

September 9, 2014

TO: Members of the MAG Bicycle and Pedestrian Committee

FROM: Katherine Coles, Phoenix, Chair of the MAG Bicycle and Pedestrian Committee

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Tuesday, September 16, 2014 at 1:30 p.m.
MAG Offices, Ironwood Room, Second Floor
302 North First Avenue, Phoenix

A meeting of the MAG Bicycle and Pedestrian Committee will be held at the time and place noted above. If you are attending in person, please park in the garage under the building. Bring your ticket to the meeting as parking will be validated. For those using transit, the Regional Public Transportation Authority will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the parking garage.

Committee members may attend the meeting either in **person, by video conference or by telephone conference call**. Those attending by videoconference must notify the MAG site three business days before the meeting. Those attending by telephone conference call please contact MAG offices for conference call instructions.

Pursuant to Title II of the Americans with Disabilities Act (ADA), MAG does not discriminate on the basis of disability in admissions to or participation in its public meetings. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Maureen DeCindis at the MAG office. Requests should be made as early as possible to allow time to arrange the accommodation.

Please be advised that under procedures adopted by the MAG Regional Council on August 21, 2013, all MAG committees need to have a quorum to conduct business. A quorum is a simple majority of the membership based on the attendance of the three previous Bicycle and Pedestrian Committee meetings. If the Bicycle and Pedestrian Committee does not meet the quorum requirement, members who have arrived at the meeting will be instructed that a legal meeting cannot occur and will subsequently be dismissed. Your attendance at the meeting is strongly encouraged. If you are unable to attend the meeting, please make arrangements for a proxy from your jurisdiction to represent you. Please contact Maureen DeCindis at (602) 254-6300 or send email to mdecindis@azmag.gov if you have any questions or need additional information.

TENTATIVE AGENDA

1. Call to Order

For the September 2014 meeting, the quorum requirement is 12 committee members.

2. Approval of the August 19, 2014 Meeting Minutes of the Bicycle and Pedestrian Committee

2. For information, discussion and action to approve the meeting minutes of the August 19, 2014 Bicycle and Pedestrian Committee meeting.

3. Call to the Audience

An opportunity will be provided to members of the public to address the committee on items not scheduled on the agenda that fall under the jurisdiction of MAG, or on items on the agenda for discussion but not for action. Members of the public will be requested not to exceed a three minute time period for their comments. A total of 15 minutes will be provided for the Call to the Audience agenda item, unless the Committee requests an exception to this limit. Please note that those wishing to comment on action agenda items will be given an opportunity at the time the item is heard. Please fill out blue cards for Call to the Audience and yellow cards for Action Items.

3. For information.

4. Staff and Member Agency Reports

Staff and committee members are invited to provide an update of pedestrian and bicycle-related activity in their agencies.

4. For information and discussion.

5. Strategic Transportation Safety Plan Update

MAG is developing a comprehensive update to the 2005 Strategic Transportation Safety Plan (STSP) with oversight provided by the Transportation Safety Committee. The STSP establishes the regional vision, goals, objectives, strategies, and performance measures for improving transportation safety in the MAG region. The STSP would also help MAG meet MAP-21 requirements for safety planning. A few STSP tasks are geared to identify strategies for incorporating safety considerations in the Regional Transportation Plan (RTP) and in all transportation infrastructure projects programmed in the TIP, with a particular focus on reducing road risk for pedestrian, bicyclist and all transit users. A Working Group was formed with members of the Transportation Safety, Transit, and Bike and Pedestrian Committees to help identify practices that could be recommended for implementation through the STSP. The resulting list produced by the Working Group includes recommended practices, of which one practice will affect the TIP programming process (See Attachment One). MAG Staff will provide a brief presentation of the STSP process and Working Group members will provide an overview of the recommended practices to be incorporated in the STSP. The Transportation Safety Committee is seeking the committee's support and endorsement of practice#3 due to the committee's role in providing oversight to the programming of Bike-Ped related projects in the MAG TIP. See Attachment #1.

5. This item is for information on promoting a practices relating to bicycle and pedestrian safety, and discussion and possible action to recommend approval of the proposed practice number three (#3).

6. Regional Transportation Demand Management (TDM) Plan

The Maricopa Association of Governments and Valley Metro are considering ways to expand implementation and marketing of alternative transportation modes and schedules. The Regional Transportation Demand Management (TDM) Plan will evaluate the opportunity for new and expanded alternative mode programs to:

- areas unserved or underserved by transit
- areas where drive-alone rates are high
- non-commute travel, such as special events

7. MAG Bicycles Count Project

MAG staff will present on the recently completed MAG Bicycles Count project, summarizing the results and analysis of the bicycle data count collection effort, along with the framework established for future data collection in the region. MAG staff will also present on Phase II of the MAG Bicycles Count project, which includes the continuation of data collection using a consultant through the MAG Transportation Planning On-Call, as well as an updated analysis based on new data collected. Data for Phase II will be collected in October-November 2014 and March-May 2015. Additionally, MAG staff will provide an update on the process for making bicycle counting equipment available for MAG member agencies to borrow for their own data collection efforts. See Attachments #2, #3 and #4.

6. For information and discussion

7. For information, discussion, and possible recommendation of acceptance of the MAG Bicycles Count project final report.

8. Request for Future Agenda Items

Members will have the opportunity to suggest future agenda topics.

9. Next Meetings

All meetings will be on the third Tuesday of the month in the Ironwood Room at 1:30 p.m., except where otherwise noted.

October 21, 2014

November 18, 2014

December 16, 2014 (possibly noon)

8. For information and discussion.

9. For information and discussion.

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
BICYCLE AND PEDESTRIAN COMMITTEE

Tuesday, August 19, 2014 at 1:30 p.m.
MAG Office Building, Ironwood Room
302 North First Avenue, Phoenix

MEMBERS ATTENDING

Katherine Coles, Phoenix, Chair of Bicycle and Pedestrian Committee	David Gue for Thomas Chlebanowski, Litchfield Park
Christine Fanchi for Tracy Stevens, Avondale, Vice-Chair of Bicycle and Pedestrian Committee	# David Maestas, Maricopa
Michael Sanders, ADOT	# Denise Lacey, Maricopa Coounty
Raquel Schatz, Apache Junction	Jim Hash, Mesa
* Robert Wisener, Buckeye	Brandon Forrey, Peoria
Stacy Pbridge- Denzak for D.J. Stapley, Carefree	Keith Newman for Brett Burningham, Queen Creek
* Ian Cordwell, Cave Creek	Ben Limmer, Valley Metro
Jason Crampton, Chandler	Susan Conklu, Scottsdale
Jose Macias, El Mirage	Stephen Chang, Surprise
Kristin Myers, Gilbert	Eric Iwersen, Tempe
* Purab Adabala, Glendale	* Robert Carmona, Wickenburg
* Joe Schmitz, Goodyear	# Grant Anderson, Youngtown

*Members neither present nor represented by proxy
#Attended via audio-conference

OTHERS PRESENT

Kenneth Steel, Maricopa County Health Department	Karen Vitkay, Alta Planning
* Kelly LaRosa, FHWA	Jason Harrington, Harrington Planning & Design
# Bob Beane, Coalition of Arizona Bicyclists	Radu Nan, Kittelson & Assoc.
Tiffany Halperin, ASLA	J.C. Porter, ASU
Theresa Gunn, Gunn Communications	Brian Sager, Kimley-Horn, Inc.
Nick Falbo, Alta Planning	Alex Oreschak, MAG
Brad Berdine, bicycle advocate	

1. Call to Order

Chair Katherine Coles called the meeting to order at 1:35 p.m.

2. Approval of the July 15, 2014 Meeting Minutes of the Bicycle and Pedestrian Committee

Jason Crampton moved to approve the meeting minutes of the Bicycle and Pedestrian Committee for July 15, 2014. Kristin Myers seconded the motion. The motion passed unanimously.

3. Call to the Audience

An opportunity was provided to members of the public to address the MAG Bicycle and Pedestrian Committee on items not scheduled on the agenda that fall under the jurisdiction of MAG, or on items on the agenda for discussion but not for action. Members of the public were requested not to exceed a three minute time period for their comments. A total of 15 minutes was provided for the Call to the Audience agenda item, unless the Bicycle and the Pedestrian Committee requests an exception to this limit. Those wishing to comment on action agenda items were given an opportunity at the time the item was heard.

4. Staff and Member Agency Reports

Jim Hash reported that Mesa is hosting an pedestrian event entitled *Mesa Adventure Challenge*. This event is a wildly fun urban adventure race/scavenger hunt.

5. Presentation, Review and Recommendation for Approval of the 2015 MAG Design Assistance Project Applications

Maureen DeCindis explained that at the July 2014 meeting, the Bicycle and Pedestrian committee recommended the ranked list of projects for the \$300,000 available through the FY2015 Design Assistance Program. Four of the eleven projects received funding: Avondale - Dysart Rd. Project, Tempe - Alameda Dr. Project, Mesa - Dobson Rd., and Ft. McDowell Yavapai Nation - Ft. McDowell Connector Project. Since that meeting, the City of Avondale's project has been deemed ineligible. With the removal of this project, \$75,000 is now available to fund projects on the ranked list. The 5th ranked project, Surprise: Grand Avenue Sidewalk Gap Improvement project for \$36,000 is funded. The 6th spot on the list is shared by two projects that have identical scores: Peoria: New River Multi-use Path Access at Deer Valley Road (\$65,000) and Scottsdale: McDowell Road Bike Lanes: Pima Road to 64th St. (\$78,960). Due to a tie for the 6th ranked spot, it is necessary to hold a run-off vote between the Peoria and Scottsdale projects. The representatives from both cities will present their projects again, and then the committee will rank the two projects for a tie-breaker for the 6th position. There is only \$39,000 remaining, whichever project is chosen, that jurisdiction will add local funds for their project design. Presentations of the Design Assistance applications will be in alphabetical order, Peoria first and then Scottsdale. At the end of the presentations, each member agency will vote for the project that will be funded.

Peoria: New River Multi-use Path Access at Deer Valley Road (\$65,000)

This project will provide a connection to the New River Multi-use Path from the south side of Deer Valley Road that will include shade, benches, water fountains and limited parking. The site will function as an access point, rest stop and park and ride site for bicycle commuters.

Brandon Forrey explained that Peoria has funded a lot of bike facility improvements from 79th Avenue to 107th Ave and onto 119th Avenue. Bike facilities will eventually be along all of Deer Valley Road. Lanes will be painted westbound on Deer Valley road when this access project has been constructed.

Brandon Forrey explained that Peoria has the local funding for the design and construction of this project but it would be very helpful to receive this federal design funding. At some future date, bike lanes will extend to the 303 on Happy Valley Road and on Lake Pleasant Parkway.

There is a possibility that there will be a U.S. Bike Route on Deer Valley Road and New River. This access point project is of great value for the city of Peoria. This has both local and regional significance and vital to the expansion of the Peoria system. This access project will have some parking for cars at this site. A number of people will be driving vehicles to this site and using it as park and ride lot to bike to work from this location.

The site is adjacent to a medical facility. This works well with events that the city of Peoria sponsors such as the *Keep It Safe Family Affair* event with Dignity Health. This will also be the site of the trail and bike rodeo safety events.

Scottsdale: McDowell Road Bike Lanes: Pima Road to 64th Street (\$78,960)

This project will add bike lanes to McDowell Road from Pima Road to 64th Street within the existing roadway. The project will include narrowing and restriping existing lanes, changing the medians, and adding the remaining two miles of gaps with new bike lanes.

Susan Conklu explained that designing the gaps would complete bike lanes on McDowell Road. This corridor has strong commitment from city council for redevelopment. There are current and future projects especially filling in the gaps that are in plans for the city. Currently, the bicycle level of service is E for bicyclists. Many people bike on the sidewalk or bike in the vehicle lane. There are also many new multi-family developments being built along McDowell road. Major employers include ASU Sky Song that currently has 1,000 employees and will shortly increase to 1,500 employees. General Dynamic has 2,500 employees.

There are seven private and five public schools in the area. There are links to seven transit routes and links to 70 miles of pathways linking to other cities including Tempe and Phoenix. There are Community centers and senior centers in the area. The city is focusing and trying to attract more people to bike in this area. The city is only 5-9 miles wide. The Indian Bend Wash provides a great north-south corridor but the city needs more east-west routes. These bike lanes will discourage sidewalk riding where data indicates that 64% of collisions were due to sidewalk riding.

Grant Anderson asked if the city of Scottsdale has funding to design and build this project. Susan Conklu responded that the city does have the funding and that this is a priority project. Kristin Myers asked if Peoria will build their project with local funds. Brandon Forrey responded that Peoria would build this project with local funds but noted that Peoria hasn't received any federal dollars since 2005.

The committee then cast their votes. There were twelve votes for the Peoria project and seven votes for the Scottsdale project. Jim Hash made a motion to recommend the city of Peoria - New River Multi-use Path Access at Deer Valley Road project for \$39,000 and that the city of Surprise project and the Peoria project be added to the list of already recommended projects for approval. Brandon Forrey seconded the motion. The motion passed unanimously.

The following is the complete list of MAG Design Assistance 2015 projects that are recommended for approval:

Bicycle and Pedestrian Committee Rank (8/19/14) - FY 2015 DESIGN ASSISTANCE PROGRAM

Applicant	Funds	Project	Rank	Recommended Award	Cumulative
City of Tempe	\$75,000	Alameda Drive Bicycle and Pedestrian Facilities Improvements Project	1	\$75,000	\$75,000
City of Mesa	\$75,000	Dobson Road Complete Street - US60 to Broadway Road	2	\$75,000	\$150,000
Fort McDowell Yavapai Nation	\$79,500	Fort McDowell Multi-Use Pathway Connector	3	\$75,000	\$225,000
City of Surprise	\$36,000	Grand Avenue Sidewalk Gap Improvement Project	4	\$36,000	\$261,000
City of Peoria	\$65,000	New River MUP Access at Deer Valley Road	5	\$39,000	\$300,000

6. Off-Street Bicycle Network Wayfinding and Branding Guidelines

Karen Vitkay of Alta Planning provided an overview of wayfinding standards and case studies highlighting best practices from other regions including a summary of public input from on-line survey #2. Building on this information, initial recommendations for destination prioritization and sign placement scenarios were shared. Input from the group will be used to determine the sign typologies that will make up the wayfinding family of elements for the MAG Off-Street Bicycle Network Guidelines.

The main Requirements and Standards

- AASHTO: Guide for the Development of Bicycle Facilities
- US Access Board: ADA Guidance
- FHWA: Manual on Uniform Traffic Control Devices
- NACTO: Urban Bikeway Design Guide
- ADOT: Arizona Manual of Approved Signs
- Salt River Project: Design Requirements

AASHTO: Guide for the Development of Bicycle Facilities

- Design guidance for bicycle facilities
- Defers to MUTCD
- Recognizes wayfinding as an invitation to cyclists
- Routes may be named, numbered, or letter coded
- Wayfinding may provide connectivity between gaps



MUTCD

- National standard for all traffic control devices on any street, highway, bikeway...
- Addresses sign size, shape, color, composition
- Placement standards

NACTO

- Facilitates transportation ideas, insights, and best practices
- Committed to raising the state of the practice
- Is there a better way to do this?
- FHWA endorsed/approved

MUTCD Spectrum



Core Wayfinding Principles

- Connect People to Places
- Promote Active Travel
- Maintain Motion
- Keep Information Simple
- Be Predictable

Case Studies

- Placement
- Family of Elements
- Content
- System Logic

Case Study: Louisville Loop

- Cohesive family of elements
- Ubiquitous system brand

Case Study: The Intertwine (Portland)

- Regional uniformity / consistency
- Adapts to existing signs
- Cost effective
- Parks, paths, on-street connections

Case Study: San Jose Trails

- Unique trail identification
- Mile marker logic
- Emergency response integration

Case Study: Get There By Bike

- Consistent logic based on progressive disclosure
- Describes destination prioritization

DESTINATION HIERARCHY

Example:

Level 1: Cities (5 mi) i.e. Glendale

Level 2: Neighborhoods (3 mi) i.e. City Center

Level 3: Landmarks/Tourist venues (1 mi) i.e. Thunderbird Paseo

Level 4: Local destinations Optional (1 mi) Glendale Community College

This approach provides consistent logic based on progressive disclosure and describes destination prioritization.

Precedents: Pavement Markings and Technology

- Expands the amount of information available
- Dynamic instead of static

Therese Gunn explained the results of the public input survey about wayfinding needs:

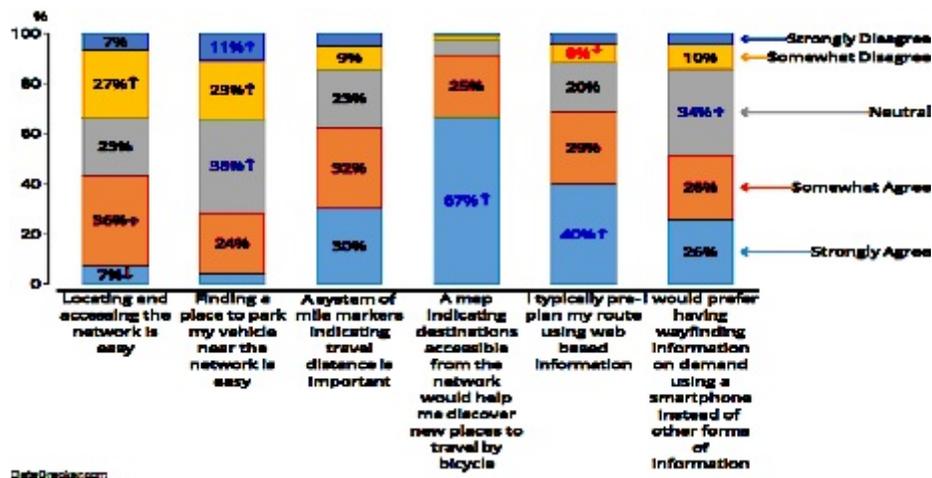
Public Input from the survey: Wayfinding Needs - Destinations

- Work: 28%
- School: 4%
- Shopping: 5%
- Family and friends: 6%
- Civic destinations (museum, library): 2%
- Community centers, preserves, parks: 35%
- Other bike facilities: 17%
- Transportation bus/train: 4%

Public Input from the survey:Wayfinding Needs: Wayfinding Challenges

- I lost my way when a pathway was terminated: 37%
- I lost my way when a pathway intersected a roadway: 29%
- I could not find where to get on the street network from a pathway: 44%
- I lost my way due to a gap in the bicycle network: 51%
- I could have used better direction when my route was interrupted due to construction activity or other temporary closure: 22%
- I encountered difficulty locating my destination from the pathway network: 23%
- Route was not clear through a linear park or where more than one path was present: 28%
- I was unable to locate another off-street facility or pathway: 36%
- I misjudged the distance I had traveled: 10%

Wayfinding Opportunities and Challenges:



Communication Strategy:

Support

- Brochures & Maps
- Marketing Materials
- Merchandise

Digital

- Path website
- Mobile app
- QR codes/audio tour

Environmental

- Public Art
- Street Furniture

Static

- Path identification
- Directional Signs
- Pavement Markings
- Health and Fitness

Wayfinding Family of Elements

- Path Directional sign

- Primary Path ID sign
- Secondary Path ID sign
- Road marker with destination sign
- Decision sign with distances
- Decision sign in existing park
- Path confirmation sign
- Turn sign
- Street sign

Note these are NOT the designs. These are categories of wayfinding elements that will be developed based on input.

Nick Falbo conducted a Mental Map sketching exercise. He asked members to choose a category:

1. Region
2. City
3. Route/pathway

Regional and City: Draw main geographic landmarks and barriers on a map as you visualize biking.

Route: Draw a bike route on the map from A to B. Think about complete directions. Picture making the trip and draw all that you would see along the way especially areas that are challenging.

Eric Iwersen asked about logos imbedded onto the pathway surface especially where the pathway intersects the roadway. It would be a symbol representing the name though not a traffic control informational sign. FHWA doesn't allow because it is not standard in MUTCD. Eric said that the problem comes up where the bike path meets the street and bike lane. Karen Vitdky responded that most cities will come in with local funds for the more creative signs. Eric Iwersen asked if we could just call it art and not call it a traffic control device

Nick Falbo asked if someone would like to share their map ideas. Michael Sanders spoke about the map he drew on a regional scale starting from the northwest and then Rim country and then Tucson in the south and he added other non-roadway paths such as canal, river systems and the extensive irrigations systems and the core area of all the major cities in the state.

Susan Conklu showed a city by looking at where the neighborhood connects to pathways. She added the Indian Bend wash, the cross city routes, and links to the Rio Salado pathway in Tempe and the CAP canal. She said that she is always looking for destinations and that her map is not to scale.

Brad Berdine, bicycle advocate, explained that the map he drew included routes that were safe paths from his house and optional routes to connect to the other city systems. He focused on the safest paths to use.

Katherine Coles encouraged all members to share this project information with their other city staff.

7. Regional Transportation Demand Management (TDM) Plan

This presentation was tabled till September.

8. Discussion of the Proposed AASHTO U.S. Bicycle Route System Routes Through Phoenix Area

Michael Sanders presented the results of alternative route evaluations through the Phoenix area for the AASHTO U.S. Bicycle Route System based on comments ADOT received from the MAG Bicycle and Pedestrian Committee members. Michael Sanders distributed a handout:

- USBRS Alternatives in Arizona Map
- ADOT AASHTO USBRS Evaluation Criteria
- USBR 90 Segment Scores Outside of Phoenix Metro Area
- USBR 90 Alternatives Within the Phoenix Metro Area
- USBR 90 Alternative Scores Within the Phoenix Metro Area
- Appendix (on-line)

ADOT AASHTO USBRS Evaluation Criteria

Roadway Factors	3	2	1	0	Score	Contextual Factors	
						Segment-Level	YES/ NO
Average Daily Traffic	0-1000 vpd	1,000 - 10,000 vpd	10,000 - 20,000 vpd	20,000+ vpd		Routing easy to follow with limited turns, is well marked or has easily identified permanent landmarks to enable navigation (wayfinding)	
Percentage of Daily Traffic that is Truck and Commercial Traffic (Data only for State-Owned Routes)	0 to 100	100-500	500-2000	>2000		Destinations identified as important by the Office of Tourism (scenic, cultural, historical, recreational, universities, tourist attractions) are along or can be easily accessed (within 2.5 miles) by the segment. Analyst will make note of number of services to which the route connects. Note: Analyst can refer to http://arizonaguide.com/places-to-visit	
Posted Speed Limit	< 25 mph	30 - 35 mph	40 - 45 mph	>50 mph		Other modes that provide inter-city travel (airports with commercial service, Amtrak station, intercity bus depot) are along or can be easily accessed (within 2.5 miles) of the segment	
Type of Bicycle Infrastructure Available	Shared-Use path	Bike lane or paved shoulder with effective width of 4' or greater	Paved shoulder with effective width of 2' to 4'	Paved shoulder with effective width of less than 2'; or no shoulder		Availability of services (bicycle shops, food/water, lodging/camping, convenience/grocery stores, hospitals) along the segment. Analyst will make note of and document number of services to which the route connects.	
Side Friction (Urban Area Only)	Almost none	Light	Medium	Heavy		Terrain: relatively flat to limited rolling; limited winding and sharp curves. Analyst will note length and % of steep grades.	
Major Intersection Crossings Comfortability Level (Urban Area Only)	All intersections have bike facilities (e.g., bicycle buffer)	Some intersections have bike facilities	Few intersections have bike facilities	No intersections have bike facilities		Route-Level includes or intersects major existing and planned bicycle routes that are suitable for travel by touring bicycles (including urban shared-use paths)	
Total (Score)						Neighboring-state existing or proposed USBRS are connected to the route	
Total (Yes)							

Yung Koprowski and Christopher Sobie from Kimley Horn presented maps showing the scores for the pathways outside the Phoenix metro area. The next map indicated the alternative routes in the Phoenix area. At the last meeting there were four routes and now those are revised and four more routes were added. All the routes were then re-evaluated for the best route. All the alternatives were segmented and re-scored. Green indicates the highest scoring route. USBR 90 resulted in the highest score. Michael Sanders wants details on each segment and explained that there will ultimately be a draft for all four corridors in the state. ADOT will seek input from federal and tribal lands representatives. There were appendices provided for each segment. Michael Sanders said that ADOT will put the final route in a KML file in Google earth so people can see the detail. Concurrence will be needed from all agency road owners. Kristin Myers asked if this would be in the form of a resolution from ADOT. Brandon Forrey noted a segment in Peoria that has no bike lanes due to insufficient width and there are no plans to widen this. Brandon Forrey offered an alternate that would work better. Michael Sanders said that this is the kind of feedback he is seeking from members. He asked that all comments be received by September 5, 2014.

9. Request for Future Agenda Items

Members will have the opportunity to suggest future agenda topics.

Susan Conklu suggested that members who are attending the APBP Pro-Walk Pro-Bike Conference give a short summary of what they learned. Brandon Forrey said he would like to speak about sessions from a recent ITE conference..

10. Next Meetings

All meetings will be on the third Tuesday of the month in the Ironwood Room at 1:30 p.m., except where otherwise noted.

September 16, 2014

October 21, 2014

November 18, 2014

December 16, 2014 (possibly noon)

MAG Strategic Transportation Safety Plan (STSP)
 Task 5 Working Group
 List of Recommended Practices

Practice	Notes:	Implementation Timeframe	Funding Source	Lead Agency
1. Prepare best practices guide specific to the MAG Region for high risk intersections and high exposure bike/ped crossing nodes employing safety countermeasures: i) Consistent traffic signal operations for pedestrians and bicyclists ii) Installation of enhanced crossings (lighting, widened crosswalks for pedestrians and bicyclists, bulb outs, ladder style crosswalk markings.)	None	0-5 years	MAG Planning Funds	MAG
2. Develop on-going training and public information bicycle and pedestrian safety campaigns. (Note: the campaign would focus on multiple audiences, e.g., elementary schools, MVD, AAA, Bicyclists, Drivers, Police, Engineers, Planners, Teachers, Health Care Industry)	GOHS funding could be utilized for this.	0-5 years	GOHS	GOHS
3. Encourage submittal of TIP projects that include safety elements, for improving safer access for all modes, by including safety as an explicit project evaluation criteria for all TIP projects.	This could be easily done by MAG with support of committees that evaluate projects that are incorporated into the TIP. MAG staff, with oversight by the Safety Committee, will develop the Safety Evaluation Criteria including guidelines for scoring projects. The actual safety scoring could be done by individual modal committees as part of their normal TIP project review process.	1 year	N/A	MAG
4. Prepare best practices guide for Road Diet and Complete Streets projects that incorporates safety countermeasures in project development.	The intent would be to outline what kind of corridors would be good candidates for these practices with consideration of connecting or abutting conditions as well as how complete streets policies are implemented/enforced, and incorporating known safety countermeasures. The resulting best practices could be incorporated in #3.	0-5 years	MAG Planning Funds	MAG
5. Develop short-range action program oriented to 1) high transit activity stops and 2) new routes that would enhance transit stop safety with focus on amenities, safe access and connections. (Note: The intent of this program would be to employ the checklist from the MAG Designing Accessible Communities and tie to Valley Metro Service Standards.)	The intent of this would be to employ the checklist from the MAG Designing Accessible Communities and tie to the Valley Metro Service Standards. This would be heavily reliant on the support of RPTA as the administrators of the Public Transportation Funds (PTF) and agreement with local agencies and towns who own the facilities.	0-5 years	PTF Local	RPTA Local Agencies

MAG Strategic Transportation Safety Plan (STSP)
 Task 5 Working Group
 List of Recommended Practices

Practice	Notes:	Implementation Timeframe	Funding Source	Lead Agency
6. Develop Bicyclist Safety Assessment (BSA) program that focuses on bicyclist safety countermeasures at high risk intersections. (Examples: leading bicycle phase to coincide with leading pedestrian phase; countdown signals; continuous bike lanes through intersection, bicycle detectors/sensors.)	Could be incorporated into existing MAG RSA program and possibly be expanded for high exposure intersections as the bicycle counts and RSA programs increase the amount of data available.	1 year	MAG Planning Funds	MAG
7. Develop update of regional bus stop design and location guidelines to promote a greater emphasis on safety and consistent practices by local jurisdictions in cooperation with bus operators.	This in part is already being done by Valley Metro and greater emphasis on safety for bicyclists and pedestrians can be added to this effort.	0-5 years	PTF	RPTA Local Agencies
8. Prepare technical resource that summarizes and documents regional and national research on effectiveness of safety countermeasures.	This is already being done at the national level but could be done through a MAG project at a regional level as more safety countermeasures are implemented. As of now, we could only document the systemic countermeasures that have been installed through the HSIP. A more comprehensive program would need to be defined to align determination of safety countermeasure effectiveness with what is being implemented regionally and national standards.	5-10 years	MAG Planning Funds	MAG



MAG Bicycles Count:

Final Report and Implementation Plan
Executive Summary

June 2014



Coffman Studio



Graham Ware



this page is intentionally left blank

MAG Bicycles Count: Summary of Key Findings

The key purpose of this study was to develop a regional bicycle counting strategy, and then collect the first snapshot of bicycle counts in the region, with the anticipation of on-going counting to help build the region's understanding of cycling trends and patterns over time.

How We Counted

- 128 - Counting Sites
- 44 - Continuous Automated Sites
- 84 - Peak Period Manual Count Sites
- Developed Factors to Estimate Sidewalk Riding
- Calculated Weekday and Weekend Peak Period Percentages to Extrapolate Manual Counts to Daily Counts
- Developed Data Summaries
 - Average Daily Bicycle Volumes (Path, Lane or Route)
 - Temporal Patterns (Day of Week, Hour of Day)

Key Findings

- **Bike paths showed the highest levels of cycling activity** in the region, relative to other facilities, such as bike lanes, bike routes or roadways without bike facilities.
- **The Rio Salado Downstream Dam Bridge** in Tempe showed the highest average daily weekend bicycle count, collected via automated counters, at 859 cyclists per day on the weekend. This count site is a bike path.
- **107th Street and Thomas Road** in the City of Avondale showed the highest average daily weekday bicycle count, collected via automated counters, at 488 cyclists per day during the week.

This count site is a bike lane.

- **19th Avenue and Glendale Avenue** in the City of Phoenix showed the highest average daily bicycle volume, collected via automated counters, along roadways with no facility (or bike route) with 271 average daily cyclists on the weekend and 241 average daily cyclists during the week.
- **Mill Avenue and 10th Street** in the City of Tempe showed the highest average daily weekday bicycle volumes (estimated from peak period manual counts) with an estimated 2,244 average daily cyclists during the week.
- **College Avenue and Apache Boulevard** in the City of Tempe showed the highest average daily weekend bicycle volumes (estimated from peak period manual counts) with an estimated 719 cyclists during the weekend.
- All bicycle facility types experienced **higher PM peaks** compared to AM peaks **during weekdays**.
- The PM peak hour during weekdays was 5PM for all facility types. During weekdays, it was 10AM



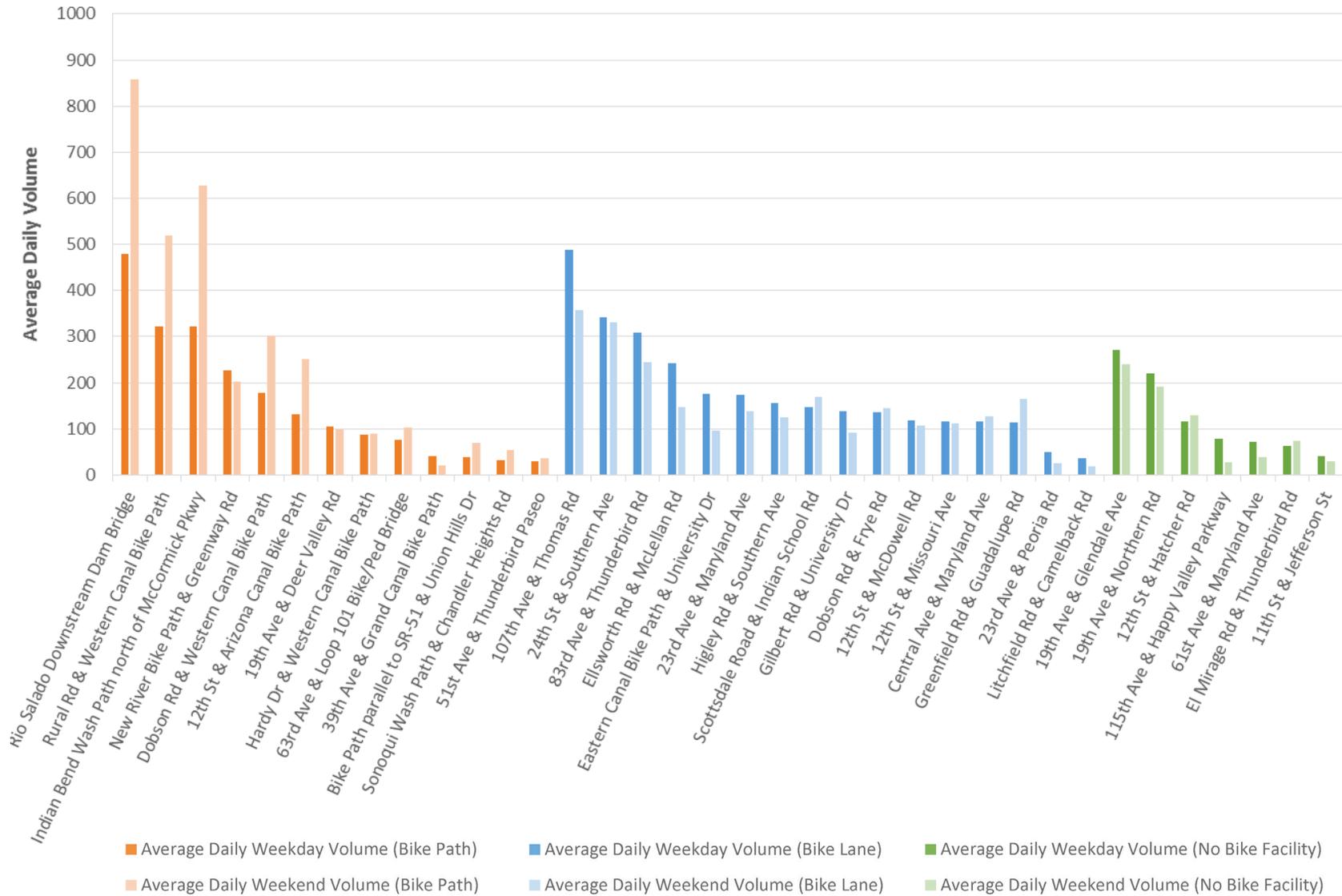
for bike paths, and 7AM for bike lanes and bike routes (or no facility).

- All bicycle facility types experienced **higher AM peak hours** compared to PM peaks **during weekends**. The PM peak hour during weekends was 4PM for bike paths and bike lanes, and 5PM for bike routes (or no facility).
- Saturdays showed the highest average daily bicycle volumes overall, with 180 average daily cyclists across all automated count sites. Friday showed the highest average daily weekday bicycle volumes across all automated count sites, with 161 average daily cyclists.
- The manual counts showed that during the AM peak hour, **between 30% and 94% of cyclists in Maricopa County are riding along the sidewalk**. The highest sidewalk cycling rates occurs along 6-lane roadways with no bike facility and with right-turn pockets.

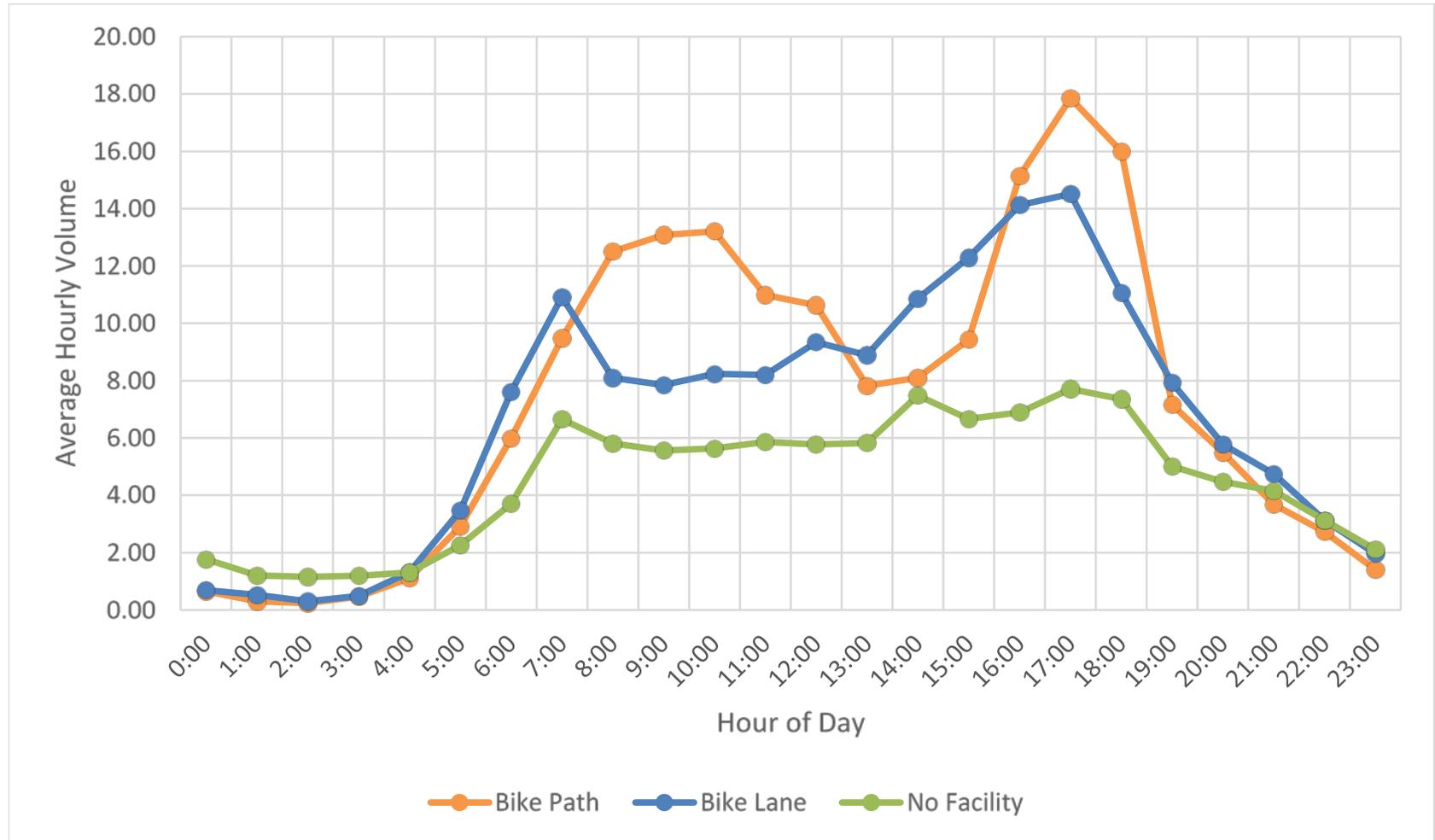
In summary, these findings reflect the fact that Maricopa County, especially considering its population density, has noteworthy cycling levels that fall within similar "Order of Magnitude" levels of other major regions across the country.

Generally, Bike Paths experienced greater average hourly volumes during weekdays and weekends than Bike Lanes or roadways without bike facilities. This finding is potentially indicative of a general preference for Bike Paths for both Commuting and Recreational uses.

Chart 7-6: Average Daily Automated Count Site Bicycle Volumes for Weekdays & Weekends by Facility Type

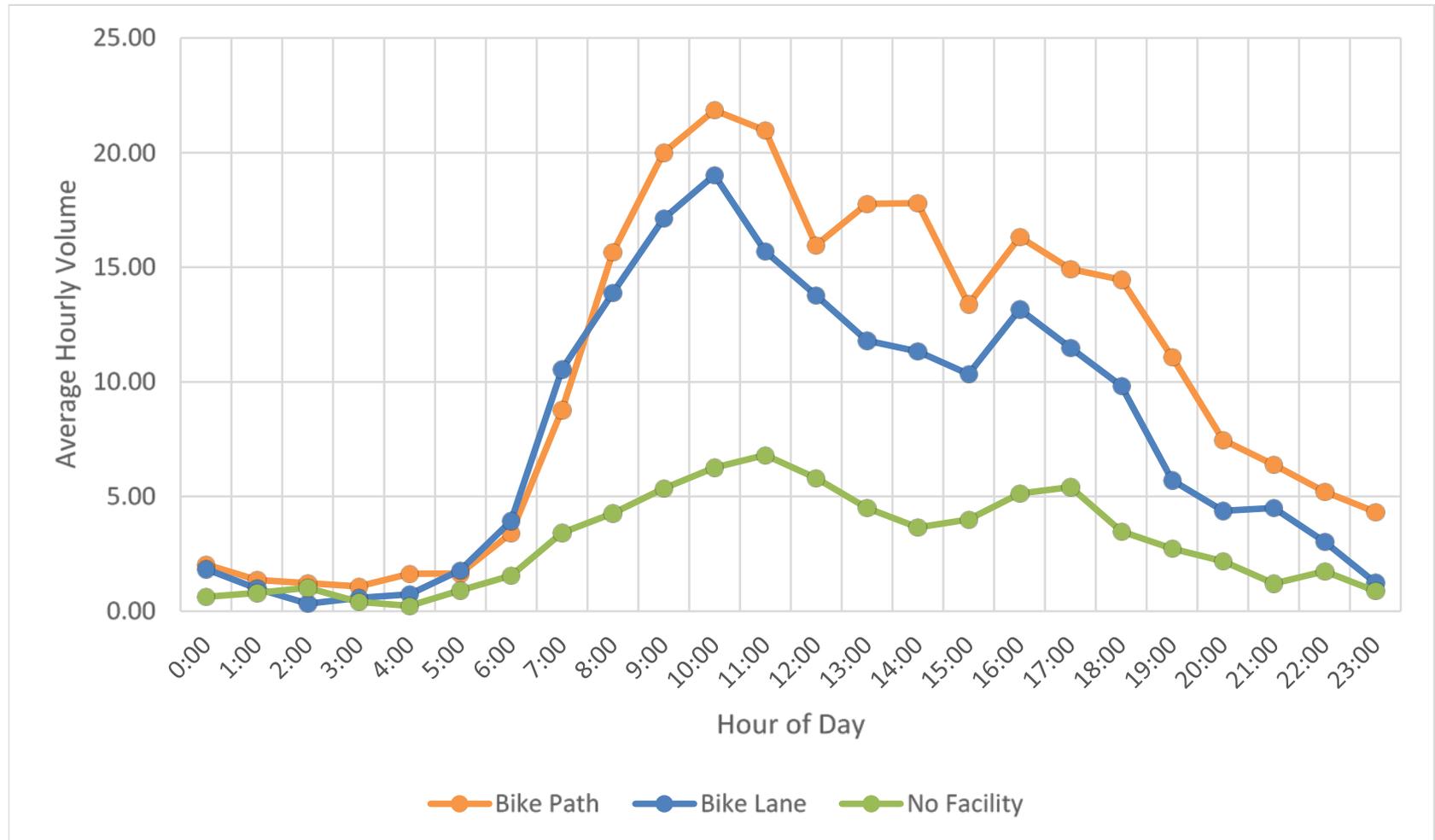


Average Hourly Weekday Volumes



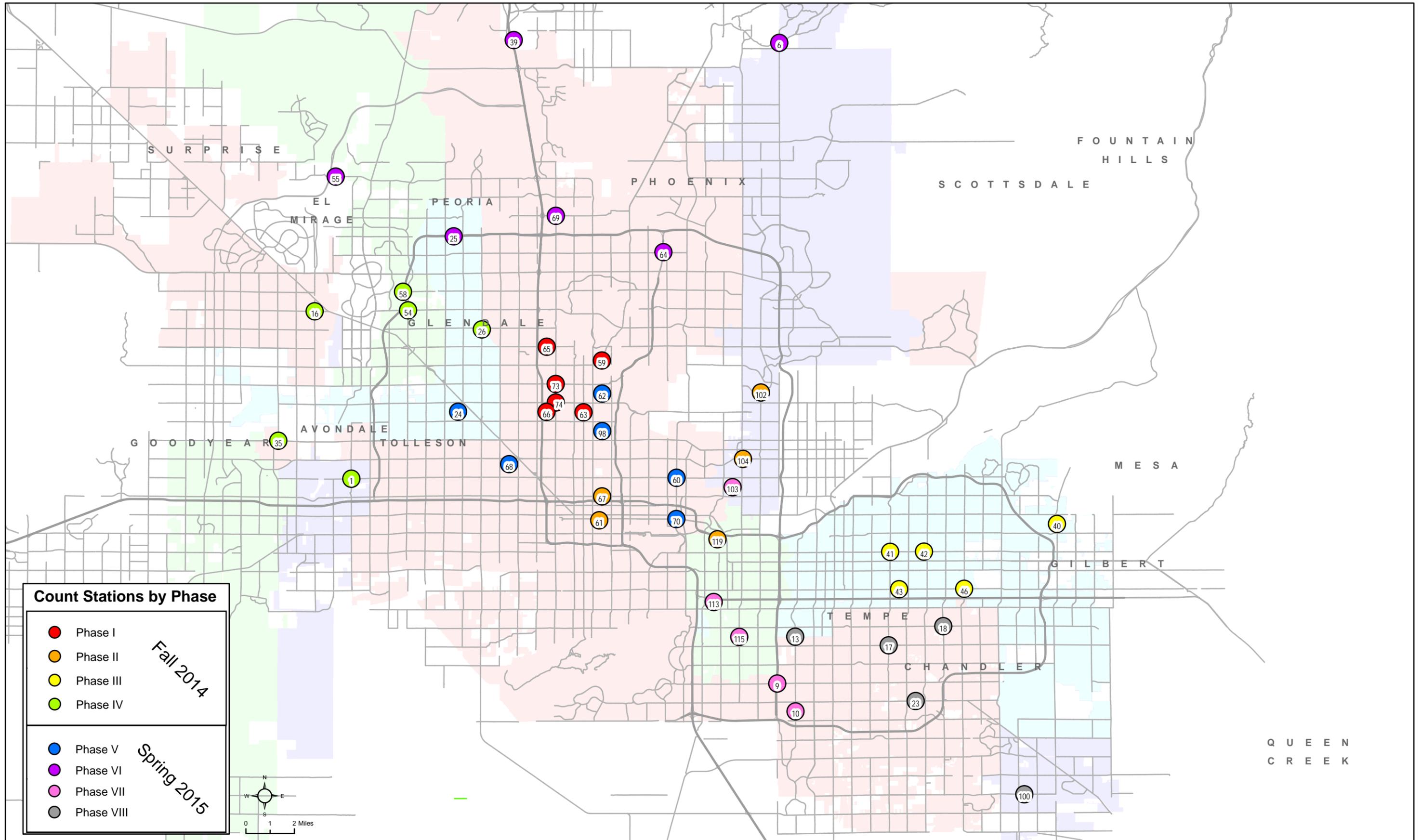
MAG Region, average of 37 automated count stations, October-November 2014

Average Hourly Weekend Volumes



MAG Region, average of 37 automated count stations, October-November 2014

FY 2015 Automated Count Stations By Phase



FY 2015 Automated Count Stations By Phase

Data collection will occur in (8) 2-week phases. The dates below indicate when each of the 8 installations should occur.

Phase	Date	Total Locations		
Phase I	9/29/2014	4 on-street + 2 off-street	6	
Phase II	10/13/2014	3 on-street + 2 off-street	5	
Phase III	10/27/2014	5 on-street	5	
Phase IV	11/10/2014	4 on-street + 2 off-street	6	
Phase V	3/9/2015	4 on-street + 2 off-street	6	
Phase VI	3/23/2015	4 on-street + 2 off-street	6	
Phase VII	4/6/2015	3 on-street + 2 off-street	5	
Phase VIII	4/20/2015	3 on-street + 2 off-street	5	
				Total
				44

Count ID	Jurisdiction	Count Location	Count Direction	Phase
59	Phoenix	12th St & Hatcher Rd	EW	1
63	Phoenix	Central Ave & Maryland Ave	EW	1
65	Phoenix	23rd Ave & Peoria Rd	NS	1
66	Phoenix	23rd Ave & Maryland Ave	NS	1
73	Phoenix	19th Ave & Northern Rd	Sidewalk EW	1
74	Phoenix	19th Ave & Glendale	Sidewalk EW	1
61	Phoenix	11th St & Jefferson St	EW	2
67	Phoenix	12th St and McDowell Rd	NS	2
102	Scottsdale	Indian Bend Wash Path north of McCormick Pkw	NS	2
104	Scottsdale	Indian School Road east of Scottsdale Road	EW	2
119	Tempe	Rio Salado Downstream Dam Bridge	Off-Street	2
40	Mesa	Ellsworth Rd & McLellan Rd	NS	3
41	Mesa	Gilbert Rd & University Dr	EW	3
42	Mesa	Eastern Canal Bike Path and University Dr	EW	3
43	Mesa	24th St & Southern Ave	EW	3
46	Mesa	Higley Rd & Southern Ave	NS	3
1	Avondale	107th Ave & Thomas Rd	NS	4
16	El Mirage	El Mirage Rd & Thunderbird Rd	NS	4
26	Glendale	51st Ave & Thunderbird Paseo (Canal Path)	Off-Street	4
35	Litchfield Park	Litchfield Rd & Camelback Rd	EW	4
54	Peoria	83rd Ave & Thunderbird Rd	NS	4
58	Peoria	New River Bike Path & Greenway Rd	Off-Street	4
24	Glendale	61st Ave & Maryland Ave	EW	5
60	Phoenix	44th St & Thomas Rd	NS	5
62	Phoenix	12th St & Arizona Canal Bike Path	Off-Street	5
68	Phoenix	39th Ave & Grand Canal Bike Path	Off-Street	5
70	Phoenix	44th St & Washington St	EW	5
98	Phoenix	12th St & Missouri Ave	NS	5
6	Carefree	Pima Rd & Cave Creek Rd	NS	6
25	Glendale	63rd Ave & Loop 101 Bike/Ped Bridge	Off-Street	6
39	Maricopa County	Gavilan Peak Pkwy & Pioneer Rd	NS	6
55	Peoria	Happy Valley Parkway (west of the Agua Fria River)	EW	6
64	Phoenix	Bike Path parallel to SR-51 & Union Hills Dr	Off-Street	6
69	Phoenix	19th Ave & Deer Valley Rd	EW	6
9	Chandler	Price Rd & W Ray Rd	EW	7
10	Chandler	Dobson Rd & Frye Rd	NS	7
103	Scottsdale	68th St & Oak St	NS	7
113	Tempe	Hardy Dr & Western Canal Bike Path	Off-Street	7
115	Tempe	Rural Rd & Western Canal Bike Path	Off-Street	7
13	Chandler	Dobson Rd & Western Canal Bike Path	Off-Street	8
17	Gilbert	Gilbert Rd and Elliott Rd	NS	8
18	Gilbert	Greenfield Rd & Guadalupe Rd	EW	8
23	Gilbert	Eastern Canal Trail & E Williams Field Rd	EW	8
100	Queen Creek	Chandler Heights Rd & Sonoqui Wash Path	Off-Street	8