



## PUBLIC MEETING AGENDA

### Transportation Commission

**MEETING DATE**

Tuesday, January 10, 2017  
7:30 a.m.

**MEETING LOCATION**

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

<b>AGENDA ITEM</b>	<b>PRESENTER</b>	<b>ACTION or INFORMATION</b>
<b>1. Public Appearances</b> The Transportation Commission welcomes public comment for items listed on this agenda. There is a three-minute time limit per citizen.	Don Cassano, Commission Chair	Information
<b>2. Approval of Meeting Minutes</b> The Commission will be asked to review and approve meeting minutes from the November 8, 2016 meeting.	Don Cassano, Commission Chair	<b>ACTION</b>
<b>3. Commission Business</b> The Commission will be asked to elect a chair and vice chair for 2017 as well as reach consensus on meeting date and time.	Don Cassano, Commission Chair	<b>ACTION</b>
<b>4. Transportation Market Research Survey</b> Staff and the consultant from WestGroup Research will present the findings from the 2016 transportation telephone survey.	Sue Taaffe, Public Works and Kathy DeBoer, WestGroup Research	Information
<b>5. Interstate 10/Interstate 17 Corridor Master Plan</b> Staff will present an update on the I-10/I-17 Corridor Masterplan.	Julian Dresang, Public Works and Eric Anderson, Maricopa Association of Governments	Information and Possible Action
<b>6. Traffic Congestion Research Survey</b> Staff and the consultant from BRC Research will present the findings from the 2016 traffic congestion telephone survey.	Sue Taaffe, Public Works and Bruce Hernandez, Behavior Research Center	Information
<b>7. Bike Hero</b> Staff will request the Commission select a recipient for the city's annual Bike Hero Award.	Sue Taaffe, Public Works	<b>ACTION</b>
<b>8. McClintock Drive Update</b> Staff will present the process for moving forward to explore and develop concepts to achieve the Council's goal of keeping the bike lanes, improving traffic flow and decreasing congestion.	Shelly Seyler and Julian Dresang, Public Works	Information

<b>9. Department &amp; Regional Transportation Updates</b> Staff will provide updates and current issues being discussed at regional transit agencies.	Public Works Staff	Information
<b>10. Future Agenda Items</b> Commission may request future agenda items.	Don Cassano, Commission Chair	Information

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 Transportation Commission November 8, 2016

Minutes of the Tempe Transportation Commission held on Tuesday, November 8, 2016, 7:30 a.m., at the Tempe Transportation Center, Don Cassano Community Room, 200 E. Fifth Street, Tempe, Arizona.

**(MEMBERS) Present:**

Ryan Guzy	Lloyd Thomas
Don Cassano (Chair)	Susan Conklu
Philip Luna	Shereen Lerner
Brian Fellows	Bonnie Gerepka
Peter Schelstraete	Kevin Olson
Pam Goronkin	Cyndi Streid

**(MEMBERS) Absent:**

Charles Redman  
Jeremy Browning  
Charles Huellmantel

**City Staff Present:**

Shelly Seyler, Deputy Public Works Director	Joe Clements, Transportation Financial Analyst
Sue Taaffe, Public Works Supervisor	Laura Kajfez, Neighborhoods Services Specialist
Tony Belleau, Transportation Planner	Mike Nevarez, Transit Manager
Julian Dresang, City Traffic Engineer	Amanda Nelson, Public Information Officer
Chase Walman, Transportation Planner	Ken Jones, Deputy City Manager
Eric Iwersen, Principal Planner	

**Guests Present:**

Nicholas Smart, resident  
JC Porter, ASU  
Amy McNamer, resident

Commission Chair Don Cassano called the meeting to order at 7:35 a.m.

**Agenda Item 1 – Public Appearances**

None.

**Agenda Item 2 – Minutes**

Chair Cassano introduced the minutes of the October 11, 2016 meeting and asked for a motion. A motion was made to approve the minutes.

**Motion:** Commissioner Pam Goronkin  
**Second:** Commissioner Lloyd Thomas  
**Decision:** Approved

**Agenda Item 3 – Recognition of Outgoing Commissioners**

Don Cassano and Shelly Seyler thanked Pam Goronkin, Peter Schelstraete and Philip Luna for their years of service and contribution to the Transportation Commission.

**Agenda Item 4 – City Preliminary Long-Range Financial Forecast and Transit Fund Update**

Ken Jones presented the City Preliminary Long-Range Financial Forecast and Transit Fund Update. Ken stated that the Transit and Transportation funds are both stable and have a fund balance, and that the Transit Tax forecast includes operation of the Streetcar and Orbit Saturn. The Transit Tax generates about \$40 million annually and is expected to grow two to three percent a year. During the economic downturn, the state began sweeping Highway User Revenue Funds (HURF) to fund the Department of Public Safety Services. Ken also explained that the bond question on the ballot for streets would utilize secondary property tax.

The Commission asked the following questions, and staff responded as follows:

- Is the HURF fund distribution on the Council legislative agenda? Yes.
- What is the city's bond rating? Standards and Poor's has Tempe at an AAA rating and Moody's at an AA-.
- Does the Transit Fund also pay for capital projects and is it a certain percent? Ken said that the city uses cash for the capital projects and they vary year to year.
- Will HURF funds continue to be swept by the state and not given to the cities? Most likely.
- For the bond issue regarding streets, how is the money spent? It can be spent on personnel or projects.

**Agenda Item 5 – Streetcar**

Eric Iwersen provided an update on the status of the Tempe Streetcar Project including:

- Schematics of track configurations
- Stop amenities
- Public art
- Procurement timeline
- Next steps

The Commission asked the following questions, and staff responded as follows:

- Where is the wireless section? The procurement RFP for the manufacturer included options for wireless portions on Mill and Ash from Rio Salado to University. A team comprised of Tempe staff, Valley Metro staff, CTE (Center for Transportation and the Environment) is currently reviewing the proposals.
- How will additional routes work with the light rail expansions? It is likely that there will be many lines like in other cities with routes having numbers or letters.
- Where does the extra space come from for the stops? Typically intersections are wider and can accommodate the stations in the middle of the street.
- Don't you lose a lane on Apache? The vehicles will share the same lane as the streetcar and there will still be left turn pockets.
- How long are the turn pockets? They vary from between 100 to 200 feet.
- At the end of the line, how do the vehicles turn around? Similar to how the light rail operated, the operator will walk to the other end of the streetcar where there are controls for operations.
- Why isn't the extension south on Mill Avenue not shown on the regional map? It continues to be considered for a future extension and will likely be included in Prop 500.
- Will the streetcar be free or have free zones? That decision will be made in 2017.



- How did Tucson handle free zone areas? Staff was not sure, but they are conducting a peer analysis on these types of questions.
- Has a fare box on board the streetcar been considered? There has been that discussion; however, fare boxes on board would slow down the system.
- What is the cost to collect fares? Staff did not have an answer, but that is information that will be brought back to the Commission in the future along with fare rates.

One Commissioner stated that if the streetcar were to go to Mill and Southern that a park-and-ride would be needed. Another Commissioner stated that the alignment south to Mill and Southern would not qualify for federal funding with the current starter line.

A public meeting was held Oct. 26 and the City Council will be presented this information on Dec. 1. The system is anticipated to open in August/September 2020.

#### **Agenda Item 6 – Fifth Street Streetscape Project**

Eric Iwersen provided an overview and update of the Fifth Street Streetscape Project including:

- Project history
- Existing conditions – land use, tree canopy, bus stops, bike lanes, light fixtures and parking.
- Possible improvements – bike lanes, parklets, redesigned parking, mid-block crossing treatments and public art.
- Timeline and next steps

The Sustainability Commission is looking for four Transportation Commissioners to participate in a future meeting. Lloyd Thomas, Susan Conklu, Ryan Guzy and Don Cassano volunteered.

#### **Agenda Item 7 – Department & Regional Transportation Updates**

Staff updated the commission on the McClintock Drive Traffic Lane Configuration Project and the Council has instructed staff to explore alternatives for the corridor.

#### **Agenda Item 8- Future Agenda Items**

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

- 5<sup>th</sup> Street Streetscape Project (November)
- Streetcar (November)
- Transportation Commission Annual Report (November)
- Long-Range Forecast Presentation (November)
- Recognition of Outgoing Commission Members (November)
- Market Research Survey (January)
- Commission business (January)
- Bike Hero (January)
- Leading vs. Lagging Left Turn Signals (January)
- Streetcar (January)
- Long-Range Forecast Presentation (February)
- Rio Salado @ McClintock Drive MUP Underpass (February)
- FY 2017-18 Media Plan (February)
- ASU Bike Registry Outreach Efforts (February)
- Streetcar (March)
- North/South Railroad Spur MUP (May)

- Streetcar (May)
- Bicycle/Pedestrian Signal Activate Operations Update (TBD)

Commissioner requested that the following items be added to future agenda items:

- Speed Limits
- Public Process for Transportation Projects
- DTA Update

The December 2016 meeting has been cancelled. The next meeting is scheduled for January 10, 2017.

The meeting was adjourned at 8:46 a.m.

Prepared by: Sue Taaffe

Reviewed by: Shelly Seyler

# CITY OF TEMPE TRANSPORTATION COMMISSION



## STAFF REPORT

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### AGENDA ITEM 3

#### DATE

January 1, 2017

#### SUBJECT

Commission Business

#### PURPOSE

To request that the Transportation Commission makes selections for the positions of chair and vice-chair as well as reach consensus on meeting date and time.

#### BACKGROUND

At the January meeting of each year, the Commission addresses the following business:

- Chair and Vice-Chair. The Commission annually elects a Chair and Vice-Chair for the upcoming year per the Tempe City Code, Sec. 2-249 "The officers of the commission shall be selected by the commission members at the first meeting of the commission following the 31<sup>st</sup> day of December of each year and shall serve until the 31<sup>st</sup> day of December of the next succeeding year. No officer shall serve in the same capacity for more than two (2) consecutive one-year terms."
- Meeting Dates and Times. The Commission regularly scheduled meetings are the 2<sup>nd</sup> Tuesday of each month at 7:30 a.m.

As of January 1, 2017, the Commission has 14 member positions filled. Transportation Commission members are listed below.

1. DON CASSANO (Current Chair elected in Jan. 2016)
2. RYAN GUZY (Current Vice Chair elected in Jan. 2016)
3. JEREMY BROWNING
4. BONNIE GEREPKA
5. CHARLES HUELLMANTEL
6. KEVIN OLSEN
7. CHARLES REDMAN
8. CYNDI STREID
9. SUSAN CONKLU
10. SHERLEEN LERNER
11. LLYOD THOMAS
12. BRIAN FELLOWS
13. SHANA ELLIS
14. NIGEL A.L. BROOKS

**FISCAL IMPACT**

None

**RECOMMENDATION**

None

**CONTACT**

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**ATTACHMENTS**

None

# CITY OF TEMPE TRANSPORTATION COMMISSION



## STAFF REPORT

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### AGENDA ITEM 4

#### DATE

December 16, 2016

#### SUBJECT

Results of October 2016 Tempe Transit Telephone Survey

#### PURPOSE

The purpose of this memo is to provide the Commission with an overview of the key findings from the October 2016 Tempe Transit telephone 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. 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 2006, 2008, 2010, 2012 and September/October 2014. The most recent data collection was completed with 401 Tempe residents in September 2016. The margin of error for this sample size is approximately +4.9% at a 95% level of confidence.

Telephone calls with Tempe residents were made from WestGroup's interviewing center in Phoenix, Arizona during October 2016. 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

- More than three in five (62%) Tempe residents indicated they used Tempe's transit service in the past year, including light rail, Orbit, Flash, and local bus/express.
- Among residents who indicated use of Tempe's transit service in the past year, 16% reported at least riding on a monthly basis. This is down significantly from 2014 when one quarter (25%) indicating riding on a monthly basis, while "special circumstances" usage is up slightly (31% to 37%).

- In general there are fewer new transit users, but users are continuing use public transit as the years go by. The proportion of surveyed transit riders who report having used the transit service for less than a year was 5%, however, nearly one-half (47%) have been riding transit in the city for more than 6 years (up from 31% in 2014).
- Convenience and getting to and from recreation were again the most popular reasons for riding public transit (mentioned by 27% and 18%, respectively).
- Recreational activities and Phoenix/Downtown Phoenix were the top destinations for transit riders (35% and 20%, respectively). ASU, work and Downtown Tempe were each mentioned by 14% of riders.
- A lower proportion of riders in 2016 indicated they use public transit to go shopping (4% vs. 15%), however the destination of Phoenix/Downtown Phoenix increased significantly to 20% up from 13% in 2014.
- Riders were most satisfied with the cleanliness of the bus stops and their comfort on the bus (91% and 90% very + somewhat satisfied, respectively). Despite their high satisfaction with bus stops for cleanliness, riders expressed the lowest level of satisfaction with security and amenities at bus stops (72% and 74%).

### **Overall Satisfaction and Improvements of Tempe's Transit System**

- More than two-thirds (69%) of residents with an opinion indicated they were highly satisfied with the Tempe transit system.
  - Residents satisfied with the transit system (rating it a "4" or "5") mention good service (32%) and frequent and reliable service (18%).
  - Residents who provided "1", "2", or "3" ratings mentioned more/better routes (14%) and more frequent buses with extended hours (8%) as needed improvements.
- On-time performance of buses continued to top the list with the highest percentage of "high priority" ratings as it did in 2014 (79% of residents provided a top-two rating).

### **Potential Use of Tempe's Transit System**

- When non-riders were asked why they do not use public transit, well over half (59%) indicated they prefer using a car.
- Perceived effectiveness of each argument presented to residents regarding motivation to use public transit has been declining since prior to 2006.
  - The argument improves air quality/good for environment was perceived as either "somewhat effective" or "very effective" by 51% of residents, compared to a range of 60% to 75% since 2006.
  - Reduces congestion was seen as effective by 44%, compared to a range of 49% to 69% since 2006.

- Saves money on gas, auto insurance/maintenance was perceived as effective by 45% (the same as last year) compared to a range of 57% to 72% between 2006 and 2012.

### **Tempe in Motion (TIM)**

- Total awareness of Tempe in Motion (TIM) remained statistically comparable to recent years (44%), as did the proportion of TIM-aware residents who knew the correct meaning of the TIM acronym (65%).
- Residents aware of TIM, recalled hearing about it through street banners (24%) and signs on buses (11%).
- Among those aware of TIM advertising, over half (54%) indicated it had a positive impact on their impression of transportation options in Tempe.
  - One in four (25%) indicated “yes” when asked whether the advertising message persuaded them to try public transit in Tempe.

### **Tempe Bicycling and Walking**

- Approximately three in five residents (62%) report having access to a bicycle.
- Among those who reported having access to a bike, 71% reported they ride their bike at least once a month, which is virtually the same as in 2014.
- Approximately three in seven (44%) of those who indicated riding their bikes at least once a month report they ride for exercise, while 13% report riding a bike to the store and 12% ride a bike to work/school.
- As was the case in 2014, two thirds (65%) of residents reported being satisfied with the quality of walking and biking paths in Tempe.
- Among those with an opinion, the most common positive reasons for ratings included they are fine the way they are/no problems (18%) and they are everywhere, there are plenty of paths (12%). Top negative reasons included don’t seem safe enough/make them safer (9%) and need more of them (7%) or need more bike lanes (4%).
- Protected bike lanes, safer paths and adding more bike and pedestrian paths received the highest percentage of priority ratings (63% to 66%).

### **Tempe Youth Free Transit Pass Program**

- Nearly two in five (38%) residents surveyed in 2016 reported having heard of the Tempe Youth Free Transit Pass. This is consistent with 2014 awareness.
- Among those aware of the program, one quarter (24%) indicated they heard about it through school followed by 16% citing word-of-mouth.

## Conclusions

1. Transit usage among Tempe residents continues to stay consistent over the past four years. Additionally it appears that those who used public transit in the past are continuing to use it with a notable increase in those who have used transit six or more years and a decrease in the percentage who are newer riders. However, in 2016, there was an increase in using transit only in special circumstances versus a more consistent basis.
2. Satisfaction with various bus system attributes among bus riders generally follow a similar hierarchy compared to the previous two waves of the study. Measures pertaining to comfort on the bus, cleanliness of the bus, and driver courtesy and professionalism have the highest levels of satisfaction, while measures pertaining to bus service during major events, amenities and security at bus stops tend to be near the bottom. This indicates the overarching perception surrounding the bus system among current riders has not changed much since 2012. It should be noted, however, that satisfaction with “ease of use” continues to decline from 2012 (and all previous years); a conversation about what could be causing this continued drop off is likely warranted.
3. Overall satisfaction with the transit system in Tempe declined slightly this year compared to 2014, but is in-line with satisfaction reported in 2012. Interestingly, on-time performance was most often selected as the highest priority for transit system improvements; in other markets it is more common to see requests for more service, longer hours, or more frequent service at the top of the list. Also, there was a decline in satisfaction among riders for reliability and on-time performance compared to 2014. Again, a conversation about what could be causing this continued concern about reliability is likely warranted.
4. The effectiveness of messaging arguments in favor of public transit usage measured in this survey has been in decline for more than ten years. In particular, the argument saves money on gas/auto insurance/maintenance saw a steep decline compared to 2012. Normalized or decreasing gas prices in addition to increasingly improved fuel efficiencies in vehicles likely play a role in residents’ perceived benefit of public transit versus individual vehicular transport. Only the messaging pertaining to improves air quality/good for environment was considered to be an effective measure by more than half of the population. It appears that it may be necessary to look into other messaging that resonates stronger with non-transit users.



**FISCAL IMPACT**

The cost of the survey was \$23,175 which is budgeted in cost center 3916-6737.

**RECOMMENDATION**

Use the findings from the market research to assist in planning for the FY 2017-18 advertising campaign.

**CONTACT**

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**ATTACHMENTS**

Market Research Report  
PowerPoint

# City of Tempe Transit Survey Report

Prepared For:



City of Tempe  
October 2016



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## 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. 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 2006, 2008, 2010, 2012 and September/October 2014. The most recent data collection was completed with 401 Tempe residents in September 2016. The margin of error for this sample size is approximately  $\pm 4.9\%$  at a 95% level of confidence.

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  - *Reduces congestion* was seen as effective by 44%, compared to a range of 49% to 69% since 2006.
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- As was the case in 2014, two thirds (65%) of residents reported being satisfied with the quality of walking and biking paths in Tempe.
- Among those with an opinion, the most common positive reasons for ratings included *they are fine the way they are/no problems (18%)* and *they are everywhere, there are plenty of paths (12%)*. Top negative reasons included *don’t*

*seem safe enough/make them safer* (9%) and *need more of them* (7%) or *need more bike lanes* (4%).

- *Protected bike lanes, safer paths* and *adding more bike and pedestrian paths* received the highest percentage of priority ratings (63% to 66%).

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- Nearly two in five (38%) residents surveyed in 2016 reported having heard of the Tempe Youth Free Transit Pass. This is consistent with 2014 awareness.
- Among those aware of the program, one quarter (24%) indicated they heard about it *through school* followed by 16% citing *word-of-mouth*.

## **Conclusions**

1. Transit usage among Tempe residents continues to stay consistent over the past four years. Additionally it appears that those who used public transit in the past are continuing to use it with a notable increase in those who have used transit six or more years and a decrease in the percentage who are newer riders. However, in 2016, there was an increase in using transit only in special circumstances versus a more consistent basis.
2. Satisfaction with various bus system attributes among bus riders generally follow a similar hierarchy compared to the previous two waves of the study. Measures pertaining to *comfort on the bus, cleanliness of the bus, and driver courtesy and professionalism* have the highest levels of satisfaction, while measures pertaining to *bus service during major events, amenities and security at bus stops* tend to be near the bottom. This indicates the overarching perception surrounding the bus system among current riders has not changed much since 2012. It should be noted, however, that satisfaction with “ease of use” continues to decline from 2012 (and all previous years); a conversation about what could be causing this continued drop off is likely warranted.
3. Overall satisfaction with the transit system in Tempe declined slightly this year compared to 2014, but is in-line with satisfaction reported in 2012. Interestingly, on-time performance was most often selected as the highest priority for transit system improvements; in other markets it is more common to see requests for more service, longer hours, or more frequent service at the top of the list. Also, there was a decline in satisfaction among riders for reliability and on-time performance compared to 2014. Again, a conversation about what could be causing this continued concern about reliability is likely warranted.
4. The effectiveness of messaging arguments in favor of public transit usage measured in this survey has been in decline for more than ten years. In particular, the argument *saves money on gas/auto insurance/maintenance* saw a steep decline compared to 2012. Normalized or decreasing gas prices in addition to increasingly improved fuel efficiencies in vehicles likely play a role in residents’

perceived benefit of public transit versus individual vehicular transport. Only the messaging pertaining to *improves air quality/good for environment* was considered to be an effective measure by more than half of the population. It appears that it may be necessary to look into other messaging that resonates stronger with non-transit users.

## 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. 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 - September 2006, 2008, 2010, 2012 and September/October 2014. The most recent data collection was completed with 401 Tempe residents in September 2016. Due to size limitations, tables in the report do not show data from the studies conducted from 1998 to 2004.

Telephone calls with Tempe residents were made from WestGroup's interviewing center in Phoenix, Arizona during September 2016. 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. All phone numbers were manually dialed.

The survey was completed with 401 Tempe residents. The margin of error for this sample size is approximately  $\pm 4.9\%$  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 401, **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 <sup>A</sup>, <sup>B</sup>, and <sup>C</sup>). A letter after a number indicates that the number is statistically higher than the number in the column with that letter. For example, in the table below, the 90% in the first row of column C is significantly higher than the figures in columns D and E (79% and 80%, respectively) at the 95% confidence level.

	2016 (n=246)	Gender		Age			Income	
		Male (n=134) (A)	Female (n=113) (B)	18-34 (n=89) (C)	35-54 (n=86) (D)	55+ (n=69) (E)	<\$40K (n=59) (F)	\$40K+ (n=153) (G)
Light Rail Orbit or Flash neighborhood shuttles	84%	88%	79%	90% <sup>DE</sup>	79%	80%	80%	85%
Local or express bus	37%	39%	35%	40%	41% <sup>E</sup>	28%	55% <sup>G</sup>	31%
Don't Know/Refused	28%	27%	28%	35%	24%	26%	45% <sup>G</sup>	20%
	7%	3%	11% <sup>A</sup>	2%	8%	11% <sup>C</sup>	7%	6%

For trend tables and charts displaying yearly data (rather than sub-groups of the current year), significant differences between 2016 and 2014 figures are shown using an asterisk. For example, in the table below, the 5% in the 2016 column is significantly different than the 10% in the 2014 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.

	2016 (n=246)	2014 (n=256)
Daily	5%	6%
Weekly	5%*	10%
Monthly	6%	9%
Every few months	9%	8%
Special circumstances	37%	31%
Don't Use Transit	38%	35%

### C. Demographics

The total data was weighted in 2016, 2014 and 2012 to match the age categories from 2010. Data was also weighted in 2006. An overview of respondent demographics follows in Table 1A.

**Table 1A: Demographics**

	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)	2008 (n=424)	2006** (n=407)
<b>Gender</b>						
Male	52%	51%	50%	49%	50%	51%
Female	48%	49%	50%	51%	50%	49%
<b>Years Lived in Tempe</b>						
<1 year	1%	2%	2%	2%	3%	7%
1 – 2 years	4%	5%	6%	5%	7%	10%
3 – 5 years	9%*	13%	6%	10%	12%	16%
6 – 10 years	15%	14%	13%	15%	17%	15%
11 – 20 years	24%	22%	25%	19%	22%	17%
20+ years	48%	44%	49%	49%	39%	35%
<b>Age**</b>						
18 – 34	32%	32%	32%	33%	31%	30%
35 – 54	34%	34%	33%	34%	35%	25%
55+	33%	33%	32%	33%	34%	45%
Average Age	47.3	47.1	49.4	47.7	47.6	50.3
<b>Education</b>						
Some high school	2%	2%	1%	2%	1%	5%
High school graduate	10%	11%	10%	9%	9%	14%
Some college	26%*	33%	24%	30%	31%	33%
College graduate	33%	32%	32%	29%	31%	30%
Post graduate	27%*	19%	32%	29%	26%	18%
No answer/ Refused	2%	2%	1%	1%	2%	2%
<b>Income</b>						
<\$20,000	7%*	13%	9%	10%	12%	12%
\$20 - \$40,000	18%	18%	14%	14%	19%	20%
\$40 - \$60,000	19%	18%	11%	16%	15%	17%
\$60 - \$80,000	13%*	8%	14%	14%	12%	11%
\$80 - \$100,000	7%	8%	10%	11%	10%	9%
\$100,000+	20%	20%	20%	17%	19%	15%
No answer/refused	16%	14%	21%	16%	13%	16%
Average Income	\$67,325	\$63,700	\$70,304	\$67,047	\$64,500	\$51,500

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

\*\*Between 2001-2006 ages were reported in the following categories: 18-34, 35-49, 50+. In more recent years, age categories were updated as listed above.

**Table 1B: Demographics**

	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)	2008 (n=424)	2006 (n=407)
<b>Marital Status</b>						
Married	52%	46%	54%	61%	53%	53%
Single	45%	50%	43%	36%	44%	44%
Refused	3%	3%	3%	3%	3%	3%
<b>Occupation**</b>						
Full-time	57%	46%	46%	47%	51%	45%
Part-time	6%	11%	8%	12%	12%	10%
Retired	20%	21%	28%	23%	20%	27%
Student	6%	8%*	4%	7%	8%	4%
Stay at home Spouse	3%	4%	6%	7%	5%	5%
Unemployed/disabled	5%	7%	6%	6%	4%	7%
Refused	3%	3%	2%	1%	2%	3%
<b>Zip Code</b>						
85281	21%	23%	19%	19%	19%	25%
85282	33%	32%	44%	38%	38%	43%
85283	24%	26%	22%	29%	29%	24%
85284	22%	19%	15%	14%	14%	9%

\*Indicates significantly different from 2014 at the 95% confidence level. \*\*In 2008 question was changed to accept multiple responses.

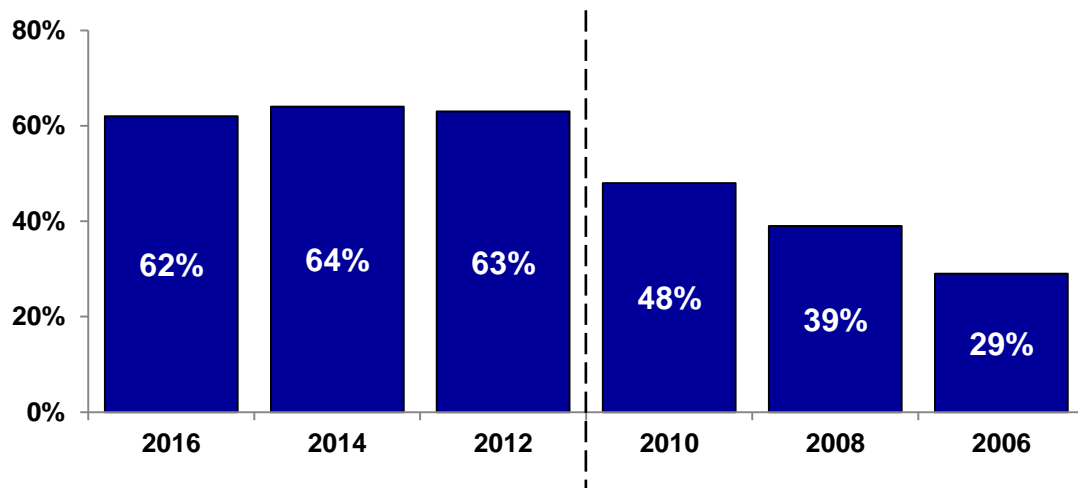
## II. Rider Characteristics and Opinions

### A. Current Use of Public Transit

#### 1. Using Tempe Transit Service

More than three in five (62%) Tempe residents indicated they used Tempe’s transit service in the past year, including light rail, Orbit, Flash, and local bus/express. This is consistent with usage in 2014 and 2012.

**Transit Service Usage in Tempe**  
 Percentage of residents who rode Tempe Transit Service in past year



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

2016 n=401 , 2014 n=409 , 2012 n=400, 2010 n=427, 2008 n=424, 2006 n=407

Q4: *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 residents who have used Tempe’s transit service in the past year, 16% reported that they generally ride at least once a month. This is down significantly from 2014 when one quarter (25%) indicating riding on a monthly basis.**

Riders significantly more likely to report riding weekly or daily include those aged 18 to 54 (13% vs. 4% age 55+) and those with annual household incomes of less than \$80K (12% vs. 4% earning less).

**Table 2a Frequency of Transit Usage**

	2016 (n=246)	2014 (n=256)
Daily	5%	6%
Weekly	5%*	10%
Monthly	6%	9%
Every few months	9%	8%
Special circumstances	37%	31%
Don't Use Transit	38%	35%

Q4: In general would you say you use Tempe’s transit system (including light rail, Orbit, Flash and local bus/express)...

**Table 2b Type of Transit Usage Trending Breakdown**

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

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

Note: Question added in 2012.

Q4a: Which of the following have you used in Tempe in the past year?

**Table 2c Type of Transit Usage  
Demographic Breakdown**

	2016 (n=246)	Gender		Age			Income	
		Male (n=134) (A)	Female (n=113) (B)	18-34 (n=89) (C)	35-54 (n=86) (D)	55+ (n=69) (E)	<\$40K (n=59) (F)	\$40K+ (n=153) (G)
Light Rail	84%	88%	79%	90% <sup>DE</sup>	79%	80%	80%	85%
Orbit or Flash neighborhood shuttles	37%	39%	35%	40%	41% <sup>E</sup>	28%	55% <sup>G</sup>	31%
Local or express bus	28%	27%	28%	35%	24%	26%	45% <sup>G</sup>	20%
Don't Know/Refused	7%	3%	11% <sup>A</sup>	2%	8%	11% <sup>C</sup>	7%	6%

<sup>ABC</sup> Indicates significant differences compared to other sub-group at the 95% level.

## B. Length of Use of Transit System

The proportion of surveyed transit riders who report having used the transit service for less than a year was 5%, however, nearly one-half (47%) have been riding transit in the city for more than 6 years (up from 31% in 2014).

**Table 3a: Length of Use of Transit System**

(Among those who have ridden in the past year)

Time Riding	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)	2006 (n=119)
Less than a year	5%	6%	9%	14%	31%	17%
1 – 2 years	9%	10%	13%	27%	13%	27%
2 – 4 years	15%*	24%	29%	13%	19%	20%
4 – 6 years	19%	23%	16%	10%	13%	13%
6 – 10 years	22%*	13%	13%	25%	20%	21%
>10 years	25%	18%	12%	NA	NA	NA
Don't know	4%	7%	8%	11%	4%	4%

Q7: How long have you been using the transit system in Tempe?

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

### C. Reasons for Using Public Transit

**Convenience and getting to and from recreation were again the most popular reasons for riding public transit (mentioned by 24% and 22%, respectively). “Don’t have a car” was a distant third with only 8% citing this reason.**

**Table 3b: Top Reasons for Using Public Transit**  
(Among those who have ridden in the past year)

Responses	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)	2006 (n=119)
Convenient	24%	27%	16%	24%	15%	14%
Get to/from recreation	22%	18%	14%	7%	4%	2%
Don’t have car	8%	12%	11%	9%	16%	29%
Get to/from school	5%	4%	2%	2%	7%	5%
To avoid parking	5%	3%	10%	7%	3%	4%
Need to get to Phoenix	4%	3%	-	-	-	-
Dislike Driving/ Take a break from driving	4%	1%	-	-	-	-
Saves money	3%	6%	7%	4%	17%	8%
To go downtown	3%	3%	6%	5%	-	-
A way to get around	3%	3%	2%	-	-	-
To avoid drinking and driving	3%	2%	-	-	-	-
To get to/from work	3%	2%	-	-	-	-
Vehicle not available/ Having car problems	3%	1%	-	-	-	-
Avoid driving in traffic	-	3%	2%	-	-	-

Q8: What is the main reason you ride public transit?

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

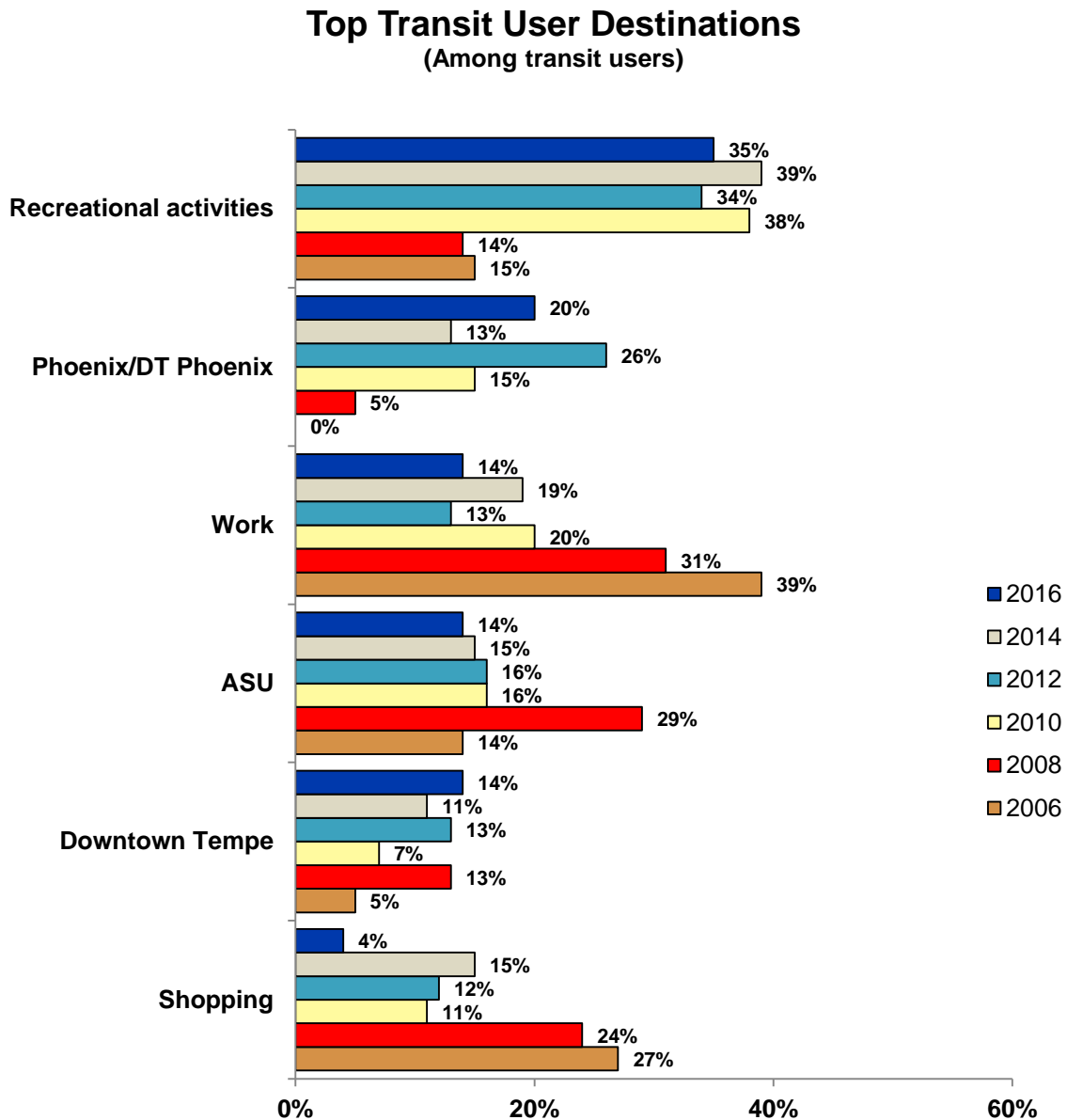
Note: In years prior to 2010, the question was worded: *What is the main reason you ride the bus?*

Note: Response categories with less than 3% mentions in 2016 not shown in table.



**D. Public Transit Destinations**

**Recreational activities and Phoenix/Downtown Phoenix were the top destinations for transit riders (35% and 20%, respectively).** ASU, work and Downtown Tempe were each mentioned by 14% of riders.



Q9: Where do you go when you use public transit?

2016 n=246 , 2014 n=256, 2012 n=252, 2010 n=304, 2008 n=166, 2006 n=119

**A lower proportion of riders in 2016 indicated they use public transit to go *shopping* (4% vs. 15%), however the destination of *Phoenix/Downtown Phoenix* increased significantly to 20% up from 13% in 2014.**

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

Responses	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)	2006 (n=119)
Recreational activities	35%	39%	34%	38%	14%	15%
DT Phoenix	20%*	13%	26%	15%	5%	-
Work	14%	19%	13%	20%	31%	39%
ASU	14%	15%	16%	16%	29%	14%
Downtown Tempe	14%	11%	13%	7%	13%	5%
Downtown (gen)	6%	1%	-	-	-	-
Phoenix	5%	2%	-	-	-	-
Shopping	4%*	15%	12%	11%	24%	27%
High School	4%*	1%	-	-	-	-
Airport	4%	-	-	-	-	-
Community College	3%	2%				
Around Tempe	3%*	<1%				
Visit friends/family	2%	4%	5%	2%	5%	6%
Library	2%	4%	3%	2%	7%	2%
Errands	1%	6%	8%	5%	7%	14%

Q9: *Where do you go when you use public transit?*

\*Indicates significant difference compared to 2014 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 1% mentions in 2016 not displayed.

**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 cleanliness of the bus stops and their comfort on the bus (91% and 90% very + somewhat satisfied, respectively).** Despite their high satisfaction with bus stops for cleanliness, riders expressed the lowest level of satisfaction with *security and amenities at bus stops* (72% and 74%).

**There were no statistically relevant shifts between 2014 and 2016 bus satisfaction ratings.**

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

Attribute	2016 (n=128)			% Very/somewhat satisfied			
	Very/ somewhat Satisfied	Very Satisfied	Somewhat Satisfied	2014 (n=109)	2012 (n=141)	2010 (n=203)	2008 (n=166)
Cleanliness of bus stops	91%	44%	47%	87%	85%	NA	NA
Comfort on the bus	90%	43%	47%	92%	92%	95%	93%
Cleanliness of the bus	89%	49%	39%	91%	88%	92%	89%
Driver courtesy and professionalism	89%	70%	19%	90%	93%	93%	89%
Safety on the bus	86%	49%	37%	79%	82%	95%	92%
Route frequency	81%	42%	39%	79%	79%	74%	78%
Ease of using the bus	81%	53%	27%	84%	93%	91%	90%
Hours of operation	80%	40%	40%	81%	84%	NA	NA
Reliability/on-time performance of buses	80%	45%	35%	85%	86%	80%	76%
Bus service during major events	76%	40%	36%	72%	70%	NA	NA
Amenities of bus stops	74%	25%	49%	76%	72%	NA	NA
Security at bus stops	72%	30%	43%	65%	65%	NA	NA

Q10: In general how satisfied are you with...

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

Among riders who indicated dissatisfaction with one or more attribute, the most common suggestions of what could be done to improve satisfaction with buses is *more frequent buses* (mentioned by 32%), *better and more routes* (15%), *shade at bus stops* (13%), and *safer buses* (11%).

**Table 5b: Suggested Improvements**

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

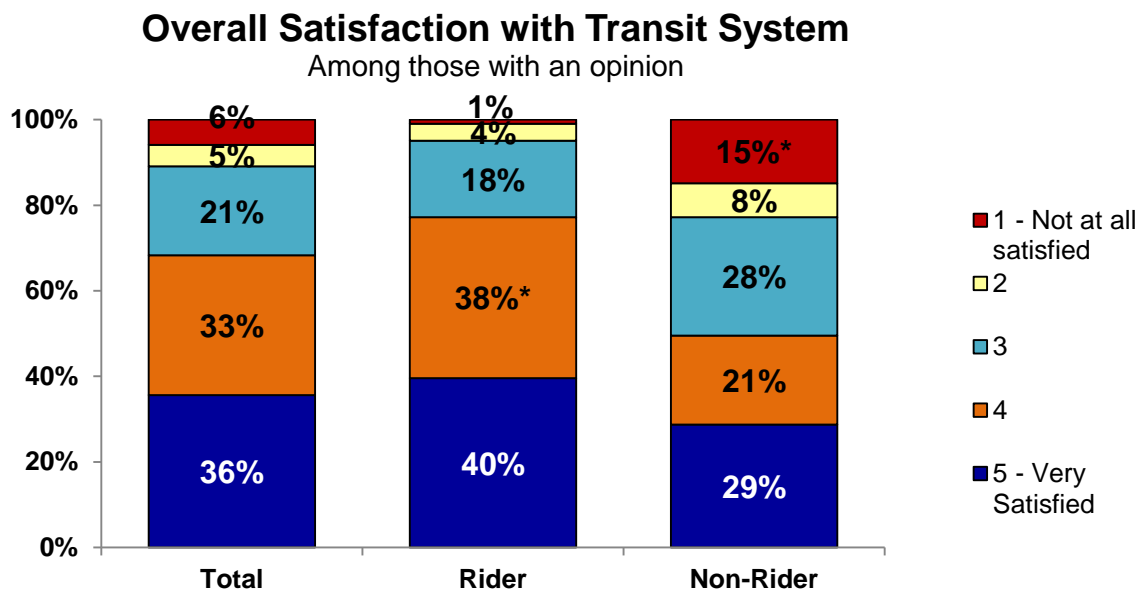
Q10a: You indicated dissatisfaction with some of the attributes, what could be done to improve your satisfaction with the bus service?

Note: Response categories with less than 5% mentions in 2016 not shown in table.

### III. Overall Satisfaction and Improvement of Tempe’s Transit System

#### A. Overall Satisfaction with Tempe Transit System

More than two-thirds (69%) of residents with an opinion indicated they were highly satisfied with the Tempe transit system. This figure is consistent with the prior three waves of research. As in the past, current riders were more likely to provide a top-two rating (78% vs. 50% of non-riders).



Total n=352, Rider: n=244, Non-Rider: n=108

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

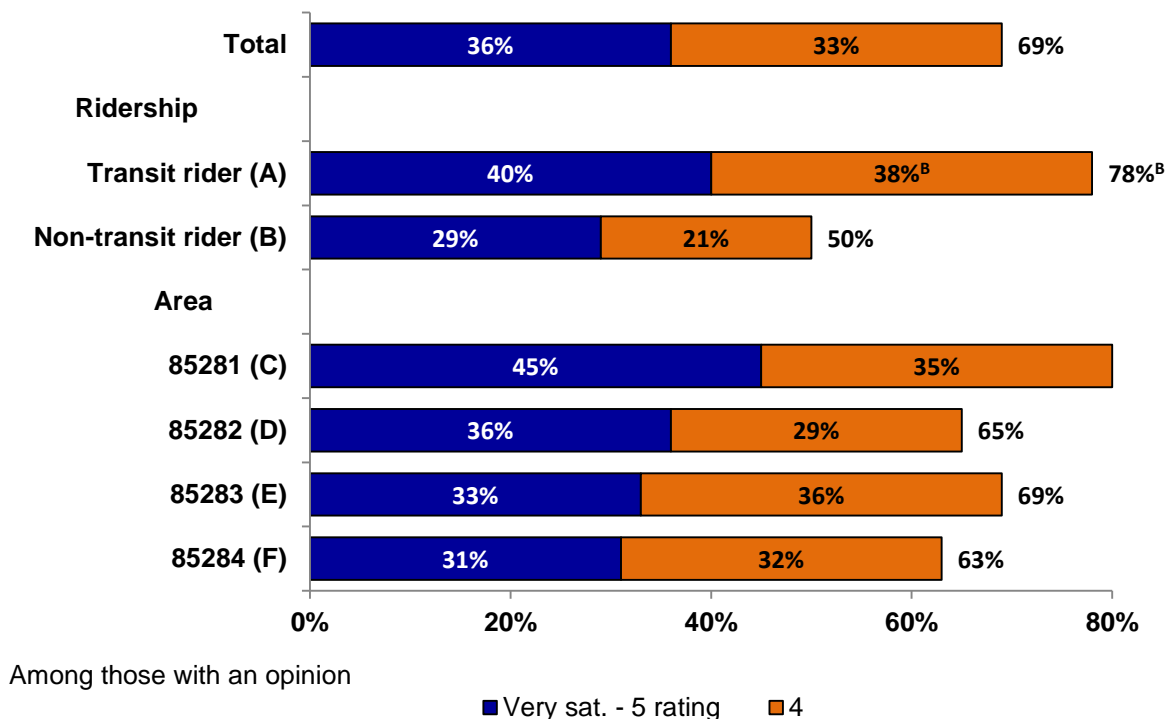
**Table 6: Overall Satisfaction with Transit System in Tempe**  
(Among those with an opinion)

Satisfaction	2016 (n=352)	2014 (n=376)	2012 (n=355)	2010 (n=377)
<b>NET very + somewhat satisfied</b>	<b>69%</b>	<b>72%</b>	<b>69%</b>	<b>66%</b>
5 – Very satisfied	36%	37%	39%	29%
4	33%	35%	30%	37%
3	21%	17%	21%	22%
2	5%	6%	5%	5%
1 – Very dissatisfied	6%	5%	5%	6%
Don't know (not included in %)	12%	8%	11%	12%

Q11. How satisfied are you with the quality of the transit system in Tempe?

In addition to differences between bus riders and non-riders, satisfaction ratings were higher statistically for residents in 85281 than for residents in 85282 and 85284 (80% vs. 65% and 63%).

### Overall Satisfaction with Transit Service (Top Two Ratings)



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”) mention *good service* (32%), and *frequent and reliable service* (18%). These were also the top two mentions in 2014.

Residents who provided “1”, “2”, or “3” ratings mentioned needing *better/more routes* (14%) and *more frequent buses with extended hours* (8%) as needed improvements. Again, these were also the top two mentions in 2014.

**Table 7: Reason for Satisfaction Level**

Responses	Satisfaction Level		
	Total (n=352)	4,5 (n=242)	1,2,3 (n=110)
<b>Positive</b>			
Satisfied, good service	24%	32%	8%
Frequent, available, reliable	13%	18%	1%
Convenient (general)	8%	11%	--
Good routes, convenient routes	6%	8%	--
Buses/light rail are clean	4%	5%	--
Like the light rail/light rail is good	4%	5%	2%
Provides transportation for those in need	3%	4%	2%
Saves money, cheap, free	3%	4%	--
Easy to use	2%	3%	1%
<b>Neutral</b>			
Don't use it, never used it	10%	5%	19%
Always room for improvement	5%	4%	9%
It's average/okay	3%	2%	5%
Drivers are adequate/well-trained	2%	3%	--
<b>Negative/Suggestions</b>			
Need better/more routes, connections, doesn't go where I need to	8%	5%	14%
More frequent buses, more hours	6%	5%	8%
Don't like the type of people who ride the bus	4%	3%	5%
Need more security	3%	2%	6%
It was dirty/needs to be cleaned up a little bit	3%	2%	5%
Buses are not on time	2%	1%	2%
Bus stops need shade	2%	3%	1%
Buses take too long, too slow	2%	<1%	5%
Don't know	4%	4%	5%

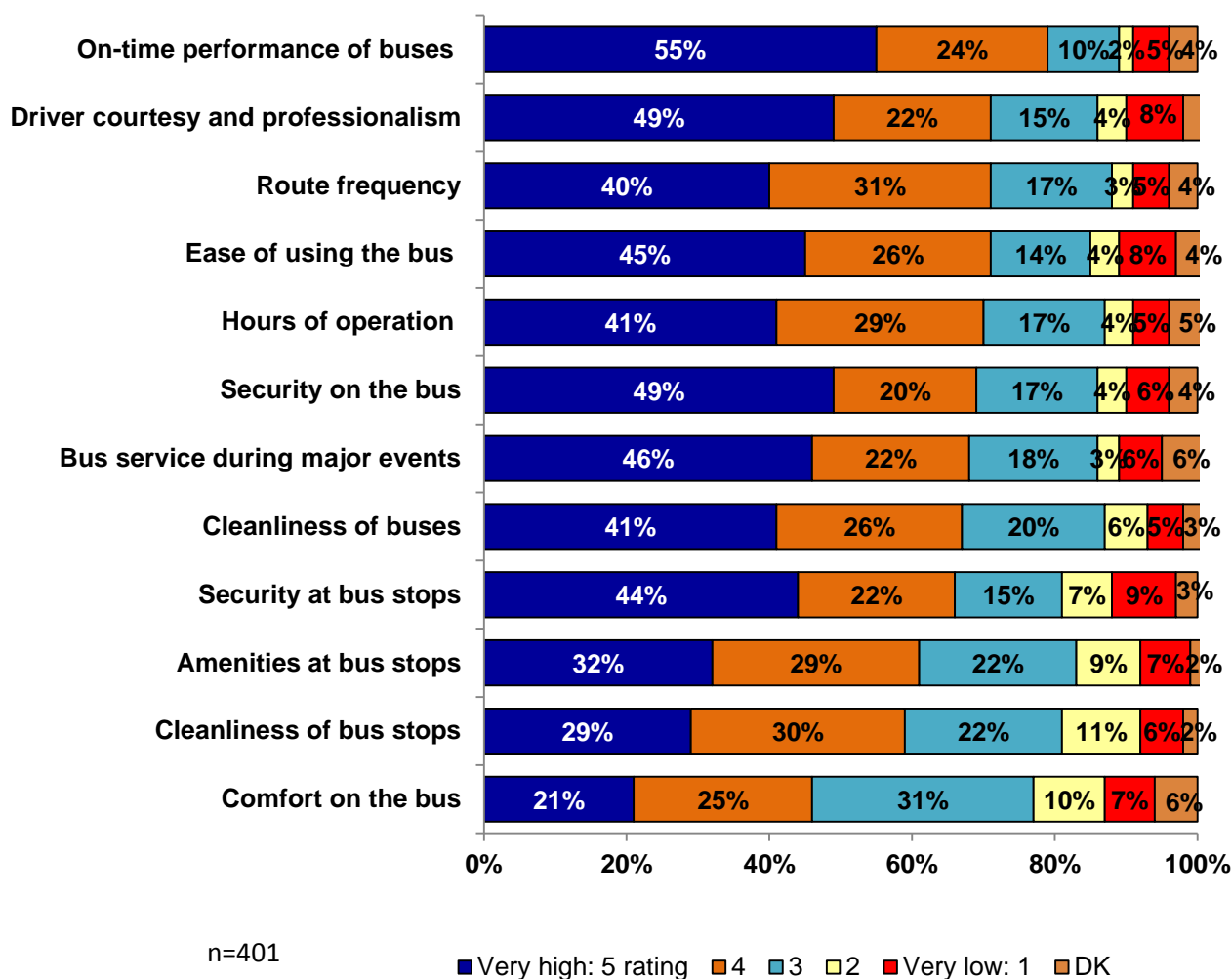
Q11a: Please explain your rating.

Note: Response categories with less than 2% total mentions in 2016 not shown in table.

### B. Priority of Possible Improvements to Tempe’s Transit System

Residents were read a list of possible transit improvements for the City and then asked to rate how high of a priority each improvement should be for the City on a one to five scale, with a “5” indicating a very high priority and a “1” indicating a very low priority. **On-time performance of buses continued to top the list with the highest percentage of “high priority” ratings as it did in 2014 (79% of residents provided a top-two rating).** Attributes considered to be less of a priority included *cleanliness of the bus stops* (58%) and *comfort on the bus* (47%), again similar to 2014.

#### Priority of Transit Improvements





**Table 8a: Priority of Possible Transit Improvements  
Percent Top Two Ratings  
Tracking Breakdown**

	2016 (n=401)	2014 (n=409)
On-time performance of buses	79%	77%
Driver courtesy and professionalism	71%	68%
Route frequency	71%	70%
Ease of using the bus	70%	65%
Hours of operation	70%	69%
Security on the bus	69%	66%
Bus service during major events	68%	66%
Cleanliness of buses	67%	69%
Security at bus stops	66%	61%
Amenities at bus stops	61%	58%
Cleanliness of bus stops	59%	61%
Comfort on the bus	47%*	54%

*Q12-23: Now I'm going to read you a list of possible transit improvements. Please indicate how high of a priority each improvement should be for the City of Tempe.*

Note: Attribute list prior to 2012 contained different attributes, this data is available in previous reports.

Female residents were more likely than male residents to provide top-two priority ratings for one-half of the attributes, as shown in Table 8b below. Notably women express more concern over security, cleanliness, courtesy and ease of use. Prioritization ratings between public transit riders and non-riders, for the most part, did not vary significantly.

**Table 8b: Priority of Possible Transit Improvements  
Percent Top Two Ratings  
Demographic Breakdown**

	2016 (n=401)	Gender		Transit Rider Status	
		Male (n=209) (A)	Female (n=192) (B)	Rider (n=246) (C)	Non-Rider (n=152) (D)
On-time performance of buses	79%	77%	82%	80%	80%
Driver courtesy and professionalism	71%	65%	77% <sup>A</sup>	70%	74%
Route frequency	71%	68%	73%	70%	72%
Ease of using the bus	70%	66%	75% <sup>A</sup>	70%	72%
Hours of operation	70%	67%	74%	72%	69%
Security on the bus	69%	65%	73% <sup>A</sup>	69%	70%
Bus service during major events	68%	67%	70%	70%	66%
Cleanliness of buses	67%	62%	72% <sup>A</sup>	66%	69%
Security at bus stops	66%	59%	73% <sup>A</sup>	65%	68%
Amenities at bus stops	61%	58%	65%	58%	66%
Cleanliness of bus stops	59%	50%	69% <sup>A</sup>	53%	69% <sup>C</sup>
Comfort on the bus	47%	42%	51%	46%	49%

<sup>ABCD</sup> Indicates significantly higher percentage than comparative sub-group at the 95% level.

## IV. Potential Use of Tempe's Transit System

### A. Reasons for Not Riding Transit

When non-riders were asked why they do not use public transit, approximately three in five (59%) indicated they *prefer using a car* and an additional 7% said *they need their car for business*.

**Table 9: Top Reasons for Not Using Public Transit  
(Among those who have not used public transit in the past year)**

Reasons	2016 (n=152)	2014 (n=143)	2012 (n=148)	2010 (n=123)
Prefer car	59%	58%	46%	45%
Bus stop far away	11%	11%	12%	10%
Takes too long	8%	6%	10%	11%
Need car for business	7%	1%	--	--
Doesn't go where they need to go	7%	7%	12%	10%
Inconvenient (general)	6%	4%	5%	8%
Don't know how to use transit system/bus	6%	2%	4%	2%
Don't need to, don't have the need to use	4%	9%	6%	15%
Health/disability	3%	3%	5%	7%
Don't have to go far distances	3%	3%	5%	5%
Bike	3%	2%	--	--
Work from home/Telecommute	3%	--	--	--
Transit is not secure	3%	1%	--	--
Not frequent enough	2%	2%	3%	3%
Too hot/cold/rainy	1%	2%	3%	2%
Don't know	2%	2%	2%	2%

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? Question changed in 2010 to current wording above.

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

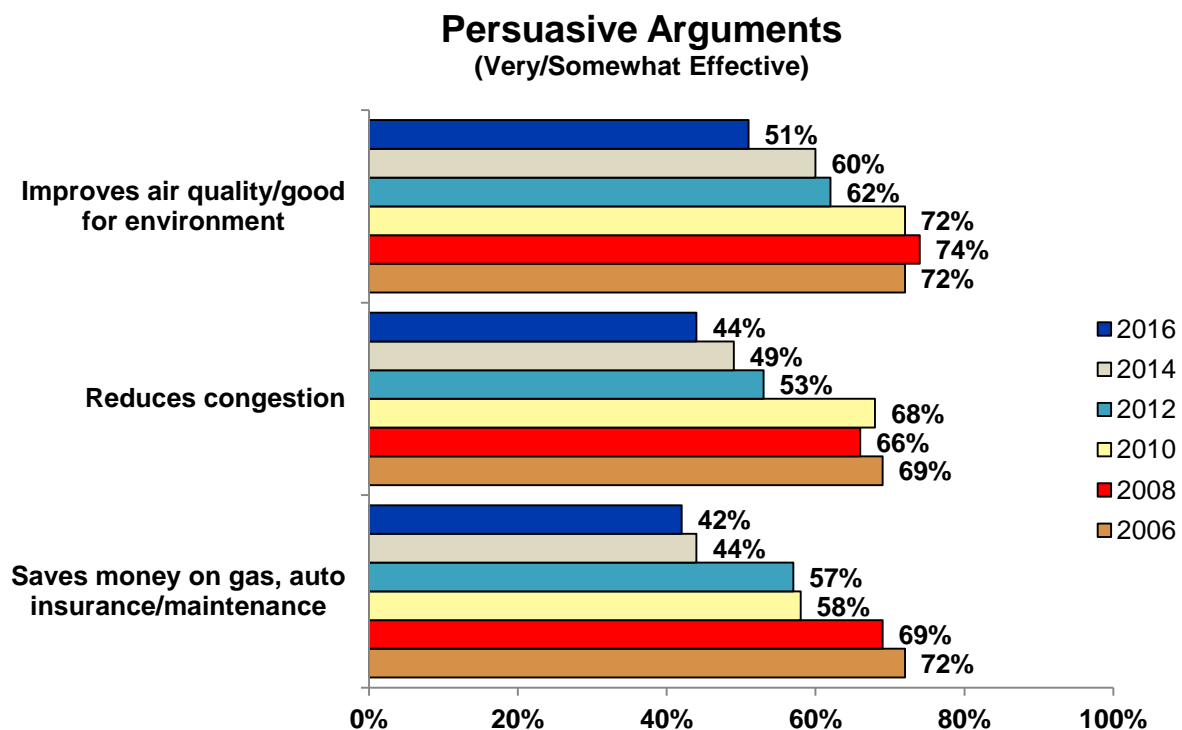
Note: Reasons with less than 2% mentions in 2016 not shown in table.

### B. Effectiveness of Persuasive Arguments

Residents were asked to rate the effectiveness of three arguments for motivating public transit usage. Ratings were completed on a four-point nominal scale (“very effective,” “somewhat effective,” “not very effective,” and “not at all effective”).

Perceived effectiveness of each argument presented to residents regarding motivation to use public transit has been declining since 2006.

- The argument *improves air quality/good for environment* was perceived as either “somewhat effective” or “very effective” by 51% of residents, compared to a range of 60% to 74% since 2006.
- *Reduces congestion* was seen as effective by 44%, compared to a range of 49% to 69% since 2006.
- *Saves money on gas, auto insurance/maintenance* was perceived as effective by 45% (the same as last year), compared to a range of 57% to 72% between 2006 and 2012.



Q6: 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.

Note: Slight wording change in 2012 to benefit statements.

2016 n=152 , 2014 n=143, 2012 n=148, 2010 n=123; 2008 n=258; 2006 n=289

**Table 10: Effectiveness of Reasons to Persuade Transit Usage**  
 (Among those who have not ridden a bus in the past year)

	2016 (n=152)	2014 (n=143)	2012 (n=148)	2010 (n=123)	2008 (n=258)	2006 (n=289)
<b>Improves air quality</b>						
Effective**	51%	60%	62%	72%	74%	72%
Not effective***	44%	37%	35%	24%	24%	23%
<b>Reduces congest.</b>						
Effective**	44%	49%	53%	68%	66%	69%
Not effective***	54%	46%	44%	29%	33%	28%
<b>Save money on gas, insurance/ maintenance</b>						
Effective**	42%	45%	57%	58%	69%	72%
Not effective***	55%	52%	40%	41%	31%	24%

Q6: 2006-2008: For each of the following benefits to riding the bus, please indicate how effective it would be in persuading you to ride the bus instead of using your current mode of transportation.

2010-2016: 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?

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

\*\* 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) remained statistically comparable to recent years (44%), as did the proportion of TIM-aware residents who knew the correct meaning of the TIM acronym (65%).**

Those more likely to have net awareness of TIM include:

- Residents aged 18 to 54 vs. older residents (63% vs. 35%)
- Transit riders vs. non-transit riders (55% vs. 29%)
- Those living in Tempe six or more years vs. those living in Tempe for a shorter time frame (48% vs. 23%)

**Table 11: Awareness of TIM**

	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)	2008 (n=424)	2006 (n=407)
<b>Total Awareness (Unaided + Aided)</b>	<b>44%</b>	<b>50%</b>	<b>53%</b>	<b>54%</b>	<b>48%</b>	<b>38%</b>
Unaided Awareness	19%	18%	21%	24%	27%	18%
Aided Awareness	25%	32%	32%	30%	21%	21%
<b>Meaning of TIM</b>	(n=178)	(n=204)	(n=211)	(n=230)	(n=202)	(n=155)
“Tempe in Motion”	65%	68%	69%	69%	74%	67%
Other	9%	5%	5%	4%	6%	6%
Don’t know	26%	26%	26%	27%	20%	28%

Q24/25: What is the name of Tempe’s transit/transportation program? Have you ever heard of TIM?

Q25a IF YES: To the best of your knowledge, what does TIM mean or stand for?

## B. Source of Awareness

Residents aware of TIM recalled hearing about it through **street banners (24%)** and **signs on buses (11%)**. Sources of awareness were generally consistent with 2014.

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

Responses	2016 (n=178)	2014 (n=204)	2012 (n=211)	2010 (n=230)	2008 (n=202)	2006 (n=155)
Street banner	20%	24%	29%	17%	20%	19%
Signs on the buses	11%	15%	13%	18%	20%	20%
Bill inserts	7%	3%	9%	2%	2%	3%
Word of mouth	6%	4%	6%	3%	4%	3%
Newspaper/Print Ads	6%	5%	6%	6%	7%	15%
Sign (general)	6%*	1%	--	--	--	--
Direct mail	4%	3%	5%	5%	2%	4%
TV	4%	3%	6%	9%	10%	19%
ASU/School	4%	5%	--	3%	2%	--
Library	4%	--	--	--	--	--
Pandora	3%	2%	--	--	--	--
Internet/online ads	3%	3%	3%	4%	3%	4%
I live here/lived here a long time	2%	2%	--	--	--	--
Ad/Commercial (unspec)	2%	--	--	--	--	--
Billboard	2%	1%	--	--	--	--
Flyers/brochures	2%	3%	2%	6%	4%	--
On the light rail	2%	--	--	--	--	--
Work	--	2%	1%	1%	3%	--
Don't know	7%	13%	16%	12%	14%	14%

Q26: How did you hear about it?

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

Note: Sources with less than 2% mentions in 2016 not shown in table.

**C. Advertising Effect on Perception of Tempe Transportation Options**

Over half (54%) of those who heard about TIM via newspaper, online, direct mail, or street banners indicated the advertising had a positive impact on their impression of transportation options in Tempe. An additional 39% said the advertising had *no effect*. Only 2% 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 four (25%) indicated “yes” when asked whether the advertising message persuaded them to try public transit in Tempe**. This is not significantly different than the 20% and 28% recorded in the prior two waves of research.

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

	2016 (n=71)	2014 (n=88)	2012 (n=94)	2010 (n=79)	2008 (n=120)	2006 (n=89)
Make you think more positively about transportation options in Tempe	54%	52%	42%	58%	57%	52%
Have no effect on your perceptions	39%	41%	52%	38%	42%	43%
Make you think negatively about transportation options in Tempe	2%	2%	2%	1%	1%	4%
Don't know	5%	5%	4%	3%	--	1%

Q27: How did the messages affect your perception of the transportation system in Tempe?  
Note: Question changed in 2008 from “bus system” to “transportation.”

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

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

Q28: Did the advertising messages persuade you to try public transit in Tempe?



## VI. Tempe Bicycling and Walking

### A. Bicycle Usage

**Approximately three in five residents (62%) reported they have access to a bicycle.**

This is statistically similar to 2014 and 2012, but remains somewhat elevated over prior years. Those who have a bike, but only ride it never/occasionally (28%) were asked why this was the case (n=70). Nearly four in ten (38%) of those who never or only occasionally ride their bike say it is because it is *too hot outside*. *Health issues* and a *far distance* rounded out the top three reasons with 9% mentioning each.

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

- Male residents vs. female residents (69% vs. 55%)
- Residents aged 18 to 54 vs. older residents (68% vs. 51%)
- Those with annual household incomes of \$80,000 or more vs. those with lower incomes (73% vs. 56%)
- Married residents (70% vs. 52% of singles)
- Those who reside in zip code 85284 (76% vs. 54% to 64% in other zip codes)

**Among those who reported having access to a bike, 71% reported they ride their bike at least once a month, which is virtually the same as in 2014.**

**Table 15: Access to and Frequency of Bike Use**

	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)	2008 (n=424)	2006 (n=407)
<b>Have access to bike</b>	<b>62%</b>	<b>61%</b>	<b>62%</b>	<b>58%</b>	<b>56%</b>	<b>53%</b>
<b>Frequency</b>						
Never/occasionally	28%	30%	32%	35%	29%	32%
Once or twice	23%	18%	18%	17%	19%	19%
Three to five times	20%	17%	11%	13%	19%	14%
Six to ten times	8%	8%	12%	9%	10%	8%
>10 times	20%	27%	24%	24%	23%	25%
Don't know/not sure	1%	1%	2%	2%	--	2%

Q29: Do you have access to a bicycle that you can ride when you want to?

Q30: How many times in a month do you ride your bike?

## B. Bicycle Travel Patterns

Approximately three in seven (44%) of those who indicated riding their bikes at least once a month report they ride for *exercise*, while 13% report riding a bike to *the store* and 12% ride a bike to *work/school*. There was a significant increase in the percent of residents reporting to ride their bicycles to the local parks (10% up from 4%).

**Table 16: Bike Riding Destinations**

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

Responses	2016 (n=176)	2014 (n=174)	2012 (n=163)	2010 (n=155)	2008 (n=169)	2006 (n=142)
Exercise	44%	53%	58%	60%	56%	59%
Store	13%	14%	15%	16%	19%	14%
Work/school	12%	24%	17%	24%	25%	24%
Parks	10%*	4%	6%	4%	6%	8%
Along the canal	9%	4%	--	--	--	--
Tempe Town Lake	5%	4%	6%	7%	4%	1%
Mill Avenue/ Downtown Tempe	5%	3%	5%	3%	1%	2%
Friend's house	4%	9%	7%	3%	6%	2%
Restaurant/Dinner	4%	3%	2%	1%	2%	--
Everywhere	3%	3%	2%	1%	1%	3%
The bar/when I've been drinking	3%	3%	1%	--	--	--
ASU	2%	5%	1%	3%	6%	1%
Mountains (unspecified)	2%	--	--	--	--	--
South Mountain	2%	--	--	--	--	--
The light rail	2%	--	--	--	--	--
Run errands	2%	2%	3%	1%	2%	5%

Q30b: Where do you go when you ride your bike?

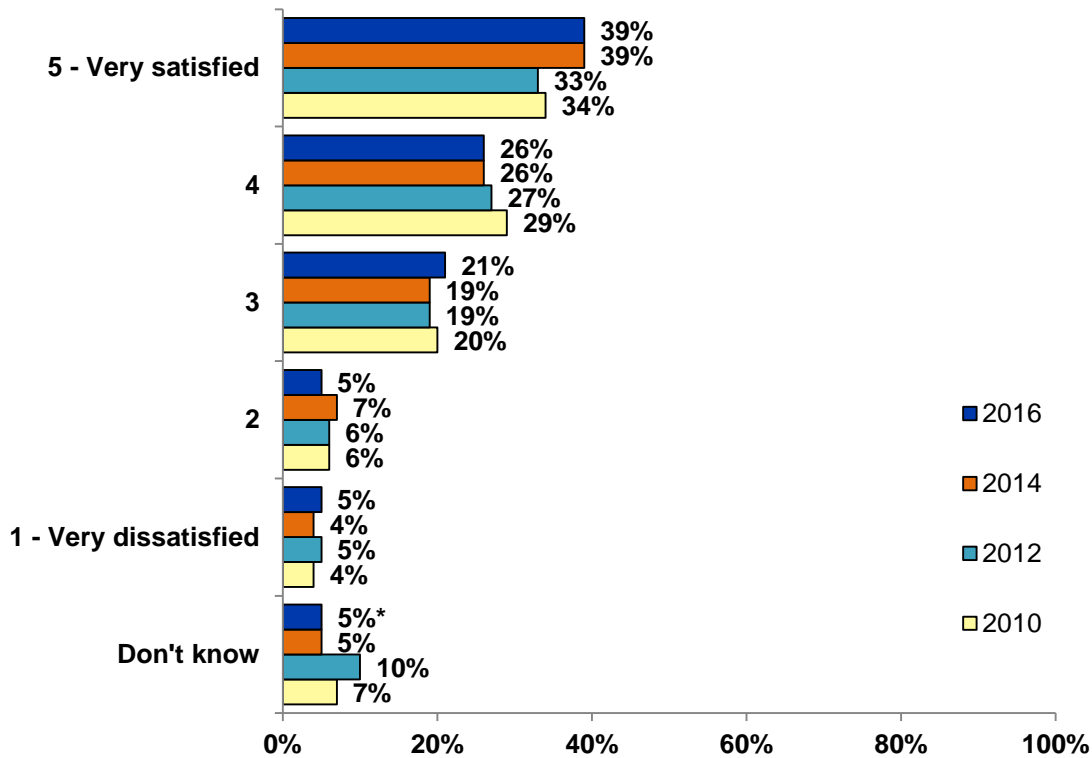
\*Indicates significant difference compared to 2014 at the 95% confidence level.

Note: Destinations with less than 2% mentions in 2016 not shown in table.

**C. Overall Satisfaction with Bicycle and Pedestrian Paths**

As in 2014, two thirds (65%) of residents reported being satisfied with the quality of walking and biking paths in Tempe.

**Overall Satisfaction with Tempe Walking and Bike Paths**



2016 n=401, 2014 n=409, 2012 n=400, 2010 n=427

Q32: How satisfied are you with the quality of the walking and biking paths in Tempe?

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

Residents were asked to explain the reason(s) for their ratings for the bike and pedestrian paths. **Among those with an opinion, the most common positive reasons for ratings included *they are fine the way they are/no problems (18%)* and *they are everywhere, there are plenty of paths (12%)*.** Of note: 5% stated they had 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 of them or need more bike lanes (7% and 4%)*.**

**Table 17: Reasons for Satisfaction Rating**  
(Among those with an opinion)

Responses	2016 (n=380)	2014 (n=390)	2012 (n=362)	2010 (n=397)
<b>Positive</b>				
They are fine the way they are, no problems	18%	29%	23%	20%
They are everywhere, plenty of paths	12%	12%	15%	16%
They are safe	7%	5%	6%	11%
Have good routes, connect well	6%	3%	6%	4%
They are properly maintained, well landscaped	6%	4%	12%	6%
Have seen/noticed improvements/upgrades	5%*	2%	--	--
Easy to use, accessible	5%	6%	6%	4%
Paths are well lit	4%	5%	5%	7%
Paths are wide enough, have enough room	3%	3%	3%	4%
Paths are visible to motorists/clearly marked	3%	2%	4%	--
They added more paths	2%*	1%	--	--
<b>Neutral</b>				
Never use them, No knowledge of them	6%	5%	4%	5%
There is always room for improvement	4%	4%	3%	2%
<b>Negative/Suggestions</b>				
Don't seem safe enough, make them safer	9%	8%	10%	11%
Could use more of them	7%	6%	4%	9%
Need more bike lanes	4%	9%	11%	7%
Dissatisfied that they made a 3 lane road to a 2 lane road	3%	--	--	--
No one used the bike lanes	3%	--	--	--
They are not maintained	2%	2%	2%	2%
Better markings for bike/walk paths	2%	1%	--	--
Traffic congestion is getting higher	2%	--	--	--
Lanes/paths need to be wider	1%	4%	5%	3%
<b>Don't know</b>	<b>5%</b>	<b>6%</b>	<b>6%</b>	<b>5%</b>

Q31a: Please explain your rating

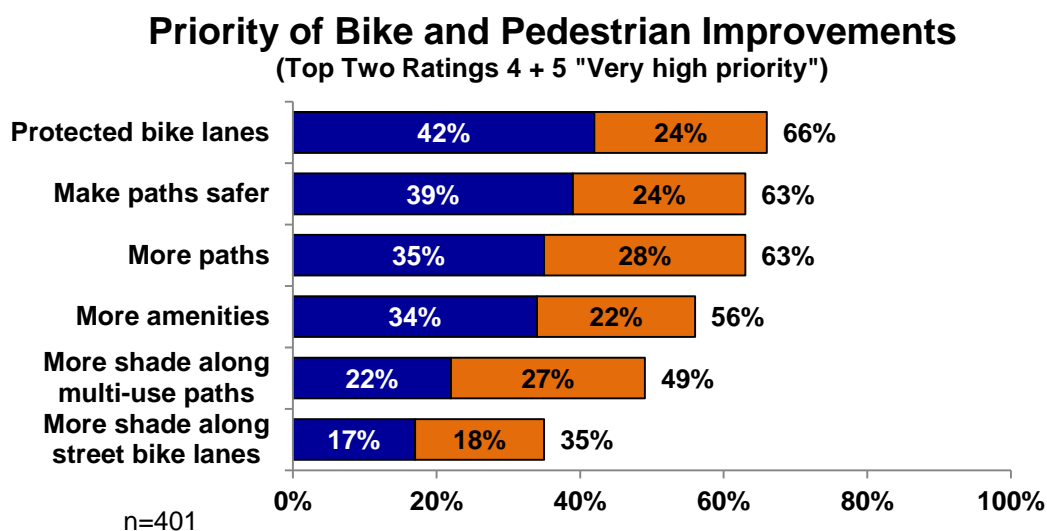
\*Indicates significant difference compared to 2014 at the 95% confidence level.

Note: Response categories with less than 2% total mentions in 2016 not shown in table.

### D. Priority of Possible Bicycle and Pedestrian Improvements

Residents were provided with a list of possible improvements for the biking and walking paths in Tempe, and then asked to indicate how high of a priority each improvement should be for the City. In 2016, two new attributes were included in the list (protected bike lanes and more shade along bike lanes).

**Protected bike lanes, safer paths and adding more bike and pedestrian paths received the highest percentage of priority ratings** (63% to 66% rated a 4 or 5, where 5 means “very high priority”). Proportions of top-two ratings for each attribute were generally comparable to 2014 figures. **With just over one-third rating the need for more shade along street bike lanes as a 4 or 5, this attribute ranked as the lowest priority.**



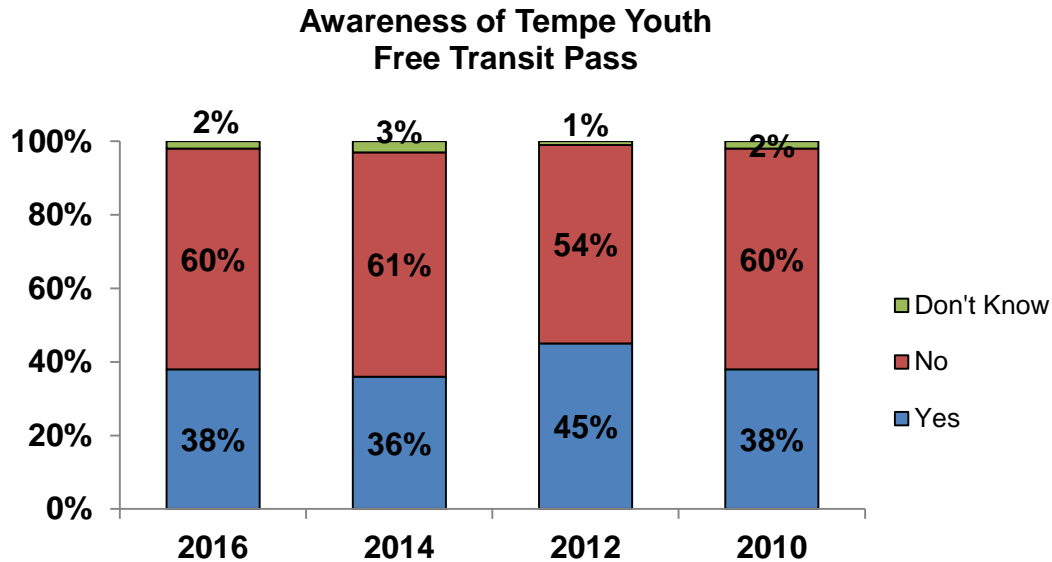
**Table 18: Priority of Possible Bicycle and Pedestrian Improvements**

Attribute	Top Two (4+5) rating			
	2016 (n=401)	2014 (n=409)	2012 (n=400)	2010 (n=427)
Protected bike lanes	66%	--	--	--
Make paths safer	63%	58%	56%	70%
Add more bike and pedestrian paths	63%	64%	62%	60%
More amenities for bikes and pedestrians along the paths such as water fountains and lighting	56%	64%	61%	57%
More shade along multi-use paths	48%	49%	46%	54%
More shade along street bike lanes	35%	--	--	--

Q32-35: Now I'm going to read you a list of possible bicycle and pedestrian improvements. Please indicate how high of a priority each improvement should be for the City of Tempe.

## VII. Tempe Youth Free Transit Pass Program

Nearly two in five (38%) residents surveyed in 2016 reported having heard of the Tempe Youth Free Transit Pass. This is consistent with 2014 awareness. Public transit users were more likely than non-users to say “yes” (43% vs. 29%). Residents in 85282 are most likely to be aware of the pass (45%) and those in 85284 are the least likely to be familiar with them (28%).



2016 n=401, 2014 n=409, 2012 n=400, 2010 n=427

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

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

Among those aware of the program, one quarter (24%) indicated they heard about it *through school* followed by 16% citing *word-of-mouth*. These were also the top sources mentioned in 2014 and 2012.

**Table 19: Sources for Tempe Youth Transit Pass Program Information**  
(Among those aware of the program)

Sources	2016 (n=150)	2014 (n=148)	2012 (n=179)
Through school	24%	20%	24%
Word-of-mouth (friends/family)	16%	20%	19%
Library	11%	7%	6%
Bill insert	8%	3%	--
Advertisement	4%	8%	5%
Letter from the City	3%	5%	5%
Newspaper	3%	6%	9%
On the bus	3%	4%	--
Employer/work	2%	5%	1%
Web site	1%	2%	3%
Don't know	7%	5%	10%

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

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

Note: Sources with less than 3% mentions in 2016 not shown in table except for in a few cases to maintain tracking history.

Note: Prior to 2010, question was asked only of people with children aged 6 years and older. This data is available in earlier reports.

**APPENDIX A: Questionnaire**



**City of Tempe – Tempe in Motion  
Questionnaire – September 2016**

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 XXX 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
  
2. What is your zip code?
  - a. 85281
  - b. 85282
  - c. 85283
  - d. 85284
  - e. Other/Don't know/Refused – THANK AND TERMINATE
  
3. 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. 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
  
- 4a. IF a, b, c, d or e IN Q4: Which of the following have you used in Tempe in the past year?  
MULTIPLE RESPONSES ALLOWED
  - a. Local or express bus
  - b. Orbit or Flash neighborhood shuttles
  - c. Light rail

5. ASK IF “f- don’t use transit” IN Q4: 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)
- I prefer to drive my car
  - I don’t know how to use the transit system
  - The stops are too far away
  - I don’t like the type of people who use transit
  - Using public transit takes too long
  - Service isn’t frequent enough
  - Transit is not secure
  - Stops are not secure
  - I need my car for business
  - Public transit is dirty
  - Other: Specify \_\_\_\_\_
  - Don’t know
6. ASK IF “f- don’t use transit” IN Q4: 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?
- Saves money on gas, auto insurance, and car maintenance
  - Improves air quality and is good for the environment
  - Reduces congestion

ASK IF a, b, c, d, e in Q4: ALL OTHERS SKIP TO Q11

7. 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
8. What is the main reason you use public transit? (DO NOT READ LIST)
- Convenient
  - Don’t have a car
  - Don’t have a driver’s license
  - Enjoy the people
  - Protects the environment
  - Saves money
  - Saves wear and tear on my car
  - Other (SPECIFY: \_\_\_\_\_)

9. 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. Other (SPECIFY: \_\_\_\_\_)

10. ASK ONLY OF THSE WHO ANSWER “A” OR “B” in IN Q4a In general, how satisfied are you with: ROTATE LIST

	Very satisfied	Somewhat satisfied	Somewhat dissatisfied	Very dissatisfied	DK/ no answer
<b>a. Cleanliness of buses</b>	4	3	2	1	0
<b>b. Cleanliness of bus stops</b>	4	3	2	1	0
<b>c. Amenities at bus stops (e.g. shade, seating, bike racks)</b>	4	3	2	1	0
<b>d. Reliability/on-time performance of buses</b>	4	3	2	1	0
<b>e. Driver courtesy and professionalism</b>	4	3	2	1	0
<b>f. Route frequency</b>	4	3	2	1	0
<b>g. Hours of operation</b>	4	3	2	1	0
<b>h. Comfort on the bus</b>	4	3	2	1	0
<b>i. Ease of using the bus (e.g., using schedules, getting to the bus stop, paying fares)</b>	4	3	2	1	0
<b>j. Security at bus stops</b>	4	3	2	1	0
<b>k. Security on the bus</b>	4	3	2	1	0
<b>l. Bus service during major city events</b>	4	3	2	1	0

10a. ONLY ASK IF ANSWER IS SOMEWHAT DISSATISFIED OR VERY DISSATISFIED IN Q10: You indicated dissatisfaction with some of the attributes, what could be done to improve your satisfaction with the bus service?

ASK ALL:

11. 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”
- 11a. Please explain your rating.

12-23. Now I am going to read you a list of possible transit 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....

<b>RANDOM ORDER 12-23</b>	<b>Very high priority</b>				<b>Very low priority</b>	<b>DK / Refused</b>
<b>12. Cleanliness of buses</b>						
<b>13. Cleanliness of bus stops</b>						
<b>14. Amenities at bus stops (e.g. shade, seating, bike racks)</b>						
<b>15. Reliability/on-time performance of buses</b>						
<b>16. Driver courtesy and professionalism</b>						
<b>17. Route frequency</b>						
<b>18. Hours of operation</b>						
<b>19. Comfort on the bus</b>						
<b>20. Ease of using the bus (e.g., using schedules, getting to the bus stop, paying fares)</b>						
<b>21. Security at bus stops</b>						
<b>22. Security on the bus</b>						
<b>23. Bus service during major city events</b>						

23a. Is there anything else that you believe should be a high priority for the City of Tempe regarding public transit that I did not already mention? Please explain.

24. What is the name of Tempe’s transit/transportation program? DO NOT READ LIST
- a. TIM (or Tempe in Motion) – SKIP TO Q25a
  - b. Valley Metro – ASK Q25
  - c. Orbit – ASK Q25
  - c. Other (SPECIFY: \_\_\_\_\_) – ASK Q25
  - d. Don’t know ASK Q25

25. Have you ever heard of TIM? a. YES                      b. NO (IF NO SKIP TO Q29)

- 25a. IF YES in Q25 or “TIM” IN Q24: To the best of your knowledge, what does TIM mean or stand for? DO NOT READ LIST
- a. Tempe In Motion
  - b. Other (SPECIFY: \_\_\_\_\_)
  - c. Don’t know

26. IF YES in Q25 or “TIM” IN Q24: How did you hear about it? MULTIPLE RESPONSES ALLOWED
- a. TV
  - b. Newspaper ads
  - c. Online ads/web
  - d. Direct mail
  - e. Street Banners
  - f. Twitter/Facebook

- g. Pandora
  - h. ASU Campus outdoor ads
  - i. Movie theatre advertising
  - j. Don't know/Not aware of the program
  - k. Other (SPECIFY: \_\_\_\_\_)
27. IF a, b, c, d, e, f, g, h or i in Q26: 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
28. If a or b in Q 27: Did the advertising messages persuade you to try public transit in Tempe?
- a. Yes
  - b. No
  - c. Don't know
29. Do you have access to a bicycle that you can ride when you want to?
- a. Yes
  - b. No – SKIP TO Q32
30. IF YES IN Q29: 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
- 30a. If none/never ride it in Q30: What are some reasons why don't you ride your bike more often? (DO NOT READ LIST)
- a. Takes too long
  - b. Have too much to carry
  - c. Too hot
  - d. Too cold
  - e. Not enough bike lanes/paths
  - f. Too much traffic
  - g. Too dangerous
  - h. Other (SPECIFY: \_\_\_\_\_)
  - i. Don't know/NA
- 30b. IF RIDE BIKE 1+ times in Q30: Where do you go when you ride your bike?
- a. Work/school
  - b. Store
  - c. Friend's house
  - d. Nowhere/just riding for exercise
  - e. Other (SPECIFY: \_\_\_\_\_)
31. What is the main reason you ride a bicycle? (DO NOT READ LIST)
- a. Convenient
  - b. Don't have a car

- c. Don't have a driver's license
- d. Protects the environment
- e. Saves money
- f. Saves wear and tear on my car
- g. Other (SPECIFY: \_\_\_\_\_)

**ASK ALL:**

32. 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"

32a. Please explain your rating.

33-38. Now I am going to read you a list of possible bicycle and pedestrian 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....

<b>RANDOM ORDER 32-35</b>	<b>Very high priority</b>				<b>Very low priority</b>	<b>DK / Refused</b>
33. Miles of bike and pedestrian paths	5	4	3	2	1	0
34. Security/comfort on paths	5	4	3	2	1	0
35. Amenities along the paths like water fountains and lighting	5	4	3	2	1	0
36. Shade along multi-use paths	5	4	3	2	1	0
37. Shade along on street bike lanes	5	4	3	2	1	0
38. Protected bike lanes	5	4	3	2	1	0

### 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. What is your age: \_\_\_\_\_

D3. What is the highest grade of school or year of college that you have completed:

- a. Some high school
- b. High school graduate
- c. Some college
- d. College graduate
- e. Post graduate
- f. No answer

D4. Are you married or single?

- a. Married
- b. Single
- c. No answer

D5 . Have you ever heard of the Tempe Youth Free Transit Pass Program?

- a. Yes
  - b. No
  - c. 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/postcard 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. More than \$100,000
  - g. No answer

Thanks for your time. That concludes our interview.

# 2016 Transit Survey Report Findings Transportation Commission

Jan. 10, 2017





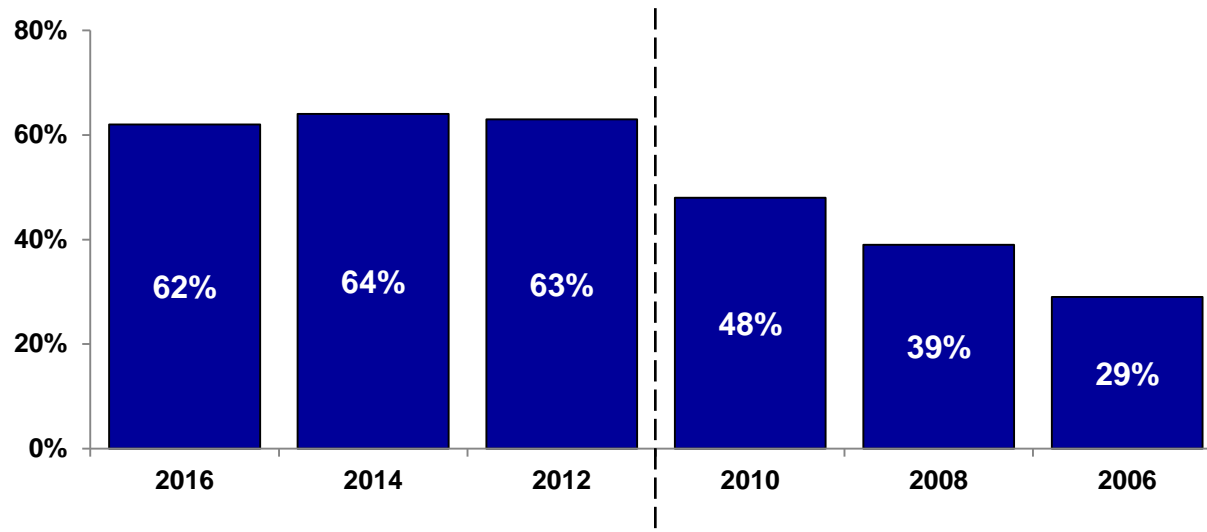
# Methodology



- Gain insights into perceptions about public transit among riders and non-riders
- 401 Tempe residents surveyed (land and cell lines)
- Margin of error for this sample size is approximately ±4.9% at a 95% level of confidence

## Transit Service Usage in Tempe

Percentage of residents who rode Tempe Transit Service in past year



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

2016 n=401 , 2014 n=409 , 2012 n=400, 2010 n=427, 2008 n=424, 2006 n=407

Q4: *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]*

# Who Are Our Daily & Weekly Riders?

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- Male vs. female residents (12% vs. 8%)
- Zip code 85281 vs. other zip codes (15% vs. a range of 4% to 12%)
- Residents aged 18 to 54 vs. older residents (13% vs. 4%)
- Single residents vs. married residents (12% vs. 8%)
- Annual household incomes of less than \$80K vs. those with higher incomes (12% vs. 4%)

**The proportion of surveyed transit riders who report having used the transit service for less than a year was 5%, however, nearly one-half (47%) have been riding transit in the city for more than 6 years (up from 31% in 2014).**

Time Riding	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)	2006 (n=119)
Less than a year	5%	6%	9%	14%	31%	17%
1 – 2 years	9%	10%	13%	27%	13%	27%
2 – 4 years	15%*	24%	29%	13%	19%	20%
4 – 6 years	19%	23%	16%	10%	13%	13%
6 – 10 years	22%*	13%	13%	25%	20%	21%
>10 years	25%	18%	12%	NA	NA	NA
Don't know	4%	7%	8%	11%	4%	4%

# Why Do They Ride?

---

- Convenience and getting to and from recreation events continue to be the most cited reasons from residents when asked why they ride public transit (mentioned by 24% and 22%, respectively).

## Top Public Transit Trip Destinations (Among public transit users)

Responses	2016 (n=246)	2014 (n=256)	2012 (n=252)	2010 (n=304)	2008 (n=166)	2006 (n=119)
<b>Recreational activities</b>	35%	39%	34%	38%	14%	15%
<b>DT Phoenix</b>	20%*	13%	26%	15%	5%	-
<b>Work</b>	14%	19%	13%	20%	31%	39%
<b>ASU</b>	14%	15%	16%	16%	29%	14%
<b>Downtown Tempe</b>	14%	11%	13%	7%	13%	5%
<b>Downtown (gen)</b>	6%	1%	-	-	-	-
<b>Phoenix</b>	5%	2%	-	-	-	-
<b>Shopping</b>	4%*	15%	12%	11%	24%	27%
<b>High School</b>	4%*	1%	-	-	-	-
<b>Airport</b>	4%	-	-	-	-	-
<b>Community College</b>	3%	2%				
<b>Around Tempe</b>	3%*	<1%				
<b>Visit friends/family</b>	2%	4%	5%	2%	5%	6%
<b>Library</b>	2%	4%	3%	2%	7%	2%
<b>Errands</b>	1%	6%	8%	5%	7%	14%

## 2016 Satisfaction with Bus Service (Among bus riders)

Attribute	2016 (n=128)			% Very/somewhat satisfied			
	Very/ somewhat Satisfied	Very Satisfied	Somewhat Satisfied	2014 (n=109)	2012 (n=141)	2010 (n=203)	2008 (n=166)
<b>Cleanliness of bus stops</b>	91%	44%	47%	87%	85%	NA	NA
<b>Comfort on the bus</b>	90%	43%	47%	92%	92%	95%	93%
<b>Cleanliness of the bus</b>	89%	49%	39%	91%	88%	92%	89%
<b>Driver courtesy and professionalism</b>	89%	70%	19%	90%	93%	93%	89%
<b>Safety on the bus</b>	86%	49%	37%	79%	82%	95%	92%
<b>Route frequency</b>	81%	42%	39%	79%	79%	74%	78%
<b>Ease of using the bus</b>	81%	53%	27%	84%	93%	91%	90%
<b>Hours of operation</b>	80%	40%	40%	81%	84%	NA	NA
<b>Reliability/on-time performance of buses</b>	80%	45%	35%	85%	86%	80%	76%
<b>Bus service during major events</b>	76%	40%	36%	72%	70%	NA	NA
<b>Amenities of bus stops</b>	74%	25%	49%	76%	72%	NA	NA
<b>Security at bus stops</b>	72%	30%	43%	65%	65%	NA	NA

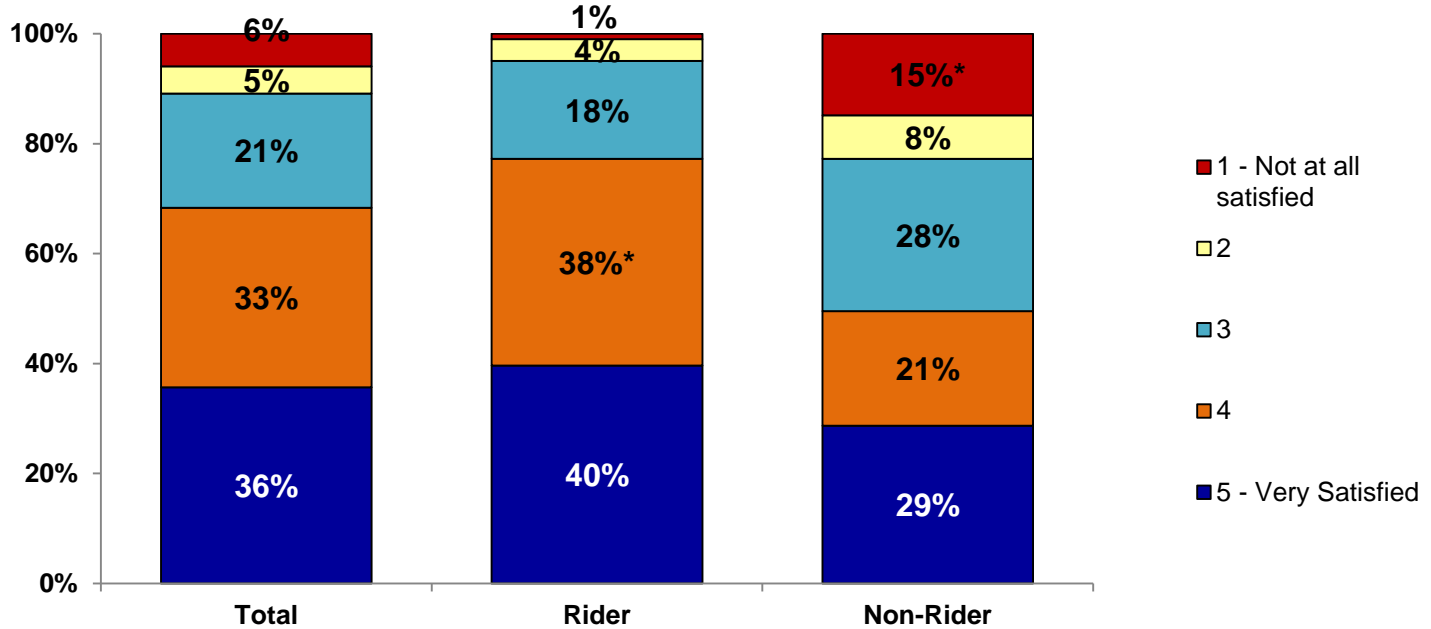
# Suggested Improvements

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



# Overall Satisfaction with Transit System

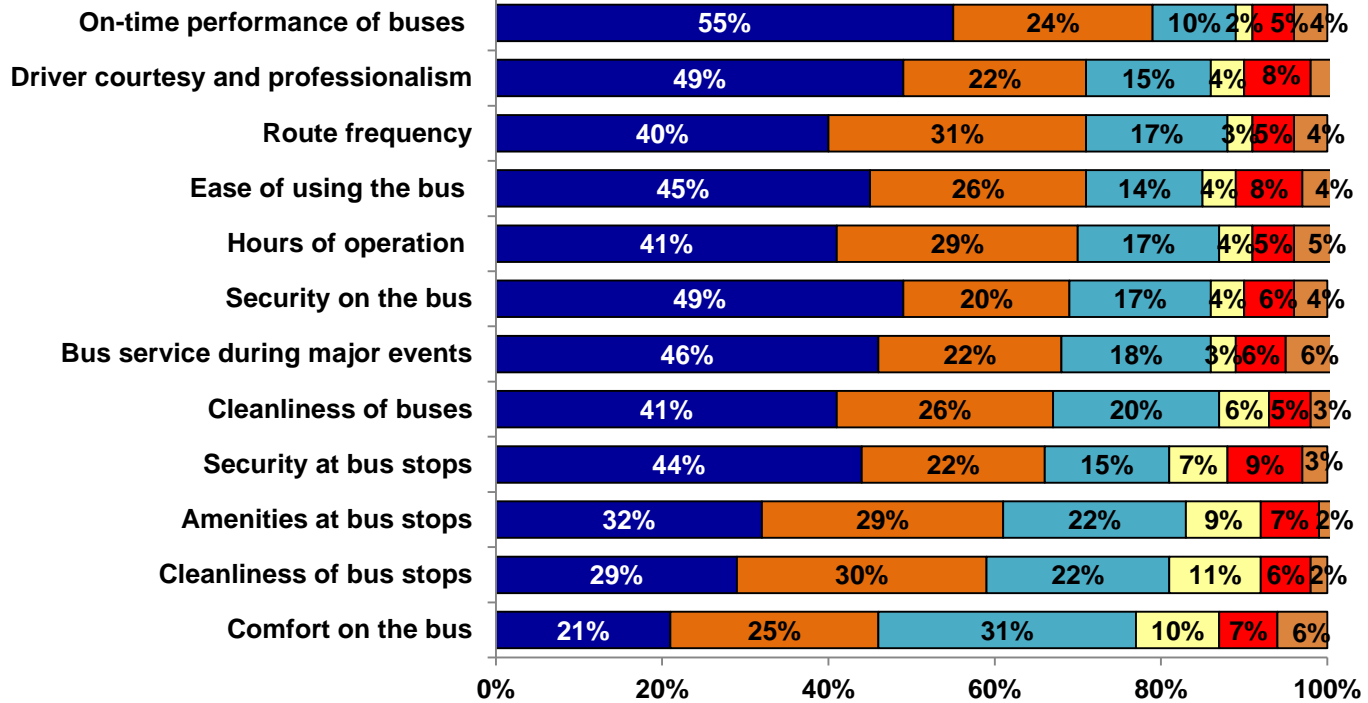
Among those with an opinion



Total n=352, Rider: n=244, Non-Rider: n=108

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

## Priority of Transit Improvements



n=401

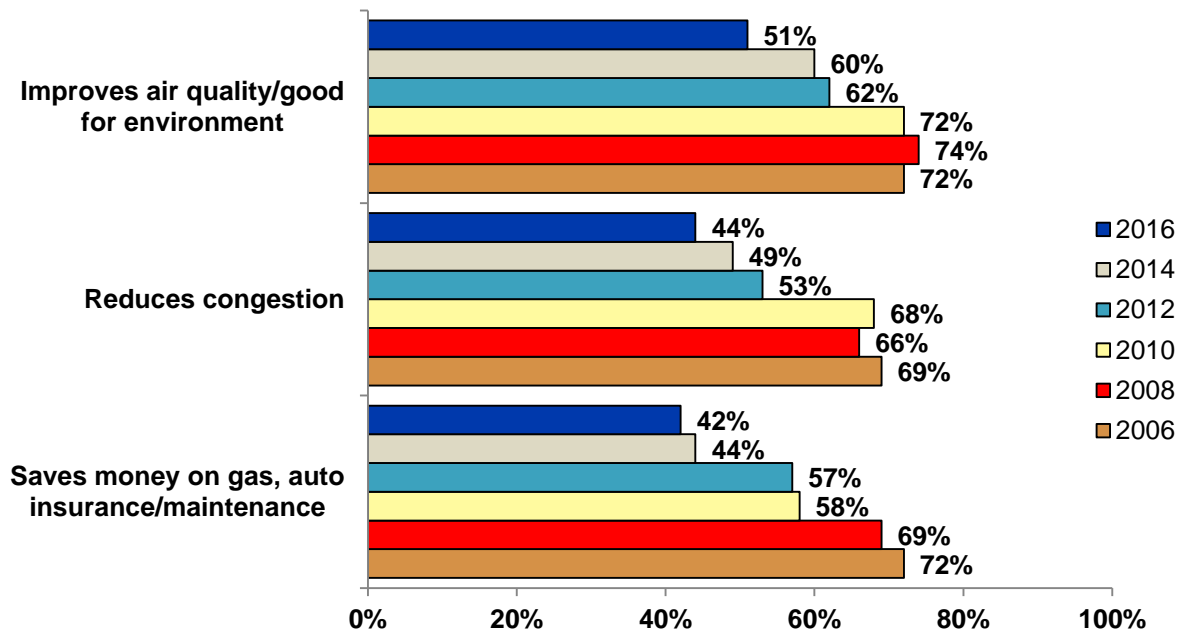
■ Very high: 5 rating 
 ■ 4 
 ■ 3 
 ■ 2 
 ■ Very low: 1 
 ■ DK

# Why Don't They Ride?



- 59% indicated they prefer using a car (about the same as in 2014).
- 7% said they need their car for business.

## Persuasive Arguments (Very/Somewhat Effective)



Q6: 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.

Note: Slight wording change in 2012 to benefit statements.

2016 n=152 , 2014 n=143, 2012 n=148, 2010 n=123; 2008 n=258; 2006 n=289

# Awareness of TIM



Awareness of TIM remained statistically comparable to recent years (44%).

Those more likely to have net awareness of TIM include:

- Residents aged 18 to 54 vs. older residents (63% vs. 35%)
- Transit riders vs. non-transit riders (55% vs. 29%)
- Those living in Tempe six or more years vs. those living in Tempe for a shorter time frame (48% vs. 23%)

# Top Sources of TIM Awareness

(Among those aware of TIM)

Responses	2016 (n=178)	2014 (n=204)	2012 (n=211)	2010 (n=230)	2008 (n=202)	2006 (n=155)
Street banner	20%	24%	29%	17%	20%	19%
Signs on the buses	11%	15%	13%	18%	20%	20%
Bill inserts	7%	3%	9%	2%	2%	3%
Word of mouth	6%	4%	6%	3%	4%	3%
Newspaper/Print Ads	6%	5%	6%	6%	7%	15%
Sign (general)	6%*	1%	--	--	--	--
Direct mail	4%	3%	5%	5%	2%	4%
TV	4%	3%	6%	9%	10%	19%
ASU/School	4%	5%	--	3%	2%	--
Library	4%	--	--	--	--	--
Pandora	3%	2%	--	--	--	--
Internet/online ads	3%	3%	3%	4%	3%	4%
I live here/lived here a long time	2%	2%	--	--	--	--
Ad/Commercial (unspec)	2%	--	--	--	--	--
Billboard	2%	1%	--	--	--	--
Flyers/brochures	2%	3%	2%	6%	4%	--
On the light rail	2%	--	--	--	--	--
Work	--	2%	1%	1%	3%	--
Don't know	7%	13%	16%	12%	14%	14%

# Impact of Ads



- 54% of those who heard of TIM indicated they feel advertising made them think more positively about transportation options in Tempe.
- Among those who indicated TIM advertising had a positive or neutral impact about their feelings of transportation options in Tempe, 25% indicated “yes” when asked whether the advertising message persuaded them to try public transit in Tempe. (up from 20% in 2014).

# Bike Usage



62% reported they have access to a bicycle.

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

- Male residents vs. female residents (69% vs. 55%)
- Residents aged 18 to 54 vs. older residents (68% vs. 51%)
- Annual household incomes of \$80,000 or more vs. lower incomes (73% vs. 56%)
- Married residents (70% vs. 52% of singles)
- Zip code 85284 (76% vs. 54% to 64% in other zip codes)



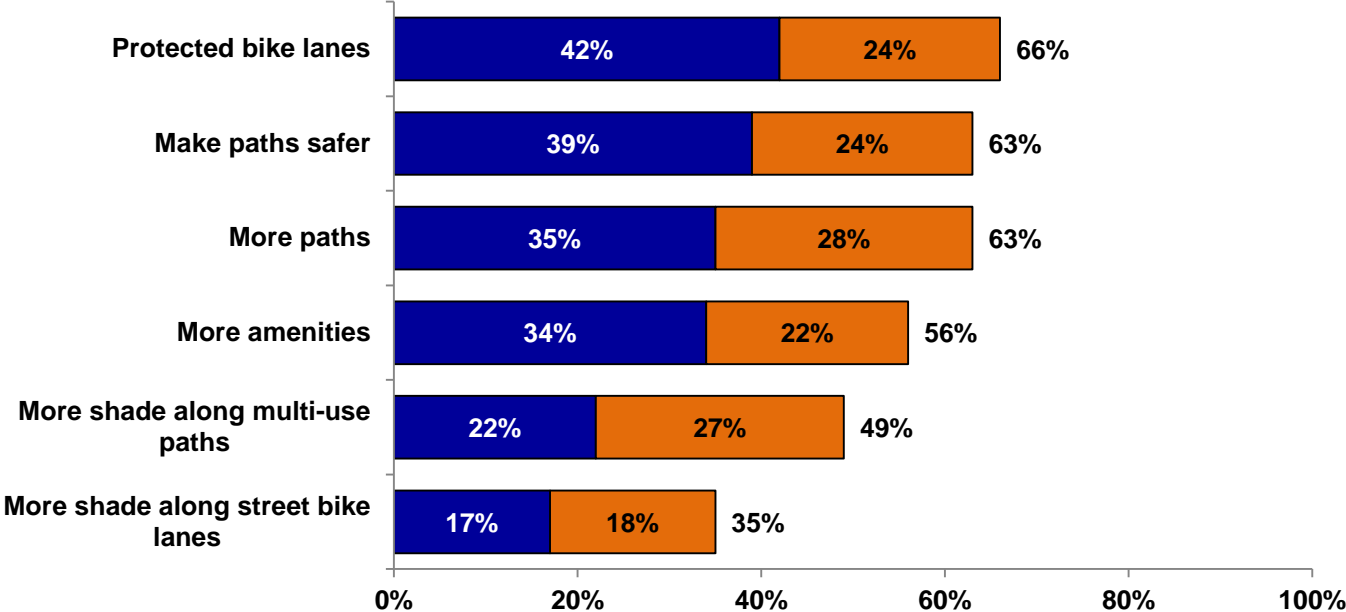
# Bike Usage



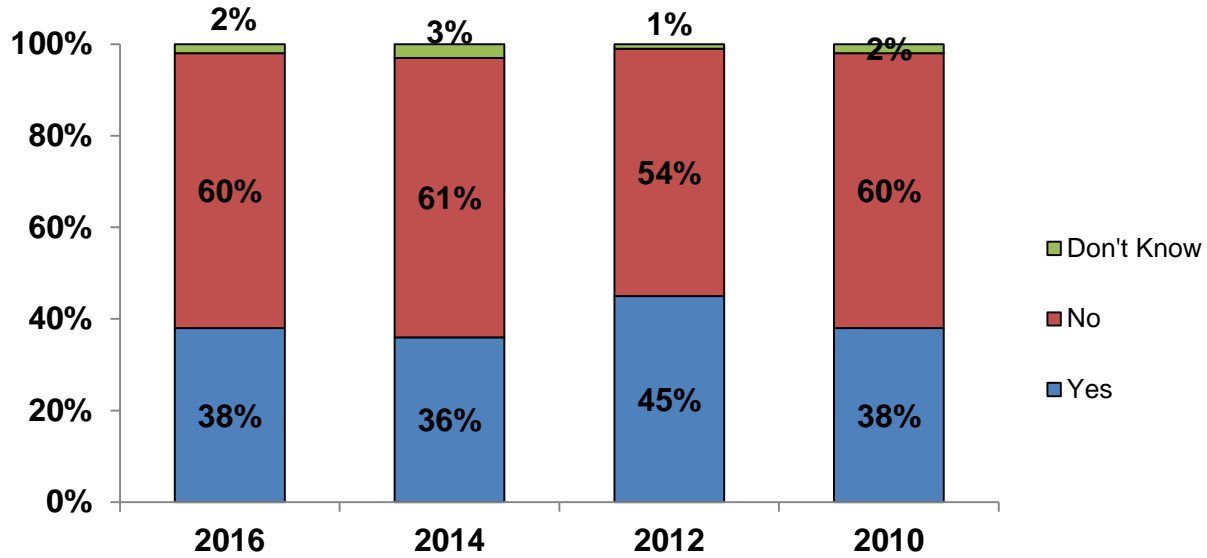
- 44% of those who indicated riding their bikes at least once a month report they ride for exercise, while 12% report riding for work/school.
- 65% of residents indicated they are satisfied with the quality of walking and biking paths of residents.

# Priority of Bike and Pedestrian Improvements

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



## Awareness of Tempe Youth Free Transit Pass



2016 n=401, 2014 n=409, 2012 n=400, 2010 n=427

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

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

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

Sources	2016 (n=150)	2014 (n=148)	2012 (n=179)
Through school	24%	20%	24%
Word-of-mouth (friends/family)	16%	20%	19%
Library	11%	7%	6%
Bill insert	8%	3%	--
Advertisement	4%	8%	5%
Letter from the City	3%	5%	5%
Newspaper	3%	6%	9%
On the bus	3%	4%	--
Employer/work	2%	5%	1%
Web site	1%	2%	3%
Don't know	7%	5%	10%

# Conclusions

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- Transit usage among Tempe residents remains consistent.
- Effectiveness of messaging in favor of public transit usage is in decline.
- Overall satisfaction with transit system declined slightly compared to 2014.
- Satisfaction with bus system attributes among bus riders generally follow a similar hierarchy as previous years.

**STAFF REPORT**

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**AGENDA ITEM 5**

**DATE**

January 1, 2017

**SUBJECT**

Interstate 10/Interstate 17 Corridor Master Plan Update

**PURPOSE**

The purpose of this memo is to provide the Commission with an update on the Maricopa Association of Government's progress on the Interstate 10/Interstate 17 Corridor Master Plan.

**BACKGROUND**

The Maricopa Association of Governments (MAG), in partnership with the Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT), launched this study to develop a Corridor Master Plan for the Interstate 10 (I-10) and Interstate 17 (I-17) corridor. This corridor is referred to as the "Spine," because it serves as the backbone for transportation in the metropolitan Phoenix area. In fact, the corridor handles more than 40 percent of all daily freeway traffic in the region.

The Spine Study effort includes analyzing various long-term strategies to improve mobility in the corridor. The study is evaluating the full range of transportation modes and concepts to identify the best multimodal solutions. These long-term solutions are envisioned as a combination of traditional methods, new technology, and increased use of transit (such as buses.) The key outcome of the Spine Study will be a detailed strategy to manage traffic in the I-10 and I-17 corridors through 2040. Study recommendations will be programmed in the MAG Regional Transportation Plan and Transportation Improvement Program.

The current MAG Regional Transportation Plan allocates \$1.47 billion for the Spine Corridor. This amount includes funding for any identified near-term improvements, in addition to longer range improvements. The Spine Study will identify how to best use these funds to achieve the greatest benefit to the region. It will also define funding shortfalls of the preferred corridor improvement approach so that additional funding allocations can be identified.

The 35-mile Spine corridor begins at the I-17/Loop 101 (North Stack) interchange and continues south and east to the I-10/I-17 (The Split) interchange. The corridor continues east and south along I-10 to the interchange with Loop 202 (Pecos Stack).

Public open houses are scheduled for January 2017 on the following dates and times at the locations identified below.

Tuesday, January 24, 2017

① Morning: 11:30 a.m. to 1:00 p.m.

② Evening: 6:00 to 7:30 p.m.

Maricopa Association of Governments  
Saguaro Room, 2nd Floor Saguaro Room

302 N. 1st Ave., Phoenix, 85003

③ Wednesday, January 25, 2017

6:00 to 7:30 p.m.

Town of Guadalupe El Tianguis Mercado

Multipurpose Room

9201 S. Avendia del Yaqui, Guadalupe, 85283

④ Tuesday, January 31, 2017

6:00 to 7:30 p.m.

Washington Activity Center, Multipurpose Room

2240 W. Citrus Way, Phoenix, 85015

The comment period will open mid-January and will include an online survey posted on the project webpage for those interested to provide feedback. Comments received by February 17, 2017 will be included in the project record.

**FISCAL IMPACT**

NONE

**RECOMMENDATION**

For information

**CONTACT**

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City Traffic Engineer

480-350-8025

[julian\\_dresang@tempe.gov](mailto:julian_dresang@tempe.gov)

**ATTACHMENTS**

PowerPoint



## 2014

- Project Scoping
- Data Discovery
- Partner Needs

## 2015

- Public Meetings
- Needs Assessment Report
- 341 Concepts

## 2016

- Three Screening Levels
- Seven Alternatives
- Three Variations

## 2017

- Public Meetings
- Corridor Master Plan Recommendation for Adoption into Regional Transportation Plan



- Public Involvement on recommendations opens week of January 16, 2017.
- First Public Meeting on January 24, 2017.





# Needs Assessment Report

[spine.azmag.gov](http://spine.azmag.gov)





Aging Infrastructure



Four Light Rail  
Crossings of I-17



Planning for Bicycles  
and Pedestrians





Technology



Constrained Corridor



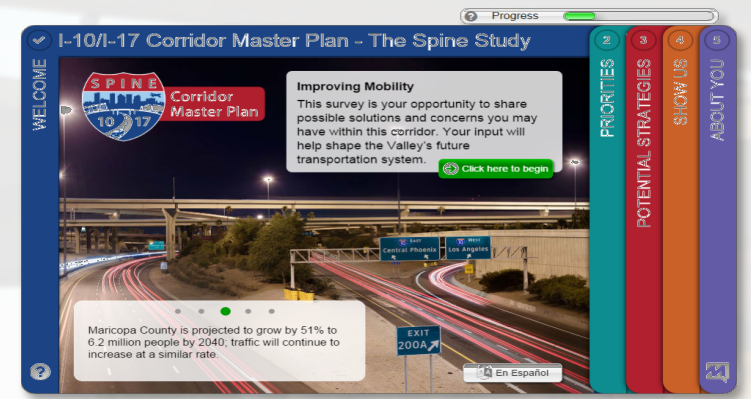
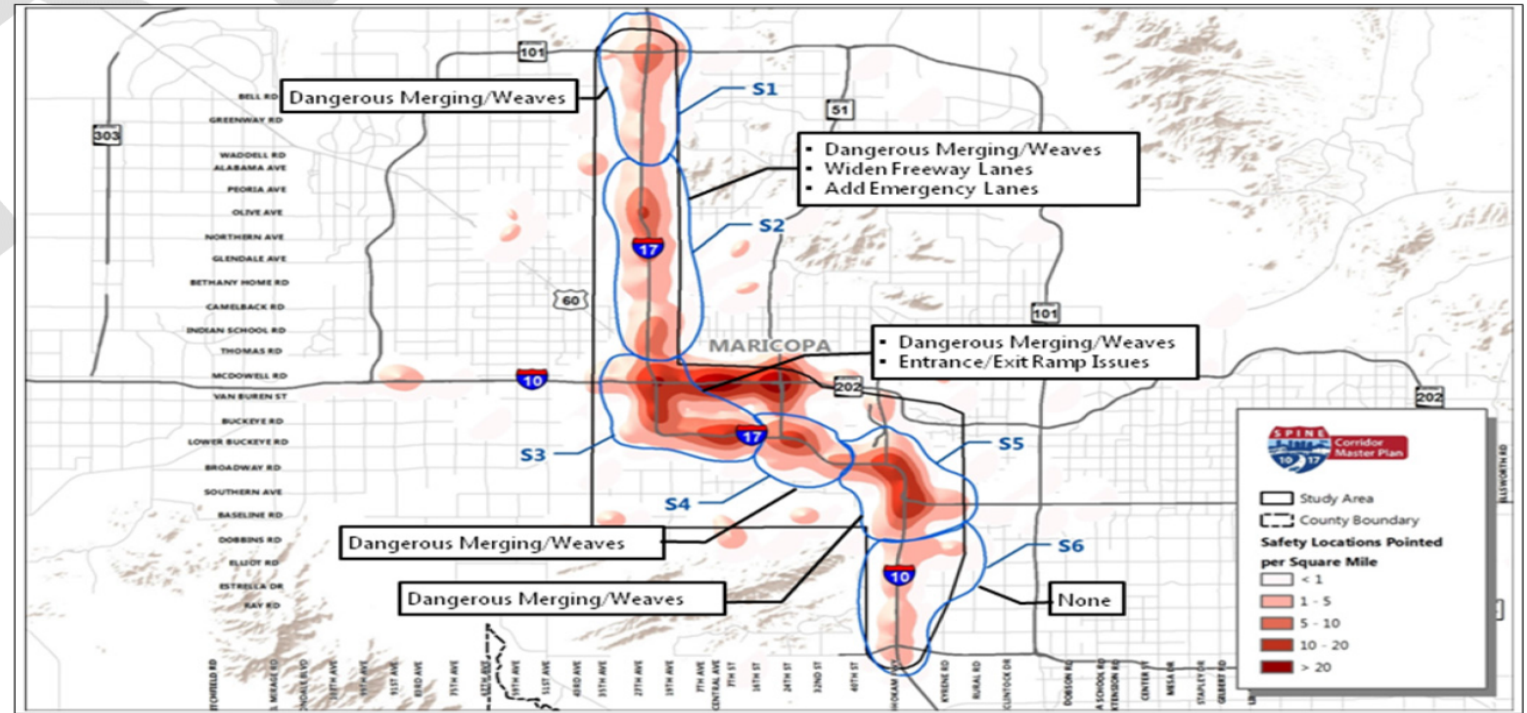
Increasing Demand

## Issues





Figure 1-31. Safety Pin Heat Map with Comment Areas



# 341 Possibilities ...

92 SYSTEM-WIDE

249 SEGMENT-SPECIFIC

**Transit  
Bike  
Ped**

Add Lanes to  
entire Spine  
Corridor

Managed  
Lanes

**Traffic  
Interchange  
Fixes**

Weaving  
Traffic  
Fixes

**DHOVs**  
interlinked  
with Park and  
Ride Lots and  
Transit  
Routes

**Managed  
Motorways**  
  
**Active Traffic  
Management**  
  
**TSM&O**

Camelback  
Rd

**Grand  
Canyon  
University**



Central Ave  
Overcrossing  
and South  
Central LRT

**Split to  
Stack**

**Freight  
Connections**  
between  
Durango  
Curve and  
40th St



# 341 IDEAS

Add one additional general purpose lane in each direction to Interstate Add three additional general purpose lanes in each direction to Interstate Create multi-lane separated express/local lane system Frontage roads between Pecos stack and US 60 Free express lanes from SR-202L to Broadway curve Limit frontage road access Revise merge points on frontage roads Flatten S-curve near Netrocenter/evaluate vertical profile; develop crash map to find cause of accidents Reduce frontage road to one lane to widen I-17 Reconfigure I-10/US 60 connection Add WB Broadway to NB (northbound) SR-143 ramp Increase EB (eastbound) I-10/Broadway on-ramp capacity Add DHOVs to Stack Add DHOVs to Split Consolidated traffic operations center Connected vehicle integration (Personal Vehicles and Freight)

Additional traffic operations staff and maintenance staff for city of Phoenix Better local jurisdiction coordination to close the gap, interconnect between cities Variable speed control on interstate Lane control signals Active motorways, active management Dynamic HOV lane occupancy control Advance queue warning for NB traffic on I-10 when approaching Broadway Curve Automatic speed warning in advance of high crash frequency locations

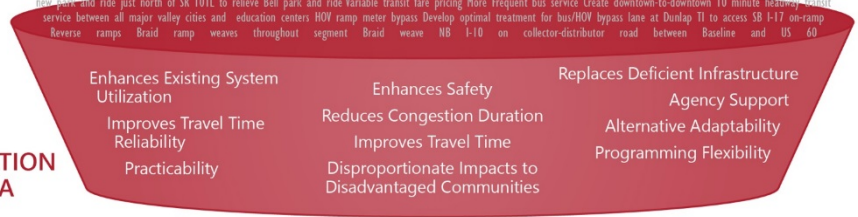
Access management plans/Frontage road system for crossroads between 19th Ave and 35th Ave Add one additional general purpose lane in each direction to arterial corridors of interest Add more arterial bus pullouts

Coordination between ADOF and Valley Metro on Central Ave/I-17 crossing Add mid mile crossing at Encanto Blvd Add mid mile crossing at Osborn Rd Add mid mile crossing at Campbell Ave Add bike lanes on Adams/Jefferson from 24th to 21st Ave Improve Bike/Ped infrastructure on 3rd St Improve Bike/Ped infrastructure on 15th Ave Add bike lanes on Central Ave from Apache to Watkins St Add bike lanes on Union Hills Dr. from 27th Ave. to 21st Dr Add bike lanes on Rose Garden Ln. from 27th to 23rd Ave Add bike lanes on Deer Valley from 27th to 23rd Ave Bike/Pedestrian Crossings at Chandler Bike/Pedestrian Crossings at Warner Bike/Pedestrian Crossings at Elliot Bike/Ped crossing at I-10 along Salt River/Rio Salado Bike/Ped crossing at I-10 along Western Canal Add DHOVs to Van Buren Make Adams/Jefferson complete a standard split diamond Configuration Add DHOV to Central Ave Add DHOV to Washington Ave Add DHOV to 15th Ave New high capacity traffic interchange at McDowell New high capacity traffic interchange at Thomas New high capacity traffic interchange at Camelback Rd New high capacity traffic interchange at Northern Ave New high capacity traffic interchange at Dunlap Ave New high capacity traffic interchange at Peoria Ave Enforcement of HOV General purpose/HOV restrictions Emphasize carpool/vanpool, incentivize HOV Restricted HOV buffer crossover and access points Increase freeway safety patrol More bike capacity on ADOT bus transit connection with intelligent transportation systems and Dynamic Message Signs (real time transit data) Add new park and ride just north of SR 101L to relieve Bell park and ride Variable transit fare pricing More frequent bus service Create downtown-to-downtown 10 minute headway transit service between all major valley cities and education centers HOV ramp meter bypass Develop optimal treatment for bus/HOV bypass lane at Dunlap TI to access SB I-17 on-ramp Reverse ramps Braid ramp weaves throughout segment Braid weave NB I-10 on collector-distributor road between Baseline and US 60



**Corridor Master Plan**

**EVALUATION CRITERIA**



## STRATEGIES

**What if we only maintain existing infrastructure?**  
(No Build Option)

**What if we focus on necessary spot improvements?**

**What if we focus on reconstructing old infrastructure?**

**What if we focus on adding lanes?**

- General Purpose Lanes
- High Occupancy Vehicle (HOV) Lanes
- Express Lanes
- HOV/Toll Lanes

**EVALUATION CRITERIA**

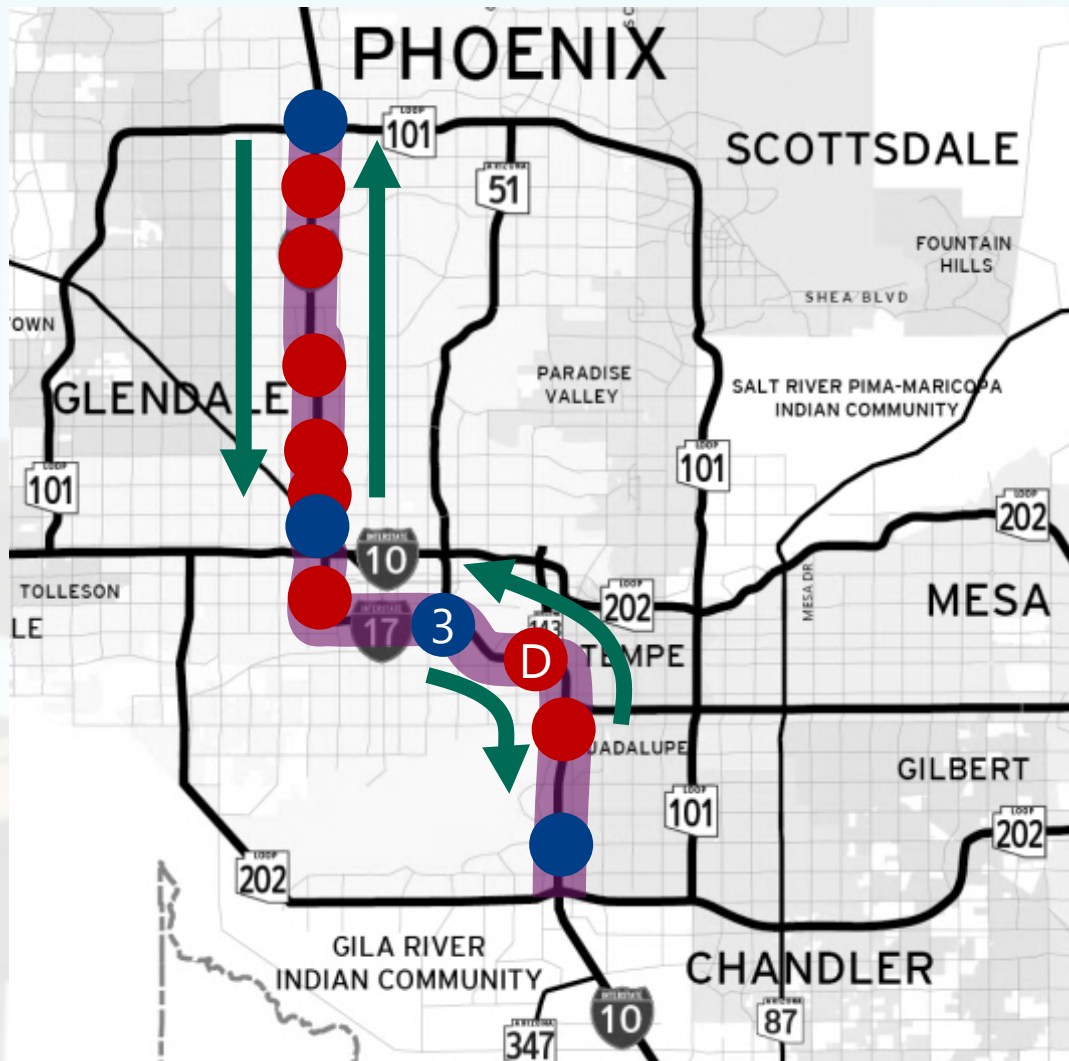


## HIGHEST PERFORMING ALTERNATIVE

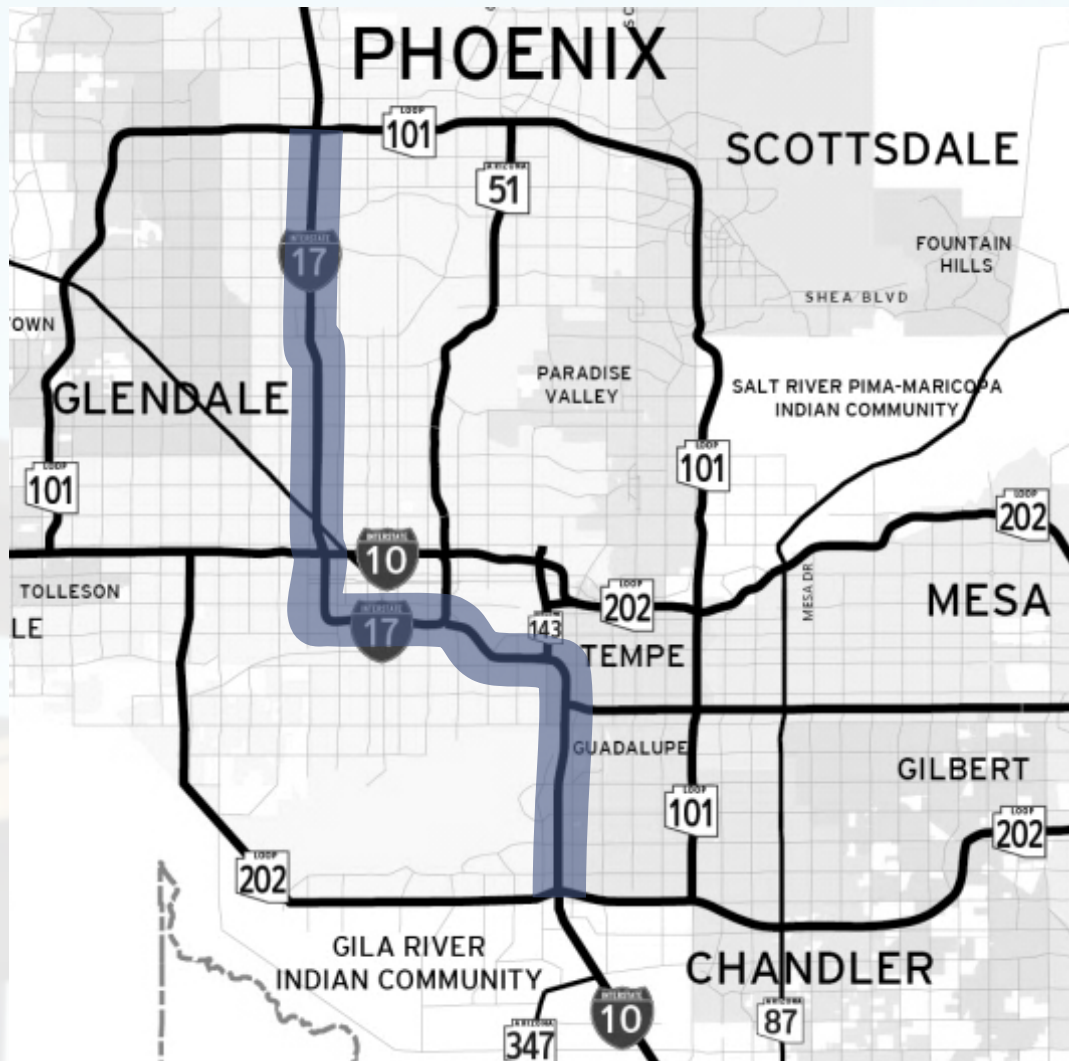
# Establishing the Highest Performing Alternative

Interstate 10/Interstate 17 Corridor Master Plan

[spine.azmag.gov](http://spine.azmag.gov)



- Add a minimum of **one-lane** throughout entire corridor.
- Expanded **Managed Capacity** operation along:
  - Interstate 10, from Interstate 17 to US-60; and
  - Interstate 17, from Interstate 10 to Loop 101.
- **Improve/reconstruct nine traffic interchanges** throughout the corridor.
- Add **DHOV ramps** and new interchanges.
- Plan and enhance **bicycle/pedestrian connections** across the corridor at **fifteen** locations.



- ✓ Modest performance improvements throughout the corridor between the **Base Build** and **Highest Performing Alternatives**.
- ✓ Adding additional general purpose lane between **I-17 Split** and **US-60** provides lane balance and performs best for this segment.
- ✓ Congestion duration generally improves with **33% fewer hours of delay** throughout a weekday in 2040.
- ✓ Travel **in HOV lanes** has greater reliability over existing conditions.
- ✓ **“X-Ramps” geometry**, although greater costs, has better sight-distance and ramp placement to improve safety along I-17 between I-10 Split and the Durango Curve.



# CITY OF TEMPE TRANSPORTATION COMMISSION



## STAFF REPORT

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### AGENDA ITEM 6

#### DATE

December 16, 2016

#### SUBJECT

Results of October 2016 Tempe Traffic Congestion Telephone Survey

#### PURPOSE

The purpose of this memo is to provide the Commission with an overview of the key findings from the October 2016 traffic congestion telephone survey.

The City of Tempe commissioned Behavior Research Center to complete a telephone survey of 425 Tempe residents in an effort to gain insights into perceptions traffic congestion, bus pullouts, traffic delays due to construction and adding bike lanes to arterials. The margin of error for this sample size is approximately +4.8% at a 95% level of confidence.

Calls were made between Sept. 28 and Oct. 9, 2016 with a representative cross-section of Tempe residents 18 years of age or older. A minimum of 100 interviews were conducted in each of four geographic analyses zones:

- Northwest – north of US 60, west of Rural Road
- Northeast – north of US 60, east of Rural Road
- Southwest – south of US 60, west of Rural Road
- Southeast – south of US 60, east of Rural Road

Households were selected by means of random digit dialing (RDD) according to Tempe zip codes. 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.

In addition, a non-scientific opt in online survey of 332 individuals was conducted between Sept. 30 and Oct. 23, 2016. Respondents were invited to participate in the survey via Facebook, Twitter and through emails to Neighborhood Chairs. Non-scientific online surveys conducted using an opt in methodology do not lend themselves to the calculation of sampling error estimates as are traditionally reported for random sample telephone surveys.

#### Findings from Telephone Survey

- Seventy-eight percent of Tempe residents believe that traffic congestion in Tempe in general is either a big problem (20%) or a moderate problem (58%), while less than a majority of residents

(47%) believe that traffic congestion on the major roads adjacent to their neighborhood is a big (16%) or moderate (31%) problem.

- Residents believe that afternoon drive time is by far the worst time for congestion with a reading of 84 percent. Morning drive time is mentioned by 35 percent of residents as the worst time.
- With a reading of 61 percent, Friday is viewed as the worst day for congestion in Tempe. Receiving slightly lower readings of approximately 50 percent are the remaining four weekdays.
- Seven Tempe intersections receive readings over ten percent when residents are asked to indicate those intersections with the worst congestion problems: University & Rural (18%); Broadway & Rural (16%); University & Mill (16%); Southern & Rural (15%); Southern & Mill (13%); Broadway & Mill (12%); Apache & Rural (12%).
- Sixty-one percent of residents indicate that in the past month they have been delayed at an intersection in Tempe because of a stopped bus, with a median reading of 2.0 times over the period.
- Fifty-nine percent of residents who had experienced a bus-caused delay in the past month believe that the installation of bus pullouts would help “a lot” to improve Tempe traffic congestion.
- Seventy-eight percent of residents indicate that in the past three months they have been delayed in traffic while traveling on a major road in Tempe because of a lane restriction related to construction, with a median reading of 4.0 times over the period.
- Sixty-six percent of residents who experienced construction delays in the past three months would prefer that lane restrictions or closures related to construction occur overnight, even if it might produce noise on a major road adjacent to their neighborhood.
- A slight majority of Tempe residents (52%) oppose adding bike lanes to major roads in Tempe if it means removing a lane of traffic.

#### **FISCAL IMPACT**

The cost of the survey was \$15,950 which is budgeted in cost center 3916-6737.

#### **RECOMMENDATION**

Use the findings from the research to assist in planning proposed future bus pullout locations and procedures/policies for barricading.

#### **CONTACT**

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**ATTACHMENTS**

Research Report - telephone

Research report - online

PowerPoint

# CITY OF TEMPE TRAFFIC CONGESTION SURVEY

October 2016

Prepared for  
City of Tempe  
Transportation Division

Prepared by  
Behavior Research Center, Inc.  
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## INTRODUCTION

This study was commissioned by the City of Tempe Transportation Division to determine residents' attitudes about traffic congestion within the City. More specifically, this study addresses the following issues:

- Residents' attitudes about how big of a problem traffic congestion is in Tempe in general and on major roads adjacent to their neighborhood.
- Residents' experiences with traffic delays at Tempe intersections due to stopped buses.
- Residents' experiences with traffic delays on major Tempe roads due to construction.
- Residents' attitudes about adding bicycle lanes to major roads in Tempe.

The information contained in this report is based on 425 telephone interviews conducted with a representative cross-section of Tempe residents 18 years of age or older. For the purpose of this research, a minimum of 100 interviews were conducted in each of four geographic analyses zones:

Northwest – north of US 60, west of Rural Road  
Northeast – north of US 60, east of Rural Road  
Southwest – south of US 60, west of Rural Road  
Southeast – south of US 60, east of Rural Road

Respondent selection for this project was accomplished via a computer-generated pure unweighted (EPSEM) random digit dial (RDD) telephone sample which selects households on the basis of telephone prefix. This method was used because it ensures a randomly-selected sample of area households proportionately allocated throughout the sample universe. This method also ensures that all unlisted and newly listed telephone households are included in the sample. A pre-identification screening process was also utilized on this project. This computer procedure screens the sample to remove known business and commercial phone prefixes in addition to disconnects, faxes and computers. Both landlines and cell telephones were included in this research.

All of the interviewing on this project was conducted between September 28 and October 9, 2016, at the Center's central location telephone facility where each interviewer worked under the direct supervision of BRC supervisory personnel. All of the interviewers who worked on this project were professional interviewers of the Center. Each received a thorough briefing on the particulars of this study. During the briefing, the interviewers were trained on (a) the purpose of the study, (b) sampling procedures, (c) administration of the questionnaire and (d) other project-related factors. In addition, each interviewer completed a set of practice interviews to ensure that all procedures were understood and followed.

Interviewing on this study was conducted during a cross-section of late afternoon, evening, weekday and weekend hours. During the interviewing segment of this study, up to five separate attempts, on different days and during different times of day, were made to contact each selected household. Only after five unsuccessful attempts was a household substituted in

the sample. Using this methodology, the full sample was completed and partially completed interviews were not accepted nor counted toward fulfillment of the total quotas.

As the data collection segment of this study was being undertaken, completed and validated interviews were turned over to BRC's Coding Department. The Coding Department edited, validated and coded the interviews. Upon completion of coding, a series of validity and logic checks were run to ensure the data were "clean." Following this procedure, the study data were "weighted" by the actual volume of residents in each geographic zone to make the final study sample representative of the study universe.

All surveys are subject to sampling error. Sampling error, stated simply, is the difference between the results obtained from a sample and those which would be obtained by surveying the entire population under consideration. The size of sampling error varies, to some extent, with the number of interviews completed and with the division of opinion on a particular question. An estimate of the sampling error range for this study is provided in the following table. The sampling error presented in the table has been calculated at the confidence level most frequently used by social scientists, the 95 percent level. The sampling error figures shown in the table are average figures that represent the maximum error for the sample bases shown (i.e., for the survey findings where the division of opinion is approximately 50%/50%). Survey findings that show a more one-sided distribution of opinion, such as 70%/30% or 90%/10%, are usually subject to slightly lower sampling tolerances than those shown in the table.

As may be seen in the table, the oversampling error for this study is +/-4.8 percent when the sample is studied in total. However, when subsets of the total sample are studied, the amount of sampling error increases based on the sample size within the subset.

SAMPLING SIZE	APPROXIMATE SAMPLING ERROR AT A 95% CONFIDENCE LEVEL (PLUS/MINUS PERCENTAGE OF SAMPLING TOLERANCE)
425	4.8%
300	5.8
200	7.1
100	10.0

#### SAMPLE PROFILE

<u>AGE</u>		<u>TYPICAL MODE OF TRANSPORTATION</u>	
Under 25	9%	Car/Truck	84%
25 to 34	38	Bike	10
35 to 44	11	Bus	2
45 to 54	17	Ride Share/Taxi	2
55 to 64	8	Walk	1
65 or over	<u>17</u>	Light rail	1
	100%	Motorcycle	<u>1</u>
			101%

\*Does not equal 100% due to rounding

## SUMMARY OF THE FINDINGS

### KEY STUDY FINDINGS

- Seventy-eight percent of Tempe residents believe that traffic congestion in Tempe in general is either a big problem (20%) or a moderate problem (58%), while less than a majority of residents (47%) believe that traffic congestion on the major roads adjacent to their neighborhood is a big (16%) or moderate (31%) problem.
- Residents believe that afternoon drive time is by far the worst time for congestion with a reading of 84 percent. Morning drive time is mentioned by 35 percent of residents as the worst time.
- With a reading of 61 percent, Friday is viewed as the worst day for congestion in Tempe. Receiving slightly lower readings of approximately 50 percent are the remaining four weekdays.
- Seven Tempe intersections receive readings over ten percent when residents are asked to indicate those intersections with the worst congestion problems: University & Rural (18%); Broadway & Rural (16%); University & Mill (16%); Southern & Rural (15%); Southern & Mill (13%); Broadway & Mill (12%); Apache & Rural (12%).
- Sixty-one percent of residents indicate that in the past month they have been delayed at an intersection in Tempe because of a stopped bus, with a median reading of 2.0 times over the period.
- Fifty-nine percent of residents who had experienced a bus-caused delay in the past month believe that the installation of bus pullouts would help “a lot” to improve Tempe traffic congestion.
- Seventy-eight percent of residents indicate that in the past three months they have been delayed in traffic while traveling on a major road in Tempe because of a lane restriction related to construction, with a median reading of 4.0 times over the period.
- Sixty-six percent of residents who experienced construction delays in the past three months would prefer that lane restrictions or closures related to construction occur overnight, even if it might produce noise on a major road adjacent to their neighborhood.
- A slight majority of Tempe residents (52%) oppose adding bike lanes to major roads in Tempe if it means removing a lane of traffic.

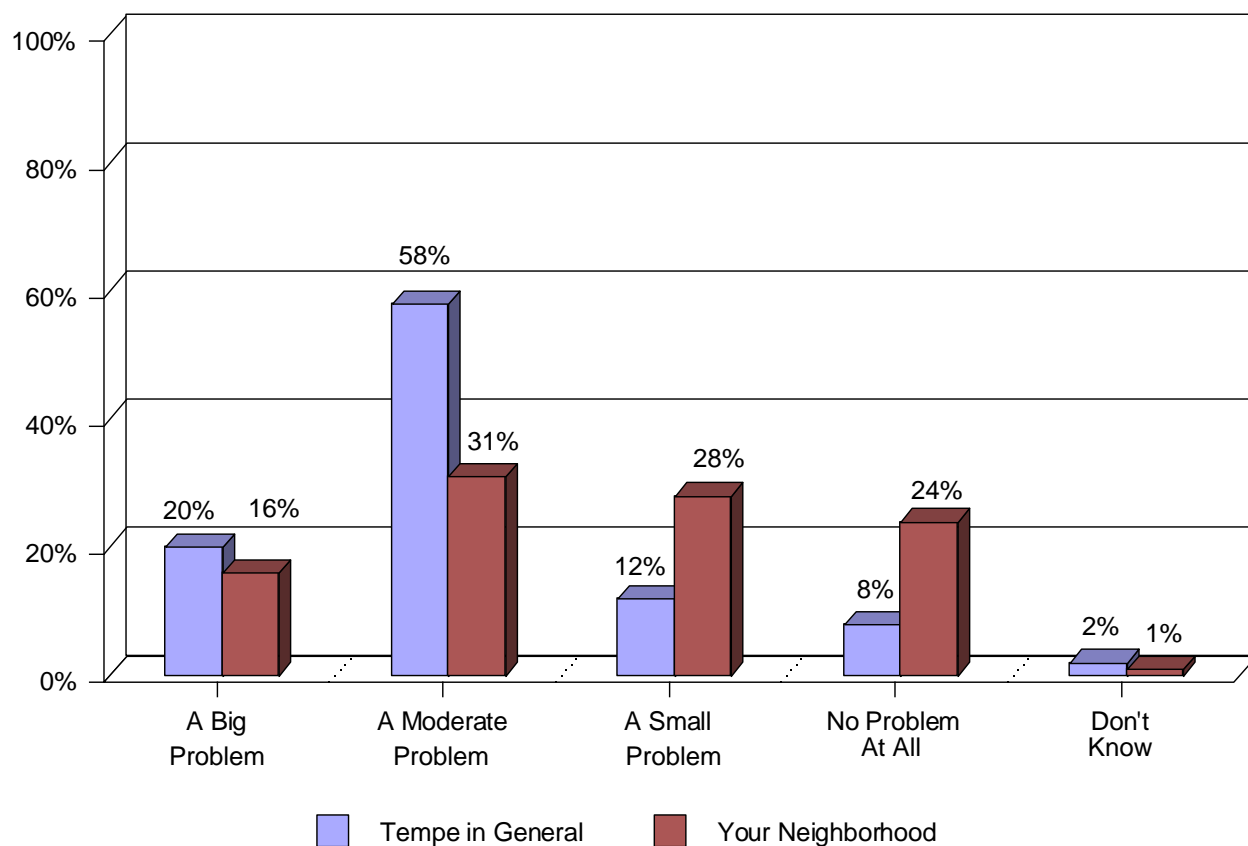


## TRAFFIC CONGESTION IN TEMPE

Nearly eight out of ten residents (78%) believe that traffic congestion in Tempe in general is either a big problem (20%) or a moderate problem (58%), with northern Tempe residents offering somewhat higher problem readings than southern Tempe residents.

In comparison, less than a majority of residents (47%) believe that traffic congestion on the major roads adjacent to their neighborhood is a big (16%) or moderate (31%) problem. Only among northwestern Tempe residents does the problem reading reach majority status (55%).

### TEMPE TRAFFIC CONGESTION



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**TABLE 1: EVALUATION OF  
TEMPE TRAFFIC CONGESTION**

“How big of a problem would you say the amount of traffic congestion in **Tempe is in general?**”

	REGION				
	TOTAL	North- west	North- east	South- west	South- east
A big problem	20%	18%	23%	17%	20%
A moderate problem	58	64	58	57	53
A small problem	12	10	10	14	15
No problem at all	8	7	6	10	12
Don't know	<u>2</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>0</u>
	100%	100%	100%	100%	100%
<b>BIG/MODERATE SUMMARY</b>	<b>78%</b>	<b>82%</b>	<b>81%</b>	<b>74%</b>	<b>73%</b>

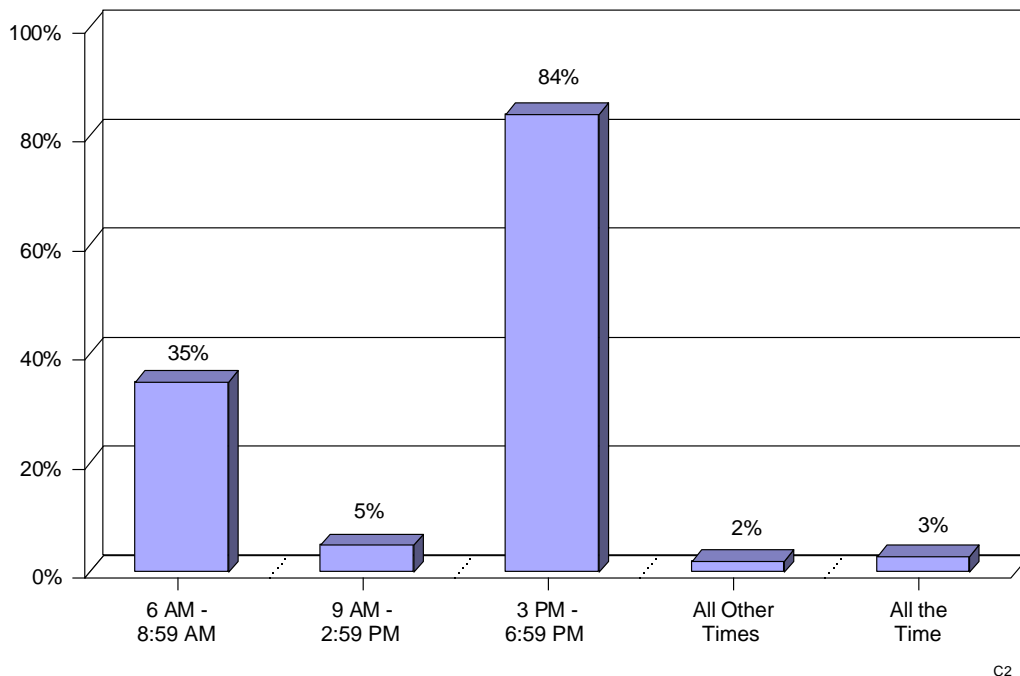
“How big of a problem would you say traffic congestion is on the major streets adjacent to **your neighborhood?**”

A big problem	16%	20%	16%	11%	17%
A moderate problem	31	35	24	36	29
A small problem	28	13	38	29	28
No problem at all	24	31	19	22	25
Don't know	<u>1</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>1</u>
	100%	100%	100%	100%	100%
<b>BIG/MODERATE SUMMARY</b>	<b>47%</b>	<b>55%</b>	<b>40%</b>	<b>47%</b>	<b>46%</b>

When residents who believe congestion is a big or moderate problem in Tempe are asked to reveal the worst times for congestion, the afternoon drive time receives by far the highest reading of 84 percent. This high reading is consistent across all regions. Morning drive time is mentioned by 35 percent of residents, with residents in southern Tempe offering particularly high readings.

### WORST TIMES FOR TRAFFIC CONGESTION IN TEMPE

(Among Those Who Feel Congestion is a Big or Moderate Problem in Tempe)



**TABLE 2: WORST TIMES FOR TRAFFIC CONGESTION IN TEMPE**

(AMONG THOSE WHO FEEL A CONGESTION IS A BIG OR MODERATE PROBLEM IN TEMPE)

“Is there a certain time of day that you feel congestion is worse in Tempe?”

	REGION				
	TOTAL	North-west	North-east	South-west	South-east
6 a.m. to 8:59 a.m.	35%	25%	31%	50%	41%
9 a.m. to 2:59 p.m.	5	16	1	2	2
3 p.m. to 6:59 p.m.	84	76	90	86	80
All other times	2	2	1	2	5
All the time	3	1	6	1	2

Totals do not equal 100% due to multiple responses

Continuing with this line of questioning, we find that Friday, with a reading of 61 percent, is viewed as the worst day for congestion in Tempe. Receiving slightly lower readings of approximately 50 percent are the remaining four weekdays. The data also reveals that northeast residents offer particularly high weekday readings, while southwest residents offer particularly low weekday readings.

### WORST DAYS FOR TRAFFIC CONGESTION IN TEMPE

(Among Those Who Feel Congestion is a Big or Moderate Problem in Tempe)

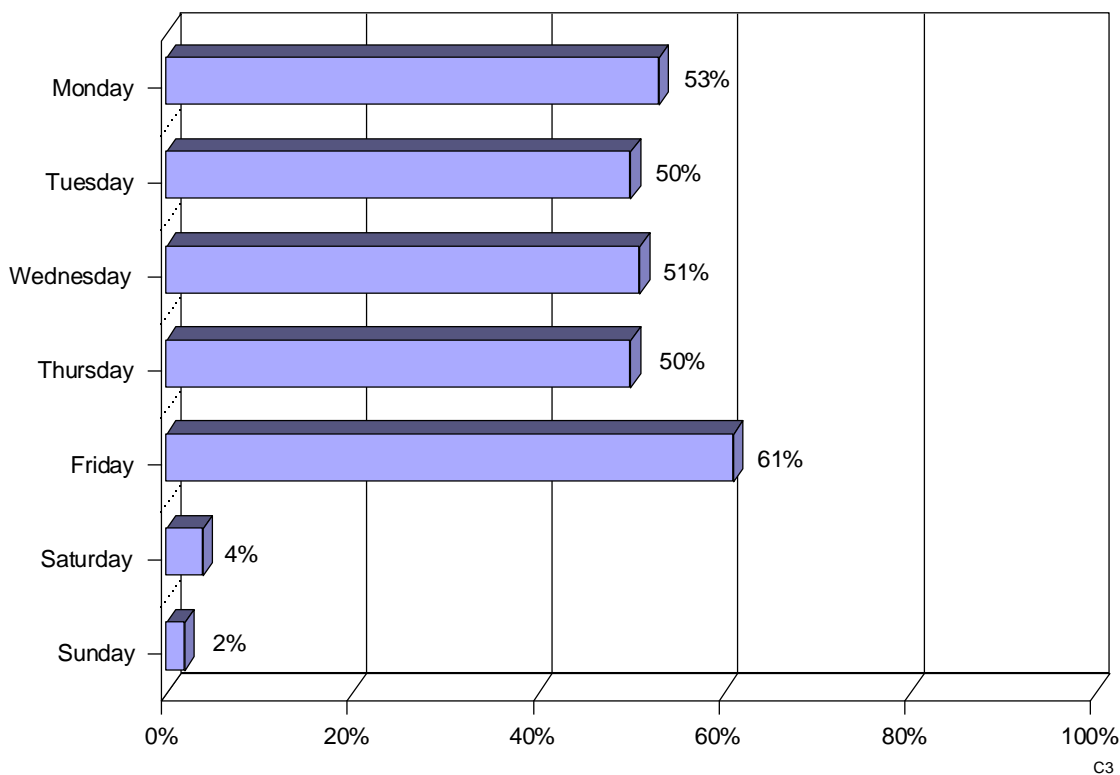


TABLE 3: WORST DAYS FOR TRAFFIC  
CONGESTION IN TEMPE

(AMONG THOSE WHO FEEL CONGESTION IS A  
BIG OR MODERATE PROBLEM IN TEMPE)

“Is there a certain day of the week that you feel congestion is  
worse in Tempe?”

	REGION				
	TOTAL	North- west	North- east	South- west	South- east
Monday	53%	49%	67%	39%	51%
Tuesday	50	48	61	39	49
Wednesday	51	53	63	39	43
Thursday	50	48	60	40	49
Friday	61	56	78	51	52
Saturday	4	2	7	2	2
Sunday	2	2	2	2	1
Every day	15	21	5	20	14

Totals exceed 100% due to multiple responses

Finally, in this section we find that seven Tempe intersections receive readings over ten percent when residents are asked to indicate those intersections with the worst congestion problems. As might be expected, response to this question varies sharply by city region.

## WORST INTERSECTION FOR TRAFFIC CONGESTION IN TEMPE

(Among Those Who Feel Congestion is a Big or Moderate Problem in Tempe)

### TOP 7 MENTIONS

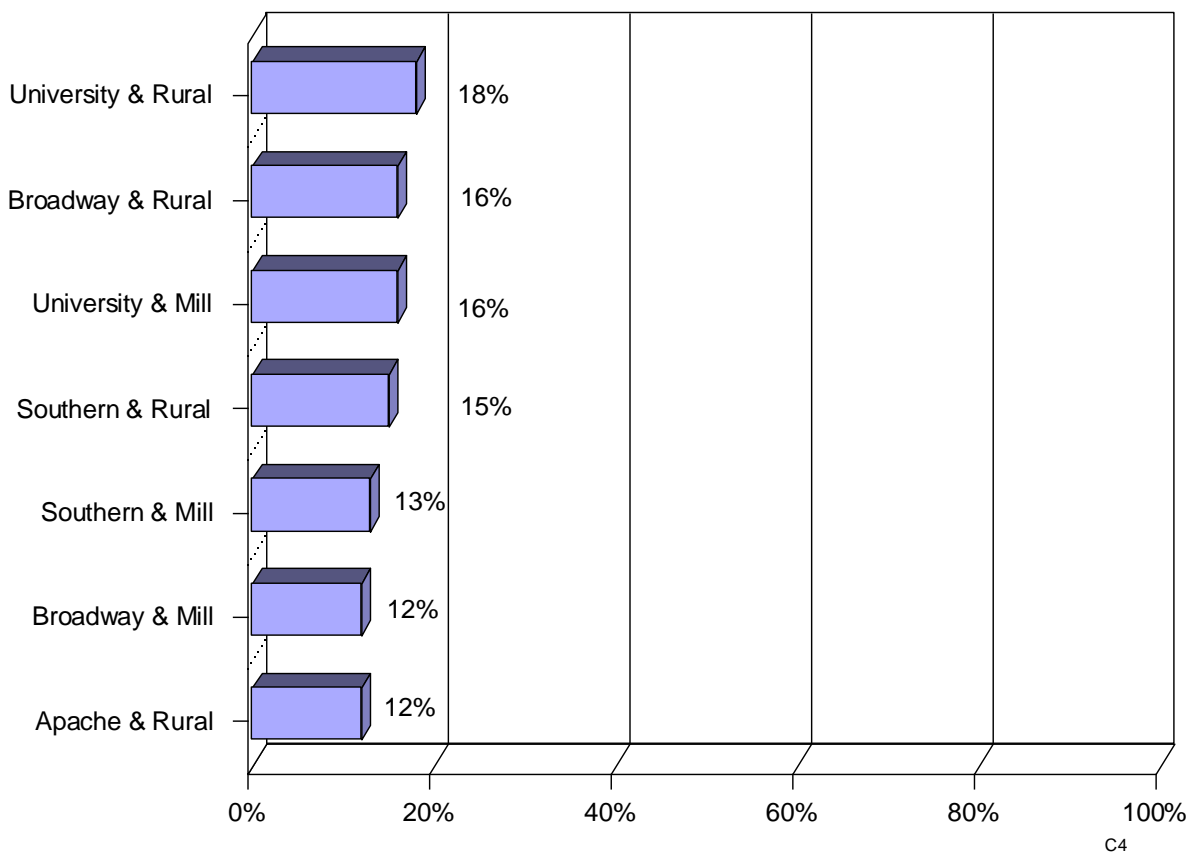


TABLE 4: WORST INTERSECTIONS FOR  
TRAFFIC CONGESTION IN TEMPE

(AMONG THOSE WHO FEEL CONGESTION IS A  
BIG OR MODERATE PROBLEM IN TEMPE)

“Which intersections in Tempe do you feel have the worst congestion problems?”

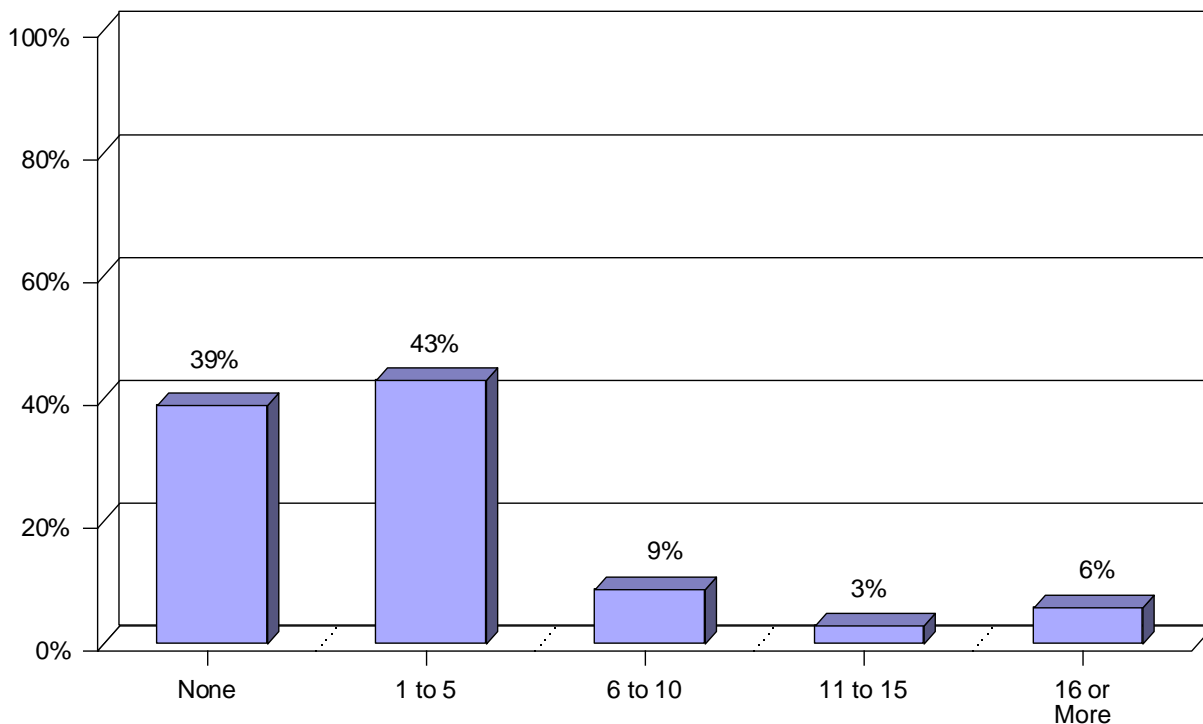
	REGION				
	TOTAL	North- west	North- east	South- west	South- east
University & Rural	18%	11%	19%	30%	13%
Broadway & Rural	16	15	27	8	9
University & Mill	16	25	17	10	7
Southern & Rural	15	19	16	14	10
Southern & Mill	13	19	12	9	11
Broadway & Mill	12	5	26	6	5
Apache & Rural	12	9	13	8	19
Southern & McClintock	9	3	8	9	21
Baseline & Mill	9	7	5	23	2
University & McClintock	9	14	6	8	9
Baseline & McClintock	9	2	5	16	16
Baseline & Rural	8	4	4	13	16
Apache & McClintock	7	4	8	3	13
Broadway & McClintock	6	3	2	6	15
Baseline & Priest	5	2	2	16	4
Guadalupe & McClintock	5	1	1	6	20
Southern & Priest	5	7	6	4	1
Broadway & Priest	4	8	3	4	1
Guadalupe & Rural	3	2	*	5	7
All others	17	10	19	26	12

\* Indicates % less than .5

**EXPERIENCE WITH BUS DELAYS**

Sixty-one percent of residents indicate that in the past month they have been delayed at an intersection in Tempe because of a stopped bus, with a median reading of 2.0 times over the period. Southeast residents report the lowest bus-caused delay reading.

**EXPERIENCE WITH BUS-CAUSED TRAFFIC DELAYS**



**TABLE 5: EXPERIENCE WITH BUS - CAUSED TRAFFIC DELAYS**

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“Next, in the past month, how many times, if any, have you been delayed at an intersection in Tempe because of a stopped bus?”

	REGION				
	TOTAL	North-west	North-east	South-west	South-east
None	39%	33%	39%	33%	56%
1 to 5	43	50	39	45	36
6 to 10	9	4	16	10	1
11 to 15	3	1	2	7	*
16 or more	6	12	4	5	7
	100%	100%	100%	100%	100%
<b>MEDIAN TIMES</b>	2.0	2.4	2.1	2.5	<1.0

\*Indicates % less than .5



Eight Tempe intersections record readings of ten percent or over when residents are asked to reveal those intersections where they have experienced bus-caused delays.

### INTERSECTIONS WHERE BUS DELAYS EXPERIENCED

(Among Those Who Have Experienced Bus Delays in the Past Month)

#### TOP 8 MENTIONS

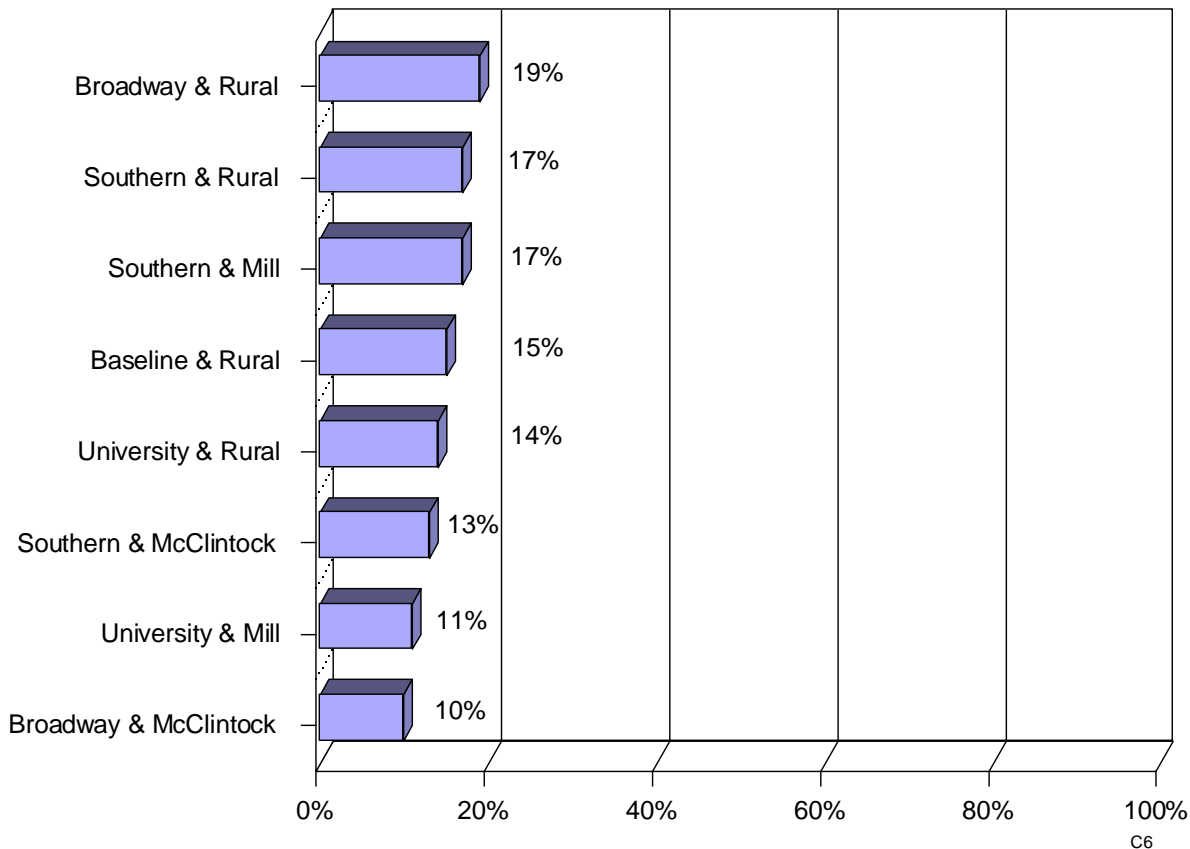


TABLE 6: INTERSECTIONS WHERE  
BUS DELAYS EXPERIENCED

(AMONG THOSE WHO HAVE EXPERIENCED  
BUS DELAYS IN THE PAST MONTH)

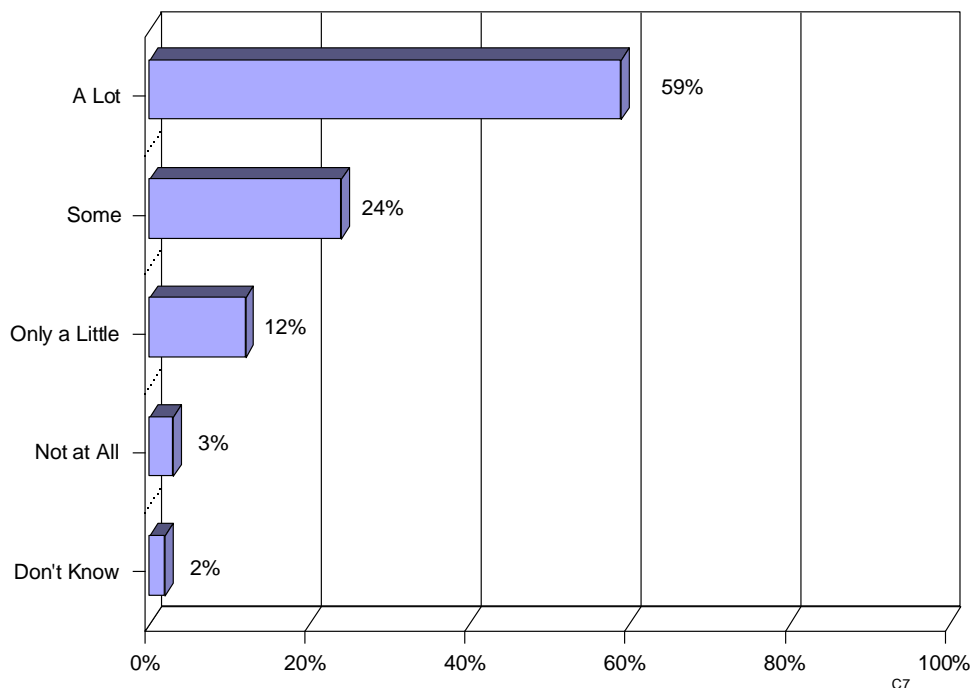
“At which intersection have you experienced delays? Please give me the cross streets that form each intersection.”

	REGION				
	TOTAL	North- west	North- east	South- west	South- east
Broadway & Rural	19%	37%	19%	5%	10%
Southern & Rural	17	19	25	8	10
Southern & Mill	17	28	14	9	16
Baseline & Rural	15	27	8	15	8
University & Rural	14	25	10	10	6
Southern & McClintock	13	24	11	4	10
University & Mill	11	18	9	12	1
Broadway & McClintock	10	16	3	7	17
Apache & Rural	9	15	7	9	1
Baseline & Mill	9	16	1	13	2
Baseline & McClintock	9	17	4	9	7
Baseline & Priest	9	15	1	17	1
Broadway & Priest	9	23	6	1	1
Guadalupe & Rural	9	14	1	12	12
University & McClintock	8	15	6	4	2
University & Priest	8	15	11	1	0
Broadway & Mill	7	15	9	0	0
Apache & McClintock	7	15	2	6	2
Guadalupe & McClintock	6	14	2	0	10
Southern & Priest	5	15	0	1	6
McClintock & Elliot	2	0	0	8	1
McClintock & Warner	1	0	0	0	8
All others	10	11	3	13	16

In a related question, 59 percent of residents who had experienced a bus-caused delay in the past month believe that the installation of bus pullouts would help “a lot” to improve Tempe traffic congestion. Only among southeast residents does the “a lot” reading dip below 50 percent.

### PERCEIVED IMPACT OF BUS PULLOUTS ON TRAFFIC CONGESTION

(Among Those Who Have Experienced Bus Delays in the Past Month)



**TABLE 7: PERCEIVED IMPACT OF BUS PULLOUTS ON TRAFFIC CONGESTION**

(AMONG THOSE WHO HAVE EXPERIENCED BUS DELAYS IN THE PAST MONTH)

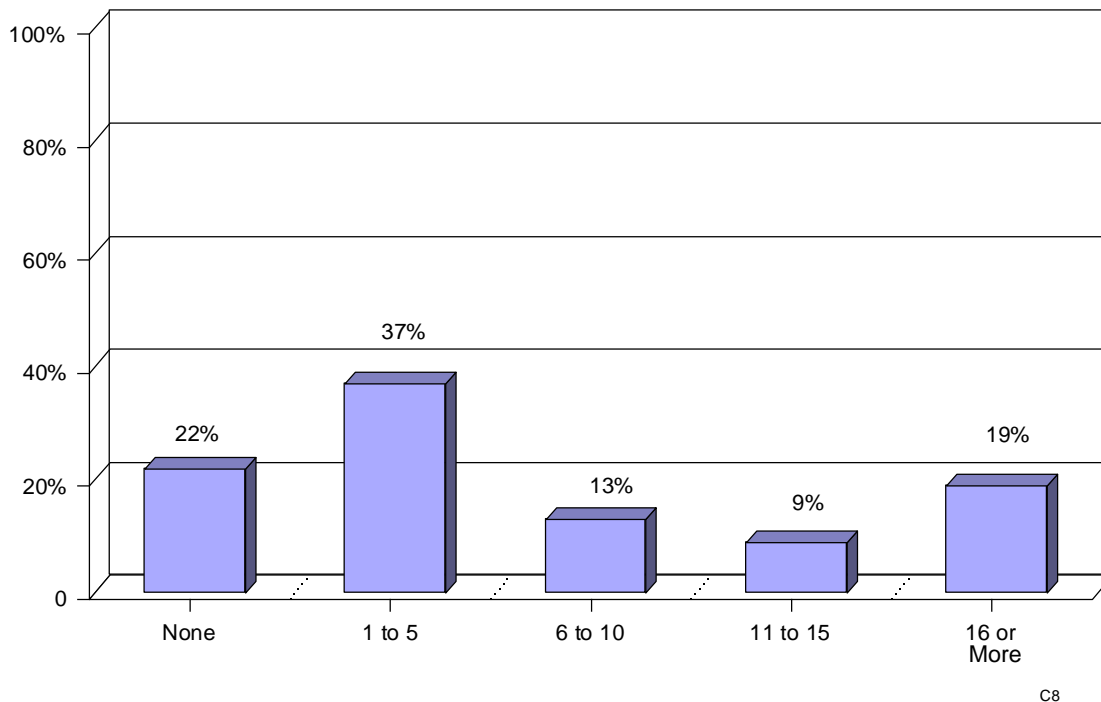
“Do you feel that installing bus pullouts, which is when a bus pulls out of the traffic lane to pick up passengers, would help a lot, some, only a little or not at all to improve traffic congestion in Tempe?”

	TOTAL	REGION			
		North-west	North-east	South-west	South-east
A lot	59%	51%	67%	66%	46%
Some	24	30	18	20	29
Only a little	12	16	11	5	17
Not at all	3	2	3	4	4
Don't know	<u>2</u>	<u>1</u>	<u>1</u>	<u>5</u>	<u>4</u>
	100%	100%	100%	100%	100%

**EXPERIENCE WITH CONSTRUCTION-CAUSED DELAYS**

Seventy-eight percent of residents indicate that in the past three months they have been delayed in traffic while traveling on a major road in Tempe because of a lane restriction related to construction with a median reading of 4.0 times over the period. Once again, southeast residents report the lowest construction caused delay reading.

**EXPERIENCE WITH CONSTRUCTION -  
CAUSED TRAFFIC DELAYS**



**TABLE 8: EXPERIENCE WITH CONSTRUCTION-  
CAUSED TRAFFIC DELAYS**

“In the past three months, how many times, if any, have you been delayed in traffic while traveling on a major road in Tempe because of a lane restriction or closure related to construction?”

	REGION				
	TOTAL	North-west	North-east	South-west	South-east
None	22%	19%	19%	24%	25%
1 to 5	37	35	34	36	49
6 to 10	13	17	15	7	13
11 to 15	9	10	6	16	5
16 or more	<u>19</u>	<u>19</u>	<u>26</u>	<u>17</u>	<u>8</u>
	100%	100%	100%	100%	100%
<b>MEDIAN TIMES</b>	4.0	4.5	4.7	3.8	3.1

When residents who have experienced construction delays in the past three months are asked if they would prefer that lane restrictions or closures related to construction occur overnight, 66 percent say yes, even if it might produce noise on a major road adjacent to their neighborhood. This attitude is universal across each City region.

## PREFERENCE FOR OVERNIGHT CONSTRUCTION CLOSURES

(Among Those Who Have Experienced Construction Delays in the Past 3 Months)

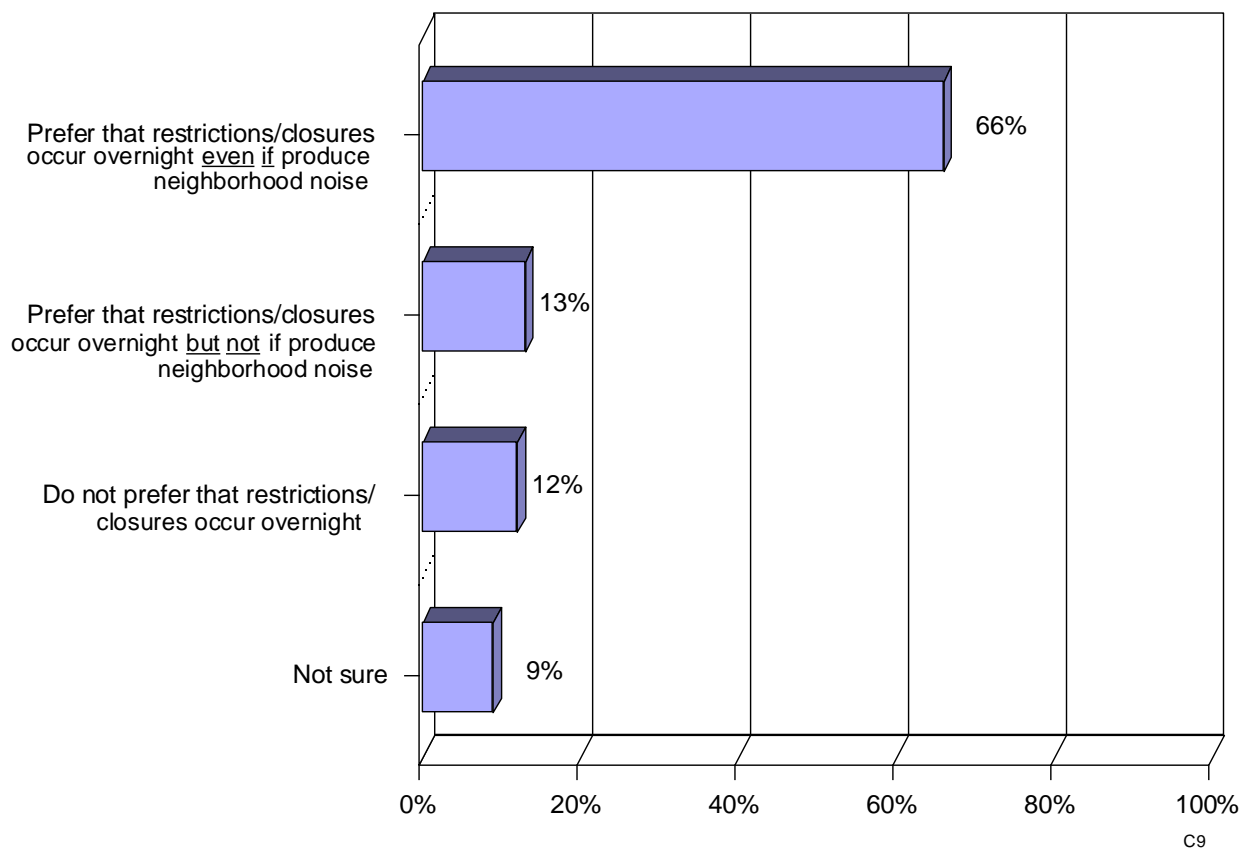


TABLE 9: PREFERENCE FOR OVERNIGHT  
CONSTRUCTION CLOSURES

(AMONG THOSE WHO HAVE EXPERIENCED  
CONSTRUCTION DELAYS IN THE PAST 3 MONTHS)

“Would you prefer that lane restrictions or closures related to  
construction occurred overnight in Tempe?”

	REGION				
	TOTAL	North- west	North- east	South- west	South- east
Yes	83%	87%	86%	81%	75%
No	12	13	12	11	13
Don't know	<u>5</u>	<u>*</u>	<u>2</u>	<u>8</u>	<u>12</u>
	100%	100%	100%	100%	100%

(AMONG THOSE PREFERRING OVERNIGHT CLOSURES)

“And would you still prefer that lane restrictions and closures  
related to construction occurred overnight in Tempe even if it was  
on a major road adjacent to your neighborhood which may  
produce noise?”

Yes	80%	88%	71%	84%	77%
No	15	9	22	13	14
Don't know	<u>5</u>	<u>3</u>	<u>7</u>	<u>3</u>	<u>9</u>
	100%	100%	100%	100%	100%

\*Indicates % less than .5

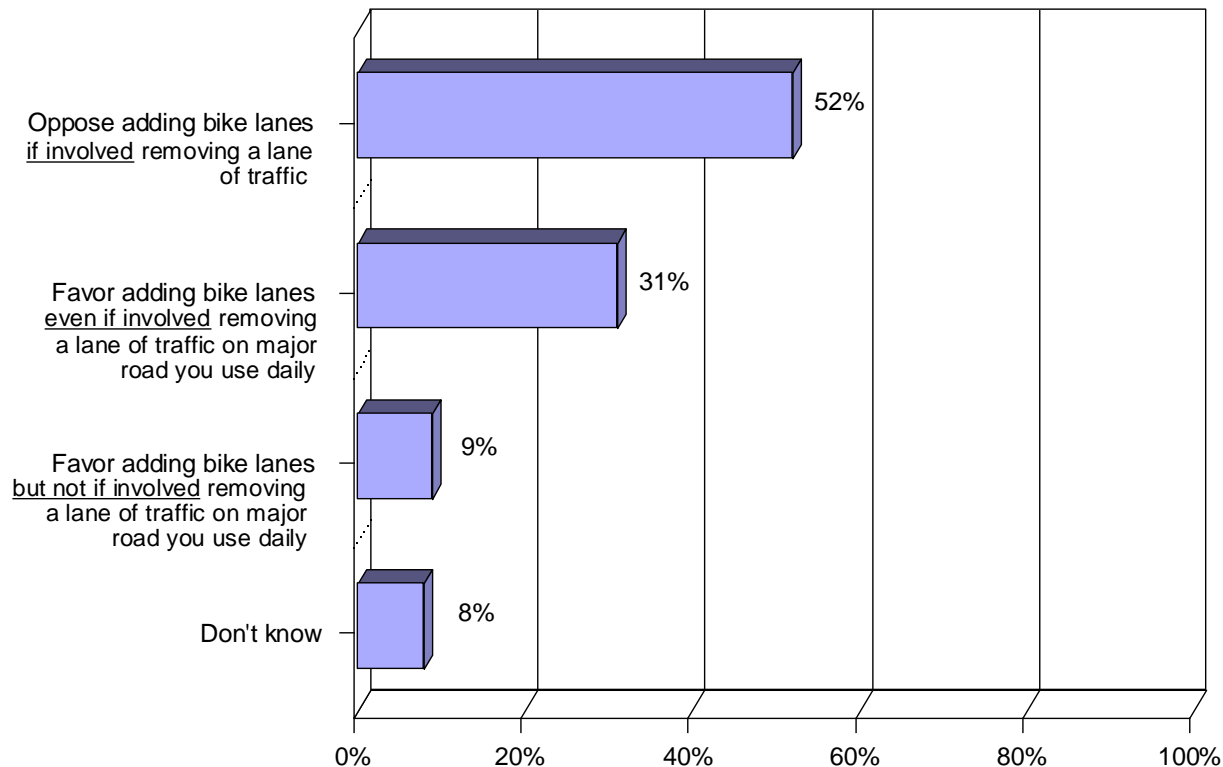
SUMMARY

Prefer restrictions/closures occur overnight <u>even if</u> produce neighborhood noise	66%	77%	61%	69%	58%
Prefer restrictions/closures occur overnight <u>but not if</u> produce neighborhood noise	13	8	19	10	11
Do not prefer restrictions/ closures occur overnight	12	13	12	12	12
Don't know	<u>9</u>	<u>2</u>	<u>8</u>	<u>9</u>	<u>19</u>
	100%	100%	100%	100%	100%

### ATTITUDE ABOUT ADDING BIKE LANES ON MAJOR ROADS

A majority of Tempe residents (52%) oppose adding bike lanes to major roads in Tempe if it means removing a lane of traffic. Only in the northwest region of the City does opposition drop below majority with a reading of only 34 percent. In this region, 50 percent of residents favor adding bike lanes even if it involves removing a lane of traffic on a major road they use daily.

### ATTITUDE ABOUT ADDING BIKE LANES TO MAJOR TEMPE ROADS



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TABLE 10: ATTITUDE ABOUT ADDING  
BIKE LANES TO MAJOR TEMPE ROADS

“Do you favor or oppose adding bicycle lanes to major roads in Tempe if it means removing a lane of traffic?”

	REGION				
	TOTAL	North- west	North- east	South- west	South- east
Favor	43%	54%	41%	38%	36%
Oppose	51	34	56	61	56
Don't know	<u>6</u>	<u>12</u>	<u>3</u>	<u>1</u>	<u>8</u>
	100%	100%	100%	100%	100%

(AMONG THOSE FAVORING BIKE LANES)

“And would you still favor adding bicycle lanes to major roads in Tempe if it involved removing a lane of traffic along a major road that you use daily?”

Favor	74%	92%	79%	38%	74%
Oppose	21	7	20	42	26
Don't know	<u>5</u>	<u>1</u>	<u>1</u>	<u>20</u>	<u>*</u>
	100%	100%	100%	100%	100%

\*Indicates % less than .5

SUMMARY

Oppose adding bike lanes <u>if involved</u> removing a lane of traffic	52%	34%	56%	61%	56%
Favor adding bike lanes <u>even if involved</u> removing a lane of traffic on major road you use daily	31	50	32	15	26
Favor adding bike lanes <u>but not if involved</u> removing a lane of traffic on major road you use daily	9	4	8	15	9
Don't know	<u>8</u>	<u>12</u>	<u>4</u>	<u>9</u>	<u>9</u>
	100%	100%	100%	100%	100%



## MAJOR TEMPE ROADS TRAVELED MOST OFTEN

The three most travelled major streets in Tempe are Rural (45%), McClintock (43%) and Southern (38%).

TABLE 11: MAJOR TEMPE ROADS  
TRAVELED MOST OFTEN

“What major street in Tempe do you travel the most?”

	TOTAL	REGION			
		North-west	North-east	South-west	South-east
Rural	45%	48%	40%	51%	44%
McClintock	43	17	64	28	62
Southern	38	57	46	24	16
Broadway	23	26	37	13	6
Baseline	19	6	13	37	26
Mill	17	30	16	10	8
University	17	19	26	9	6
Priest	11	19	6	15	3
Apache	10	2	21	5	6
Elliot	9	1	1	19	23
Guadalupe	7	1	1	13	20
Warner	3	0	*	8	7
All others	8	5	4	11	11

\*Indicates % less than .5

**APPENDIX**

Survey Questionnaire

Hello, my name is \_\_\_\_\_ and I'm with the Behavior Research Center of Arizona. We're conducting a survey for the City of Tempe Transportation Division on important transportation issues affecting the City and I'd like to speak with you for a few minutes.

A. Before we get started however, are you 18 years of age or older and a resident of Tempe?

IF YES: CONTINUE

IF NO: ASK TO SPEAK WITH OTHER HOUSEHOLD MEMBER 18+ AND RESIDENT. REINTRODUCE YOURSELF AND CONTINUE. IF NONE AVAILABLE, ARRANGE CALLBACK. IF NONE, TERMINATE.

**(CELLPHONE SAMPLE ONLY)**

B. Are you currently driving a vehicle or doing any activity that requires your full attention?

(ARRANGE CALLBACK) Yes...1  
(CONTINUE) No...2

1. To begin, do you live north or south of US 60?

North...1  
South...2

2. And do you live east or west of Rural Road?

East...1  
West...2

3. How big of a problem would you say the amount of traffic congestion is in Tempe in general?  
(READ EACH EXCEPT DK)

A big problem...1  
A moderate problem...2  
A small problem...3  
Or no problem at all...4  
Don't know/NA...5

4. And how big of a problem would you say traffic congestion is on the major streets adjacent to your neighborhood? (READ EACH EXCEPT DK)

A big problem...1  
A moderate problem...2  
A small problem...3  
Or no problem at all...4  
Don't know/NA...5

**(IF Q3 OR Q4 = 1 OR 2, GO TO Q5; OTHERWISE GO TO Q8)**

5. Is there a certain time of day that you feel traffic congestion is worse in Tempe? (DO NOT READ)

6 a.m. to 9 a.m....1  
9 a.m. to 3 p.m....2  
3 p.m. to 7 p.m....3  
All the time...4  
Don't know/NA...5

6. Is there a certain day of the week that you feel traffic congestion is worse in Tempe? (DO NOT READ – MARK ALL MENTIONED).

- Sunday...1
- Monday...2
- Tuesday...3
- Wednesday...4
- Thursday...5
- Friday...6
- Saturday...7
- Every day...8
- Don't know/NA...9

7. Which intersections in Tempe do you feel have the worst congestion problem? Please give me the two cross streets that form each intersection. (MARK ALL MENTIONED).

- Apache and Rural...1
- Apache and McClintock...2
- Baseline and Priest...3
- Baseline and McClintock...4
- Baseline and Mill...5
- Baseline and Rural...6
- Broadway and Rural...7
- Broadway and McClintock...8
- Broadway at Mill...9
- Broadway at Priest...10
- Guadalupe and Rural...11
- Guadalupe and McClintock...12
- Southern and McClintock...13
- Southern and Priest...14
- Southern and Mill...15
- Southern and Rural...16
- University and McClintock...17
- University and Priest...18
- University and Mill...19
- University and Rural...20
- \_\_\_\_\_ Other (SPECIFY)

8. What are the major roads in Tempe that you travel the most? (MARK ALL MENTIONED)

- Apache...1
- Baseline...2
- Broadway...3
- Elliot...4
- Guadalupe...5
- McClintock...6
- Mill...7
- Priest...8
- Rio Salado...9
- Rural...10
- Southern...11
- University...12
- \_\_\_\_\_ Other (SPECIFY)

9. Next, in the past month, how many times, if any, have you been delayed at an intersection in Tempe because of a stopped bus?

- (GO TO Q11) None...1
- 1 to 5...2
- (GO TO Q10) 6 to 10...3
- 11 to 15...4
- 16 or more...5

10. At which intersections have you experienced delays? Please give me the two cross streets that form each intersection. (MARK ALL MENTIONED).

- Apache and Rural...1
- Apache and McClintock...2
- Baseline and Priest...3
- Baseline and McClintock...4
- Baseline and Mill...5
- Baseline and Rural...6
- Broadway and Rural...7
- Broadway and McClintock...8
- Broadway at Mill...9
- Broadway at Priest...10
- Guadalupe and Rural...11
- Guadalupe and McClintock...12
- Southern and McClintock...13
- Southern and Priest...14
- Southern and Mill...15
- Southern and Rural...16
- University and McClintock...17
- University and Priest...18
- University and Mill...19
- University and Rural...20
- \_\_\_\_\_ Other (SPECIFY)

11. Do you feel that installing bus pullouts, which is when a bus pulls out of the traffic lane to pick up passengers, would help a lot, some, only a little or not at all to improve traffic congestion in Tempe?

- A lot...1
- Some...2
- Only a little...3
- Not at all...4
- Don't know...5

12. In the past three months, how many times if any, have you been delayed in traffic while traveling on a major road in Tempe because of a lane restriction or closure related to construction?

- (GO TO Q15) None...1
- 1 to 5...2
- (GO TO Q13) 6 to 10...3
- 11 to 15...4
- 16 or more...5

13. Would you prefer that lane restrictions or closures related to construction occurred overnight in Tempe?

- (GO TO Q14) Yes...1
- No...2
- (GO TO Q15) Don't know...3

14. And would you still prefer that lane restrictions and closures related to construction occurred overnight in Tempe even if it was on a major road adjacent to your neighborhood which may produce noise?
- Yes...1  
No...2  
Don't know...3
15. Do you favor or oppose adding bicycle lanes to major roads in Tempe if it means removing a lane of traffic?
- (GO TO Q16) Favor...1  
Oppose...2  
(GO TO Q17) Don't know...3
16. And would you favor or oppose adding bicycle lanes to major roads in Tempe if it involved removing a lane of traffic along a major road that you use daily?
- Favor...1  
Oppose...2  
Don't know...3
17. Now, before I finish, I need two pieces of information about yourself for classification purposes only. First, which one of the following categories best describes your age? (READ EACH EXCEPT REFUSED)
- Under 25...1  
25 to 34...2  
35 to 44...3  
45 to 54...4  
55 to 64...5  
65 or over...6  
Refused...7
18. And finally, what mode of transportation do you use most often to travel in Tempe? (DO NOT READ)
- Car/truck...1  
Bus...2  
Bike...3  
Walk...4  
\_\_\_\_\_ Other (SPECIFY)

Thank you very much, that completes this interview. We very much appreciate your help on this project. My supervisor may want to call you to verify that I conducted this interview so may I have your first name so that they may do so?  
(VERIFY PHONE NUMBER)

NAME: \_\_\_\_\_ PHONE #: \_\_\_\_\_

**CITY OF TEMPE  
TRAFFIC CONGESTION SURVEY**

**ONLINE SUPPLEMENT**

October 2016

Prepared for  
City of Tempe  
Transportation Division

Prepared by  
Behavior Research Center, Inc.  
45 East Monterey Way  
Phoenix, Arizona 85012  
(602) 258-4554



## SURVEY BACKGROUND

This summary report presents the findings of an Online Supplement Survey to a City of Tempe Traffic Congestion Survey conducted for the City of Tempe Transportation Division.

The base Tempe Traffic Congestion Survey was based on 425 telephone interviews conducted with a representative cross-section of Tempe residents 18 years of age or older. Respondent selection for the project was accomplished via a computer-generated pure unweighted (EPSEM) random digit dial (RDD) telephone sample which selects households on the basis of telephone prefix. This method was used because it ensured a randomly-selected sample of area households proportionately allocated throughout the sample universe. This method also ensured that all unlisted and newly listed telephone households were included in the sample. A pre-identification screening process was also utilized on this project. This computer procedure screened the sample to remove known business and commercial phone prefixes in addition to disconnects, faxes and computers. Both landlines and cell telephones were included in this research.

All of the interviewing on the base survey was conducted between September 28 and October 9, 2016, at the Center's central location telephone facility where each interviewer worked under the direct supervision of BRC supervisory personnel. Interviewing was conducted during a cross-section of late afternoon, evening, weekday and weekend hours. During the interviewing segment of this study, up to five separate attempts, on different days and during different times of day, were made to contact each selected household. Only after five unsuccessful attempts was a household substituted in the sample.

All random sample surveys are subject to sampling error. Sampling error, stated simply, is the difference between the results obtained from a sample and those which would be obtained by surveying the entire population under consideration. The size of sampling error varies, to some extent, with the number of interviews completed and with the division of opinion on a particular question. The estimated sampling error for the base survey is +/-4.8 percent at a 95 percent confidence level. This sampling error figure represents the maximum error for survey findings where the division of opinion is approximately 50%/50%. Survey findings that show a more one-sided distribution of opinion, such as 70%/30% or 90%/10%, are usually subject to slightly lower sampling tolerances than those shown in the table.

**The results of the Online Supplement Survey presented in this summary report are based on a non-scientific opt in survey of 332 individuals who filled out the survey online between September 30 and October 23, 2016. Respondents were invited to participate in the survey either via an online invitation sent by the Transportation Division to neighborhood, homeowner and affiliated association contacts or via invitations posted on the city's Facebook and Twitter accounts. Non-scientific online surveys conducted using an opt in methodology do not lend themselves to the calculation of sampling error estimates as are traditionally reported for random sample telephone surveys.**

### SAMPLE PROFILE

<u>AGE</u>		<u>TYPICAL MODE OF TRANSPORTATION</u>	
Under 25	2%	Car/Truck	88%
25 to 34	20	Bike	10
35 to 44	21	Bus	1
45 to 54	23	Ride Share/Taxi	<u>1</u>
55 to 64	20		100%
65 or over	<u>14</u>		
	100%		



TABLE 1: EVALUATION OF  
TEMPE TRAFFIC CONGESTION

“How big of a problem would you say the amount of traffic congestion in Tempe is in general?”

	RESIDENT TELEPHONE SURVEY	ONLINE OPT IN SURVEY
A big problem	20%	34%
A moderate problem	58	44
A small problem	12	16
No problem at all	8	6
Don't know	<u>2</u>	<u>0</u>
	100%	100%
<b>BIG/MODERATE SUMMARY</b>	<b>78%</b>	<b>78%</b>

“How big of a problem would you say traffic congestion is on the major streets adjacent to your neighborhood?”

A big problem	16%	34%
A moderate problem	31	37
A small problem	28	18
No problem at all	24	11
Don't know	<u>1</u>	<u>0</u>
	100%	100%
<b>BIG/MODERATE SUMMARY</b>	<b>47%</b>	<b>71%</b>

~~~~~

TABLE 2: WORST TIMES FOR TRAFFIC  
CONGESTION IN TEMPE

(AMONG THOSE WHO FEEL CONGESTION IS A  
BIG OR MODERATE PROBLEM IN TEMPE)

“Is there a certain time of day that you feel congestion is worse in Tempe?”

|                     | <u>RESIDENT<br/>TELEPHONE<br/>SURVEY</u> | <u>ONLINE<br/>OPT IN<br/>SURVEY</u> |
|---------------------|------------------------------------------|-------------------------------------|
| 6 a.m. to 8:59 a.m. | 35%                                      | 57%                                 |
| 9 a.m. to 2:59 p.m. | 5                                        | 3                                   |
| 3 p.m. to 6:59 p.m. | 84                                       | 86                                  |
| All other times     | 2                                        | 1                                   |
| All the time        | 3                                        | 6                                   |

Totals do not equal 100% due to multiple responses  
~~~~~

TABLE 3: WORST DAYS FOR TRAFFIC  
CONGESTION IN TEMPE

(AMONG THOSE WHO FEEL CONGESTION IS A  
BIG OR MODERATE PROBLEM IN TEMPE)

“Is there a certain day of the week that you feel congestion is worse in Tempe?”

	<u>RESIDENT TELEPHONE SURVEY</u>	<u>ONLINE OPT IN SURVEY</u>
Monday	53%	78%
Tuesday	50	77
Wednesday	51	76
Thursday	50	78
Friday	61	69
Saturday	4	8
Sunday	2	1
Every day	15	15

Totals exceed 100% due to multiple responses  
~~~~~

TABLE 4: WORST INTERSECTIONS FOR  
TRAFFIC CONGESTION IN TEMPE

(AMONG THOSE WHO FEEL CONGESTION IS A  
BIG OR MODERATE PROBLEM IN TEMPE)

“Which intersections in Tempe do you feel have the worst congestion problems?”

|                         | <u>RESIDENT<br/>TELEPHONE<br/>SURVEY</u> | <u>ONLINE<br/>OPT IN<br/>SURVEY</u> |
|-------------------------|------------------------------------------|-------------------------------------|
| University & Rural      | 18%                                      | 40%                                 |
| Broadway & Rural        | 16                                       | 33                                  |
| University & Mill       | 16                                       | 31                                  |
| Southern & Rural        | 15                                       | 43                                  |
| Southern & Mill         | 13                                       | 29                                  |
| Broadway & Mill         | 12                                       | 28                                  |
| Apache & Rural          | 12                                       | 30                                  |
| Southern & McClintock   | 9                                        | 41                                  |
| Baseline & Mill         | 9                                        | 10                                  |
| University & McClintock | 9                                        | 26                                  |
| Baseline & McClintock   | 9                                        | 30                                  |
| Baseline & Rural        | 8                                        | 18                                  |
| Apache & McClintock     | 7                                        | 32                                  |
| Broadway & McClintock   | 6                                        | 34                                  |
| Baseline & Priest       | 5                                        | 17                                  |
| Guadalupe & McClintock  | 5                                        | 16                                  |
| Southern & Priest       | 5                                        | 18                                  |
| Broadway & Priest       | 4                                        | 15                                  |
| Guadalupe & Rural       | 3                                        | 8                                   |
| All others              | 17                                       | 26                                  |

Note: online respondents reacted to a list of defined Intersections.

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TABLE 5: EXPERIENCE WITH BUS -  
CAUSED TRAFFIC DELAYS

“Next, in the past month, how many times, if any, have you been delayed at an intersection in Tempe because of a stopped bus?”

	<u>RESIDENT TELEPHONE SURVEY</u>	<u>ONLINE OPT IN SURVEY</u>
None	39%	30%
1 to 5	43	44
6 to 10	9	17
11 to 15	3	4
16 or more	<u>6</u>	<u>5</u>
	100%	100%
 MEDIAN TIMES	 2.0	 2.8
~~~~~		

TABLE 6: INTERSECTIONS WHERE  
BUS DELAYS EXPERIENCED

(AMONG THOSE WHO HAVE EXPERIENCED  
BUS DELAYS IN THE PAST MONTH)

“At which intersection have you experienced delays? Please give me the cross streets.”

	RESIDENT TELEPHONE SURVEY	ONLINE OPT IN SURVEY
Broadway & Rural	19%	25%
Southern & Rural	17	36
Southern & Mill	17	27
Baseline & Rural	15	16
University & Rural	14	22
Southern & McClintock	13	41
University & Mill	11	24
Broadway & McClintock	10	28
Apache & Rural	9	17
Baseline & Mill	9	12
Baseline & McClintock	9	26
Baseline & Priest	9	9
Broadway & Priest	9	11
Guadalupe & Rural	9	7
University & McClintock	8	18
University & Priest	8	7
Broadway & Mill	7	21
Apache & McClintock	7	27
Guadalupe & McClintock	6	12
Southern & Priest	5	15
McClintock & Elliot	2	1
McClintock & Warner	1	0
All others	10	15

Note: online respondents reacted to a list of defined intersections.

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TABLE 7: PERCEIVED IMPACT OF BUS  
PULLOUTS ON TRAFFIC CONGESTION

“Do you feel that installing bus pullouts, which is when a bus pulls out of the traffic lane to pick up passengers, would help a lot, some, only a little or not at all to improve traffic congestion in Tempe?”

|               | RESIDENT<br>TELEPHONE<br>SURVEY | ONLINE<br>OPT IN<br>SURVEY |
|---------------|---------------------------------|----------------------------|
| A lot         | 59%                             | 47%                        |
| Some          | 24                              | 32                         |
| Only a little | 12                              | 16                         |
| Not at all    | 3                               | 3                          |
| Don't know    | <u>2</u>                        | <u>2</u>                   |
|               | 100%                            | 100%                       |

~~~~~

TABLE 8: EXPERIENCE WITH CONSTRUCTION-  
CAUSED TRAFFIC DELAYS

“In the past three months, how many times, if any, have you been delayed in traffic while traveling on a major road in Tempe because of a lane restriction or closure related to construction?”

	RESIDENT TELEPHONE SURVEY	ONLINE OPT IN SURVEY
None	22%	11%
1 to 5	37	51
6 to 10	13	22
11 to 15	9	6
16 or more	<u>19</u>	<u>10</u>
	100%	100%
 MEDIAN TIMES	 4.0	 4.1

~~~~~

TABLE 9: PREFERENCE FOR OVERNIGHT  
CONSTRUCTION CLOSURES

(AMONG THOSE WHO HAVE EXPERIENCED  
CONSTRUCTION DELAYS IN THE PAST 3 MONTHS)

“Would you prefer that lane restrictions or closures related to construction occurred overnight in Tempe?”

|            | RESIDENT<br>TELEPHONE<br>SURVEY | ONLINE<br>OPT IN<br>SURVEY |
|------------|---------------------------------|----------------------------|
| Yes        | 83%                             | 92%                        |
| No         | 12                              | 7                          |
| Don't know | <u>5</u>                        | <u>11</u>                  |
|            | 100%                            | 100%                       |

(AMONG THOSE PREFERRING OVERNIGHT CLOSURES)

“And would you still prefer that lane restrictions and closures related to construction occurred overnight in Tempe even if it was on a major road adjacent to your neighborhood which may produce noise?”

|            |          |           |
|------------|----------|-----------|
| Yes        | 80%      | 77%       |
| No         | 15       | 9         |
| Don't know | <u>5</u> | <u>14</u> |
|            | 100%     | 100%      |

SUMMARY

|   |          |           |
|---|----------|-----------|
| Prefer restrictions/closures occur overnight <u>even if</u> produce neighborhood noise    | 66%      | 63%       |
| Prefer restrictions/closures occur overnight <u>but not</u> if produce neighborhood noise | 13       | 7         |
| Do not prefer restrictions/closures occur overnight                                       | 12       | 7         |
| Don't know  | <u>9</u> | <u>23</u> |
|   | 100%     | 100%      |

~~~~~

TABLE 10: ATTITUDE ABOUT ADDING  
BIKE LANES TO MAJOR TEMPE ROADS

“Do you favor or oppose adding bicycle lanes to major roads in Tempe if it means removing a lane of traffic?”

	RESIDENT TELEPHONE SURVEY	ONLINE OPT IN SURVEY
Favor	43%	36%
Oppose	51	55
Don't know	<u>6</u>	<u>9</u>
	100%	100%

(AMONG THOSE FAVORING BIKE LANES)

“And would you still favor adding bicycle lanes to major roads in Tempe if it involved removing a lane of traffic along a major road that you use daily?”

Favor	74%	93%
Oppose	21	3
Don't know	<u>5</u>	<u>4</u>
	100%	100%

SUMMARY

Oppose adding bike lanes <u>if involved</u> removing a lane of traffic	52%	55%
Favor adding bike lanes <u>even if involved</u> removing a lane of traffic on major road you use daily	31	34
Favor adding bike lanes <u>but not if involved</u> removing a lane of traffic on major road you use daily	9	1
Don't know	<u>8</u>	<u>10</u>
	100%	100%

~~~~~



TABLE 11: MAJOR TEMPE ROADS  
TRAVELED MOST OFTEN

“What major street in Tempe do you travel the most?”

|            | <u>RESIDENT<br/>TELEPHONE<br/>SURVEY</u> | <u>ONLINE<br/>OPT IN<br/>SURVEY</u> |
|------------|--|-------------------------------------|
| Rural      | 45%                                      | 63%                                 |
| McClintock | 43                                       | 72                                  |
| Southern   | 38                                       | 68                                  |
| Broadway   | 23                                       | 49                                  |
| Baseline   | 19                                       | 45                                  |
| Mill       | 17                                       | 39                                  |
| University | 17                                       | 29                                  |
| Priest     | 11                                       | 26                                  |
| Apache     | 10                                       | 16                                  |
| Elliot     | 9  | 13                                  |
| Guadalupe  | 7  | 20                                  |
| Warner     | 3  | 1                                   |
| All others | 8  | 15                                  |

Note: online respondents reacted to a list of defined intersections

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# 2016 Traffic Congestion Report Findings Transportation Commission

Jan. 10, 2017

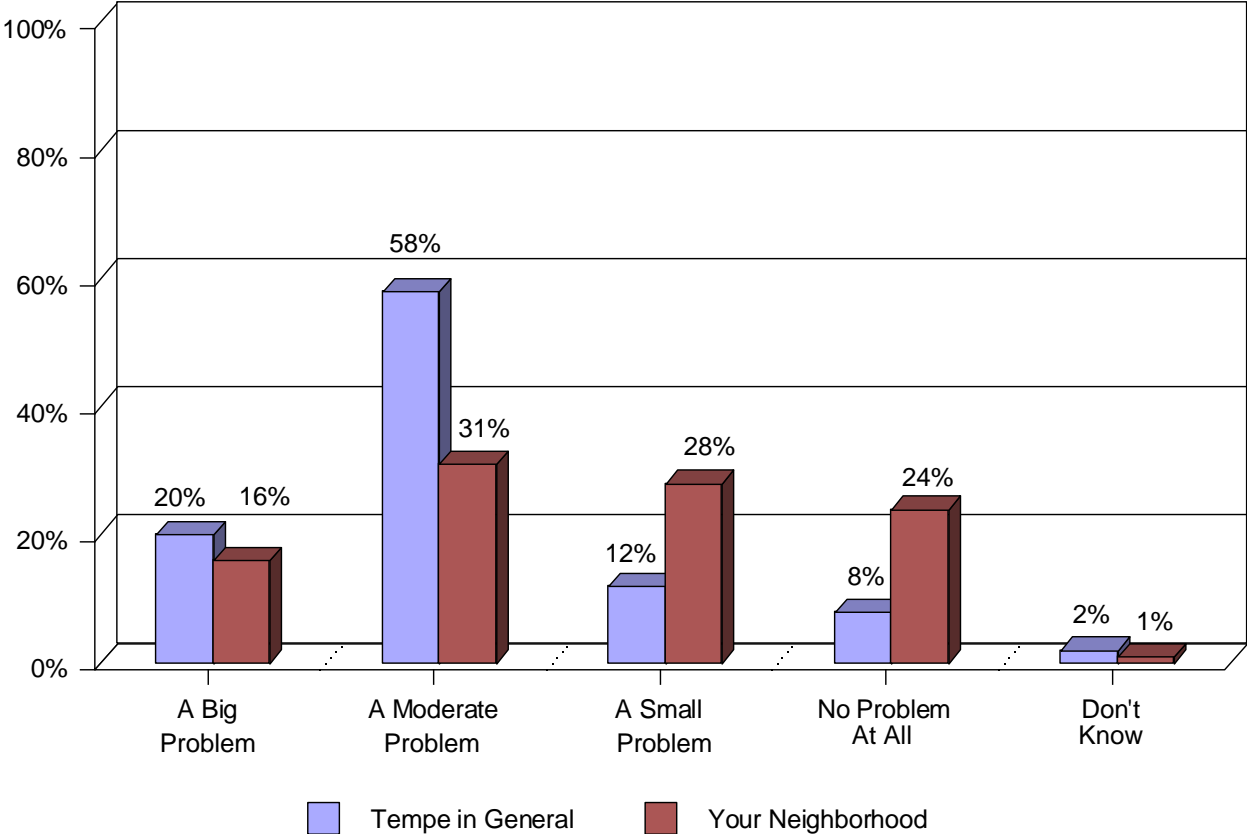


# Methodology



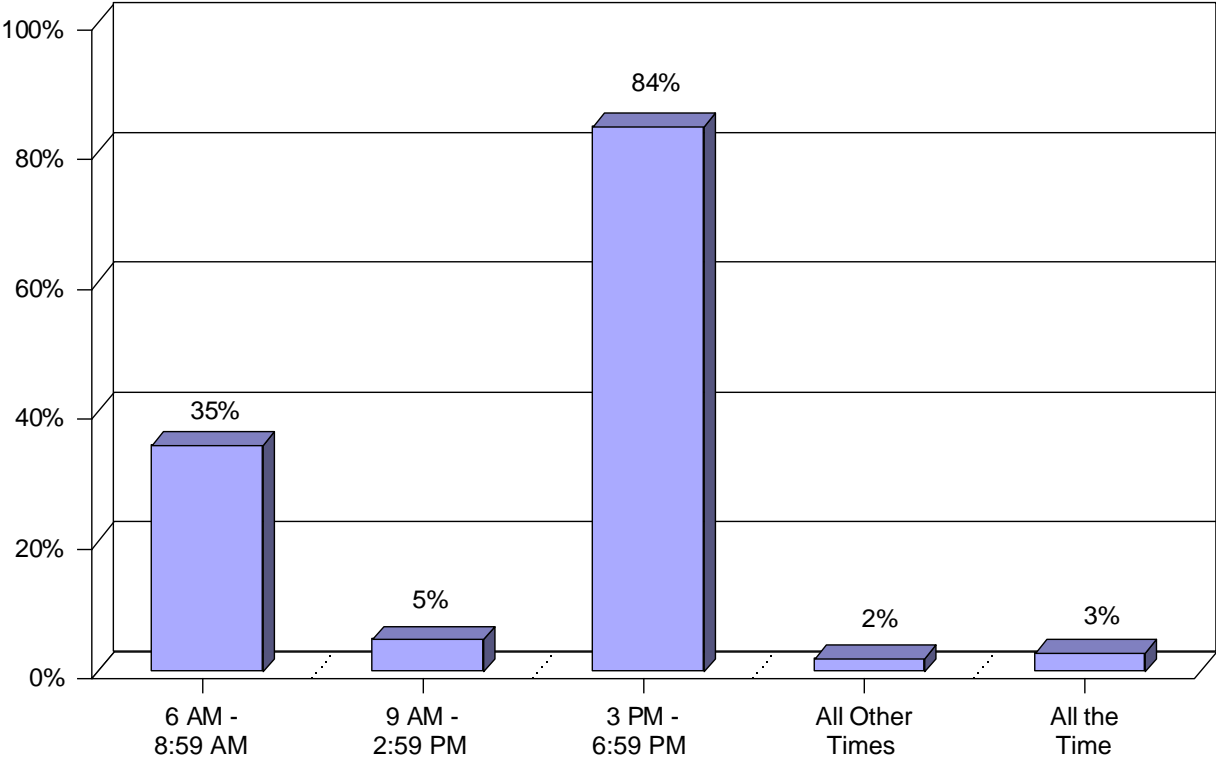
- Gain insights into perceptions about traffic congestion, bus pullouts, traffic delays due to construction and adding bicycle lanes on arterials.
- 425 Tempe residents surveyed (land and cell lines)
- Margin of error for this sample size is approximately  $\pm 4.8\%$  at a 95% level of confidence

# TEMPE TRAFFIC CONGESTION



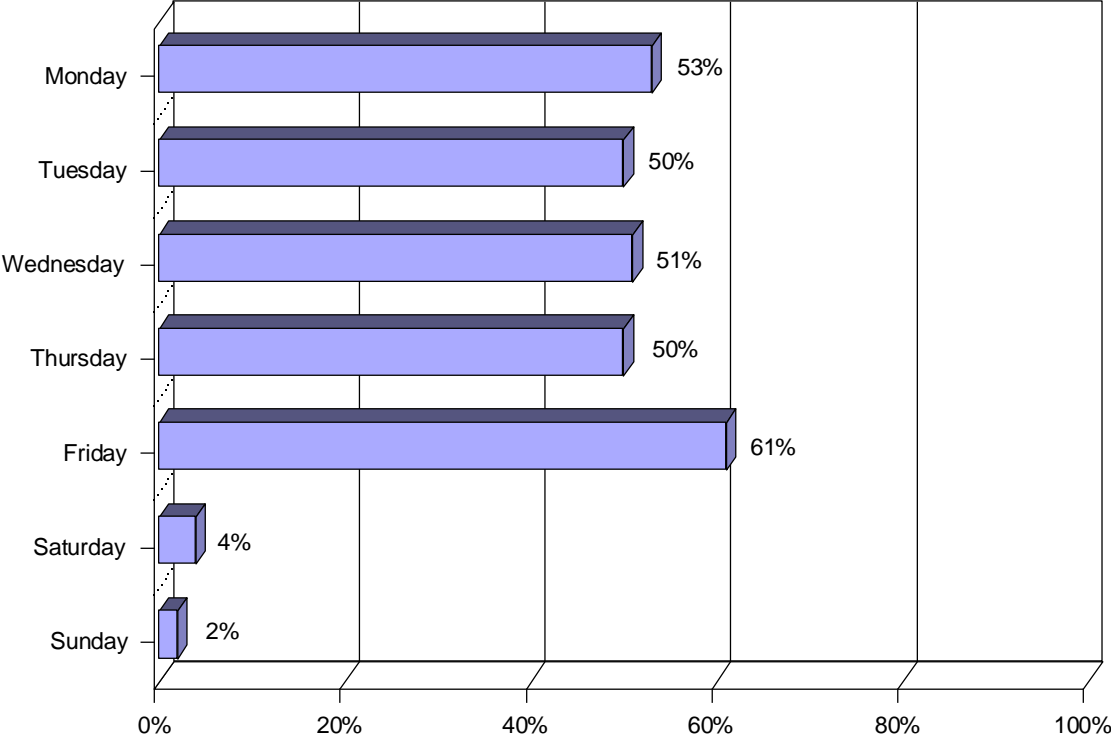
# WORST TIMES FOR TRAFFIC CONGESTION IN TEMPE

(Among Those Who Feel Congestion is a Big or Moderate Problem in Tempe)



# WORST DAYS FOR TRAFFIC CONGESTION IN TEMPE

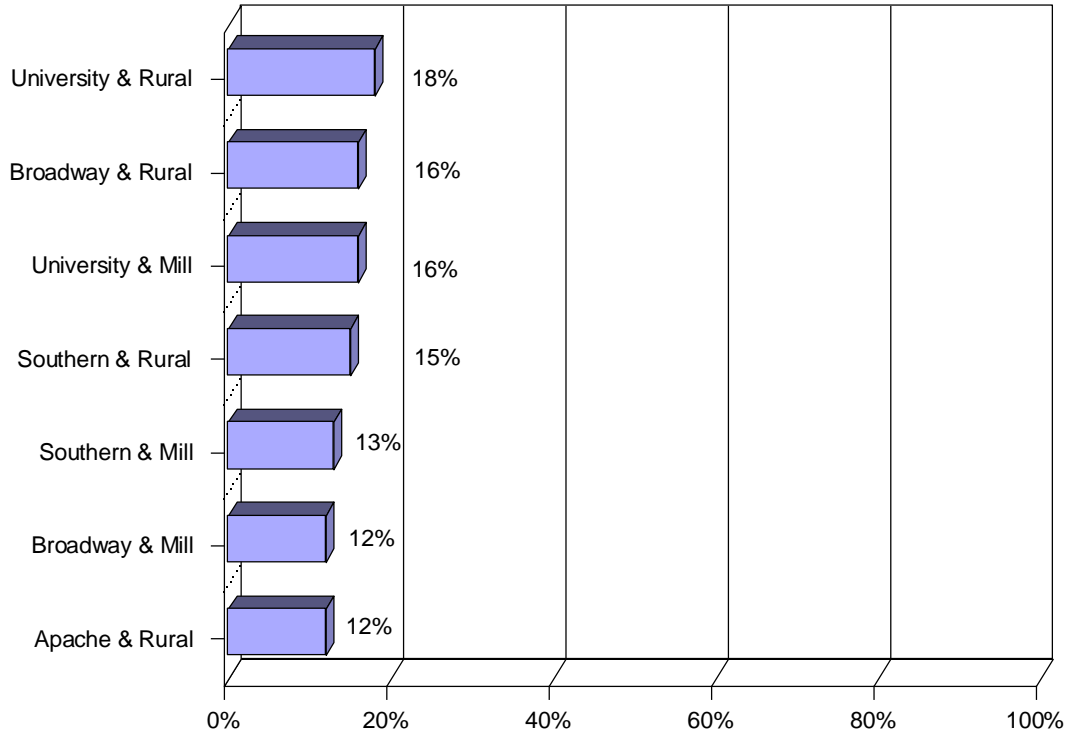
(Among Those Who Feel Congestion is a Big or Moderate Problem in Tempe)



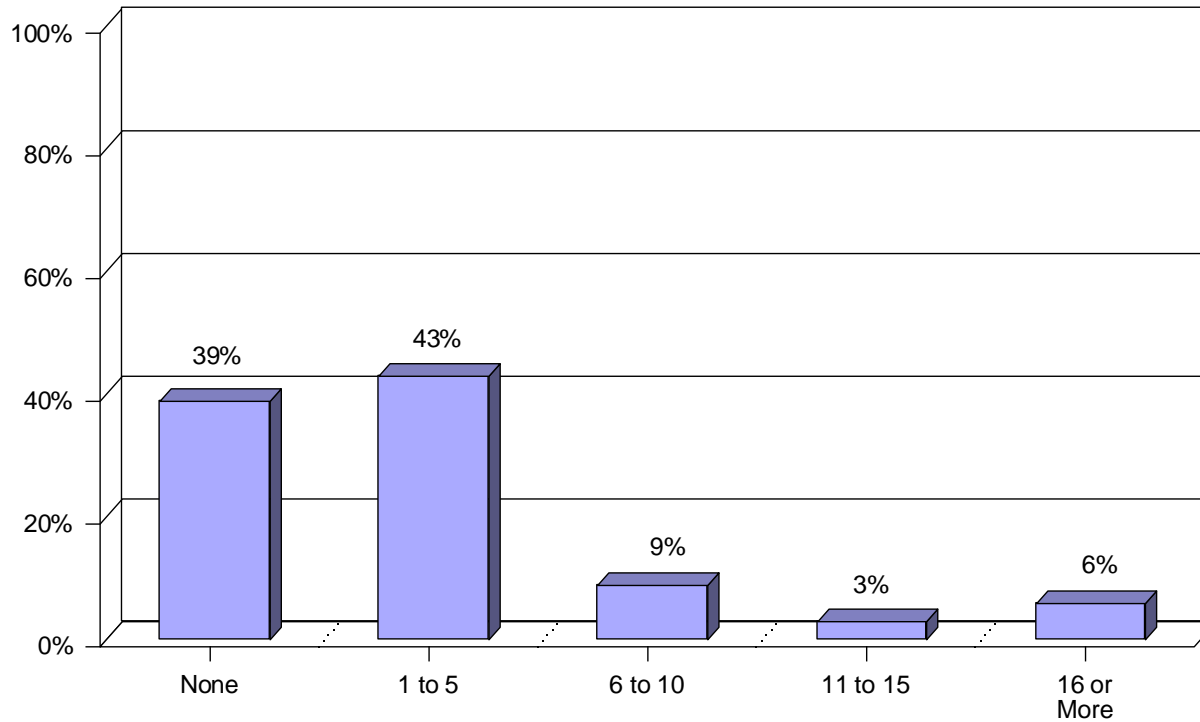
# WORST INTERSECTION FOR TRAFFIC CONGESTION IN TEMPE

(Among Those Who Feel Congestion is a Big or Moderate Problem in Tempe)

## TOP 7 MENTIONS



# EXPERIENCE WITH BUS-CAUSED TRAFFIC DELAYS

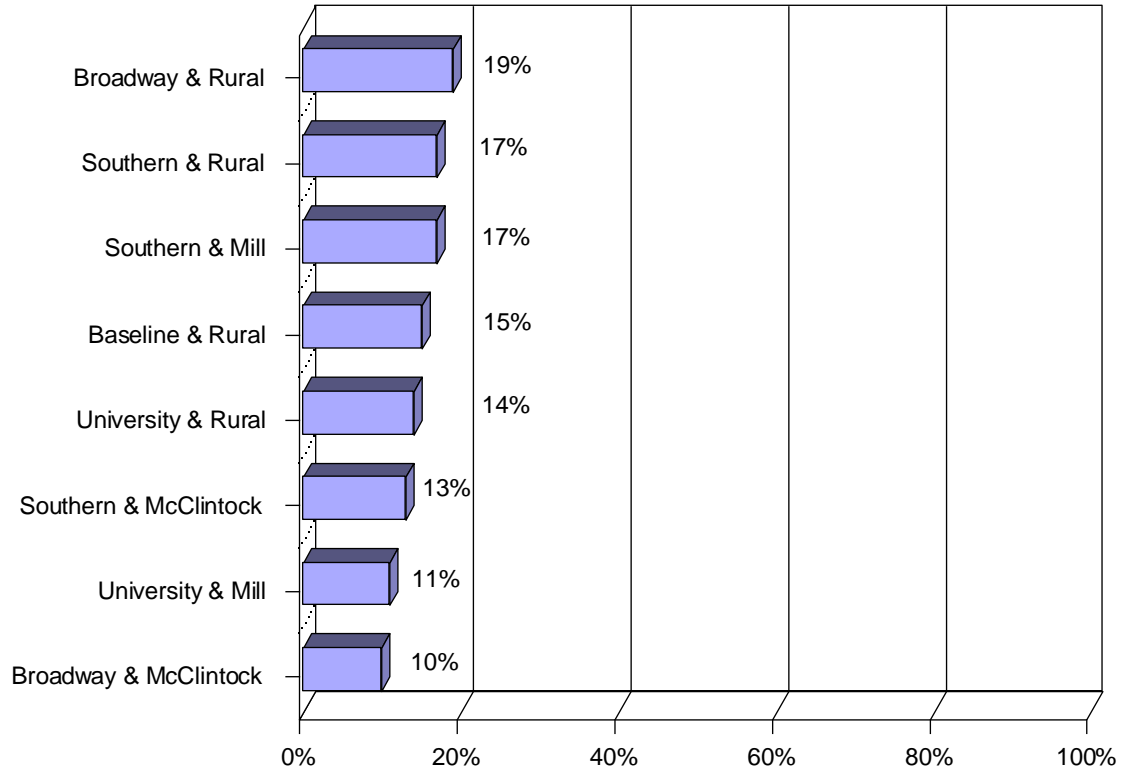




# INTERSECTIONS WHERE BUS DELAYS EXPERIENCED

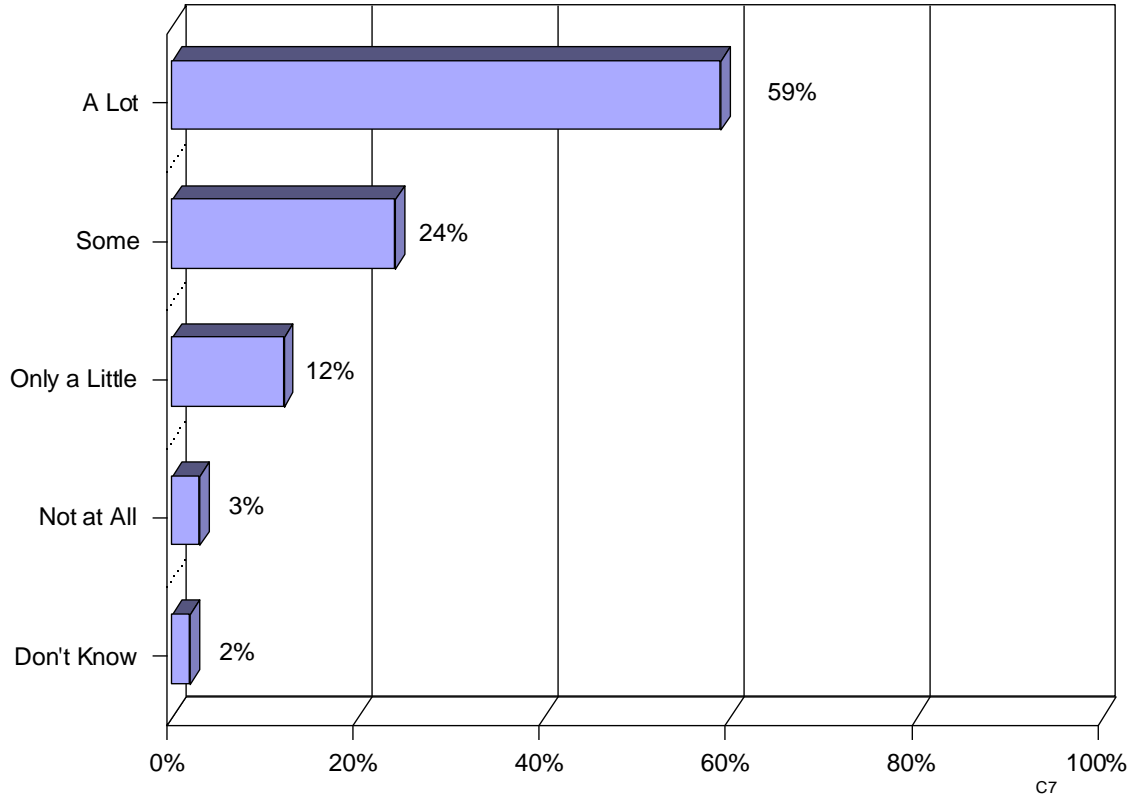
(Among Those Who Have Experienced  
Bus Delays in the Past Month)

## TOP 8 MENTIONS

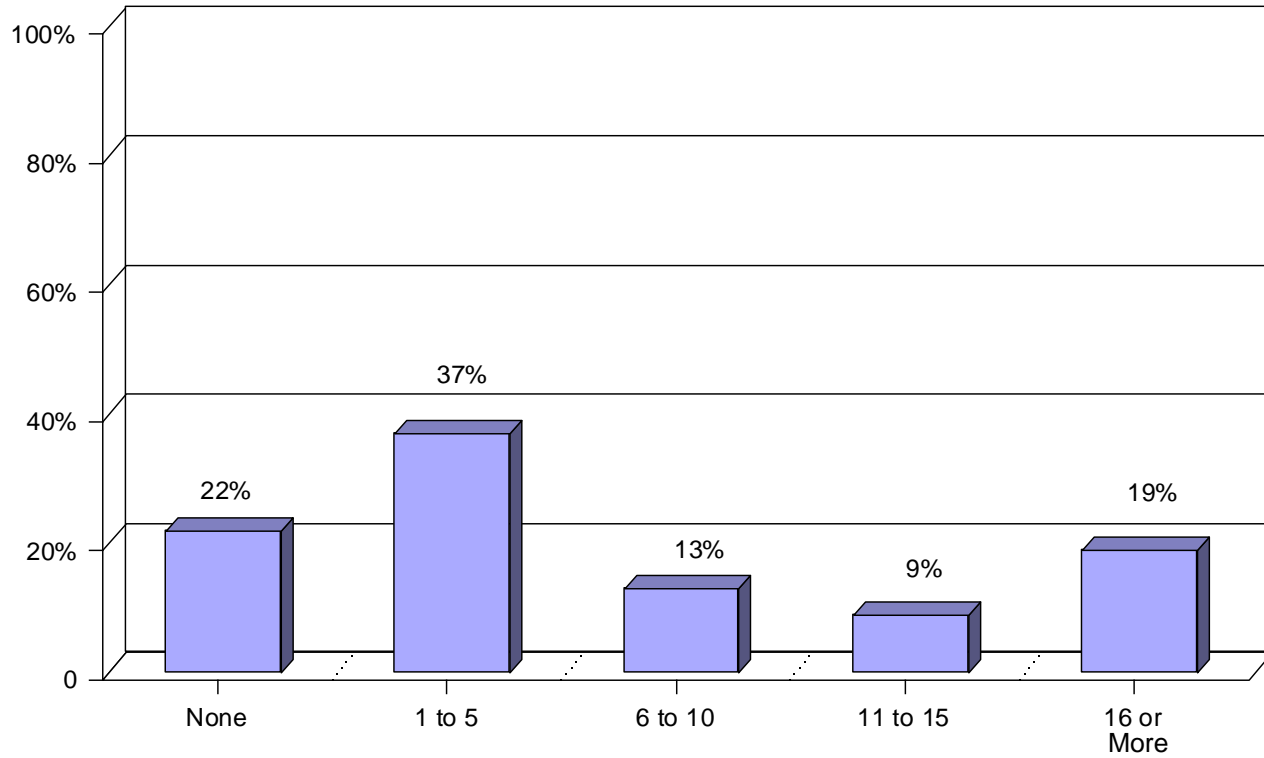


# PERCEIVED IMPACT OF BUS PULLOUTS ON TRAFFIC CONGESTION

(Among Those Who Have Experienced Bus Delays in the Past Month)

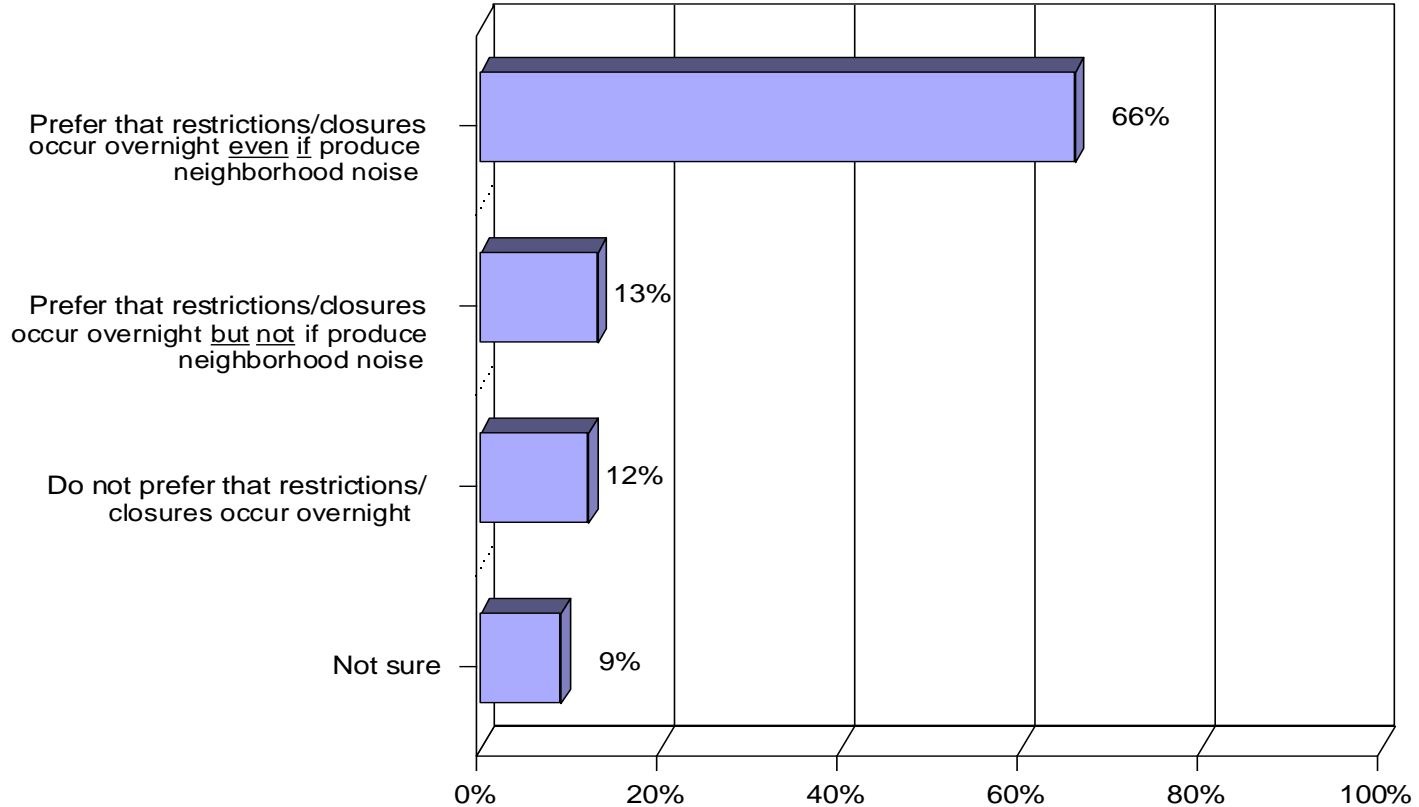


# EXPERIENCE WITH CONSTRUCTION - CAUSED TRAFFIC DELAYS

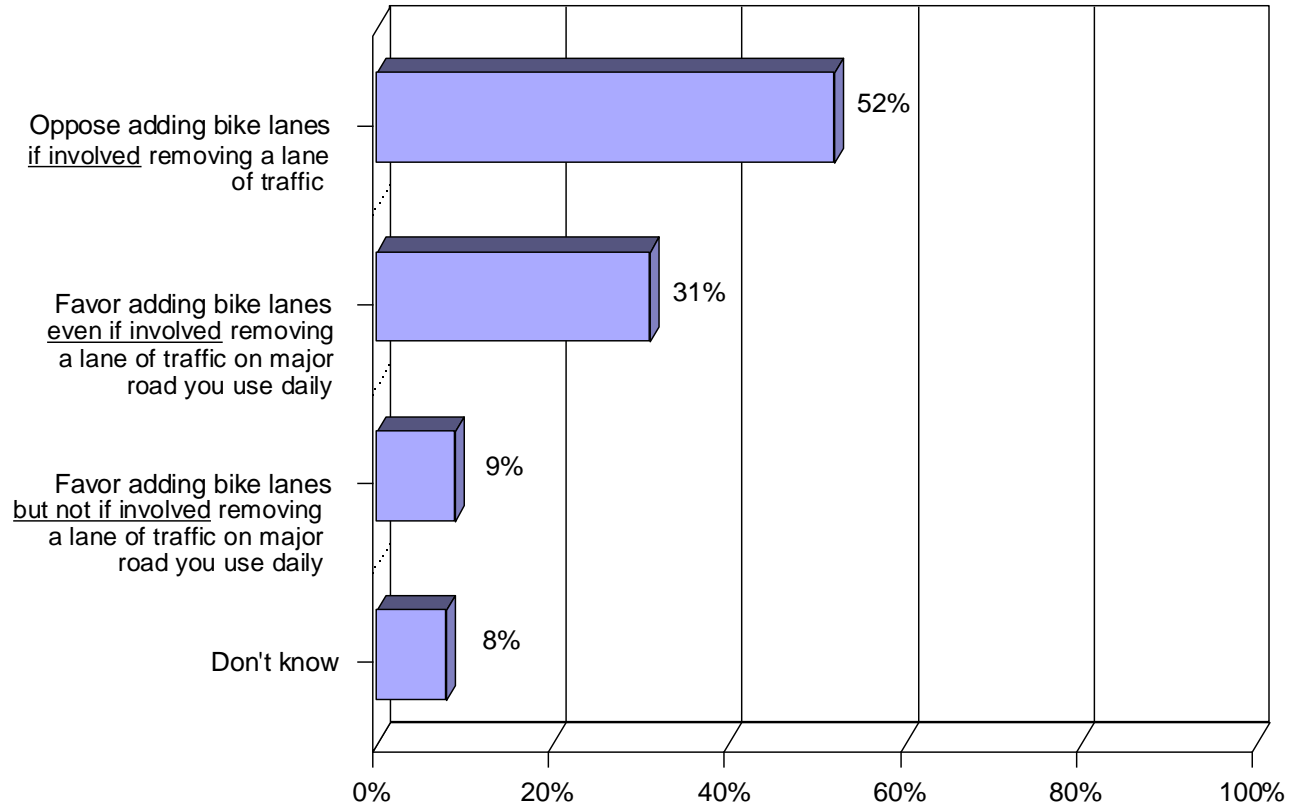


# PREFERENCE FOR OVERNIGHT CONSTRUCTION CLOSURES

(Among Those Who Have Experienced Construction Delays in the Past 3 Months)



# ATTITUDE ABOUT ADDING BIKE LANES TO MAJOR TEMPE ROADS



# Next Steps



- Use data to provide the Transportation Commission and City Council information on proposed future bus pullout locations and procedures/policies for barricading.

# CITY OF TEMPE TRANSPORTATION COMMISSION



## STAFF REPORT

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AGENDA ITEM 7

### DATE

January 3, 2017

### SUBJECT

Tempe Bike Hero Award

### PURPOSE

The purpose of this memo is to request that the Commission select a recipient for the city's annual Bike Hero Award.

### BACKGROUND

The purpose of the Tempe Bike Hero Award is to celebrate bicycling in Tempe, increase awareness of bicycling as an alternative mode of transportation, promote bicycling as an environmentally-friendly recreational activity and illustrate the dedication of Tempe residents and organizations to bicycling.

Award criteria include:

- Individuals who live or work in Tempe.
- Tempe-based organizations.
- Demonstration of how the nominee promotes bicycling in Tempe including listing his/her or the organization's achievements and contributions to bicycling along with specific instances of bicycle advocacy. Contributions that could qualify for the award include, but aren't limited to, the following:
  - demonstration of using a bicycle as a significant mode of transportation
  - consistent implementation of bike-friendly facilities at a business site
  - organization of bike events
  - bike-friendly elements in facility design
  - bike safety advocacy
  - youth involvement in bicycling
  - advocacy for bicycle-friendly roads

Nominees include:

1. Pi Kappa Phi
2. Broadmor Bobcats
3. Debra Long
4. Bill Terrance

Past winners include Bike Saviours (2016), Catherine Brubaker (2016), Eric and Rochelle Geryol (2015), Ryan and Jennifer Guzy (2014), Maja Wessels (2013), Patricia Berning (2012), Eric Iwersen (2011), Bicycle

Cellar (2010), Sue Fassett (2009) and Tempe Bicycle Action Group (2008). The recipient will be presented with the award at a future Tempe City Council meeting.

**FISCAL IMPACT**

\$125 for the award, which is budgeted in cost center 3916-6629.

**RECOMMENDATION**

Select a recipient for the 2017 bike hero award.

**CONTACT**

Sue Taaffe  
Public Works Supervisor  
480-350-8663  
[sue\\_taaffe@tempe.gov](mailto:sue_taaffe@tempe.gov)

**ATTACHMENTS**

Nominations



**City of Tempe**  
**Tempe Bike Hero Award Application**

To nominate a person or organization for the 2017 Tempe Bike Hero Award, please complete this form and provide the information requested below. If you wish to nominate more than one person/organization, please complete a form for each individual/organization that you wish to nominate.

**I am nominating the following person/organization for the Tempe Bike Hero Award:**

Name of Person/Organization Nominated: Pi Kappa Phi Fraternity (attn: Zachary Bryant)

Street Address: 1402 S. Jentilly Lane #202

City: Tempe State: AZ Zip Code: 85281

Phone: 602-292-2802 E-mail: (if available) zacharius.bryant@gmail.com

The nominee (check all that apply):

- Lives and/or works in Tempe
- Lived and/or worked in Tempe at time of contribution
- Is a Tempe based organization

Describe in no more than two pages why this person or organization should receive this award. Up to three additional supplemental pages are permitted. Supplements can include photos, newspaper articles, flyers or recommendations. Nominations will not be returned.

Nominated by: Amanda Slee

Street Address: 1900 E Apache Blvd #4026

City: Tempe State: AZ Zip Code: 85281

Phone: 702-755-1271 E-mail: (if available) amandasleepphotography@gmail.com

Why am I nominating the Pi Kappa Phi organization for the Tempe Bike Hero Award?

Pi Kappa Phi is a fraternity at Arizona State University, who works heavily with the Special Needs community through their philanthropy - The Ability Experience. Every summer, they put on a large event called Journey of Hope - a two-month, cross-country cycling trip that raises funds and awareness for people with disabilities. Every summer, around 100 brothers cycle 3000+ miles and raise over \$650,000 for the different programs and organizations along the route. Each year, around 5-10 brothers from the Arizona State chapter take part in Journey of Hope or Gear Up Florida (a smaller scale trip that rides from Southern Florida to Northern Florida over two weeks). This has led many Pi Kappa Phi's in Tempe to take up cycling in many forms - whether it's around campus, to and from their friends' houses, and even on their daily commutes to work. In addition to this, they hold a philanthropy fund raiser on ASU's campus every spring in which other sororities come out and cycle on stationary bikes. The pedals on these bikes do not stop moving for 48 hours all day and night from start to end. They invite local Best Buddies chapters out to their events to help take part and hangout as well! These men deserve this award because they have not only raised huge amounts of money for people with disabilities but have done it all through biking in one way or another. They have even changed their own lives in the process as cycling has provided them with a healthy form of recreation, all while bring awareness to people with disabilities throughout Tempe.

**City of Tempe  
Tempe Bike Hero Award Application**

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**I am nominating the following person/organization for the Tempe Bike Hero Award:**

Name of Person/Organization Nominated: Broadmor PTA Bike Cats

Street Address: 311 E Aepli Drive

City: Tempe State: AZ Zip Code: 85282

Phone: 602-561-1094 (cell) E-mail: (if available) president@broadmorpta.org

The nominee (check all that apply):

- Lives and/or works in Tempe
- Lived and/or worked in Tempe at time of contribution
- Is a Tempe based organization

Describe in no more than two pages why this person or organization should receive this award. Up to three additional supplemental pages are permitted. Supplements can include photos, newspaper articles, flyers or recommendations. Nominations will not be returned.

Nominated by: Brandi Reynolds

Street Address: 2442 E Fairmont Drive

City: Tempe State: AZ Zip Code: 85282

Phone: 602-561-1094 E-mail: (if available) brandi.a.reynolds@gmail.com



Broadmor PTA Bikecats Program should be considered for the Tempe Bike Hero Award. Since 2010, they have been improving the safety, skill and comfort of young Tempe bike riders. In 2010 the program was launched by a Broadmor parent named Jason Franz. Today, the program is managed by Polly Baldwin, the school librarian, along with the help of other parents Gwen Melis, Brad Clemens, and Jon Kelman. Each school year, the Bikecats meet around 4 to 6 times during the year. The first ride for the 2016-17 school year was held was October 15<sup>th</sup>, 2016.

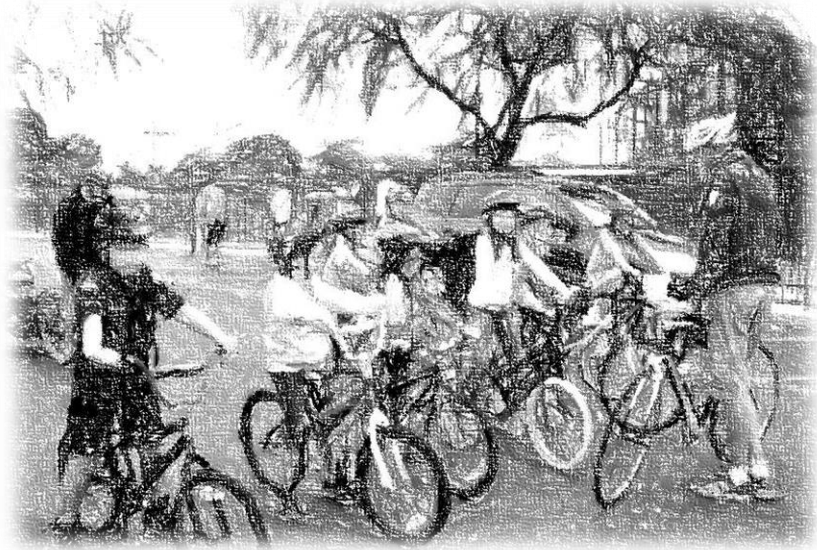
The goal of each meeting/ ride is multi-purpose and incorporates several different goals.

- Our school, Broadmor Elementary, is located in the Broadmor community and provides a bike storage area. Bikecats encourages the love of bike riding, teaches proper bike skills, and models safe riding habits. Through organized rides, we also show safe routes to school and other prime biking sites around Tempe with the use of turn signals.
- The day of the event, families arrive either on or with their bikes. The first step is to help look over the bikes to make sure they are street safe: tires have air, chains aren't loose, seat and handlebars are positioned correctly. The PTA can provide helmets for any children who do not have one of their own.
- Next, the children and adults practice riding in the parking lot to build confidence and work on basic bike skills with volunteers.
- After a period of time, the group gathers to discuss who will lead up the group and who will make sure no one gets left behind. Once we review street rules, we will depart on a planned ride. Our rides have taken us around the neighborhood, up to the Tempe town lake, over the freeway bike ramp to Kiwanis, to different areas on the ASU campus. The destination is often determined by the strength, skill set and size of the group. While on these rides, the more senior cyclists help the youth and inexperienced practice their bicycle safety and road skills.

The information regarding the rides is communicated to Broadmor families and community members via signs on campus, email, peach jar announcements, and Facebook posts. Everyone is welcome to attend. Our facebook is <https://www.facebook.com/broadmorpta/>

Attached: 2016-17 ride schedule and photos from the past several years of bikecats rides!





# **Broadmor Bike Cats are back!**

Students and families of all skill levels welcome.

**Saturday, October 15 @ 9am**

Plan to meet at the bike here at Broadmor. We'll ride bikes with other bobcats, and show new skills and tips. We always finish with a community bike ride. This first time, we'll ride around the Broadmor neighborhood.

Can't make it to the first one? No problem!

Join us for one of these dates:

November 19, 2016 9am

January 7, 2017 9am

February 11, 2017 9am

Or ride with us at the Tour de Tempe in April!

Contact Mrs. Baldwin at [pbaldwin@tempeschools.org](mailto:pbaldwin@tempeschools.org) with questions or concerns.









**City of Tempe**  
**Tempe Bike Hero Award Application**

To nominate a person or organization for the 2017 Tempe Bike Hero Award, please complete this form and provide the information requested below. If you wish to nominate more than one person/organization, please complete a form for each individual/organization that you wish to nominate.

**I am nominating the following person/organization for the Tempe Bike Hero Award:**

Name of Person/Organization Nominated: Debra Long

Street Address: 934 East Verde Ln.

City: Tempe State: AZ Zip Code: 85284

Phone: (480)455-0590 E-mail: (if available) debra.anderson.long@gmail.com

The nominee (check all that apply):

- Lives and/or works in Tempe
- Lived and/or worked in Tempe at time of contribution
- Is a Tempe based organization

Describe in no more than two pages why this person or organization should receive this award. Up to three additional supplemental pages are permitted. Supplements can include photos, newspaper articles, flyers or recommendations. Nominations will not be returned.

Nominated by: Julia Long

Street Address: 934 East Verde Ln.

City: Tempe State: AZ Zip Code: 84284

Phone: (480)295-9162 E-mail: (if available) julialong101@yahoo.com



## Bike Hero Nomination – Debra Long

I am nominating Debra Long for being an exceptional bicycle role model in Tempe. She is a pre-school teacher for Head Start, located at the Tempe Boys and Girls Club. Debra bikes to work 3-4 days a week from her home in South Tempe. The total commute is 17 miles. She utilizes the Tempe canals, which make her ride safer and traffic free. She enjoys biking to work because she avoids traffic and gets to exercise. Debra exhibits exceptional bike safety by wearing a helmet, using a bike light and by wearing reflective clothing. Biking to work also give her a chance to talk to the kids about biking. Her students see her biking to work before and after school. She explains how biking is a fun way to exercise and convenient way get around town. It is an inexpensive activity that can be enjoyed by the whole family. This is also beneficial to the families that have limited or no access to a car. The students look up to Debbie, she leads by example, which makes the students more likely to want to do it. Educating her students on biking, exercise and bike safety makes Debra an exceptional role model to young kids in our community.

I nominate the following person for the Tempe Bike Hero Award: William 'Bill' Terrance.  
Address: 410 S. Roberts Rd., Tempe, AZ 85281  
Email: [bill@biketempe.org](mailto:bill@biketempe.org)  
Bill Terrance lives and/or works in Tempe.

Nominated by: Lloyd Thomas  
Address: 200 E. Geneva Dr., Tempe, AZ 85282  
Phone: (480) 276-5155  
Email: [LloydT@CAzBike.org](mailto:LloydT@CAzBike.org)

Bill Terrance has lived and worked in Tempe for several years. He has an undergraduate degree from Arizona State University and is currently pursuing a Masters of Public Policy degree from Arizona State University. His areas of interest are Transportation System and Geographical Information Science (GIS).

In addition to studying he is working as a Research Aide at the Morrison Institute for Public Policy at Arizona State University.

Bill Terrance works with student groups and non-profits. He is a Boardmember of the Bike Coalition at ASU. He is a Boardmember, and former Vice-President, of the Tempe Bicycle Action Group. His current position at TBAG includes being Chair of the Events Committee. Additionally he volunteers for numerous TBAG activities including the Bike Valet, Bike Count, and Bicycle Advocacy. Bill is a member of the League of American Bicyclists and is a League Certified Instructor, LCI, recognized for his ability to instruct and train others.

I've listened while Bill Terrance has spoken at several City Council Meetings. He is articulate, knowledgeable, and passionate.

It is an honor to nominate Bill Terrance for Tempe Bike Hero for 2017.

Respectfully,  
Lloyd A. Thomas

# CITY OF TEMPE TRANSPORTATION COMMISSION



## STAFF REPORT

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### AGENDA ITEM 8

#### DATE

January 1, 2017

#### SUBJECT

McClintock Drive Process

#### PURPOSE

The purpose of this memo is to provide the Commission with the process for moving forward to explore and develop concepts to achieve the Council's goal of keeping the bike lanes, improving traffic flow and decreasing congestion as approved by the City Council on December 15, 2016.

#### BACKGROUND

On November 3, 2016, staff presented the Council with follow-up data regarding the performance of McClintock Drive. Council requested that staff develop a process to procure a consultant to evaluate McClintock Drive for inclusion of bicycle infrastructure while restoring vehicle capacity.

#### PROCESS

The following outlines staff's process with the goal of returning to Council in June 2017 after conducting extensive public involvement and the ability to evaluate solutions on a segment-by-segment basis while also including the improvements of the entire corridor.

January, March and May 2017: Continue Data Collection between University and Elliot:

- Traffic Volumes
- Travel Times (including off peak times; also compare to other two/two arterials in Tempe)
- Bike Counts: At all major intersections between Apache & Guadalupe on McClintock
- Crashes: Collect Monthly

February 2017: Council approves contract with consultant if required

March – May 2017

Deliverables from consultant:

- Traffic Analysis
- Data Collection and Field Review
- Best Practice Research
- Modeling Alternatives
- Develop Design Alternatives that meet Council's threshold criteria
- Cost Opinions
- Internal stakeholder meetings
- Two public meetings with breakout sessions
- Transportation Commission Presentation
- Sustainability Commission Presentation

June 2017: Present to Council:

- Public outreach findings
- Data collection findings
- Design alternatives and costs for council consideration

Tempe staff will follow the Council-adopted Tempe Involving the Public (TIP) manual throughout the public involvement process.

**FISCAL IMPACT**

TBD pending consultant selection

**RECOMMENDATION**

For information

**CONTACT**

Shelly Seyler  
Deputy Public Works Director  
480-350-8854  
[shelly\\_seyler@tempe.gov](mailto:shelly_seyler@tempe.gov)

**ATTACHMENTS**

PowerPoint

# McClintock Drive Process

## Transportation Commission

January 10, 2017



# Continue Data Collection

## Data Collection: University to Elliot (Jan, Mar and May)

- Traffic Volumes
- Travel Times (including off peak; other two/two arterials)
- Bike Counts (major intersections between Apache & Guadalupe)
- Crashes



# Process and Timeline



## December 2016 – January 2017

- Procure Design Consultant

## February 2017

- Council approves consultant Contract if required

## March – May 2017

- Analysis and Evaluation, Public Input, Alternatives Development

## June 2017

- Council consideration

# Consultant Deliverables

- Traffic Analysis
- Data Collection and Field Review
- Best Practice Research
- Modeling Alternatives
- Develop Design Alternatives
- Two public meetings with breakout sessions
- Cost Opinions
- Internal Stakeholder Meetings
- Transportation Commission Presentation
- Sustainability Commission Presentation



# Next Steps

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## June 2017 IRS Presentation:

- Public outreach findings
- Data collection findings
- Design alternatives, and costs for Council consideration

**STAFF REPORT**

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**AGENDA ITEM 10**

**DATE**

December 16, 2016

**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:

- Speed Limits (February)
- Bus Pullout Decision Matrix (February)
- Road Construction Traffic Mitigation (February)
- Streetcar (February)
- FY 2017-18 Media Plan (February)
- Rio Salado @ McClintock Drive MUP Underpass (March)
- Long-Range Forecast Presentation (March)
- 5<sup>th</sup> Street Streetscape Project (March)
- Country Club Way Bike/Ped Project (March)
- Leading vs. Lagging Left Turn Signals (March)
- ASU Bike Registry Outreach Efforts (April)
- McClintock Drive Update (April)
- Streetcar (April)
- Maintenance of MUPs (April)
- North/South Railroad Spur MUP (May)
- Tempe Involving the Public Plan (May)
- DTA Update (May)
- Streetcar (June)
- Annual Report (September)
- Annual Report (October)
- Alameda Streetscape Project (October)
- Bicycle/Pedestrian Signal Activate Operations Update (TBD)
- Small Area Transportation Study (TBD)
- Prop 500 (TBD)
- MAG Grant Applications (TBD)

**RECOMMENDATION**

This item is for information only.

**CONTACT**

Shelly Seyler, Deputy Public Works Director – Transportation  
480-350-8854

[shelly\\_seyler@tempe.gov](mailto:shelly_seyler@tempe.gov)