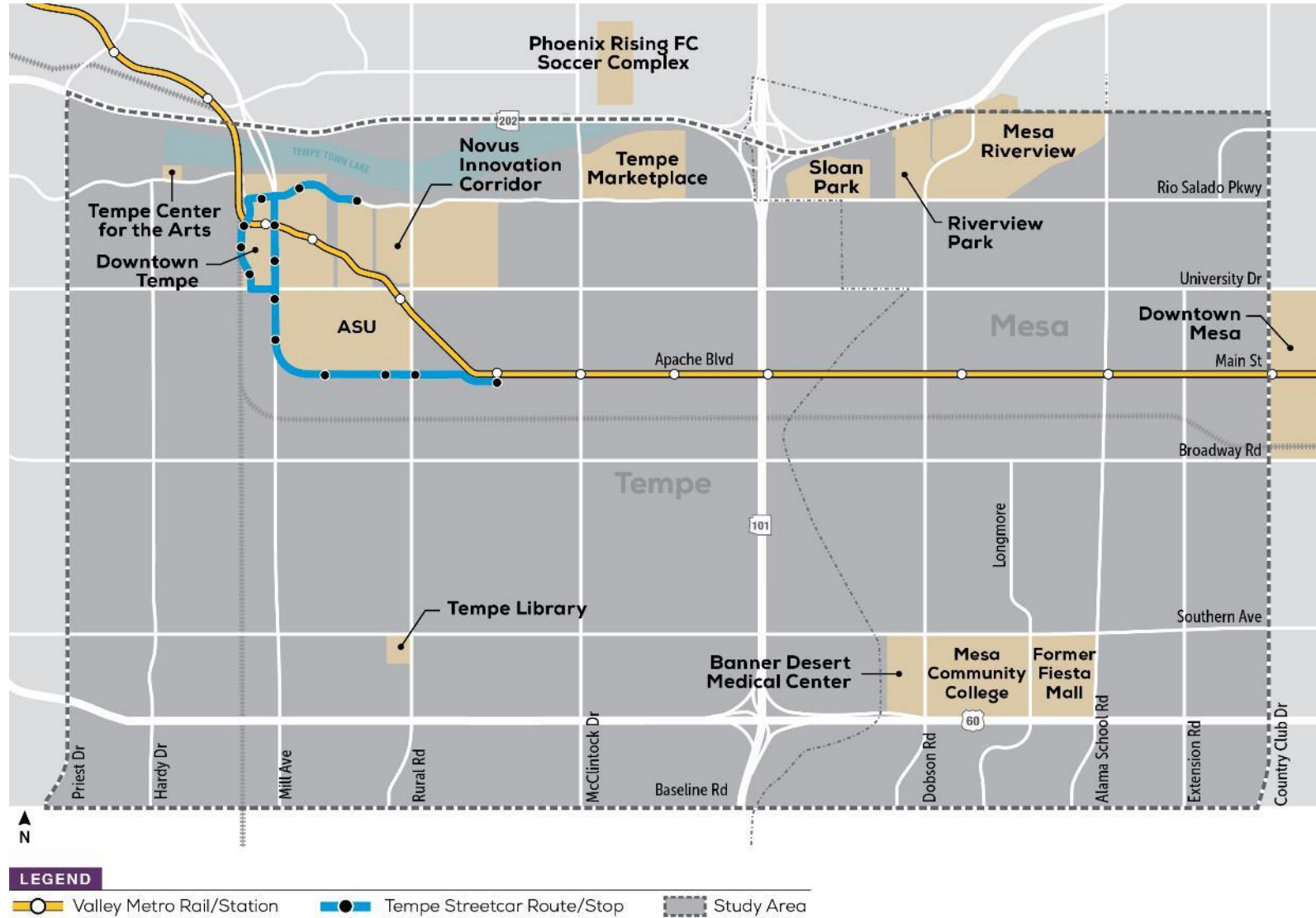
- The cities of Tempe and Mesa have partnered with Valley Metro to evaluate streetcar as a high-capacity transit option
- \$600,000 budget co-funded by the cities of Tempe and Mesa

Purpose

- **Evaluate possible streetcar extension(s) to serve Tempe and Mesa**
 - Link Tempe Streetcar with key regional activity centers, employment, residential
- **Evaluate feasibility of options**
- **Identify potential next steps**
 - Anticipate/prepare for next phase of regional funding



Study Area



Key Stakeholders



- Commissions and Boards at cities of Tempe and Mesa

Evaluation Criteria

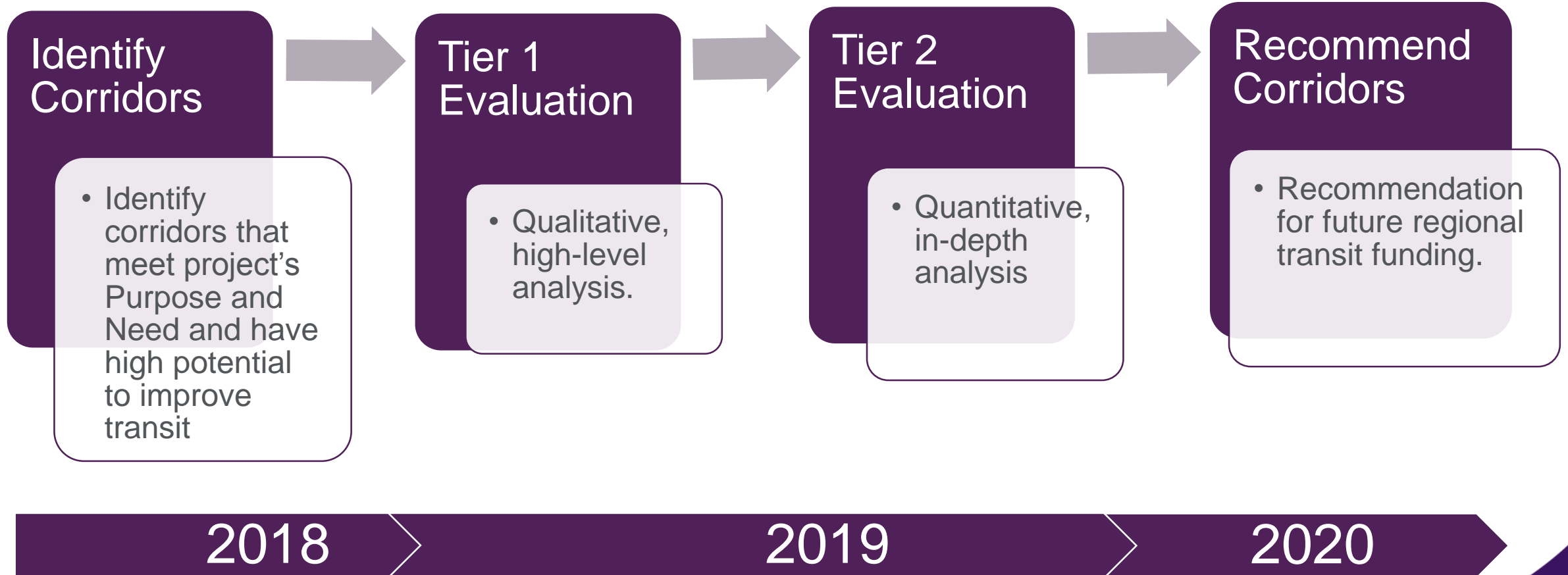
Tier 1

- Ridership Potential
- Transit-Oriented Land Use and Economic Development Potential

Tier 2

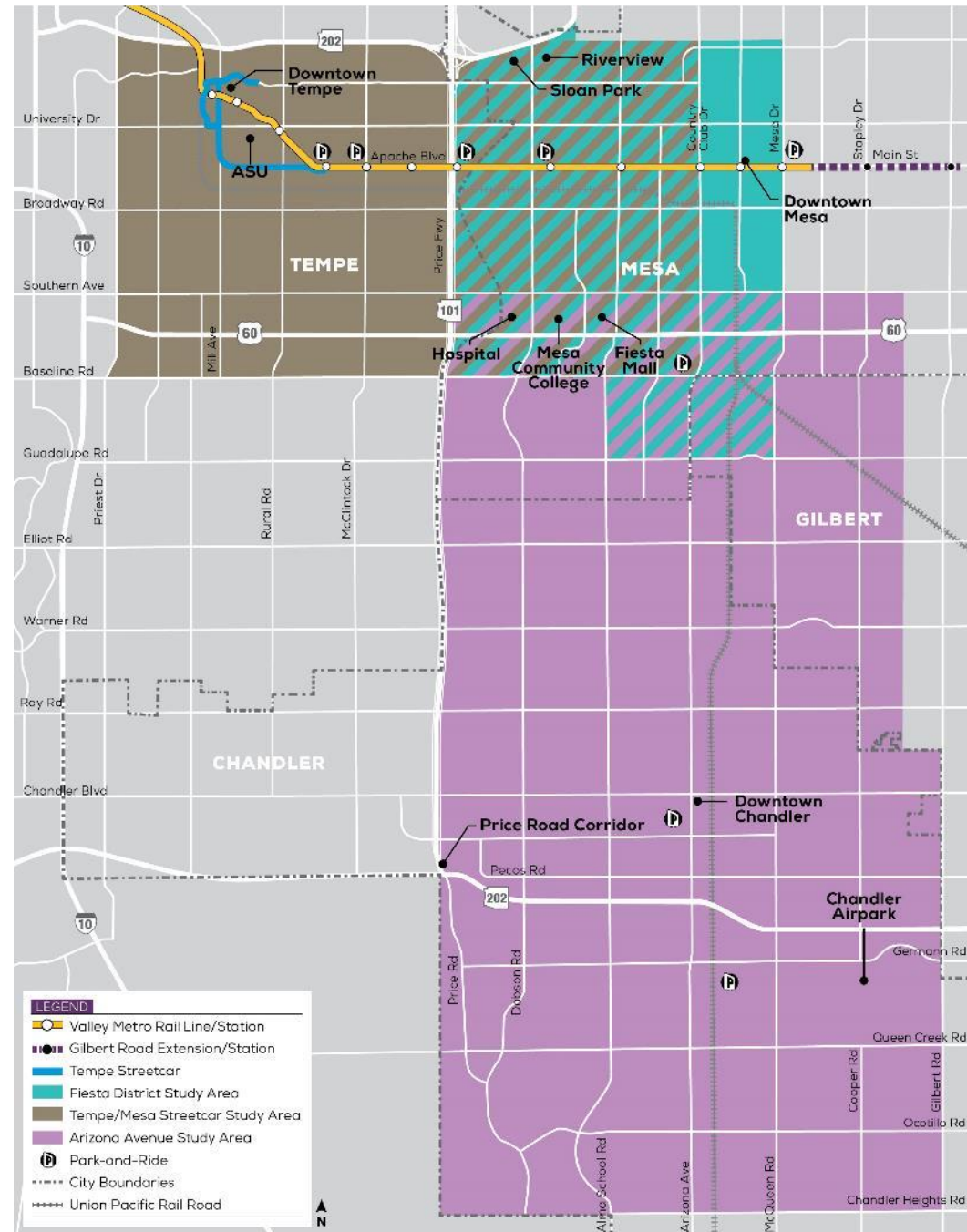
- Physical and Engineering Constraints
- Transportation Network Integrity and Functionality

Process



Related Projects

- Fiesta District Alternatives Analysis
 - Completion in summer 2019
- Tempe/Mesa Streetcar Feasibility Study
 - Completion in spring 2020
- Arizona Avenue Alternatives Analysis
 - Completion in spring 2020
- Tempe Streetcar (under construction)
 - Open for operations in 2021



Public Information



The screenshot shows the Valley Metro website's 'Tempe/Mesa Streetcar Feasibility Study' page. The page includes a navigation bar with links for Home, Maps & Schedules, Fares, How to Ride, and News & Events. The main heading is 'Tempe/Mesa Streetcar Feasibility Study'. Below the heading is a photo of a streetcar stop with a sign for 'Mill Ave'. To the right of the photo is a location pin for 'Tempe/Mesa' and a brief description: 'The Tempe/Mesa Streetcar Feasibility Study will collect data and identify preliminary corridors as potential extensions to the Tempe Streetcar.' Below this is a 'Status' section with a 'Background' tab. The background text states: 'The Tempe/Mesa Streetcar Feasibility Study began in May 2018. It is currently underway to determine:' followed by a bulleted list: '• Best connectivity to the overall transit system', '• Ridership projections', '• Project cost', and '• Traffic interface'. Below the list, it says 'Community outreach and engagement will be conducted through...'. At the bottom of the screenshot is a photo of three people (two women and one man) standing around a table with informational displays, engaged in conversation.

• Feasibility Study

- Targeted outreach
- Key stakeholders, property owners
- Website, information at other public meetings

• Future Phases

- Expanded outreach to broad range
- Additional outreach tools, including public meetings

Thank You



CITY OF TEMPE TRANSPORTATION COMMISSION



STAFF REPORT

AGENDA ITEM 10

DATE

December 1, 2018

SUBJECT

Future Agenda Items

PURPOSE

The Chair will request future agenda items from the Commission members.

BACKGROUND

The following future agenda items have been previously identified by the Commission or staff:

- January 8
 - Commission Business
 - Roundabouts
 - Prop 500/BRT
 - T Intersections
 - 20 Minute City
- February 12
- March 12
 - Alameda Drive Streetscape
 - McClintock Drive Reconfiguration Data
 - Capital Improvements Project Update
- April 9
 - Vision Zero
 - Speed Limits
 - Paid Media Plan
- May 14
 - MAG Design Assistance Grants
 - Bike Hero Award
- June
- July
- August
 - Transit Security Update
- September
 - Annual Report
- October
 - Annual Report
- November
- December

- TBD: Ordinances Related to Bicycles and Pedestrians

RECOMMENDATION

This item is for information only.

CONTACT

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