MARICOPA ASSOCIATION of GOVERNMENTS

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June 1, 2010

TO: Members of the MAG Management Committee

FROM: Mark Pentz, Chandler, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Wednesday, June 9, 2010 - 12:00 noon
MAG Office, Suite 200 - Saguaro Room
302 North 1st Avenue, Phoenix

The next Management Committee meeting will be held at the MAG offices at the time and place noted above. Members of the Management Committee may attend the meeting either in person, by videoconference or by telephone conference call. The agenda and summaries are also being transmitted to the members of the Regional Council to foster increased dialogue between members of the Management Committee and Regional Council. You are encouraged to review the supporting information enclosed. Lunch will be provided at a nominal cost.

Please park in the garage under the building, bring your ticket, parking will be validated. For those using transit, Valley Metro/RPTA will provide transit tickets for your trip. For those using bicycles, please lock your bicycle in the bike rack in the garage.

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 Valerie Day at the MAG office. Requests should be made as early as possible to allow time to arrange the accommodation.

Members are reminded of the importance of attendance by yourself or a proxy. Any time that a quorum is not present, we cannot conduct the meeting. Please set aside sufficient time for the meeting, and for all matters to be reviewed and acted upon by the Management Committee. Your presence and vote count.

c: MAG Regional Council

**MAG MANAGEMENT COMMITTEE**
**TENTATIVE AGENDA**
**June 9, 2010**

| | **COMMITTEE ACTION REQUESTED** |
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| 1. Call to Order | |
| 2. Pledge of Allegiance | |
| 3. Call to the Audience<br><br>An opportunity is provided to the public to address the Management Committee on items that are not on the agenda that are within the jurisdiction of MAG, or non-action agenda items that are on the agenda for discussion or information only. Citizens 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 Management Committee requests an exception to this limit. Please note that those wishing to comment on agenda items posted for action will be provided the opportunity at the time the item is heard. | 3. Information. |
| 4. Executive Director's Report<br><br>The MAG Executive Director will provide a report to the Management Committee on activities of general interest. | 4. Information and discussion. |
| 5. Approval of Consent Agenda<br><br>Prior to action on the consent agenda, members of the audience will be provided an opportunity to comment on consent items that are being presented for action. Following the comment period, Committee members may request that an item be removed from the consent agenda. Consent items are marked with an asterisk (*). | 5. Recommend approval of the Consent Agenda. |

**ITEMS PROPOSED FOR CONSENT***

**MINUTES**

| | |
|---|---|
| *5A. Approval of May 12, 2010, Meeting Minutes | 5A. Review and approval of the May 12, 2010, meeting minutes. |

## TRANSPORTATION ITEMS

*5B. American Recovery and Reinvestment Act (ARRA) Status Report

A Status Report on the American Recovery and Reinvestment Act (ARRA) funds dedicated to transportation projects in the MAG region details the status of project development. The report covers highway, local, transit, and enhancement projects programmed with ARRA funds and the status of project development milestones per project. Policy and schedule updates may be provided. Please refer to the enclosed material.

5B. Information and discussion.

*5C. Update to Federal Functional Classification System

The City of Chandler has requested to classify Airport Boulevard as a Major Collector in the federal functional classification system. MAG concurrence is required in order for the Arizona Department of Transportation to proceed with classification of the facility. On May 27, 2010, the Transportation Review Committee recommended approval. Please refer to the enclosed material.

5C. Recommend approval of the City of Chandler request to classify Airport Boulevard as a Major Collector in the federal functional classification system.

*5D. Project Changes/Amendments and Administrative Modifications to the Fiscal Year 2008-2012 MAG Transportation Improvement Program

The fiscal year (FY) 2008-2012 Transportation Improvement Program (TIP) and Regional Transportation Plan 2007 Update were approved by the MAG Regional Council on July 25, 2007. Since that time, there have been requests from member agencies to modify projects in the programs. ADOT is requesting the addition of three new projects, and there are requests to modify project costs for 12 transit projects. These were heard and recommended for approval at the May 27, 2010, Transportation Review Committee. There are 12 ARRA related project change requests that will be heard for the first time at the Management Committee. All ARRA projects are being modified to reconcile the project costs from cost savings. Please refer to the enclosed material.

5D. Recommend approval of amendments and administrative modifications to the FY 2008-2012 Transportation Improvement Program, and as appropriate, to the Regional Transportation Plan 2007 Update.

## AIR QUALITY ITEMS

*5E. Conformity Consultation

The Maricopa Association of Governments is conducting consultation on a conformity assessment for an amendment and administrative modification to the FY 2008-2012 MAG Transportation Improvement Program (TIP). The proposed amendment and administrative modification involve several projects, including a new Arizona Department of Transportation pavement preservation project on State Route 85, a new region wide Intelligent Transportation Systems project, a new Transportation Enhancement project located at Interstate-17 at the Central Arizona Project, and transit projects. The amendment includes projects that may be categorized as exempt from conformity determinations. The administrative modification includes minor project revisions that do not require a conformity determination. Please refer to the enclosed material.

5E. Consultation.

## GENERAL ITEMS

*5F. Approval of Electric Vehicle Charging Infrastructure Deployment Guidelines

On April 16, 2009, MAG entered into a Memorandum of Understanding with ECOtality and Nissan North America to support the adoption of electric vehicles in an effort to address environmental concerns in the region. On August 5, 2009, ECOtality North America was selected by the U.S. Department of Energy for a grant of approximately $99.8 million to implement the largest deployment of electric vehicles and charging infrastructure in history. The ECOtality initiative, in partnership with Nissan North America, proposes to deploy charging infrastructure in major population areas, including Phoenix/Tucson. On March 17, 2010, ECOtality presented the Electric Vehicle Charging Infrastructure Deployment Guidelines version 2.0 document to the MAG Building Codes Committee (BCC). The MAG BCC reviewed the document and provided feedback to ECOtality. On May 19, 2010, ECOtality presented version 3.0 of the

5F. Recommend approval of the Electric Vehicle Charging Infrastructure Deployment Guidelines document version 3.0 as guidelines to the implementation of infrastructure that will support and encourage the adoption of electric vehicles in the MAG region.

Electric Vehicle Charging Infrastructure Deployment Guidelines to the MAG BCC. The Deployment Guidelines document is intended to create a common knowledge base of electric vehicle (EV) requirements for stakeholders involved in the implementation of EV charging infrastructure. ECOtality's Deployment Guidelines provide the necessary background information for understanding EV requirements and the related codes, laws and standards for this effort. At the May 19, 2010, meeting of the MAG Building Codes Committee, the committee voted to recommend approval of the EV Charging Infrastructure Deployment Guidelines document version 3.0 as guidelines to the implementation of infrastructure that will support and encourage the adoption of electric vehicles in the MAG region. Please refer to the enclosed material.

## ITEMS PROPOSED TO BE HEARD

## TRANSPORTATION ITEMS

6. Interstate 11 Proposal Update

The MAG Regional Council accepted the findings of the Interstate 10-Hassayampa Valley Roadway Framework Study and the Interstates 8 and 10-Hidden Valley Transportation Framework Study in February 2008 and September 2009, respectively. The studies included the 152-mile Hassayampa Freeway as an illustrative (unfunded) project. The freeway is now being discussed as part of a greater Interstate 11 corridor designation that reaches to Las Vegas, and potentially, destinations farther north into the Pacific Northwest. A presentation will be made about the status of this proposal and the potential influence on the MAG region. Please refer to the enclosed material.

6. Information and discussion.

7. Interim Closeout of the Federal Fiscal Year 2010 MAG Federally Funded Program

There were 28 projects submitted to MAG for closeout funds, requesting $7.9 million to be advanced and $15.6 million of new funds. After calculating the estimated amount of federal surface transportation program (STP) and federal

7. Recommend approval of additional projects to be deferred from FFY 2010 to FFY 2011 or later and additional projects requesting removal of federal funds; advancing the three projects submitted for priority 1 and 1A projects to FFY 2010; allocating the $2.337 million from deleted projects in FFY 2010 by the cities of Glendale and Mesa to fund Glendale's GLN09-609 with $196,035 and fund

congestion mitigation air quality (CMAQ) funds available for the MAG region for federal fiscal year (FFY) 2010, and deducting the funding commitments for projects this fiscal year and future funding commitments for projects and regional programs identified in the Draft FY 2011-2015 MAG TIP, it is determined that the money available for FFY 2010 Closeout is $2.337 million from projects that are requesting to be deleted from the TIP. Please see the attached memorandum, Table A that lists the projects requesting deferrals and deletions, and Table B, which lists the projects submitted for Closeout. Projects highlighted in Table B are the projects associated with the motion. Please refer to the enclosed material.

Mesa's, MES13-905 and MES10-810 with $2,141,307; and amending and modifying the FY 2008-2012 Transportation Improvement Program, and as appropriate, the Regional Transportation Plan 2007 Update.

## AIR QUALITY ITEM

8. Update on Exceptional Events and MAG Five Percent Plan for PM-10

On May 25, 2010, the Environmental Protection Agency (EPA) Region IX Administrator conducted a meeting to announce that EPA would not concur with the Arizona Department of Environmental Quality (ADEQ) documentation regarding four exceptional events at the West 43rd Avenue monitor. MAG has provided additional information to ADEQ developed by MAG staff and MAG's consultant Sierra Research, a leading environmental firm in the nation, to support ADEQ's exceptional event documentation. It is MAG's and ADEQ's position that the exceedances at the West 43rd Avenue monitor are caused by high winds and the surface conditions in the vicinity of the monitor. EPA does not concur with ADEQ and MAG's technical analysis, resulting in a potential disapproval of the MAG Five Percent Plan for PM-10. If EPA proposes disapproval of the Plan in whole or in part, the sanctions process will be triggered. If the problem is not corrected in 18 months, the first sanction will be imposed which would be tighter controls on major industries. If the problem is still not corrected within 24 months, the second sanction will be imposed, which would be the loss of federal highway funds. A Federal Implementation Plan would also be imposed. If the highway sanctions are imposed, it

8. Information and discussion.

will trigger a conformity lapse resulting in major projects in the Transportation Improvement Program (TIP) not being able to proceed. Within 30-90 days after the disapproval becomes final, we have been informed that a conformity freeze will occur. It appears that under a freeze, no new projects can be added to the TIP. Clarification will be provided by EPA and will be forthcoming. We have just received the technical analysis used by EPA to make their disapproval decision. Once we have had the opportunity to review this information, a report will be made to the Management Committee. Please refer to the enclosed material.

## GENERAL ITEMS

9. FY 2011 MAG Regional Plan to End Domestic Violence

The first MAG Regional Plan to End Domestic Violence was approved by the MAG Regional Council in 1999. The MAG Regional Domestic Violence Council, with more than 150 stakeholders, has developed a new Regional Plan responding to the changing dynamics created by the recession. Fifteen strategies in the areas of funding, training and education, coordination and collaboration, and services were developed to maximize impact with limited resources. The MAG Regional Domestic Violence Council recommended approval of the Regional Plan on May 6, 2010. Please refer to the enclosed material.

9. Recommend approval of the FY 2011 MAG Regional Plan to End Domestic Violence.

10. Election of Officers

Each June, the positions of Chair and Vice Chair are elected by the Management Committee. According to the MAG Committee Operating Policies and Procedures, approved by the Regional Council, the Chair works with members to nominate a manager for the Vice Chair position and the current Vice Chair is nominated for the position of Chair. The positions serve one-year terms.

10. Elect a Chair and Vice Chair.

11. Legislative Update

    An update will be provided on legislative issues of interest.

    11. Information, discussion, and possible action.

12. Request for Future Agenda Items

    Topics or issues of interest that the Management Committee would like to have considered for discussion at a future meeting will be requested.

    12. Information and discussion.

13. Comments from the Committee

    An opportunity will be provided for Management Committee members to present a brief summary of current events. The Management Committee is not allowed to propose, discuss, deliberate or take action at the meeting on any matter in the summary, unless the specific matter is properly noticed for legal action.

    13. Information.

Adjournment

MINUTES OF THE
MAG MANAGEMENT COMMITTEE MEETING
May 12, 2010
MAG Office Building - Saguaro Room
Phoenix, Arizona

MEMBERS ATTENDING

Mark Pentz, Chandler, Chair
Carl Swenson, Peoria, Vice Chair
# George Hoffman, Apache Junction
Charlie McClendon, Avondale
David Johnson for Stephen Cleveland, Buckeye
Gary Neiss, Carefree
Wayne Anderson for Usama Abujbarah, Cave Creek
Pat Dennis for B.J. Cornwall, El Mirage
Alfonso Rodriguez for Phil Dorchester, Fort McDowell Yavapai Nation
# Julie Ghetti for Rick Davis, Fountain Hills
Rick Buss, Gila Bend
* David White, Gila River Indian Community
Tami Ryall for Collin DeWitt, Gilbert
Brent Stoddard for Ed Beasley, Glendale
Mark Gaillard for John Fischbach, Goodyear
Bill Hernandez, Guadalupe
Darryl Crossman, Litchfield Park
Scott Butler for Christopher Brady, Mesa
Jim Bacon, Paradise Valley
Karen Peters for David Cavazos, Phoenix
John Kross, Queen Creek
* Bryan Meyers, Salt River Pima-Maricopa Indian Community
Dave Richert, Scottsdale
Michael Celaya for Mark Coronado, Surprise
Jeff Kulaga for Charlie Meyer, Tempe
* Reyes Medrano, Tolleson
# Gary Edwards, Wickenburg
# Mark Hannah for Lloyce Robinson, Youngtown
Steve Hull for John Halikowski, ADOT
Kenny Harris for David Smith, Maricopa County
David Boggs, Valley Metro/RPTA

* Those members neither present nor represented by proxy.
# Participated by telephone conference call. + Participated by videoconference call.

1. Call to Order

The meeting was called to order by Chair Mark Pentz at 12:02 p.m.

2. Pledge of Allegiance

The Pledge of Allegiance was recited.

Chair Pentz noted that George Hoffman, Gary Edwards, Mark Hannah, and Julie Ghetti were participating in the meeting via teleconference.

Chair Pentz congratulated David Richert on being named City Manager for Scottsdale.

Chair Pentz noted the following items at each place: the revised agenda; for agenda item #5E, a revised project listing to include an enhancement funded project for the City of Phoenix (PHX10-870); for agenda item #5H, a revised conformity consultation to reflect the change made to the project listing in agenda item #5E; and for agenda item #11, a bill tracking chart.

Chair Pentz announced that public comment cards were available to members of the public who wish to comment. He noted that parking garage validation and transit tickets were available from Valley Metro/RPTA for those using transit to come to the meeting.

3. Call to the Audience

Chair Pentz stated that Call to the Audience provides an opportunity to the public to address the Management Committee on items that are not on the agenda that are within the jurisdiction of MAG, or non-action agenda items that are on the agenda for discussion or information only. Chair Pentz noted that those wishing to comment on agenda items posted for action will be provided the opportunity at the time the item is heard. Public comments have a three minute time limit and there is a timer to help the public with their presentations. No public comment cards were received.

4. Executive Director's Report

Dennis Smith, MAG Executive Director, reported on items of interest in the MAG region. He briefed the Management Committee on the Sun Corridor Joint Planning Advisory Council (JPAC) meeting that was held on April 20, 2010, at Wild Horse Pass. Mr. Smith stated that attendees heard a report on the AECOM Global Cities Program, which is providing $300,000 of effort from the AECOM Foundation toward a study on the Sun Corridor to identify economic engines. He said that the study is expected to be done the end of June.

Mr. Smith then reported on the Western High Speed Rail Alliance. He stated that the Federal Railroad Administration is seeking applications for $115 million in planning and construction grants for high-speed rail, and includes $50 million in planning grants. Mr. Smith stated that applications and proposals are due to Federal Railroad Administration by May 19, 2010, with selection announcements made during summer 2010. Mr. Smith advised that the Nevada Department of Transportation agreed to submit the grant in the multi state category on behalf of the Western High Speed Rail Alliance.

Mr. Smith stated that Mexico is proposing a new deep water port at Punta Colonet, which will be the first major port constructed on the West Coast of North America in the past several decades. Mr. Smith stated that last week, the Chair of the MAG Regional Council and MAG staff met with consultant for Mexico's Secretariat of Communications and Transport, who is working with the United States on identifying the border crossing of the rail line in Arizona. He said that this may represent an opportunity for Arizona to create a platform to take advantage of global Asian trade flows. Mr. Smith reported that Mexico's National infrastructure Program from 2007-2012 identifies the Punta Colonet port and the rail connection to the United States as Mexico's number one infrastructure priority. He advised that the estimated range of total investment is $5 billion. Mr. Smith explained that they are considering San Luis for the crossing into Arizona, which may

provide opportunities for an inland port and reactivation of the Wellton branch of the Union Pacific line. Mr. Smith stated that if the Wellton branch becomes active, it could provide freight opportunities and potential renewal of Amtrak service in Phoenix. He stated that the line was deactivated in 1990s and that is when Phoenix lost Amtrak service. Mr. Smith reported that the decision on the crossing is expected in September and the final report in December.

Chair Pentz thanked Mr. Smith for his report. No questions for Mr. Smith were noted.

Chair Pentz reopened the Call to the Audience agenda item to recognize a late request for public comment from Maria Hernandez, a resident of South Phoenix. Ms. Hernandez said that she was at the meeting to call attention to the rate increase for Dial-a-Ride scheduled for July. She stated that the rates should not increase because a lot of low-income people and senior citizens rely on Dial-a-Ride. Ms. Hernandez expressed that increasing rates would result in less ridership because people will not be able to afford the fares. She reported on the Dial-a-Rider service by saying that the dispatchers do not do their jobs and confuse the drivers, and when a driver goes into a doctor's office for example, they do not ask if anyone there is waiting for Dial-a-Ride. Ms. Hernandez expressed her hope that this can be resolved. She said that she knew the economy was bad, but why hurt the senior citizens and those with disabilities. Chair Pentz thanked Ms. Hernandez for her comments.

5. Approval of Consent Agenda

Chair Pentz stated that agenda items #5A, #5B, #5C, #5D, #5E, #5F, #5G, and #5H were on the Consent Agenda. He reviewed the public comment guidelines for the Consent Agenda. Chair Pentz noted that no public comment cards had been received.

Chair Pentz asked if any member of the Committee had questions or a request to have a presentation on any Consent Agenda item. None were noted.

Mr. McClendon moved to recommend approval of the Consent Agenda. Mr. Buss seconded, and the motion passed unanimously.

5A. Approval of April 14, 2010, Meeting Minutes

The Management Committee, by consent, approved the April 14, 2010, meeting minutes.

5B. American Recovery and Reinvestment Act (ARRA) Status Report

A Status Report on the American Recovery and Reinvestment Act (ARRA) funds dedicated to transportation projects in the MAG region details the status of project development. The report covers highway, local, transit, and enhancement projects programmed with ARRA funds and the status of project development milestones per project.

5C. Arterial Life Cycle Program Fiscal Year 2010 Regional Area Road Fund Closeout

The Management Committee, by consent, recommended approval of advancing $23.995 million in Arterial Life Cycle Program (ALCP) project reimbursements to 2010 for the Fiscal Year (FY) 2010 ALCP RARF Closeout, and amend the FY 2010 Arterial Life Cycle Program, the 2008-2012 Transportation Improvement Program, and 2007 Regional Transportation Plan Update, as necessary. The Regional Area Road Fund (RARF) Closeout Process was established in Section 260 of the ALCP Policies and Procedures approved by the MAG Regional Council. A financial analysis of ALCP revenues and expenditures as well as the ALCP bonding program was conducted. After reviewing the output of the analysis, MAG staff recommended that five eligible projects be reimbursed in the FY 2010 ALCP RARF Closeout Process. The MAG Transportation Review Committee recommended approval.

5D. Fiscal Year 2010 MAG Highway Safety Improvement Program Projects

The Management Committee, by consent, recommended approval of the listing of selected projects for FY 2010 highway safety improvement program funds. A total of $1 million in FY 2010 Highway Safety Improvement Program funds has been suballocated by the Arizona Department of Transportation (ADOT) to MAG for road safety improvements in the region. On March 1, 2010, ADOT informed MAG that the list of recommended safety projects was due by June 1, 2010, to enable timely obligation. Due to the short time available to obligate the funds, the MAG Transportation Safety Committee adopted a process that would result in three categories of road safety improvement projects that could be obligated in the available time frame. On March 24, 2010, MAG staff announced a call for projects with a submittal deadline of April 9, 2010. Seventeen applications were received by MAG. The Transportation Safety Committee reviewed the applications and recommended a list of projects for funding. On April 29, 2010, the Transportation Review Committee concurred with the recommendation of the Transportation Safety Committee. The FY 2008-2012 MAG Transportation Improvement Program amendment to include these projects was addressed in agenda item #5E.

5E. Project Changes – Amendments and Administrative Modifications to the FY 2008-2012 MAG Transportation Improvement Program

The Management Committee, by consent, recommended approval of amendments and administrative modifications to the FY 2008-2012 Transportation Improvement Program, and as appropriate, to the Regional Transportation Plan - 2007 Update. The FY 2008-2012 Transportation Improvement Program (TIP) and Regional Transportation Plan (RTP) - 2007 Update were approved by the MAG Regional Council on July 25, 2007. Since that time, there have been requests from member agencies to modify projects in the programs. The proposed project changes include amendments and administrative modifications to the FY 2008-2012 TIP for highway projects that include adding an ADOT pavement project on I-17, combining two Glendale pedestrian projects into a single project, and adding a series of safety projects in various MAG cities and towns contingent on approval of agenda item #5D. The project adjustments and new projects being added to the TIP are fiscally constrained and funding is available. The projects to be added or amended have been categorized as exempt from conformity determinations and the administrative modification includes minor revisions that do not require a conformity

determination. On April 29, 2010, the MAG Transportation Review Committee recommended approval of the amendments and administrative modifications.

5F. Consultant Selection for the Southeast Corridor Major Investment Study

The Management Committee, by consent, recommended that HDR, Inc. be selected to conduct the Southeast Corridor Major Investment Study for an amount not to exceed $300,000. The fiscal year (FY) 2010 MAG Unified Planning Work Program and Annual Budget, approved by the MAG Regional Council in May 2009, was amended in March 2010 to include $300,000 to conduct the Southeast Corridor Major Investment Study. The Arizona Department of Transportation (ADOT) is in the process of completing an Environmental Impact Statement (EIS) for the widening of Interstate 10, the Maricopa Freeway, between the SR-51/SR-202L/Red Mountain "Mini-Stack" and SR-202L/Santan-South Mountain "Pecos Stack" traffic interchanges. During the course of the EIS, questions have been raised by MAG member agencies about the investment being made in this corridor and the need for alternative transportation options, in addition to widening Interstate 10 and improving the system traffic interchanges, to accommodate the growing travel demand between the East Valley and Central Phoenix. MAG proposes conducting the Southeast Corridor Major Investment Study for these purposes. A request for proposals was advertised on March 22, 2010 and four proposals were received. A multi-agency proposal evaluation team reviewed the proposal documents and, on April 28, 2010, the proposal evaluation team recommended to MAG the selection of HDR, Inc. to conduct the project in an amount not to exceed $300,000.

5G. Status of Remaining MAG Approved PM-10 Certified Street Sweeper Projects That Have Not Requested Reimbursement

A status report is being provided to members of the MAG Management Committee on the remaining PM-10 certified street sweeper projects that have received approval, but have not requested reimbursement. To assist MAG in reducing the amount of obligated federal funds carried forward in the MAG Unified Planning Work Program and Annual Budget, MAG is requesting that street sweepers be purchased and reimbursement be requested by the agency within one year plus ten calendar days from the date of the MAG authorization letter.

5H. Conformity Consultation

The Maricopa Association of Governments is conducting consultation on a conformity assessment for an amendment and administrative modification to the FY 2008-2012 MAG Transportation Improvement Program (TIP). The amendment and administrative modification involve several projects, including a new ADOT pavement project on Interstate-17, two Glendale pedestrian projects combined into a single project, and a series of safety projects in various MAG cities and towns. The amendment includes projects that may be categorized as exempt from conformity determinations. The administrative modification includes minor project revisions that do not require a conformity determination. This item was on the agenda for consultation.

6. American Recovery and Reinvestment Act Update and Guidance

Eric Anderson, MAG Transportation Director, stated that the Management Committee agenda had been revised to allow for possible action on this item. He stated that concerns had been expressed by smaller member agencies regarding the $200,000 threshold that was included in the guidelines for programming unobligated American Recovery and Reinvestment Act (ARRA) Local funds. Mr. Anderson explained that according to the guidelines that were approved by the Regional Council in January 2010, savings from an ARRA project of less than $200,000 would be returned to the region for regional projects. He gave for an example, smaller communities that received only $500,000 to $700,000 in ARRA funds, but have $150,000 in savings feel they should be able to allocate the savings to an eligible project.

Mr. Anderson reviewed the schedule for ARRA funds. March 2, 2010, was the deadline for all MAG region projects to be obligated, which means that FHWA was able to sign a project authorization that allows a project to go to bid; July 15, 2010, is the MAG policy deadline for obligating projects; August 15, 2010, is the ADOT deadline for obligating projects, which must have all required the ADOT and FHWA clearances in order to obligate. Mr. Anderson indicated that this deadline also applies to project savings. Mr. Anderson noted that ADOT has a number of tasks to finish before it can reconcile its books and forward the projects to FHWA. He continued that September 15, 2010, is the FHWA deadline for obligating projects. Mr. Anderson stated that FHWA needs to complete work on ARRA projects a couple of weeks before the end of the federal fiscal year to allow sufficient time to complete their tasks. He advised that the ADOT and FHWA deadlines are hard deadlines.

Mr. Anderson then provided an update on the existing 59 local government ARRA projects. He said that 46 projects totaling $86 million either have been awarded or bids have been received, approximately $5 million of the original $104 million has been obligated for preliminary engineering. Mr. Anderson advised that a total of approximately $10 million is advertised, yet to be advertised, or is out for bid. He stated that the bids for the last of the projects are to be opened by the end of May 2010.

Mr. Anderson then explained the bid and deobligation process by saying that if bids are higher than the estimate, jurisdictions will need to identify the funding required to complete the project, or reduce the scope of the project. He noted that the reason for higher estimates could be due to more current unit prices and the higher cost of oil. Mr. Anderson stated that some jurisdictions were holding on to projects in the hope that additional funds would be forthcoming, however, there are no additional funds and a jurisdiction will need to look to their own coffers for additional funds to cover increased costs of projects.

Mr. Anderson stated that if bids are below estimate, a jurisdiction may request a change order to add to a project to utilize the funds, however, the requested change must be consistent with the approved environmental clearance, must not require any new right of way or utility clearances, and must be consistent with the current scope of the project, i.e., no new work elements. Mr. Anderson advised that the project savings also may be applied to an existing ARRA project, provided that it meets the MAG policy adopted by the Regional Council in January 2010. He advised that this means that the jurisdiction has $200,000 or more in savings, and that a project

must meet the eligibility requirements, must be able obligate in time, and very importantly, is through or in the final stages of federal clearances through ADOT. Mr. Anderson commented that if a project has not been started, even a very simple project called a category exclusion still requires an environmental clearance through ADOT, which typically takes four months from the time the TRACS number is received. Mr. Anderson stated that ADOT has been trying to reduce this timeframe, but it still takes months.

Mr. Anderson stated that issues include tight deadlines, and the regional bid savings, anticipated to be $10 to $20 million, have not been forthcoming. He explained that the savings forecast was based on the engineer's estimates at the time, but the engineer's estimates have been tuned up based on more current unit prices. Mr. Anderson stated that MAG does not control this process, ADOT is the entity that MAG needs to work with to obligate these projects on time, in addition to FHWA. He said that the ADOT Local Governments Section has indicated it may be able to obligate only three to five new projects, which must be simple projects that do not require any new right of way or utility clearances. Mr. Anderson advised that it is not cost effective to process small ARRA projects. He advised that a new project would have to go through the certification process with approval from the Governor's office as eligible, and jurisdictions would need to work on a JPA agreement and clearances with ADOT.

Mr. Anderson then reviewed the existing policy on the allocation of bid savings approved by the MAG Regional Council on January 27, 2010: The local agency with the ARRA project savings will have local discretion to move the project savings to another existing ARRA project in that jurisdiction; and/or swap the ARRA funds with ADOT-STP funds and move the project savings to an eligible project that is above $200,000 and can obligate before September 30, 2010, including new projects. Any jurisdiction that cannot meet the $200,000 threshold and obligation deadline of September 30, 2010 will return the project savings to the regional pool for reallocation.

Mr. Anderson presented options that the Committee might consider: Maintain the existing policy; modify the existing policy to reduce or eliminate the $200,000 threshold and allow jurisdictions to try to obligate their funds by the ADOT deadline; call for a special Management Committee meeting for further discussion; or other options. He commented that $150,000 or $160,000 is a large portion of a smaller community's allocation. Mr. Anderson stated that time is of the essence and there is not time to complete the entire MAG committee process. He added that if a community wants to do a new project, it is simply out of time. Mr. Anderson remarked that a lot has been accomplished with this program and it has been a great benefit to the region, but the region needs to ensure that all of the ARRA funding has been utilized, including all of the bid savings.

Chair Pentz thanked Mr. Anderson for his report and asked what he thought would be a reasonable threshold below the $200,000. Mr. Anderson replied that the Transportation Review Committee discussed this extensively. He said that the original threshold was $500,000, but that amount was seen as too high. Mr. Anderson stated that there is a balance on what can be done with the funds because you have to go through the federal process, there are upfront costs, and an administrative fee by ADOT which means that a project will easily cost $25,000 off the top. Mr. Anderson indicated there was a lot of conversation regarding smaller communities by the

Transportation Review Committee and he thought they selected the $200,000 amount because they felt it was a workable number. Mr. Anderson expressed that if the threshold was reduced, a community has project savings and thinks it can obligate a project, he would say to go for it, but from his perspective and from working with ADOT, he felt the probability of success was very low. He noted that the implication of not being successful is not only does a community's project not obligate, the funds may be lost to the region. Mr. Anderson reported that MAG staff is fielding calls every day, dealing with a range of issues: bids over and under the engineer's estimate, site problems, etc., and they have tried to be fair to the member agencies and give them a best judgment of the time to obligate a project, however, they are running out of time and patience.

Mr. McClendon asked for clarification that the project savings need to be obligated by September 30. Mr. Anderson replied that September 30 was the absolute deadline, but ADOT would like the projects by August 15.

Mr. McClendon indicated that he sympathized with the concerns expressed, but he thought it was a little late to do this. He said that the process was conducted in January and MAG staff has been working since then to use the returned money so the region does not lose it.

Mr. Crossman stated that this deserved additional discussion due to additional factors. He indicated that he thought a special Management Committee meeting was needed to provide everyone the opportunity to come with their data. Mr. Crossman said that the $200,000 threshold represents about one-third of the City of Litchfield Park's allocation of $613,000. He reported that the City's ARRA project came in below estimate and they have less than $200,000, but it has a project ready to go immediately. Mr. Crossman stated that the City would like the opportunity to present this and he thought other communities might be in the same situation. He indicated that he would make a motion to hold a special Management Committee when the time was appropriate.

Mr. Hernandez stated that he liked the option that if a jurisdiction has less than $200,000 and has a project ready to go that they be given the opportunity to move it forward. He indicated that he thought the Town of Guadalupe might be in that position. Mr. Hernandez stated that he felt if a jurisdiction can meet all of the requirements it ought to be allowed to move its project forward. He added that he felt a special Management Committee meeting was not needed.

Mr. Hernandez moved to recommend eliminating the $200,000 threshold and if a jurisdiction has projects that can meet all of the requirements that it be allowed to move the projects forward. Ms. Dennis seconded.

Chair Pentz recognized public comment from Grant Anderson, the consulting engineer for the Town of Youngtown. Grant expressed his appreciation for Eric Anderson's comments on how funds can be allocated and utilized and the Town is in total agreement, however, the Town has a unique situation. Grant Anderson reported that the Town had a cost estimate prepared by the ADOT Management Consultant and the Town believed that it had used all of its ARRA funds, but ended up with $225,000 in project savings. He said that the Town has another project that ties in with the existing project and has completed its clearances. Mr. Anderson reported that this

project's estimate is $50,000, which would take the Town's project savings below the $200,000 threshold. He said that they have been told that this type of addition is not possible because it does not meet the original intent of the project, however, the Town feels that it meets the original intent and should be able to move forward. Mr. Anderson remarked that the Town feels that a special meeting to discuss issues is appropriate. He added that if the threshold is eliminated, and jurisdictions are allowed, the Town would pursue the project with the Management Consultant who believes the project can be completed in a timely manner by August 15.

Chair Pentz expressed that he was not sure a special meeting was needed and that this issue could probably be resolved today. He indicated that he sympathized with the smaller communities because $200,000 out of a $600,000 allocation was a substantial amount of money, but he was not sure he agreed with having no threshold at all. Chair Pentz commented on having some amount – perhaps $50,000 – just to have funds to go through the process.

Mr. McClendon asked for clarification if the funds not spent go into a fund which MAG is working to allocate. Mr. Anderson replied that was correct; the backup strategy is to put any leftover money into freeway projects. He indicated that ADOT has a number of projects already scheduled and the existing funds can be replaced with the ARRA funds.

Mr. McClendon asked if projects were evaluated and found to meet the criteria and were ready to go if they could be allocated some of those funds. Mr. Anderson replied that one of his concerns was that there would not be enough money to allocate to all of the projects – perhaps only 75 percent of what is needed to make a project whole. He stated that another concern was creating an additional lag in getting projects out the door.

Mr. McClendon stated that what concerned him was letting the project savings go back to projects that appear to be ready and then if they cannot meet the deadline the money is gone. He stated that this is the risk, whereas the approved approach ensures that the money will be spent in this region.

Mr. Hernandez asked if there would still be time to push the funds to the backup plan if a jurisdiction was unable to meet the deadline. Mr. Anderson replied that they would have to discuss this with ADOT, but in theory they would have enough time to push any leftover funds to ADOT projects.

Mr. Hernandez asked for clarification if the Management Committee took action today there would still be time to give jurisdictions the opportunity to move their projects forward and then if not successful and cannot meet the requirements, the money will go to ADOT projects. He commented that if the timing is so critical, he would recommend that the Committee take action today. Mr. Hernandez stated that a number of smaller communities have spoken today that $200,000 is a lot of money, and he could guarantee that they could do some beneficial projects with that money. He asked that the Committee vote the motion up or down and encouraged that no special meeting be held.

Mr. Bacon expressed his support for holding the course, not because he thought this was such a wonderful process. He stated that he represented a small community whose project savings

vanished under a discrepancy, and he could make a compelling case, but the rules were clear. Mr. Bacon stated that the time pressures are such that we need to hold the course. He added that the Town is still considering if it even wants to continue to participate in this program. Mr. Bacon expressed that he preferred holding the course. He commented that everyone knew the rules; they may not have liked them when they were approved, but they need to observe them.

Mr. Smith asked if projects needed to be in the TIP to use the funds. Mr. Anderson replied that last month, with permission of the FHWA, action was taken to enter unfunded projects into the TIP. He added that typically, a project is required to have funding sources identified to be in the TIP. Mr. Anderson stated that there are a number of placeholder projects in the TIP right now; if they go forward, they remain in the TIP, and if they do not go forward, they will be deleted. He offered clarification on timing that MAG staff will assist where possible, but MAG does not control the rules or the process because this is an ADOT process. Mr. Anderson stated that MAG staff are doing their best to provide guidance and assistance, but it is up to ADOT to execute whatever action MAG takes. Mr. Anderson stated that the Local Governments Section might be able to process only three to five new projects.

Mr. Smith stated that if this motion passes, a list of projects would need to be assembled for the Regional Council.

Mr. Anderson stated that staff would need to know what projects member agencies want to submit for new projects. He commented that time is running out and then reviewed the original process that first began in March with the call for projects, followed by the TIP amendment that was processed in April for projects with no funding source. Mr. Anderson explained that projects not submitted in that call for projects could be amended into the TIP at the May Regional Council meeting.

Mr. Crossman stated that the smaller communities who received ARRA funding of $500,000 or $600,000 were asking for an opportunity to use all of their allocation if the amount fell below $200,000.

Mr. Rodriguez expressed the concern of Fort McDowell on this vote because they have entered into a partnership with the County to use their ARRA funds and he would like the opportunity to consult with the County first before voting.

Ms. Dennis reiterated Mr. Crossman's comments. She said that she seconded the motion to eliminate the threshold because she wanted to ensure that all of a jurisdiction's allocation would be available to use on their projects that have met the requirements and been approved. Ms. Dennis added that their concern is not for bringing in new projects, but taking out the $200,000 threshold so any who wanted to use the money could be able.

Chair Pentz stated that the motion was to allow those with project savings of less than $200,000 the ability to reprogram the funds with other projects.

Mr. Hernandez stated that he was not sure if Litchfield Park or El Mirage were talking about reprogramming the funds for other projects, but he was talking about using the money to finish

projects that have already met the requirements and been approved and to finish projects and utilize the funds they were allocated. Mr. Hernandez expressed his appreciation to MAG staff and ADOT who have been very helpful to his community. He added that the motion was simply to allow jurisdictions the ability to utilize the funds that were allocated to them.

With no further discussion, the vote on the motion passed, with Vice Chair Swenson, Mr. Hoffman, Mr. Johnson, Mr. Neiss, Mr. Anderson, Ms. Dennis, Mr. Rodriguez, Ms. Ghetti, Mr. Buss, Mr. Stoddard, Mr. Hernandez, Mr. Crossman, Mr. Richert, Mr. Celaya, Mr. Edwards, Mr. Hannah, and Mr. Harris voting yes; Chair Pentz, Mr. McClendon, Ms. Ryall, Mr. Gaillard, Mr. Butler, Mr. Bacon, Ms. Peters, Mr. Kross, and Mr. Kulaga voting no; and Mr. Boggs and Mr. Hull abstaining.

7. Update and Review of Project Deferral Requests for Federal Fiscal Year 2010 MAG Closeout

Eileen Yazzie, MAG Transportation Programming Manager, provided a report on the project deferral requests for the federal fiscal year 2010 MAG Closeout. She explained that the purpose of the federal Closeout was to allocate unobligated funds to other projects that could obligate the funds in the time required. Ms. Yazzie advised that the most important criterion for a project to be funded through Closeout was that the project had completed or was near completion of the federal project development process administered by the ADOT Local Government Section and would be able obligate by the end of the current federal fiscal year (September 30, 2010).

Ms. Yazzie said that the Programming Principles address project deferrals in the closeout process. She explained that the Principles permit a one time deferral for projects, and requests to defer a project for a second time or more required the sponsoring agency to submit a justification letter explaining why the project should remain in the MAG Federal Fund Program. Ms. Yazzie explained that the justification letter would be taken through the MAG Committee Process, and if the justification was approved, then the project would remain in the program.

Ms. Yazzie stated that MAG has received deferral requests totaling $14.5 million; of those were 13 requests to defer a project for the second time or more. She provided a breakdown of the number of projects by mode and allocated federal funds: seven paving projects ($4.7 million), two bicycle projects ($315,000), one ITS project ($665,000), two pedestrian projects ($315,000), and one street project ($910,000). Ms. Yazzie stated that MAG staff is working with ADOT to determine if there could be additional deferrals.

Ms. Yazzie stated that five projects had been submitted for a deferral for the first time: three paving projects ($2.25 million), one ITS project ($665,000), and one pedestrian project ($510,000).

Ms. Yazzie announced that MAG staff had received requests to delete four projects from the MAG Federal Fund Program: three bicycle projects ($1.7 million) and one pedestrian project ($441,000).

Ms. Yazzie informed the Committee that MAG staff had not determined the estimated funds available for the FFY 2010 Federal Fund Closeout, and are currently working on an analysis of

the rescission amount to determine the 2010 carryforward. She stated that the interim closeout is anticipated to move through the MAG committees in June, beginning with the Transportation Review Committee.

Chair Pentz thanked Ms. Yazzie for her report. No questions from the Committee were noted.

Vice Chair Swenson moved to recommend approval of a list of projects to be deferred from FFY 2010 to FFY 2011 or later, approval of a list of projects requesting to remove federal funds from the project, and make the necessary amendments and modifications to the 2008-2012 MAG Transportation Improvement Program, and as necessary to the Regional Transportation Plan 2007 Update. Mr. Crossman seconded, and the motion passed unanimously.

8. Acceptance of Commuter Rail Planning Studies

Marc Pearsall, MAG Transit Planner, presented three MAG commuter rail studies, the Commuter Rail System Study, the Grand Avenue Commuter Rail Corridor Development Plan, and the Yuma West Commuter Rail Corridor Development Plan, for a recommendation of acceptance. Mr. Pearsall reported that since December 2008, these studies had been vetted by MAG member agencies and the general public at more than 60 meetings and stakeholder presentations. He added that the item also was the agenda to revise the corridor ranking that was included in the Commuter Rail System Study upon the completion of update regional socioeconomic forecasts or relevant passenger rail studies.

Mr. Pearsall stated that the study purpose was to evaluate the feasibility, costs, constraints and operating scenarios of implementing commuter rail. He further elaborated on the Grand Avenue and Yuma West corridors and their operations phases: Phase A opening day service, Phase B mid-level service and Phase C mature system service. He added that the recommended overall most productive system map is a four-line, X-shaped system carrying nearly 18,000 daily boardings.

Mr. Pearsall explained that the study findings recommend a prioritization for the implementation of startup service in the two most productive corridors. He said that the first recommended corridor to receive service was Segment #1, the East Valley-Union Pacific Phoenix Subdivision at 6,450 daily boardings, and the second corridor recommended to receive service was Segment #2, the BNSF Railway interlined with East Valley-Union Pacific Phoenix Subdivision for a combined total of nearly 10,000 daily boardings. Mr. Pearsall stated that beyond the two initial corridors, there was no one outstanding performer in other three corridors: Tempe, Chandler, Yuma-West. The study's corridor prioritization does recommend a full system build-out, but there was no definitive priority on how should the remainder of the corridors be phased for service. Mr. Pearsall added that considerations for future phasing and system build-out would include development patterns, changes in travel demand, community support, potential integration with intercity rail and owner railroad support.

Mr. Pearsall noted that potential future corridor extensions, including using existing railroad lines, historic railroad corridors and new rights of way parallel to proposed MAG region freeways were possible beyond the 2035 timeframe. He noted that corridors such as the Hassayampa

Valley-Buckeye, Hidden Waters-Gila Bend, Hidden Valley-Mobile, Tempe-Maricopa extension, Chandler-Sacaton-Coolidge extension, Queen Creek Florence extension, and Superstition Vistas-Apache Junction were all listed as potential candidates for future commuter rail service.

Mr. Pearsall discussed the study's eight recommended implementation steps. 1.) Continued coordination with ADOT and railroads, 2.) Determine liability and indemnification statutes, 3.) Regional Sustainable Transportation and Land Use Integration Study (FY 2011), 4.) Identify local funding, 5.) Develop and implement governance plan, 6.) Railroad agreements, 7.) Design and construction and, 8.) Operation. He noted that these implementation steps give MAG, ADOT and the region a road map toward commuter rail service, should the MAG region decide that commuter rail is a viable investment.

Mr. Pearsall stated that this item was on the agenda for action to recommend 1.) acceptance of the findings of the Grand Avenue Commuter Rail Corridor Development Plan, Yuma West Commuter Rail Corridor Development Plan, and Commuter Rail System Study, and 2.) revising the corridor ranking included in the Commuter Rail System Study upon the completion of update regional socioeconomic forecasts or relevant passenger rail studies.

Mr. Pearsall noted that information on the history of Amtrak and intercity passenger rail, and its absence from Phoenix, was requested at a previous Regional Council meeting. He showed the Committee a collection of informational slides displaying the history of train travel to Phoenix, including the first train in 1887, the first transcontinental train to Phoenix in 1927, twelve daily passenger trains servicing the Valley by 1960 and the final Amtrak train in June 1996. Mr. Pearsall also elaborated on maps showing the Amtrak 1971 system, the present Amtrak system, plus recent illustrations showing Amtrak's 1996 Phoenix bypass through Maricopa. He added that a slide titled the 'Most populous metro areas/cities in U.S. lacking Amtrak service (top 25 cities)' confirmed that since 1996, Phoenix remains the nation's largest city and metro area without Amtrak or intercity passenger rail service. Mr. Pearsall concluded his presentation with a slide depicting MAG's possible future with commuter rail, specifically a photo-simulation displaying a commuter train sitting in downtown Phoenix.

Mr. Pearsall then introduced Mr. Lonnie Blaydes from the Commuter Rail Project team. Mr. Pearsall explained that Mr. Blaydes had more than 35 years of experience in the passenger rail industry and has successfully brokered negotiations for new commuter rail system in areas such as Denver, Dallas, Seattle and Albuquerque. He added that Mr. Blaydes expertise had greatly assisted the MAG Commuter Rail Studies process.

Mr. Blaydes thanked the Committee and explained in detail, the System Study and the recommended implementation steps for commuter rail. He expressed that in his experience throughout many of the MAG region's peer cities and regions, that the most successful commuter rail systems all required a champion individual, organization or event to galvanize local, regional and state support for implementation. Mr. Blaydes described that in New Mexico, it was Governor Richardson who promoted the Rail Runner, in Minnesota it was the State Legislature and in Los Angeles it was an event – the 1994 earthquake – that helped emphasize the value of commuter rail to the community. He added that the MAG region would benefit by a champion willing to move forward with commuter rail now that a bulk of the study work had recommended that there was

a need and market for such a service. Mr. Blaydes also discussed critical and common ingredients that resulted in implementation of commuter rail across the United States, specifically in New Mexico's Rail Runner Express, Seattle's Sounder, Minnesota's Northstar and Los Angeles' Metrolink.

Chair Pentz thanked Mr. Blaydes and Mr. Pearsall for their presentations and asked if there were any questions or comments from the Committee.

Ms. Dennis inquired as to what types of scenarios would possibly change or affect the prioritization schedule recommended by the MAG study. Mr. Blaydes responded that a willing and participating host railroad could possibly alter the prioritization schedule, as traditionally it was easier to implement passenger rail service within a corridor where the owner-railroad wished to forge a partnership. Mr. Blaydes also mentioned other 'game changers', including congressional earmarks, new local funding sources, reintroduction of Amtrak service through the Valley or new federal funds dedicated to passenger rail. He also spoke about looking for the 'low-hanging fruit' and to select a corridor that can be done easily, however, if it is the region's first corridor, it is important to ensure it will be a successful line because you want to have that success on the record.

Mr. Celaya stated that he agreed with Mr. Blaydes on having a champion to promote the need for commuter rail service in the Valley. He recommended Surprise Councilwoman and MAG Regional Council member Sharon Wolcott as a potential leader on this issue, in part to her previous role as a Minnesota State Legislator in helping to create and initiate North Star commuter rail service in Minneapolis.

With no further discussion, Chair Pentz called for a motion. Mr. Kross moved to recommend: 1) acceptance of the findings of the Grand Avenue Commuter Rail Corridor Development Plan, Yuma West Commuter Rail Corridor Development Plan, and Commuter Rail System Study; and 2) revising the corridor ranking included in the Commuter Rail System Study upon the completion of updated regional socioeconomic forecasts or relevant passenger rail studies. Ms. Dennis seconded, and the motion passed unanimously.

9. Sustainable Communities Planning Grant Program

Amy St. Peter, MAG Human Services Manager, reported on the Sustainable Communities Planning Grant Program. She said that the purpose of this presentation is to inform the Committee about activities undertaken to determine the viability of a regional application through MAG.

Ms. St. Peter stated that the U.S. Department of Housing and Urban Development (HUD) is partnering with the U.S. Department of Transportation (DOT) and the Environmental Protection Agency (EPA) on the Sustainable Communities Planning Grant Program to support the development of regional plans for sustainable development. Ms. St. Peter stated that MAG may be eligible to apply for funding, which may position MAG well in the future if such plans become a requirement with the reauthorization of federal transportation funding.

Ms. St. Peter stated that approximately $100 million is available nationally with up to $5 million potentially available for large metropolitan areas. She noted that a 20 percent match is required. Ms. St. Peter commented that it is anticipated that this grant process will be very competitive and oversubscribed, and she added that many in this region have expressed interest in applying or partnering for the grant.

Ms. St. Peter stated that the advance notice published by HUD in March did not define an eligible applicant or region. She indicated that the Notice of Funding Availability (NOFA) is due any day and staff hopes it will clarify who can apply for this funding. Ms. St. Peter remarked that such clarification will help determine if MAG is the most appropriate applicant for the region.

Ms. St. Peter stated that at the request of the MAG Executive Committee in April, staff have convened meetings with community partners such as the Urban Land Institute and with the officers of the MAG technical committees to collect information about current activities that are relevant to this grant. She added that a report on the meetings will be presented to the MAG Executive Committee on May 17.

Ms. St. Peter stated that feedback received so far indicates support for developing green housing and jobs along high capacity transit lines such as commuter rail, light rail, and the proposed intercity rail from Phoenix to Tucson. She reported that in the meeting with the technical committee officers it was expressed that it was important to focus on the entire region, to consider infill development, to specifically identify the impact desired by the plan, and to leverage existing efforts proposed in the MAG FY 2011 Unified Planning Work Program.

Ms. St. Peter stated that feedback received by HUD indicates they are prioritizing plans and projects that can be put into action. She indicated that HUD is providing additional funds to assist with implementation of the projects proposed by the regional plans for sustainable development.

Ms. St. Peter stated that HUD has also advised that applications focusing on partnerships with the capacity to deliver tangible results will be deemed most competitive. She said that partners on this grant could extend beyond the MAG region. Ms. St. Peter reported that other councils of governments are considering applications for this program and she added that it has been suggested that a consolidated application with a coordinating function could offer flexibility for the councils of governments to address the issues critical to them and increase the competitiveness for all regions.

Ms. St. Peter stated that discussions are underway with the Pima Association of Governments (PAG), and the Central Arizona Association of Governments (CAAG). She noted that PAG has indicated a preference to submit an application independently and CAAG has expressed an interest in submitting a consolidated application with MAG.

Ms. St. Peter stated that in addition to continuing dialogue with PAG and CAAG, MAG is collecting planning inventories from the MAG technical committees regarding their activities that could support a regional application. She said that a stakeholders group meeting is scheduled for May 14 at 9:30 a.m. with community partners to collect the same information, which will be

presented to the MAG Executive Committee seeking their guidance on the degree of MAG's involvement in a potential regional application.

Chair Pentz thanked Ms. St. Peter for her report. No questions from the Committee were noted.

10. Approval of the Draft FY 2011 MAG Unified Planning Work Program and Annual Budget and the Member Dues and Assessments

Becky Kimbrough, MAG Fiscal Services Manager, reported on the Draft MAG FY 2011 Unified Planning Work Program and Annual Budget. She said that the MAG dues and assessments were presented in January 2010 with a proposed overall decrease of 50 percent due to economic conditions.

Ms. Kimbrough noted that the proposed new projects for FY 2011 were first presented at the February committee meetings. She stated that these new project proposals come from the various MAG technical committees, policy committees and other discussions with members and stakeholders regarding joint efforts within the region. Ms. Kimbrough said that improvements to the MAG office space were included to address MAG's office space needs in place of the regional office center project that was deferred.

Ms. Kimbrough stated that the draft Work Program and Annual Budget was reviewed at the Intermodal Planning Group (IPG) meeting on April 29, 2010. She noted that representatives from the Federal Highway Administration, Federal Transit Administration, Arizona Department of Administration, the Environmental Protection Agency, Valley Metro and Valley Metro Rail, and Phoenix Transit participated in the meeting. She reported that the review did not result in any new recommendations for the FY 2011 Work Program and Annual Budget document.

Ms. Kimbrough reported that each year, MAG submits it Work Program to the Government Finance Officers Association for the Distinguished Budget award. She noted that this will be the 11th year in a row that MAG will submit the document.

Chair Pentz thanked Ms. Kimbrough for her report. No questions from the committee were noted.

Mr. Hernandez moved to recommend approval of the resolution adopting the Draft FY 2011 MAG Unified Planning Work Program and Annual Budget and the member dues and assessments. Mr. Crossman seconded, and the motion passed unanimously.

11. Legislative Update

No oral report was provided. Members were provided a bill tracking chart.

12. Request for Future Agenda Items

Topics or issues of interest that the Management Committee would like to have considered for discussion at a future meeting will be requested.

No requests were noted.

13. Comments from the Committee

An opportunity will be provided for Management Committee members to present a brief summary of current events. The Management Committee is not allowed to propose, discuss, deliberate or take action at the meeting on any matter in the summary, unless the specific matter is properly noticed for legal action.

No comments from the Committee were noted.

14. Adjournment

Mr. Kross moved, Mr. Crossman seconded, and the motion passed to adjourn the meeting at 1:10 p.m.

_____
Chair

_____
Secretary

Agenda Item #5B

# Project Status Report
# Transportation Projects – MAG Region MAY 14, 2010
# American Recovery & Reinvestment Act (ARRA) Funding

On February 17, 2009, President Obama signed the American Recovery and Reinvestment Act (ARRA) of 2009. The national Highway Infrastructure Investment component of the legislation is $27.5 billion. All projects in the MAG region have been obligated.

For the highway portion, the Arizona Department of Transportation (ADOT) has 120 days to obligate 50 percent of the funding, and a year – by March 2, 2010, to obligate the remaining funds. Of the ADOT portion, $129.4 million was directed for Highway projects in the MAG Region. The legislation also sub-allocates 30 percent of the funding ($156.57 million) to local jurisdictions. The amount being sub-allocated to the MAG Region is $104.6. Metropolitan planning organizations and Local Agencies have one year to obligate the funds, by March 2, 2010.

The MAG regional portion for transit is $66.4 million. The legislation requires that 50 percent of the transit funds be obligated within 180 days, and the remainder to be obligated within one year by March 2, 2010.

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**Project Status Report** **p. 3 – 11**

## Project Status Report

The Project Status Report highlights three areas of project details as noted below:

**Project I nformation:** Lists information about the project as reported on in the MAG Transportation Improvement Program (TIP) including the project location and description.

**Project Funding:** Explains the project funding sources and amounts as listed in the MAG TIP.

**Project Development Status:** This section reports on the status of project development steps. This section will most likely change in the future as projects are under construction. The project development steps are:

- Project Approved by MAG RC (Date): Project approved by the MAG Regional Council for inclusion in the current MAG TIP
- Design & Federal Clearances: The required design and federal clearances have been complete or have estimated completion dates. Or other notes may be provided regarding status with FHWA or FTA. Check mark indicates that work is completed.
- Obligate: The project has obligated, which means that the Federal Highway Administration agrees that the project has completed the necessary federal steps and the federal funds can be promised for the project. This date is the projected obligation date based on submittal of final PS&E. Actual date will depend on FHWA processing time.
- Advertise Date – The date the project scheduled to be advertised.
- Award Date – The date the project is awarded to contractor.
- Estimated Completion – The contractor has estimated that construction will be completed by this date.

**This information can also be found at the MAG Website:**
**http://www.mag.maricopa.gov/detail.cms?item=9615**

# PROJECT STATUS REPORT TRANSPORTATION PROJECTS IN MAG REGION
## American Recovery & Reinvestment Act (ARRA) Funding
## MAY 14 2010

| Project Information | | | | | Project Funding | | | Project Development Status | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIP # | Federal ID | Project Location | Project Description | Fund Type | Federal - ARRA | Total | Award Amount | Approval Date | Design | Environmental | Obligated | Advertise Date | Award Date | Estimated Complete | Comments |
| **State Sponsored Projects - Roadways** | | | | | | | | | | | | | | | |
| DOT09-815 | 010-B(205) | I-10: Verrado Way - Sarival Rd | Construct General Purpose Lane | ARRA | $27,635.1 | $27,635.1 | $27,635.1 | 05/27/09 | ✓ | ✓ | ✓ | ✓ | 7/17/09 | 2/12/2011 | Admin Mod: Change project costs from $28.2M to $26.3M. |
| DOT09-818 | 017-A(207) | I-17: SR74-Anthem Way | Construct General Purpose Lane | ARRA | $13,994.1 | $13,994.1 | $13,994.1 | 05/27/09 | ✓ | ✓ | ✓ | ✓ | 6/19/09 | 5/31/2010 | Admin Mod: Change project costs from $13.4M to $13.3M |
| DOT09-6C00R | 060-B(201) | US 60: SR 303L - 99th Ave | Road Widening | ARRA | $23,899.3 | $23,923.5 | $23,923.5 | 03/25/09 | ✓ | ✓ | ✓ | ✓ | 11/20/09 | 12/31/2011 | Admin Mod: Change project costs from $45.0M to $22.3M |
| DOT07-323 | 101-A(203) | 99th Ave from I-10 to MC-85 | Road Widening | STP-AZ & ARRA | $1,519.1 | $2,251.2 | | 04/22/09 | ✓ | ✓ | ✓ | ✓ | | | Regional cost includes $652,890 in Toleson local ARRA funds. Bids open |
| DOT09-801 | 060-B(201) | US 60: 99th Ave to Thunderbird Rd (within the city limits of El Mirage) | Transporatation Landscaping Enhancement | ARRA | $212.8 | $212.8 | $212.8 | 04/22/09 | ✓ | ✓ | ✓ | ✓ | 11/20/09 | 12/31/2011 | El Mirage local ARRA funds used for local costs in ADOT project |
| DOT07-332 | 060-B(200) | US 60: 99th Ave - 83rd Ave | Road Widening | ARRA | $8,046.8 | $8,046.8 | $8,046.8 | 03/25/09 | ✓ | ✓ | ✓ | ✓ | 8/14/09 | 10/31/2010 | Admin Mod: Change project costs from $11.2 mill to $7.6M. |
| DOT06-613 | 085-B(200) | SR 85: Southern Ave - I 10 | Widen roadway, adding 2 through lanes | ARRA | $11,147.3 | $11,147.3 | $11,147.3 | 05/27/09 | ✓ | ✓ | ✓ | ✓ | 9/18/09 | 11/26/2010 | Admin Mod: Change project costs from $18.6 mill to $11.0M - pending contract award |
| DOT12-840 | 101-A(204) | 101 (Agua Fria Fwy) at Union Hills Dr/Beardsley Rd | Construct traffic interchange, construct new frontage road and Texas U-Turn structure over L101 | ARRA, STP MAG & Local | $5,667.4 | $17,173.9 | $17,173.9 | 04/22/09 | ✓ | ✓ | ✓ | ✓ | 10/16/09 | 7/31/2011 | Admin Mod: Change project costs from $27.5 mill to $17.1M |
| DOT08-673 | 074-A(200) | 74: US-60 (Grand Ave) to Loop 303 (Estrella Fwy); MP 20-22 | Construct eastbound and westbound passing lanes | ARRA | $2,440.9 | $2,440.9 | $2,324.6 | 05/27/09 | ✓ | ✓ | ✓ | ✓ | 10/16/09 | 09/31/2011 | Admin Mod: Change project costs from $3.9 mill to $2.3M |
| DOT12-841 | 101-A(206) | Loop 101: Northern to Grand SB | Auxiliary lane - 3 miles | ARRA | $2,186.1 | $2,186.1 | | 09/30/09 | ✓ | ✓ | ✓ | ✓ | 5/4/10 | | |
| DOT10-815 | 101-A(201) | Loop 101: Olive Avenue | TI Improvements | ARRA | $2,172.4 | $2,172.4 | $2,172.4 | 09/30/09 | ✓ | ✓ | ✓ | ✓ | 3/19/10 | | Admin Mod: Change project costs from $3M mill to $2.17M - pending contract award |
| DOT10-6C32 | 074-A(201) | SR 74: MP 13 - MP 15 | Construct Passing Lanes | ARRA | $3,395.0 | $3,395.0 | | 09/30/09 | ✓ | ✓ | ✓ | ✓ | | | Bids open 6/11/10 |
| DOT10-816 | 017-A(211) | I-17: I-10 to Indian School | Southbound Roadway Improvements | ARRA | $1,100.0 | $1,100.0 | | 09/30/09 | ✓ | ✓ | ✓ | ✓ | | | Bids open 5/20/10 |
| DOT10-813 | 101-A(205) | Loop 101: 51st Ave to 27th Ave EB | Auxiliary lane | ARRA | $2,085.1 | $2,085.1 | | 09/30/09 | ✓ | ✓ | ✓ | ✓ | 5/4/10 | | Bids open 4/9/10 |
| DOT10-828 | 087-B(205)A | SR 87: Four Peaks - Dos S Ranch Road | Construct Roadway Improvements | ARRA | $18,500.0 | $18,500.0 | | 09/30/09 | ✓ | ✓ | ✓ | ✓ | | | Bids open 4/30/10 |

**PROJECT STATUS REPORT TRANSPORTATION PROJECTS IN MAG REGION**
**American Recovery & Reinvestment Act (ARRA) Funding**
**MAY 14 2010**

| Project Information | | | | | Project Funding | | | Project Development Status | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIP # | Federal ID | Project Location | Project Description | Fund Type | Federal - ARRA | Total | Award Amount | Approval Date | Design | Environmental | Obligated | Advertise Date | Award Date | Estimated Complete | Comments |
| **State Sponsored Projects - Roadways** | | | | | | | | | | | | | | | |
| DOT08-828 | 087-A(206)A | SR 87: MP 211.8 to 213.0 | Repair cut slopes for erosion control | ARRA | $1,600.0 | $1,600.0 | | 12/09/09 | ✓ | ✓ | ✓ | ✓ | | | To be done in conjunction with project SR 87: Four Peaks - Dos S Ranch Road |
| DOT08-839 | 143-A( ) | 143 Hohokam: SR 143/Sky Harbor Blvd TI | TI Improvements, Adding Ramps | ARRA | $35,100.0 | $35,100.0 | | 12/09/09 | ✓ | ✓ | | | | | |
| DOT10-851 | | US 60: San Domingo - Whitmann | Pavement Preservation | ARRA | $9,000.0 | $9,000.0 | | 02/24/10 | ✓ | ✓ | | | | | State project to be funded with Local ARRA STP-AZ funds will be used if full amount of ARRA funds are not available |
| | | | | | $160,701.4 | $172,964.1 | $106,630.3 | | | | | | | | |

# PROJECT STATUS REPORT TRANSPORTATION PROJECTS IN MAG REGION
## American Recovery & Reinvestment Act (ARRA) Funding
## MAY 14 2010

| Project Information | | | | | Project Funding | | | Project Development Status | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIP # | Federal ID | Project Location | Project Description | Fund Type | Federal - ARRA | Estimated Total | Construction Award Amount | Approval Date | Design | Environment | Obligate | Bid Open Date | Award Date | Estimated Complete | Comments |
| **Local Projects - Roadway** | | | | | | | | | | | | | | | |
| APJ09-801 | APJ-0(201) | Ironwood Drive: Southern Avenue to 16th Avenue | Design and Reconstruction of Pavement | ARRA | $1,348.3 | $1,348.3 | $1,499.1 | 4/22/09 | ✓ | ✓ | ✓ | 2/3/10 | 4/24/10 | | |
| AVN09-801 | AVN-0(206) | Dysart Road-I-10 to Indian School Road | Preliminary engineering, design and construction for Mill & Replace | ARRA | $2,035.2 | $2,035.2 | $1,681.9 | 4/22/09 | ✓ | ✓ | ✓ | 3/5/10 | 4/8/10 | | |
| AVN09-802 | AVN-0(207) | Dysart Road -Van Buren to the I-10 | Preliminary engineering, design and construction for Mill & Replace | ARRA & Local | $179.7 | $401.8 | N/A | 4/22/09 | N/A | N/A | N/A | N/A | N/A | N/A | Combined with AVN09-801 |
| BKY09-801 | BKY-0(202) | Various Locations Townwide - Functionally Classified Roads | Pre-engineer/Design and Pavement Rehabiliation and Preservation | ARRA | $1,621.9 | $1,621.9 | $1,118.9 | 4/22/09 | ✓ | ✓ | ✓ | 2/12/10 | 3/19/10 | | |
| CFR09-801 | CFE-0(200) | Intersection of Tom Darlington Drive and Ridgeview Place | Pre-engineer/Design and construct Pedestrian crossing | ARRA | $35.0 | $35.0 | N/A | 4/22/09 | N/A | N/A | N/A | N/A | N/A | N/A | Combined Project: ARRA-CFE-0(200),Town of Carefree has been combined with Cave Creek Road ARRA-CFE-0(201)A. |
| CFR09-802 | CFE-0(201) | Cave Creek Road: Scopa Trail to Carefree Eastern Border | Pre-engineer/Design and construct, repair and restoration of Cave Creek Road | ARRA | $553.3 | $553.3 | $440.8 | 4/22/09 | 11/12/09 | ✓ | ✓ | 3/12/10 | | | Preliminary estimate based on low bid. |
| CVK09-807 | CVK-0(201) | Various Locations - Functionally Classified Roadways | Pre-Engineer/Design and Construct Pavement Rehab projects | ARRA | $614.8 | $614.8 | $491.4 | 5/27/09 | ✓ | ✓ | ✓ | 4/2/10 | | | Preliminary estimate based on low bid. |
| CHN120-07C | CHN-0(025) | Chandler Blvd/Dobson Road Intersection, and Dobson Road from Chandler Blvd to Frye Road | Intersection and Capacity Improvement | ARRA, Local & RARF | $2,288.7 | $7,629.0 | $4,370.0 | 4/22/09 | ✓ | ✓ | ✓ | 2/5/10 | 3/25/10 | Feb-11 | |
| CHN09-801 | CHN-0(211) | Price Road from Germann Road south to Queen Creek Road | Design and reconstruction of pavement | ARRA | $3,678.9 | $3,678.9 | $2,313.0 | 4/22/09 | ✓ | ✓ | ✓ | 3/3/10 | 4/22/10 | Nov-10 | |
| ELM09-801 | ELM-0(202) | Various Locations Citywide - Functionally Classified Roadways | Pre-Engineer/Design and Mill and Replace Existing Road. | ARRA | $952.8 | $952.8 | $566.8 | 4/22/09 | ✓ | ✓ | ✓ | 4/16/10 | | | Preliminary estimate based on low bid. |
| FTH07-301 | FTH-0(203) | Shea Blvd. (Palisades Blvd. to Fountain Hills Blvd.) | Widen for 3rd (westbound) lane, bike lane, sidewalk, and turn pockets. | ARRA, STP, & Local | $1,081.6 | $3,376.6 | $1,746.7 | 6/24/09 | ✓ | ✓ | ✓ | 12/11/09 | 2/19/10 | | |
| GBD09-801 | GBD-0(201) | Pima Street/SR-85 Various Locations | Design and Construct Signage Improvements | ARRA | $33.0 | $33.0 | | 4/22/09 | N/A | N/A | N/A | N/A | N/A | N/A | Combined with GBD09-802 |
| GBD09-802 | GBD-0(200) | Pima Street/SR-85 Various Locations | Design and Construct Pedestrian and Landscape Improvements | ARRA | $339.5 | $339.5 | | 4/22/09 | ✓ | ✓ | ✓ | 4/23/10 | | | |
| GBD09-803 | GBD-0(203) | Gila Bend Airport on SR-85 | Design and Construct Carpool and Transit Park & Ride Lot | ARRA | $170.0 | $170.0 | $245.0 | 5/27/09 | ✓ | ✓ | ✓ | 4/2/10 | | | Preliminary estimate based on low bid. |
| GRC09-801 | GRI-0(200) | Various Locations - Functionally Classified Roadways | Pre-Engineer/Design and Construct Pavement Rehab projects | ARRA | $561.3 | $561.3 | $492.7 | 4/22/09 | ✓ | ✓ | ✓ | 4/9/10 | | | Preliminary estimate based on low bid. |
| GLB09-801 | GIL-0(203) | Various Locations - Functionally Classified Roadways | Pre-Engineer/Design and Construct Nova Chip Overlays- arterial roadways | ARRA | $5,306.3 | $5,306.3 | $4,179.4 | 4/22/09 | ✓ | ✓ | ✓ | 2/12/10 | | | |
| GLN09-801 | GLN-0(219) | Various Locations Citywide - Functionally Classified Roadways | New traffic signal cabinets and controllers | ARRA | $1,100.0 | $1,100.0 | $1,512.5 | 4/22/09 | ✓ | ✓ | ✓ | 4/23/10 | | | |

## PROJECT STATUS REPORT TRANSPORTATION PROJECTS IN MAG REGION
## American Recovery & Reinvestment Act (ARRA) Funding
## MAY 14 2010

| Project Information | | | | | Project Funding | | | Project Development Status | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIP # | Federal ID | Project Location | Project Description | Fund Type | Federal - ARRA | Estimated Total | Construction Award Amount | Approval Date | Design | Environment | Obligate | Bid Open Date | Award Date | Estimated Complete | Comments |
| **Local Projects - Roadway** | | | | | | | | | | | | | | | |
| GLN09-802 | GLN-0(218) | Various Locations Citywide - Functionally Classified Roadways | Modernize traffic signals | ARRA | $550.0 | $550.0 | | 4/22/09 | ✓ | ✓ | ✓ | | | | |
| GLN09-803 | GLN-0(217) | Various Locations Citywide - Functionally Classified Roadways | CCTV Camera Installations | ARRA | $90.0 | $90.0 | | 4/22/09 | ✓ | ✓ | ✓ | | | | |
| GLN09-804 | GLN-0(215) | Camelback Rd. - 47th to 83rd Aves. | Install wireless communication with traffic signals | ARRA | $230.0 | $230.0 | $250.7 | 4/22/09 | ✓ | ✓ | ✓ | 4/16/10 | | | Preliminary estimate based on low bid. |
| GLN09-805 | GLN-0(216) | Bethany Home Rd. - 63rd to 83rd Aves. | Install wireless communication with traffic signals | ARRA | $200.0 | $200.0 | | 4/22/09 | ✓ | ✓ | ✓ | | | | |
| GLN09-806 | GLN-0(211) | Glendale Ave. - 51st to 66th Aves. | Pre-Engineer/Design and construct pavement overlay | ARRA | $1,170.0 | $1,170.0 | | 4/22/09 | ✓ | ✓ | ✓ | 4/23/10 | | | |
| GLN09-807 | GLN-0(212) | Litchfield Rd. - Missouri to Northern Ave. | Pre-Engineer/Design and construct pavement surface treatment | ARRA | $510.0 | $510.0 | | 4/22/09 | ✓ | ✓ | ✓ | 5/14/10 | | | |
| GLN09-808 | GLN-0(214) | 25 Miles on Arterial Streets | Install thermoplastic pavement markings | ARRA | $358.4 | $358.4 | | 4/22/09 | ✓ | ✓ | ✓ | 4/23/10 | | | Bid Open Date |
| GLN08-604 | GLN-0(033) | 63rd Avenue at Loop 101 Expressway | Design and construct multi-use overpass over Loop 101 (Agua Fria Fwy) (Phase 2) | ARRA, CMAQ, & Local | $1,850.0 | $5,407.4 | $3,024.0 | 4/22/09 | ✓ | ✓ | ✓ | 3/5/10 | | | Preliminary estimate based on low bid. |
| GDY09-801 | GDY-0(202) | Various Locations Citywide - Functionally Classified Roadways | Pre-Engineer/Design and construct mill, patch and replace | ARRA & Local | $782.4 | $798.4 | $623.5 | 4/22/09 | ✓ | ✓ | ✓ | 3/26/10 | 4/16/10 | | *Bid open date. |
| GDL09-801 | GUA-0(200) | Various Locations Townwide - Functionally Classified Roadways | Design and Mill & Asphalt overlay roadways | ARRA | $634.0 | $634.0 | $548.1 | 4/22/09 | ✓ | ✓ | ✓ | 4/9/10 | | | Preliminary estimate based on low bid. |
| LPK09-801 | LPK-0(201) | Various Locations Citywide - Functionally Classified Roadways | Pre-Engineer/Design and mill and replace pavement resurfacing/ reconstruction | ARRA | $614.0 | $614.0 | $455,905 | 4/22/09 | ✓ | ✓ | ✓ | 4/2/10 | | | Preliminary estimate based on low bid. |
| MMA09-725 | MMA-0(201) | Bush Hwy from Usery Pass Rd to Stewart Mtn Rd | Design and construct bicycle lane | TEA-ARRA | $750,000 | $1,117,817 | $561,095 | 5/27/09 | ✓ | ✓ | ✓ | 3/24/10 | 7/21/09 | Mar-10 | Construction is complete, final close-out in process. (This is an ADOT TE project, so ADOT will keep savings in their TE program, if any.) |
| MMA09-801 | MMA-0(210) | Various Locations Countywide - Functionally Classified Roadways | Pre-Engineer/Design and construct AR Overlay | ARRA & Local | $6,469.2 | $6,478.1 | $9,399,600 | 4/22/09 | ✓ | ✓ | ✓ | 2/18/10 | 3/24/10 | | |
| MES09-801R | MES-0(209) | Various Locations Citywide - Functionally Classified Roadways | Pre-Engineer/Design and pavement reconstruct and ADA upgrades | ARRA | $1,610.9 | $1,610.9 | $967.2 | 5/27/09 | ✓ | ✓ | ✓ | 3/11/10 | | | |
| MES09-802R | MES-0(210) | Various Locations Citywide - Functionally Classified Roadways | Pre-Engineer/Design and construct mill and replace pavement | ARRA | $970.7 | $970.7 | $1,281.2 | 5/27/09 | ✓ | ✓ | ✓ | 2/3/10 | 3/22/10 | Aug-10 | |
| MES09-803 | MES-0(211) | Various Locations Citywide - Functionally Classified Roadways | Pre-Engineer/Design and pavement reconstruct and ADA upgrades, Group 1 | ARRA | $2,559.3 | $2,559.3 | $2,336.4 | 5/27/09 | ✓ | ✓ | ✓ | 2/10/10 | 4/5/10 | Sep-10 | |
| MES09-804 | MES-0(212) | Various Locations Citywide - Functionally Classified Roadways | Pre-Engineer/Design and pavement reconstruct and ADA upgrades, Group 2 | ARRA | $2,333.3 | $2,333.3 | $1,975.7 | 5/27/09 | ✓ | ✓ | ✓ | 2/3/10 | 3/22/10 | Jun-10 | |

## PROJECT STATUS REPORT TRANSPORTATION PROJECTS IN MAG REGION
## American Recovery & Reinvestment Act (ARRA) Funding
## MAY 14 2010

| Project Information | | | | | Project Funding | | | Project Development Status | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIP # | Federal ID | Project Location | Project Description | Fund Type | Federal - ARRA | Estimated Total | Construction Award Amount | Approval Date | Design | Environment | Obligate | Bid Open Date | Award Date | Estimated Complete | Comments |
| **Local Projects - Roadway** | | | | | | | | | | | | | | | |
| MES09-805 | MES-0(213) | Various Locations Citywide - Functionally Classified Roadways | Pre-Engineer/Design and pavement reconstruct and ADA upgrades Group 3 | ARRA | $3,310.6 | $3,310.6 | $3,476.4 | 5/27/09 | ✓ | ✓ | ✓ | 2/3/10 | 3/22/10 | Nov-10 | |
| PVY09-801 | PVY-0(202) | Various Locations Townwide - Functionally Classified Roadways | Pre-Engineer/Design and construct pavement resurface projects | ARRA & Local | $823.2 | $823.8 | | 4/22/09 | ✓ | ✓ | ✓ | 5/20/10 | | | Bid Open Date |
| PEO100-07AC1 | PE0-0(206) | Beardsley Rd Connection: Loop 101 (Agua Fria Fwy) to Beardsley Rd at 83rd Av/Lake Pleasant Pkwy | Construct Beardsley Road extension and bridge over New River | ARRA, STP-MAG & Local | $2,850.4 | $11,489.7 | $7,919.3 | 4/22/09 | ✓ | ✓ | ✓ | 10/22/09 | 12/18/09 | | |
| PEO09-801 | PE0-0(205) | Various Locations | Pavement Preservation: Major Arterial mill, overlay and re-striping | ARRA & Local | $1,130.1 | $1,396.3 | $1,848.3 | 6/24/09 | ✓ | ✓ | ✓ | 3/12/10 | | | Preliminary estimate based on low bid. |
| PHX07-316 | PHX-0(209) | 7th St & McDowell Rd | Design & Construction of Intersection Improvements | ARRA & CMAQ | $1,000.0 | $2,256.0 | $748.9 | 4/22/09 | ✓ | ✓ | ✓ | 10/27/09 | 11/18/09 | Jul-10 | |
| PHX09-801 | PHX-0(237) | Various Locations (North Area) - Functionally Classified Roadways | Design & Construction of Pavement Preservation | ARRA | $7,136.2 | $7,136.2 | $5,190.0 | 4/22/09 | ✓ | ✓ | ✓ | 1/26/10 | 3/3/10 | Dec-10 | |
| PHX09-802 | PHX-0(238) | Various Locations (Central Area) - Functionally Classified Roadways | Design & Construction of Pavement Preservation | ARRA | $7,150.0 | $7,150.0 | $4,930.7 | 4/22/09 | ✓ | ✓ | ✓ | 1/26/10 | 3/3/10 | Dec-10 | |
| PHX09-803 | PHX-0(239) | Various Locations (South Area) - Functionally Classified Roadways | Design & Construction of Pavement Preservation | ARRA | $7,150.0 | $7,150.0 | $4,844.0 | 4/22/09 | ✓ | ✓ | ✓ | 1/26/10 | 3/3/10 | Dec-10 | |
| PHX09-804 | PHX-0(229) | Various Locations - (North Area) | Design & Construction of Removal/Replacement of Existing ADA Ramps or Construction of New ADA Ramps | ARRA | $1,750.0 | $1,750.0 | $981.3 | 4/22/09 | ✓ | ✓ | ✓ | 2/2/10 | 3/3/10 | Dec-10 | |
| PHX09-805 | PHX-0(230) | Various Locations - (South Area) | Design & Construction of Removal/Replacement of Existing ADA Ramps or Construction of New ADA Ramps | ARRA | $1,750.0 | $1,750.0 | $1,082.1 | 4/22/09 | ✓ | ✓ | ✓ | 2/2/10 | 3/3/10 | Dec-10 | |
| PHX09-806 | PHX-0(231) | 11 Locations Citywide | Design & Costruct Bridge Deck Rehabilitations | ARRA | $2,250.0 | $2,250.0 | $1,397.4 | 4/22/09 | ✓ | ✓ | ✓ | 3/23/10 | TBD | Dec-10 | |
| PHX09-807 | PHX-0(232) | 6 Locations Citywide | Design & Costruct Bridge Joint Rehabilitations | ARRA | $1,250.0 | $1,250.0 | $412.3 | 4/22/09 | ✓ | ✓ | ✓ | 2/9/10 | TBD | Dec-10 | |
| PHX09-808 | PHX-0(236) | Citywide Corridors | Inventory / Programming & Procure / Install Traffic Control Signs | ARRA | $3,000.0 | $3,000.0 | | 4/22/09 | ✓ | ✓ | ✓ | 3/23/10 | TBD | Dec-10 | |
| PHX09-809 | PHX-0(234) | Citywide Corridors | Design & Procure/Install Fiber Optic Backbone System | ARRA | $1,500.0 | $1,500.0 | $414.0 | 4/22/09 | ✓ | ✓ | ✓ | 3/9/10 | TBD | Dec-10 | |
| PHX09-810 | PHX-0(233) | Citywide Corridors | Design &Procure/Install CCTV | ARRA | $1,000.0 | $1,000.0 | | 4/22/09 | ✓ | ✓ | ✓ | 4/27/10 | TBD | Feb-11 | |
| PHX09-811 | PHX-0(235) | Citywide Corridors | Design &Procure/Install Wireless Communications | ARRA | $500.0 | $500.0 | | 4/22/09 | ✓ | ✓ | ✓ | 4/27/10 | TBD | Feb-11 | |
| QNC09-801 | QCR-0(204) | Combs Rd: UPRR/Rittenhouse Rd to approx. 1,000 ft west of Gantzel Rd | Pre-Engineer/Design and construct resurfacing roadway | ARRA | $227.3 | $227.3 | N/A | 4/22/09 | N/A | N/A | N/A | N/A | N/A | N/A | |

## PROJECT STATUS REPORT TRANSPORTATION PROJECTS IN MAG REGION
## American Recovery & Reinvestment Act (ARRA) Funding
## MAY 14 2010

| Project Information | | | | | Project Funding | | | Project Development Status | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIP # | Federal ID | Project Location | Project Description | Fund Type | Federal - ARRA | Estimated Total | Construction Award Amount | Approval Date | Design | Environment | Obligate | Bid Open Date | Award Date | Estimated Complete | Comments |
| **Local Projects - Roadway** | | | | | | | | | | | | | | | |
| QNC09-802 | QCR-0(205) | Various Locations on Rittenhouse Rd | Pre-Engineer/Design and construct resurfacing roadway and shoulder paving | ARRA | $805.8 | $805.8 | $816.6 | 4/22/09 | ✓ | ✓ | ✓ | 4/16/10 | | | Preliminary estimate based on low bid. |
| SRP09-801 | SRI-0(200) | Various Locations - Functionally Classified Roadways | Design & Construction of Pavement Preservation/Chip-Seal | ARRA | $653.9 | $653.9 | $663.2 | 5/27/09 | ✓ | ✓ | ✓ | 3/26/10 | 4/16/10 | | |
| SCT09-802 | SCT-0(209) | Various Locations | Preliminary engineering, design and construction for Mill & Replace | ARRA | $4,600.0 | $4,600.0 | $3,700.0 | 7/22/09 | ✓ | ✓ | ✓ | 3/2/10 | | | *Bid open date. Award amt includes estimated salaries and overhead. |
| SCT12-813 | SCT-0(206) | Various Locations in Southern Scottsdale | Replace traffic signal controllers and cabinets | ARRA, & Local | $439.6 | $500.0 | $505.0 | 4/22/09 | ✓ | ✓ | ✓ | 3/12/10 | | | *Bid open date. Award amt includes estimated salaries and overhead. |
| SUR09-801 | SUR-0(208) | Bell Road-Parkview to West City Limit | Pre-Engineer/Design and construct pavement Reconstruction and ITS Conduit Installation | ARRA | $2,933.4 | $2,933.4 | $2,807.3 | 4/22/09 | ✓ | ✓ | ✓ | 3/5/10 | | | Preliminary estimate based on low bid. |
| TMP09-801 | TMP-0(211) | Baseline Road between Kyrene Road and the Union Pacific Railroad, over the Western Canal | Construct replacement bridge over the Western Canal | ARRA, & Local | $4,362.6 | $6,000.0 | $2,083.1 | 4/22/09 | ✓ | ✓ | ✓ | 3/23/10* | 4/22/10 | Jan-10 | Contract Awardd date April 22, 2010. Notice to proceed May 1, 2010. |
| WKN09-801 | WBG-0(200) | North Vulture Mine Rd: US 60 to Northern Town Limits | Design and Complete Pavement Mill and Replace | ARRA | $644.1 | $644.1 | | 4/22/09 | ✓ | ✓ | ✓ | | | | |
| YTN09-801 | YTN-0(200) | Peoria Ave: 111th Avenue west by 1950 feet/approx. 115th Avenue | Pre-Engineer/Design and construct mill and replace - pavement resurfacing | ARRA | $645.9 | $645.9 | $321.1 | 4/22/09 | ✓ | ✓ | ✓ | 4/23/10 | | | |
| | | | | | $101,695.7 | $126,113.1 | | | | | | | | | |

## PROJECT STATUS REPORT TRANSPORTATION PROJECTS IN MAG REGION
## American Recovery & Reinvestment Act (ARRA) Funding
## MAY 14 2010

| Project Information | | | Project Funding | | | Project Development Status | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIP # | Project Location | Project Description | Federal - ARRA | Estimated Total | Award Amount | Approval Date | Design | Environment | Obligated | Bid Opened | Award Date | Estimated Complete | Comments |
| **Local Projects - Transit Projects** | | | | | | | | | | | | | |
| AVN09-804T | Citywide | Purchase 2 replacement dial-a-ride vehicles | $126.0 | $126.0 | | 6/24/09 | NA | ✓ | ✓ | | | | |
| GDY05-202T | I-10: Litchfield Rd to Dysart Rd (ADOT Basin between Litchfield and Dysart) | Park and Ride Land Acquisition | $352.2 | $1,847.1 | | 6/24/09 | ✓ | ✓ | ✓ | | | Mar-10 | The design is completed. The EA is completed. The land was acquired. Estimated construction cost is about $5M. |
| GDY06-204T | I-10: Litchfield Rd to Dysart Rd (ADOT Basin between Litchfield and Dysart) | Construct regional park-and-ride (1/10 - Litchfield) | $2,036.2 | $4,193.8 | | 6/24/09 | ✓ | ✓ | ✓ | | | Mar-10 | The design is completed. The EA is completed. The land was acquired. Estimated construction cost is about $5M. |
| GDY08-800T | I-10: Litchfield Rd to Dysart Rd (ADOT Basin between Litchfield and Dysart) | Acquire land- regional park and ride | $186.5 | $977.6 | | 6/24/09 | ✓ | ✓ | ✓ | | | Mar-10 | The design is completed. The EA is completed. The land was acquired. Estimated construction cost is about $5M. |
| GLN10-807T | Citywide | Operating Assistance - Glendale | $4.6 | | | 3/2/10 | NA | NA | ✓ | NA | | | |
| GLN10-808T | Citywide | ADA Complimentary Assistance - Glendale | $70.3 | | | 3/2/10 | NA | NA | ✓ | NA | | | |
| MES08-801T | Loop 202/Power | Construct regional park-and-ride (Loop 202/Power) | $517.8 | $1,800.0 | | 9/30/09 | | ✓ | ✓ | | | | Admin Mod: Modify project costs to lower amount and change funding type to ARRA-Transit and 5309. |
| MES10-801T | US60/Country Club | Park-and-Ride design | $367.5 | $367.5 | | 9/30/09 | | ✓ | ✓ | | | | Amend: Add new ARRA-Transit project to list. |
| MES10-802T | US60/Country Club | Park-and-Ride land acquisition | $3,238.3 | $3,238.3 | | 9/30/09 | | ✓ | ✓ | | | | Amend: Add new ARRA-Transit project to list. |
| MES10-803T | Loop 202/Power | Design regional park-and-ride (Loop 202/Power) | $765.0 | $765.0 | | 9/30/09 | | ✓ | ✓ | | | | Amend: Add new ARRA-Transit project to list. |
| MES10-804T | Gilbert/McDowell | Design regional park-and-ride | $765.0 | $765.0 | | 9/30/09 | | ✓ | ✓ | | | | Amend: Add new ARRA-Transit project to list. |
| MES10-805T | Gilbert/McDowell | Construct regional park-and-ride | $517.8 | $2,289.0 | | 9/30/09 | | ✓ | ✓ | | | | Amend: Add new ARRA-Transit project to list. |
| MES10-809T | Country Club/US 60 | Park-and-Ride construction | $3,228.8 | $3,228.8 | | 3/25/09 | ✓ | ✓ | ✓ | | | | Admin Mod: Modify project costs to lower amount. |
| PEO10-803T | Citywide | ADA Complimentary Assistance - Peoria | $0.7 | | | 3/2/10 | NA | NA | ✓ | NA | | | |
| PHX08-704T | 27th Ave/Baseline Rd | 27th Ave/Baseline Park and Ride Construct | $1,100.0 | $1,100.0 | | 5/27/09 | | ✓ | ✓ | ✓ | | Jun-12 | Staff is reviewing a revised design scope of work and fee proposal from Premier Engineering. |
| PHX08-705T | I-17/Happy Valley | Happy Valley/I-17 Park and Ride - construct | $5,500.0 | $5,500.0 | | 3/25/09 | ✓ | ✓ | ✓ | ✓ | | Dec-10 | Construction is in it's initial stage. Contractor is clearing the site and beginning excavation for underground utilities. |
| PHX09-611T | Regionwide | Preventive Maintenance | $5,400.0 | $11,964.0 | | 3/25/09 | NA | NA | ✓ | ✓ | | Jun-10 | Ongoing |
| PHX09-837T | Bell Rd/SR-51 | Bus access crossover | $640.1 | $640.1 | | 3/25/09 | ✓ | ✓ | ✓ | ✓ | | Jul-10 | Comments on the revised scope of work by the Deputy Director were forwarded to EAS on March 18. A cost analysis on the proposal and a negotiation summary/memorandum will be prepared by EAS. |

**PROJECT STATUS REPORT TRANSPORTATION PROJECTS IN MAG REGION**
**American Recovery & Reinvestment Act (ARRA) Funding**
**MAY 14 2010**

| Project Information | | | Project Funding | | | Project Development Status | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIP # | Project Location | Project Description | Federal - ARRA | Estimated Total | Award Amount | Approval Date | Design | Environment | Obligated | Bid Opened | Award Date | Estimated Complete | Comments |
| **Local Projects - Transit Projects** | | | | | | | | | | | | | |
| PHX09-838T | Pecos Road/40th Street | Pecos/40th St Park and Ride Expansion | $3,000.0 | $3,000.0 | | 3/25/09 | ✓ | ✓ | ✓ | ✓ | | Dec-10 | Contractor finished laying out underground utilities, concrete curbs and sidewalks, and is getting ready to grade site for aggregate base course placement. |
| PHX09-839T | Regionwide | Intelligent Transportation System Enhancement: Regional Transit Stop Data Overhaul | $300.0 | $300.0 | | 3/25/09 | NA | ✓ | ✓ | ✓ | | Sep-10 | Operational Review has been completed by Trapeze was on site March 2 - 5, 2010 installing the BSM software and providing training on System Admin, field staff using laptop and GPS for adding and updating bus stops, and map updates. Issue list has been cr |
| PHX09-840T | Citywide | Bus Stop Improvements | $4,321.2 | $4,321.2 | | 3/25/09 | ✓ | ✓ | ✓ | ✓ | | Dec-11 | Southwest Fabrication received the Notice to Proceed work on 2/22/10. SW is now repairing concrete transit pads and is manufacturing transit furniture. The first batch of new furniture is scheduled to be placed at sites by the end of April. |
| PHX10-804T | Citywide | Operating Assistance - Phoenix | $870.7 | | | 3/2/10 | NA | NA | ✓ | NA | | Mar-10 | |
| PHX10-805T | Citywide | ADA Complimentary Assistance - Phoenix | $972.0 | | | 3/2/10 | NA | NA | ✓ | NA | | Mar-10 | |
| PHX10-818T | Central Avenue/Van Buren | Central Station Transit Center Refurbishments | $5,000.0 | $5,000.0 | | 3/25/09 | | ✓ | ✓ | ü | | Jan-11 | The construction plans were approved on March 16 after one review. The Statement of Readiness for Central Station has been approved by Budget & Research. Discussions are continuing on the revised CA services proposal from the consultant team. A draft RCA |
| SCT09-803T | Loop 101/Scottsdale Rd | Park-and-Ride construction | $5,000.0 | $5,000.0 | | 3/25/09 | ✓ | ✓ | ✓ | | | | Receiving FTA guidance on Scottsdale's request to secure a lease for potential site. Environmental documentation underway. Part of second 50%. |
| SCT10-801T | Citywide | Operating Assistance - Scottsdale | $20.4 | | | 3/2/10 | NA | NA | ✓ | NA | | | |
| TMP09-806T | East Valley Operations and Maintenance Facility | Expansion/ Updgrade | $6,500.0 | $6,500.0 | | 3/25/09 | ✓ | ✓ | ✓ | | | Mar-11 | Final Design Contract Awarded |
| TMP10-801T | Citywide | Operating Assistance - Tempe | $331.0 | | | 3/2/10 | NA | NA | ✓ | NA | | | |

**PROJECT STATUS REPORT TRANSPORTATION PROJECTS IN MAG REGION**

**American Recovery & Reinvestment Act (ARRA) Funding**

**MAY 14 2010**

| Project Information | | | | | | Project Funding | | | Project Development Status | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIP # | Federal ID | Project Location | Project Description | Length | Fund Type | Federal - ARRA | Estimated Total | Award Amount | Approval Date | Design | Environment | Obligated | Advertise Date | Award Date | Estimated Complete | Comments |
| **Local Projects - Transportation Enhancements** | | | | | | | | | | | | | | | | |
| CHN09-805 | CHN-0(014) | Paseo Trail, Consolidated Canal: Galveston to Pecos Rd. | Construction of multi-use path | n/a | TEA-ARRA | $750,000 | $1,161,610 | | 5/27/09 | ✓ | ✓ | ✓ | | | | |
| GLB04-303R | GIL-0(015) | Canal Crossing Project | Design and construction pedestrian bridges over canal crossing | n/a | TEA-ARRA | $270,000 | $680,000 | $297.6 | 5/27/09 | ✓ | ✓ | ✓ | 9/9/09 | 9/18/09 | | Adjusted to include contingency. |
| GLB08-801 | GIL-0(202) | Heritage District Downtown Ped Project | Design and construct sidewalks, landscaping and other pedestrian improvements | 1 | TEA-ARRA | $578,670 | $578,670 | $376.0 | 5/27/09 | ✓ | ✓ | ✓ | 9/9/09 | | | Adjusted to include contingency. |
| GLN08-611 | GLN-0(201) | Old Roma Alley | Design and construct pedestrian enhancements and landscape | 0.05 | TEA-ARRA | $732,562 | $732,562 | | 5/27/09 | ✓ | ✓ | ✓ | 12/3/09 | | | |
| MMA09-725 | MMA-0(201) | Bush Hwy from Usery Pass Rd to Stewart Mtn Rd | Design and construct bicycle lane | 4.6 | TEA-ARRA | $750,000 | $1,117,817 | $561.1 | 5/27/09 | ✓ | ✓ | ✓ | 6/25/09 | 7/21/09 | Dec-09 | Construction scheduled to begin Oct 5, 09. |
| MES09-806 | MES-0(021) | Consolidated Canal Pathway, 8th Street and Lindsay | Design and construct 12-foot wide multi-use pathway with lighting and signing | 1.3 | TEA-ARRA | $750,000 | $1,509,375 | | 6/24/09 | ✓ | ✓ | ✓ | 4/7/10 | 6/21/10 | TBD | PH IIA auth; Adding PHIIV after 12-3 MAG TIP action |
| SCT09-703 | SCT-0(200) | Crosscut Canal, Thomas Rd to Indian School Rd | Construct new pedestrian/bicycle bridge and multi-use path | 0.75 | ARRA; TEA-ARRA | $1,632,333 | $3,117,272 | $663,000 | 5/27/09 | ✓ | ✓ | ✓ | ✓ | | | Project is using $750,000 TE ARRA funds plus $882,333 MAG ARRA funds. |
| SCT09-801 | SCT-0(203) | Downtown Canal Bank Improvements | Design and construct transportation enhancements to connect Sun Circle Trail to Goldwater Underpass | n/a | TEA-ARRA | $600,000 | $625,402 | $284.0 | 5/27/09 | ✓ | ✓ | ✓ | 11/2/09 | | | Includes estimated salaries and overhead |
| TMP09-704 | TMP-0(202) | Crosscut Canal from Papago Park to Mouer Park - Tempe | Design and construct multi-use path (phase II) | 1 | TEA-ARRA | $750,000 | $1,400,000 | $2,505.7 | 5/27/09 | ✓ | ✓ | ✓ | 5/19/10 | | | |
| | | | | | | $5,181,232 | $7,805,436 | | | | | | | | | |

Agenda Item #5C

# MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review

**DATE**:
June 1, 2010

**SUBJECT:**
Update to the Federal Functional Classification System

**SUMMARY:**
The MAG funding suballocation for the MAG Region from the American Recovery and Reinvestment Act (ARRA) requires projects to adhere to the requirements established in the Surface Transportation Program (STP). As such, ARRA and/or STP funded projects must be located on a facility that is classified as an urban collector or rural major collector or higher in the federal functional classification hierarchy.

MAG has received a request from the City of Chandler to add one project to the federal functional classification system. The City of Chandler has requested that Airport Boulevard from Germann Road to Queen Creek Road be classified as a Major Collector. The classification requests are necessary for the ARRA/STP funded projects to proceed.

**PROS & CONS:**
PROS: Approval of this classification of this roadway will allow a project to receive federal funds and proceed in a timely manner.

CONS: None.

**TECHNICAL & POLICY IMPLICATIONS:**
TECHNICAL: Roadway projects that wish to utilize transportation federal ARRA and/or MAG-STP funds need to be located on a roadway that is federally functionally classified as one of the following: Urban Principal Arterial, Urban Minor Arterial, Urban Collector, Rural Principal Arterial, Rural Minor Arterial or Rural Major Collector.

POLICY: This request is in accord with Federal regulations regarding the coordination of the development and amendment of federal functional classifications between local governmental agencies and state highway agencies.

**ACTION NEEDED:**
Recommend approval of the City of Chandler request to classify Airport Boulevard as a Major Collector in the federal functional classification system.

**PRIOR COMMITTEE ACTIONS:**
Transportation Review Committee: On May 27, 2010, the Transportation Review Committee recommended approval of the proposed update to the federal functional classification system.

MEMBERS ATTENDING

Peoria: David Moody
ADOT: Robert Samour for Floyd Roehrich
Avondale: David Fitzhugh
Buckeye: Scott Lowe
Chandler: Dan Cook for Patrice Kraus
El Mirage: Pat Dennis for Lance Calvert
Fountain Hills: Randy Harrel
Gila Bend: Eric Fitzer for Rick Buss
Gila River: Sreedevi Samudrala for Doug Torres
Gilbert: Michelle Gramley for Tami Ryall
Glendale: Terry Johnson
Goodyear: Cato Esquivel
Guadalupe: Gino Turrubiartes
Litchfield Park: Paul Ward for Woody Scoutten
Maricopa County: John Hauskins
# Mesa: Scott Butler
* Paradise Valley: Bill Mead
Phoenix: Rick Naimark
Queen Creek: Tom Condit
RPTA: Bryan Jungwirth
Scottsdale: Dave Meinhart
Surprise: Bob Beckley
Tempe: Chris Salomone
Valley Metro Rail: John Farry
* Wickenburg: Rick Austin
Youngtown: Grant Anderson for Lloyce Robinson

* Not present
# - Attended by Audioconference

**CONTACT PERSON:**
Stephen Tate, Transportation Planner III, (602) 254-6300.

**Chandler • Arizona**
*Where Values Make The Difference*

Maricopa Association of Governments
Received
MAY 10 2010

May 6, 2010

Mr. Steve Tate, Transportation Planner
Maricopa Association of Governments
302 North First Avenue
Phoenix, Arizona 85003

Subject: Federal Classification of Airport Boulevard

Dear Steve,

Attached is the Functional Classification Worksheet for the proposed federal functional classification of Airport Boulevard as an Urban Collector. Also attached is the requested map showing the location of the roadway.

Please process this request for functional classification through the MAG and ADOT process.

If you need any additional information or have any questions please give me a call at 480-782-3403.

Respectfully,

Daniel W. Cook, PE
Deputy Public Works Director

Attachments: Functional Classification Worksheet, Location Map

Mailing Address:
Mail Stop 403
PO Box 4008
Chandler, Arizona 85244-4008

**Public Works Department**
**Administration**
*Telephone (480) 782-3400*
*Fax (480) 782-3415*

Location:
215 East Buffalo Street
Chandler, Arizona 85225

# Functional Classification Worksheet

**Road Name:** Airport Boulevard **Length:** 1.16 miles

**Limits (termini):** Germann Road on the north, and Queen Creek Road on the south

**Current Functional Classification:** Urban Collector

**Proposed Functional Classification:** Urban Collector

**Most recent traffic count (ADT):** 3010 ADT **Year:** 2009

**Is this request consistent with the transportation plan?** *(circle one)* ⊙**Yes** or ○**No**

**Has the local agency (owner) committed to funding any construction projects on this route (i.e. new construction, improvements, etc) , excluding or outside of any Federal funds?** *(circle one)* ⊙**Yes** or ○**No**

*If yes, attach a copy of any documentation to this request*

**Has the regional planning body approved this request?** *(circle one)* ○**Yes** or ⊙**No**

*If yes, attach a copy of either a) an adopted resolution passed by the regional planning body; or (b) an approved motion shown in the minutes from an official meeting of the regional planning body.*

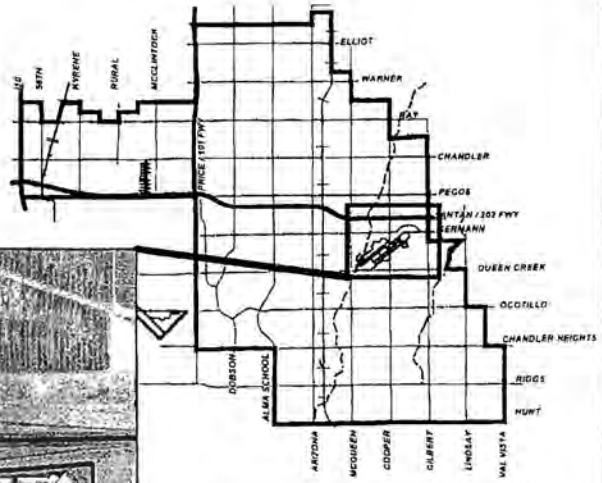
**Request Criteria:** Describe the reason for this request below (attach additional pages as necessary). If applicable, provide information on any specific traffic generators, population/housing changes (official Census or DES estimates), private or public development in the area, commercial/industrial activity and any other pertinent information that will help to justify this request. Please cite specific data and data sources for all figures used in the justification. Attach a map of the area with the route indicated on the map. Maps may be printed from the ADOT website at http://tpd.az.gov. Legible, handwritten notes on the map are acceptable.

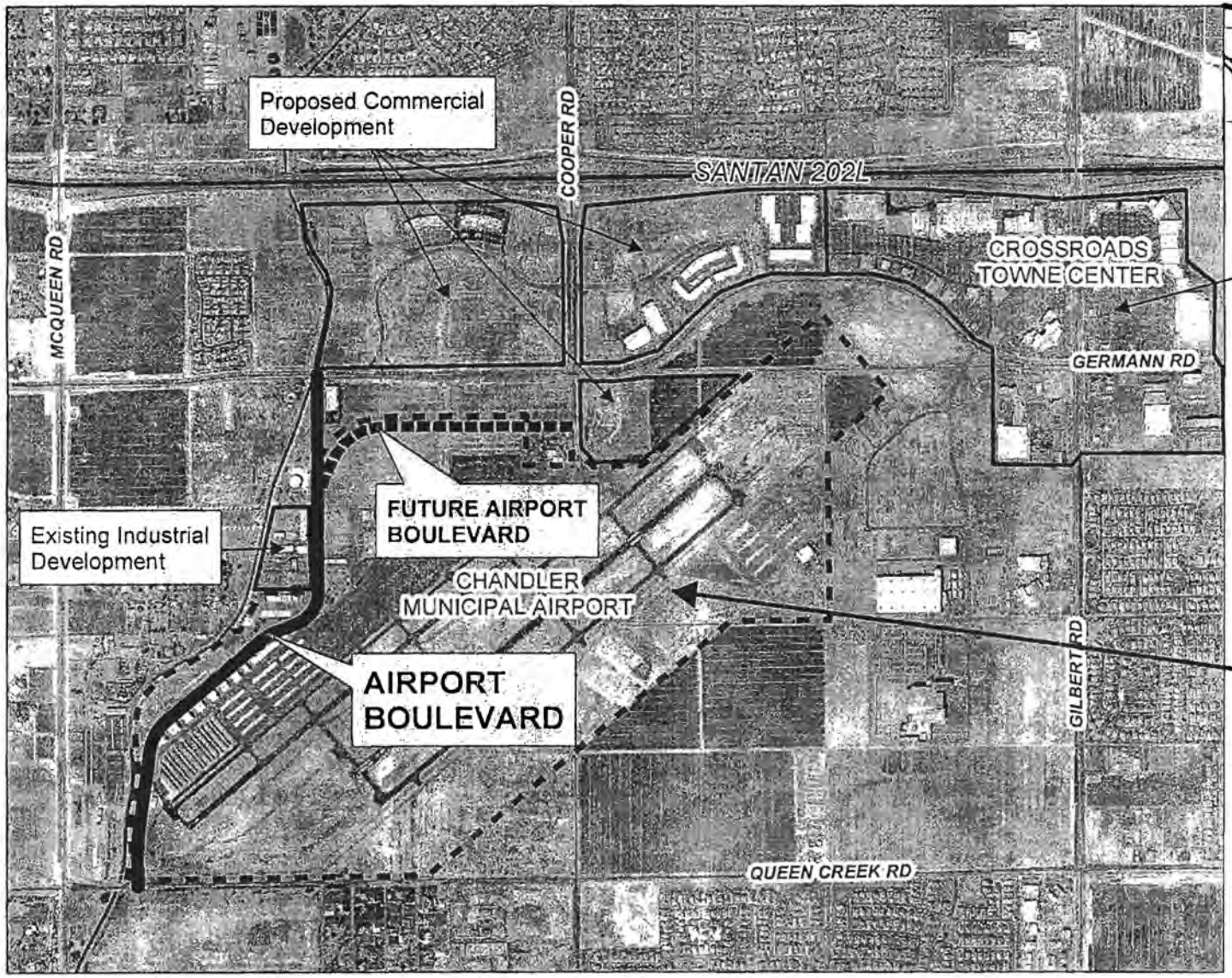
Airport Boulevard is an existing urban collector street is the City of Chandler, AZ. This roadway was constructed in 1985 and extends between the urban principal arterial streets of Queen Creek Road on the south and Germann Road on the north. Airport Boulevard functions as a feeder to the arterial streets from the existing industrial development and the Chandler Municipal Airport (CHD). Chandler Municipal Airport is a very busy general aviation reliever airport to Phoenix Sky Harbor Airport. Chandler Municipal Airport has about 204,000 annual air traffic operations that ranks CHD as the 50th busiest airport and the 21st busiest general aviation airport in the United States. Additionally, CHD has two parallel runways, 449 based aircraft, 234 aircraft storage hangers, 303 aircraft tie-down locations, and generates an economic impact to the City of Chandler of over $53.4 million based on a 2002 ADOT and Arizona State University study. There is approximately 100,000 square feet of industrial development that feeds traffic directly onto Airport Boulevard. This is currently enough vacant land area to an additional 300,000 square feet of industrial and commercial development. Approximately one mile east of Airport Boulevard is an existing retail development that has over 1.5 million square feet of space. Traffic from the retail development also uses Airport Boulevard to travel between Germann Road and Queen Creek Road. To the north and east of the Airport Boulevard there is a developing commercial center that could develop about 2 to 3 million square feet of commercial space; some of the traffic from this development would also use Airport Boulevard.

Currently the City of Chandler is planning on an improvement to a portion of Airport Boulevard with an estimated cost of $2.3 million. The ADOT has committed approximately $1.3 million and the City of Chandler has committed a grant match of approximately $230,000.

Chandler + Arizona

# AIRPORT BOULEVARD




1.5 Million Square Feet Commercial/Retail Space

| CHANDLER MUNICIPAL AIRPORT STATISTICS | |
|---|---|
| Annual Air Traffic Operations (Calendar Year 2009) | 204,000 |
| FAA Ranking of all towered | 50th busiest |
| FAA Ranking of all GA towered airports | 21st busiest |
| Total Based Aircraft | 449 |
| Total number of aircraft storage hangar units | 234 |
| Total number of aircraft storage tiedown units | 303 |
| Economic Impact of CHD based on 2002 ADOT / ASU analysis | $53.4 million |

NTS
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Agenda Item #5D

# MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review

**DATE**:
June 1, 2010

**SUBJECT:**
Project Changes/Amendments and Administrative Modifications to the Fiscal Year 2008-2012 MAG Transportation Improvement Program

**SUMMARY:**
The Fiscal Year (FY) 2008-2012 Transportation Improvement Program (TIP) and Regional Transportation Plan 2007 Update were approved by the MAG Regional Council on July 25, 2007. Since that time, there have been requests from member agencies to modify projects in the program.

The proposed amendments and administrative modifications to the FY 2008-2012 TIP are listed in the attached Table. To move forward with project implementation for FY 2010, the Arizona Department of Transportation (ADOT) has requested a new pavement preservation project, a new ITS project, and a new TEA project.

All transit projects, except for VMR09-821T, VMR10-703TR2, and VMR10-704T, were heard and voted on for approval at the MAG Transit Committee. The requests to modify the three projects mentioned above happened after the Transit Committee met when working with MAG this week on fiscal constraint and finalization of information for FTA grants. All of the transit requests are fiscal requests and MAG has verified no positive or negative impact to associated revenue and expenditures.

The ADOT led projects and transit projects were heard and recommended for approval at the May 27, 2010 Transportation Review Committee. The twelve ARRA related project change requests will be heard for the first time at the MAG Management Committee. These requested changes are related to reconciling funds available from lower project bids/awards. There is no negative fiscal impact to the ARRA local program.

**PUBLIC INPUT:**
None.

**PROS & CONS:**
PROS: Approval of this TIP amendment and administrative modification will allow the projects to proceed in a timely manner.

CONS: None.

**TECHNICAL & POLICY IMPLICATIONS:**
TECHNICAL: Projects that wish to utilize transportation federal funds need to be shown in the TIP in the year that they expect to commence and may need to undergo an air quality conformity analysis or consultation.

POLICY: This amendment and administrative modification request is in accord with MAG guidelines.

**ACTION NEEDED:**
Recommend approval of amendments and administrative modifications to the FY 2008-2012 Transportation Improvement Program, and as appropriate, to the Regional Transportation Plan 2007 Update.

**PRIOR COMMITTEE ACTIONS:**
Transportation Review Committee: On May 27, 2010, the Transportation Review Committee (TRC) recommended approval of the projects found in the Highway and Transit tables for amendments and administrative modifications to the FY 2008-2012 Transportation Improvement Program, as appropriate, to the Regional Transportation Plan 2007 Update.

MEMBERS ATTENDING
Peoria: David Moody
ADOT: Robert Samour for Floyd Roehrich
Avondale: David Fitzhugh
Buckeye: Scott Lowe
Chandler: Dan Cook for Patrice Kraus
El Mirage: Pat Dennis for Lance Calvert
Fountain Hills: Randy Harrel
Gila Bend: Eric Fitzer for Rick Buss
Gila River: Sreedevi Samudrala for Doug Torres
Gilbert: Michelle Gramley for Tami Ryall
Glendale: Terry Johnson
Goodyear: Cato Esquivel
Guadalupe: Gino Turrubiartes
Litchfield Park: Paul Ward for Woody Scoutten
Maricopa County: John Hauskins
# Mesa: Scott Butler
* Paradise Valley: Bill Mead
Phoenix: Rick Naimark
Queen Creek: Tom Condit
RPTA: Bryan Jungwirth
Scottsdale: Dave Meinhart
Surprise: Bob Beckley
Tempe: Chris Salomone
Valley Metro Rail: John Farry
* Wickenburg: Rick Austin
Youngtown: Grant Anderson for Lloyce Robinson

EX-OFFICIO MEMBERS ATTENDING
* Street Committee: Dan Cook
* ITS Committee: Debbie Albert
Bicycle/Pedestrian Committee: Peggy Rubach
* Transportation Safety Committee: Kerry Wilcoxon

* Members neither present nor represented by proxy. + - Attended by Videoconference
# - Attended by Audioconference

MAG Transit Committee: On May 13, 2010, the MAG Transit Committee recommended approval of the requested project changes for GDY08-801T, PHX08-610T, new 2008 preventative maintenance project in Phoenix, PHX07-310T, new 2009 mid life rehab project in Phoenix, VMT09-650T, VMT09-642T, VMR09-825T, and VMR09-826T.

MEMBERS ATTENDING
Phoenix: Debbie Cotton
ADOT: Mike Normand
Avondale: Rogene Hill
# Buckeye: Andrea Marquez
* Chandler: RJ Zeder
El Mirage: Pat Dennis
Gilbert: Ken Maruyama for Tami Ryall
Glendale: Cathy Colbath, Chair
Goodyear: Cato Esquivel
Maricopa County: Mitch Wagner
Mesa: Mike James
* Paradise Valley: William Mead
Peoria: David Moody for Maher Hazine
* Queen Creek: Wendy Kaserman
Scottsdale: Theresa Huish
* Surprise: Michael Celaya
Tempe: Jyme Sue McLaren
# Tolleson: Chris Hagen
Valley Metro Rail: Jim Mathien for Wulf Grote
Regional Public Transportation Authority: Bryan Jungwirth for Carol Ketcherside

* Members neither present nor represented by proxy. + - Attended by Videoconference
# - Attended by Audioconference

**CONTACT PERSON:**
Eileen O. Yazzie, Transportation Programming Manager, (602) 254-6300.

# Request for Project Change - 2008-2012 MAG Transportation Improvement Program

## MAG Management Committee 6-1-10

Highway Projects

| TIP # | Agency | Project Location | Project Description | FY | Length | Fund Type | Local Cost | ARRA Cost | Federal Cost | Regional Cost | Total Cost | Requested Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| New | ADOT | MAG Regionwide | Evaluation of Intelligent Transportation System (ITS) in the MAG Region | 2010 | | CMAQ | | | $ 211,232 | $ 12,768 | $ 224,000 | Establish a new ITS evaluation project (Advertise this project in August 2010). |
| New | ADOT | 85: SR85/I-10 TI Ramps | Pavement Preservation | 2010 | | NH | | | $ 707,250 | $ 42,750 | $ 750,000 | Establish a new pavement preservation project in FY10. |
| New | ADOT | 17: at Central Arizona Project (CAP) | Construct pedestrian bridge | 2010 | | STP-TEA | | | $ 2,862,005 | $ 172,995 | $ 3,035,000 | Establish a new pedestrian bridge project. Utilize Transportation Enhancecements close out funds. |

ARRA Related Highway Projects

| TIP # | Agency | Project Location | Project Description | FY | Length | Fund Type | Local Cost | ARRA Cost | Federal Cost | Regional Cost | Total Cost | Requested Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHN09-801 | Chandler | Price Road from Germann Road south to Queen Creek Road | Design and reconstruction of pavement | 2009 | | ARRA | - | 1,927,461 | | - | 1,927,461 | Transfer $1,736,438.30 to Chandler/Dobson |
| CHN120-07C | Chandler | Chandler Blvd/Dobson Road Intersection, and Dobson Road from Chandler Blvd to Frye Road. | Intersection and Capacity Improvement | 2009 | | ARRA | | 3,949,421 | | 420,546 | 4,369,967 | Transfer ARRA Price Road Savings to Chandler/Dobson Intersection |
| FTH07-301 | Fountain Hills | Shea Blvd.: Palisades Blvd. to fountain Hills Blvd. | Widen for third (westbound) climbing lane and bicycle lane. | 2009 | 2 | STP-MAG | $131,000 | | $2,164,000 | | $ 2,295,000 | De-obligate all ARRA funds ($1,081,614) due to bid savings. |
| FTH11-101ABS | Fountain Hills | Shea Blvd.: Saguaro Blvd. to Fountain Hills Blvd. | Mill and overlay | 2010 | 2 | STP-AZ | $65,379 | | $1,081,614 | | $ 1,146,993 | New project funded with STP from de-obligated ARRA |
| MES09-801R | Mesa | Arterial Reconstruct - Southern Avenue (44-001-001) | Pavement Preservation | 2010 | | ARRA | | $ 967,227 | | | $ 967,227 | Reduce ARRA/project costs by $591,186 from $1,558,413 to $967,227 |
| MES09-803 | Mesa | Arterial Reconstruction: Higley Rd. (Group 1) 44-003-001 | Pavement Preservation | 2010 | | ARRA | | $ 2,361,031 | | | $ 2,361,031 | Reduce ARRA/project costs by $145,569 from$2,506,600 to $2,361,031 |
| MES09-804 | Mesa | Arterial Reconstruction: Brown Rd and University Dr. (Group 2) 44-004-001 | Pavement Preservation | 2010 | | ARRA | | $ 2,003,611 | | | $ 2,003,611 | Reduce ARRA/project costs by $276,921 from $2,280,532 to $2,003,611 |
| MES08-803ABS | Mesa | Southern Ave: Greenfield Rd to Higley Rd. | Pavement Preservation | 2010 | 2.5 | STP-AZ | $ 386,324 | $ 1,013,676 | | | $ 1,400,000 | New project funded with STP from de-obligated ARRA |
| GLB09-801 | Gilbert | Various Locations - Functionally Classified Roadways | Pre-Engineer/Design and Construct Nova Chip Overlays - arterial roadways | 2010 | 14.88 miles | ARRA | | $4,366,610 | | | $4,366,610 | Reduce ARRA/project costs by $939,703 from $5,306,313 to $4,366,610 |
| GLB06-201R | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GLB07-302 | Gilbert | Eastern Canal | Santan Vista Trail | | | STP-AZ | $200,000 | | $939,703 | | | Reprogramming of ARRA savings, $939,703 as STP-AZ for a current CMAQ project |
| GLB05-107R | | | | 2010 | 3 miles | CMAQ | | | $1,685,769 | | $2,825,472 | |

Transit Projects

| TIP # | Agency | Project Location | Project Description | Fiscal Year | Length | Fund Type | Local Cost | ARRA Cost | Federal Cost | Regional Cost | Total Cost | Requested Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GDY08-801T | Goodyear | Citywide | Purchase bus <30 feet - 5 expand | 2008 | | CMAQ | $ 37,000 | | $ 438,000 | $ - | $ 475,000 | Delete Project |
| PHX08-610T | Phoenix | Regionwide | Purchase bus: < 30 foot - 5 expand (dial-a-ride) | 2008 | | 5307 | $ 79,000 | | $ 316,000 | $ - | $ 395,000 | Delete Project |
| New | Phoenix | Various locations | Preventive maintenance | 2008 | | 5307 | $ 1,696,808 | | $ 6,787,232 | | $ 8,484,040 | Increase funds by $316k from bus purchae program (PHX08-610T). |
| PHX07-310T | Phoenix | Various locations | Upgrade LNG fuel station - North Division | 2009 | | 5307 | $ 300,000 | | $ 1,200,000 | | $ 1,500,000 | Delete Project |
| New | Phoenix | Various locations | Mid Life Bus Engine Rehabilitation | 2009 | | 5307 | $ 300,000 | | $ 1,200,000 | | $ 1,500,000 | Add New project using funds from PHX07-310T. |
| VMT09-650T | Valley Metro | Regionwide | Reimbursement of bus: standard - 5 expand (Gilbert, Power) advance purchased in 2008 | 2009 | | 5307 | $ - | | $ 13,630,000 | $ (13,630,000) | $ - | Reduce from 8 to 5 buses due to reduction in service |
| VMT09-642T | Valley Metro | Regionwide | Associated capital maintenance | 2009 | | 5307 | $ 2,088,000 | | $ 8,352,000 | $ - | $ 10,440,000 | Increase PM funds due to reduction in bus purchaes. Move match from regional to local. |
| VMR09-821T | Valley Metro Rail | Tempe | Fixed guideway corridor - Tempe South - Preliminary Engineering/FEIS | 2009 | | CMAQ-Flex | | | $ 2,726,000 | $ 174,000 | $ 2,900,000 | Delete Project |
| VMR10-703TR2 | Valley Metro Rail | Main Street Corridor | Fixed guideway corridor - Central Mesa - Preliminary Engineering/FEIS | 2010 | | CMAQ-Flex | | | $ 10,000,000 | $ 2,500,000 | $ 12,500,000 | Admin Mod: Adjust federal funding amounts from $5 mill to $10 mill. |
| VMR10-704T | Valley Metro Rail | Tempe | Fixed guideway corridor - Tempe South - Preliminary Engineering/FEIS | 2010 | | CMAQ-Flex | | | $ 2,726,000 | $ 681,500 | $ 3,407,500 | Admin Mod: Adjust federal funding amounts from $5 mill to $2.726 mill. |
| VMR09-825T | VM Rail | Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line | Expand METRO light rail hours of service from 11:00pm on Friday and Saturday evenings to 2:00am on Saturday and Sunday mornings. | 2009 | | CMAQ | | | $ 300,000 | $ - | $ 300,000 | Delete Project |
| VMR09-826T | VM Rail | Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line | Installation of additional METRO ticket vending machines and stand alone fare validation systems | 2009 | | CMAQ | | | $ 600,000 | $ - | $ 600,000 | Increase funds by $300K to $600K from deleted VMR09-825T project. |

Agenda Item #5E

# *MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review*

**DATE**:
June 1, 2010

**SUBJECT:**
Conformity Consultation

**SUMMARY:**
The Maricopa Association of Governments is conducting consultation on a conformity assessment for an amendment and administrative modification to the FY 2008-2012 MAG Transportation Improvement Program (TIP). The proposed amendment and administrative modification involve several projects, including a new Arizona Department of Transportation pavement preservation project on State Route 85, a new region wide Intelligent Transportation Systems project, a new Transportation Enhancement project located at Interstate-17 and the Central Arizona Project, and transit projects. The amendment includes projects that may be categorized as exempt from conformity determinations. The administrative modification includes minor project revisions that do not require a conformity determination. A description of the projects is provided in the attached interagency consultation memorandum. Comments on the conformity assessment are requested by June 25, 2010.

**PUBLIC INPUT:**
Copies of the conformity assessment have been distributed for consultation to the Federal Transit Administration, Federal Highway Administration, Arizona Department of Transportation, Arizona Department of Environmental Quality, Regional Public Transportation Authority, City of Phoenix Public Transit Department, Valley Metro Rail, Maricopa County Air Quality Department, Central Arizona Association of Governments, Pinal County Air Quality Control District, U.S. Environmental Protection Agency and other interested parties including members of the public.

**PROS & CONS:**
PROS: Interagency consultation for the amendment and administrative modification notifies the planning agencies of project modifications to the TIP.

CONS: The review of the conformity assessment requires additional time in the project approval process.

**TECHNICAL & POLICY IMPLICATIONS:**
TECHNICAL: The amendment and administrative modification may not be considered until the consultation process for the conformity assessment is completed.

POLICY: Federal transportation conformity regulations require interagency consultation on development of the transportation plan, TIP, and associated conformity determinations to include a process involving the Metropolitan Planning Organization, State and local air quality planning

agencies, State and local transportation agencies, Environmental Protection Agency, Federal Highway Administration, and the Federal Transit Administration. Consultation on the conformity assessment has been conducted in accordance with federal regulations, MAG Conformity Consultation Processes adopted by the Regional Council in February 1996 and MAG Transportation Conformity Guidance and Procedures adopted by the Regional Council in March 1996. In addition, federal guidance is followed in response to court rulings regarding transportation conformity.

**ACTION NEEDED:**
Consultation.

**PRIOR COMMITTEE ACTIONS:**
None.

**CONTACT PERSON:**
Dean Giles, Air Quality Planning Program Specialist III, (602) 254-6300.

MARICOPA ASSOCIATION of GOVERNMENTS

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June 1, 2010

TO: Leslie Rogers, Federal Transit Administration
Robert Hollis, Federal Highway Administration
John Halikowski, Arizona Department of Transportation
Benjamin Grumbles, Arizona Department of Environmental Quality
David Boggs, Regional Public Transportation Authority
Debbie Cotton, City of Phoenix Public Transit Department
Stephen Banta, Valley Metro Rail
Max Porter, Maricopa County Air Quality Department
Maxine Brown, Central Arizona Association of Governments
Donald Gabrielson, Pinal County Air Quality Control District
Gregory Nudd, U.S. Environmental Protection Agency, Region IX
Other Interested Parties

FROM: Dean Giles, Air Quality Planning Program Specialist

SUBJECT: CONSULTATION ON A CONFORMITY ASSESSMENT FOR A PROPOSED AMENDMENT AND ADMINISTRATIVE MODIFICATION TO THE FY 2008-2012 MAG TRANSPORTATION IMPROVEMENT PROGRAM

The Maricopa Association of Governments is conducting consultation on a conformity assessment for an amendment and administrative modification to the FY 2008-2012 MAG Transportation Improvement Program (TIP). The proposed amendment and administrative modification involve several projects, including a new Arizona Department of Transportation pavement preservation project on State Route 85, a new region wide Intelligent Transportation Systems project, a new Transportation Enhancement project located at Interstate-17 and the Central Arizona Project, and transit projects. The amendment includes projects that may be categorized as exempt from conformity determinations. The administrative modification includes minor project revisions that do not require a conformity determination. A description of the projects is provided in the attached interagency consultation memorandum. Comments on the conformity assessment are requested by June 25, 2010.

MAG has reviewed the projects for compliance with the federal conformity rule and has found that consultation is required on the conformity assessment. The amendment includes projects that may be categorized as exempt from conformity determinations. The administrative modification includes minor project revisions that do not require a conformity determination. The conformity finding of the TIP and the associated Regional Transportation Plan 2007 Update, as amended, that was made by the Federal Highway Administration and Federal Transit Administration on March 9, 2010 remains unchanged by this action. The conformity assessment is being transmitted for consultation to the agencies listed above and other interested parties. If you have any questions or comments, please contact me at (602) 254-6300.

Attachment

cc: Ira Domsky, Arizona Department of Environmental Quality
Jennifer Toth, Arizona Department of Transportation
Mark Hodges, Arizona Department of Transportation

ATTACHMENT

CONFORMITY ASSESSMENT FOR A PROPOSED AMENDMENT AND ADMINISTRATIVE MODIFICATION TO THE FY 2008-2012 MAG TRANSPORTATION IMPROVEMENT PROGRAM

The federal transportation conformity rule (40 CFR 93.105) requires interagency consultation when making changes to a Transportation Improvement Program (TIP) and Transportation Plan. The consultation processes are also provided in the Arizona Conformity Rule (R18-2-1405). This information is provided for consultation as outlined in the MAG Conformity Consultation Processes document adopted by the MAG Regional Council on February 28, 1996. In addition, federal guidance is followed in response to court rulings regarding transportation conformity.

The amendment includes projects that may be categorized as exempt from conformity determinations. Types of projects considered exempt are defined in the federal transportation conformity rule at 40 CFR 93.126. The administrative modification includes minor project revisions that do not require a conformity determination. Examples of minor project revisions include design, right-of-way, and utility projects. The proposed amendment and administrative modification to the FY 2008-2012 MAG Transportation Improvement Program includes the projects on the attached table. The project number, agency, and description is provided, followed by the conformity assessment.

MAG has reviewed the projects for compliance with the federal conformity rule and consultation is required on the conformity assessment. The projects are not expected to create adverse emission impacts or interfere with Transportation Control Measure implementation. The conformity finding of the TIP and the associated Regional Transportation Plan that was made by the Federal Highway Administration and Federal Transit Administration on March 9, 2010 remains unchanged by this action.

Highway Projects

| TIP # | Agency | Project Location | Project Description | FY | Length | Fund Type | Local Cost | ARRA Cost | Federal Cost | Regional Cost | Total Cost | Requested Change | Conformity Assessment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| New | ADOT | MAG Region wide | Evaluation of Intelligent Transportation System (ITS) in the MAG Region | 2010 | | CMAQ | | | $ 211,232 | $ 12,768 | $ 224,000 | Establish a new ITS evaluation project (Advertise this project in August 2010). | The project is considered exempt under the category "Specific activities which do not involve or lead directly to construction, such as: Planning and technical studies." The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| New | ADOT | 85: SR85/I-10 TI Ramps | Pavement Preservation | 2010 | | NH | | | $ 707,250 | $ 42,750 | $ 750,000 | Establish a new pavement preservation project in FY10. | The project is considered exempt under the category "Pavement resurfacing and/or rehabilitation." The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| New | ADOT | 17: at Central Arizona Project (CAP) | Construct pedestrian bridge | 2010 | | STP-TEA | | | $ 2,862,005 | $ 172,995 | $ 3,035,000 | Establish a new pedestrian bridge project. Utilize Transportation Enhancements close out funds. | The project is considered exempt under the category "Bicycle and pedestrian facilities." The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| CHN09-801 | Chandler | Price Road from Germann Road south to Queen Creek Road | Design and reconstruction of pavement | 2009 | | ARRA | - | $ 1,942,461 | | - | $ 1,942,461 | Transfer $1,736,438.30 to Chandler/Dobson | A minor project revision is needed to reduce project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| CHN120-07C | Chandler | Chandler Blvd/Dobson Road intersection, and Dobson Road from Chandler Blvd to Frye Road. | Intersection and Capacity Improvement | 2009 | | ARRA | | $ 3,949,421 | | $ 420,546 | $ 4,369,967 | Transfer ARRA Price Road Savings to Chandler/Dobson intersection | A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| FTH07-301 | Fountain Hills | Shea Blvd.: Palisades Blvd. to Fountain Hills Blvd. | Widen for third (westbound) climbing lane and bicycle lane. | 2009 | 2 | STP-MAG | $131,000 | | $2,164,000 | | $ 2,295,000 | De-obligate all ARRA funds ($1,081,614) due to bid savings. | A minor project revision is needed to reduce project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| NEW | Fountain Hills | Shea Blvd.: Saguaro Blvd. to Fountain Hills Blvd. | Mill and overlay | 2010 | 2 | STP-AZ | $65,379 | | $1,081,614 | | $ 1,146,993 | New project funded with STP from de-obligated ARRA | The project is considered exempt under the category "Pavement resurfacing and/or rehabilitation." The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| MES09-801R | Mesa | Arterial Reconstruct - Southern Avenue (44-001-001) | Pavement Preservation | 2010 | | ARRA | | $ 967,227 | | | $ 967,227 | Reduce ARRA/project costs by $591,186 from $1,558,413 to $967,227 | A minor project revision is needed to reduce project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| MES09-803 | Mesa | Arterial Reconstruction: Higley Rd. (Group 1) 44-003-001 | Pavement Preservation | 2010 | | ARRA | | $ 2,361,031 | | | $ 2,361,031 | Reduce ARRA/project costs by $145,569 from $2,506,600 to $2,361,031 | A minor project revision is needed to reduce project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| MES09-804 | Mesa | Arterial Reconstruction: Brown Rd and University Dr. (Group 2) 44-004-001 | Pavement Preservation | 2010 | | ARRA | | $ 2,003,611 | | | $ 2,003,611 | Reduce ARRA/project costs by $276,921 from $2,280,532 to $2,003,611 | A minor project revision is needed to reduce project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| NEW | Mesa | Southern Ave: Greenfield Rd to Higley Rd. | Pavement Preservation | 2010 | 2.5 | STP-AZ | $ 386,324 | $ 1,013,676 | | | $ 1,400,000 | New project funded with STP from de-obligated ARRA | The project is considered exempt under the category "Pavement resurfacing and/or rehabilitation." The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |

Transit Projects

| TIP # | Agency | Project Location | Project Description | Fiscal Year | Length | Fund Type | Local Cost | ARRA Cost | Federal Cost | Regional Cost | Total Cost | Requested Change | Conformity Assessment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GLB09-801 | Gilbert | Various Locations - Functionally Classified Roadways | Pre-Engineer/Design and Construct Nova Chip Overlays - arterial roadways | 2010 | 14.88 miles | ARRA | | $4,366,610 | | | $4,366,610 | Reduce ARRA/project costs by $939,703 from $5,306,313 to $4,366,610 | A minor project revision is needed to reduce project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| GLB06-201R<br>GLB07-302<br>GLB05-107R | Gilbert | Eastern Canal | Santan Vista Trail | 2010 | 3 miles | STP-AZ<br>CMAQ | $200,000 | | $939,703<br>$1,685,769 | | $2,825,472 | Reprogramming of ARRA savings, $939,703 as STP-AZ for a current CMAQ project | A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| GDY08-801T | Goodyear | Citywide | Purchase bus <30 feet - 5 expand | 2008 | | CMAQ | $ 37,000 | | $ 438,000 | $ - | $ 475,000 | Delete Project | The project is considered exempt under the category "Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet." The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| PHX08-610T | Phoenix | Region wide | Purchase bus: < 30 foot - 5 expand (dial-a-ride) | 2008 | | 5307 | $ 79,000 | | $ 316,000 | $ - | $ 395,000 | Delete Project | The project is considered exempt under the category "Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet." The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| New | Phoenix | Various locations | Preventive maintenance | 2008 | | 5307 | $ 1,696,808 | | $ 6,787,232 | | $ 8,484,040 | Increase funds by $316,000 from bus purchase program (PHX08-610T). | A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| PHX07-310T | Phoenix | Various locations | Upgrade LNG fuel station - North Division | 2009 | | 5307 | $ 300,000 | | $ 1,200,000 | | $ 1,500,000 | Delete Project | The project is considered exempt under the category "Reconstruction or renovation of transit buildings and structures (e.g. rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures." The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| New | Phoenix | Various locations | Mid Life Bus Engine Rehabilitation | 2009 | | 5307 | $ 300,000 | | $ 1,200,000 | | $ 1,500,000 | Add New project using funds from PHX07-310T. | The project, that includes rehabilitation with clean diesel engines, is considered exempt under the category "Rehabilitation of transit vehicles." The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| VMT09-650T | Valley Metro | Region wide | Reimbursement of bus: standard - 5 expand (Gilbert, Power) advance purchased in 2008 | 2009 | | S307 | $ - | | $ 13,630,000 | $ (13,630,000) | $ - | Reduce from 8 to 5 buses due to reduction in service | The project is considered exempt under the category "Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet." The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| VMT09-642T | Valley Metro | Region wide | Associated capital maintenance | 2009 | | 5307 | $ 2,088,000 | | $ 8,352,000 | $ - | $ 10,440,000 | Increase PM funds due to reduction in bus purchases. Move match from regional to local. | A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| VMR09-821T | Valley Metro Rail | Tempe | Fixed guide way corridor - Tempe South - Preliminary Engineering/FEIS | 2009 | | CMAQ-Flex | | | $ 2,726,000 | $ 174,000 | $ 2,900,000 | Delete Project | A minor project revision is needed to delete project. Project is replaced with VMR10-704T. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |

| TIP # | Agency | Project Location | Project Description | Fiscal Year | Length | Fund Type | Local Cost | ARRA Cost | Federal Cost | Regional Cost | Total Cost | Requested Change | Conformity Assessment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VMR10-703TR2 | Valley Metro Rail | Main Street Corridor | Fixed guide way corridor - Central Mesa - Preliminary Engineering/FEIS | 2010 | | CMAQ-Flex | | | $ 10,000,000 | $ 2,500,000 | $ 12,500,000 | Admin Mod: Adjust federal funding amounts from $5 million to $10 million. | A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| VMR10-704T | Valley Metro Rail | Tempe | Fixed guide way corridor - Tempe South - Preliminary Engineering/FEIS | 2010 | | CMAQ-Flex | | | $ 2,726,000 | $ 681,500 | $ 3,407,500 | Admin Mod: Adjust federal funding amounts from $5 million to $2.726 million. | A minor project revision is needed to reduce project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| VMR09-825T | VM Rail | Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line | Expand METRO light rail hours of service from 11:00pm on Friday and Saturday evenings to 2:00am on Saturday and Sunday mornings. | 2009 | | CMAQ | | | $ 300,000 | $ - | $ 300,000 | Delete Project | A minor project revision is needed to delete project. Project has been implemented with local funding sources. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| VMR09-826T | VM Rail | Central Phoenix / East Valley (CP/EV) 20-mile light rail transit starter line | Installation of additional METRO ticket vending machines and stand alone fare validation systems | 2009 | | CMAQ | | | $ 600,000 | $ - | $ 600,000 | Increase funds by $300,000 to $600,000 from deleted VMR09-825T project. | A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |

| TIP # | Agency | Project Location | Project Description | FY | Length | Fund Type | Local Cost | ARRA Cost | Federal Cost | Regional Cost | Total Cost | Requested Change | Conformity Assessment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BKY10-801 | Buckeye | Miller Road: Hazen Rd to I-10 and Monroe (MC85): Miller Rd to Apache Rd | Interconnect Traffic Signals | 2013 | 6 | CMAQ | $ 90,000 | | $ 210,000 | | $ 300,000 | Defer Project from 2010 to 2013 | A minor project revision is needed to defer project to FY 2013. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| BKY11-801 | Buckeye | North Watson Road and MC85 Phase I and Phase II | Pave Unpaved Road | 2013 | 0.22 | CMAQ | $ 3,896 | | $ 64,456 | | $ 68,352 | Defer Project from 2010 to 2013 | A minor project revision is needed to defer project to FY 2013. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| CHN07-601 | Chandler | Commonwealth Ave: Hamilton St to Ithaca | Pave dirt road | 2011 | 0.2 | CMAQ | $ 1,075,000 | | $ 325,000 | $ - | $ 1,400,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| CHN13-901 | Chandler | Various Locations in the City of Chandler | Paving dirt alleys | 2011 | 10 | CMAQ | $ 589,000 | | $ 350,000 | $ - | $ 939,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| ELM13-903 | El Mirage | Dysart Ranchettes area: Varney Rd, Peoria Ave, Dysart Rd, El Mirage | Paving dirt roads | 2011 | 3.4 | CMAQ | $ 1,750,000 | | $ 1,250,000 | | $ 3,000,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| ELM09-802 | El Mirage | 125th Ave and 127th Ave: Varney Rd to Peoria Ave | Pave unpaved roads | 2011 | 1 | CMAQ | $ 1,102,252 | | $ 381,031 | $ - | $ 1,483,283 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| FTM09-903C | Fort McDowell Yavapai Nation | Various Locations on Fort McDowell Yavapai Nation | Construct Pave dirt road | 2011 | 2.5 | CMAQ | $ 24,000 | | $ 375,000 | $ - | $ 399,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| FTM13-901 | Fort McDowell Yavapai Nation | Various Locations on Fort McDowell Yavapai Nation | Paving dirt roads | 2011 | 4.7 | CMAQ | $ 1,650,000 | | $ 700,000 | $ - | $ 2,350,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| GLN08-605 | Glendale | Glendale Ave: Loop 101 to Luke AFB | Pave access points | 0 | 5 | CMAQ | $ 27,000 | | $ 63,000 | | $ 90,000 | Delete Project from the TIP | The deletion of the project would not change the assumptions used in the regional emissions analysis. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| GLN09-610 | Glendale | Downtown alley north of Glendale Ave between 57th Ave and 57th Dr | Transform existing service alleyway into a safe environment for pedestrian circulation and limited vehicular traffic | 2012 | 0.04 | CMAQ | $ 103,166 | | $ 240,721 | $ - | $ 343,887 | Defer Project from 2010 to 2012 | A minor project revision is needed to defer project to FY 2012. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |

| TIP # | Agency | Project Location | Project Description | FY | Length | Fund Type | Local Cost | ARRA Cost | Federal Cost | Regional Cost | Total Cost | Requested Change | Conformity Assessment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GLN07-311 | Glendale | Alley 250 ft north of Glendale Ave: 58th Ave to 57th Dr | Design and construct alley improvements and pedestrian walkway | 2012 | 0.05 | CMAQ | $ 75,000 | | $ 75,000 | $ - | $ 150,000 | Defer Project from 2010 to 2012 | A minor project revision is needed to defer project to FY 2012. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| MES07-315 | Mesa | Southern Ave at Country Club Dr | Add 1 right turn lane and three bus pullouts. | 2013 | 0.45 | CMAQ | $ 3,437,000 | | $ 910,000 | $ - | $ 4,347,000 | Defer Project from 2010 to 2013 | A minor project revision is needed to defer project to FY 2013. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| MES08-603 | Mesa | Longmore: Broadway Rd to Main St (EVIT) | Design and construct bicycle path to connect Broadway Rd with Main St and the Light Rail Station | 2011 | 0.5 | CMAQ | $ 388,961 | | $ 1,082,739 | $ - | $ 1,471,700 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| MES06-203C | Mesa | Pepper Pl: Lewis St to Robson St | Construct multi-use path | 0 | 0.5 | CMAQ | $ 93,039 | | $ 305,961 | $ - | $ 399,000 | Delete Project from the TIP | The project is considered exempt under the category "Bicycle and pedestrian facilities". The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| MES07-314 | Mesa | South Canal: Val Vista Dr to Greenfield Rd | Construct multi-use path. Development of multi-use path system (MUP) | 0 | 1.25 | CMAQ | $ 232,200 | | $ 541,800 | $ - | $ 774,000 | Delete Project from the TIP | The project is considered exempt under the category "Bicycle and pedestrian facilities". The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| MES09-605 | Mesa | Grand St: Broadway Rd to 6th Ave (Nuestro neighborhood phase 1) | Improve pedestrian facilities | 0 | 0.25 | CMAQ | $ 189,018 | | $ 441,041 | $ - | $ 630,059 | Delete Project from the TIP | The project is considered exempt under the category "Bicycle and pedestrian facilities". The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| MES10-608 | Mesa | South Canal: McDowell Rd to Val Vista Dr | Construct new multi-use path on the north bank | 0 | 1.5 | CMAQ | $ 568,337 | | $ 852,505 | $ - | $ 1,420,842 | Delete Project from the TIP | The project is considered exempt under the category "Bicycle and pedestrian facilities". The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| PHX10-845 | Phoenix | Salt River: 24th Street to I-10/Tempe Drain | Construct Multi-use path | 2011 | | CMAQ | $ 480,100 | | $ 801,606 | | $ 1,281,706 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| PHX09-619 | Phoenix | 19th Ave at Greenway Rd | Construct multi-use path and bridge (phase 2) | 2011 | 0.04 | CMAQ | $ 2,174,100 | | $ 1,010,000 | $ - | $ 3,184,100 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| PHX09-624 | Phoenix | Various locations | Construct regional ITS fiber optic backbone, phase B-1 | 2011 | 30 | CMAQ | $ - | | $ 665,000 | $ - | $ 665,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| PHX09-871 | Phoenix | Various locations | Pave unpaved alleys | 2011 | 18 | CMAQ | $ 200,000 | | $ 466,667 | $ - | $ 666,667 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |

| TIP # | Agency | Project Location | Project Description | FY | Length | Fund Type | Local Cost | ARRA Cost | Federal Cost | Regional Cost | Total Cost | Requested Change | Conformity Assessment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PHX09-872 | Phoenix | Various locations | Pave unpaved roads | 2011 | 3 | CMAQ | $ 450,000 | | $ 1,050,000 | $ - | $ 1,500,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| PHX10-633 | Phoenix | Various locations | Construct regional ITS fiber optic backbone, phase B-2 | 2011 | 30 | CMAQ | $ - | | $ 665,000 | $ - | $ 665,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| PHX13-904 | Phoenix | Various Locations in the City of Phoenix: 44 miles of dirt alleys | Paving dirt alleys | 2011 | 44 | CMAQ | $ 920,000 | | $ 1,200,000 | $ - | $ 2,120,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| SCT07-606 | Scottsdale | Dynamite Blvd: Pima Road to Alma School Road | Install Vertical Curb and Gutter | 2011 | 3 | CMAQ | $ 500,000 | | $ 500,000 | $ - | $ 1,000,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| SCT10-617R | Scottsdale | Scottsdale Rd: Earll Dr to Chaparral Rd | Upgrade sidewalks and add bicycle lanes | 2011 | 3 | CMAQ | $ 2,540,741 | | $ 510,696 | $ - | $ 3,051,437 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| SUR09-820 | Surprise | Rural Area West of 219th Ave between Pinnacle Peak & Deer Valley | Pave unpaved roads | 2011 | 3.27 | CMAQ | $ 686,700 | | $ 1,602,302 | $ - | $ 2,289,002 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| TMP10-620 | Tempe | Broadway Rd: Rural Rd to Mill Ave | Construct pedestrian and bicycle facilities improvements | 2011 | 1 | CMAQ | $ 2,571,780 | | $ 2,571,780 | | $ 5,143,560 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| TMP10-629 | Tempe | Salt River: I-10/Tempe Drain to Priest | Construct Multi-use path | 2011 | 1.1 | CMAQ | $ 400,000 | | $ 120,000 | | $ 520,000 | Defer Project from 2010 to 2011 | A minor project revision is needed to defer project to FY 2011. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| SUR11-715 | Surprise | Peoria Ave: Litchfield Rd to Jackrabbit Rd | Design and construct fiber optic cable interconnection of existing and future ITS facilities | 2011 | | CMAQ | $ 100,000 | | $ 700,000 | | $ 800,000 | Advance Project from 2011 to 2010 due to Closeout recommendation | A minor project revision is needed to advance project to FY 2010. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| SUR11-714 | Surprise | Bell Road US60(Grand Avenue) to 114th Avenue | Design of Multiuse Path | 2012 | | CMAQ | | | $ 175,000 | $ - | $ 175,000 | Advance Design project from 2012 to 2010 due to Closeout recommendation. | A minor project revision is needed to advance project to FY 2010. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |
| LPK05-101C | Litchfield Park | Litchfield Rd Bypass at Wigwam Boulevard | Construct bicycle underpass | 2010 | | CMAQ | $ 53,850 | $ - | $ 1,686,420 | | $ 1,740,270 | Add $800,000 of CMAQ funds from Closeout recommendation. | A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |

| TIP # | Agency | Project Location | Project Description | FY | Length | Fund Type | Local Cost | ARRA Cost | Federal Cost | Regional Cost | Total Cost | Requested Change | Conformity Assessment |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GLN09-609 | Glendale | Skunk Creek/Union Hills Dr. | Design and construct multi-use path under Union Hills Dr. | 2010 | | | $ 147,228 | | $ 357,807 | | $ 505,035 | Add $196,035 of CMAQ funds from Closeout recommendation. | A minor project revision is needed to increase project funding. The conformity status of the TIP and Regional Transportation Plan 2007 Update would remain unchanged. |

Agenda Item #5F

# MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review

**DATE:**
June 1, 2010

**SUBJECT:**
Approval of Electric Vehicle Charging Infrastructure Deployment Guidelines

**SUMMARY:**
On April 16, 2009, MAG, ECOtality and Nissan North America announced a zero emissions partnership that will help facilitate the introduction of electric vehicles (EVs) in the MAG region. The proposed infrastructure will utilize 220-volt charging stations at residential and commercial locations, as well as 440-volt fast-charge stations that could be strategically located to allow vehicles to fully charge in less than 26 minutes. The public and commercial charging systems will utilize the standardized plugs and connectors that have been adopted by major auto manufacturers and will be compatible with all plug-in vehicles.

On May 20, 2009, MAG staff provided an overview on the zero emission partnership initiative to the MAG Building Codes Committee. On August 5, 2009, ECOtality North America, formerly known as Electric Transportation Engineering Corporation (eTec), a subsidiary of ECOtality, Inc. and a leader in clean electric transportation and storage technologies, was selected by the U.S. Department of Energy for a grant of approximately $99.8 million to undertake the largest deployment of EVs and charging infrastructure to date. The grant will be matched by the application's project participants to provide a total of approximately $200 million to fund the initiative. ECOtality, as the lead applicant for the proposal, partnered with Nissan North America to deploy EVs and the charging infrastructure that will support them along with all electric and plug-in hybrid electric vehicles. The project proposes to deploy charging infrastructure in major population areas that include Phoenix (AZ), Tucson (AZ), San Diego (CA), Portland (OR), Eugene (OR), Salem (OR), Corvallis (OR), Seattle (WA), Nashville (TN), Knoxville (TN), and Chattanooga (TN). In addition to implementation of charging infrastructure in the Phoenix and Tucson regions, ECOtality plans to link the two metropolitan areas by implementing strategic fast-charge stations along Interstate-10 to create the first true implementation of an EV Corridor in North America.

On March 17, 2010, ECOtality presented version 2.0 of the Electric Vehicle Charging Infrastructure Deployment Guidelines to the MAG Building Codes Committee. The Deployment Guidelines document is intended to create a common knowledge base of EV requirements for stakeholders involved in the implementation of EV charging infrastructure. ECOtality's Deployment Guidelines provide the necessary background information for understanding EV requirements and the related codes, laws and standards for this effort. The document is the foundation for implementation of the EV Micro-Climate© program, providing the optimum infrastructure to support and encourage the adoption of electric vehicles in the MAG region. The MAG Building Codes Committee provided feedback and requested that ECOtality update the document based on the feedback received.

At the May 19, 2010 MAG Building Codes Committee meeting, ECOtality presented version 3.0 of the Electric Vehicle Infrastructure Deployment Guidelines, which incorporated the feedback received from members on version 2.0. The MAG Building Codes Committee further reviewed the document and voted to recommend approval of the document.

**PUBLIC INPUT:**
No public input has been received.

**PROS & CONS:**
PROS: ECOtality's Electric Vehicle (EV) Charging Infrastructure Deployment Guidelines will create a common knowledge base of EV requirements for stakeholders involved in the implementation of EV charging infrastructure.

CONS: None.

**TECHNICAL & POLICY IMPLICATIONS:**
TECHNICAL: ECOtality's Electric Vehicle (EV) Charging Infrastructure Deployment Guidelines provide the necessary background information for understanding EV requirements and the related codes, laws and standards to support and encourage the adoption of electric vehicles in the MAG region.

POLICY: ECOtality plans to link the two metropolitan areas by implementing strategic fast-charge stations along Interstate-10 that will allow for EV travel between Phoenix and Tucson and create the first true implementation of an EV Corridor in North America.

**ACTION NEEDED:**
Recommend approval of the EV Charging Infrastructure Deployment Guidelines document version 3.0 as guidelines to the implementation of infrastructure that will support and encourage the adoption of electric vehicles in the MAG region.

**PRIOR COMMITTEE ACTIONS:**
The MAG Building Codes Committee reviewed the Electric Vehicle Charging Infrastructure Deployment Guidelines Version 3.0 and recommended approval of the document at the May 19, 2010 meeting.

COMMITTEE MEMBERS ATTENDING

Steven Hether, Mesa, Chair
Ken Sowers, Avondale, Acting Chair
Phil Marcotte, Buckeye
* Mike Tibbett, Carefree
Mike Baxley, Cave Creek
# Alex Banachowski, Chandler
* Mary Dickson, El Mirage
* Peter Johnson, Fountain Hills
* John Smith, Gila Bend
* Jo Rene DeVeau, Gila River Indian Community
# Ben Cox for Ray Patten, Gilbert
Stephen Dudley for Bryan Woodcox, Glendale
Bill King for Ed Kulik, Goodyear
* Chuck Ransom, Litchfield Park
Tom Ewers, Maricopa County
Bob Lee, Paradise Valley
# Dennis Chase for Dennis Marks, Peoria
Tom Wandrie, Phoenix
# Dean Wise, Queen Creek
Michael Clack, Scottsdale
# Michael Williams, Tempe
# Mario Rochin, Tolleson
John Stigsell, Youngtown
Rick DeStefano, Wickenburg
Bridget Jones for Rus Brock, Home Builders Association

* Member neither present nor represented by proxy
# Committee members participating via audioconference

**CONTACT PERSON:**
Jami Garrison, MAG, (602) 254-6300

# Electric Vehicle Charging Infrastructure Deployment Guidelines for the Greater Phoenix Area

**May, 2010**
**Version 3.0**

An ecotality Company

**ELECTRIC TRANSPORTATION ENGINEERING CORPORATION**

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**ETEC Document #021213.0 April 2010**

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City of Phoenix

SRP

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ASU GLOBAL INSTITUTE of SUSTAINABILITY
ARIZONA STATE UNIVERSITY

APS

CITY OF SCOTTSDALE

CITY OF TEMPE ARIZONA

CITY OF PEORIA

CAVE CREEK ARIZONA

City of Avondale

mesa·az

TOWN OF FOUNTAIN HILLS All that is Arizona

GLENDALE

Goodyear All-America City 2008

GILBERT ARIZONA

WICKENBURG, ARIZONA INCORPORATED JUNE 15TH 1863

ADOT

Valley of the Sun Clean Cities Coalition

VALLEY FORWARD SINCE 1969

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## Acronyms

**BEV** Battery Electric Vehicle—Vehicle powered 100% by the battery energy storage system available on-board the vehicle.

**CCID** Charge Current Interrupting Device—A device within EVSE to shut off the electricity supply if it senses a potential problem that could result in electrical shock to the user.

**EV** Electric Vehicle

**EREV** Extended Range Electric Vehicle—see *PHEV*

**EVSE** Electric Vehicle Supply Equipment—Equipment that provides for the transfer of energy between electric utility power and the electric vehicle.

**ICE** Internal Combustion Engine

**kW** Kilowatts—A measurement of electric power. Used to denote the power an electrical circuit can deliver to a battery.

**kWh** Kilowatt Hours—A measurement of total electrical energy used over time. Used to denote the capacity of an EV battery.

**NEC** National Electric Code—Part of the National Fire Code series established by the National Fire Protection Association (NFPA) as NFPA 70. The NEC codifies the requirements for safe electrical installations into a single, standardized source.

**NEMA** National Electrical Manufacturers Association—Group that develops standards for electrical products.

**PHEV** Plug-in Hybrid Electric Vehicle—Vehicles utilizing a battery and an internal combustion engine (ICE) powered by either gasoline or diesel.

**REEV** Range Extended Electric Vehicle—see *PHEV*

**RTP** Real Time Pricing—a concept for future use whereby utility pricing is provided to assist a customer in selecting the lowest cost charge.

**SAE** Society of Automotive Engineers—standards development organization for the engineering of powered vehicles.

**TOU** Time of Use—an incentive-based electrical rate established by an electric utility.

**V2G** Vehicle to Grid—a concept that allows the energy storage in electric vehicles to be used to support the electrical grid during peak electrical loads.

**VAC** Voltage Alternating Current

# Electric Vehicle Charging Infrastructure Deployment Guidelines

## 1. Introduction

Concerns about global warming, oil shortages, and increasing gas prices, along with the rapid rise of more fuel-efficient vehicles, are clear indicators of changing consumer preferences and automotive industry direction. As major automotive manufacturers plan to launch plug-in electric vehicles (EV) in 2010, the future of transportation is being propelled by a fundamental shift to cleaner and more efficient electric drive systems.

Electric Transportation Engineering Corporation (eTec), a subsidiary of ECOtality, has been involved in every North American EV initiative since 1989. With over two decades of experience in electric transportation, eTec is the most experienced and qualified solution provider for EVs and their supporting infrastructure. eTec's unparalleled EV infrastructure experience, combined with its expertise in batteries, battery charging, utility activities, and electric drive systems makes eTec a leader in electric transportation.

ECOtality and eTec developed the EV Micro-Climate© program as an integrated turnkey program to ensure an area is well equipped with the necessary infrastructure to support the consumer adoption of electric transportation. Beginning with extensive feasibility and infrastructure planning studies, the program provides a blueprint to create a rich EV infrastructure. The program is developed with all relevant stakeholders, including governmental organizations, utilities, private-sector businesses, and automotive manufacturers.

These Deployment Guidelines are not intended to be used as an installation manual or a replacement for approved codes and standards, but rather are intended to create a common knowledge base of EV requirements for stakeholders involved in the development and approval of EV charging infrastructure.

Electric vehicles have unique requirements that differ from internal combustion engine vehicles, and many stakeholders currently are not familiar with these requirements. eTec's *Electric Vehicle Charging Infrastructure Deployment Guidelines* provide the necessary background information for understanding EV requirements, and are the foundation upon which the EV Micro-Climate program builds in order to provide the optimum infrastructure to support and encourage the adoption of electric vehicles.

# 2. Electric Vehicle Technology

This section describes the basic electric vehicle technologies that are either available in the marketplace or coming to market in the near future. The focus of this section is on street-legal vehicles that incorporate a battery energy storage device with the ability to connect to the electrical grid for the supply of some or all of its fuel energy requirements. Two main vehicle configurations are described, along with the four main categories of vehicle applications. Vehicle categories and the relative size of their battery packs are discussed in relationship to recommended charging infrastructure.

## A. Electric Vehicle Configurations

### Battery Electric Vehicle (BEV)

Battery Electric Vehicles (BEVs) are powered 100% by the battery energy storage system available on-board the vehicle. The Nissan LEAF is an example of a BEV. Refueling the BEV is accomplished by connection to the electrical grid through a connector system that is designed specifically for this purpose. Most advanced BEVs have the ability to recapture some of the energy storage utilized through regenerative braking (Put simply, converting the propulsion motor into a generator when braking). When regenerative braking is applied, BEVs can typically recover 5 to 15 percent of the energy used to propel the vehicle to the vehicle speed prior to braking. Sometimes manufacturers also install solar photovoltaic (PV) panels on vehicle roofs. This provides a very small amount of energy relative to the requirements of propelling the vehicle, but integrating PV in the roof typically can provide enough power to operate some small accessory loads.

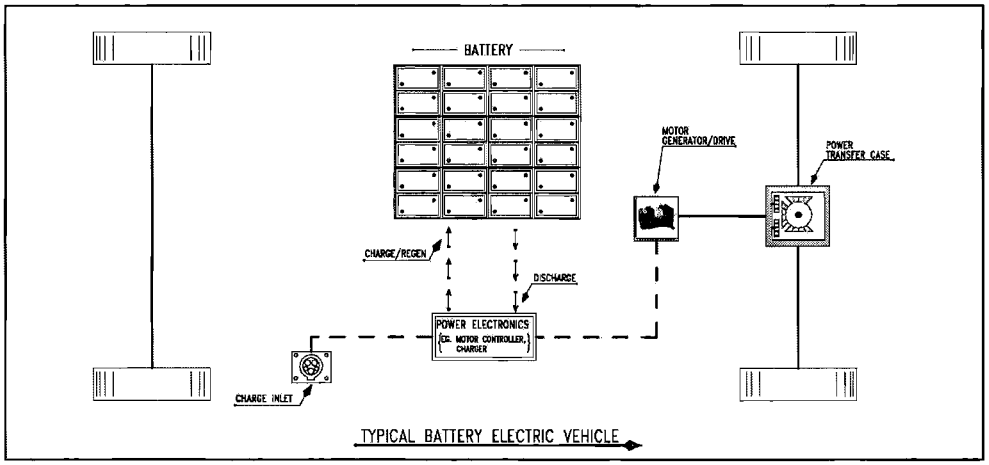


**Figure 2-1 Battery Electric Vehicle**

A typical BEV is shown in the block diagram in Figure 2-1. Since the BEV has no other significant energy source, the battery must be selected to meet the BEV range and power requirements. BEV batteries are typically an order of magnitude larger than the batteries in hybrid electric vehicles.

### Plug-in Hybrid Electric Vehicle (PHEV)

PHEVs are powered by two energy sources. The typical PHEV configuration utilizes a battery and an internal combustion engine (ICE) powered by either gasoline or diesel. Within the PHEV family, there are two main design configurations, a *Series Hybrid* as depicted in Figure 2-2, and a *Parallel Hybrid* as depicted in Figure 2-3. The Series Hybrid vehicle is propelled solely by the electric drive system, whereas the Parallel Hybrid vehicle is propelled by both the ICE and the electric drive system. As with a BEV, a Series Hybrid will typically require a larger and more powerful battery than a Parallel Hybrid vehicle in order to meet the performance requirements of the vehicle solely based on battery power.

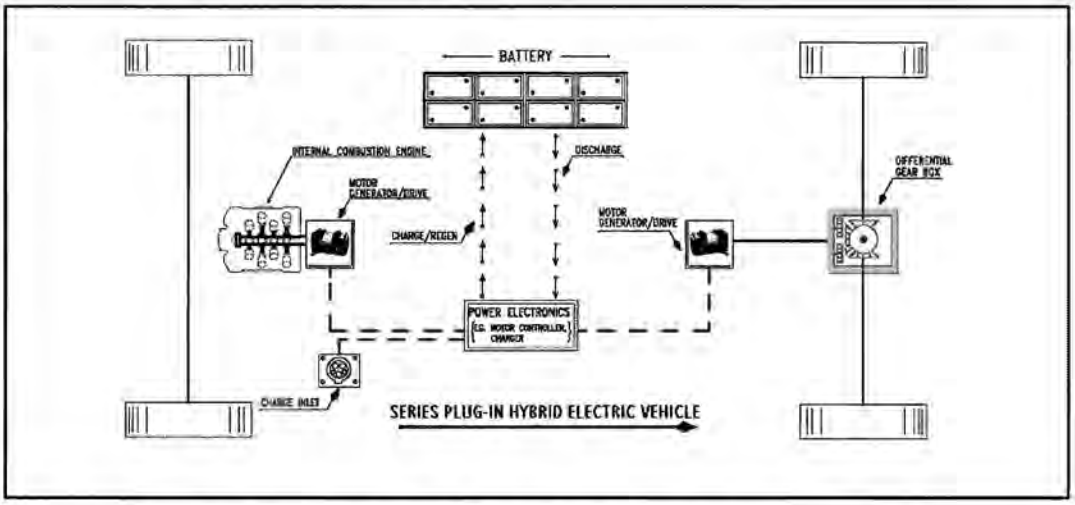


**Figure 2-2 Series Plug-In Hybrid Vehicle Block Diagram**

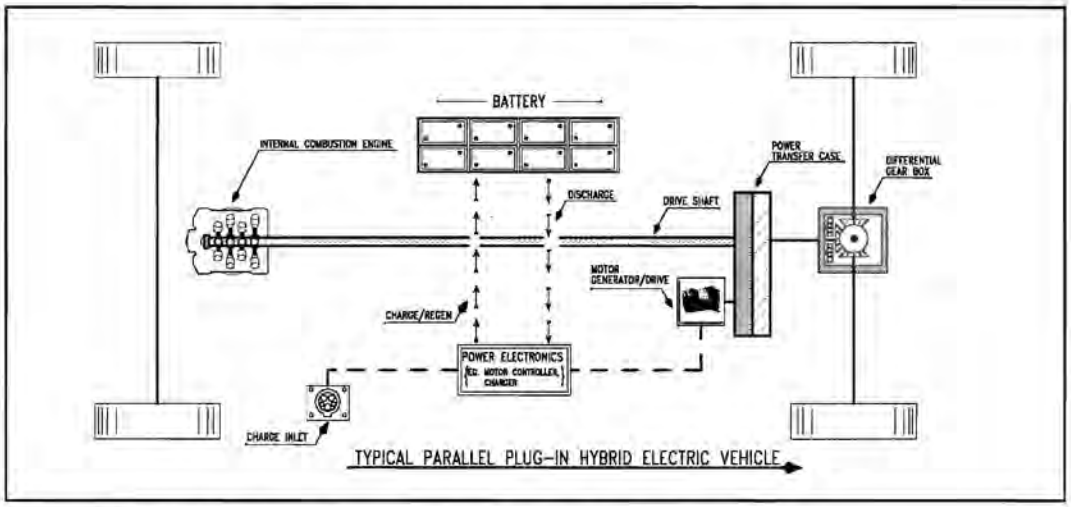


**Figure 2-3 Parallel Plug-In Hybrid Vehicle Block Diagram**

Manufacturers of PHEVs use different strategies in combining the battery and ICE and may utilize the battery only for the first several miles; an example of this strategy is the Chevy Volt, which has an ICE providing generating power for the duration of the vehicle range. Others may use the battery power for sustaining motion and the ICE for acceleration or higher-energy demands at highway speeds. Frequently, the vehicles employing the former strategy gain a designation such as *PHEV-20* to indicate that the first 20 miles are battery only. Other terms related to PHEVs may include *Range Extended Electric Vehicle* (REEV) or *Extended Range Electric Vehicle* (EREV).

## B. Electric Vehicle Categories

EVs can be broken down into the following categories.

### On-Road Highway Speed Vehicles

An *On-Road Highway Speed Vehicle* is an EV capable of driving on all public roads and highways. Performance of these On-Road vehicles is similar to ICE vehicles.

### City Electric Vehicles

Traditionally, *City Electric Vehicles* have been BEVs that are capable of driving on most public roads, but generally are not driven on highways. Top speed is typically limited to 55 mph.

### Neighborhood Electric Vehicles (NEVs)

*Neighborhood Electric Vehicles* (NEVs), also known as *Low Speed Vehicles* (LSVs), are BEVs that are limited to 25 mph and are allowed in certain jurisdictions to operate on public streets posted at 35 mph or less.

### Commercial On-Road Highway Speed Vehicles

There are a number of commercial electric vehicles, including commercial trucks and buses. These vehicles are found as both BEVs and PHEVs. Performance and capabilities of these vehicles are specific to their applications.

The focus of the EV Micro-Climate program is on the first and last categories described above, the On-Road Highway Speed and Commercial On-Road Highway Speed Vehicles. Specialty vehicles such as electric motorcycles and bicycles require a different planning process.

## C. Batteries

### Battery Technology

Recent advancements in battery technologies will allow EVs to compete with ICE vehicles in performance, convenience, and cost. Although lead-acid technology serves many EV applications such as forklifts and airport ground support equipment very cost-effectively, the limitations on energy density and repeated cycles of charging and discharging make its application to on-road highway speed EVs less practical.

Today, most major car companies utilize nickel-metal-hydride or various lithium-based technologies for their EVs. Lithium provides four times the energy of lead-acid and two times that of nickel-metal-hydride. The materials for lithium-based batteries are generally considered abundant, non-

hazardous, and lower cost than nickel-based technologies. The current challenge with lithium-based technologies is increasing battery capacity while maintaining quality and cycle life and lowering production costs.

From an infrastructure standpoint, it is important to consider that, as battery costs are driven down over time, the auto companies will increase the size of the lithium-based battery packs and thus increase the range of electric vehicles.

### Relative Battery Capacity

Battery size or capacity is measured in kilowatt hours (kWh). Battery capacity for electric vehicles will range from as little as 3 kWh to as large as 40 kWh or more. Typically, PHEVs will have smaller battery packs because they have more than one fuel source. BEVs rely completely on the storage from their battery pack for both range and acceleration, and therefore require a much larger battery pack than a PHEV for the same size vehicle.

### Battery Charging Time

The amount of time to fully charge an EV battery is a function of the battery size and the amount of electric power or kilowatts (kW) that an electrical circuit can deliver to the battery. Larger circuits, as measured by voltage and amperage, will deliver larger amounts of kW. The common 110-120 volts AC (VAC), 15 amp circuit will deliver at minimum 1.1 kW to a battery. A 220-240 VAC, 40 amp circuit (similar to the circuit used for household appliances like dryers and ovens) will deliver at minimum 6 kW to a battery. Table 2-1 provides information on several different on-road highway speed electric vehicles, their battery pack size, and charge times at different power levels to replenish a depleted battery.

### Table 2-1 EV Charge Times

| | | **Circuit Size and Power in kW Delivered to Battery** | | | |
|---|---|---|---|---|---|
| **EV Configuration** | **Battery Size (kWh)** | 120 VAC, 15 amp **1.2 kW** | 120 VAC, 20 amp **1.6 kW** | 240 VAC, 40 amp **6.5 kW** | 480 VAC, 85 amp **60 kW** |
| **PHEV-10** | **4** | 3 h 20 m | 2 h 30 m | 35 m | n/a |
| **PHEV-20** | **8** | 6 h 40 m | 5 h | 1 h 15m | n/a |
| **PHEV-40** | **16** | 13 h 20 m | 10 h | 2 h 30 m | 16 m |
| **BEV** | **24** | 20 h | 15 h | 3 h 40 m | 24 m |
| **BEV** | **35** | 29 h 10 m | 21 h 50 m | 5 h 20 m | 35 m |
| **PHEV Bus** | **50** | n/a | n/a | 7 h 40 m | 50 m |

**Note:** Power delivered to battery calculated as follows: 120VAC x 12 amps x .85 eff.; 120VAC x 16 amps x .85 eff.; 240VAC x 32 amps x .85 eff.; 480VAC x √3 x 85 amps x .85 eff.

## D. Automaker Plans

Many automakers have announced plans for the introduction of on-road highway speed EVs in the near future. A summary table of such plans is shown in Figure 2-4 below.

**Plug-In Hybrid Electric Vehicles**

| Company | Model | Price | Battery Type | Battery Size | EV Range (miles) | PHEV Type | Market launch | Production Capacity |
|---|---|---|---|---|---|---|---|---|
| BYD | F3DM | $21,915 | Lithium-ion | - | 62 | - | 2008 | |
| BYD | F6DM | ~$22,000 | Lithium-ion | - | 62 | - | 2008 | |
| Fisker | Karma | $87,900 | Lithium-ion | 22 KWh | 50 | Series | 2010 | 15k |
| Ford | Escape PHEV | - | Lithium-ion | 10 KWh | 30-40 | - | 2012 | |
| GM | Chevrolet Volt | ~$40,000+ | Lithium-ion | 16 KWh | 40 | Series | 2010 | 60k by 2012 |
| Opel | Ampera | - | Lithium-ion | 16 KWh | 40 | Series | 2012 | |
| Toyota | Prius | ~$48,000 | Lithium-ion | - | 12-18 | Parallel | 2010 | 20k-30k |
| Volkswagen | Golf Twin Drive | - | Lithium-ion | 12 KWh | 30 | - | 2010 | 20 car pilot |

**Electric Vehicles**

| Company | Model | Price | Battery Type | Battery Size | EV Range (miles) | Latest Model | Market launch | Production Capacity |
|---|---|---|---|---|---|---|---|---|
| BMW | Mini E | - | Lithium-ion | 35 KWh | ~100+ | 2009 | n.d. | 500 pilot |
| BYD | E6 EV | - | Lithium-ion | 18 KWh | 249 | 2009 | 2009 | |
| Chery Auto. | S18 EV | ~$15,000 | Lithium-ion | 13 KWh | 93 | 2009 | 2009 | |
| Chrysler | Dodge circuit | - | Lithium-ion | 26 KWh | 150-200 | 2010 | 2010 | |
| Coda | EV Sedan | $45,000 | Lithium-ion | 34 KWh | 90-120 | 2010 | 2010 | |
| Ford | Focus EV | - | Lithium-ion | - | 100 | 2011 | 2011 | |
| Mitsubishi | iMiEV | ~$46,000 | Lithium-ion | 16 KWh | 100 | 2009 | 2009 | 20,000 |
| Nissan | EV LEAF | ~$24k to ~$34k* | Lithium-ion | 24 KWh | 100 | 2010 | 2010 | 150,000+ |
| Renault | Fluence ZE (Better Place) | - | Lithium-ion | - | 100 | 2011 | 2011 | 100,000 |
| Smart | EV | - | Lithium-ion | - | 70 | 2010 | 2010 | |
| Subaru | Stella | $47,900 | Lithium-ion | 9 KWh | 55 | 2009 | 2009 | ~170 in 2009 |
| Tesla | Model S | $57,400 | Lithium-ion | - | 160-300 | 2011 | 2011 | |
| Tesla | Roadster EV | $109,000 | Lithium-ion | 53 KWh | 244 | 2009 | 2009 | |
| Think | City | $28,000 | Sodium or Li | - | 110 | 2010 | 2010 | 2,500 (US) |

*Source: Company data, Credit Suisse estimates*

**Figure 2-4 Automaker PHEV and BEV Plans**[1]

[1] Credit Suisse "Electric Vehicles," Equity Research, *Energy Technology/Auto Parts & Equipment*, October 1, 2009.

# 3. Charging Requirements

This section covers the terminology and general requirements of Electric Vehicle Supply Equipment (EVSE). EVSE provides for the safe transfer of energy between the electric utility power and the electric vehicle.

## A. Charging Components

The terms used to identify the components in the delivery of power to the vehicle are defined first.

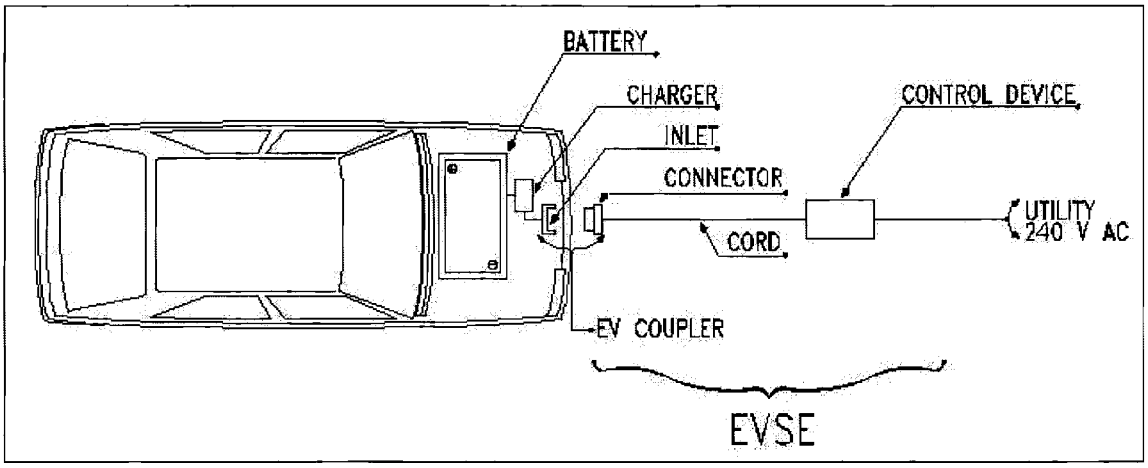


**Figure 3-1 Level 2 Charging Diagram**

Power is delivered to the EV's onboard battery through the *EV inlet* to the *charger*. The charger converts Alternating Current (AC) to the Direct Current (DC) required to charge the battery. The charger and EV inlet are considered part of the EV. A *connector* is a device that, by insertion into an EV inlet, establishes an electrical connection to the electric vehicle for the purpose of charging and information exchange. The EV inlet and connector together are referred to as the *coupler*. The EVSE consists of the connector, cord, and interface to utility power. The interface between the EVSE and utility power will be directly "hardwired" to a control device as illustrated in Figure 3-1, or a plug and receptacle as illustrated in Figure 3-3.

In the 1990s, there was no consensus on EV inlet and connector design. Both conductive and inductive types of couplers were designed, and in both cases, different designs of each type were provided by automakers. At the present time, however, the Society of Automotive Engineers (SAE) has agreed that all vehicles produced by automakers in the United States will conform to a single design known as the J1772 Standard.[2]

---

2 While the J1772 Standard will be utilized by all automakers in the United States, it may not be the standard used in other countries. This question is the subject of a harmonization project with the Canadian Codes. A common connector is also the goal of European, Asian, and North American designers.

**J1772 Connector** **J1772 Inlet (right side)**

**Figure 3-2 J1772 Connector and Inlet (Preliminary)**

The J1772 Standard EV coupler is designed for 10,000 connections and disconnections with exposure to dust, salt, and water; it is able to withstand a vehicle driving over it and is corrosion resistant.

The J1772 Standard and National Electrical Code requirements ensure multiple safety layers for EV components, including:

- The EV coupler -
  - must be engineered to prevent inadvertent disconnection.
  - must have a grounded pole that is the first to make contact and the last to break contact.
  - must contain an interlock device that prevents vehicle startup while connected.
  - must be unique to electric vehicle charging and cannot be used for other purposes.
- The EV inlet -
  - must be de-energized until it is attached to the EVSE.
  - must de-energize prior to removal of the connector.
- The EVSE -
  - must be tested and approved for use by Underwriters Laboratory (UL) or a similar nationally-recognized, independent testing lab.
  - must be able to initiate area ventilation for those specific batteries that may emit potentially explosive gases.
  - must have a charge current interrupting device (CCID) that will shut off the electricity supply if it senses a potential problem that could result in electrical shock to the user.

In addition, when connected, the vehicle charger will communicate with the EVSE to identify the circuit rating (voltage and amperage) and adjust the charge to the battery accordingly. Thus, an EVSE that is capable of delivering 20 amps will deliver that current, even if it is connected to a 40 amp rated circuit.

The J1772 coupler and EV inlet will be used for both Level 1 and Level 2 charging levels, which are described below.

### B. Charging Levels

In 1991, the Infrastructure Working Council (IWC) was formed by the Electric Power Research Institute (EPRI) to establish a consensus on several aspects of EV charging. Level 1, Level 2, and DC Fast Charging levels were defined by the IWC, along with the corresponding functionality requirements and safety systems. EPRI published a document in 1994 that describes the consensus items of the IWC.[3]

**Note:** For Levels 1 and 2, the conversion of the utility AC power to the DC power required for battery charging occurs in the vehicle's on-board charger. In Level 3 charging, or more correctly called DC Fast Charging, the conversion from AC to DC power typically occurs off-board so that DC power is delivered directly to the vehicle.[4]

#### Level 1 – 120 volt AC

The Level 1 method uses a standard 120 volts AC (VAC) branch circuit, which is the lowest common voltage level found in both residential and commercial buildings. Typical voltage ratings can be from 110 – 120 volts AC. Typical amp ratings for these receptacles are 15 or 20 amps.

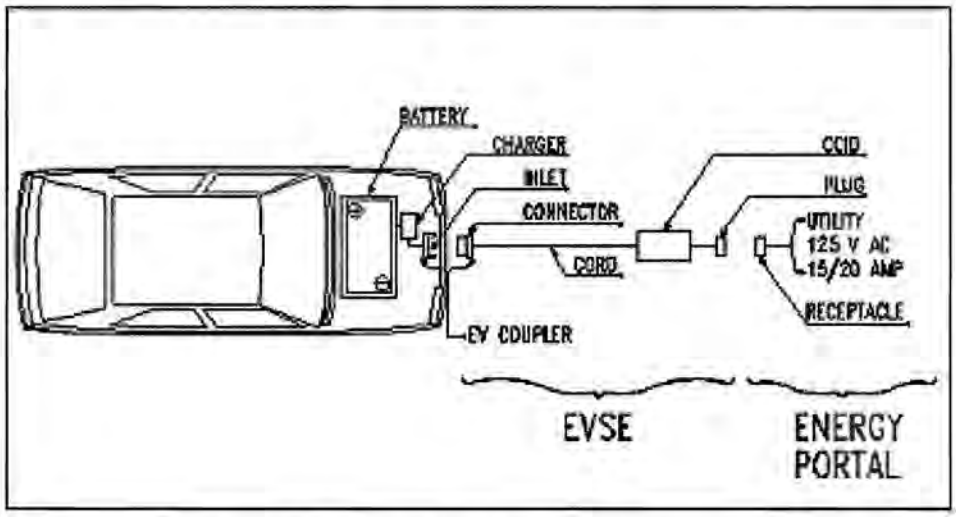


**Figure 3-3 Level 1 Charging Diagram**

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[3] "Electric Vehicle Charging Systems: Volume 2." *Report of the Connector and Connecting Station Committee*, EPRI, December 1994.

[4] AC DC Fast Charging (delivering high-power AC directly to the vehicle) is defined within the SAE J1772 document, but this approach has not been implemented yet.

**Figure 3-4 Level 1 Cord Set[5]**

Level 1 charging typically uses a standard 3-prong electrical outlet (NEMA 5-15R/20R) to connect to premises wiring.

Future EV suppliers probably will provide a Level 1 Cord Set (125 VAC, 15 or 20 amps) with the vehicle. The Cord Set will use a standard 3-prong plug (NEMA 5-15P/20P), with a charge current interrupting device (CCID) located in the power supply cable within 12 inches of the plug. The vehicle connector at the other end of the cord will be the design identified in the J1772 Standard. This connector will mate properly with the vehicle inlet, also approved by J1772.

Because charge times can be very long at Level 1 (see Table 2-1), many EV owners will be more interested in Level 2 charging at home and in publicly available locations. Some EV manufacturers suggest their Level 1 Cord Set should be used only during unusual circumstances when Level 2 EVSE is not available, such as when parked overnight at a non-owner's home.

Several companies provide kits to convert internal combustion and hybrid vehicles to plug-in vehicles. Many of these conversions use a standard 3-prong electrical plug and outlet to provide Level 1 charging of their vehicles. With the standardization of EVs on the J1772 Standard and the higher level of safety afforded by a J1772-compliant charging station, existing vehicles will need to be retrofitted to accommodate a J1772 inlet in order to take advantage of the deployment of EVSE infrastructure.

**Level 2 – 240 volt AC**

Level 2 is typically described as the "primary" and "preferred" method for the EVSE for both private and publicly available facilities, and specifies a single-phase branch circuit with typical voltage ratings from 220 – 240 volts AC. The J1772-approved connector allows for current as high as 80 amps AC (100 amp rated circuit). However, current levels that high are rare; a more typical rating would be 40 amps AC, which allows a maximum current of 32 amps. This provides approximately 7.7 kW with a 240 VAC circuit.

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[5] Conceptual Design for Chevy Volt, *Electrifying the Nation*, PHEV Summit, Tony Posawatz, January 2009.

The higher voltage of Level 2 allows a much faster battery charge. Because of the higher voltage, Level 2 has a higher level of safety requirements than Level 1 under the National Electric Code (NEC), including the requirement that the connector and cord be hardwired to the control device and premises wiring, as illustrated in Figures 3-1 on and 3-3.

**Figure 3-5 Level 2 Charging**

### Level 3 Charging (DC Fast Charging)

Level 3 Charging, or preferably, "DC Fast Charging", is planned for commercial and public applications and is intended to perform in a manner similar to a commercial gasoline service station, in that recharge is rapid. Typically, DC Fast Charging would provide a 50% recharge in 10 to 15 minutes. DC Fast Charging typically uses an off-board charger to provide the AC to DC conversion. The vehicle's on-board battery management system controls the off-board charger to deliver DC directly to the battery.

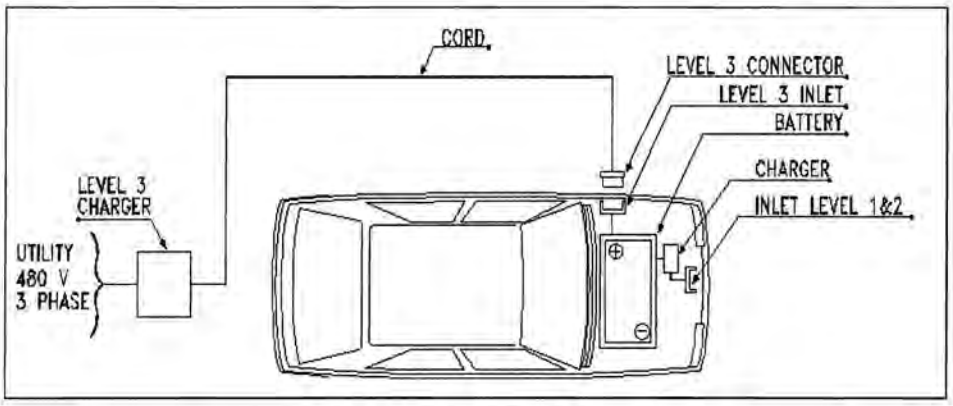


**Figure 3-6 DC Fast Charging**

This off-board charger is serviced by a three-phase circuit at 208, 480, or 600VAC. The SAE standards committee is working on a DC Fast Charging connector, but has placed the highest priority in getting the Level 1 and 2

connector approved first. The DC Fast Charger connector standard is expected to be approved in 2010.

eTec will be utilizing DC Fast Charging equipment in infrastructure developed in 2010.

DC Fast Charging was accomplished by eTec for the Chrysler EPIC in the 1990s and for industrial applications since 1998. Similar, though smaller, equipment will be used for the coming generation of EVs.

**Figure 3-7 Chrysler EPIC DC Fast Charging (90kW) circa 1997**

**Note:** Although it will be uncommon, a vehicle manufacturer may choose not to incorporate an on-board charger for Levels 1 and 2, and instead utilize an off-board DC charger for all power levels. In this case, the electric vehicle would have only a DC charge port. Another potential configuration that may be found, particularly with commercial vehicles, is providing 3-phase power directly to the vehicle. This configuration requires dedicated charging equipment that will be non-compatible with typical publicly available infrastructure.

### C. Level 1 versus Level 2 Considerations

For a BEV owner (and some PHEV owners who choose the utility time-of-use rates), the preferred method of residential charging will be Level 2 (240VAC/single-phase power), providing the EV owner a reasonable charge time and also allowing the local utility the ability to shift load as necessary while not impacting the customer's desire to obtain a full charge by morning. For other PHEV owners, a dedicated Level 1 circuit may adequately meet the owner's charging needs.

BEV owners who have the opportunity for Level 2 charging at work or in public areas may find the vehicle battery remains at a higher charge and thus home charging time is not a concern and Level 1 will suffice. See Table 2-1 for relative battery sizes and estimated recharge times.

## D. General Requirements

This section identifies the general requirements of EVSE.

**Certification:** EVSE will meet the appropriate codes and standards and will be certified and so marked by a Nationally Recognized Testing Laboratory (e.g., Underwriters Laboratories). Owners should be cautioned against using equipment that has not been certified for EV use.

**Cord Length:** The EVSE will provide a maximum of 25 feet of flexibility from the wall location to the EV Inlet. This figure was obtained by starting with the typical 15-foot car length and adding the 7-foot car width plus 3 feet to the EVSE's permanent location. The EV inlet location on each EV model will vary by manufacturer; however, this standard length should be sufficient to reach from a reasonably positioned EVSE to the inlet.

**Tripping Hazard:** An extended EV cord may present a tripping hazard, so the EVSE should be located in an area of minimum pedestrian traffic. An alternative would be installation of an overhead support or trolley system to allow the cord to hang above the vehicle in the location of the EV inlet.

**Ventilation Requirements:** If there are ventilation requirements, the EVSE will be required to energize a properly-sized ventilation system. This requirement is expected to be rare, since automobile manufacturers are expected to use non-gassing batteries. Some EV owners who convert their own vehicles to electric or purchase conversion vehicles may use gassing batteries, however. The approved EVSE will communicate with the vehicle and if ventilation is required but no ventilation system exists, the EVSE will not charge the vehicle. In multi-family or parking garage situations that may already have ventilation systems for exhaust of normal vehicle emissions, that system generally would be sufficient. However, calculations should verify this result. It also may be impractical to wire the charger to the ventilation controls or costly to run the system for a single vehicle charging. In these cases, it may be prudent to specify that the chargers are intended for non-gassing batteries only.

**Energized Equipment:** Unless de-energized by the local disconnect, the EVSE is considered electrically energized equipment. Because it operates above 50 volts, Part 19 Electrical Safety of the Occupational Health and Safety (OHS) Regulation requires guarding of live parts. EVSE may be positioned in a way that requires a physical barrier for its protection. Wheel stops are recommended to prevent a vehicle from contacting the EVSE. They also help position the EV in the optimum location for charging.

**Figure 3-8 Wheel Stop**[6]

**Figure 3-9 Garage Wheel Stop**[7]

**Shortest Run:** In addition to the above requirements, the lowest-cost installation generally is the location closest to the electrical supply breaker, because it minimizes the conduit run to the charger.

**Ergonomics/Ease of Use:** Most EV owners will find it most convenient to have the EVSE located near the EV inlet. In some cases, it may be desirable to back into the garage, both minimizing the tripping hazard and reducing the electrical circuit run to the EVSE.

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[6] Rubberform Recycled Products LLC, www.rubberform.com
[7] ProPark Garage Wheel Stop, www.organizeit.com

# 4. Charging Scenarios

## A. Single Attached/Detached Garages

### Power Requirements

**Level 1:** Dedicated branch circuit with NEMA 5-15R or 5-20R Receptacle.

**Level 2:** Dedicated branch circuit hardwired to a permanently-mounted EVSE with the following specifications: 240VAC/Single Phase, 4-wire (2 Hot, GND, and Neutral), 40 amp Breaker.

### Cost Estimates

$2,000 - $2,500 for a generic installation. Costs will vary based on length of the circuit run, electrical panel upgrades, and other factors.

### Level 2 Notes

- The breaker size recommended will meet the requirements of almost all BEVs and PHEVs. Some PHEVs with small battery packs (see Table 2.1) may only require a 20 or 30 amp breaker for their recommended EVSE, in which case the breaker can be easily changed.
- The Neutral may not be required by some EVSE, but since it is inexpensive to include and may be required in the future if a different vehicle is purchased, it is recommended.
- For new construction, bring the circuit to a dual gang box with a cover plate for future installation of EVSE.
- For new construction that is incorporating an advanced internet network within the home, an internet connection at the EVSE location would be advisable. For existing homes, the value of providing an internet connection at the EVSE location is unknown at this time and is left up to the individual homeowner. It is likely that wireless methods will be available where a hard connection is not available.
- Many Level 2 EVSE suppliers will provide controls in the EVSE to enable charging at programmable times to take advantage of off-peak power pricing. If not, homeowners may desire to install a timing device in this circuit to control charging times.

### Siting Requirements

An indoor-rated EVSE is acceptable for an enclosed garage. The EV owner probably will prefer a particular location for the EV. However, the EV should be positioned so that the general requirements described previously are considered, which often means the EV will be at the furthest point from the residence entry into the garage.

The installation of the EVSE at the front of the vehicle may be acceptable unless the cord becomes a tripping hazard. Often the EVSE will be placed on an exterior wall to shorten the distance from the electrical box and at the same time positioning the EVSE out of the way.

If the EVSE is to be installed after the EV has been purchased, the location of the EV inlet will play a part in the location of the EVSE. It is best to keep the EVSE as close to the inlet as possible to minimize how much the cord is spread out on the floor. If the branch circuit is installed prior to the EV purchase, the garage junction box should be on the wall closest to the utility service connection, consistent with the general requirements for EVSE. Typical locations are shown in Figure 4-1.

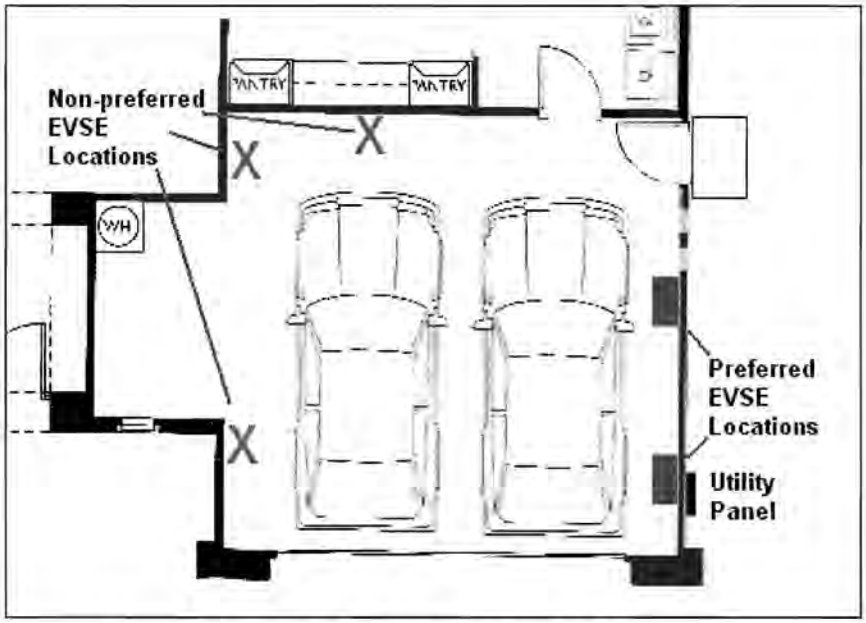


**Figure 4-1 Double Garage Location for EVSE**

In the above figure, the best location would be the EV on the right. The non-preferred EVSE locations are in typical walking areas and could present a tripping hazard. In addition, these locations are further away from the utility panel. If the EV owner wishes to place the EVSE in these locations, one option would be to install an overhead support for the charge cable and connector. If the EV inlet is on the left side of the vehicle, the owner could consider backing into the garage.

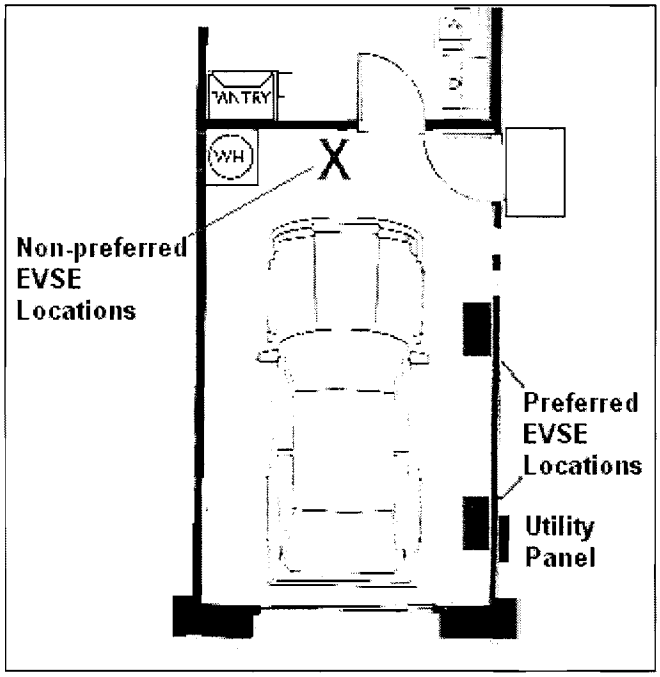


**Figure 4-2 Typical Single Garage Location for EVSE**

In the single garage environment, most locations will be acceptable for placing the EVSE, except perhaps at the head of the vehicle because of tripping concerns. The preferred locations were selected due to proximity to the utility panel. Again, the option of using overhead support for the EVSE cable would allow EVSE installation where the owner prefers.

The National Electrical Code provides additional requirements should the EVSE be located in a hazardous area. Any other materials stored in the garage also should be considered when placing the EVSE, particularly if they are hazardous.

Detached garages will add additional considerations when routing the electrical supply to the garage. Landscaping will be disrupted during the installation process, which may be of great significance to the owner and should be planned thoroughly in advance.

### Installation Process

Installing an EVSE in a residential garage typically consists of installing a dedicated branch circuit from an existing house distribution panel to an EV outlet receptacle (125 VAC, 15/20 A) in the case of Level 1 charging or an EVSE (operating at 240 VAC, 40 A) for Level 2 charging. If the garage is built with the conduit or raceway already installed from the panel to the garage, the task is greatly simplified.

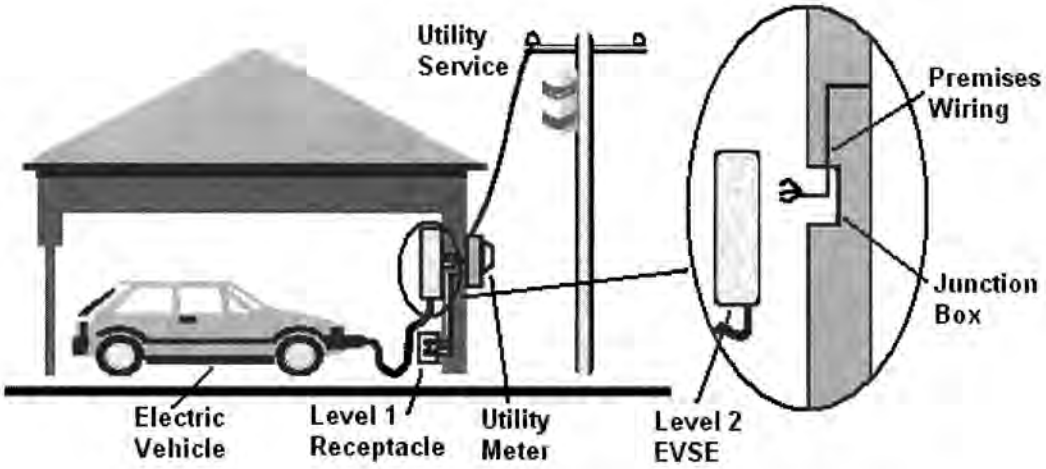


**Figure 4-3 Typical Level 1 and Level 2 Installations for a Residential Garage**

The specific steps involved in this process are shown in the flowchart in Figure 4-4. In general, they include:

- Consultation with the EV dealer to determine whether Level 1 or Level 2 EVSE is required, whether ventilation will be required, and which EVSE to purchase
- Consultation with the electric utility to determine rate structure, as well as any requirements for a special or second meter
- Consultation with a licensed electrical contractor to plan the installation effort, including location of the EVSE, routing the raceway from the utility service panel to the EVSE, Level 1 or Level 2 requirements, ventilation requirements, adequacy of current utility service, and preparing an installation quote
- Submission of required permitting documents and plans
- Completion of EVSE installation and utility service components, if required
- Inspection of final installation

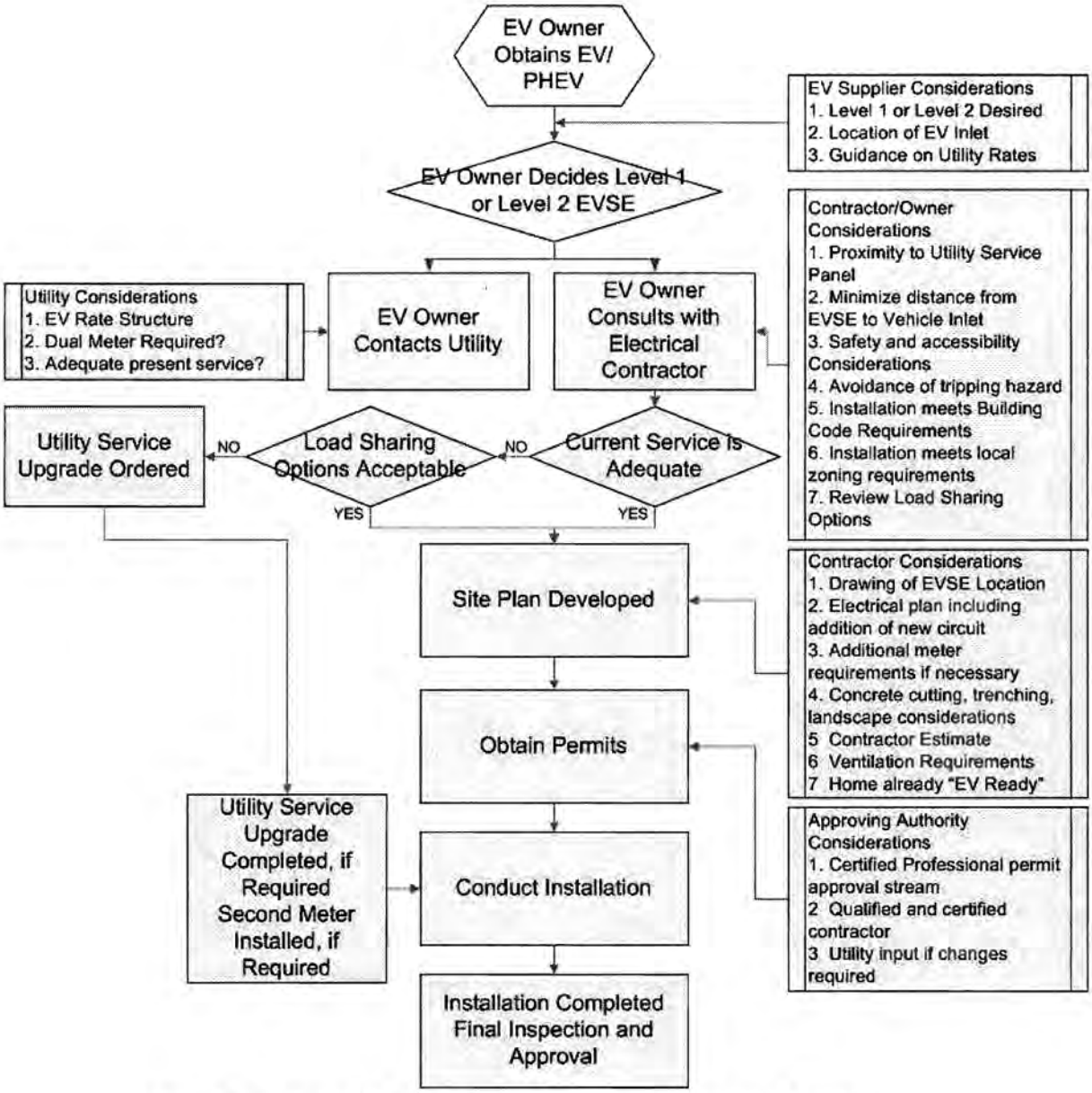


**Figure 4-4 Installation Process for a Residential Garage/Carport**

If the garage has a pre-existing raceway, a 120 VAC, 15/20 amp circuit or a 240 VAC, 40 amp circuit can be installed. Some homes may not have sufficient utility electrical service to install this circuit. In that case, either a new service must be added, as previously noted, or installation of an approved load control device may allow the homeowner to avoid a major panel upgrade and allow the utility to avoid upgrading the electrical service to the homeowner.

Although a new home may already have the raceway installed, a permit for the service is required. Increasingly, standards are directing that a raceway

for an electric vehicle will be included in new home construction. The conductors may or may not be included. If included, consideration should be given to sizing the conductors for the 240 VAC, 40 amp circuit required for Level 2 charging, but installing the 125 VAC, 20 amp Level 1 breaker and receptacle. The homeowner would have a functional circuit that could be upgraded easily to Level 2, if desired.

Contact a local electrical contractor to evaluate the options of adding a new service vs. upgrading the existing service, as utility fees may apply.

## B. Carport

### Power Requirements

Power requirements are the same as garage scenario above.

### Cost Estimates

$2,000 - $2,500 for a generic installation. Costs will vary based on the length of the circuit run, electrical panel upgrades, and other factors.

### Siting Requirements

The siting requirements for the carport will include those identified for the garage. Some owners may elect to place the EVSE in the garage, but charge a vehicle outdoors. This scenario is similar to the carport requirements. A carport is considered an outdoor area, so the EVSE should be properly designed for exterior use. Consideration must be given to precipitation and temperature extremes. In geographic areas that experience high precipitation, pooling of water in the carport or driveway may be a concern. While the EVSE is safe, owners may have a concern about standing in pooled water while connecting the EVSE. Consultation with the owner will be required when locating the EVSE.

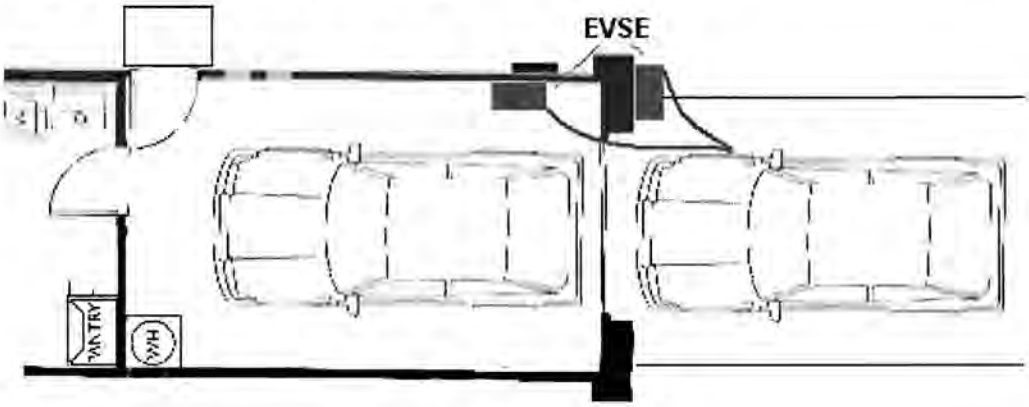


**Figure 4-5 Installation Considerations for Outdoor Parking**

Freezing temperatures can cause cords to freeze to the parking surface, so cord support should be considered in a cold environment. Adequate lighting is an additional consideration, along with mitigating efforts to prevent vandalism, as noted in Section 5. The carport installation process is similar to the garage process previously outlined.

### Consultation with Landlord or HOA

An installation in a multi-family location may involve a more lengthy approval process for zoning considerations. The local zoning requirements may require a public hearing or pre-approval by a Design Review Committee.

## C. Multi-Family Dwellings

### Power Requirements

Power requirements are the same as the garage scenario.

### Cost Estimates

Costs will vary based on length of the circuit run, trenching, electrical panel upgrades, and other factors.

### Siting Requirements

Multi-family dwellings will have additional considerations, because the apartment or condominium owner also must be involved in any siting decisions. The EV owner will prefer a site close to the owner's dwelling, but this may not be in the best interest of the apartment owner. Special flooding or drainage conditions may apply. Lighting and vandalism concerns will exist. Payment methods for the electrical usage will need to be identified. There may be insurance and liability questions. All concerns should be discussed with the property owner prior to the EV purchase.

Should the EV owner later relocate, the electrical installation raceway and panel upgrades, if any, will be retained at the multi-family location. Ownership of the EVSE needs to be identified clearly. If the EV owner takes the EVSE, site restoration may be required. Circuit removal or de-energizing methods should be settled. Discussion with the utility also is required, since there may be metering questions or issues to be resolved. In condominiums, the Homeowners' Association (HOA) may be involved to approve EV additions.

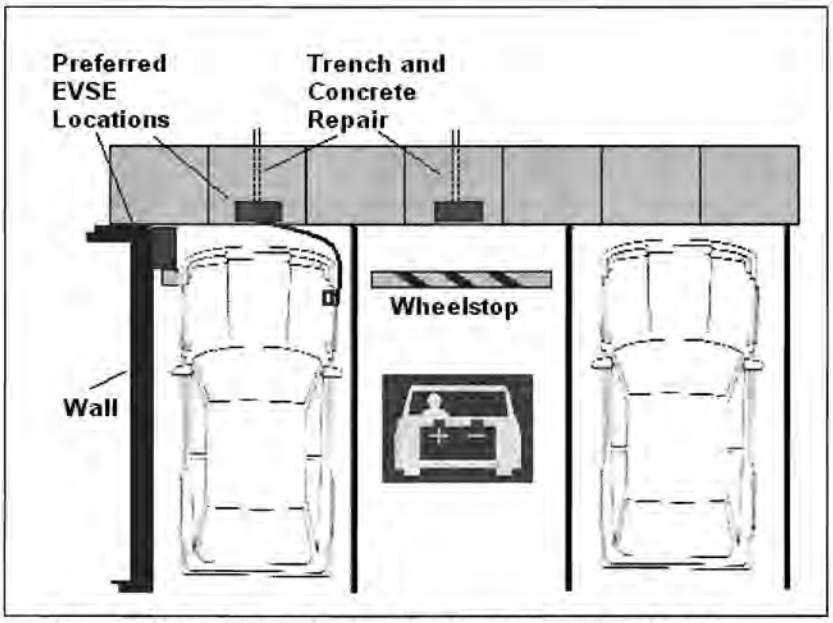


**Figure 4-6 Typical EVSE Installation in Multi-Family Lot**

In general, unless the location is well protected from the environment, the EVSE will need to be outdoor rated. The installation of the EVSE at the front of the vehicle may be the only choice unless an adjacent wall is available. If located at the front of the parking stall, the EVSE should be located on the vehicle side of any walkway to minimize the cord becoming a tripping hazard. The walkway for pedestrians would be on the back side of the EVSE. Because a wheel stop will be installed, consideration should also be given to make sure the EV parking is not in an area of normal pedestrian traffic in order to avoid pedestrians tripping over the wheel stop when no vehicle is present.

Trenching and concrete work and repairs are likely. Consideration must be given to maintaining a safe and secure area around the parking stall to avoid tripping hazards or EVSE interference with other operations.

## Installation Process

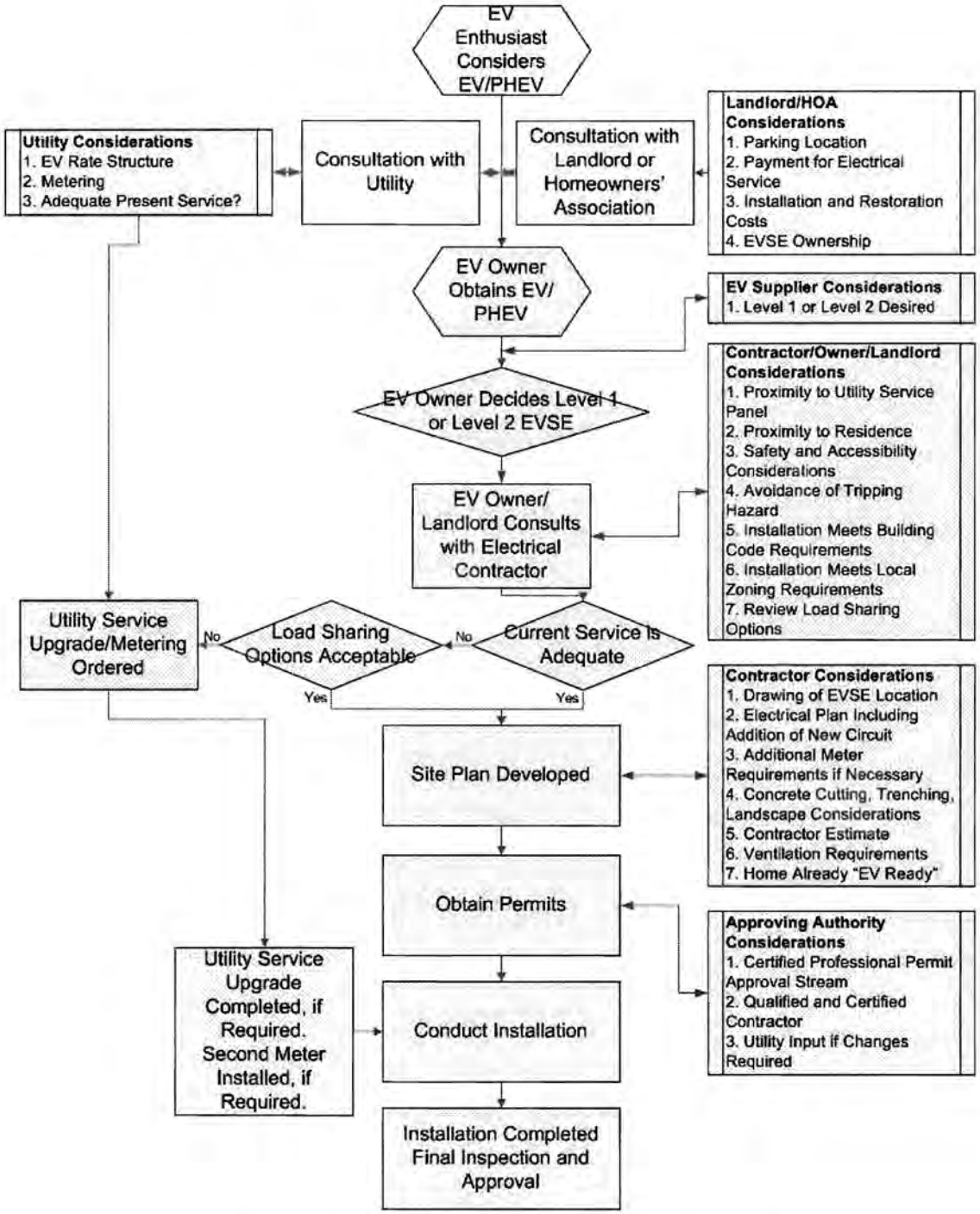


**Figure 4-7 Installation Process for Multi-Family**

If the parking area has a pre-existing raceway, the wishes of the EV owner and property owner can determine whether this will be a 120 VAC, 15/20 amp circuit or a 240 VAC, 40 amp circuit. This also would require review by an electrical contractor to make sure the service panel is sufficient to support the choice. Although a raceway may have been installed previously, a permit for the service will be required.

**Multiple Parking Stall Installation**

In a new construction or retrofit situation, broad charging infrastructure installation in a multi-residential building will require the services of an electrical consultant to determine the best approach. For example, the proponent may consider a load control strategy to manage the charging load within the capacity of the electrical service to the building, rather than upgrading the service size to accommodate increased building load from electric vehicle charging.

## D. Commercial Fleets

**Power Requirements**

Dedicated branch circuits hardwired to permanently-mounted EVSE with the following specifications: 208VAC or 240VAC / Single-Phase, 4-wire (2 Hot, GND, Neutral), 40Amp Breaker.

Commercial fleet charge stations generally will include multiple charging station locations, and therefore with new construction, these additional locations will need to be allowed for when sizing the main service entrance section (SES). Since it is likely that most of the charging will occur during working hours, for existing buildings, the additional load may require an upgrade or a new SES and/or utility supply.

Because of the potentially large electrical load, it is recommended that a network connection is provided in close proximity to the charge stations. This connection may be required for interface with the building energy management system or to implement local utility load control strategies.

**Cost Estimates**

$40,000 - $50,000 for a generic installation of ten EVSE stations. Costs will vary based on length of the circuit run, trenching, electrical panel upgrades, and other factors.

**Siting Requirements**

Presently, commercial fleets make up the highest population of EVs. Utilities, governmental agencies, and other private fleets have been encouraged and are encouraging the private adoption of EVs. A significant amount of planning is required to correctly size an EV parking and charging area. Consideration must be given to current requirements, as well as anticipated future requirements. Electrical service requirements will be much higher than residential or multi-family installations, and can have a significant impact on electrical usage and the utility. For that reason, electrical utility planners need to be involved early on in the fleet planning process.

The individual homeowner will be interested in charging his/her vehicle off-peak. That interest will be greater for the fleet manager.

Flood-prone area restrictions must be considered, as well as issues of standing water. Often large parking lots have low spots where water accumulates. Although a Level 2 EVSE contains the proper protection device for this issue, employees may not be comfortable operating the EVSE in standing water.

Installation of an EVSE unit in a commercial facility typically consists of installing new dedicated branch circuits from the central meter distribution panel to a Level 2 EVSE. In a commercial fleet, there are typically many such EVSE units in adjacent parking stalls. Proximity to the electrical service is an important factor in locating this parking area. The length of the circuit run and the number of units will have a significant impact on the cost.

Because these EVSE units are in a designated area, the potential for pedestrian traffic is less and more consideration can be given to the most economical installation methods. In addition, the commercial nature of the site will allow greater overall security, such as fences and gates, so the threat of vandalism is minimized.

Fleet managers must also be aware of other equipment that will be stored in the vicinity of the EVSE. It is important that a hazardous environment does not already exist in the area planned.

Fleet manager interests and priorities can also stimulate the development of DC Fast Charging. The higher recharge rate means a shorter turnaround for each vehicle and maximizes on-road time. The 480/600 VAC required for DC Fast Charging is generally available in commercial facilities.

**Figure 4-8 Level 2 Commercial EV Charging Location**

### Installation Process

The installation process is similar to the processes described previously, except that much more detailed planning is involved prior to the owner making the final decision and obtaining permits.

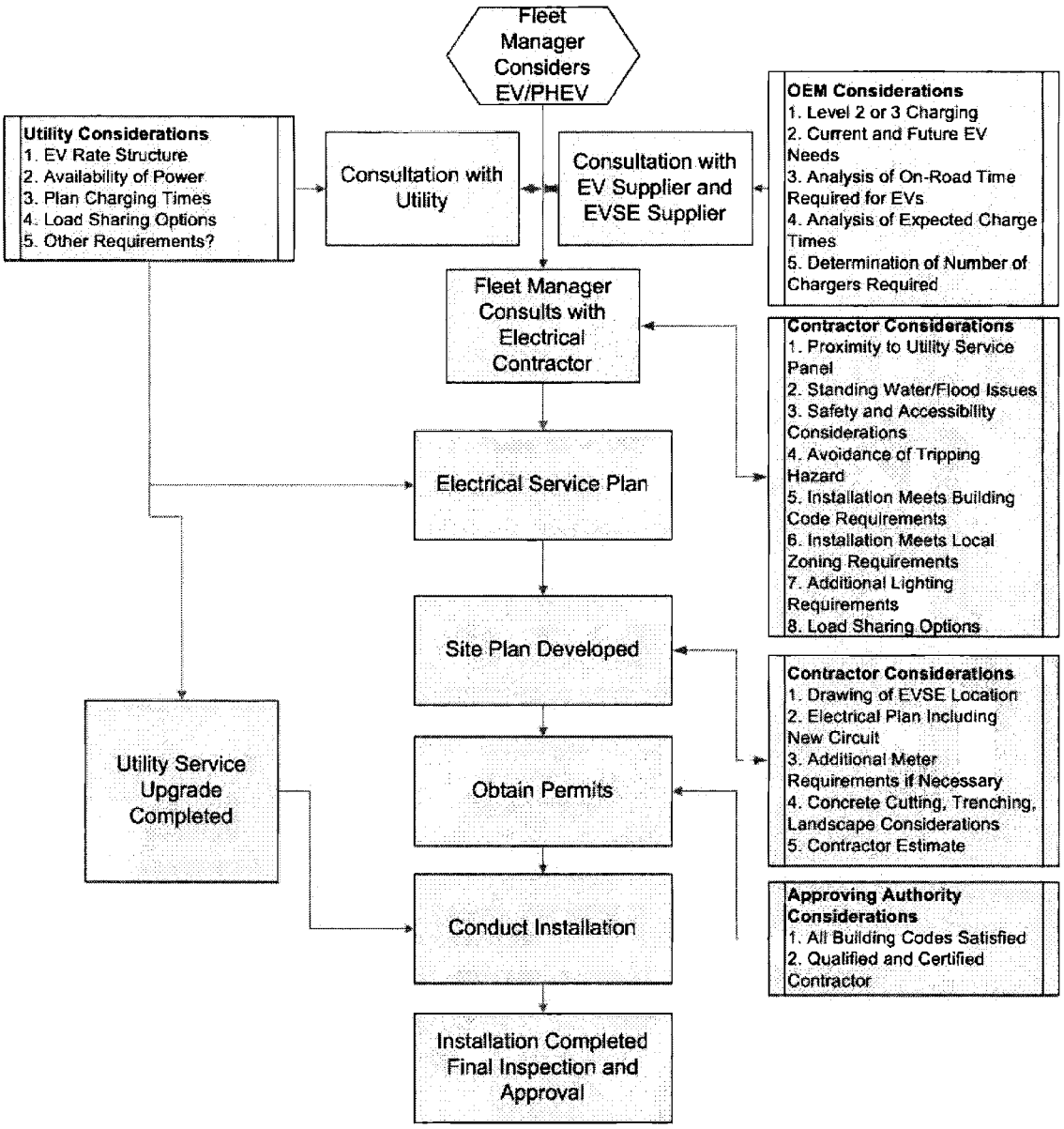


**Figure 4-9 Installation Process for Commercial Fleet Operations**

## E. Publicly Available Charging Stations

A significant factor in the consumer adoption of EVs will be the ability to extend the range of battery-only power. This can be accomplished by the thoughtful installation of publicly available charging locations. The EV Micro-Climate program focuses on this important area.

Publicly available charging may employ a mix of Level 1, 2, and 3 (DC Fast) charging stations; however, the charge return generated by a dedicated Level 1 charging station will be minimal for a BEV, and its use is neither recommended nor included in the EV Micro-Climate. The recommended configuration for a publicly available Level 2 charging station is one equipped with a J1772

connector. This will accommodate all vehicles equipped with a J1772 inlet, including PHEVs and other EVs that require lower kW charging than a BEV.

Publicly available charging may be served by either public or commercial charging stations. Public charging stations are those EVSE installed on public-owned property, such as city or county property. Curbside chargers are a typical example. Commercial charging stations are those EVSE stations installed on private or commercial property, such as retail locations.

The determination of publicly available Level 2 EVSE charging sites should focus on locations where the EV owner will be parked for a significant period of time, i.e., 1 – 3 hours. An appreciable recharge can occur during this time period. Locations where owners can be expected to park for this length of time include restaurants, theaters, shopping malls, governmental facilities, hotels, amusement parks, public parks, sports venues, arts productions, museums, libraries, outlet malls, airport visitor lots, and major retail outlets, among many other choices.

Businesses, such as electric utilities or those that wish to promote EV usage, will install public charging near their building entrance in highly visible areas, even though EV owner stay times may be shorter than 1 – 3 hours. As noted above, these stations should be Level 2.

The determination of publicly available DC Fast Charging EVSE charging sites should focus on locations where the EV owner will be parked for a relatively short period of time, e.g., 15 minutes, where an appreciable recharge can occur during this time period. Locations where owners can be expected to park for this time include convenience stores, coffee houses, service stations, drug stores, and fast food restaurants, among many other choices. For DC Fast Charging, the availability of 480/600 VAC will be a consideration.

Publicly available charge stations will vary greatly in design and requirements. They also include a number of other requirements not found in residential and fleet applications, such as signage and point-of-sale systems, as described in Section 5.

### LEED Building Certification

A driving force in the design, construction, and operation of facilities is the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. It was developed by the U.S. Green Building Council and it provides standards for environmentally sustainable construction and facility operation. It requires a study of the $CO_2$ emissions by company personnel and encourages, through monetary incentives or preferred parking, the use of alternative fuel vehicles. It provides credits for installing EV charging stations and suggests certain percentages of parking be devoted to alternative fuel vehicles. These locations will apply to employees, as well as visitors using the facility. Companies interested in being LEED-certified are excellent sites for publicly available charging stations.

### Power Requirements

**Level 2:** Dedicated branch circuits hardwired to permanently-mounted EVSE with the following specifications: 208VAC or 240VAC / Single-Phase, 4-wire (2 Hot, GND, Neutral), 40Amp Breaker.

**DC Fast Charging:** Dedicated branch circuit hardwired to permanently-mounted charger supplied with the circuit, as specified in the installation manual. DC Fast Charging chargers rated up to 30kW may require either 208AVC/3-Phase or 480VAC/3-Phase. DC Fast Charging chargers greater than 30kW probably will require 480VAC/3Phase.

**Example Sizes**

1. For 30kW Output Power, typical input power requirements are:

   208VAC/3-Phase, 4-wire (3-Hot, GND), 125 Amp Breaker, -or-

   480VAC/3-Phase, 4-wire (3-Hot, GND), 60 Amp Breaker

2. For 60kW Output Power, typical input power requirement is:

   480VAC/3-Phase, 4-wire (3-Hot, GND), 125 Amp Breaker

Communication generally will be preferable for any publicly available charge stations, but it is not necessarily required. Wireless methods most likely will be utilized, but if a hardwired internet connection is available, it is generally preferable to wireless.

**Siting Requirements**

Siting requirements for publicly available charging are similar to other scenarios previously discussed, but involve many additional considerations. Questions such as ownership, vandalism, payment for use, maintenance, and data collection are addressed in following sections.

Flood-prone area restrictions must be considered, as well as issues of standing water or high precipitation. As previously noted, despite the safety of the device, users may not be comfortable operating the EVSE in standing water. Unlike fleet use, an area designated for public use should be in a preferred parking area. Also unlike fleet use, the area will be public, and therefore the threat for vandalism will be greater. Public chargers likely will be in a high pedestrian traffic area, so considerations around placing the charger to best avoid making the charge cord or the wheel stop into tripping hazards are very important.

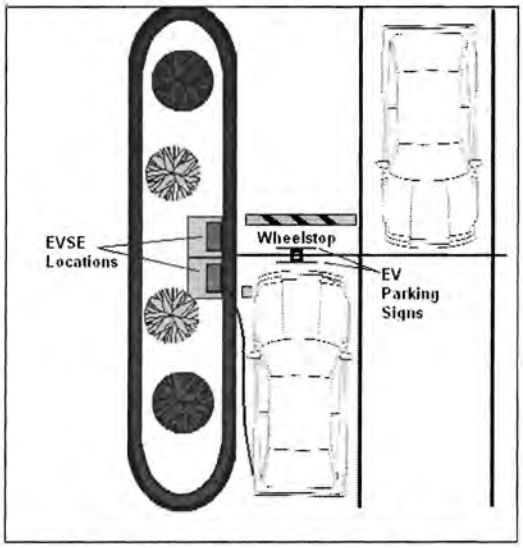


**Figure 4-10 Publicly Available Charging Layout Example**

There are several ways to address the protection of the equipment, shelter, signage, and pedestrian safety. The following pictures provide examples.

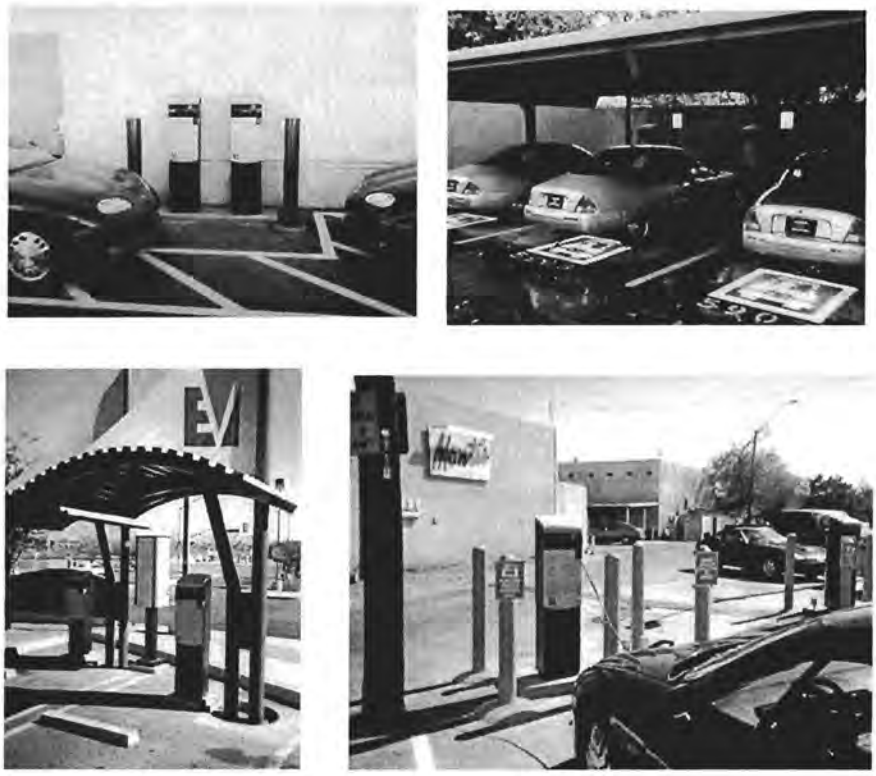


**Figure 4-11 Publicly Available Charging Examples**

Some publicly available charging will be advanced by commercial businesses interested in promoting electric vehicle use through personal preference or as part of LEED certification. Commercial businesses may decide on their own to purchase and install systems or to share in these costs. Other business owners will be receptive to placement of chargers in their parking lots once approached with incentives. Other public, private, and governmental agencies will install EVSE out of support for EVs. Mapping these selected locations will provide input to an overall municipal plan identifying the ideal sites to ensure wide coverage of publicly available charging.

Publicly available sites also will need to conform to accessibility requirements, as well as requirements for the number of parking stalls with EVSE that are accessible. This issue is discussed further in Section 5.

Lighting and shelter are extremely important in public sites. The EV owner must feel safe when parking at night. In addition, the EV owner must be able to read directions and properly locate the EV connector and insert it into the EV inlet. An indoor stall in a parking structure or a sheltered stall in the outdoor parking lot provides additional convenience for the EV owner (see Figure 5-3).

Installation of the EVSE in a public area typically consists of installing new dedicated branch circuits from the central meter distribution panel to a Level 2 EVSE. There likely will be many such EVSE units in adjacent parking stalls. Proximity to the electrical service is an important factor in locating this parking area. The length of the circuit run and the number of units will have a significant impact on the cost.

The cost of providing power to the EV parking location must be balanced with the convenience of the parking location to the facilities being visited by the EV owner. It may be more convenient for the EV owner if a large shopping mall has two or three EV parking areas rather than one large area, although the cost for three areas will be greater than the cost for one.

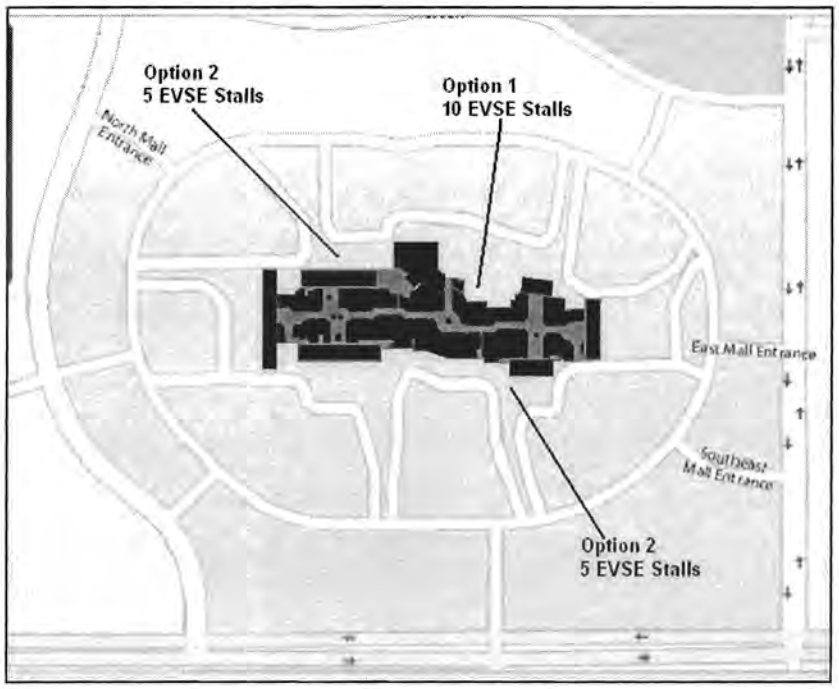


**Figure 4-12 Shopping Mall EVSE Parking Example**

Local area aesthetics also are important, and may require the installation of landscaping or screening walls to shield the electrical transformer, panel, or other equipment from the public eye.

Trouble reporting can be very important in public charging areas. Each publicly available charging area should be equipped with a method whereby the EV user can notify the equipment owner of trouble found with the equipment. Public satisfaction will suffer if stations are f out of service or not kept in an appealing condition. The trouble-reporting solution may be a normal business call number or a service call number that monitors many publicly available charging locations. This will require a communications line. At a minimum, a sign may be posted at the EVSE location directing comments to a particular office or store location.

**Figure 4-13 Indoor Charging**

**Figure 4-14 Outdoor Charging**

### Installation Process

The installation process is similar to the processes shown previously, but more detailed planning is required before submitting plans to obtain permits.

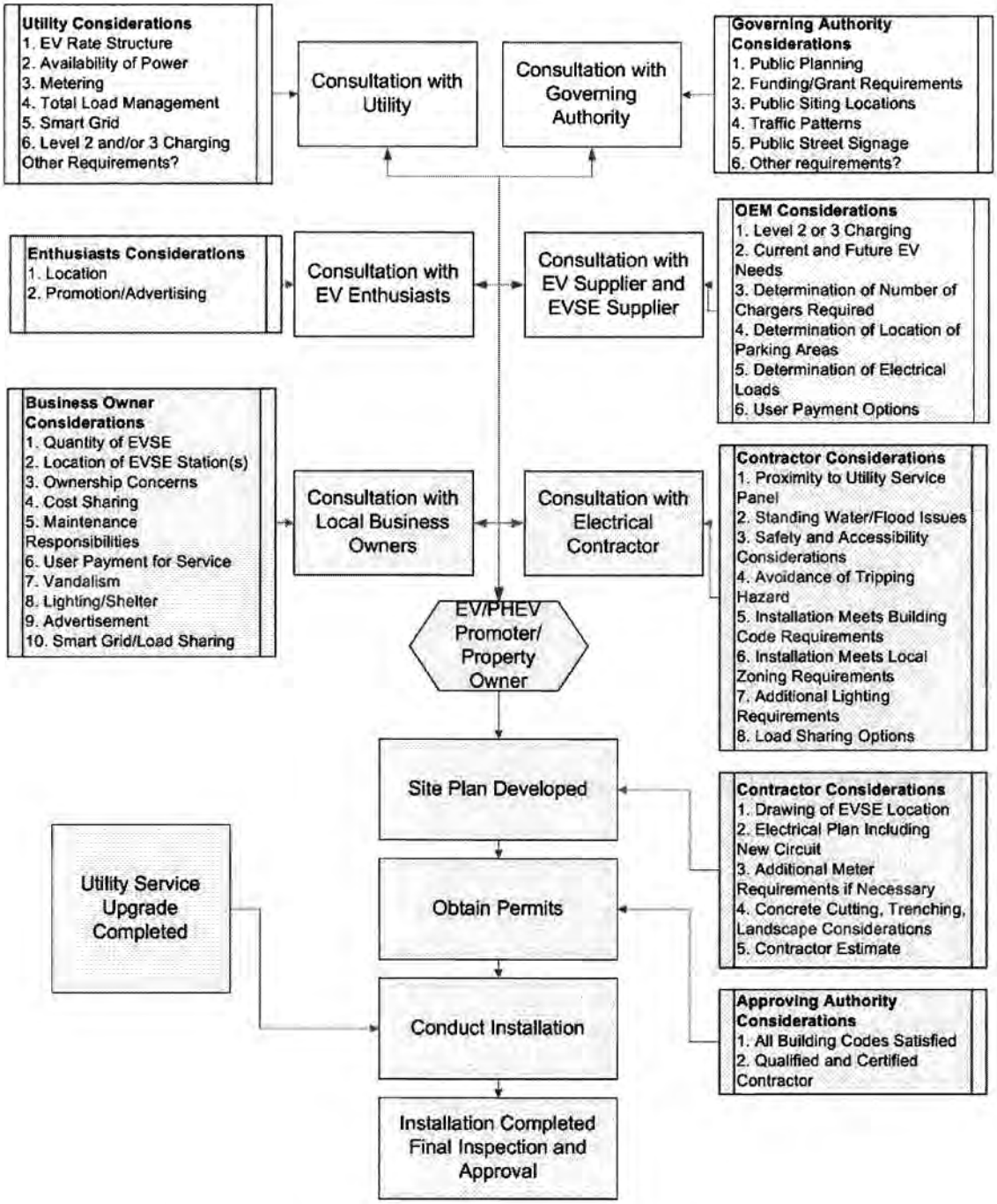


**Figure 4-15 Installation Flowchart for Public Charging**

The quality of the advance planning will determine the quality of the final installation and, ultimately, the EV owner's acceptance and satisfaction.

## Curbside Charging

Curbside charging is not necessarily associated with a commercial business. Generally speaking, these areas are owned by the municipality rather than private interests. Many of the same considerations previously noted apply.

**Figure 4-16 Curbside Charging**

# 5. Additional Charging Considerations

## A. Signage

In addition to the signs and warnings required by NEC that are described in Section 6, information signage is recommended for publicly available charging stations. Signage has two purposes: keeping non-EV vehicles from parking in charging station stalls, and helping EV drivers find charging stations.

**Figure 5-1 No Parking Except for Electric Vehicles Sign**

Previous experience has shown that signs that follow the red on white standards for *No Parking* work best to keep non-EV drivers from occupying charging station stalls. The *Manual on Uniform Traffic Control* (MUTCD) defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, and private roads open to the public. The example in Figure 5-1 follows MUTCD standards. The general public does not recognize friendly green or blue *EV Parking* or *EV Parking Only* signs. If the signage is blue, it can be mistaken for an accessible location; green signs often are mistaken for short-term parking signs.

**Figure 5-2 Wayfinding Sign**

Widespread adoption of EVs will include maps or websites identifying charging locations. It is helpful to post EV parking area signs on adjacent streets and access points directing EV drivers to the charging locations. A wide variety of symbols for charging station wayfinding were developed in the mid-1990s. A number of designs have been suggested to update these symbols. Stakeholders have identified several criteria, including being able to symbolize the next generation of EVs that do not use lead-acid batteries, as well as modern charging stations that do not have a two-prong plug extending from the vehicle or charging station. Ideally, a common design to indicate charging station locations will be used on federal and state highways and local streets.

## B. Lighting and Shelter

For commercial, apartment, condominium, and fleet charging stations, adequate lighting is recommended for safety and convenience. Shelter is not typically required for outdoor-rated equipment. For geographic locations that have significant rainfall or snow, providing shelter over the charging equipment will provide added convenience for potential EV users. Locations within parking garages or private garages that are well protected from the environment may utilize EVSE that is not specifically outdoor rated.

Lighting should be sufficient to easily read associated signs, instructions, or controls on the EVSE and provide sufficient lighting around the vehicle for all possible EV Inlet locations.

**Figure 5-3 Public Charging with Shelter and Lighting**

In residential garages or carports, lighting is also important so pedestrians can avoid tripping over extended charge cords while the EV is charging.

## C. Accessibility Recommendations

Current state and federal regulations do not provide design criteria that specifically address EV parking and charging; however, certain design requirements were added to the NEC for accessible EVSE, and some

municipalities provide guidance for accessible EV parking locations. New standards may be developed; therefore, recommendations herein constitute the best guidance to date.

There are two possible scenarios to consider when establishing charging stations and accommodating persons with disabilities: where the primary purpose is EV charging, and where the primary purpose is accessible parking.

**EV Charging is the Primary Purpose**

When EV charging stations are provided at a site in addition to regular parking, EV charging is considered the primary purpose. Parking spaces with accessible EV charging stations are not reserved exclusively for the use of persons with disabilities and a disabled parking pass would not be required.

To enable persons with disabilities to have access to a charging station, EV connectors should be stored or located within accessible reach ranges. In addition, the charging station should be on a route that is accessible both between the charging station and the vehicle and all around the vehicle.

Accessible EV charging stations should be provided according to Table 5-1.

**Table 5-1 Accessible Charging Station Recommendations**

| EV Charging Stations | Accessible EV Charging Stations |
|---|---|
| 1 – 50 | 1 |
| 51 – 100 | 2 |

The accessible EV charging stations should be located in close proximity to major buildings and site facilities; however, these charging stations need not be located immediately adjacent to the buildings and other facilities like traditional ADA parking, since EV charging, not parking, is considered the primary purpose.

**Accessible Parking is the Primary Purpose**

If a charging station is placed in an existing accessible parking space, then the primary use of that space must be accessible parking; that is, a disabled parking pass would be required to park in this EV charging space.

The federal Americans with Disabilities Act, Revised Code of Arizona, and Arizona Administrative Code identify requirements for location, design, and number of parking spaces for persons with disabilities.

Note that it is important that the placement of the charging station in an existing accessible parking space should allow adequate space (minimum of 36 inches) for a wheelchair to pass the vehicle wheel stop.

## D. Safety Issues Related to Indoor Charging

The possibility of invoking the ventilation requirements or hazardous environment requirements of the NEC exists when installing indoor charging. When the EVSE connector makes contact with the EV inlet, the pilot signal from the vehicle will identify whether the battery requires ventilation. While most BEV and PHEV batteries do not require ventilation systems, some batteries, such as lead acid or

zinc air batteries, emit hydrogen gas when charged. Most vehicle manufacturers will identify clearly that their batteries do or do not require ventilation. Without adequate ventilation, the hydrogen gas concentration may increase to an explosive condition. The Lower Flammability Limit of hydrogen in air is a 4% mixture by volume. Locations are hazardous when 25% of that limit is reached, which is a 1% mixture by volume. The EVSE contains controls to turn on the ventilation system when required, and also to stop charging should that ventilation system fail.

Recognizing that hydrogen is lighter than the air mixture, higher concentrations would accumulate near the ceiling. The ventilation system should take this into account by exhausting high and replenishing lower.

Indoor charging also can provide a challenge with respect to lighting, tight access, and storage of other material. Often areas in an enclosed garage can be poorly lighted, and when this is combined with tight access around the vehicle and other equipment stored in and around the vehicle parking stall, the possibility of personal injury from tripping increases.

### E. Installations Located in Flood Zones

Permits for constructing facilities, including EV charging stations, include reviews to determine whether the site is located in a flood-prone area. The Code of Federal Regulations, *Title 44 Emergency Management and Assistance, Part 60 Criteria for Land Management and Use*, includes the following requirement:

> "If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall (i) be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, (ii) be constructed with materials resistant to flood damage, (iii) be constructed by methods and practices that minimize flood damages, and (iv) be constructed with electrical heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding."[8]

For EVSE components, elevation and component protection are the two primary methods for minimizing flood damage, preventing water from entering or accumulating, and resisting flood damages. These measures are required by the National Flood Insurance Program (NFIP).

The primary protection for EVSE is elevation. *Elevation* refers to the location of a component above the Design Flood Elevation (DFE). All locations approved for EVSE installation should be above the DFE. This may mean that the EVSE is located outside a garage if inside would be below the DFE. This may mean that certain areas of a condominium parking lot would not contain any EVSE if that elevation is not achievable. This may require the installation of EVSE charging stations on the third level of a parking garage rather than the first.

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[8] 44CFR60.3(a)(3)

*Component protection* refers to the implementation of design techniques that protect a component from flood damage when they are located below the DFE.

*Wet flood proofing* refers to the elimination or minimization of the potential of flood damage by implementing waterproofing techniques designed to keep floodwaters away from utility equipment. In this case, the rest of the structure may receive damage, but the EVSE is protected by barriers or other methods.

*Dry flood proofing* refers to the elimination or minimization of the potential for flood damage by implementing a combination of waterproofing features designed to keep floodwaters completely outside of a structure.[9] If the entire building is protected from flood water, the EVSE is also protected.

## F. Point of Sale Options

During the Early Adoption stage of EV ownership, most owners of publicly available charging stations will absorb the cost of the electricity used, since this actual cost is low per use. However, as the public acceptance and ownership of EVs grow, more EV owners will favor having the option for point of sale. In most areas, only electric utilities can actually sell electricity, so a fee for convenience/ service probably will be the strategy. Often a credit card transaction fee will well exceed the electricity cost of charging an EV. However, the availability and convenience of charging will be a service the public will desire and purchase. A fee for service can help the EVSE owner recover the costs for equipment, installation, service, and maintenance. Several options for point of sale options are available.

### Card Readers

Several types of card readers are available that may be incorporated with the EVSE. Credit/debit card readers would be simple to use and are already widely accepted by the public. The credit/debit card would record a fee each time publicly available charging is accessed and base the fee on the number of times accessed rather than the length of time on charge.

A smartcard is a card that is embedded with a microprocessor or memory chip, so it can securely store more detailed information than a credit/debit card. A smartcard could be sold with a monthly subscription for charger use and be embedded with additional user information. That information could be captured in each transaction and used for data recording, as noted in Section G. The smartcard could be used for a pre-set number of charge opportunities or to bill a credit card number for each use.

Both cases will require a communication system from the reader to a terminal for off-site approval and data recording. Upon approval, power will be supplied to the EVSE. The cost of this system and its integration into the EVSE will be a design consideration.

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[9] FEMA Publication 348, *Principles and Practices for the Design and Construction of Flood Resistant Building Utility Systems,* November 1999.

**Figure 5-4 Smartcard Reader**[10]

### Parking Area Meters

Drivers are very familiar with the parking meters used in public parking. A simple coin-operated meter is an option for EV parking areas, and can be installed at the head of each EVSE parking stall. Another method in common use at public pay parking lots is to provide a central kiosk for credit card purchases. The parking stall number is identified at the kiosk and a parking receipt issued that can be displayed in the vehicle. There is little cost for the meter, and a single kiosk reduces the point of service cost for the whole parking lot. This system will require an attendant to periodically monitor the area for violations. Penalties for violators will need to be determined. Note that a coin-operated meter also may invite vandalism.

### Radio-Frequency Identification (RFID) Subscription Service

Like the smartcard, an RFID fob can be programmed with user information. The RFID reader collects the information from the fob to activate the EVSE station. A monthly subscription for the user keeps the fob active and the monthly fee can be based upon number of actual uses or a set fee. The reader is programmed for the accepted RFID.

**Figure 5-5 RFID Fob**[11]

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[10] ACR-38 Smart Card Reader by Advanced Card Systems.
[11] Texas Instruments RFID.

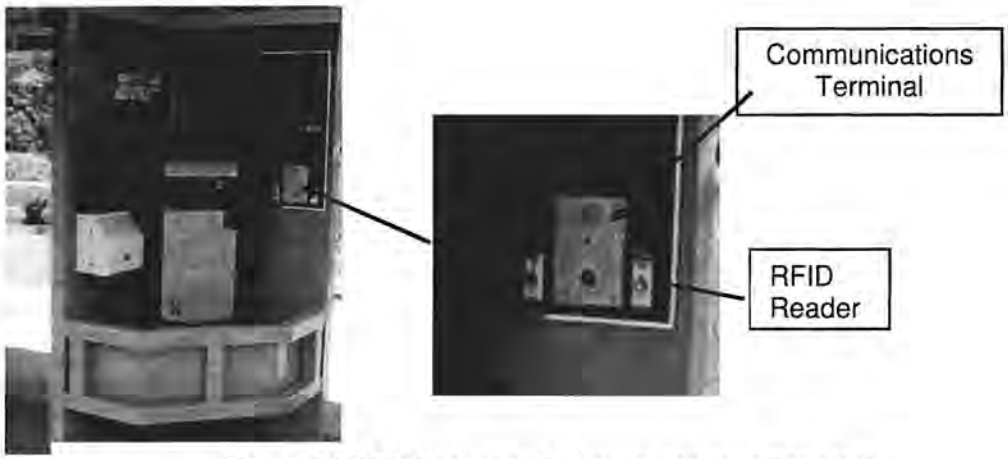


**Figure 5-6 RFID Reader and Communications Terminal**

## G. Data Collection

More than simply recording payment for service, the use of a smartcard or RFID can substantially increase the amount of information available at each publicly available charging station. Data collection systems can track usage at each of the stations and provide feedback on actual EV usage. It may be found that usage at some venues is lighter than expected, whereas others may have heavier use. This information could be helpful in expanding publicly available charging locations. In addition, data on the time of day usage may show peak usage at unexpected times, which may impact power utilization. Some EVSE may include features that allow a wide range of data to be collected.

## H. Vandalism

Publicly available charging carries the possibility of vandalism and theft. Destruction of property through purposeful defacing of equipment is a possibility; however, such destruction actually proved to be very minor during EV usage in the mid-1990s. Still, as public acceptance and the number of publicly available charging sites continue to grow, steps should be taken to minimize the possibility of vandalism.

Most EVSE can be constructed of materials that will clean easily and can have graffiti removed. Careful planning for site locations to include sufficient lighting and equipment protection will discourage damage and theft. Motion sensor activated lighting may benefit users and deter abusers. EVSE with cable retractors or locking compartments for the EVSE cord and connector may be designed. Placing the EVSE in security-patrolled areas or within sight of manned centers will discourage vandalism.

EVSE owners in condominiums and apartments may wish to protect the equipment with a lockable, secure cabinet to prevent unauthorized use and for protection from vandalism.

## I. Station Ownership

Ownership of the individual charging station may not be entirely clear. A business owner may wish to host publicly available charging, but may not have the legal right to the parking lot or for making improvements. Charging stations constructed with public grants or other financing may have split ownership - one entity may own the charger and another may own the infrastructure. The sale of a business may include the EVSE or the sale of the property may include both. EVSE may be rented or leased equipment. Before planning any installation, it is important to identify the entities that have legal rights with respect to the equipment and its installation. Whose approvals are required to obtain the permits and whose approvals are required to remove the equipment later?

For individual EV owners, the ownership of the EVSE should reside with the owner. The ownership of the installation should reside with the property owner. However, both may share legal responsibilities and liabilities for the equipment and both should be protected by insurance.

For publicly available charging, there may be a combination of owners. Utilities may wish to own and manage the public charging infrastructure in order to manage power requirements. In a successful EV market penetration, ownership of new public charging may shift to private ownership. Several businesses may join together to promote EV usage and may share in the EVSE ownership. However, there should be *one* individual business entity tasked with the responsibility of ownership, along with the proper contact information to be shared with the local utility.

## J. Maintenance

The EVSE typically will not require routine maintenance. However, all usable parts can wear, and periodic inspections should be conducted to ensure that all parts remain in good working order. Periodic cleaning may be required, depending on local conditions. Testing of communications systems and lighting should be conducted periodically. Repair of accidental damage or purposeful vandalism also may be required. Unless otherwise agreed, these responsibilities generally fall to the owner identified in Section I above.

# 6. Codes and Standards

During the initial introduction of EVs in the early 1990s, stakeholders representing the automotive companies, electric utilities, component suppliers, electric vehicle enthusiasts, equipment manufacturers, and standards and national testing organizations worked to obtain a consensus on methods and requirements for EV charging. This resulted in revisions to building codes, electric codes, first responder training, and general site design and acceptance documentation. These requirements are designed to protect the public and make EVSE accessible for use.

Equipment is designed to EVSE standards set by organizations, such as the Society of Automotive Engineers, and is tested through nationally-recognized testing laboratories, such as Underwriters Laboratories. This testing certifies that the equipment is suitable for its designed purpose. The equipment installation is required to follow the rules of the National Electric Code and Building Codes. Both of these codes can be augmented by state or local governing bodies. Frequently, the codes also affect the standards provided - as is the case for Electric Vehicles.

Nothing within these Guidelines should be construed to allow any detail of the EV charging installations to deviate from the adopted building codes and planning ordinances of each jurisdiction in which they are installed. Our intent is to develop standard plans for each jurisdiction and to have those plans approved prior to requesting permits or inspection approvals from that jurisdiction. We understand that those standard plans may vary slightly from jurisdiction to jurisdiction based on their specific adopted building codes and planning ordinances.

in order to protect the public health and conform to safety regulations, regulatory agencies are responsible for monitoring the installation process to ensure that the proper codes and standards are being implemented.

## A. Regulatory Agencies

The federal government, as well as state, county, and city governments, each have model building codes established that provide minimum requirements for safe construction and installation processes.

The City of Phoenix, for example, currently recognizes, among others, the International Building Code and Arizona Revised Statutes. These model codes, as well as national codes such as the National Electric Code, are updated on a regular basis, based on industry performance and technical advances.

## B. National Electric Code

The National Electric Code (NEC) is part of the National Fire Code series established by the National Fire Protection Association (NFPA) as NFPA 70. The NEC codifies the requirements for safe electrical installations into a single, standardized source. This code is adopted by state and local jurisdictions and may be augmented by those jurisdictions to be applied as the local practice. When identifying the electrical requirements for EVSE installation, it is important to work with the local jurisdiction to identify any local requirements in addition to the national code standard. The NEC is updated every three years. Although the current published, adopted edition is 2008,

not all jurisdictions have approved this edition, and care should be taken to follow the electrical code currently in place for each jurisdiction. Section 625 of the NEC specifically addresses electric vehicles.

### C. SAE and UL

Currently, the Society of Automotive Engineers (SAE) has determined that there will be a single conductive coupler design. The J1772 "SAE Electric Vehicle Conductive Charge Coupler" is the standard that is being used by automotive suppliers in the United States. While J1773, the Inductive Charge Coupler, is still active, none of the automakers are using this method.

Applicable SAE Standards include:

- SAE J1772
- SAE J2293
- SAE J2847
- SAE J2836
- SAE J2894
- SAE J551

SAE J2293 establishes requirements for EVs and the off-board EVSE used to transfer electrical energy to an EV from a utility source. This document defines, either directly or by reference, all characteristics of the total EV Energy Transfer System (EV-ETS) necessary to ensure the functional interoperability of an EV and EVSE of the same physical system architecture. The ETS, regardless of architecture, is responsible for the conversion of AC electrical energy into DC electrical energy that can be used to charge an EV's storage battery. J2847 provides specifics on digital communications; J2836 provides a case for the use of digital communications between vehicle and EVSE; J2894 addresses on-board charger power quality; and J551 provides standards for electromagnetic compatibility.

Underwriters Laboratories (UL) provides testing and certification that equipment complies with relevant standards, especially in areas involving public safety. The following UL standards form a basis for certifying EVSE.

- UL 2202 *Electric Vehicle (EV) Charging System Equipment*
- UL 2231-1 *Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits: General Requirements*
- UL 2231-2 *Personnel Protection Systems for Electric Vehicle (EV) Supply Circuits: Particular Requirements for Protection Devices for Use in Charging Systems*
- UL 2251 *Plugs, Receptacles, and Couplers for Electric Vehicles*

Equipment that successfully completes the testing is "certified", "approved", or "listed" as meeting the standard. In general, the SAE and UL requirements are more restrictive and are expected to be incorporated in harmonized standards.

## D. Occupational Safety and Health

Under the Occupational Safety and Health Act (OSHA) of 1970, OSHA's role is to assure safe and healthful working conditions for working men and women by authorizing enforcement of the standards developed under the Act; assisting and encouraging the states in their efforts to assure safe and healthful working conditions; and providing for research, information, education, and training in the field of occupational safety and health.[12]

The Arizona State Department of Labor and Industries publishes the *Safety and Health Core Rules*, which are the basic safety and health rules required by most employers in the state of Arizona.

## E. Engineering, Permitting & Construction

The process flowcharts shown in Figure 4-4, 4-7, 4-9, and 4-15 all require permitting of the work. A typical permit application includes the name of the owner or agent; the physical address where the work will be conducted; the property's parcel number; the voltage and amperage of the system; the name, address, and license number of the qualified contractor performing the installation; whether additional trades will be involved; and other information required in that jurisdiction.

Service load calculations may be required. The electrical contractor will review the existing current service loading and consider the rating of the EVSE unit(s) to be installed. The contractor then will develop a new loading calculation to determine whether the existing service panel is adequate or new service will be required.

It is recommended that local methods be considered to streamline the permitting process for residential EVSE installations. For BEV purchasers, the Level 1 Cord Set provided with the vehicle will require a significant charge period, so in general, an EV owner will prefer a Level 2 EVSE. Keeping the time span from EV purchase to fully functional and inspected EVSE installation as short as possible will be important for customer satisfaction.

Installation drawing requirements may vary by jurisdiction, ranging from layouts for residential installations to a full set of plans for public charging. In general, an electrical contractor from eTec's approved certified contractor network can complete the requirements for residential garage circuits.

For fleet and public charging, an engineering company is recommended to prepare the detailed site plans for installation. Several trades may be involved, including general contracting, electrical, landscaping, paving, concrete, masonry, and communications systems. As noted above, careful planning is required to coordinate this effort, and an engineering company can provide the detailed set of drawings that will be required. In addition, there may be several permitting offices involved with the approval of these plans.

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[12] OHSA website www.osha.gov

# 7. Utility Integration

## A. Background

Electric utilities are under significant pressure to maintain a dependable, clean, low-cost electrical supply to their customer base. In order to achieve these goals, utilities are evaluating, and in some cases implementing, Smart-Grid technologies that allow utilities to control various electrical loads on their systems. Through these Smart-Grid technologies, utilities can minimize new power plant and electrical distribution and transmission investment by shifting and controlling load while minimizing the impact to the customer.

Advanced Metering Infrastructure (AMI) or Smart Meters are being deployed by utilities to provide remote meter reading. Smart Meters also have the ability to control various customer loads.

Electric vehicles are one of the better loads to control for the utilities through Smart Meters, because EVs have an on-board storage system, which means that delaying the charge of the battery has no noticeable impact on the customer, unlike turning off a lighting or air-conditioning load, which can have an immediate impact on the customer. Additionally, a neighborhood transformer may not be sized such that every EV-owning customer in an area can be charging at the same time. The ability to schedule the EV charging systems connected to a neighborhood transformer could significantly extend the life of that transformer, or delay or eliminate the need to replace the transformer with a larger size.

As the adoption of EVs increases, load control strategies for multi-family dwellings may allow the utility to control charge times to maximize the effectiveness and utilization of existing transformers.

During residential EVSE installations, the electrical contractor will evaluate the electrical service capabilities of the existing system. If inadequate power is available at the service entrance, an additional service panel or other upgrade may be required.

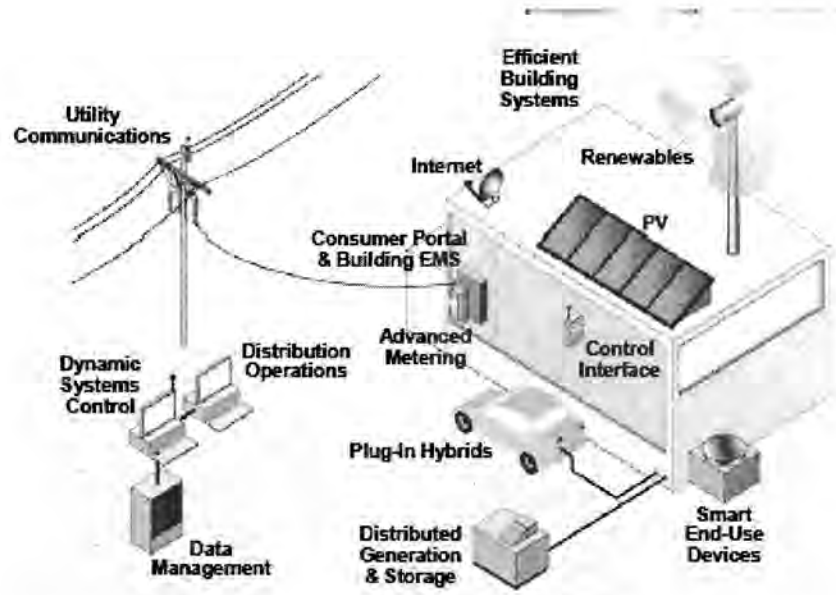


**Figure 7-1 Smart Grid Infrastructure**[13]

Figure 7-1 incorporates many design features of a Smart Grid/distributed energy storage system. Home use of photovoltaic or wind energy can supplement the utility power. A home area network (HAN) communicating with the Advanced Meter can control lighting, heating, cooling, and other major appliances. Given the right incentives, a home owner may elect to have the utility control total home consumption or delivery power back to the utility through the storage capability of the EV.

There are various mechanisms for utilities to control EV load including:

### Time-of-Use (TOU)

TOU is an incentive-based electrical rate that allows the EV owner to save money by charging during a designated "off-peak" time frame established by the utility. Typically, these off-peak times are in the late evenings through early mornings and/or weekends, during a timeframe when demand on the utility electrical grid is at its lowest point. TOU is now being implemented by some utilities, but currently there is not a common approach. Discussion with the local utility prior to installation of the charge station is recommended.

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[13] Transportation Systems (EVP)in Electric -Successful Integration of Plug, *EPRI, Plug-In 2009 Canada*, September 2009.

### Dual Metering

Some utilities will provide a special rate for EV charging and will require the installation of a second meter specifically for this purpose. This will require additional installation time, since the utility must install the meter before the EVSE is available for use. The use of a "revenue-grade" meter in the EVSE and a communications path to allow the utility control may obviate the need for the second meter.

### Demand Response

Demand response is a voluntary program that allows a utility to send out a signal to customers (typically large commercial customers) to cut back on loads during times the utility is experiencing a high peak on their utility grid. These customers are compensated when they participate in this program. As deployment of Smart Meters becomes more prevalent, EV owners may participate in such programs. Utilities may enter into contracts with EV owners to allow the utility to maintain more control over EV charging.

### Real-Time Pricing (RTP)

RTP is a concept that could be implemented in the future for EVs. In this model, pricing signals are sent to a customer through a number of communication mediums that allow the customer to charge their EV during the most cost-effective period. For example, the EVSE installed in the EV owner's garage could be pre-programmed to ensure the car is fully charged by 6:00 am, at the lowest cost possible. RTP signals from the utility would allow this to occur without customer intervention. In order to implement RTP, smart meters would need to be in place at the charging location and the technology built in to the EVSE. These programs are under development at the time of this writing.

### Vehicle-to-Grid (V2G)

V2G is a concept that allows the energy storage in electric vehicles to be used to support the electrical grid during peak electrical loads, in times of emergency such as grid voltage support, or based on pricing economics. V2G could also support vehicle-to-home, where the energy stored in the vehicle battery could supplement the home's electrical requirements. V2G requires that the on-board vehicle charger be bi-directional (energy is able to flow both in and out of the system). The EVSE at the premises must also be bi-directional and able to accommodate all of the utility requirements related to flowing energy back into the electrical grid. Although there are various development efforts in V2G, for on-road EVs, this concept probably is several years away from implementation in any commercial sense.

## B. Interconnection Requirements

Although vehicle-to-grid (V2G) connections may be in the future for most applications, some infrastructure will incorporate EVSE with solar parking structures or other renewable resources. Because these systems will connect to the local grid, it will be necessary to contact the local utility to determine whether there are any interconnection requirements. These requirements are in place to protect personnel and property while feeding electricity back into the utility grid. Most utility requirements typically are already in place for solar photovoltaic and wind systems that are grid-tied to the utility.

## C. Commercial Electrical Supply/Metering

There are typically two scenarios for connection to a commercial electrical supply. The first is utilizing the existing main service entrance section (SES) or an otherwise adequate supply panel at the commercial establishment, and the second is to obtain a new service drop from the local electric utility.

The decision on which approach to take depends on a number of factors, including the ability to obtain permission from the property owner and/or tenant of the commercial business, and the location of the existing SES or adequate electrical supply from the proposed electric vehicle charge station site. If permission is granted by the property owner and/or tenant (as required), then a fairly simple analysis can be performed to compare the cost of utilizing an existing supply vs. a new service drop to determine the best approach.

A new utility service drop typically requires the establishment of a new customer account, which may include a credit evaluation of the entity applying for the meter, and a monthly meter charge in addition to the energy and demand charges. The local utility also may require an analysis of the anticipated energy consumption.

Agenda Item #6

# *MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review*

**DATE:**
June 1, 2010

**SUBJECT:**
Interstate 11 Proposal Update

**SUMMARY:**
The MAG Regional Council accepted the findings of the Interstate 10-Hassayampa Valley Roadway Framework Study and the Interstates 8 and 10-Hidden Valley Transportation Framework Study in February 2008 and September 2009, respectively. These studies included the 152-mile Hassayampa Freeway as an illustrative (unfunded) project. This freeway is now being discussed as part of a greater Interstate 11 corridor designation that reaches to Las Vegas, and potentially destinations farther north into the Pacific Northwest.

A north-south interstate highway corridor in this part of the United States was not identified as part of the original 42,843-mile system when President Eisenhower signed the Federal-Aid Act of 1956 authorizing construction of the Interstate Highway System. In fact, the combined population of Phoenix, Tucson, Las Vegas, and Reno was less than 700,000 in 1956, and the focus of interstate planners at that time was to improve connections to California. Today, the US Census Bureau estimates this corridor has about eight million in population. Future projections indicate this corridor will continue to see significant growth, prompting the need for better surface transportation connections to accommodate not only the travel demand between these metropolitan areas, but also improved mobility for freight shipments throughout the Intermountain West.

Elements for an Interstate 11 corridor have been emerging over time. In Arizona, the Department of Transportation (ADOT) is in the process of conducting a multi-year program for improving US-93 between Phoenix and Las Vegas by widening the roadway to four-lanes with planning and right-of-way acquisition that could allow the corridor to be constructed to interstate standards in the future. The State Transportation Board recently accepted the findings of ADOT's bqAZ: Statewide Transportation Planning Framework Program that includes the conversion of US-93 into an interstate corridor and for that interstate route to continue along the Hassayampa Freeway from Wickenburg to Casa Grande. In Nevada, the Department of Transportation (NDOT) has already constructed portions of US-93 to interstate standards, as Interstate 515, and has cleared an environmental impact statement to extend the freeway corridor around Boulder City. NDOT also continues to plan for improvements to US-95 between Las Vegas and Reno to connect Nevada's largest cities. Both states, in partnership with the Federal Highway Administration - Central Federal Lands Division, will open later this year, the Mike O'Callaghan – Pat Tillman Memorial Bridge, providing a four-lane interstate standard bypass of Hoover Dam and crossing of the Colorado River.

These actions, including the recent designation of the Hassayampa Freeway corridor as an illustrative (unfunded) project of the MAG Regional Transportation Plan, have prompted various government and business organizations in both Arizona and Nevada to form a coalition called CANDO: Connection Arizona and Nevada, Delivery Opportunities, to advance the Interstate 11 concept. The coalition is presently working with members of the United States Congress to establish a High Priority Corridor

designation for Interstate 11 as a corridor that extends from metropolitan Phoenix to Reno and potentially farther north. The coalition is only seeking the Interstate 11 designation at this time to position the corridor for funding opportunities in future surface transportation authorizations.

**PUBLIC INPUT:**
No public input has been received.

**PROS & CONS:**
PROS: Since the initial 1956 system was identified, another 3,900 miles of interstate highways have been added by the United States Congress to improve connections throughout the country. Interstate designations have been proven to raise the visibility of transportation corridors as a means for relieving congestion, improving goods movements and freight connections, providing for economic development, and providing safer corridors for intercity travel. An Interstate 11 corridor could certainly meet several of these criteria, especially in providing for an alternate route to the congested Interstate 5 corridor, and to improve the north-south movement of goods from ports in Mexico and Canada in the Intermountain West. The MAG priority is to deliver the projects included in the Regional Transportation Plan that were part of the Proposition 400 election.

CONS: The funding for Interstate 11 does not exist at this time.

**TECHNICAL & POLICY IMPLICATIONS:**
TECHNICAL: The majority of the long-range planning for an Interstate 11 corridor has been completed through the Interstate 10-Hassayampa Valley Roadway Framework Study, the Interstates 8 and 10-Hidden Valley Transportation Framework Study, and bqAZ: Statewide Transportation Planning Framework. The next steps for the corridor would be to conduct environmental, design concept and location studies, to establish the route centerline.

POLICY: In the metropolitan Phoenix area, MAG has identified through the framework studies the Hassayampa Freeway corridor and has encouraged member agencies that are affected by these studies to incorporate this recommendation into their general plan. This corridor recommendation provides an opportunity for preserving the corridor that could eventually become Interstate 11.

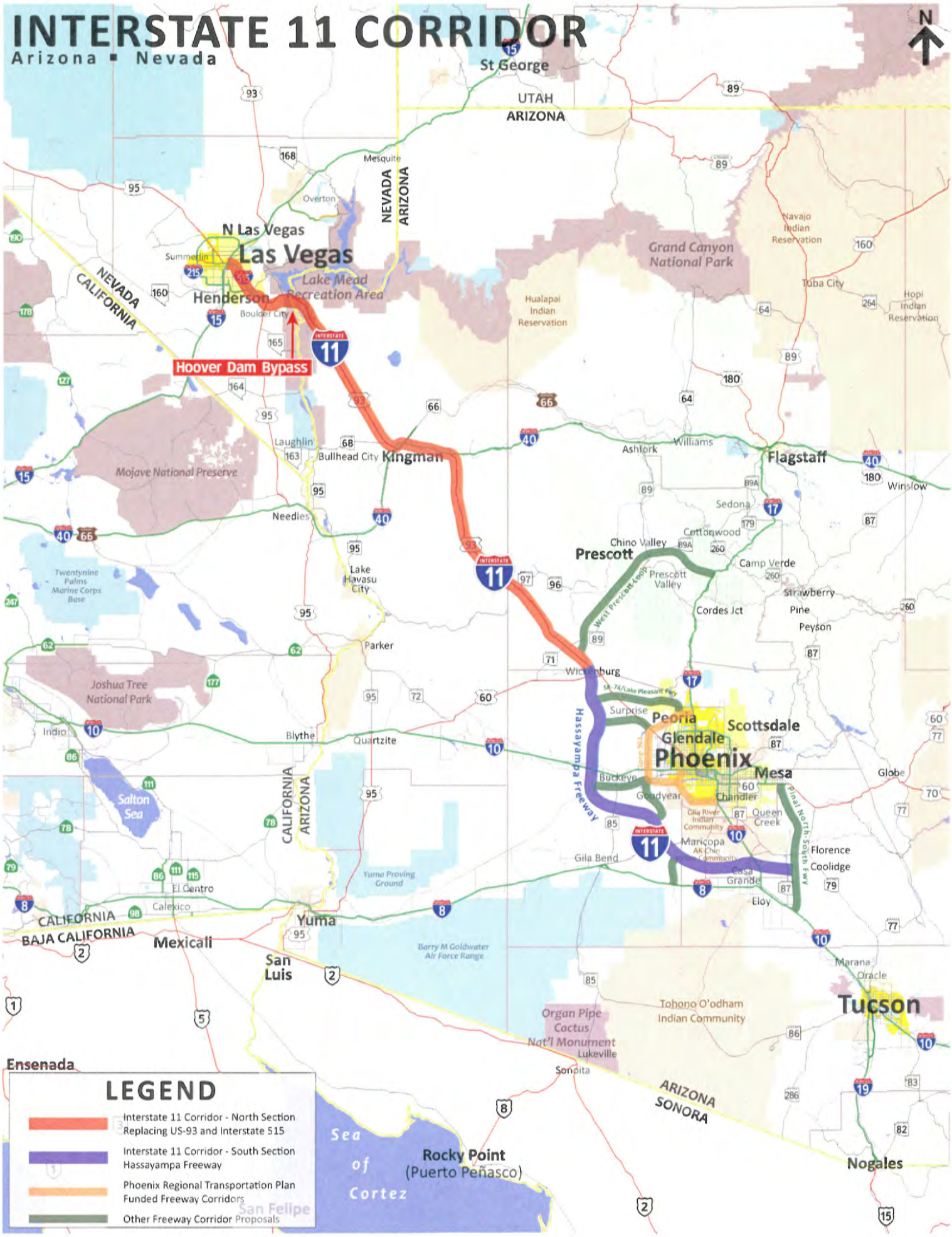
**ACTION NEEDED:**
Information and discussion.

**PRIOR COMMITTEE ACTIONS:**
None.

**CONTACT PERSON:**
Bob Hazlett, Senior Transportation Engineer, MAG 602 254-6300.

# INTERSTATE 11 CORRIDOR

Arizona ▪ Nevada



Agenda Item #7

# MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review

**DATE**:
June 1, 2010

**SUBJECT:**
Interim Closeout of the Federal Fiscal Year 2010 MAG Federally Funded Program

**SUMMARY:**
The interim closeout has established the availability of $2.337 million in unobligated MAG Federal funds for the current Federal Fiscal Year (FFY).

By May 2010, member agencies submitted requests to defer or delete federal funds from projects for approximately $14.5 million, which were approved by MAG Regional Council in May 2010. There are an additional $4.9 million of requests to defer or remove federal funds from projects being heard at the June - July committee cycle. The TRC recommended approval of the new requests on May 27, 2010. Please see Table A for information about request to defer projects or remove federal funding.

There were 28 projects submitted to MAG for closeout funds. Of the 28 projects, two projects were identified to be advanced, one project was requested to advance a portion of construction funds for a new design project for FFY 2010, seven projects that requested to be advanced and an increase of funds, nine projects scheduled for FFY 2010 requested additional funds, and nine projects requested new funds. These are identified in Table B titled 'List of Project Funding Requests.'

There were two motions made at the May 28, 2010 Transportation Review Committee (TRC) meeting. The first was to recommend approval of additional projects to be deferred from FFY 2010 to FFY 2011 or later, approve additional projects requesting removal of Federal funds, and to advance the priority 1 and 1A projects to FFY 2010. The second was to recommend to allocate the closeout funds deleted from FFY 2010 projects by the cities of Glendale and Mesa to those cities respectively.

Since the TRC met, Mesa has coordinated with MAG and is requesting that projects MES13-905 and MES10-810 are funded with the $2,141,307 FFY2010 Closeout funds. MAG staff has further reviewed the new deferral and deletion requests and has found that a request to delete the Glendale paving dirt shoulders project GLN07-779 will require further consideration. The motion will need to be changed at the Management Committee meeting.

**PUBLIC INPUT:**
There was no public comment at the April and May 2010, Transportation Review Committee meetings.

**PROS & CONS:**
PROS: Approval of these recommendations will allow for additional and accelerated transportation projects to be funded in the MAG region.

CONS: There is no guarantee that sufficient funds will be available in the following fiscal year to cover any or all of the deferred projects. Uncertainty over the reauthorization of the federal legislation makes this problem more acute.

**TECHNICAL & POLICY IMPLICATIONS:**
TECHNICAL: Action to close out the FFY 2010 MAG federally funded program is needed to ensure that all MAG federal funds are fully used in a timely and equitable manner. These actions may include any necessary amendments or administrative adjustments to the FY 2008-2012 MAG TIP to allow the projects to proceed.

POLICY: Previously adopted MAG policies on the allocation of uncommitted and redistributed federal funds to projects have been followed.

**ACTION NEEDED:**
Recommend approval of additional projects to be deferred from FFY 2010 to FFY 2011 or later and additional projects requesting removal of federal funds; advancing the three projects submitted for priority 1 and 1A projects to FFY 2010; allocating the $2.337 million from deleted projects in FFY 2010 by the cities of Glendale and Mesa to fund Glendale's GLN09-609 with $196,035 and fund Mesa's, MES13-905 and MES10-810 with $2,141,307; and amending and modifying the FY 2008-2012 Transportation Improvement Program, and as appropriate, the Regional Transportation Plan 2007 Update.

**PRIOR COMMITTEE ACTIONS:**
Transportation Review Committee: There were two motions made at the May 28, 2010 Transportation Review Committee (TRC) meeting. The first was to recommended approval of additional projects to be deferred from FFY 2010 to FFY 2011 or later, approve additional projects requesting removal of Federal funds, and to advance the priority 1 and 1A projects to FFY 2010. The second was to recommend to allocate the closeout funds deleted from FFY 2010 projects by the cities of Glendale and Mesa to those cities respectively. The Glendale allocation of $196,035 to be programmed for the Skunk Creek project adding that the City of Mesa should coordinate with MAG on programming Mesa's allocation of the $2,141,307.

MEMBERS ATTENDING
Peoria: David Moody
ADOT: Robert Samour for Floyd Roehrich
Avondale: David Fitzhugh
Buckeye: Scott Lowe
Chandler: Dan Cook for Patrice Kraus
El Mirage: Pat Dennis for Lance Calvert
Fountain Hills: Randy Harrel
Gila Bend: Eric Fitzer for Rick Buss
Gila River: Sreedevi Samudrala for Doug Torres
Gilbert: Michelle Gramley for Tami Ryall
Glendale: Terry Johnson
Goodyear: Cato Esquivel
Guadalupe: Gino Turrubiartes
Litchfield Park: Paul Ward for Woody Scoutten
Maricopa County: John Hauskins
# Mesa: Scott Butler
* Paradise Valley: Bill Mead
Phoenix: Rick Naimark
Queen Creek: Tom Condit
RPTA: Bryan Jungwirth
Scottsdale: Dave Meinhart
Surprise: Bob Beckley
Tempe: Chris Salomone
Valley Metro Rail: John Farry
* Wickenburg: Rick Austin
Youngtown: Grant Anderson for Lloyce Robinson

EX-OFFICIO MEMBERS ATTENDING
* Street Committee: Dan Cook
* ITS Committee: Debbie Albert
Bicycle/Pedestrian Committee: Peggy Rubach
* Transportation Safety Committee: Kerry Wilcoxon

* Members neither present nor represented by proxy. + - Attended by Videoconference
# - Attended by Audioconference

**CONTACT PERSON:**
Eileen Yazzie, (602) 254-6300.

MARICOPA ASSOCIATION of GOVERNMENTS
302 North 1st Avenue, Suite 300 ▲ Phoenix, Arizona 85003
Phone (602) 254-6300 ▲ FAX (602) 254-6490

June 1, 2010

TO: Members of the MAG Management Committee

FROM: Eileen O. Yazzie, Transportation Programming Manager

SUBJECT: FEDERAL FISCAL YEAR (FFY) 2010 YEAR END CLOSEOUT

## FFY 2010 OBLIGATION AUTHORITY

The estimated amount of federal surface transportation program (STP) and federal congestion mitigation air quality (CMAQ) funds available for the MAG region in FFY 2010 is approximately $93.5 million. Please note, the final notices of federal highway funds for FY 2010 are still not available and these are estimates. Additionally, there is $48 million in carryforward funds, which brings the available funds to obligate to $141.7 million. It is projected that $81.4 million will be obligated by the end of the FFY 2010. This leaves a total of $60.3 million left in the MAG Region *before* fiscal constraint is met for project deferrals and other regional program commitments in 2011-2015.

## Fiscal Constraint for Project/Program Commitments

To meet the federal requirements for the region's Transportation Improvement Program (TIP), the first four years of a TIP have to be fiscally constrained. At this point, the DRAFT FY 2011-2015 MAG TIP is fiscally constrained dependent on utilizing the majority, $58.7, of the $60.3 million carryforward in future years for project deferrals that are part of this FFY 2010 Closeout, the deferral of two CMAQ highway projects, and projects in the Arterial Life Cycle Program.

1. Deferral Requests - The MAG Regional Council approved $12.4 million of project deferrals on May 26, 2010. There are additional deferral requests totaling $4.7 million that are on today's agenda for action, bringing the total of project deferral requests to $17.1 million. To approve these projects to be included in the fiscally constrained DRAFT FY2011-2015 MAG TIP, the funding commitment to complete the projects needs to be deferred as well.
2. CMAQ Highway Projects - There are two highway CMAQ projects being deferred to FY2011 reflected in the DRAFT FY 2011-2015 TIP for $7.264 million in which the funding commitment to complete the projects needs to be deferred as well.
3. Arterial Life Cycle Program - The DRAFT FY 2011 ALCP is fiscally constrained dependent on a carryforward of STP-MAG funds of $34.3 million to be obligated between 2011 - 2013.

MAG will work with ADOT to meet the FFY 2010 federal obligation requirements, while continuing the financial commitments for future CMAQ and STP funds for projects and programs identified in the DRAFT FY 2011-2015 TIP.

## Deletion of Projects

On May 26, 2010, the MAG Regional Council approved $2.141 million to delete projects funded with CMAQ; all of the projects were led by the City of Mesa. There are two additional deletion requests totaling $196,035 that are on today's agenda for action; both of these are led by the City of Glendale. This brings the total amount of project deletions to $2.337 million of CMAQ funds.

## Amount Available for FFY 2010 Closeout

The amount available for FFY 2010 Closeout for additional funds for current FFY 2010 CMAQ projects (PRIORITY #2) and new projects (PRIORITY #3) is the amount that is deleted from projects: $2.337 million of CMAQ funds. The three projects submitted for advancement of funds could be considered to be advanced as PRIORITY #1 if they are able to meet the deadlines and requirements that are to be set forth in the ARRA discussion.

## Submittal of Projects

There were 28 projects submitted to MAG for closeout funds. Of the 28 projects, two projects were identified to be advanced, one project was requested to advance a portion of construction funds for a new design project for FFY 2010, there were seven projects that requested to be advanced and increase of funds, nine projects scheduled for FFY 2010 requested additional funds, and nine projects requested new funds. These are identified in the table titled 'List of Project Funding Requests.'

## DRAFT FY 2009 MAG Federal Fund Programming Principles

The 2009 Closeout process will follow the DRAFT FY 2009 MAG Federal Fund Programming Principles (Principles) which set forth guidelines on project selection for available federal funds.

Per the DRAFT Principles:
Projects submitted for use of Closeout funds will be selected based on the following three priorities in order:

1. Advancing projects (or phases of projects) of the same mode that are already programmed in the current Transportation Improvement Program (TIP) with MAG federal funds from a future year, in chronological order of the TIP.
2. Adding additional federal funds to an existing, unobligated project, up to the originally programmed, federal-aid maximum, or the maximum established by the mode in the RTP, whichever is less.
3. New projects.

## Transportation Review Committee - May 28, 2010

There were two motions made at the May 28, 2010 Transportation Review Committee (TRC) meeting. The first was to recommended **approval of additional projects to be deferred from FFY 2010 to FFY 2011 or later, approve additional projects requesting removal of Federal funds**, and to advance the priority 1 and 1A projects to FFY2010. The second was to recommend to allocate the closeout funds deleted from FFY 2010 projects by the cities of Glendale and Mesa to those cities respectively. The Glendale allocation of $196,035 to be programmed for the Skunk Creek project adding that the City of Mesa should coordinate with MAG on programming Mesa's allocation of the $2,141,307.

Since the TRC met, Mesa has coordinated with MAG and is requesting that projects MES13-905 and MES10-810 are funded with the $2,141,307 FFY2010 Closeout funds.

MAG staff has further reviewed the new deferral and deletion requests and has found that a request to delete the Glendale paving dirt shoulders project GLN07-779 will require further consideration. The motion will need to be changed at the Management Committee meeting.

The amount available for FFY 2010 Closeout is subject to change since member agency deferral notifications are still being submitted and the amount of STP and CMAQ funds to the MAG region are still being finalized.

If there are any questions regarding the FFY 2010 year-end Closeout process, please call Eileen Yazzie at 602-254-6300.

# TABLE A

## Federal Fiscal Year 2010 Closeout - Requests to Defer Projects, Remove Federal Funds/Delete Projects

### PROJECTS NEEDING ACTION

**Requests to Defer Projects - First Request**

**Per the Programming Principles, 'Member agencies are allowed a one time deferral without justification.'**

| Closeout Request | Section | Agency | ID | Location | Work | Length | Funding | FedCost | LocCost | Total | MAG Mode | Original Yr Prog. for Const. | # of Times Deferred (not including this request) | Year Requested to be deferred | Have Letter? | Will the project be complete? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Defer | Highway | El Mirage | ELM13-903 | Dysart Ranchettes area: Varney Rd, Peoria Ave, Dysart Rd, El Mirage | Paving dirt roads | 3.4 | CMAQ | $ 1,250,000 | $ 1,750,000 | $ 3,000,000 | AQ/TDM | 2010 | 0 | 2011 | Not needed | |
| Defer | Highway | Phoenix | PHX10-845 | Salt River: 24th Street to I-10/Tempe Drain | Construct Multi-use path | | CMAQ | $ 801,606 | $ 480,100 | $ 1,281,706 | Bike/Ped | 2010 | 0 | 2011 | Not needed | |
| Defer | Highway | Tempe | TMP10-620 | Broadway Rd: Rural Rd to Mill Ave | Construct pedestrian and bicycle facilities improvements | 1 | CMAQ | $ 2,571,780 | $ 2,571,780 | $ 5,143,560 | Bike/Ped | 2010 | 0 | 2011 | Not needed | |
| Defer | Highway | Tempe | TMP10-629 | Salt River: I-10/Tempe Drain to Priest | Construct Multi-use path | 1.1 | CMAQ | $ 120,000 | $ 400,000 | $ 520,000 | Bike/Ped | 2010 | 0 | 2011 | Not needed | |
| | | | | | | | | $ 4,743,386 | | | | | | | | |

**Requests to Remove Federal Funds from the Project/Delete Project**

| Closeout Request | Section | Agency | ID | Location | Work | Length | Funding | FedCost | LocCost | Total | MAG Mode | Original Yr Prog. for Const. | # of Times Deferred (not including this request) | Year Requested to be deferred | Have Letter? | Will the project be complete? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Delete* | Highway | Glendale | GLN07-779* | Various Locations: Camelback Rd, Litchfield Rd, Olive Ave, Greenway Rd, 83rd Ave, 75th Ave | Pave dirt shoulders | 5.17 | CMAQ | $ 133,035 | $ 133,035 | $ 266,070 | AQ or TDM | Request to Delete Project | | | | No |
| Delete | Highway | Glendale | GLN08-605 | Glendale Ave: Loop 101 to Luke AFB | Pave access points | 5 | CMAQ | $ 63,000 | $ 27,000 | $ 90,000 | AQ or TDM | Request to Delete Project | | | | No |
| | | | | | | | | $ 196,035 | | | | | | | | |

*MAG staff has further reviewed the new deferral and deletion requests and has found that a request to delete the Glendale paving dirt shoulders project GLN07-779 cannot move forward as requested. Modification to this request is pending and information will be presented at Management Committee.

### PROJECTS ALREADY APPROVED BY REGIONAL COUNCIL TO BE DEFERRED

**Requests to Defer Projects - Second Time or More**

**Per the Programming Principles, 'If a project is requesting to be deferred for the second time or more, a deferral justification letter is to be submitted.' Please see attached letters.**

| Closeout Request | Section | Agency | ID | Location | Work | Length | Funding | FedCost | LocCost | Total | MAG Mode | Original Yr Prog. for Const. | # of Times Deferred (not including this request) | Year Requested to be deferred | Have Letter? | Will the project be complete? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Defer | Highway | Chandler | CHN07-601 | Commonwealth Ave: Hamilton St to Ithaca | Pave dirt road | 0.2 | CMAQ | $ 325,000 | $ 1,075,000 | $ 1,400,000 | AQ or TDM | 2007 | 2 | 2011 | Yes | |
| Defer | Highway | El Mirage | ELM09-802 | 125th Ave and 127th Ave: Varney Rd to Peoria Ave | Pave unpaved roads | 1 | CMAQ | $ 381,031 | $ 1,102,252 | $ 1,483,283 | AQ or TDM | 2009 | 1 | 2011 | Yes | |
| Defer | Highway | Fort McDowell Yavapai Nation | FTM09-903C | Various Locations on Fort McDowell Yavapai Nation | Construct Pave dirt road | 2.5 | CMAQ | $ 375,000 | $ 24,000 | $ 399,000 | AQ or TDM | 2007 | 3 | 2011 | Yes | |
| Defer | Highway | Glendale | GLN09-610 | Downtown alley north of Glendale Ave between 57th Ave and 57th Dr | Transform existing service alleyway into a safe environment for pedestrian circulation and limited vehicular traffic | 0.04 | CMAQ | $ 240,721 | $ 103,166 | $ 343,887 | Ped | 2009 | 1 | 2012 | Yes | |

## TABLE A

### Federal Fiscal Year 2010 Closeout - Requests to Defer Projects, Remove Federal Funds/Delete Projects

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Defer | Highway | Glendale | GLN07-311 | Alley 250 ft north of Glendale Ave: 58th Ave to 57th Dr | Design and construct alley improvements and pedestrian walkway | 0.05 | CMAQ | $ 75,000 | $ 75,000 | $ 150,000 | Ped | 2007 | 2 | 2012 | Yes | |
| Defer | Highway | Mesa | MES07-315 | Southern Ave at Country Club Dr | Add 1 right turn lane and three bus pullouts. | 0.45 | CMAQ | $ 910,000 | $ 3,437,000 | $ 4,347,000 | Street | 2007 | 2 | 2013 | Yes | |
| Defer | Highway | Mesa | MES08-603 | Longmore: Broadway Rd to Main St (EVIT) | Design and construct bicycle path to connect Broadway Rd with Main St and the Light Rail Station | 0.5 | CMAQ | $ 1,082,739 | $ 388,961 | $ 1,471,700 | Bicycle | 2008 | 2 | 2011 | Yes | |
| Defer | Highway | Phoenix | PHX09-619 | 19th Ave at Greenway Rd | Construct multi-use path and bridge (phase 2) | 0.04 | CMAQ | $ 1,010,000 | $ 2,174,100 | $ 3,184,100 | Bicycle | 2009 | 1 | 2011 | Yes | |
| Defer | Highway | Phoenix | PHX09-624 | Various locations | Construct regional ITS fiber optic backbone, phase B-1 | 30 | CMAQ | $ 665,000 | $ - | $ 665,000 | ITS | 2009 | 1 | 2011 | Yes | |
| Defer | Highway | Phoenix | PHX09-871 | Various locations | Pave unpaved alleys | 18 | CMAQ | $ 466,667 | $ 200,000 | $ 666,667 | AQ or TDM | 2009 | 1 | 2011 | Yes | |
| Defer | Highway | Phoenix | PHX09-872 | Various locations | Pave unpaved roads | 3 | CMAQ | $ 1,050,000 | $ 450,000 | $ 1,500,000 | AQ or TDM | 2009 | 1 | 2011 | Yes | |
| Defer | Highway | Scottsdale | SCT07-606 | Dynamite Blvd: Pima Road to Alma School Road | Install Vertical Curb and Gutter | 3 | CMAQ | $ 500,000 | $ 500,000 | $ 1,000,000 | AQ or TDM | 2007 | 3 | 2011 | Yes | |
| Defer | Highway | Surprise | SUR09-820 | Rural Area West of 219th Ave between Pinnacle Peak & Deer Valley | Pave unpaved roads | 3.27 | CMAQ | $ 1,602,302 | $ 686,700 | $ 2,289,002 | AQ or TDM | 2009 | 1 | 2011 | Yes | |
| | | | | | | | | $ 8,683,460 | | | | | | | | |

### PROJECTS ALREADY APPROVED BY REGIONAL COUNCIL TO BE DEFERRED

**Requests to Defer Projects - First Request**

**Per the Programming Principles, 'Member agencies are allowed a one time deferral without justification.'**

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Defer | Highway | Buckeye | BKY10-801 | Miller Road: Hazen Rd to I-10 and Monroe (MC85): Miller Rd to Apache Rd | Interconnect Traffic Signals | 6 | CMAQ | $ 210,000 | $ 90,000 | $ 300,000 | ITS | 2010 | 0 | 2013 | Not needed | |
| Defer | Highway | Buckeye | BKY11-801 | North Watson Road and MC85 Phase I and Phase II | Pave Unpaved Road | 0.22 | CMAQ | $ 64,456 | $ 3,896 | $ 68,352 | AQ or TDM | 2011 | 0 | 2013 | Not needed | |
| Defer | Highway | Chandler | CHN13-901 | Various Locations in the City of Chandler | Paving dirt alleys | 10 | CMAQ | $ 350,000 | $ 589,000 | $ 939,000 | AQ or TDM | 2010 | 0 | 2011 | Not needed | |
| Defer | Highway | Fort McDowell Yavapai Nation | FTM13-901 | Various Locations on Fort McDowell Yavapai Nation | Paving dirt roads | 4.7 | CMAQ | $ 700,000 | $ 1,650,000 | $ 2,350,000 | AQ or TDM | 2010 | 0 | 2011 | Not needed | |
| Defer | Highway | Phoenix | PHX10-633 | Various locations | Construct regional ITS fiber optic backbone, phase B-2 | 30 | CMAQ | $ 665,000 | $ - | $ 665,000 | ITS | 2010 | 0 | 2011 | Yes-Not Needed | |
| Defer | Highway | Phoenix | PHX13-904 | Various Locations in the City of Phoenix: 44 miles of dirt alleys | Paving dirt alleys | 44 | CMAQ | $ 1,200,000 | $ 920,000 | $ 2,120,000 | AQ or TDM | 2010 | 0 | 2011 | Yes-Not Needed | |
| Defer | Highway | Scottsdale | SCT10-617R | Scottsdale Rd: Earll Dr to Chaparral Rd | Upgrade sidewalks and add bicycle lanes | 3 | CMAQ | $ 510,696 | $ 2,540,741 | $ 3,051,437 | Ped | 2010 | 0 | 2011 | Yes-Not Needed | |
| | | | | | | | | $ 3,700,152 | | | | | | | | |

### PROJECTS ALREADY APPROVED BY REGIONAL COUNCIL TO BE DELETED

**Requests to Remove Federal Funds from the Project/Delete Project**

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Delete | Highway | Mesa | MES06-203C | Pepper Pl: Lewis St to Robson St | Construct multi-use path | 0.5 | CMAQ | $ 305,961 | $ 93,039 | $ 399,000 | Bicycle | Request to Delete Project | | | | No |
| Delete | Highway | Mesa | MES07-314 | South Canal: Val Vista Dr to Greenfield Rd | Construct multi-use path. Development of multi-use path system (MUP) | 1.25 | CMAQ | $ 541,800 | $ 232,200 | $ 774,000 | Bicycle | Request to Delete Project | | | | No |
| Delete | Highway | Mesa | MES09-605 | Grand St: Broadway Rd to 6th Ave (Nuestro neighborhood phase 1) | Improve pedestrian facilities | 0.25 | CMAQ | $ 441,041 | $ 189,018 | $ 630,059 | Ped | Request to Delete Project | | | | No |
| Delete | Highway | Mesa | MES10-608 | South Canal: McDowell Rd to Val Vista Dr | Construct new multi-use path on the north bank | 1.5 | CMAQ | $ 852,505 | $ 568,337 | $ 1,420,842 | Bicycle | Request to Delete Project | | | | No |
| | | | | | | | | $ 2,141,307 | | | | | | | | |

# TABLE B
# FY 2010 Closeout - List of Project Funding Requests

**Priority Key: 1 = Advance, 1A = Advance portion of construction segment for a new design phase, 2 = Advance and request additional funding, 3 = New CMAQ project requested.**

| Priority | Agency | TIPIDN | Mode | Location | Project Description | Current Programming | | | | Change in FY 2010 Federal Funding | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Year | Federal | Local | Total | New/Increased | Advanced | Total |
| 1 | Litchfield Park | LPK13-901 | AQ or TDM | Wigwam Boulevard at Litchfield Road Bypass | Acquire right of way and construct multi-use underpass | 2013 | 800,000 | 471,000 | 1,271,000 | - | 800,000 | 800,000 |
| 1 | Surprise | SUR11-715 | ITS | Peoria Ave: Litchfield Rd to Jackrabbit Rd | Design and construct fibre optic cable interconnection of existing and future ITS facilities | 2011 | 700,000 | 1,000,000 | 1,700,000 | - | 700,000 | 700,000 |
| 1A | Surprise | SUR11-714* | Pedestrian | Bell Road US60(Grand Avenue) to 114th Avenue | Design of Multiuse Path | 2012 | 1,000,000 | 500,000 | 1,500,000 | - | 175,000 | 175,000 |
| 1-2 | Chandler | CHN08-610C | Bicycle | Loop 101 (Price Freeway) at Galveston Street | Construct multi-use path and bridge over the Loop 101 (Price Freeway) at Galveston Street | 2012 | 1,164,992 | 1,315,808 | 2,480,800 | 318,250 | 1,164,992 | 1,483,242 |
| 1-2 | Chandler | CHN14-101 | Bicycle | Chandler: Galveston Street Bicycle & Pedestrian Bridge | Construct Bicycle/Pedestrian Bridge, Phase 2 | 2014 | 2,056,758 | 64,942 | 2,121,700 | - | 2,056,758 | 2,056,758 |
| 1-2 | Mesa | MES 12-815 | ITS | Brown Rd., Higley Rd. (ITS Phase 5) | Fiber, cameras, detection, cabinets, controllers. | 2012 | 659,994 | 1,934,406 | 2,594,400 | 1,934,406 | 659,994 | 2,594,400 |
| 1-2 | Mesa | MES 11-703 | ITS | Citywide | New Cabinets, Controllers | 2011 | 700,000 | 500,000 | 1,200,000 | 500,000 | 700,000 | 1,200,000 |
| 1-2 | Mesa | MES 13-905 | Bicycle | Consolidated Canal: Lindsay Road to Baseline Road | Design and Construct 10-foot wide concrete path | 2012 | 1,099,000 | 471,000 | 1,570,000 | 471,000 | 1,099,000 | 1,570,000 |
| 1-2 | Mesa | MES08-602R | Pedestrian | North-South Pedestrian Path: Phase 2 - 1st Street to Convention Center | Construct pedestrian improvements | 2011 | 253,673 | 83,717 | 337,390 | 83,717 | 253,673 | 337,390 |
| 1-2 | Phoenix | PHX13-903 | Pedestrian | 32nd St: Washington St to McDowell Rd | Design 32nd St Pedestrian Enhancement (Washington St to McDowell Rd) | 2013 | 373,000 | 480,150 | 853,150 | 480,150 | 373,000 | 853,150 |

# TABLE B

# FY 2010 Closeout - List of Project Funding Requests

**Priority Key: 1 = Advance, 1A = Advance portion of construction segment for a new design phase, 2 = Advance and request additional funding, 3 = New CMAQ project requested.**

| Priority | Agency | TIPIDN | Mode | Location | Project Description | Current Programming | | | | Change in FY 2010 Federal Funding | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Year | Federal | Local | Total | New/Increased | Advanced | Total |
| 2 | Buckeye | BK07-704 | AQ or TDm | Various Locations: MC85/Monroe, Southern Ave., Apache Rd. | Pave Dirt Shoulders | 2010 | $113,000 | $187,000 | $300,000 | 169,900 | - | 169,900 |
| 2 | Glendale | GLN09-609 | Bicycle | Skunk Creek/Union Hills Dr. | Design and construct multi-use path under Union Hills Dr. | 2010 | 161,772 | 147,228 | 309,000 | 196,035 | - | 196,035 |
| 2 | Mesa | MES10-810 | ITS | Alma School Rd., Southern Ave., Baseline Rd., Guadalupe Rd. (ITS Phase 4B) | Fiber, cameras, detection, cabinets, controllers. | 2010 | 709,973 | 1,893,027 | 2,603,000 | 1,670,307 | - | 1,670,307 |
| 2 | Mesa | MES09-809 | ITS | Dobson Road, Broadway Road, Alma School Road (ITS Phase 4A) | Fiber, cameras, detection, cabinets, controllers. | 2010 | 651,254 | 992,746 | 1,644,000 | 992,746 | - | 992,746 |
| 2 | Mesa | MES08-604 | ITS | East Mesa (Various Locations) | New CCTV, Video Detection Cameras | 2010 | 838,700 | 359,400 | 1,198,100 | 359,400 | - | 359,400 |
| 2 | Phoenix | PHX07-315 | Pedestrian | 7th Ave at the ACDC Canal | Construct multi-use underpass | 2010 | 1,750,000 | 1,158,300 | 2,908,300 | 1,189,932 | - | 1,189,932 |
| 2 | Tempe | TMP10-620 | Pedestrian | Broadway Road - Rural Road to Mill Avenue | Construct bicycle and pedestrian facility improvements | 2010 | 2,571,780 | 2,571,780 | 5,143,560 | 1,200,000 | - | 1,200,000 |
| 2 | Tempe | TMP10-803 | ITS | Citywide | Install Video Detection System | 2010 | 305,568 | 138,969 | 444,537 | 138,969 | - | 138,969 |
| 2 | Tempe | TMP10-629 | Pedestrian | Salt River: SR143 Hohokam Freeway to Priest Drive | Construct multi-use path | 2010 | 400,000 | 40,000 | 440,000 | 1,250,000 | - | 1,250,000 |
| 3 | Avondale | New | Transit | City of Avondale City Center Design | 100% design plans for the MAG/Avondale Transit Study | | | | | $630,000 | $0 | $630,000 |
| 3 | Avondale | New | ITS | City of Avondale MOSC Building | Construction of Interim Traffic Operation Center | | | | | 888,000 | - | 888,000 |
| 3 | Glendale | New | Pedestrian | Downtown Alleyway: 58th Ave. to 57th Ave. | Design downtown alleyway for safe pedestrian circulation | | | | | $200,000 | $0 | $200,000 |
| 3 | Glendale | New | ITS | Various Locations Citywide | 22 CCTV cameras and 6 Ethernet installations | | | | | $207,460 | $0 | $207,460 |
| 3 | Glendale | New | ITS | Various Locations Citywide | Modernize traffic signals | | | | | $707,250 | $0 | $707,250 |

# TABLE B

# FY 2010 Closeout - List of Project Funding Requests

**Priority Key: 1 = Advance, 1A = Advance portion of construction segment for a new design phase, 2 = Advance and request additional funding, 3 = New CMAQ project requested.**

| Priority | Agency | TIPIDN | Mode | Location | Project Description | Current Programming | | | | Change in FY 2010 Federal Funding | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Year | Federal | Local | Total | New/Increased | Advanced | Total |
| 3 | Glendale | New | ITS | Various Locations Citywide | Upgrade traffic signal controllers | | | | | $235,750 | $0 | $235,750 |
| 3 | Scottsdale | New | ITS | Various Locations | Purchase and install traffic signal controllers and cabinets | | | | | $550,000 | $0 | $550,000 |
| 3 | Surprise | New | ITS | Surprise TMC | Develop an ITS Strategic Plan document in line with regional ITS planning efforts. | | | | | $190,000 | $0 | $190,000 |
| 3 | Valley Metro | New | Transit | Arizona Avenue/Country Club Drive | First year operating costs for the Arizona Avenue/Country Club Drive bus rapid transit (BRT) route. | | | | | $811,288 | $0 | $811,288 |
| | | | | | Total | | $ 16,309,464 | $ 14,309,473 | $ 30,618,937 | $ 15,374,560 | $ 7,982,417 | $ 23,356,977 |

Agenda Item #9

# *MARICOPA ASSOCIATION OF GOVERNMENTS INFORMATION SUMMARY... for your review*

**DATE**:
June 1, 2010

**SUBJECT:**
FY 2011 MAG Regional Plan to End Domestic Violence

**SUMMARY:**
During FY 2010, the MAG Regional Domestic Violence Council, together with more than 150 stakeholders, developed the new Regional Plan to End Domestic Violence in response to the changing dynamics created by the recession. This is not the first plan to address domestic violence using a regional approach. The first MAG Regional Plan to End Domestic Violence was approved by the MAG Regional Council in 1999. The new plan includes fifteen strategies in the areas of funding, training and education, coordination and collaboration, and services developed to maximize impact with limited resources in today's community. The Regional Plan to End Domestic Violence was recommended for approval by the MAG Regional Domestic Violence Council on May 6, 2010.

**PUBLIC INPUT:**
The Regional Plan to End Domestic Violence was developed on the basis of broad community input of more than 150 stakeholders beginning October 2009 through May 2010. The community input included elected officials, service providers, municipal staff and the private sector including survivors of domestic violence. An opportunity for public input on the Regional Plan was provided at the May 6, 2010, Regional Domestic Violence Council meeting but no public input was given.

**PROS & CONS:**
PROS: The Plan promotes a coordinated community response to domestic violence, maximizes impact with limited resources, helps to avoid duplication of efforts, and engages the community in efforts to maintain or enhance funding for domestic violence programs.

CONS: There are no anticipated cons from developing the report.

**TECHNICAL & POLICY IMPLICATIONS:**
TECHNICAL: The plan was developed using a strength-based approach. The techniques of Appreciative Inquiry (AI) and Open Space Technology were utilized to engage community partners in identifying strengths and how best to capitalize on prior successes to continue making the most impact. Nearly 90 AI interviews were completed with community stakeholders as well as with survivors of domestic violence. Responses to the interviews were analyzed for trends, which provided a starting point for discussion at the MAG Regional Plan to End Domestic Violence Summit in February 2010. Nearly 100 community stakeholders, including those who participated in the AI interview process, helped to develop strategies during the Summit. The Regional Plan to End Domestic Violence will be implemented in collaboration with community partners with regular progress reports provided to the MAG Regional Domestic Violence Council.

POLICY: The MAG Regional Domestic Violence Council created the next Regional Plan to End Domestic Violence to ensure continuation of a coordinated community response to domestic violence. The new plan takes into account advances in addressing this issue as well as the changing dynamics caused by the recession. The Regional Plan to End Domestic Violence provides a roadmap for maximizing impact with limited resources through increased coordination and collaboration throughout the region.

**ACTION NEEDED:**
Recommend approval of the FY 2011 MAG Regional Plan to End Domestic Violence.

**PRIOR COMMITTEE ACTIONS:**
MAG Regional Domestic Violence Council: The committee recommended the Regional Plan for approval at the May 6, 2010, meeting.

MEMBERS ATTENDING:

* Cmdr. Kim Humphrey, City of Phoenix Police Dept., Chair
Celeste Adams, Save the Family
Christina Avila, City of Avondale
Lt. Robert Bates, Phoenix Police Dept.
Kristen Scharlau for Kathy Berzins, City of Tempe
Larry Grubbs for John A. Blackburn, Jr., AZ Criminal Justice Commission
Allie Bones, Arizona Coalition Against Domestic Violence
Rick Buss, Town of Gila Bend
* Chris Christy, Salt River Pima-Maricopa Indian Community
JoAnn Del-Colle, Phoenix Family Advocacy Center
Councilmember Roy Delgado, City of El Mirage
* President Diane Enos, Salt River Pima-Maricopa Indian Community
Will Gonzalez, City of Phoenix Prosecutor's Office
Laura Guild, Arizona Dept. of Economic Security
* Dan Hughes, City of Surprise
Lynette Jelinek, Glendale Fire Dept.
Alice Ghareib for Mary Lynn Kasunic, Area Agency on Aging
* Patricia Klahr, Chrysalis Shelter Inc.
Councilmember Suzanne Klapp, City of Scottsdale
* Councilmember Sheri Lauritano, City of Goodyear
Councilmember Phil Lieberman, City of Glendale
* Jodi Beckley Liggett, Arizona Foundation for Women
Barbara Marshall, Maricopa County Attorney's Office, Vice Chair
Jeremy Arp for Maria-Elena Ochoa, Governor's Office for Children, Youth, and Families
Dottie O'Connell, Chicanos Por la Causa
Connie Phillips, Sojourner Center
Lynn Potts for John Pombier, City of Mesa
* Kerry Ramella, City of Phoenix Fire Dept.
Sarah Youngblood, Community Legal Services

*Those members neither present nor represented by proxy.

**CONTACT PERSON:**
Renae Tenney, Human Services Planner, 602-254-6300

MARICOPA ASSOCIATION of GOVERNMENTS

# Regional Plan to End Domestic Violence

Regional Domestic Violence Council
May 6, 2010

St. Luke's Health Initiatives
*A Catalyst for Community Heath*

Funded through a grant from
St. Luke's Health Initiatives

MAG Regional Plan to End Domestic Violence 2010 SUMMIT

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MARICOPA ASSOCIATION of GOVERNMENTS

# Executive Summary

The Maricopa Association of Governments (MAG) Regional Domestic Violence Council leads the coordinated community response for ending domestic violence. Established in 1999, the Council strives to reduce the incidence of and trauma associated with domestic violence. The Council was formed to implement recommendations laid out in the first regional domestic violence plan. At the time, the MAG region was one of only six regions to utilize the strength of a regional approach to addressing domestic violence. The work of the Council continues today with the guidance of a new regional plan. The *MAG Regional Plan to End Domestic Violence* will impact the region by increasing survivor safety, holding abusers accountable, and trimming costs through streamlined processes.

Domestic Violence Council Chairman Commander Kim Humphrey (left foreground) attends the Regional Plan to End Domestic Violence 2010 Summit.

Thanks to Saint Luke's Health Initiatives, the new regional plan was developed through the guidance of domestic violence survivors, advocates, and community partners. Participation in the strength-based planning process brought together many devoted to making changes for survivors of domestic violence. Their diverse perspectives and innovative ideas are reflected in the plan's strategies. The outcome of the plan will be addressing sustainability of funding, raising awareness and education, enhancing multi-disciplinary coordination, and strengthening long-term supports.

St. Luke's Health Initiatives
*A Catalyst for Community Heath*

**The plan is built on four areas of focus:**

- Funding
- Training and Education
- Coordination and Collaboration
- Services

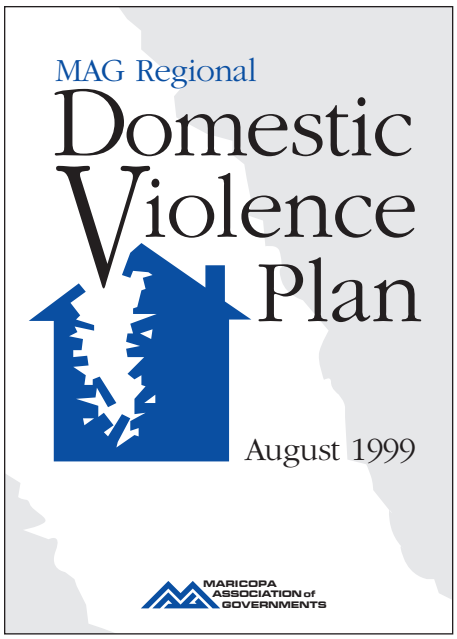
**Fifteen strategies provide the framework:**

1. Communicate the need for sustainable funding for existing programs and services.
2. Develop avenues for raising awareness and educating the public.
3. Increase social capital through grassroots efforts focused on the prevention of domestic violence.
4. Develop standardized, multi-disciplinary curriculum for providing domestic violence education to criminal justice system and first responders.
5. Develop multi-disciplinary training for victims about the criminal justice process, law enforcement procedures, and realistic expectations of these systems.
6. Develop cross-training between law enforcement, criminal justice system and advocates.
7. Increase coordination and collaboration between shelters and services.
8. Increase access to information on available resources.
9. Coordinate multi-disciplinary effort for reviewing standard protocols and practices for responding to domestic violence.
10. Connect all critical resources for people experiencing domestic violence and homelessness through a coordinated community response.
11. Create an ideal model for culturally competent prevention and intervention services.
12. Enhance the process for appropriately meeting survivors' housing needs.
13. Develop support groups for teens who have experienced or witnessed domestic violence.
14. Develop more transportation options for those residing in shelter.
15. Create long-term supports for helping survivors maintain their safety.

Forward movement is vital to the success of the *MAG Regional Plan to End Domestic Violence.* The Council is indebted to community partners that champion this work. Progress will be monitored on a quarterly basis through reports to the MAG Regional Domestic Violence Council.

An annual report will show the impacts achieved by implementing the plan's strategies. The new *MAG Regional Plan to End Domestic Violence* will prove to enhance processes for increasing victim safety, holding abusers accountable, and leveraging limited resources to make the most impact in ending domestic violence throughout the region.

To become involved in these efforts, please contact Renae Tenney at rtenney@mag.maricopa.gov or by calling (602) 254-6300.
All materials may be accessed at www.mag.maricopa.gov.




The MAG Domestic Violence Council was formed to implement recommendations laid out in the first regional domestic violence plan which was developed in 1999.

# Introduction

The Maricopa Association of Governments (MAG) *Regional Plan to End Domestic Violence* provides a blueprint for continuing to make a difference in the lives of individuals and families seeking to escape violence. The landscape of domestic violence has changed dramatically over the past 10 years, especially in the wake of the recession. Funding for domestic violence providers has been drastically reduced while case managers are reporting their clients are experiencing an increase in intensity and complexity of abuse. Job loss and home foreclosures are increasing the severity of financial strains experienced by many families throughout the region. This new environment provides plenty of uncertainty, but it also presents a unique opportunity to reassess how to work better together as a region to address domestic violence.

This three-dimensional timeline highlights ten years of accomplishments achieved through a coordinated community response to domestic violence.

The MAG Regional Domestic Violence Council was developed to reduce the incidence of and trauma associated with domestic violence in the MAG region. The Council coordinates initiatives with community partners and municipalities in accordance with the regional plan. Survivors of domestic violence, advocates, and community partners guide the development of the plan, and ultimately, the Council's work. This document serves as the next regional plan to end domestic violence. The outcome of the plan will be addressing sustainability of funding, raising awareness and education, enhancing multi-disciplinary coordination, and strengthening long-term supports to increase survivor safety, hold abusers accountable, and trim costs through streamlined processes. The Council's work has positively impacted the region's ability to respond to domestic violence.

Additional shelter beds are now available to help meet the demand for safety. Employers are more active in addressing domestic violence in the workplace. Teens are connected to

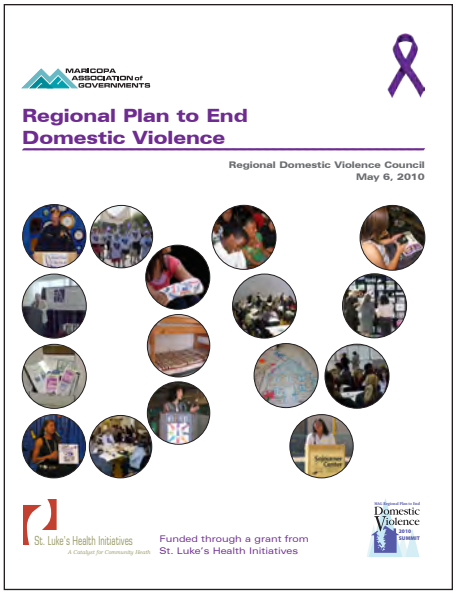
an online resource about dating violence. First responders and healthcare professionals receive training about identifying potential domestic violence victims. Efforts are underway to increase survivors' access to legal help. Countless lives have been saved by the work of the MAG Regional Domestic Violence Council in partnership with dedicated community partners.

The *MAG Regional Plan to End Domestic Violence* provides a roadmap for continuing an impactful regional response to domestic violence. First, an overview of the Council's background and key accomplishments are provided. Next, the plan describes the strength-based planning process utilizing *Appreciative Inquiry* interviews and facilitation techniques of World Café and Open Space Technology.

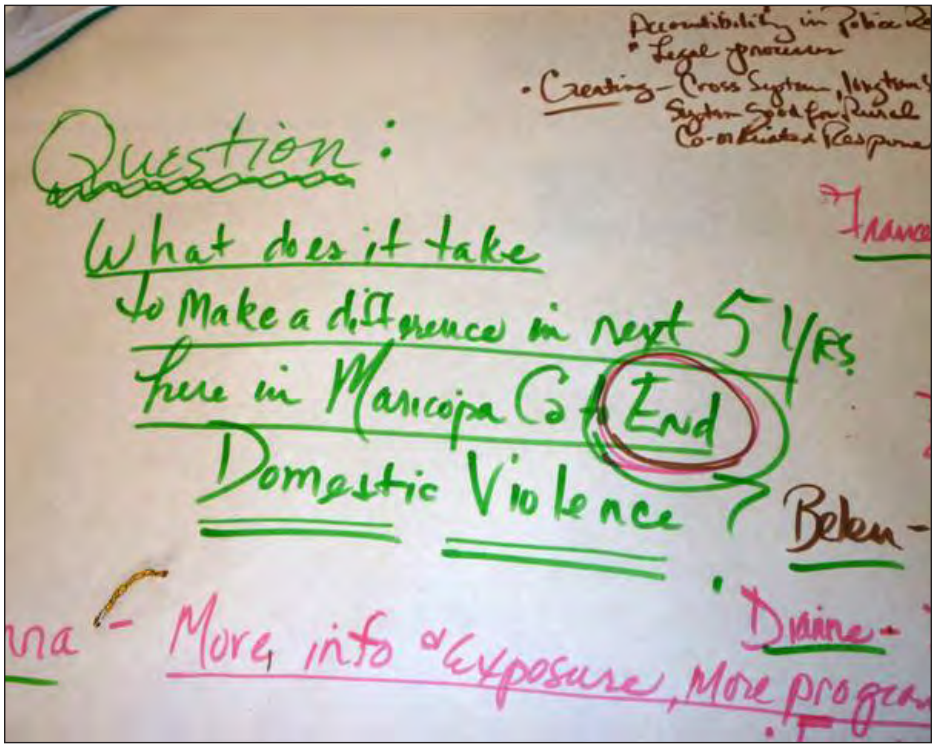
Fifteen strategies were developed around the need to embrace the changing environment and discover creative ways to leverage severely limited resources. These strategies address the following areas:

- Communicate funding concerns;
- Develop multi-disciplinary trainings for law enforcement, prosecution, and victim advocates;
- Assess protocols for arresting and prosecuting domestic violence offenders; and
- Develop additional long-term supports for survivors.

Many dedicated community partners participated in the plan development process. More than 150 individuals took part in *Appreciative Inquiry* interviews and attended the planning summit. Their innovative ideas for continuing meaningful work are captured in the plan's strategies and action plans. The strength of this plan lies in the diverse perspectives of those who participated in this process. The *MAG Regional Plan to End Domestic Violence* represents the collaborative work of many advocates, professionals, and survivors devoted to ending domestic violence in the region.




This new plan will provide a roadmap for continuing a regional response to domestic violence.




Collaborative brainstorming techniques were used during the summit to find ways to end domestic violence in the region.

# Domestic Violence 101

Domestic violence is a pattern of behavior that includes the use or threat of violence and intimidation for the purpose of gaining power and control over another person. Such violence is characterized by physical abuse, sexual abuse, economic abuse, isolation, emotional abuse, control, or verbal abuse. Legally, domestic violence is defined through 19 other crimes such as assault, homicide, and harassment. In Arizona, domestic violence was recognized legally only between adults within specific relationship parameters until recent legislative action. In July 2009, the state's definition of domestic violence was expanded to recognize dating violence amongst adults and teens.

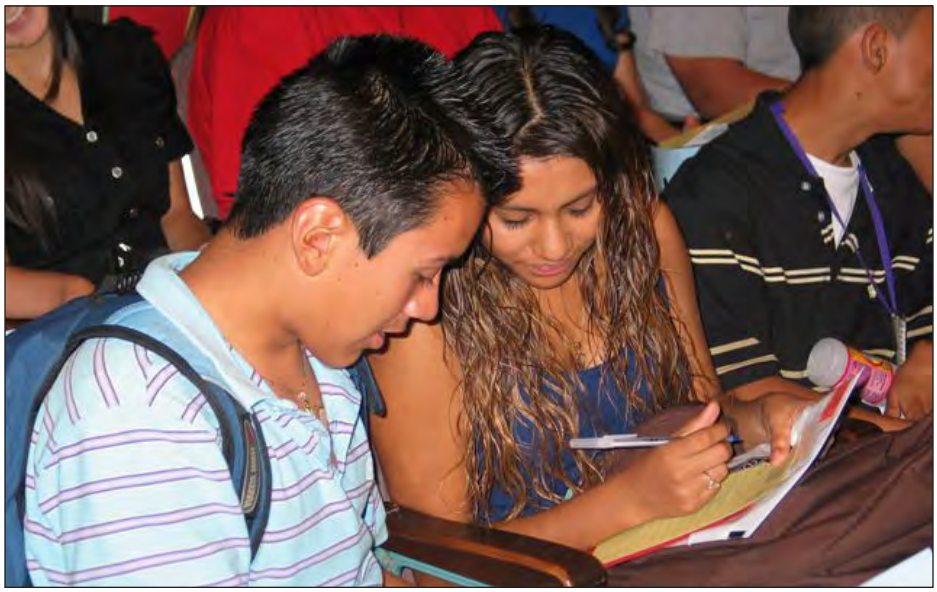
Research vividly documents the negative impact domestic violence has on the health of an individual, as well as the community. Abused teens are more likely to experience lower self-esteem; be abused as an adult; and have higher rates of teen pregnancy, substance abuse, depression, eating disorders and delinquency. Adult survivors of domestic violence are more likely to experience behavioral health issues, struggle with substance abuse, and suffer from physical injuries that may or may not be treated. The health of the one being abused suffers gravely, as well as witnesses to the abuse, such as children.

Domestic violence is a serious health condition that has a devastating impact on individuals, families, and communities. Every year, domestic violence takes away a significant number of lives and lost opportunities. Local research indicators point to the vast prevalence of domestic violence in this region. Respondents to a survey commissioned by MAG in 2005 revealed that 40 percent of adults personally knew someone who had been involved with domestic violence. Teens echo this sentiment consistently in focus groups conducted by MAG. Since 2006, more than 300 teens have participated in focus groups. On average, at least 50 percent reported they knew someone who had been a victim of teen dating violence. In some groups, 90 percent had such an experience. Lives can be saved through regional planning and coordination.

The downturn of the economy is intensifying domestic violence. More victims are remaining with their abusers longer due to the uncertainty of their jobs. Shelters and service providers are struggling to maintain appropriate service levels with unstable or reduced funding. In March 2010, state budget reductions included $1.6 million in cuts to domestic violence services. An estimated 1,600 victims are projected to be turned away from shelter due to a lack of funding. Regional planning dollars supporting the MAG Regional Domestic Violence Council have been eliminated. These changes emphasize the importance of working better together to make the most impact with limited resources.

# Background

Eleven years ago, the region awoke to the brutal reality of domestic violence when a mother was killed by her husband in front of their children. She had tried to escape, but returned home when none of the shelters she called had any room. Her story shocked the region into action. In 1999, the community came together to develop the *MAG Regional Domestic Violence Plan,* the region's first regional plan to address domestic violence. The plan was a major component in mobilizing the community around the issue of domestic violence.



Teens participating in the 2008 "Date Smart" Event at North High School discuss potential warning signs in dating relationships that could lead to abuse.

Within the year, the MAG Regional Domestic Violence Council was formed to coordinate implementation of the plan's recommendations. The Council engaged the community in collaborative projects in prevention, early intervention, crisis intervention, systems coordination and evaluation, and long-term responses to domestic violence. The results included trainings for health care professionals, online resources for teens experiencing dating violence, and the *Walk to End Domestic Violence.* This coordinated community response profoundly and positively impacted the region while earning national acclaim as a best practice model.

The *MAG Regional Domestic Violence Plan* successfully guided initiatives to address domestic violence in the region for 10 years. These initiatives, and the recent downturn of the economy, have changed the landscape of domestic violence in the region dramatically. In 2009, the MAG Regional Domestic Violence Council decided to refocus its efforts through development of a new regional plan. The Council spent the next year engaging the community in a strength-based process looking at what had been done well, and what successes could be capitalized upon to continue making a difference. The results of this process are captured in the new *MAG Regional Plan to End Domestic Violence.*

# Highlights of Accomplishments

In 2009, the MAG Regional Domestic Violence Council celebrated ten years of progress toward ending domestic violence in the region. Great strides have been made in providing safety to those deciding to leave a violent relationship.

From increasing shelter beds, to implementing workplace policies, to educating teens about healthy dating relationships, the Council has established the groundwork for intervening and preventing domestic violence in the region. A timeline of the Council's projects throughout the last ten years is provided as *Appendix A*. The following are highlights from the timeline of accomplishments.

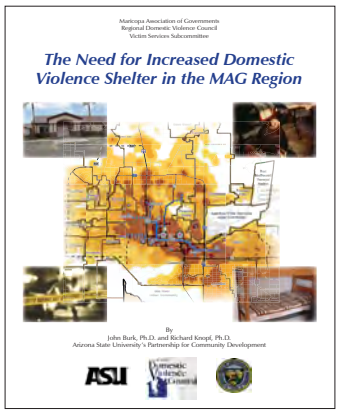
## Increased Domestic Violence Shelter Beds

The MAG Regional Domestic Violence Council conducted a study in 2006 on the need for additional domestic violence shelter beds in the region. *The Need for Increased Domestic Violence Shelter in the MAG Region* report was developed in partnership with Arizona State University's Partnership for Community Development and the Governor's Office Division for Women. The report offered statistically conclusive evidence that at least 325 more beds were needed to meet the existing demand for shelter. The study's findings led to the addition of 319 shelter beds, which ultimately decreased the turn away rate of families seeking shelter by more than 40 percent.

## Empowered Employers to Respond to Domestic Violence

In 2000, business leaders on the MAG Regional Domestic Violence Council established Employers Against Domestic Violence (EADV) to form a united response to domestic violence in the work place. This group conducted trainings as well as biannual forums on the importance of corporate policies to help victims and maintain workplace safety. EADV partnered with the Men's Anti-Violence Network to develop domestic violence awareness packets for distribution to hundreds of employers, and collaborated with The Arizona Republic for the first *Annual Walk to End Domestic Violence,*

MAG Regional Domestic Violence Council 10th Anniversary 1999-2009


Maricopa Association of Governments
Regional Domestic Violence Council
Victim Services Subcommittee

The Need for Increased Domestic Violence Shelter in the MAG Region

By
John Burk, Ph.D. and Richard Knopf, Ph.D.
Arizona State University's Partnership for Community Development

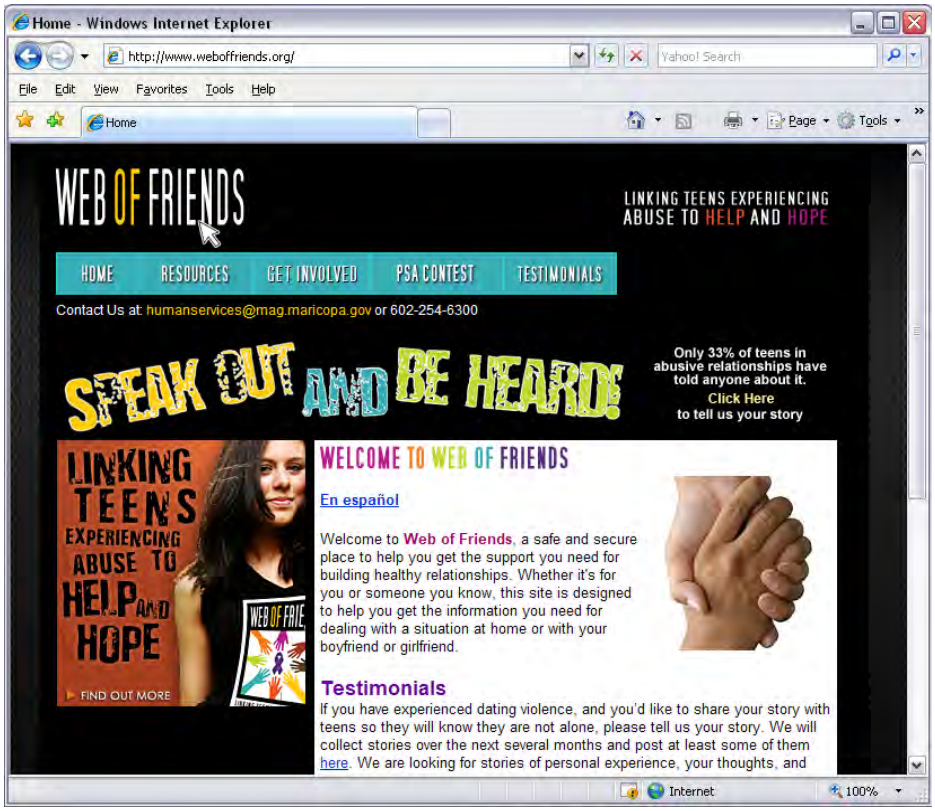
Walk to end domestic violence

Many MAG staff members and their families participated in the first Walk to End Domestic Violence event in 2003.

the most successful first-time walk in Arizona history. More than 3,000 people participated in the first year of the walk raising more than $130,000 to benefit nine domestic violence service providers.

## Connected Teens to Safety

The MAG Youth Empowerment Project was developed to put resources about dating violence directly in the hands of teens. In 2006, the project was created after feedback from teens indicated they didn't feel safe in their relationships. More than 50 percent of the teens surveyed indicated they, or someone they knew, had been involved in an abusive dating relationship. They said the best way to reach teens with information about this issue was to talk about it and create an anonymous, on-line resource. Hundreds of teens throughout the region were engaged in discussions about the importance of building healthy dating relationships, and involved in developing a series of public service announcements. Teens' feedback also led to the creation of www.WebofFriends.org, a Web site specifically for teens. In 2009, visits to the project's Web site increased by 158 percent! Teens have contacted the site from as far away as Georgia, Norway, and India. The MAG Youth Empowerment Project continues to help teens experiencing abusive relationships throughout the nation and across the globe.

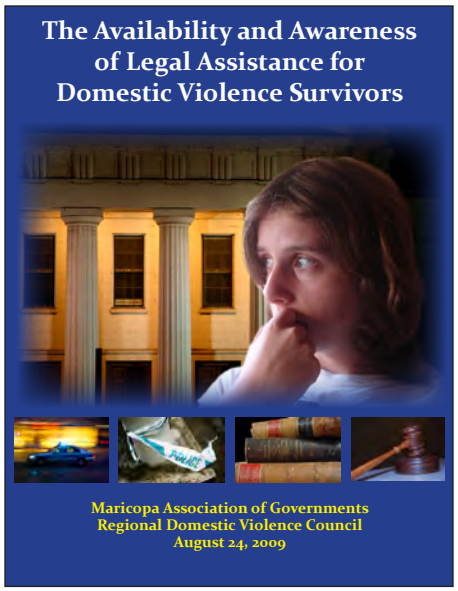


## Trained Healthcare Professionals to Screen for Domestic Violence

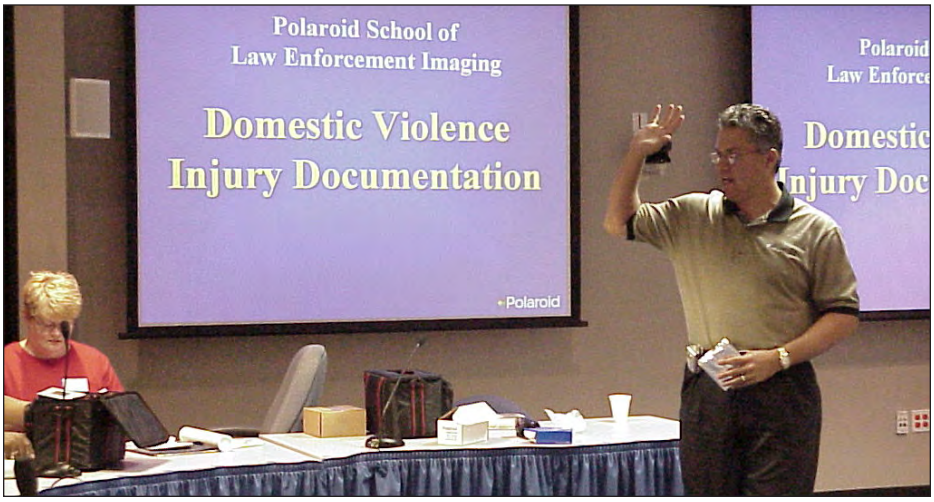
The MAG Regional Domestic Violence Council has partnered with the healthcare community to help victims to access assistance. In 2001, the Council collaborated with more than 20 municipalities and community organizations to provide first responders with training on how to work with child witnesses of domestic violence. The following year, an evidence-based domestic violence screening question was developed to help emergency room personnel identify potential domestic violence victims. Healthcare professionals received training on how to photograph domestic violence injuries and maintain photo documentation in patient's medical files. Interactive trainings for pediatricians were developed to help them determine when either the child or parent was experiencing domestic violence. This extensive collaborative project provided healthcare professionals with information about how to identify and respond to victims of domestic violence, and ultimately, provided victims with more avenues for accessing safety.

## Increased Legal Help for Survivors

*The Availability and Awareness of Legal Assistance for Domestic Violence Survivors,* a 2009 report released by the MAG Regional Domestic Violence Council, focused on the legal needs of domestic violence survivors navigating the civil court system. Domestic violence survivors as well as legal and domestic violence professionals participated in the study. All reported survivors have a difficult time finding affordable legal services. Nearly one quarter of survivors wanting legal assistance reported they did not receive it. The study found survivors may not know how to access affordable legal help. Professionals cited awareness as the biggest barrier to survivors securing legal representation. Recommendations were made to develop a legal assistance fund, reach out for pro bono legal services, develop educational materials about the civil court process, and raise awareness of the benefits of legal services. The Arizona Coalition Against Domestic Violence's Legal Committee is moving forward with several recommendations including coordinating efforts for accessing pro bono legal services, providing educational materials about the civil court process, and raising awareness of the benefits of accessing legal services.




The study found that nearly one quarter of all survivors wanting legal assistance did not receive it.




MAG hosted a training session in 2003 on how to use photography to document domestic violence injuries.

# Methodology to Develop the Plan

The development of a new regional plan to end domestic violence was identified as a primary goal of the MAG Regional Domestic Violence Council for FY 2010. The Council described the goal of the plan as highlighting what has been done well to address domestic violence in the region and what successes may be capitalized upon to make the most impact moving forward. The Council decided to use a strength-based, three-phase approach utilizing *Appreciative Inquiry* interviews, a community forum, and strategy refinement. Funding was secured from Saint Luke's Health Initiatives to support meaningful community engagement and plan development.

Nearly 90 community partners and domestic violence survivors participated in Appreciative Inquiry interviews for development of the plan.

## Appreciative Inquiry Interviews

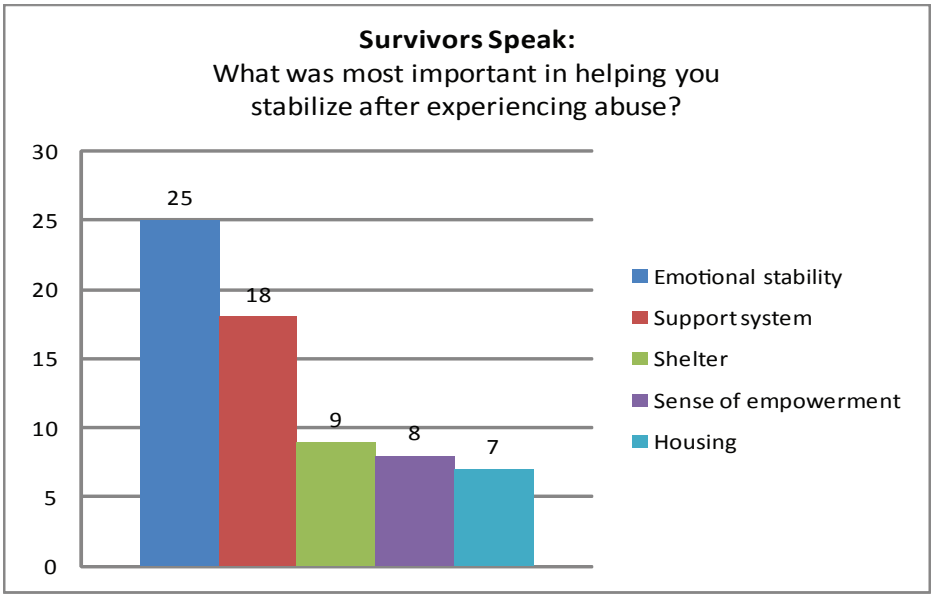
The first phase of plan development was an *Appreciative Inquiry* interview process. In October 2009, members of the MAG Regional Domestic Violence Council and community partners were invited to participate in a planning workgroup. The workgroup met twice to identify key areas of focus and create *Appreciative Inquiry* interview guides. Participants decided to create two sets of interview guides. One guide was designed for domestic violence professionals and another guide created for survivors of domestic violence. Workgroup members agreed to conduct and participate in interviews. Key community members were identified for requesting their participation in the interview process. The interview guides are provided in *Appendices B and C*.

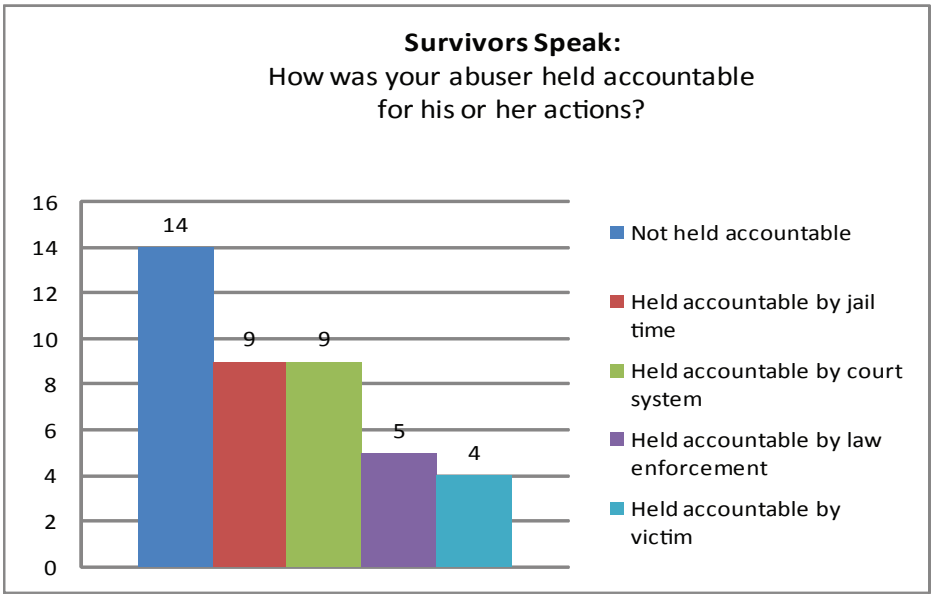
Interviews were conducted between November 2009 and January 2010. Nearly 90 community partners and survivors of domestic violence participated in this process. Interview data was analyzed for emerging trends and notable gems. Interviews were conducted with 44 professionals and 43 survivors of domestic violence. An overview of the findings is provided below. A full

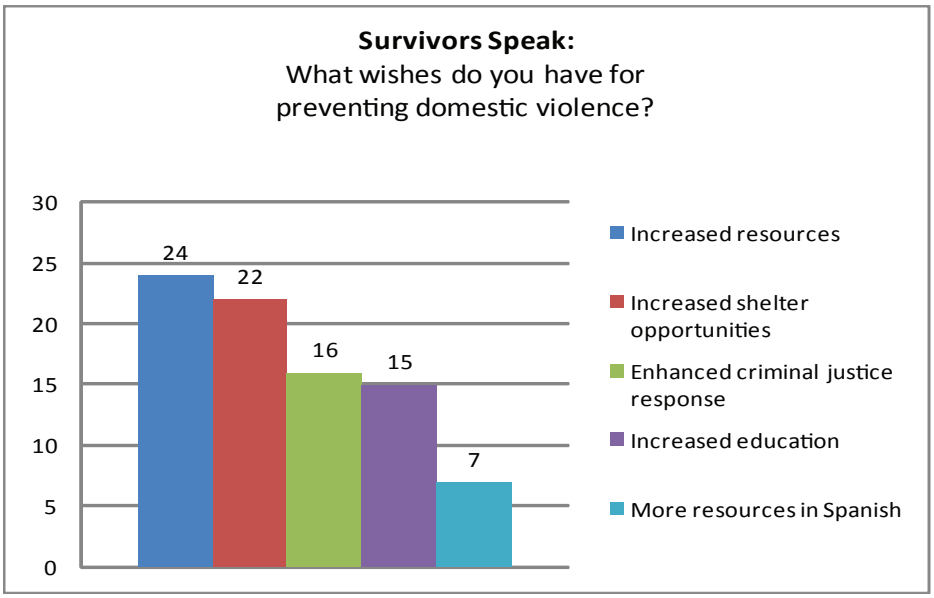
set of the results is provided in *Appendices D and E.*

Professionals shared their enthusiasm for the positive changes that have occurred to address domestic violence in the region. From providing services and shelter to survivors, raising public awareness, and establishing interdisciplinary collaborations, they believe the region has come a long way. However, they also indicated the need to continue work in these areas to refine the great efforts already taking place. Professionals cited the need to continue services and shelter options in spite of drastic state budget reductions, provide healthy relationships education to youth, and strengthen partnerships with first responders and players in the criminal justice system. Overall, professionals shared they are truly inspired by survivors of domestic violence and dedicated to improving efforts to end domestic violence in the region.

Survivors of domestic violence shared the triumphs and tribulations of their personal stories in the hopes of helping others trying to escape from abuse. Many survivors spoke of the importance of a support system, including their children, friends, extended family, victim advocates, shelter staff, and other survivors. Since most of the survivors were accessed through

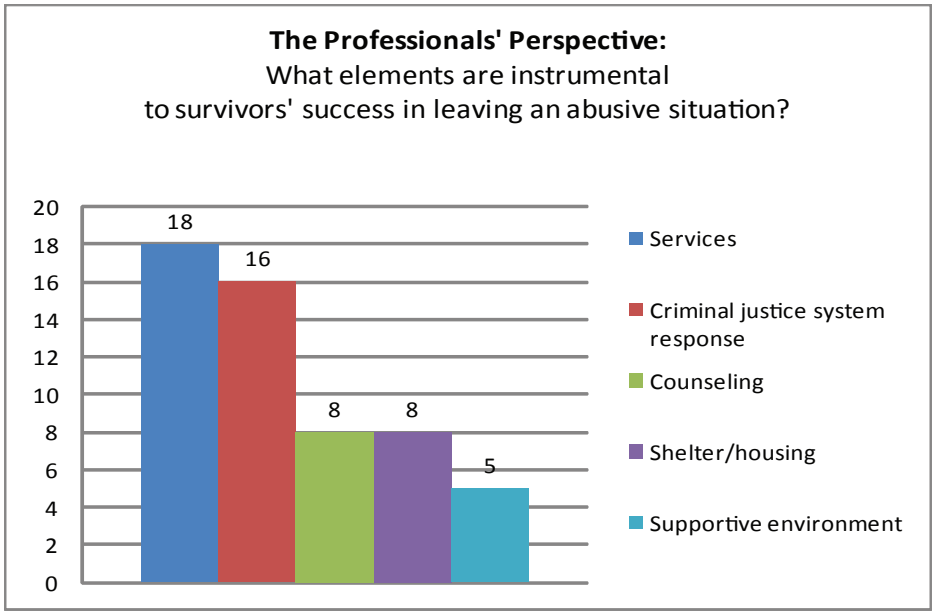


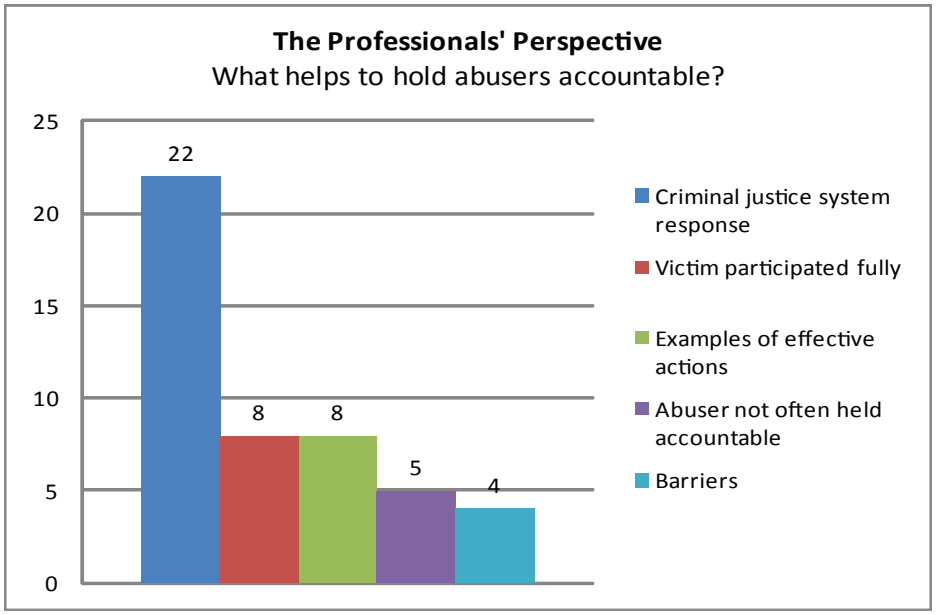



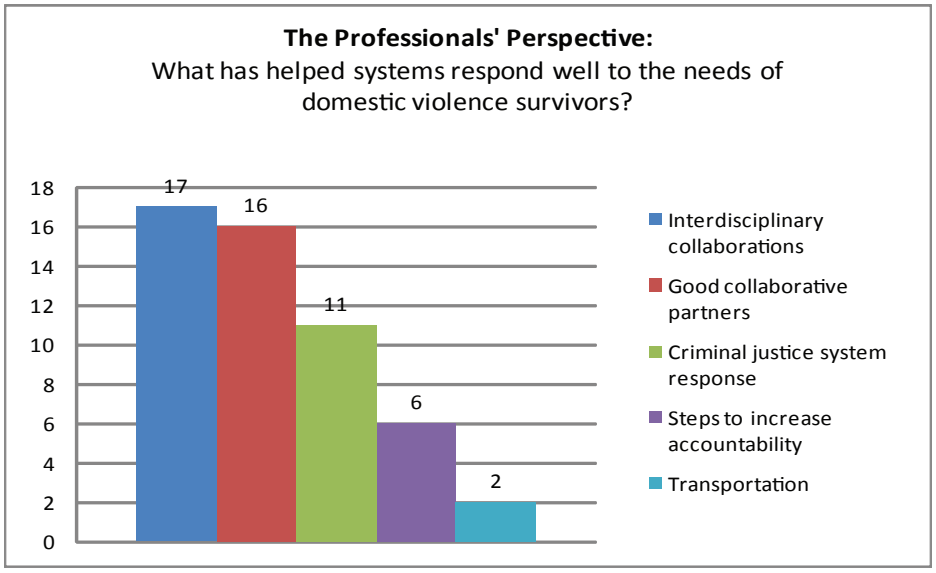



services and shelters, it was no surprise that many cited these resources made a huge difference in their ability to leave. Survivors wished for increasing resources to assist more survivors, providing additional avenues for accessing housing, increasing the public's awareness and education about domestic violence, and enhancing law enforcement and the criminal justice system's response to domestic violence. Overall, survivors were thankful for the help they have received in rebuilding their lives and the opportunity to enhance these resources for others struggling to leave a violent relationship.

Several common themes were found throughout interviews with both the professionals and survivors. The information gleaned from the interview process provided themes for discussion. These themes included the need to continue providing emergency services and shelter, enhancing public awareness and education efforts, and strengthening interdisciplinary collaborations between domestic violence providers, law enforcement, and the criminal justice system. These themes provided a foundation for the work of community partners at the MAG Regional Domestic Violence Summit, a community engagement forum.



## MAG Regional Plan to End Domestic Violence Summit

On February 24, 2010, nearly 100 community partners attended the *MAG Regional Plan to End Domestic Violence Summit,* the second phase of plan development. Participants included representatives from law enforcement, prosecution, education, domestic violence shelters and programs, victim advocates, and survivors of domestic violence. The Summit was facilitated by Sarah Griffiths and Cassandra O'Neill of Wholonomy Consulting, Inc.

*Appreciative Inquiry* interview data provided a starting point for strategy development at the Summit. An overview of the nine themes found during analysis of the interview data was presented to participants. One theme was assigned per table. Participants were encouraged to join the tables hosting the topics of interest to them and their work. These table discussions were organized using the World Café facilitation technique. World Café is used to create collaborative discussions, share knowledge, and build on the ideas of others to discover new opportunities.

**World Café Table Topics:**

- Increasing Community Awareness
- Increasing and Maintaining Access to Resources
- Creating a Coordinated Response
- Increasing Knowledge About Resources
- Increasing Accountability Throughout the Legal Process
- Creating Long-Term Supports
- Creating Cross-System Opportunities
- Increasing Accountability in Police Response
- Creating Systems Responsive to Rural and Native American Communities

MAG Regional Plan to End Domestic Violence 2010 SUMMIT

On February 24, 2010, nearly 100 community partners attended the MAG Regional Plan to End Domestic Violence 2010 Summit.

Participants at each table responded to the question: *"Over the next five years, what would it take for the region to become known nationally for its work to end domestic violence?"* The groups began their discussion based on this question and their table topic.

The World Café activity inspired rich conversations and ignited new ideas for developing strategies for the new regional plan.

Ideas from the World Café activity were brought forward

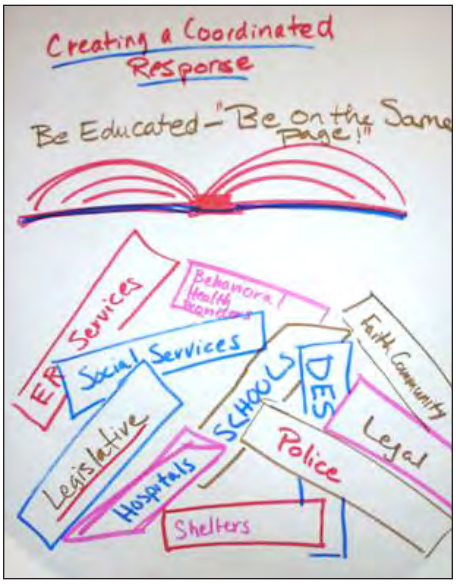
for the next step in the planning process, an Open Space Technology session. This technique is used to encourage creativity, generate enthusiasm, and help people self-organize to discuss what is most important to them and generate action plans to get results. Participants were seated in a large circle and encouraged to bring their ideas to the larger group. They were asked to frame their ideas within the context of the question: *"What strategies could be rolled out to connect and strengthen the regional work that seeks to end domestic violence?"* Participants generating ideas were designated as table hosts and took the lead in facilitating table discussions on their topics. Nine topic areas emerged during the Open Space planning session.

**Open Space Table Topics:**

- Sustaining Funding
- Awareness, Prevention, and Education
- Teen Help Programs
- Culturally Competent Services
- Housing
- Criminal Justice Accountability and Expectations
- Education of Criminal Justice System and First Responders
- Coordinated Community Response
- Shelters and Services Linkages

## Strategy Refinement

The MAG Regional Domestic Violence Council distilled the work from the Appreciative Inquiry interview process and the Summit in the third phase of plan development. In March 2010, the nine topic areas identified during the Open Space planning session were developed into strategies. Community partners were engaged throughout strategy development. Fifteen strategies were offered to the MAG Regional Domestic Violence Council on April 1, 2010. The Council provided feedback on the strategies. The strategies and action plans are reflected in the next section of this report.



# Strategies and Action Steps

Community partners provided valuable input and innovative ideas throughout the planning process. Fifteen strategies emerged from the facilitated activities at the MAG Regional Plan to End Domestic Violence Summit. These strategies aligned with input received during the Appreciative Inquiry Interview process. The strategies were organized into the four main categories of Funding, Training and Education, Coordination and Collaboration, and Services.

**Fifteen strategies provide the framework:**

1. Communicate the need for sustainable funding for existing programs and services.
2. Develop avenues for raising awareness and educating the public.
3. Increase social capital through grassroots efforts focused on the prevention of domestic violence.
4. Develop standardized, multi-disciplinary curriculum for providing domestic violence education to criminal justice system and first responders.
5. Develop multi-disciplinary training for victims about the criminal justice process, law enforcement procedures, and realistic expectations of these systems.
6. Develop cross-training between law enforcement, criminal justice system and advocates.
7. Increase coordination and collaboration between shelters and services.
8. Increase access to information on available resources.
9. Coordinate multi-disciplinary effort for reviewing standard protocols and practices for responding to domestic violence.
10. Connect all critical resources for people experiencing domestic violence and homelessness through a coordinated community response.
11. Create an ideal model for culturally competent prevention and intervention services.
12. Enhance the process for appropriately meeting survivors' housing needs.
13. Develop support groups for teens who have experienced or witnessed domestic violence.
14. Develop more transportation options for those residing in shelter.
15. Create long-term supports for helping survivors maintain their safety.

## Category: Funding

| Strategies | Short-Term | Long-Term | Resources | Primary Partners | Time-line |
|---|---|---|---|---|---|
| **1. Communicate the need for sustainable funding for existing programs and services.** | 1) Conduct meeting with foundation leaders,<br>2) Advocate on impact of loss of funding. | Create an endowment for funding services. | Domestic violence providers, business community, media, public | AZ Coalition Against Domestic Violence, Arizona Foundation for Women | FY 2011-2012 |

## Category: Training and Education

| Strategies | Short-Term | Long-Term | Resources | Primary Partners | Time-line |
|---|---|---|---|---|---|
| **2. Develop avenues for systems to raise awareness and educate the public about domestic violence.** | 1) Research best practices for raising awareness and providing education on a systems level,<br>2) Develop basic, consistent message,<br>3) Develop train-the-trainer modules for educating children and adults. | Create culturally competent, regional approach for systems to raise awareness and provide education on domestic violence; including awareness events, outreach, education in schools. | Schools, hospitals, doctors, WIC, county clinics, service providers, law enforcement, fire departments, behavioral health, government, community leaders, faith community | AZ Coalition Against Domestic Violence, Arizona Foundation for Women | FY 2011-2013 |
| **3. Increase social capital through grassroots efforts focused on the prevention of domestic violence.** | 1) Research strategies for leveraging social capital,<br>2) Recruit volunteers to assist in prevention and awareness activities. | Develop opportunities for community conversations to raise awareness and increase prevention of domestic violence; including awareness activities and outreach. | Community based leaders and groups, members of faith communities, neighbors, friends, relatives, and others engaged through personal connections | Purple Ribbon Council | FY 2011-2012 |
| **4. Develop standardized, multi-disciplinary curriculum for providing domestic violence education to criminal justice system and first responders.** | 1) Identify existing trainings for the criminal justice system, first responders, and law enforcement;<br>2) Determine how to expand or improve existing training curriculum. | 1) Develop collaboration among cities to share lessons learned including best practices for working with rural and Native American communities,<br>2) Establish a train-the-trainer curriculum for the criminal justice system, first responders, and law enforcement. | AZ POST, AZ Prosecuting Attorneys' Advisory Council, Regional Training Advisory Council, judges, mayors, decision makers, attorneys, police officers, advocates, survivors | AZ Coalition Against Domestic Violence, AZ Supreme Court Administrative Offices of the Court, Governor's Division for Women | FY 2011-2013 |
| **5. Develop multi-disciplinary training for victims about the criminal justice process, law enforcement procedures, and realistic expectations of these systems.** | 1) Determine key areas to highlight in training,<br>2) Develop multi-disciplinary training. | Deliver multi-disciplinary training. | AZ POST, AZ Prosecuting Attorneys' Advisory Council, family advocacy centers, judges, clergy, defense attorneys, survivors, police officers, advocates | Governor's Division for Women, Phoenix Family Advocacy Center | FY 2011-2012 |

## Category: Training and Education (continued)

| Strategies | Short-Term | Long-Term | Resources | Primary Partners | Time-line |
|---|---|---|---|---|---|
| **6. Develop cross-training between law enforcement, criminal justice system, and advocates.** | Research national models for successful collaboration in best interest of survivors. | Develop regional process for ongoing collaboration in best interest of survivors. | AZ Prosecuting Attorneys' Advisory Council, Phoenix Family Advocacy Center, police officers, judges, attorneys, advocates, survivors, | AZ POST, MAG | FY 2012-2013 |

## Category: Coordination and Collaboration

| Strategies | Short-Term | Long-Term | Resources | Primary Partners | Time-line |
|---|---|---|---|---|---|
| **7. Increase coordination and collaboration between shelters and services.** | Increase communication between shelters, programs, and transitional housing programs. | Develop environment of collaboration instead of competition among shelters and programs. | Shelter directors, program directors, victim services, transitional housing programs | AZ Coalition Against Domestic Violence | FY 2011-2012 |
| **8. Increase access to information on available resources.** | 1) Identify types and locations of existing resources,<br>2) Determine where resources are needed. | Develop a centralized database or Website listing resources. | Shelter directors, program directors, victim services, advocates, survivors, housing programs, attorneys | AZ Coalition Against Domestic Violence, AZ Department of Economic Security | FY 2011-2012 |
| **9. Coordinate multi-disciplinary effort for reviewing standard protocols and practices for responding to domestic violence.** | Review existing protocols and practices of law enforcement, prosecution, and advocates for responding to domestic violence. | Develop multi-disciplinary process for seamless response to domestic violence. | City of Phoenix Police Department, Phoenix Prosecutor's Office, Mesa Prosecutor's Office, Avondale Police Department, Southwest Family Advocacy Center, El Mirage Police Department, Tolleson Police Department Scottsdale Prosecutor's Office Victim Services Program, AZ Criminal Justice Commission, Sojourner Center, AZ Coalition Against Domestic Violence | MAG, Governor's Division for Women | FY 2011-2012 |
| **10. Connect all critical resources for people experiencing domestic violence and homelessness through a coordinated community response.** | 1) Survey domestic violence and homeless providers to identify who they currently engage for response,<br>2) Research best practices for public health and emergency response models,<br>3) Educate faith leaders on how to address domestic violence. | Develop a coordinated community response in the region. | Domestic violence shelter and providers, homeless shelter and providers, healthcare community, first responders, faith communities, community leaders, city leaders | MAG, Governor's Division for Women | On-going |

## Category: Coordination and Collaboration (continued)

| Strategies | Short-Term | Long-Term | Resources | Primary Partners | Time-line |
|---|---|---|---|---|---|
| **11. Create an ideal model for culturally competent prevention and intervention services.** | Develop culturally diverse trainings designed for indepth learning. | Organize discussions on coordinating services to address cultural, age, disability, and substance barriers without denying services. | Variety of cultures (i.e., refugees, LGBTQ, disabilities, aging), Department of Economic Security, Department of Health Services | AZ Coalition Against Domestic Violence in partnership with culturally specific organizations, such as Southwest Indigenious Women's Coalition, AZ South Asians for Safe Families, Chicanos por la Causa, Governor's Division for Women | FY 2011-2013 |
| **12. Enhance the process for appropriately meeting survivors' housing needs.** | Create more opportunities for networking and sharing information about existing services. | Create a "big picture" approach to planning services without sacrificing attention to crisis needs. | Shelters, transitional housing, affordable housing, MAG, AZ Department of Economic Security, Valley of the Sun United Way, Local Initiatives Support Corporation | AZ Coalition Against Domestic Violence, Arizona Housing Alliance | FY 2012-2014 |
| **13. Develop support groups for teens who have experienced or witnessed domestic violence.** | Develop network of domestic violence counselors (both male and female) to help teens. | Provide support group, counseling services, and prevention education to teens. | AZ Coalition Against Domestic Violence, AZ Department of Economic Security, survivors, teen survivors, counseling programs | Governor's Division for Women, Court Appointed Special Advocates (CASA) | FY 2011-2012 |
| **14. Develop more transportation options for those residing in shelter.** | Research existing transporation options and barriers. | Coordinate new or expanded transporation options with community partners. | Shelters, program providers, transportation programs, AZ Department of Economic Security | MAG | FY 2011-2012 |
| **15. Create long-term supports for helping survivors maintain their safety.** | Identify types of long-term supports that increase survivors' success in remaining safe. | Create long-term support services for survivors to access after leaving abuse. | Shelters, program providers, survivors, AZ Department of Economic Security | AZ Coalition Against Domestic Violence, Governor's Division for Women | FY 2012-2014 |

# Next Steps

The new regional plan provides strategies for moving forward efforts to end domestic violence. These strategies will only result in meaningful work if they are implemented, which seems daunting in the current economic environment. While resources remain thin, the relationships and reliance on community partners becomes even more important. Together, we can take the next steps in providing safety to victims and holding offenders accountable.

Several projects that will move the plan's strategies forward are already taking shape. These projects highlight the immense need for collaborative efforts for increasing training and education, enhancing coordination, and improving services. The momentum in these areas demonstrates the community's desire to make the necessary changes to better serve those impacted by domestic violence. A few of the projects are mentioned below.

Fourteen community partners collaborated to secure STOP grant funding for the MAG Protocol Evaluation Project which will assess protocols for arresting and prosecuting domestic violence offenders.

## Training and Education

Thanks to STOP Grant funding through the Governor's Division for Women, the MAG Protocol Evaluation Project began in May 2010. The purpose of this project is to assess the protocols used to arrest and prosecute domestic violence misdemeanor offenders. The project includes an evaluation of existing protocols used by law enforcement, prosecutors, and victim advocates to address domestic violence cases; assessment of national and local promising practices; and the development of training and public awareness tools. This project strives to enhance communication and continuity across multiple disciplines to the betterment of survivor outcomes.

The Arizona Supreme Court Administrative Office of the Courts is leading a collaborative project to enhance domestic violence education for members of the criminal justice system. An education specialist is developing

computer-based trainings specific to the unique nature of domestic violence cases. Additional trainings are being developed for inclusion in upcoming conferences for judges. The group has applied for grant funding to support this effort.

## Coordination and Collaboration

Increasing coordination and collaboration are key components of work being done by the Arizona Coalition Against Domestic Violence and A New Leaf. In partnership with MAG, the Coalition began hosting a quarterly meeting of the executive directors of domestic violence shelters throughout the region. Attendees have found these meetings to be meaningful and are increasing their frequency to monthly.

The AzCADV Residential Programs Committee provides domestic violence service providers with a monthly opportunity to exchange information on available resources through their organizations. A New Leaf, in partnership with Valley of the Sun United Way, facilitates a bimonthly meeting of the Domestic Violence Collaborators. These meetings provide shelter and program personnel the chance to share promising practices, build collaborative efforts, and discuss trends impacting shelters.

## Services

The MAG Domestic Violence and Homeless Transportation Project will assess the transportation needs of domestic violence survivors. In partnership with the Arizona State University CARE Program, an intern will conduct a series of focus groups with domestic violence shelter staff and survivors. These groups will help identify transportation needs of survivors in shelter, especially related to their ability to gain and maintain employment. Participating agencies include Chicanos por la Causa, the Area Agency on Aging DOVES Program, Sojourner Center, and Chrysalis. This project will lead to increased transportation options for those residing in domestic violence shelters throughout the region.

## Summary

Forward movement is vital to the success of the *MAG Regional Plan to End Domestic Violence.* Community partners will champion this work. Progress will be monitored on a quarterly basis through reports offered to the MAG Regional Domestic Violence Council. Feedback from the Council will include any needed modifications. In addition, an annual report will be developed to indicate progress made, areas needing improvement, and actions to stimulate implementation efforts. This report will be prepared for the MAG Regional Domestic Violence Council and distributed to the public.

The Domestic Violence and Homeless Transportation Project will assess transportation needs for domestic violence survivors.

# Conclusion

During the past ten years, great strides have been made in addressing domestic violence. More shelter beds reduced the number of individuals and families turned away from a safe place to sleep. Resources empowered employers to reach out to personnel experiencing abuse. Screening questions helped healthcare professionals identify potential victims of abuse. These important steps created more opportunities for those experiencing abuse to reach out and access help.

Shelter beds, like this one at the Sojourner Center, are at risk of closing due to recent budget cuts. These beds provide an important safety net to ensure individuals and families have a safe place to go when leaving an abusive situation.

Difficult decisions are being made about domestic violence services. Budget cuts are challenging providers to continue their important work. Service providers are seeking resourceful options for continuing to help those seeking safety from violence. Devoted community partners are pulling together in creative ways to maintain services that have saved countless lives throughout the region.

Ending domestic violence will require increased coordination and communication. This plan lays out strategies focusing on the importance of knowing what resources exist and how to leverage severely limited resources. The way of doing business will evolve to ensure services remain in place to provide safety. The role of the coordinated community response is vital to continuing to make the most impact for victims and survivors of domestic violence.

**See the Signs. STOP the Abuse.**

# Acknowledgements

The development of the MAG Regional Plan to End Domestic Violence was made possible by the many dedicated community partners and survivors who gave their time and expertise to the planning process. Community partners participated in the Appreciative Inquiry interview process, attended the Summit, and assisted in gathering input from survivors of domestic violence. This plan is a reflection of their dedication to ending domestic violence in the region.

MAG Regional Domestic Violence Council

## MAG Regional Domestic Violence Council

- Commander Kim Humphrey, *Phoenix Police Department, Chair*
- Barbara Marshall, *Maricopa County Attorney's Office, Vice Chair*
- Celeste Adams, *Save the Family*
- Christina Avila, *City of Avondale*
- Lieutenant Robert Bates, *Phoenix Police Department*
- Kathy Berzins, *City of Tempe*
- John A. Blackburn Jr., *Arizona Criminal Justice Commission*
- Allie Bones, *Arizona Coalition Against Domestic Violence*
- Chris Christy, *Salt River Pima-Maricopa Indian Community*
- JoAnn Del-Colle, *Phoenix Family Advocacy Center*
- Diane Enos, *President, Salt River Pima-Maricopa Indian Community*
- Will Gonzalez, *City of Phoenix Prosecutor's Office*
- Laura Guild, *Arizona Department of Economic Security*
- Dan Hughes, *City of Surprise*
- Lynette Jelinek, *Glendale Fire Department*
- Mary Lynn Kasunic, *Area Agency on Aging*
- Patricia Klahr, *Chrysalis Shelter Inc.*
- Suzanne Klapp, *Councilmember, City of Scottsdale*
- Phil Lieberman, *Councilmember, City of Glendale*
- Jodi Beckley Liggett, *Arizona Foundation for Women*
- Maria-Elena Ochoa, *Governor's Office for Children, Youth and Families*
- Dottie O'Connell, *Chicanos por la Causa*
- Stephanie Olohan, *City of Goodyear*
- Connie Phillips, *Sojourner Center*
- John M. Pombier, *City of Mesa*
- Kerry Ramella, *Phoenix Fire Department*
- Sarah Youngblood, *Community Legal Services*

## Regional Domestic Violence Plan Workgroup

- Lieutenant Robert Bates, *Phoenix Police Department*
- Allie Bones, *Arizona Coalition Against Domestic Violence*
- Maribel Castro, *Chicanos por la Causa – De Colores Shelter*
- Dottie O'Connell, *Chicanos por la Causa – De Colores Shelter*
- JoAnn Del-Colle, *Phoenix Family Advocacy Center*
- Debbie Driscol, *City of Buckeye*
- Will Gonzalez, *City of Phoenix Prosecutor's Office*
- Alice Ghareib, *Area Agency on Aging*
- Laura Guild, *Arizona Department of Economic Security*
- Katie Hobbs, *Sojourner Center*
- Terri Leveton, *Phoenix Rescue Mission*
- Mary Alice McKone, *Elim House*
- Sandy Robertson, *A New Leaf*
- Linda Scott, *Jewish Family & Children's Service*

## MAG Regional Plan to End Domestic Violence Summit and Appreciative Inquiry Interview Participants

- A New Leaf
- Aguila Youth Leadership Institute
- Ak-Chin Indian Community
- Area Agency on Aging
- Arizona Coalition Against Domestic Violence
- Arizona Department of Economic Security
- Arizona Prosecuting Attorneys' Advisory Council
- Arizona State University Morrison Institute for Public Policy
- Arizona Supreme Court, Administrative Office of the Courts
- Avondale Young Families Program
- Catholic Charities Community Services
- Catholic Diocese of Phoenix
- Chicanos por la Causa, De Colores Shelter
- Child Protective Services
- Chrysalis Shelter, Inc.
- City of Glendale Fire Department
- City of Mesa Police Department
- City of Mesa Prosecutor's Office
- City of Phoenix Fire Department
- City of Phoenix Police Department
- City of Phoenix Prosecutor's Office
- City of Scottsdale Police Department
- City of Tempe, Care 7 Program
- DRA Consulting Services
- Glendale City Court
- Governor's Office for Children, Youth, and Families
- Health Choice Arizona
- Homeward Bound
- Human Resource Essential
- Jewish Family & Children's Service
- Maricopa County Attorney's Office
- Mariposa: Wings to Safety
- Marley House
- Mountain Sky Junior High/ Washington Elementary School District
- National Organization for Women
- Nina Mason Pulliam Charitable Trust
- O'Connor House
- Peoria Unified School District
- Phoenix Family Advocacy Center
- Phoenix Rescue Mission
- Purple Ribbon Council to Cut Out Domestic Abuse
- Recovery Innovations of Arizona
- Remax Infinity
- Saint Luke's Health Initiatives
- Salt River Pima-Maricopa Indian Community
- San Lucy District
- Save The Family
- Sojourner Center
- Southwest Human Development
- Tempe Community Council
- The Arizona Republic
- The Salvation Army Elim House Domestic Violence Shelter
- Wesley Community and Health Center
- Wholonomy Consulting, Inc.

# Appendices

## Appendix A: MAG Regional Domestic Violence Council Timeline

**1999**

- Developed the *MAG Regional Domestic Violence Plan.*
- Established the MAG Regional Domestic Violence Council.
- Published Domestic Violence Safety Planning Brochures.

**2000**

- Formed Employers Against Domestic Violence (EADV).
- Developed *Model Guide for Developing Local Coordinating Councils.*

**2001**

- Formed Health Cares About Family Violence initiative collaborating with hospitals to implement screening and follow up protocol for domestic violence.
- Developed *Domestic Violence Resource Guide for Faith Leaders* and sponsored the Religious Response to Domestic Violence forum.
- Published *Crisis Response Team Reference Guide.*
- Held first Employers Against Domestic Violence forum about employers' response to domestic violence in the workplace.

**2002**

- Published *MAG Regional Domestic Violence Plan Update.*
- Developed Domestic Violence Response Kits, including domestic violence screening lanyards and shoe cards.

**2003**

- Partnered with The Arizona Republic for first Annual Walk to End Domestic Violence.
- Co-sponsored forum on the religious response to domestic violence.
- Coordinated health care provider training on photographing domestic violence injuries.

**2004**

- Partnered with Men's Anti-Violence Network (MAN) to develop domestic violence awareness packets for employers.
- Developed *Domestic Violence Plan Five-year Report Card.*
- Held first annual domestic violence awareness press conference, "There's Not a Minute to Lose."
- Produced interactive training CDs helping pediatricians identify potential domestic violence cases.
- Partnered with The Arizona Republic for second Annual Walk to End Domestic Violence.
- Developed training curriculum for Crisis Response Teams working with children witnesses of Domestic Violence.

**2005**

- Conducted a Domestic Violence Survey through Behavior Research Center.
- Participated with The Arizona Republic for the third Annual Walk to End Domestic Violence.
- Conducted Employers Against Domestic Violence trainings.
- Held "Do You See It?" press conference highlighting the importance of identifying and stopping domestic violence.

**2006**

- Developed *The Need for Increased Domestic Violence Shelter in the MAG Region,* which assisted in the efforts to increase domestic violence shelter beds.
- Drafted the *Exploration of the Fiscal Impact of Domestic Violence on Local Criminal Justice Systems* in the MAG Region.
- Implemented Youth Empowerment Project (YEP) to raise awareness of dating violence among teens.
- Launched *WebofFriends.org* website with live chat during annual press conference.

**2007**

- Conducted region's first "Text-a-thon" with teens at annual press conference to spread the word about the importance of healthy relationships.
- Coordinated first YEP Public Service Announcement (PSA) Competition, resulting in a television PSA on teen dating violence.
- Coordinated first annual joint committee meeting of the MAG Regional Domestic Violence Council and MAG Continuum of Care Regional Committee on Homelessness.

**2008**

- Organized first Smart Dating event at the annual press conference to help teens See the Signs. Stop the Abuse.
- Conducted community outreach engaging youth in discussions about healthy dating relationships.
- Implemented second Annual YEP Public Service Announcement Competition, resulting in a radio advertisement.
- Identified collaborative goals at second annual joint committee meeting of the MAG Regional Domestic Violence Council and MAG Continuum of Care Regional Committee on Homelessness.
- Participated in the Annual Walk to End Domestic Violence

**2009**

- Held third Annual YEP Public Service Announcement Competition, resulting in development of print ad and Web banner.
- Developed YEP Best Practices Toolkit.
- Released *The Availability and Awareness of Legal Assistance for Domestic Violence Survivors* report.
- Developed regional screening principles for the domestic violence and homeless shelter system.
- Conducted a domestic violence and homeless shelter capacity study as a follow up to *The Need for Increased Domestic Violence Shelter in the MAG Region.*
- Launched a community involvement process to update the MAG Regional Plan on Domestic Violence.

**2010**

- Conducted the Regional Plan to End Domestic Violence 2010 Summit
- Created the *MAG Regional Plan to End Domestic Violence.*

## Appendix B: Appreciative Inquiry Interview Guides – Survivors

**Maricopa Association of Governments**
**Regional Domestic Violence Council**
**Appreciative Inquiry Interview Questions - DV Survivor**

**Name of Interviewer:** _____

**Name of Interviewee:** _____

**Date of Interview:** _____

Thank you for participating in this interview process. As someone who has been personally touched by domestic violence, you can play an important role in identifying what is most helpful to those leaving a violent situation. Thank you for your willingness to share your experience so others may receive the help they need to be safe.

Although changes have been made in addressing domestic violence in our community, there is still a lot of work to be done. Information is being gathered from survivors of domestic violence as well as professionals helping those currently experiencing domestic violence to help identify what is already being done well and what should be done in the future. Thank you for participating in this effort.

***Services for Domestic Violence***

1) Tell me about a positive experience in which one or more systems you accessed for help were responsive to your needs. Examples of systems include criminal justice, law enforcement health care, community organizations, and/or faith communities. What happened in this experience? What made it positive for you?
   - What did the organization or agency do to make this positive outcome possible?
   - What did you do that helped achieve this positive outcome?
2) What would you say were the three most important things that helped you stabilize after the abuse?
3) Imagine it is four years from today and the three most important things that helped you are available to all women who experience domestic violence. What has changed?
4) Was it difficult for you to access shelter or services? What helped you to connect with these resources?
5) Can you describe a time when your abuser was held accountable for his/her actions? How was your abuser held accountable? What happened?
   - What did the organization or agency to make this positive outcome possible?
   - What did you do that helped achieve this positive outcome?

***Prevention of Domestic Violence***

6) What is being done the best in our community to prevent domestic violence?
7) What three wishes do you have for the way domestic violence survivors are served in Arizona? What three wishes do you have for preventing domestic violence in Arizona?

***Additional Comments***

8) Is there anything else you would like to share?

Please contact Renae Tenney, MAG Human Services Planner I, with questions at rtenney@mag.maricopa.gov or 602-254-6300. Interview notes should be sent to Renae by January 29, 2010 via email, fax (602-254-6490), or mail (302 N. 1st Ave., Phoenix, AZ 85003).

**Thank you!**

## Appendix C: Appreciative Inquiry Interview Guides – Professionals

**Maricopa Association of Governments**
**Regional Domestic Violence Council**
**Professional Interviewer Guide**

**Name of Interviewer:** _____

**Name of Interviewee:** _____

**Date of Interview:** _____

We have come a long way in addressing domestic violence in our region. As professionals in this work, we have implemented strategies to help identify domestic violence, developed brochures to help victims keep themselves safe, and expanded shelter and support services. Thank you for your shared passion and dedication in making a difference for those escaping violent relationships.

Now it is time to take a close look at how we can continue to make a difference for those experiencing domestic violence. We need your help in generating fresh approaches. We ask you to use "out of the box thinking" to identify concepts you have gleaned from your life and work experiences. Please join us as we continue to put an end to domestic violence in this region.

***Preservation of Resources***

1) Think of a time when you assisted a domestic violence survivor along their journey to self-sufficiency. What about this survivor's story and experience was inspirational?
   - What would you say were the *top three elements* or services that made their journey possible?
   - What would you say can be done to maintain or enhance these elements or services?

   *(INTERVIEWER: If the interviewee needs prompting, mention these may be feelings, relationships, services, and/or resources they found helpful. Try to determine where their three answers originated. For example, if "hope" was a major element, where did this hope come from? What made them feel hopeful?)*

2) Not all survivors may share the same access to services and shelter. What would you say is being done well to provide access to underserved domestic violence populations?

   *(INTERVIEWER: If the interviewee needs prompting, mention that "underserved populations" may include people from historically marginalized groups. Some examples may be refugees, immigrants, undocumented people, those with substance abuse issues, disabilities, mental health issues, and affluence.)*

***Offender Accountability***

3) Describe a peak experience when an abuser(s) was held accountable for his/her actions.
   - What did the survivor do that helped achieve this positive outcome?
   - What did the organization or agency do differently that allowed this positive outcome to be possible?

***Systems Accountability***

4) Describe a positive experience in which one or more systems accessed by a domestic violence victim(s) were responsive to the victim's needs.
   - What made this experience memorable for you?
   - What did the systems do differently that helped to achieve this positive outcome to be possible?

   *(INTERVIEWER: If the interviewee needs prompting, mention that "systems" may include outreach by community organizations and/or faith communities, law enforcement, health care, and courts. Try to determine how the systems were helpful. For example, if the interviewee says the police where helpful, what did they do that was helpful?*

***Prevention***

5) Describe a peak experience when you clearly saw the positive effects of domestic violence prevention efforts. What do you see as the keys to successful prevention efforts?

***Collaboration/Leveraging***

6) Tell about a time when you were energized about working closely with others in reaching a shared goal. What made the experience energizing for you?

***Leadership Development***

7) Recall a time when you were inspired by irresistible leadership. What was the situation and what made the leadership irresistible to you?
   - In what ways has this experience influenced your leadership style?
   - What would you say can be done to develop new leaders and re-energize current leaders in the domestic violence community?

***Additional Comments***

8) Is there anything else you would like to share?

Please contact Renae Tenney, MAG Human Services Planner I, with questions at rtenney@mag.maricopa.gov or 602-254-6300. Interview notes should be sent to Renae by January 29, 2010, via email, fax (602-254-6490), or mail (302 N. 1st Ave., Phoenix, AZ 85003).

**Thank you!**

## Appendix D: Appreciative Inquiry Interview Results – Survivors

| Services for Domestic Violence #1 | | |
|---|---|---|
| ***Part A: How were systems responsive to survivors' needs?*** | | |
| **Result** | **#** | **Comments** |
| Shelters | 6 | Available shelter space, a safe place, without shelter space we would be dead, saw past policy |
| First Responders (police, fire) | 5 | Treated as high priority, gave referrals, assisted with securing shelter and advocate, police helped with order of protection |
| Justice System Response | 4 | Abuser arrested and held, received order of protection, a judge finally believed in me, help with divorce for free |
| Faith Community | 2 | Provided support, helped with accessing shelter and services |
| Employer's Assistance | 1 | Helped with counseling and safety planning |
| Healthcare Professionals | 1 | |
| Food Bank | 1 | |
| ***Part B: How did survivors help achieve a positive outcome?*** | | |
| **Result** | **#** | **Comments** |
| Gained sense of empowerment | 10 | Self-awareness, inspired myself by getting this far, peace and confidence, learned from my situation, taking care of my health, don't have to live with threats and violence, have learned to be a better person, now living a better, healthy, peaceful life, better with my children, have grown in many different ways, learned about laws, felt empowered through DV Walk, received assistance |
| Gained knowledge of services | 9 | Transportation, job training, counseling, housing, Community Information & Referral, TERROS, Sojourner, orders of protection, Jewish Family and Childrens' Services |
| Went into shelter | 7 | Shelter services, DeColores, protection for self and family, |
| Found support system | 6 | Shelter staff, other survivors in shelter, family, co-workers, girlfriends |

| Services for Domestic Violence #2 | | |
|---|---|---|
| ***Three most important things that helped you stabilize after abuse?*** | | |
| **Result** | **#** | **Comments** |
| Emotional Stability | 25 | Time enough to be okay, counseling, talking with someone, crisis team, therapy, validation by therapist, mental health issues, feel better emotionally, emotional well-being (faith, hope, health), regained my health, love for self and children, feeling better, no more fear, no more abuse and insults, less stress, better health, family therapy, feel I have a future filled with triumph |
| Support System | 18 | Family, friends, other survivors, shelter staff, support groups, not feeling alone, having mentors or role models |
| Shelter | 9 | Shelter resources, resources, victim advocate, VAWA services and process, My Sister's Place, Save the Family, Community Bridges, shelter |
| Sense of Empowerment | 8 | Willpower, self-determination, discipline, self-sufficient, independent, hope, talking about my experience in court, sharing my knowledge of resources with another victim |
| Housing | 7 | Find housing, housing, some place to go, safety, find a place to live, a safe place to live where he can't hurt me |
| My Children | 6 | Safety for my children, my son |
| Financial Stability | 4 | Financial stability, employment, school, education |
| My Faith | 4 | Faith, spiritual growth, church, God, my faith |
| Leaving situation | 3 | Getting out, leaving situation, moving far away |
| Legal Help | 2 | Legal help, filed for divorce and child custody |
| Communication across systems | 1 | |

| Services for Domestic Violence #3 | | |
|---|---|---|
| ***Four years from now, what has changed to help women experiencing domestic violence?*** | | |
| **Result** | **#** | **Comments** |
| Shelter and Services | 13 | Shelter, counselors, housing, medical, safe place, safety, classes, affordable services, referrals, English classes |
| Awareness | 10 | In schools and mainstream media, television commercials, domestic violence awareness expanded, prevention education, educating children, more education, less stigma, different environment |
| Empowerment | 8 | Willing to ask for help, women speaking out, not returning to abuser, feeling stronger and more self-sufficient after overcoming abuse, enhanced self-esteem, focus on self and children |
| Counseling | 6 | Provided a lot of help and advice |
| Legal Help | 6 | Orders of protection; divorce; understanding laws; legal help; court-mandated classes; laws in general because not only am I affected, my child is affected |
| Support System | 4 | Support system, unconditional support of a friend, support of other survivors, my children, my teachers |
| Coordination Between Systems | 3 | Relationship between victim advocate and probation; being able to relay on help from police, judge, shelter staff; centralized family services with judges, police, counselor, shelter, therapists, groups, legal advocates |
| Career and Educational Opportunities | 2 | Accessible education available to all women |
| DV taken seriously by police | 2 | Have specific number to call police about DV |
| Easier shelter screening | 2 | Process was long and questions were rude, finding shelter space |
| Transitional Housing | 2 | |
| Transportation | 1 | |
| CPS Intervention | 1 | |

| Services for Domestic Violence #4 | | |
|---|---|---|
| ***Part A: Was accessing shelter or services difficult?*** | | |
| **Result** | **#** | **Comments** |
| Lack of Services | 13 | Unaware of help; did not know shelters existed; people are not aware of resources; limited awareness of shelters; information not available without shelter referrals; difficult to access services; unaware of shelters; need more information about DV at WIC offices, stores, and wherever victims might seek help, DES not helpful, long-term services to help victims from having to return to abusers, access to services in college |
| Shelter | 10 | Every time I called the shelter was full, difficult finding open space at shelter, called shelter but they would not take me in, taken to Watkins first then to De Colores four days later, Long process to get into shelter, screening questions were difficult and rude, prefer separate rooms in shelter |
| Eligibility Criteria | 5 | Not serving men, rich people, drug users, women with older children; youth programs difficult to find, transitional housing does not accept teens, had to be labeled Seriously Mentally Ill to be able to access affordable medication and therapy, ridiculous process for accessing food stamps requiring abuser to verify victim's income level |
| Law Enforcement | 3 | Talk down to victims, could do more, survivor charged with DV |
| Transportation | 2 | Limited public transportation |
| ***Part B: What helped connect you to them?*** | | |
| **Result** | **#** | **Comments** |
| Received referrals | 8 | Referred from hospital, asked for referrals, referred to resources, nurse was a great resource, teachers connected me to DeColores, received shelter list from church, crisis hotline, TV ads motivated me to keep trying |
| Not difficult | 5 | Helped by friend, CONTACS helped, referred by Mexican Consulate, police provided a number to call and shelter was waiting with open arms and love |

| Services for Domestic Violence #5 | | |
|---|---|---|
| ***Part A: How was your abuser held accountable?*** | | |
| **Result** | **#** | **Comments** |
| Was Not Held Accountable | 14 | Rural area, few services, strong church influence, given probation with recent girlfriend but statute of limitations with me, held accountable for hurting others but not me, never held accountable, deported, police informed me I could stay somewhere I felt safe if I feared what would happen after they left, no charges filed because he threatened to take my children, no charges filed |
| Held Accountable by Jail Time | 9 | Jailed for two days and sent to 26 weeks of DV classes, jailed for 24 hours then made bail of $20,000, jailed for two months, husband went to jail while I was pregnant, given jail time but came out angrier, victim charged with abuse, imprisoned for one month |
| Held Accountable by Court System | 9 | Fined for delaying legal process, provided documentation aiding lawyer, court held him accountable, judge held abuser accountable, Order of Protection, child support enforcement, provide support |
| Held Accountable by Law Enforcement | 5 | Arrested on other charges and deported but came back worse, arrested and served 15 days, arrested when he put me in a coma and almost killed my son, police very helpful |
| Held Accountable by Victim | 4 | Victim left, survivor advocated and didn't give up, abuser lost his family, abuser lost his children |
| Was Not Held Accountable - Not Reported to Police | 4 | Did not contact police due to fear; he made threats; threatened to take my children, kill me, or report me and I would get deported |
| Sent to Rehab | 1 | |

| Prevention of Domestic Violence #6 | | |
|---|---|---|
| ***Best prevention of domestic violence in our community?*** | | |
| **Result** | **#** | **Comments** |
| Awareness | 17 | Teen awareness; awareness outside of reservation; awareness and education such as television commercials, DV Walk, shoe cards, pamphlets in bathrooms; education on DV awareness, ads on preventing DV, word of mouth from others who have been in shelter, providing information on radio, internet, flyers; give more DV information, provide phone numbers, survivor's share experience |
| Resources | 7 | Services outside of reservation, resources like Web of Friends, availability of resources, more visible information about programs for victims, informing other victims of services, more information on how to overcome abuse |
| Shelters | 5 | Shelters, safe houses, housing in communities, safe place with a level of independence |
| Offender Accountability | 5 | Harsher sentencing, more severe consequences, stronger charges, tougher laws, law better enforced |
| Education | 4 | Educate children about domestic violence, educate on healthy relationships as young as possible, school programs |
| Outreach | 4 | Hospitals, doctors asking questions, teachers asking questions, churches |
| Nothing | 2 | Nothing being done |
| Communication | 1 | |

| Prevention of Domestic Violence #7 | | |
|---|---|---|
| ***Three wishes for serving domestic violence survivors?*** | | |
| **Result** | **#** | **Comments** |
| Increased Resources | 24 | Easier access to documents, services for those moving out of DV situation, long-term support, classes, support groups, financial help for mothers with infants, affordable childcare, policy changes so financial assistance does not disappear as soon as employed, transportation to services, financial assistance, reliable foster system, hotline, availability of professional counseling, sliding scale system for services, knowledge of resources, life skills, employment, education, affordable services, accessible agencies, safe haven for children while parents work out their difficulties |
| Increased Shelter Opportunities | 22 | Easier access to shelter, more shelters, safe place, more shelters for Spanish/Mexican individuals, continue to have exeptional shelters, less discrimination, no eligibility limits on older boys, accept kids of all ages, extend 30 day limit in shelter, for families of two, for single female victims |
| Enhanced Criminal Justice Response | 16 | Stricter, tougher, stronger, more severe charges for abusers, harsher on abusers on first and second calls, jail time for all abusers, stronger child custody laws, judges are aware of the issue, charges are carried forward, DV court, compassionate lawyers, police involvement, more rights for victims |
| Increased Education | 15 | Educate on relationships, awareness and education, domestic violence education, equal DV awareness for providers from all systems, accessible information and education to low-income, provide more information on television and radio, inform the community, knowledge of domestic violence, more information geared towards abusers so they know what will happen to them, outreach, can happen to anyone, can cycle |
| Increased Resources in Spanish | 7 | More information in Spanish, increased services in Spanish, more Spanish-speaking representatives, translator services, more court services in Spanish |
| Increased Resources for Undocumented Women | 9 | Less discrimination, information and services in Spanish (especially victim's rights), treat everyone equally, undocumented hold back from calling for help due to discrimination and end up losting their lives, dedicate more time and attention to making changes to help victims obtain residency without all the barriers and requirements, continue helping find work and opportunities, give legal status to DV victims |
| Children Taught Healthy Relationship Skills | 5 | Domestic violence curriculum in schools, prevention through education of children, parents teach children respect for others, teach children how to be members of a family without domestic violence |
| Sense of Personal Empowerment | 4 | Confidence, let survivors know they are not alone, collaborate with survivors, stand up against abuse |
| Seriousness Validated by Responders | 3 | Responders are more kind toward victims, advocates for children arrive with first responders, DV taken seriously |
| Affordable Housing | 2 | Places to live |

| Other #8 | | |
|---|---|---|
| ***Anything else to share?*** | | |
| **Result** | **#** | **Comments** |
| Importance of Support System | 8 | Sharing my story with others, support of friends, co-workers, get information on support groups, working with child care provider to better child's life, my sister inspired me to leave |
| Importance of Helping Others Through Their Experiences | 7 | Information used to help others, take action on information gathered, hope more is done so no one else experiences DV, do something to end DV, help DV victims put a stop to DV, increase services available for women who are abused, hope information helps so no else suffers or dies from DV |

## Appendix E: Appreciative Inquiry Interview Results – Professionals

| Preservation of Resources #1 | | |
|---|---|---|
| ***Part A: what was inspirational about survivor's journey?*** | | |
| **Result** | **#** | **Comments** |
| Interviewees were by far most inspired by survivors of domestic violence themselves. | 19 | Personal spirit, courage, resiliency, support of others, take control, right to be safe, no stigma, kids' safety, self-esteem, following through, values, empowered, determined, success, survivor's determination to survive |
| Some affected deeply by system. | 2 | Fear of the system, inspired to act by failure of system |
| ***Part B: what three top elements were instrumental to success?*** | | |
| **Result** | **#** | **Comments** |
| Services | 18 | Central point of access, coordinated, accessible, Spanish, quick, seamless, integrated in community, confidential, examples: Phoenix Family Advocacy Center (FAC), Fresh Start, Temporary Assistance for Needy Families (TANF) (2), Section 8, WIC |
| Criminal justice system response | 16 | Good police training, police sensitive communication, Orders of Protection (3), police identify signs, court kept abuser in jail until trial, victim advocates (4), police unsupportive, advocate very attentive, hospital-police-prosecutor followed protocols |
| Counseling | 8 | Free, unlimited, children's behavioral health |
| Shelter/housing | 8 | Emergency shelter (6), transitional housing, given alternative place to stay during trial when couldn't go to shelter |
| Supportive environment | 5 | Tell story and be understood, emotional support, encouragement, from surviving to thriving |
| Connected to family | 4 | Reunited with family, daughter helped mother to safety, family support |
| Nogales Circles of Peace | 1 | Not all survivors want to leave relationship |
| Transportation | 1 | |
| Medical care | 1 | |
| ***Part C: what needs to be done to maintain or enhance services?*** | | |
| **Result** | **#** | **Comments** |
| Address funding | 6 | Keep it consistent, provide more funding for services (2), provide more funding for housing, maintain funding, survivors can be reluctant to prosecute because they need abuser's income |
| Raise awareness | 5 | Put face on DV, educate public, Laura Munoz raised awareness about DV, educate survivors about cycle |
| Provide housing (not shelter) | 4 | Need a place to go that is not shelter |
| Support interdisciplinary work | 3 | Networking important, facilitate more interdisciplinary meetings, CPS called by school and helped family |
| Provide training | 2 | 1st responder training needed, more training |
| View DV as one comprehensive system | 1 | |
| Need Court Watch program | 1 | |
| Advocate | 1 | |
| Intervene against patriarchal institutions | 1 | |
| Lower caseloads for prosecutors | 1 | |

| Preservation of Resources #2 | | |
|---|---|---|
| ***What is being done well to provide access to underserved populations?*** | | |
| **Result** | **#** | **Comments** |
| Serving Spanish-speaking survivors | 13 | Bilingual outreach (3), monolingual services (3), bilingual services (2), Spanish behavioral health services (2), services for undocumented people have improved, clients get Visas, De Colores cultural competency programs |
| Examples of needed services | 13 | Behavioral health services, legal assistance, culturally specific programs, transportation (2), taxi services, victim advocates (2), discipline focused training, diversity and sensitivity training, educate underserved clients, advocates need list of resources and open beds |
| Examples of effective programs | 11 | Sojourner serves clients with substance abuse issues, community centers, South East Asians for Safe Families, Moma's House, Echo magazine, Doves, De Colores (2), Violence Against Women legislation, Family Advocacy Center (2), SEEDS program, Phoenix, Scottsdale, CONTACS |
| Steps to provide better access | 10 | Increase media awareness, listen and advocate, increase number of safe houses, network well, employ case workers who reflect diversity of clients, reimburse shelters for capacity not occupancy, provide funding to keep services available, shelters cooperate with police, utilize beds fully so more beds won't be needed, have staff provide personal support |
| Examples of underserved populations still in need | 8 | Boys older than 12 years, seriously mentally ill, substance abuse, refugees, LGBT, mid to high income survivors, substance abuse, men victimized as children |
| Tribal concerns | 4 | Number of shelters on tribal lands has increased, Amnesty International- Violence Against Native Women, tribal laws need to improve, need more services for tribal women |
| Emergency shelter | 4 | Emergency shelter serve survivors with low incomes well (2), lose clients in transitional housing, survivor insecure about entering shelter but found great support |
| Recognition | 2 | Recognition of underserved populations has improved, acknowledging need more |
| Underserved is overemphasized | 1 | |
| Good referrals | 1 | |
| Hotline attitudes have changed | 1 | |

| Offender Accountability #3 | | |
|---|---|---|
| ***Describe a peak experience when abuser was held accountable.*** | | |
| **Result** | **#** | **Comments** |
| Criminal justice system response | 22 | Treated DV as public safety issue, swift consequences (2), judges trained in DV, police free to determine arrests, collaboration between 911-prosecution-jail-advocate, positive relationship between police and shelter, police knowledgeable about coercive control, new detectives trained, need more victim advocates, assign same victim advocate to police officer, legal advocate assisted and present in court (3), Family Court researched and recreated documentation, police and Maricopa County Attorney's Office brought abuser to trial, good laws like 3 strikes means aggravated assault, court system involved, need better education about orders of protection (OOP), OOP used effectively (2), prosecutor subpoenaed survivor to testify and abuser convicted, good investigation |
| Victim participated fully | 8 | Survivor well educated about process, empowered, gave good statements for police, participation is key, attended trial, cooperated because friend had just been killed by her abuser and she realized that could have been her, testifying positive experience for survivor and helps to convict abuser, survivor didn't minimize abuse |
| Abuser not often held accountable | 5 | Not held accountable (3), not held accountable until felony charge, rarely adjudicated |
| Examples of effective actions | 8 | Men holding men accountable, modified Duluth model, responsive approach, all stay engaged through process, no personal agendas, unified voice, compliance specialist, photos of injuries |
| Barriers | 4 | Need more accurate reporting, need to change thinking behind abuse, reverse dual arrest policies, Crawford ruling hurt accountability prosecution (excited utterance) |
| Treatment | 2 | Offender treatment, highly skilled therapists |
| Abuser wanted to return to jail | 1 | Offended again and realized needed more services |
| Not survivor's job to hold abuser accountable | 1 | |

| Systems Accountability #4 | | |
|---|---|---|
| ***Describe a positive experience when one or more systems accessed for benefit of survivor.*** | | |
| **Result** | **#** | **Comments** |
| Interdisciplinary collaborations | 17 | Teams secured services for survivor, school and shelter partnered, shelters collaborate with each other and share overhead costs, joint meetings with police-CPS-FAC-shelter, shelters collaborated with criminal justice system, social service agencies collaborated with courts (3), FAC collaborates with criminal justice system, Verizon phone, immigrant attorney, church, legal aide, municipalities sharing OOP data, survivor video conference with judge, probation officer met halfway (2), Com Trans, survivor's family, State |
| Good collaborative partners | 16 | Case manager coordinated services, child support enforcement, DES Community Conversations, DV Walk in Native communities, shelters going above and beyond, LARC, CPS coordinated housing and courts, Magellan direct care clinic, Scottsdale DV Center, Catholic Church, Pinal DV Court (2), O'Connor House, ASU School of Social Work, CASA, FAC, healthcare system, survivors benefit from working together (2) |
| Criminal justice system response | 11 | Judge removed from case, video phone helps judges, police made extra effort to arrest, courts, collaboration between police and cell phone company, police cared and followed through, quick follow-up and consequence, victim advocate worked with police to get OOP, advocate secured food and shelter for survivor, release revoked to keep survivor safe |
| Steps to increase accountability | 6 | Adjust approach to survivor's religious and cultural needs, move beyond anger, need tools and freedom to make best choices, create a database of DV convictions, stimulate economic development for families, bring Mentors in Violence Prevention Program to region, advocate going to court with survivor to obtain OOP |
| Transportation | 2 | Officers provided transportation, more transportation needed |
| Barriers | 2 | Most lesbian survivors not in shelter, survivors need more permanent housing and not shelter |
| Healthcare | | |
| Inspired by seeing survivor smile at end of trial | | |

| Prevention #5 | | |
|---|---|---|
| ***Describe a peak experience when effects of prevention clearly seen.*** | | |
| **Result** | **#** | **Comments** |
| Examples of effective steps | 20 | Survivors gaining self-sufficiency (2), survivors building self-esteem, healthcare involved, survivors more aware of resources (2), community holds abusers accountable, prioritize cases, courts involved, change beliefs, realize it's cheaper to prevent than intervene, be tenacious about justice, ask people if they are okay (3), release from prison revoked (2), communication between agencies key, speaker at teen program |
| Education | 14 | Community outreach, education about signs of abuse (2), school-based education, community-based education, start in elementary school, education for kids, parenting classes, education about cycle, training |
| Awareness | 6 | Spanish-speaking public service announcements, community awareness, mainstream media, send a consistent message that DV is wrong, make messages about DV mainstream like anti-smoking ads |
| Examples of good prevention resources | 6 | Fresh Start Resource Center, Men's Anti-Violence Network, Scottsdale crisis teams, Violence Anonymous 12-step program, Purple Ribbon Council, Healthy Relationships session at Hispanic Women's Conference |
| Services | 5 | Intake center services, ongoing services, counseling, holistic services, accessible services |
| Family | 4 | Serve entire family within one system for true picture, recognize importance of offender accountability to whole family, engage survivor through children, daughter helped mother |
| Places of worship | 2 | Church stood up to abuser, Church of Latter Day Saints and tribe collaboration |

| Collaboration/Leveraging #6 | | |
|---|---|---|
| ***Describe a time when energized by working closely with others toward shared goal.*** | | |
| **Result** | **#** | **Comments** |
| Examples of positive experiences | 19 | Relationships between police, advocates, and FAC; ASU Lado Telethon, research and advocacy groups, Victim Assistance Academy, legal clinic, 6 court and police collaboration to develop defendant info sheet, coercive control program with Phoenix police (2), FAC, Arizona Coalition Against Domestic Violence (AZCADV) Legislative Committee, National College of District Attorneys, MAG Regional Domestic Violence Council, Men's Anti-Violence Network, Governor's Commission, impactful community services (2), community volunteers, prosecutors used to be assigned to precincts and communication improved, detective very involved, Pendergast School District, Kids at Hope Training, collaborating with law enforcement-doctors-prosecutors to address shocking rates of child abuse |
| Necessary elements | 13 | Pride in work (2), short-term goals with long-term focus, share resources, focus on safety for survivors, innovative solutions, common ground, excited about activities, honesty (2), diversity (3) |
| Inspired by survivors | 9 | Survivors participated in DV Walk, survivor success (3), survivor educated and employed, empathy, CPS and advocates focused on children, contact with survivors personalizes work |
| Group dynamics | 8 | Decision people/right people in the room (3), everything comes together because everyone is necessary to the process, right leadership, inspired by colleague success and knowledge (2), group member roles respected |
| Examples of steps needing to be taken | 3 | Institutionalize bullying, prioritize cases, see DV as function of poverty |

| Leadership Development #7 | | |
|---|---|---|
| ***Describe what makes leadership irresistible.*** | | |
| **Result** | **#** | **Comments** |
| Personal characteristics | 13 | Honest about flaws (2), dynamic, enthusiastic (5), stands by decisions, visionary, confident, no personal agenda, truly believes in work |
| Passionate | 10 | Worked in trenches and still passionate, passionate about work |
| Interactions with others | 8 | Brings diverse groups together, ability to motivate through example (2), challenges others, creates sense of ownership (2), protects and understands survivors (2) |
| Communication | 7 | Gives honest feedback, spokesperson people can relate to, good communicator, consistent outspoken message, advocates, asks the hard questions, willing to listen |
| Impact on others | 7 | All are equal, empowers others, personally invests in others, everyone matters, all are valued, ordinary people make a difference, inspiring |
| Innovative | 6 | Fosters different perspectives, open to change, open to new approaches, creative problem solving, new ideas, flexible |
| No ego | 5 | Selflessness, no ego |
| Examples of irresistible leadership | 5 | Sojourner's proactive position on budget reductions, Clothesline Project's enthusiastic outreach, Justice O'Connor's multi-disciplinary approach, MAG Regional Domestic Violence Council's and ACADV's open dialogue, Kids at Hope's encouragement to find positive attributes even in negative situations |
| Examples of steps needing to be taken | 5 | Focus on solutions, use an informed strength-based approach, develop redundancies in system, offer true life stories to inspire and show steps taken |
| Knowledgeable | 5 | Hands-on knowledge, not just theory, informed and involved, focuses on teaching moments, knowledgeable |

| Other #8 | | |
|---|---|---|
| ***Is there anything else to share?*** | | |
| **Result** | **#** | **Comments** |
| Criminal justice issues | 12 | Make policies specific to DV because DV is unlike other crimes, police and detective workloads are too high with 90 cases a month, assign the same victim advocate to an officer each time, need more legal assistance (2), prosecute more people, Kaity's Law helps teen dating survivors, changes in law and police methods helping, criminal justice response has improved, need for more courts to address the whole family, hundreds of cases not prosecuted for very one that is successful because survivor recants, focus more on police investigations and successful prosecution |
| Next steps | 9 | Tear down barriers and work together, recognize staff burn-out as a critical issue, do more group projects, raise awareness about FAC, need to challenge the system, need really good facilitators, address funding issues and medical/DV services being cut, ensure survivors and children can access ongoing counseling, more shelters and services in West Valley |
| Survivor issues | 7 | Investigate the family relationships, fear of immigration issues, survivors speak Mexican/Indian dialect and are learning to read and write, women sometimes victimize each other in shelter, don't put survivors down, use an empowerment model, fear of system |
| Training | 3 | Joint training between shelters and police, education is key, cross train |
| Offenders | 3 | Hold terrorists accountable, need to address offenders more, stop creating offenders |
| Hard to share only positive | 1 | |

# Notes:

**Regional Plan to**
**End Domestic Violence**

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