May 25, 2016

TO: Members of the MAG Standard Specifications and Details Committee

FROM: Jim Badowich, City of Avondale, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Wednesday, June 1, 2016 at 1:30 p.m.
MAG Office, Suite 200 (Second Floor), Ironwood Room
302 North 1st Avenue, Phoenix

A meeting of the MAG Specifications and Details Committee has been scheduled for the time and place noted above. Members of the MAG Specifications and Details Committee may attend the meeting either in person, by videoconference or by telephone conference call. If you have any questions regarding the meeting, please contact Committee Chair Jim Badowich at 623-333-4222 or Gordon Tyus, MAG staff at 602-254-6300.

In 1996, the Regional Council approved a simple majority quorum for all MAG advisory committees. If the MAG Specifications and Details Committee does not meet the quorum requirement, no action can be taken. Attendance at the meeting is strongly encouraged.

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

It is requested (not required) that written comments on active cases be prepared in advance for distribution at the meeting.

MAG Standard Specifications and Details Committee
TENTATIVE AGENDA
June 1, 2016

COMMITTEE ACTION REQUESTED

1. Call to Order and Introductions
   Introductions

2. Call to the Audience
   An opportunity is provided to the public to address the MAG Specifications and Details 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 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.

   2. Information.

3. Approval of May 4, 2016, Meeting Minutes

   3. **Review and approve minutes of the May 4, 2016 meeting.**

Carry Forward Cases from 2015

4. Case 15-13: Revisions to Section 725
   Add text to Section 725.6 to identify what to include in a concrete mix design submittal.

   4. Information and discussion.
   Sponsor: Jeff Hearne, Concrete WG

New Cases for 2016

5. Case 16-01: Misc. Corrections
   A. Revise Table 310-1 by deleting "or gradation deficiency" from the Deficiency column for Type IV.
   B. Correct arrow placement on Detail 507: Encased Concrete Pipe
   C. Add bullets back into Table 608-2 to make sure item 3. Surface Survey is included in medium and large projects.

   5. Information and discussion
   Sponsors: Bob Herz, MCDOT
   Arvid Veidmark, AZUCA

6.	Case 16-02: Certificates of Compliance and Analysis Add requirements for certificate of compliance and certificate of analysis. Add Section 106.2.1 Certificate of Compliance, add Section 106.2.2 Certificate of Analysis, and modify Section 717.2.1.2 Crumb Rubber.	6. Information and discussion Sponsor: Bob Herz, MCDOT
7.	Case 16-05: DUAL CURB RAMPS. New Details 236-1, 236-2, 237-1, 237-2 and revise Section 340.3.9 Tolerances.	7. Information and discussion Sponsor: Warren White, Chandler
8.	Case 16-08 Valve Stem Extension Detail. Separate Valve box Installation and Grade Adjustment. Revise Detail 391-2 to remove Valve Stem extension drawing. Create new Detail 393 for the Valve Stem Extension.	8. Information and discussion Sponsor: Craig Sharp, Buckeye *Updated*
9.	Case 16-09: Revisions to Section 710. Remove low volume Gyratory and Marshall mixes.	9. Information and discussion Sponsor: Greg Groneberg, Asphalt WG
10.	Case 16-10: Proposed new Section 719. POLYMER MODIFIED TERMINAL BLENDED RUBBERIZED ASPHALTIC CONCRETE.	10. Information and discussion Sponsor: Greg Groneberg, Asphalt WG *New*
11.	Case 16-11: Update to Section 309 Lime Stabilization or Modification of Subgrade. Eliminate reference to AASHTO T-26 which has been discontinued.	11. Information and discussion Sponsor: Bob Herz, MCDOT *New*
12.	Case 16-12: Revision to Alteration of Work Section 104.2.1. Replace existing requirements of Section 104.2.1 with Maricopa County requirements.	12. Information and discussion Sponsor: Bob Herz, MCDOT *New*
13.	Case 16-13: New Detail 115. Temporary Site Access With Trackout Pad.	13. Information and discussion Sponsor: Bob Herz, MCDOT *New*
14.	New and Potential Cases. New sponsored cases, other potential cases.	14. Information and discussion

General Discussion

15. Working Group Reports

15. Information and discussion.

- Curb Ramp WG Chair: Warren White
  05/16/2016 Meeting
- Water/Sewer WG Chair: Jim Badowich
  05/17/2016 Meeting
- Asphalt, Materials and Concrete WGs
  05/19/2016 Meeting
  Chairs: Greg Groneberg, Brian Gallimore and Jeff Hearne
- Outside ROW Chair: Peter Kandaris

16. General Discussion
Microsurfacing/Microseal Discussion

16. Information and discussion.

17. Request for Future Agenda Items

17. Information and discussion.

Adjournment

MEETING MINUTES FROM THE MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD SPECIFICATIONS AND DETAILS COMMITTEE

May 4, 2016

Maricopa Association of Governments Office, Ironwood Room
302 North First Avenue
Phoenix, Arizona

AGENCY MEMBERS

Jim Badowich, Avondale, Chair
Craig Sharp, Buckeye
Warren White, Chandler, Vice Chair
Shane Swartwart, El Mirage (proxy) (audio)
Jess Knudson, Florence (audio)
Tom Kaczmarowski, Glendale (audio)
Kent Westover, Gilbert (proxy)
Rob Godwin, Goodyear (proxy)
Bob Herz, MCDOT
Lance Webb, Mesa
Dan Nissen, Peoria
Robert Duvall, Phoenix (Streets)
* Jami Erickson, Phoenix (Water)
Roy Herrington, Scottsdale (proxy)
David Mobley, Surprise
Tom Wilhite, Tempe
* Jonathan Sorrell, Valley Metro
Gregory Arrington, Youngtown

ADVISORY MEMBERS

Greg Groneberg, ARPA
Jeff Hearne, ARPA
* Arvid Veidmark, AZUCA
Tom Brennan, AZUCA
Brian Gallimore, AGC
Peter Kandaris, Independent (audio)
Paul R. Nebeker, Independent
Christina Buckle, SRP

MAG ADMINISTRATIVE STAFF

Gordon Tyus

* Members not attending or represented by proxy.

GUESTS/VISITORS

Jim Anderson, Olson Precast Arizona
Troy McGahey, New Horizon Sales
Mark Moeller, ADS
Brian Sitarz, Oldcastle

1. Call to Order

   Chair Jim Badowich called the meeting to order at 1:33 p.m.

   Mr. Badowich introduced the proxies (Kent Westover, Rob Godwin and Roy Herrington) and also had the people on audio call introduce themselves (Shane Swartwart, Jess Knudson and Tom Kaczmarowski).

2. Call to the Audience

   Chair Badowich announced the call to the audience. No members of the audience wished to speak.

3. Approval of Minutes

   The members reviewed the April 6, 2016 meeting minutes. Mr. Badowich asked if there were any changes. No corrections were noted.

   Dan Nissen moved to accept the minutes as written. Tom Wilhite seconded the motion. A voice vote of all ayes and no nays was recorded.

Carry Forward 2015 Cases

4. Case 15-13: Add text to Section 725.6 to Identify what to Include in a Concrete Mix Design Submittal.

   Jeff Hearne said a new revision dated 4/21/16 was included in the packet. He said during the working group they discussed whether to use the verbiage as shown in the revision or a checklist. They decided the checklist was more than needed. Mr. Hearne also said the text in 725.6 basically collects what is required in other specs all in one place.

   Jim Badowich asked if there was a date on the mixes, and should it be added? Mr. Hearne said most cities require yearly approvals and they are already dated. Mr. Badowich said he'd found some at Avondale three years old, and pits can change in that time. He would like it to be more specific about dates. Mr. Hearne asked members to take it back to their agencies for review. He expected some comments from Jon Shi at the county.

New Cases for 2016

5. Case 16-01: Miscellaneous Corrections.

   Chair Badowich summarized current corrections and asked if there were any new submissions. Greg Groneberg and Jeff Hearne said they are investigating a few possible updates.

6. Case 16-02: Add Section 106.2.1 Certificate of Compliance, add Section 106.2.2 Certificate of Analysis, modify Section 717.2.1.2 Crumb Rubber, and modify several other sections as noted.

   Bob Herz handed out a revised version of the case that incorporated comments from the Asphalt Working Group, including adding "upon request" by the engineer the Contractor shall submit certificates of compliance and analysis. This was so that paperwork was not generated when it wasn't needed, but the engineer can still request them if they are desired by the agency, they are required for federal projects. He said the requirements for Certificate of Compliance and Certificate of Analysis were based upon the ADOT specifications, and in Section 717 references to ADOT were changed to reference the new MAG spec. He asked members to review the changes.

   Rob Duvall suggested requiring a project name and number on the certificates. He said Phoenix uses these to help track certificates on projects. Jim Badowich asked if the engineer can require them on non-federal projects. Mr. Herz said yes, they could and they can request them at any time, before during, or after the project. Mr. Badowich agreed with Mr. Duvall's suggestion.

7. Case 16-05: Dual Curb Ramps. New Details 236-1, 236-2, 237-1, 237-2 and revise Section 340.3.9 Tolerances.

   Warren White said discussion on this case will also cover the discussion during the working group meeting. He thanked Brian Gallimore and Jeff Hearne for attending the working group meeting and for their comments. There were revised details in the packet. No changes were made to the specifications.

   The first issue he discussed was options for increasing the strength of the ramps either via thickness, reinforcement (such as steel or wire mesh), or by the class of concrete. The group decided to increase the thickness to 6" for all ramps, and to use class A concrete. He said agencies currently use 4" thickness and type B concrete, but have had problems with breakage. Bob Herz said the County has not had problems with class B concrete since the compaction requirements for the subgrade under the ramp were increased to 95% in the 2009 update. Rob Godwin said they did have breakage of a 4" type B ramp and would like to increase its strength. He said the subgrade passed. Mr. Badowich said you can't test the subgrade for every ramp, and he also would like to increase the thickness. Avondale also had a four month old ramp that was broken. Jeff Hearne and Brian Gallimore agreed that contractors typically are already using type A concrete as a measure of insurance to prevent breakage and that it is also easier to work with. Bob Herz said contractors have to submit compaction test results. Rob Godwin said they currently test 1 in 4 ramps, and want to do 1 in 2, but can't do all of them. Jim Badowich said he received feedback from his public works department which doesn't want to replace so many ramps, and if MAG doesn't do this, he will need to have a supplement.

   Mr. White introduced the next issue – the application of ramp control points. They were added to the current details and are located at the center of the ramp, back of curb. Bob Herz said that for directional ramps you may need more information to identify the angle or direction of the ramp. Ray Herrington said on their plans they may require additional criteria to define where

the ramp is located. Peter Kandaris suggested showing the centerline to clarify the control point location.

Next, Mr. White discussed changes to the table in the upper right corner of the details, and how it related to the typical and maximum slopes on the section view. In order to have some construction tolerances the group suggested adding typical slopes, rather than using the maximum slopes. Changing the 8.33% ramp slope to 8% would affect the length of the ramps. They have been increased by 6" in the table to reflect this. The typical and maximum slopes on the section are both shown including the 1.5% preferred sidewalk slope and the 2% maximum slope. He said there were also changes to the notes, including requiring Class A concrete. He also noted that the line types of the landing area on the details need to be corrected to show them as dashed lines. Jim Badowich asked if the C column is based on the curb heights. Mr. White said it did take them into account. Finally he said they would probably need to adjust the way the sidewalk comes in on the curbed ramp option.

Jim Badowich said Note 5 may need to take into account the crosswalk markings, because they had an issue in Avondale where the ramps aligned with each other, but not with the crosswalk on an intersection that was skewed. Mr. Kandaris asked which took precedence, and Mr. Badowich said he thought the ramp alignment still would.

8. Case 16-06: Update Section 727 Steel Reinforcement to replace withdrawn ASTM A82 and A185 with ASTM A1064.

   Bob Herz said he received no comments since the last meeting and asked for any comments to the case as shown. Rob Duvall said that since the term "Mesh" was removed from the heading, it should also be changed in the text. Mr. Herz agreed and moved to accept the case with the revision to replace "Mesh" with "Welded wire." Rob Duvall seconded the motion. A roll call vote was taken. The motion passed: 15 yes, 0 no, 1 abstain, 1 not present.

9. Case 16-07: Add Atmospheric Corrosion Resistance Low-Alloy Steel (Corten steel) to the Material portion of Section 415 Flexible Metal Guardrail.

   Bob Herz said based on feedback from the previous meeting he added the term "weathering steel" to the spec since Corten is a brand name. He said this type of steel is required to be thicker (Class B) than standard guardrail because it is subject to erosion. He said they currently have been receiving Class A which is thinner. Seeing no further comments Mr. Herz moved to accept the case as presented. Warren White seconded the motion. A roll call vote was taken. The motion passed: 15 yes, 0 no, 1 abstain, 1 not present.

10. Case 16-08: Valve Stem Extension Revisions.

    Craig Sharp introduced a new case to separate valve box installation and grade adjustment details. This included revising Detail 391-2 to remove the valve stem extension drawing, and creating a new Detail 393 for the valve stem extension. The new extension drawing would allow adjustable lengths to be more easily manufactured.

There were comments about the minimum dimensions for the depth shown on the new Detail 393. Based on other dimensions they would need to be larger. Paul Nebeker asked when extensions were required. Mr. Sharp said currently valves under 5' do not need extensions and this was not changed. Mr. Nebeker said there are problems if they are too shallow because the key becomes difficult to turn if it is up too high. Rob Godwin suggested extending the depth that doesn't require an extension to 6' instead of 5'. Paul Nebeker said in other parts of the country extensions are not allowed. Mr. Sharp said he could adjust the detail to show a range of 36"-60". Mr. Nebeker suggested reviewing agency requirements and said valves are often activated automatically. Craig Sharp said representatives from Oldcastle brought in a sample valve extension for members to see.

Lace Webb of Mesa said Details 391-1 and 391-2 would also need to be adjusted if the maximum depth is increased. Mr. Sharp said they also need to be updated to reference the new Detail 393.

Rob Godwin suggested adding a specification to determine what it means to be "plumb." What tolerance is allowed? Mr. Nebeker said he has had issues with the dirt ring binding up and asked about the tolerances. Mr. Sharp said Note 4 allows the dirt ring to float freely above the plate it rests on. There were suggestions to note these items on the drawing.

Mr. Godwin also suggested using slurry around the valve installation since it is difficult to get good compaction around them. Mr. White said the revisions recently made to the specs already allow this as an option. Finally Mr. Nebeker suggested making the extensions even on a project when possible. Craig Sharp said he would work on the revisions and discuss it at the next Water/Sewer Working Group meeting.

11. Case 16-09: Revisions to Section 710 to Remove Low Volume Gyratory and Marshall Mixes.

Greg Groneberg introduced a new case from the Asphalt Working Group to revised Section 710. The case removes references to high and low volume mixes both for Gyratory and Marshall mixes. Currently the mix design is the same for both high and low volume options, so separating them just creates confusion and increased paperwork. While updating this section they also removed references to the superpave mix which is no longer used. Mr. Groneberg described how the tables were revised.

Rob Duvall thought including text about the arterials using Gyratory mixes and residential streets using Marshall should be left in. Also the first sentence of the 3rd paragraph should not be deleted but moved to the end of the 2nd paragraph. Peter Kandaris suggested retitling the top of column of Table 710-2 to "Requirements" or something similar where "Low Traffic, High Traffic" was removed. He also asked if the mix design shows Gyratory or Marshall. Mr. Groneberg said that it did. Mr. Badowich added Marshall mixes typically have more binder, and that extra oil helps residential streets from "drying" out.

12. New or Potential Cases.

Warren White handout out an information sheet regarding the DOT/DOJ Q&A on when street alterations trigger ramp replacements. He suggested changing the title of the Microsurfacing section to Microsealing. This better describes the type of street maintenance being accomplished and is less likely to be thought as an alteration that changes the pavement structure of a street that would trigger the ADA requirement for ramp construction. Some thought that the name change wouldn't matter, but renaming the material may have the FHWA categorized it with chip seal and slurry seal. Bob Herz said that according the County, microsurfacing triggers replacement, but chip seal and slurry seal do not. The question is who determines that microsurfacing is a trigger. Brian Gallimore said the problem is city attorneys are deciding it, and often they may not understand the process. Members agreed that a mill and overlay process does trigger it. Finally, there was discussion on transition plans and how this could affect when ramps are replaced and what maintenance can be done. Mr. White said he plans to bring this discussion to the next Materials Working Group meeting.

The handout with links to the DOJ and FHWA information is posted on the website here: http://www.azmag.gov/Events/Event.asp?CMSID=8361

13. Working Group Reports

Chair Badowich asked for reports from the working group chairs.

a. **Curb Ramp Working Group**
Warren White said most of what was discussed during the meeting was covered during the discussion on Case 16-05, and that the notes were included in the packet.

The next meeting is scheduled for Monday, May 16th at 1:30 in the MAG office.

b. **Water/Sewer Issues Working Group**
Jim Badowich they discussed water and sewer testing and are gathering city specs to create a template and come up with a draft. Flushing and chlorination will be covered.

He said Oldcastle has been helping revise and update the meter box details and lids. They plan on keeping the same dimensions to allow for interchangeable lids, but updating the materials to include polymer concrete. Mr. Badowich said they are also planning to have specs for a traffic rated option. Representatives from Oldcastle are working with Warren White to develop a case.

Another issue discussed was to reexamine extra protection for reclaimed water lines. The type of water and sewer lines need to be better defined. He asked if raw water should be considered as potable for separation concerns. Mr. Godwin said there was a blue ribbon panel that discussed this issue and raw is not considered potable. At the working group meeting Arvid Veidmark suggested sleeving as an option for separation.

Mr. Badowich said concrete encasement can be a problem because if the concrete cracks the pipe will.

He said they have also had to replace ductile iron sewer lines because the lining is failing that the pipe is deteriorating.

Finally he said Peter Kandaris joined the group to work on issues outside the right-of-way including backflow prevention to protect public water systems.

Mr. Badowich said the next meeting of the working group is scheduled for Tuesday, May 17th, at 1:30 in the MAG office.

c. **Asphalt, Materials and Concrete Working Groups**

Greg Groneberg said they worked on Case 16-02 which was already discussed, and Case 16-09 that was just introduced. They are now looking to clean up Section 310 rock correction procedures.

Another planned case is a proposed Section 719 for Polymer Modified Terminal Blended Rubberized Asphaltic Concrete. They currently are getting comments and plan to discuss it more at the next meeting.

The group also discussed problems patching trenches that are smaller than the width of the equipment. They plan on researching patching specs. Testing frequency and methods should be different.

For concrete, Jeff Hearne, said they already discussed Case 15-13. He is trying to revitalize the specs on pervious concrete and looking for contractor help on these new sections. He also described the plant tour on the 13th that had about 30 people. Agency staff member were represented on the tour which took about 2 hours and covered all three plants. He said they are trying to organize another tour on the west side in June. When asked about a walking tour, Mr. Hearne said it was more difficult to set-up do to safety issues.

The next meeting of the joint Asphalt/Materials and Concrete Working Groups is scheduled for Thursday, May 19th at noon. The meetings will be held in the ARPA office, 916 W Adams Street, Phoenix.

d. **Outside ROW Working Group**

Peter Kandaris said he discussed priorities with the Water/Sewer Working Group. He thanked Paul Nebeker for working on some items. Mr. Kandaris said he received CAD drawings for backflow preventers and is planning condense all the agency supplements down to 5 types that show the best practices. Underground storage tanks and drywells were also discussed. He plans to go the Materials Working Group next to look for help starting drafts, and with markups.

14. General Discussion

Jim Badowich asked if there were any general discussion items to bring to the committee's attention. None were given.

15. Future Agenda Items

Chair Badowich asked the committee for any possible future agenda items. None were announced.

16. Adjournment

Seeing no further business, chair Badowich adjourned the meeting at 3:32 p.m.

2016 PROPOSED REVISIONS TO MAG SPECIFICATIONS AND DETAILS

(Updated information can be found on the website: http://www.azmag.gov/Projects/Project.asp?CMSID=1055&CMSID2=7154)

CASE	DESCRIPTION	PROPOSED BY	MEMBER	SUBMITTAL DATE Last Revision	VOTE DATE	VOTE	
	CARRY FORWARD CASES FROM 2015						
15-05	Case 15-05: Proposed Revisions to Section 616 Reclaimed Water Line Construction and NEW Reclaimed Valve Box detail 270-2. Update Detail 270-1.	Chandler	Warren White	03/04/2015 04/06/2016	Voted: 04/06/2016	10 0 2	Yes No Abstain
15-10	Case 15-10: Add subsection 321.10.5.3 “Rehabilitation Work” into the MAG Specifications.	Materials WG	Brain Gallimore	06/03/2015 07/23/2015	Withdrawn 02/03/2016	0 0 0	Yes No Abstain
15-13	Case 15-13: Add text to Section 725.6 to identify what to include in a concrete mix design submittal.	Concrete WG	Jeff Hearne	06/03/2015 04/21/2016		0 0 0	Yes No Abstain
	NEW CASES FOR 2016						
16-01	**Case 16-01: Miscellaneous Corrections:** A. Revise Table 310-1 by deleting “or gradation deficiency” from the Deficiency column for Type IV. B. Correct arrow placement on Detail 507: Encased Concrete Pipe C. Add bullets back into Table 608-2 to make sure Item 3. Surface Survey is included in medium and large projects.	MCDOT	Bob Herz, Arvid Veidmark	01/06/2016 03/02/2016		0 0 0	Yes No Abstain
16-02	Case 16-02: Add requirements for certificate of compliance and certificate of analysis. Add Section 106.2.1 Certificate of Compliance, add Section 106.2.2 Certificate of Analysis, and modify Section 717.2.1.2 Crumb Rubber.	MCDOT	Bob Herz	01/06/2016 05/04/2016		0 0 0	Yes No Abstain
16-03	Case 16-03: Revision to Detail 251 RETURN TYPE DRIVEWAYS. Adjust concrete thickness and concrete class for commercial and industrial driveways to match requirements shown on Detail 250.	MCDOT	Bob Herz	01/06/2016 02/04/2016	Voted: 04/06/2016	12 0 0	Yes No Abstain
16-04	Case 16-04: Review and adjust Section 340.2.1 for withdrawn ASTM C1028 reference.	MCDOT	Bob Herz	02/03/2016 02/04/2016	Voted: 04/06/2016	12 0 0	Yes No Abstain

2016 PROPOSED REVISIONS TO MAG SPECIFICATIONS AND DETAILS

(Updated information can be found on the website: http://www.azmag.gov/Projects/Project.asp?CMSID=1055&CMSID2=7154)

CASE	DESCRIPTION	PROPOSED BY	MEMBER	SUBMITTAL DATE Last Revision	VOTE DATE	VOTE	
16-05	Case 16-05: Dual Curb Ramps. New Details 236-1, 236-2, 237-1, 237-2 and revise Section 340.3.9 Tolerances.	Chandler/ Curb Ramp WG	Warren White	03/02/2016 04/19/2016		0 0 0	Yes No Abstain
16-06	Case 16-06: Update Section 727 Steel Reinforcement to replace withdrawn ASTM A82 and A185 with ASTM A1064.	MCDOT	Bob Herz	04/06/2016	Voted: 05/04/2016	15 0 1	Yes No Abstain
16-07	Case 16-07: Add Atmospheric Corrosion Resistance Low-Alloy Steel (Corten steel) to the Material portion of Section 415 Flexible Metal Guardrail.	MCDOT	Bob Herz	04/06/2016 04/26/2016	Voted: 05/04/2016	15 0 1	Yes No Abstain
16-08	Case 16-08: Separate Valve box Installation and Grade Adjustment. Revise Detail 391-2 to remove Valve Stem extension drawing. Create new Detail 393 for the Valve Stem Extension.	Buckeye Water/Sewer WG	Craig Sharp	05/04/2016 05/24/2016		0 0 0	Yes No Abstain
16-09	Case 16-09: Revisions to Section 710 to remove low volume Gyratory and Marshall mixes.	Asphalt WG	Greg Groneberg	05/04/2016		0 0 0	Yes No Abstain
16-10	Case 16-10: Proposed new Section 719 POLYMER MODIFIED TERMINAL BLENDED RUBBERIZED ASPHALTIC CONCRETE	Asphalt WG	Greg Groneberg	06/01/2016		0 0 0	Yes No Abstain
16-11	Case 16-11: Update to Section 309 Lime Stabilization or Modification of Subgrade	MCDOT	Bob Herz	06/01/2016		0 0 0	Yes No Abstain
16-12	Case 16-12: Revision to Alteration of Work Section 104.2.1	MCDOT	Bob Herz	06/01/2016		0 0 0	Yes No Abstain
16-13	Case 16-13: Proposed New Detail 115 Temporary Site Access with Trackout Pad	MCDOT	Bob Herz	06/01/2016		0 0 0	Yes No Abstain
16-14							

CITY OF BUCKEYE

Engineering Department

Case Number: 16-08

Date: May 24, 2016

To: MAG Specifications and Details Committee

From: Craig Sharp

RE: Separate Valve Box Installation and Grade Adjustment

Purpose: These should be two separate sections

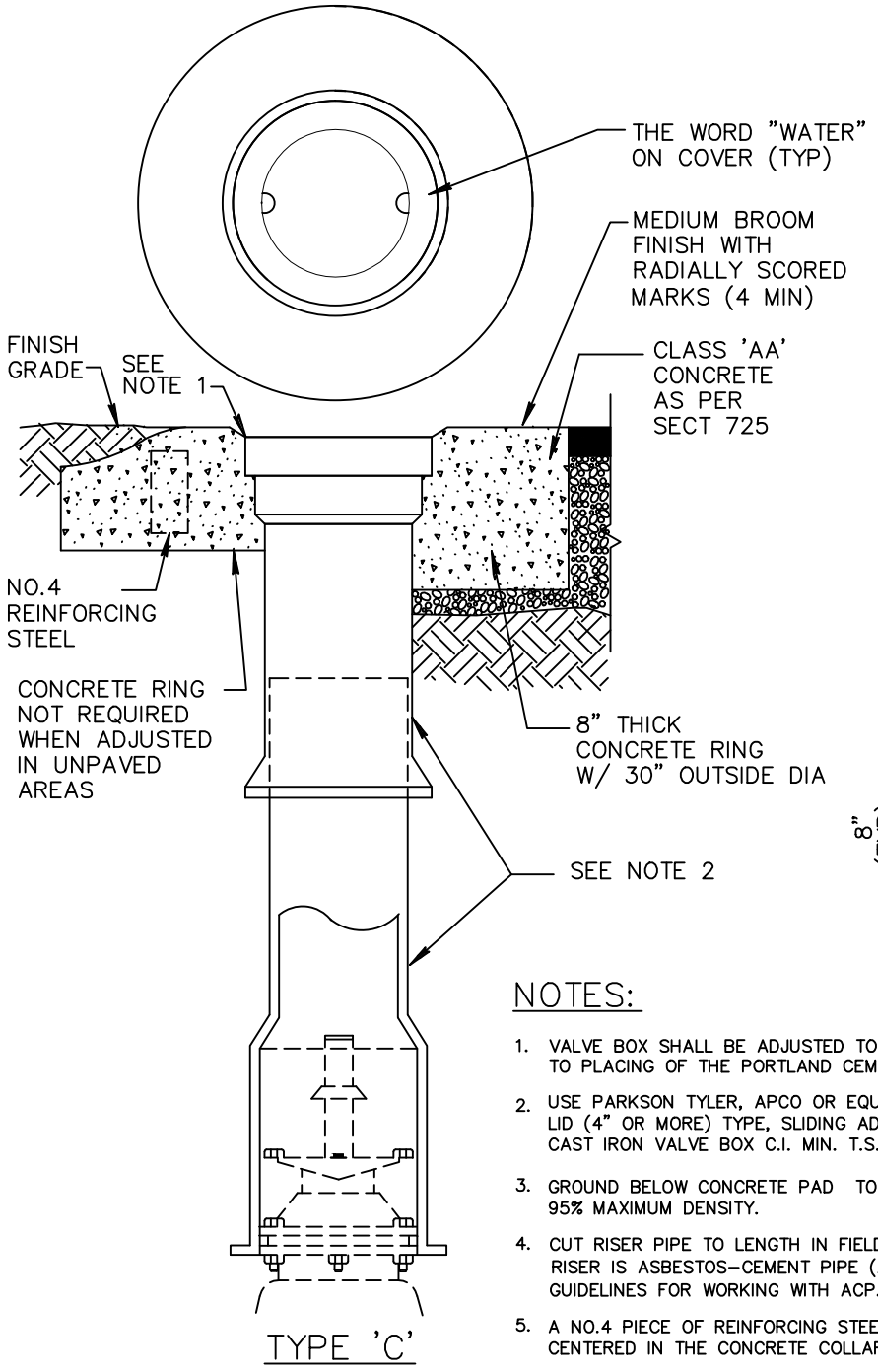
Revisions: To Detail 391-2 to remove Valve Stem extension drawing.

Create new Detail 393 for the valve stem extension.

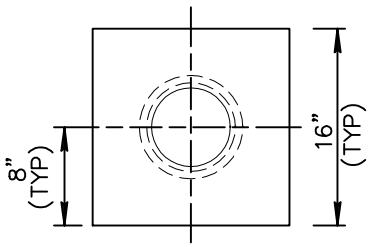
Please find attached new drawing of valve stem extension

Updated: May 24, 2016

CASE 16-08
REVISED
05-09-16



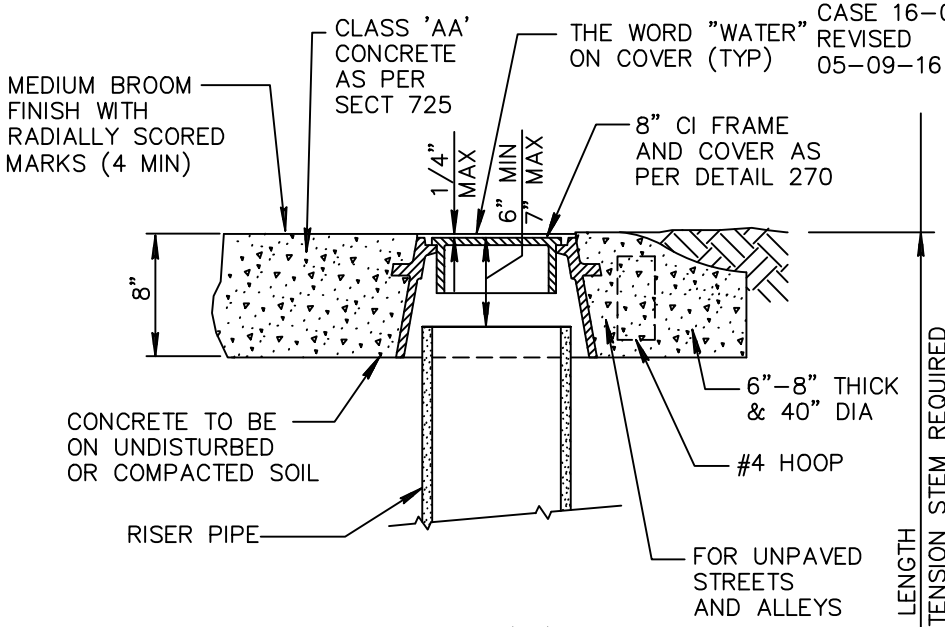
TYPE 'C'



VIEW A-A

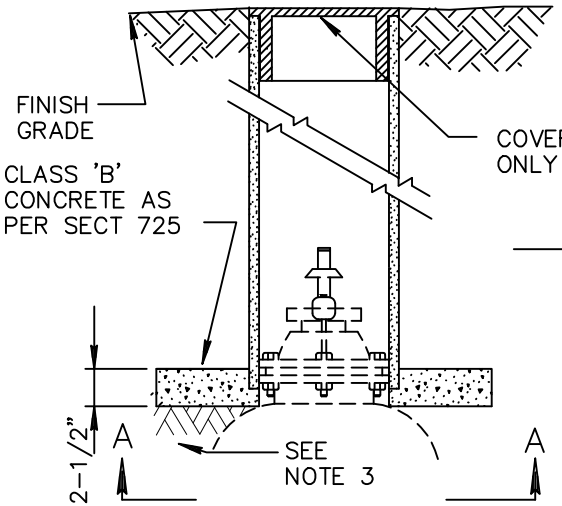
NOTES:

1. VALVE BOX SHALL BE ADJUSTED TO THE FINISHED GRADE PRIOR TO PLACING OF THE PORTLAND CEMENT CONCRETE SURFACE.
2. USE PARKSON TYLER, APCO OR EQUAL DEEP SKIRTED LID (4" OR MORE) TYPE, SLIDING ADJUSTABLE CAST IRON VALVE BOX C.I. MIN. T.S. 30,000 P.S.I.
3. GROUND BELOW CONCRETE PAD TO BE COMPACTED 95% MAXIMUM DENSITY.
4. CUT RISER PIPE TO LENGTH IN FIELD. **CAUTION:** IF EXISTING RISER IS ASBESTOS-CEMENT PIPE (ACP) FOLLOW OSHA GUIDELINES FOR WORKING WITH ACP.
5. A NO.4 PIECE OF REINFORCING STEEL SHALL BE CENTERED IN THE CONCRETE COLLAR



TYPE 'A'

(TO BE USED IN AREAS SUBJECT TO VEHICULAR TRAFFIC)



TYPE 'B'

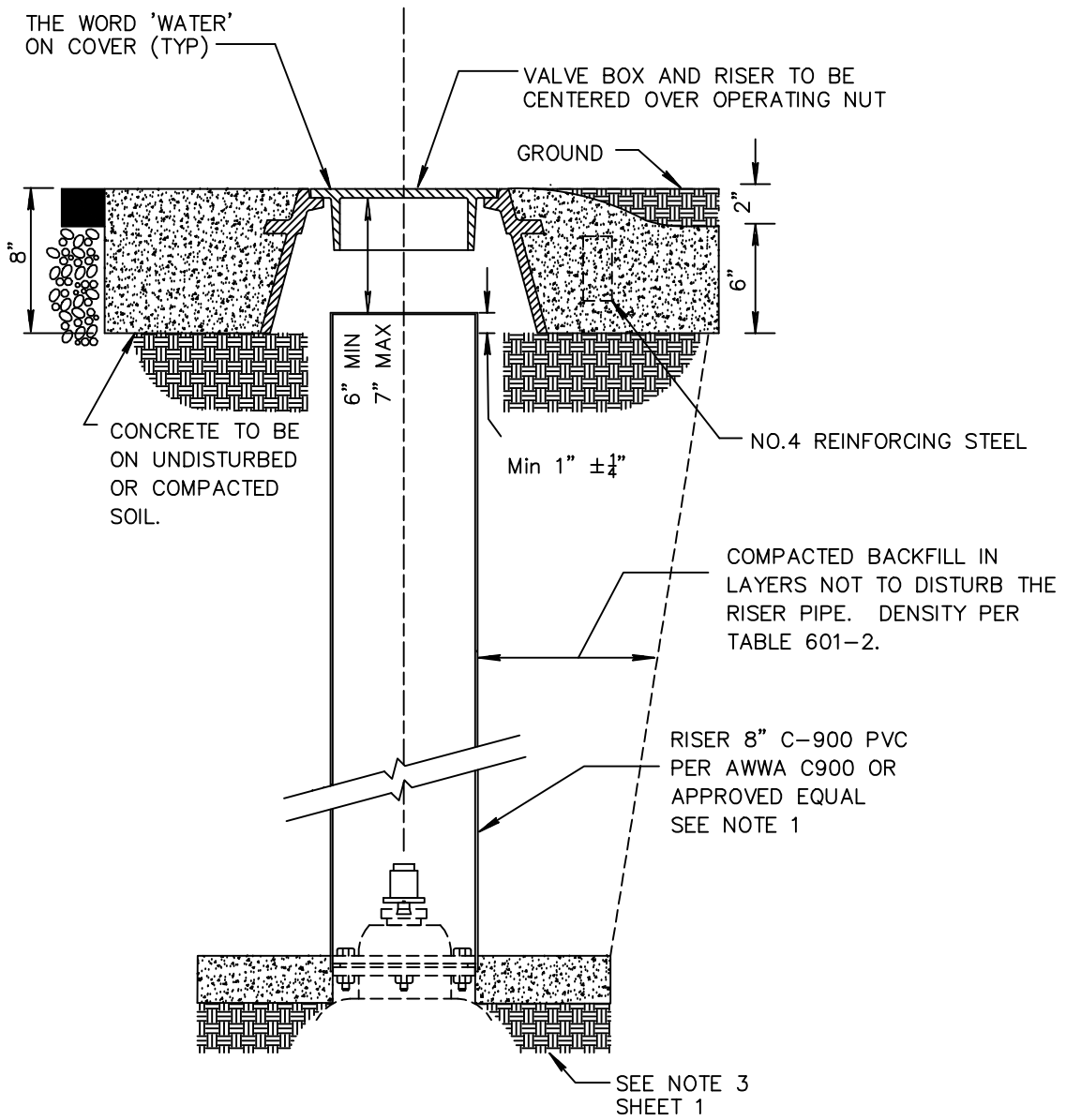
(NOT SUBJECT TO VEHICULAR TRAFFIC)

DETAIL NO.				REVISED	DETAIL NO.
391-1	MARICOPA ASSOCIATION of GOVERNMENTS — STANDARD DETAIL ENGLISH	VALVE BOX INSTALLATION AND GRADE ADJUSTMENT		DRAFT 01-01-2017	391-1

CASE 16-08
REVISED 05-09-16

NOTES:

1. IF TWO OR MORE SECTIONS OF PIPE ARE USED TO MAKE THE VALVE BOX RISER, THEY SHALL BE COUPLED OR BONDED TO FORM DEBRIS-TIGHT JOINTS.
2. ALL CONCRETE SHALL BE MAG CLASS 'AA' CONCRETE PER SECTION 725 WITH RADIAL SCORED JOINTS AND MEDIUM BROOM FINISH.
3. CONCRETE COLLAR TO HAVE BE 40" SQUARE OR ROUND.
4. VALVE BOX SHALL BE CENTERED AROUND THE OPERATING NUT.
5. THE TOP OF THE VALVE SHALL BE KEPT CLEAN.
6. A NO.4 PIECE OF REINFORCING STEEL SHALL BE CENTERED IN THE CONCRETE COLLAR

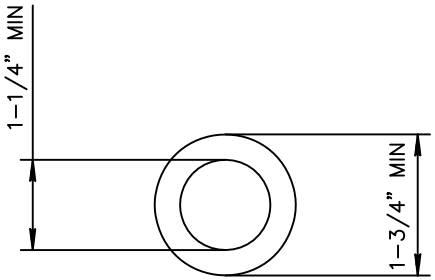


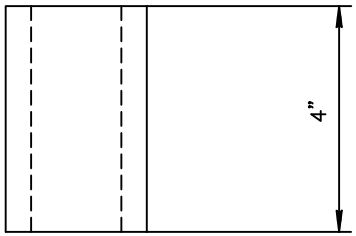
DRAFT				REVISED DRAFT	DETAIL NO.
391-2	MARICOPA ASSOCIATION of GOVERNMENTS	STANDARD DETAIL ENGLISH	VALVE BOX INSTALLATION AND GRADE ADJUSTMENT	01-01-2015	391-2

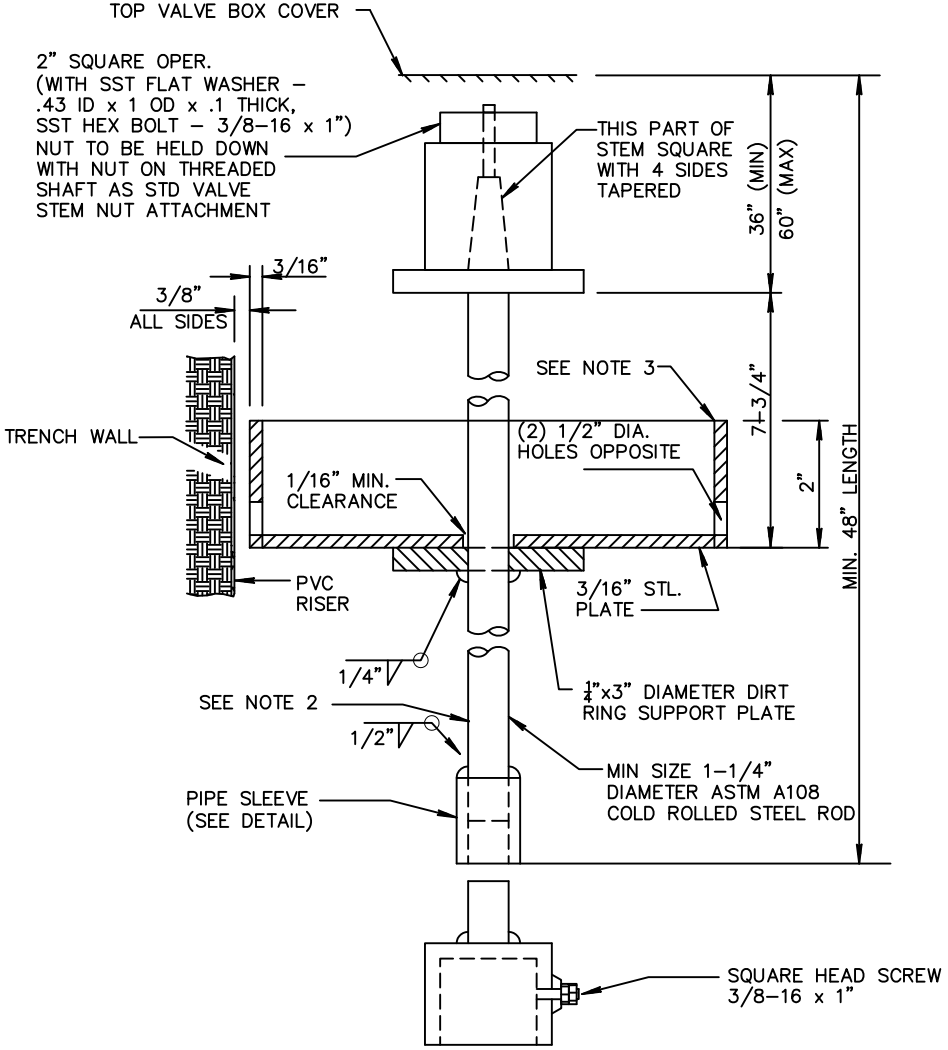
CASE 16-08
REVISED 05-09-16

PIPE SLEEVE DETAIL

MATL: STEEL PER ASTM A513







NOTES:

1. EXTENSION STEM: WITH SQUARE SOCKET ON BOTTOM TO FIT 2" SQUARE VALVE OPERATING NUT. EXTENSION OF VALVE STEMS REQUIRED ON ALL VALVES INSTALLED WHERE THE OPERATING NUT IS OVER 5' BELOW THE SURFACE. LENGTH TO FIT EACH INSTALLATION. OPERATING NUT TO BE HELD ON TOP OF EXTENSION WITH STOP NUT.
2. STEM PAINTING: ALL STEEL TO HAVE A PRIME COAT OF PAINT NO. 1-D AND ONE HEAVY APPLICATION (FINISH COAT) OF PAINT NO. 9 AS PER SECT. 790.
3. DIRT RING TO FLOAT FREELY ON THE TOP OF THE SUPPORT PLATE.

DRAFT				REVISED DRAFT	DETAIL NO.
393	MARICOPA ASSOCIATION of GOVERNMENTS STANDARD DETAIL ENGLISH	WATER VALVE EXTENSION		01-01-2017	393

SECTION 710 Case 16-09 5/6/16

ASPHALT CONCRETE

710.1 GENERAL:

Asphalt concrete shall be a mixture of asphalt cement and mineral aggregates. Mineral admixture shall be included in the mixture when required by the mix design or by the Engineer. Asphalt concrete shall be produced in accordance with Section 321.

The designation for asphalt concrete mixes shall be based on the nominal maximum aggregate size of the mix. The applicable mix designations are 3/8 inch, 1/2 inch, and 3/4 inch. Each mix shall be designed using Marshall or Gyratory compaction methods. Either Gyratory or Marshall Mixes may be used for low or high traffic conditions, as determined by the agency

The following table (Table 710-1) displays the recommended lift thickness for various asphalt concrete mix designations found within Section 710. Please note that these recommended lift thicknesses are minimums based on each mix designation's "Nominal Aggregate Size" and the relative coarseness of its gradation. The compacted thickness of layers placed shall not exceed 150% of the Minimum Lift Thickness of Table 710-1 except as otherwise provided in the plans and specifications, or if approved in writing by the Engineer.

TABLE 710-1

RECOMMENDED MINIMUM LIFT THICKNESS FOR ASPHALT CONCRETE MIXES

Asphalt Concrete Mix Designation (inches)	Minimum Lift Thickness Marshall Mixes	Minimum Lift Thickness Gyratory Mixes
3/8"	1.0 inches	1.5 inches
1/2"	1.5 inches	2.0 inches
3/4"	2.5 inches	3.0 inches

710.2 MATERIAL:

710.2.1 Asphalt Binder: The asphalt binder specified in this section has been developed for use in desert climate conditions. When used in other climates, consideration should be given to adjustments in the asphalt binder selection. The asphalt binder shall be Performance Grade Asphalt conforming to the requirements of Section 711 for PG 70-10, unless otherwise approved by the Engineer or specified differently in the plans or special provisions.

710.2.2 Aggregate: Coarse and Fine aggregates shall conform to the applicable requirements of this section. Coarse mineral aggregate shall consist of crushed gravel, crushed rock, or other approved inert material with similar characteristics, or a combination thereof, conforming to the requirements of these specifications.

Coarse aggregate for hot mix asphalt is material retained on or above the No. 4 sieve and Fine aggregate is material passing the No. 4 sieve. Aggregates shall be relatively free of deleterious materials, clay balls, and adhering films or other material that prevent coating with the asphalt binder. Coarse and Fine aggregates shall conform to the following requirements when tested in accordance with the applicable test methods.

TABLE 710-2		
COARSE/FINE AGGREGATE REQUIREMENTS		
Characteristics	Test Method	
Fractured Faces, % (Coarse Aggregate Only)	Arizona 212	85, 1 or more 80, 2 or more
Uncompacted Voids, % Min.	AASHTO T-304, Method A	45
Flat & Elongated Pieces, % 5:1 Ratio	ASTM D4791	10.0 Max.
Sand Equivalent, %	AASHTO T-176	50 Min.
Plasticity Index	AASHTO T-90	Non-plastic
L.A. Abrasion, %Loss	AASHTO T-96	9 max. @ 100 Rev. 40 max. @ 500 Rev.
Combined Bulk Specific Gravity	AI MS-2/SP-2	2.35 – 2.85
Combined Water Absorption	AI MS-2/SP-2	0 – 2.5%

Tests on aggregates used in asphalt concrete outlined above, shall be performed on materials furnished for mix design purposes and composited to the mix design gradation.

Blend sand (naturally occurring or crushed fines) shall be clean, hard and sound material which will readily accept asphalt binder coating. The blend sand grading shall be such that, when it is mixed with the other mineral aggregates, the combined product shall meet the requirements of Table 710-2.

The natural sand shall not exceed 20 percent for the Marshall mixes and 15 percent for the Gyratory mixes by weight of the total aggregate for a mix.

710.2.3 Reclaimed Asphalt Pavement (RAP): When allowed by the Engineer, Reclaimed Asphalt Pavement (RAP), as defined in Section 701.5, may be used in asphalt concrete provided all requirements of Section 710 are met. References to use of RAP in Section 710 apply only if RAP is used as part of the mixture.

When RAP is used in asphalt concrete, it shall be of a consistent gradation, asphalt content, and properties. When RAP is fed into the plant, the maximum RAP particle size shall not exceed 1 1/2 in. The percentage of asphalt in the RAP shall be established in the mix design. The percentage of RAP binder shall be established in the mix design.

When RAP is used in base and intermediate courses, the amount of RAP aggregate and RAP binder should not exceed 30% contribution; Surface courses should be limited to 20% RAP aggregate and RAP binder contribution.

In addition to the requirements of Section 710.3.1, the job mix formula shall indicate the percent of asphalt RAP and the percent and performance grade of virgin (added) asphalt binder.

When less than or equal to 15% RAP binder is used by weight of total binder in the mix, the added virgin binder shall meet the requirements for PG 70-10 as shown in Section 711. When greater than 15% RAP is used by weight of the total binder in the mix, the added virgin binder will be dropped one grade for low and high temperature properties to a PG 64-16, unless testing indicates that the blend of the recovered RAP binder and virgin binder meets the requirements for PG 70-10 as shown in Section 711. The virgin asphalt binder shall not be more than one standard asphalt material grades different than the specified mix design binder grade.

710.2.4 Mineral Admixture: Mineral admixture when used as an anti-stripping agent in asphalt concrete shall conform to the requirements of AASHTO M-17. Mineral admixture used in asphalt concrete shall be dry hydrated lime, conforming to the requirements of ASTM C1097 or Portland cement conforming to ASTM C150 Type II or ASTM C595 Type IP. The amount of hydrated lime or Portland cement used shall be determined by the mix design. The minimum mineral admixture content within a mix will be 1.00 percent, by weight of total aggregate.

710.3 MIX DESIGN REQUIREMENTS:

710.3.1 General: The mix design for asphalt concrete shall be prepared by a laboratory that is accredited through the AASHTO Accreditation Program (AAP) in Hot Mix Asphalt Aggregates and Hot Mix Asphalt. The laboratory shall be under the direct supervision of a Civil Engineer, registered by the State of Arizona, and who is listed by ADOT as a "Qualified Asphaltic Concrete Mix Design Engineer" within ADOT's latest list of approved laboratories. The latest list of approved laboratories is available on ADOT's web page www.azdot.gov. The date of the design shall not be older than one year from the date of submittal, unless supportive documentation is provided and approved by the Engineer.

The mix design report shall include the following elements as a minimum.

(1) The name and address of the testing organization and the person responsible for the mix design report.

(2) The mix plant identification and/or location, as well as the supplier or producer name.

(3) A description of all products that are incorporated in the asphalt concrete along with the sources of all products, including admixtures and asphalt binder, and their method of introduction.

(4) The supplier and grade of asphalt binder, the source and type of mineral aggregate, and the percentage of asphalt binder and mineral admixture used.

(5) The percentage of RAP and RAP Binder being contributed to the total mix shall be included in the mix design report.

(6) The mix design report shall state whether Gyratory or Marshall and size designation.

(7) The results of all testing, determinations, etc., such as: specific gravity and gradation of each component, water absorption, sand equivalent, loss on abrasion, fractured coarse aggregate particles, Tensile Strength Ratio (ASTM D4867), Marshall stability and flow, asphalt absorption, percent air voids, voids in mineral aggregate, and bulk density. Historical abrasion values may be supplied on existing sources. The submittal should include a plot of the gradation on the Federal Highway Administration's 0.45 Power Gradation Chart, plots of the compaction curves and the results of moisture sensitivity testing.

(8) The laboratory mixing and compaction temperature ranges for the supplier and grade of asphalt binder used within the mix design.

(9) A specific recommendation for design asphalt binder content and any limiting conditions that may be associated with the use of the design, such as minimum percentages of crushed or washed fine aggregate.

(10) The supplier's product code, the laboratory Engineer's seal (signed and dated), and the date the design was performed.

(11) If a Warm Mix Technology or additive is used; the following shall be included:

- Technology type and supporting manufacturer information; including instructions pertaining to laboratory mixture temperatures and curing.
- Amount (%) of additive (technology) used in the mixture.
- Attached copy of the ADOT approved product list, showing additive/technology
- Minimum plant production temperature shall not fall below manufacturer's recommendation.
- Minimum field compaction temperature shall be identified.
- Identify any special mixing or compaction temperatures or special methods to be used when conducting Quality Assurance or Quality Control testing of field collected samples. Example: if the field collected samples of warm mix asphalt can be treated as conventional hot asphalt mix, provide the equivalent conventional hot asphalt mix compaction temperature.

The mix design shall be submitted to the Agency or Engineer by the Contractor/Supplier for which it was developed as part of his project submittals. Once the mix design has been approved by the agency or Engineer, the Contractor and/or his supplier shall not change plants nor use additional mixing plants without prior approval of the Engineer. Any changes in the plant operation, the producer's pit, the asphalt binder, including modifiers in the asphalt binder, or any other item that will cause an adjustment in the mix, shall be justification for a new mix design to be submitted.

710.3.2 Mix Design Criteria: The mix design shall be performed by one of two methods, Marshall Mix Design or Gyratory Mix Design. The method shall be specified on the plans, special provisions, or by the Engineer. A minimum of 4 points will be used to establish the mix design results. The oven aging period for both Marshall and Gyratory mix design samples shall be 2 hours.

710.3.2.1 Marshall Mix Design: The Marshall Mix Design shall be performed in accordance with the requirements of the latest edition of the Asphalt Institute's Manual, MS-2 "Mix Design Methods for Asphalt Concrete." The mix shall use the compactive effort of 75 blows per side of specimen. The mix shall comply with the criteria in Table 710-3.

TABLE 710-3

MARSHALL MIX DESIGN CRITERIA

Criteria	Requirements			Designated Test Method
	3/8" Mix	1/2" Mix	3/4" Mix	
1. Voids in Mineral Aggregate: %, min	15.0	14.0	13.0	AI MS-2
2. Effective Voids: %, Range	4.0±0.2	4.0 ±0.2	4.0 ±0.2	AI MS-2
3. Absorbed asphalt: %, Range*	0-1.0	0-1.0	0-1.0	AI MS-2
4. Dust to Eff. Asphalt Ratio, Range **	0.6-1.4	0.6-1.4	0.6-1.4	AI MS-2
5. Tensile Strength Ratio: % Min.	65	65	65	ASTM D4867
6. Dry Tensile Strength: psi, Min.	100	100	100	ASTM D4867
7. Stability: pounds, Minimum	2,000	2,500	2,500	AASHTO T-245
8. Flow: 0.01-inch, Range	8-16	8-16	8-16	AASHTO T-245
9. Mineral Aggregate Grading Limits				AASHTO T-27
	Percent Passing with Admix			
Sieve Size	3/8 inch Mix		1/2 inch Mix	3/4 inch Mix
1-1/4 inch				
1 inch				100
3/4 inch			100	90 – 100
1/2 inch	100		85 – 100	---
3/8 inch	90-100		62 – 85	62 – 77
No. 8	45-60		40 – 50	35 – 47
No. 40	10-22		10 – 20	10 – 20
No. 200	2.0 – 10.0		2.0 – 10.0	2.0 – 8.0

* Unless otherwise approved by the Engineer.

** The ratio of the mix design composite gradation target for the No. 200 sieve, including admixture, to the effective asphalt content shall be within the indicated range.

710.3.2.2 Gyratory Mix Design: Gyratory Mix Designs shall be performed in accordance with the requirements of latest edition of the Asphalt Institute's SP-2 manual. Mix design laboratory compacted specimens shall be prepared using a gyratory compactor in accordance with AASHTO T-312.

The mix design shall be formulated in a manner described for volumetric mix designs in the current edition of the Asphalt Institute Manual SP-2, except the number of trial blend gradations necessary will be determined by the mix design laboratory. Duplicate gyratory samples shall be prepared at a minimum of four (4) binder contents to select the recommended binder content. The gyratory specimens shall be compacted to 160 gyrations. Volumetric data for the design number of gyrations, N_{des}, and the initial number of gyrations, N_{ini}, are then back calculated based on the bulk specific gravity, G_{mb}, of the N_{max} specimens and the height data generated during the compaction process of those same specimens.

TABLE 710-4	
Number of Gyrations	
N_{ini}	8
N_{des}	100
N_{max}	160

The corrected density of the specimens shall be less than 89.0 percent of maximum theoretical density at N_{ini}. The corrected density of the specimens shall be less than 98.0 percent of maximum theoretical density at N_{max}. The Gyratory mix shall comply with the criteria in Table 710-5.

TABLE 710-5				
GYRATORY MIX DESIGN CRITERIA				
Criteria	**Requirements**			**Designated Test**
	3/8" Mix	**1/2" Mix**	**3/4" Mix**	**Method**
1. Voids in Mineral Aggregate: %, Min.	15.0	14.0	13.0	AI SP-2
2. Effective Voids: %, Range	4.0 ± 0.2	4.0 ± 0.2	4.0 ± 0.2	AI SP-2
3. Absorbed Asphalt: %, Range *	0 - 1.0	0 - 1.0	0 - 1.0	AI SP-2
4. Dust to Eff. Asphalt Ratio, Range **	0.6 – 1.4	0.6 – 1.4	0.6 – 1.4	AI SP-2
5. Tensile Strength Ratio: %, Min.	75	75	75	ASTM D4867
6. Dry Tensile Strength: psi, Min.	75	75	75	ASTM D4867
7. Mineral Aggregate Grading Limits				AASHTO T-27
	Percent Passing with Admix			
Sieve Size	**3/8 inch Mix**	**1/2 inch Mix**	**3/4 inch Mix**	
1 inch			100	
3/4 inch		100	90-100	
1/2 inch	100	90-100	43-89	
3/8 inch	90-100	53-89	-	
No. 8	32-47	29-40	24-36	
No. 40	2-24	3-20	3-18	
No. 200	2.0-8.0	2.0-7.5	2.0-6.5	

* Unless otherwise approved by the Engineer.

** The ratio of the mix design composite gradation target for the No. 200 sieve, including admixture, to the effective asphalt content shall be within the indicated range.

710.3.2.3 Moisture Sensitivity Testing: Moisture sensitivity testing will be performed in accordance with ASTM D4867 for both Marshall and Gyratory mix designs, without the freeze/thaw cycles. The minimum required Tensile Strength Ratio is indicated in the tables above.

- End of Section -

POLYMER MODIFIED TERMINAL BLENDED RUBBERIZED ASPHALTIC CONCRETE

719.1 DESCRIPTION:
The work under this section shall consist of furnishing, proportioning and mixing all the ingredients necessary to produce a polymer modified terminal blended rubberized asphalt concrete (PMTBRAC) material. PMTBRAC mixes may be used for all traffic conditions, as determined by the agency

719.2 MATERIALS:

719.2.1 Binder 76-22 TR (PMTBRAC): The binder used in PMTBRAC shall meet the requirements of Table 711-2 as specified by the engineer.

719.2.2 Aggregate: Coarse and fine aggregates shall conform to the applicable requirements of Tables 719-1 and 719-2 below. Coarse mineral aggregate shall consist of crushed gravel, crushed rock, or other approved inert material with similar characteristics, or a combination thereof, conforming to the requirements of these specifications.

Coarse aggregate is material retained above the Number 8 sieve and fine aggregate is material passing the Number 8 sieve. Aggregates shall be free of deleterious materials, clay balls, and adhering films or other material that prevent thorough coating with the asphalt cement. Mineral aggregate shall conform to the following requirements when tested in accordance with the applicable test methods.

TABLE 719-1
MIX DESIGN GRADATION REQUIREMENTS WITH MINERAL ADMIXTURE

Sieve Size	Percent Passing
1” (25 mm)	100
¾” (19 mm)	100
½” (12.5 mm)	90-100
⅜” (9.5 mm)	75-90
No. 8 (2.36 mm)	40-50
No. 40 (425 µm)	10-20
No. 200 (75 µm)	2.0-10.0

The combined aggregate properties shall conform to the requirements of Table 719-2.

719.2.3 Mineral Admixture: Mineral admixture used in PMTBRAC shall be dry hydrated lime conforming to the requirements of ASTM C1097 or Portland cement conforming to ASTM C150 for Type II, or ASTM C595 for Type IP. The minimum mineral admixture content will be 1.0 percent, by weight of total aggregate. Mineral admixture shall be considered part of the total weight of aggregate and all combined specific gravity and combined water absorption calculations for aggregates and mineral admixture will be done in accordance with the latest edition of the Asphalt Institute’s Manual MS-2 (AI MS-2).

TABLE 719-2
COARSE/FINE AGGREGATE REQUIREMENTS

Characteristics	Test Method	Requirements
Fractured Faces, % (Plus No. 8)	ARIZ-212	85, 1 fracture 80, 2 or more
Uncompacted Voids, %	AASHTO T-304, Method A	45.0
Sand Equivalent (Minus No. 4)	AASHTO T-176	50 minimum
Plasticity Index	AASHTO T-89 & T-90	Non Plastic
L.A. Abrasion, % Loss	AASHTO T-96	9 max. @ 100 Rev. 40 max. @ 500 Rev.
Combined Bulk Specific Gravity	AI MS-2	2.35-2.85
Combined Water Absorption, %	AI MS-2	0-2.5

719.3 MIX DESIGN REQUIREMENT:

719.3.1 General: The mix design for PMTBRAC shall be prepared by a laboratory that is accredited through the AASHTO Accreditation Program (AAP) in Hot Mix Asphalt Aggregates and Hot Mix Asphalt. The laboratory shall be under the direct supervision of a Civil Engineer, registered by the State of Arizona, and who is listed by ADOT as a "Qualified Asphaltic Concrete Mix Design Engineer" within ADOT's latest list of approved laboratories. The latest list of approved laboratories is available on ADOT's web page www.azdot.gov. The date of the design shall not be older than one year from the date of submittal, unless supportive documentation is provided and approved by the Engineer.

The mix design report shall include the following elements as a minimum.

(1) The name and address of the testing organization and the person responsible for the mix design report.

(2) The mix plant identification and/or location, as well as the supplier or producer name.

(3) A description of all products that are incorporated in the asphalt concrete along with the sources of all products, including admixtures and asphalt binder, and their method of introduction.

(4) The supplier and grade of asphalt binder, the source and type of mineral aggregate, and the percentage of asphalt binder and mineral admixture used.

(5) The mix design report shall identify this as a Marshall 75-blow mix design

(6) The results of all testing, determinations, etc., such as: specific gravity and gradation of each component, water absorption, sand equivalent, loss on abrasion, fractured coarse aggregate particles, Tensile Strength Ratio (ASTM D4867), Marshall stability and flow, asphalt absorption, percent air voids, voids in mineral aggregate, and bulk density. Historical abrasion values may be supplied on existing sources. The submittal should include a plot of the gradation on the Federal Highway Administration's 0.45 Power Gradation Chart, plots of the compaction curves and the results of moisture sensitivity testing.

(7) The laboratory mixing and compaction temperature ranges for the supplier and grade of asphalt binder used within the mix design, and a copy of the supplier's temperature-viscosity curve and specific gravity at 77°F.

(8) A specific recommendation for design asphalt binder content and any limiting conditions that may be associated with the use of the design, such as minimum percentages of crushed or washed fine aggregate.

(9) The supplier's product code, the laboratory Engineer's seal (signed and dated), and the date the design was performed.

The mix design shall be submitted to the Agency or Engineer by the Contractor/Supplier for which it was developed as part of his project submittals. Once the mix design has been approved by the agency or Engineer, the Contractor and/or his supplier shall not change plants nor use additional mixing plants without prior approval of the Engineer. A new mix design shall be submitted when any changes occur in the plant operation, the producer's pit, the asphalt binder, including modifiers in the asphalt binder, or any other item that will cause an adjustment in the mix.

719.3.2 Mix Design Criteria: The mix design shall be performed by the Marshall Mix Design method. A minimum of 4 points will be used to establish the mix design results. The oven aging period for Marshall mix design samples shall be 2 hours.

719.3.2.1 Marshall Mix Design: The Marshall Mix Design shall be performed in accordance with the requirements of the latest edition of the Asphalt Institute's Manual, MS-2 "Mix Design Methods for Asphalt Concrete." The mix shall use the compactive effort of 75 blows per side of specimen, unless specified otherwise by the engineer. The mix shall comply with the criteria in Table 719-3.

The mix design for PMTBRAC shall be prepared by a laboratory that is accredited through the AASHTO

Accreditation Program (AAP) in Hot Mix Asphalt Aggregates and Hot Mix Asphalt. The laboratory shall be under the direct supervision of a Civil Engineer, registered by the State of Arizona, and who is listed by ADOT as a "Qualified Asphalt Concrete Mix Design Engineer" within ADOT's list of approved laboratories.

The date of the design shall not be older than two years from the date of submittal, unless supportive documentation is provided and approved by the Engineer.

Mix designs are subject to approval by the Engineer.

TABLE 719-3

MARSHALL MIX DESIGN CRITERIA

Criteria	Requirements 1/2" Mix	Designated Test Method
1. Binder Content, Minimum	6.1%	---
2. Voids in Mineral Aggregate: %, min	14	AI MS-2
3. Effective Voids: %, Range	4.0±0.2	AI MS-2
4. Absorbed asphalt: %, Range*	0-1.0	AI MS-2
5. Dust to Eff. Asphalt Ratio, Range **	0.6-1.4	AI MS-2
6. Tensile Strength Ratio: % Min.	65	ASTM D4867
7. Dry Tensile Strength: psi, Min.	100	ASTM D4867
8. Stability: pounds, Minimum	2,500	ASTM D6926
9. Flow: 0.01-inch, Range, Minimum	8	ASTM D6927
10. Mineral Aggregate Grading	---	AASHTO T-27 & T11

* Unless otherwise approved by the Engineer.

** The ratio of the mix design composite gradation target for the No. 200 sieve, including admixture, to the effective asphalt content shall be within the indicated range

MARICOPA COUNTY
Department of Transportation

MEMORANDUM

Date: May 10, 2016

To: MAG Specifications and Details Committee

From: Robert Herz, MCDOT Representative

Subject: Update to Section 309 Lime Stabilization or Modification of Subgrade **Case 16-11**

PURPOSE: Eliminate reference to AASHTO T-26 which has been discontinued. This adjustment only affects Section 309.2 MATERIALS and Section 309.3 COMPOSITION.

REVISION:

309.2 MATERIALS:

309.2.1 Soil or Subgrade: For lime stabilization applications, the soil or subgrade material used for this work shall consist of materials on the site or imported, and shall be free of roots, sod, weeds and stones larger than 3 inches and have a plasticity index (PI) greater than 10, when tested in accordance with AASHTO T-146 Method A, AASHTO T-89 Method A, and T-90. For lime modification applications, the allowable soil or subgrade properties will be determined by the Engineer.

309.2.2 Quicklime and Hydrated Lime: Lime used shall be either quicklime or hydrated lime and shall conform to the requirements of ASTM C977. All lime shall come from a single source. If a source change is requested, a new mix design shall be submitted using lime from the proposed new source. The new design must be approved by the Engineer prior to use.

309.2.3 Lime Slurry: Lime slurry shall be a pumpable suspension of solids in water. The solids portion of the mixture, when considered on the basis of solids content, shall consist principally of hydrated lime of a quality and fineness sufficient to meet Section 309.2.2 requirements. A certificate of compliance shall be provided to the Engineer for each load of lime applied at the project.

309.2.4 Water: Water used for mixing or curing shall be reasonably clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product. The pH (hydrogen ion concentration) of water to be used during construction for mixing or curing shall be within the range of 6.0 to 8.5. The procedure for determining pH values shall be based on the test apparatus used, the test apparatus may use either an electrometric or colorimetric method. The testing procedure shall be in accordance with the methods and instructions furnished by the manufacturer of the apparatus. ~~Water shall be tested in accordance with and shall meet the suggested requirements of AASHTO T-26. Water known to be of potable quality may be used without test.~~

309.3 COMPOSITION:

309.3.1 Lime Stabilization Mix Design: Before commencing lime treatment work, the Contractor shall submit for approval by the Engineer, a proposed mix design. The proposed mix design shall be prepared by a testing laboratory under the direction and control of an Arizona registered professional engineer. The mix design shall be determined using the soils or subgrade material to be stabilized, water from the source to be used during construction, and lime from the proposed supplier.~~, and shall determine the following:~~ The mix design shall identify the water source to be used during construction and the water's pH value.

2901 West Durango Street Phoenix, Arizona 85009 Phone: 602-506-4760 Fax: 602-506-5969

For soil stabilization applications, the mix design shall report and comply with the following requirements:

Untreated Soil:

(a) Sulfates: Tested per ARIZ 733, AASHTO T-290, or ASTM C1580.
(b) Moisture-Density Relationship (Proctor): Tested per ASTM D698 Method A.
(c) Plasticity Index: Test method AASHTO T-146 Method A, AASHTO T-89 Method A, and T-90.
(d) Sieve Analysis and Minus No. 200 Wash: Test methods ASTM C136 and ASTM D1140.

Lime Treated Soil:

(a) pH: Lime saturation content per ASTM C977 APPENDIX or ASTM D6276.
(b) Plasticity Index: Less than 3, per AASHTO T-146 Method A, AASHTO T-89 Method A, and T-90.
(c) Swell Potential: Maximum expansive potential of 1.0 per ARIZ 249 using passing No. 4 sieve material. The maximum expansive potential shall be determined on a sample compacted to approximately 95 percent of the ASTM D698 Method A maximum dry density at approximately 2% below optimum moisture content. The sample should be confined under a 100 psf surcharge and inundated.
(d) Unconfined Compressive Strength: Minimum 160 psi per ASTM D5102 Procedure A, after five days curing at 100°F, sealed in air-tight condition.
(e) Mellowing time and mellowing moisture content for treated soil sections b and c to be determined by design engineer. Mellowing time and mellowing moisture content for treated soil section d determined by ASTM D5102.
(f) Hydrated Lime Content: The design engineer shall designate the minimum percentage of lime by dry weight of the dry soil to satisfy the criteria for Section 309.3.2 requirements. The percentage of lime specified shall be sufficient to allow for expected variations during the mixing process. A minimum of 5.0% hydrated lime by dry weight of the dry soil is required for all mix designs.

309.3.2 Lime Modification: For soil modification purposes only, the Engineer shall specify the minimum amount of hydrated lime or lime slurry required to meet the desired improved soil properties.

309.4 CONSTRUCTION: **<***No Changes***>**

MARICOPA COUNTY
Department of Transportation

MEMORANDUM

Date: May 11, 2016

To: MAG Specifications and Details Committee

From: Robert Herz, MCDOT Representative

Subject: Case 16-12 Revision to Alteration of Work Section 104.2.1 **Case 16-12**

PURPOSE: Replace existing requirements of Section 104.2.1 with Maricopa County requirements.

EXISTING TEXT:

104.2 ALTERATION OF WORK:

*104.2.1 By the Contracting Agency: The Contracting Agency reserves the right to make, at any time during the progress of the work, such alterations in the details of construction and such increases or decreases in quantities as may be found necessary or desirable. Such alterations and changes shall not invalidate the contract nor release the surety and the Contractor agrees to perform the work as altered, the same as if it had been a part of the original contract. The Engineer will issue Change Orders to cover unforeseen circumstances which make it impossible to carry out the work in accordance with the original contract plans and specifications.

If the alterations or changes made by the Contracting Agency increases or decreases the total cost of the contract or the total cost of any major item by more than 20 percent, either party may request an adjustment in payment in accordance with Section 109.

_____
*Not applicable to Improvement District Projects.

REVISION:

104.2 ALTERATION OF WORK:

*104.2.1 Significant Changes In The Character Of The Work: The Engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and Contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or, by affecting other work, cause such other work to become significantly different in character, an adjustment, excluding anticipated profits, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against Contractor in such amount as the Engineer may determine to be fair and equitable.

If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.

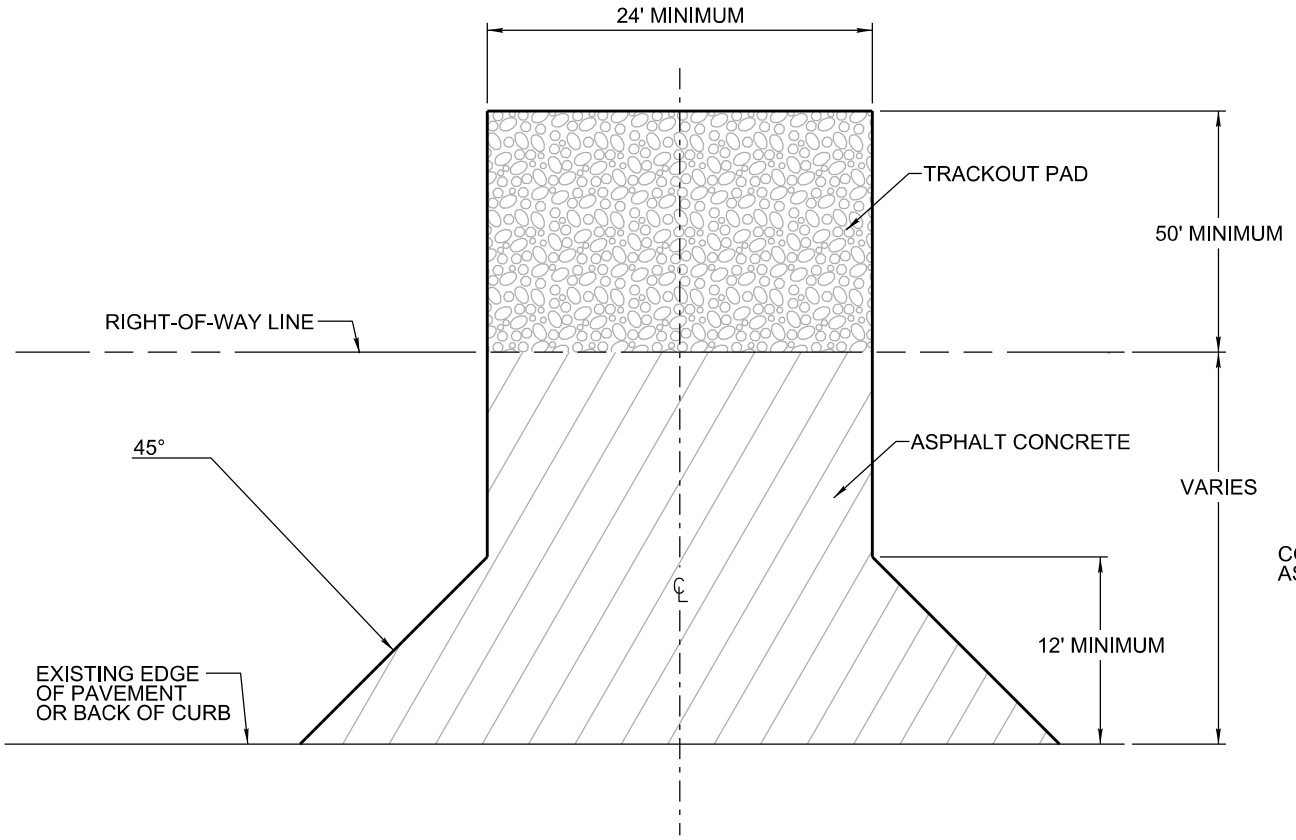
2901 West Durango Street Phoenix, Arizona 85009 Phone: 602-506-4760 Fax: 602-506-5969

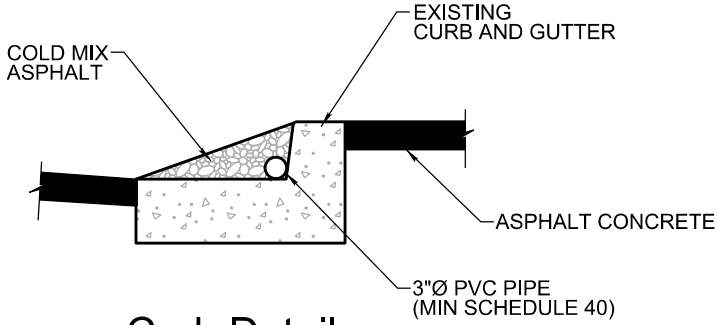
The term "significant change" shall be construed to apply only to the following circumstances:

- When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction or;
- When a major item of work, as defined elsewhere in the contract, is increased in excess of 25 percent or decreased in excess of 25 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 25 percent of original contract item quantity, or in case of a decrease in excess of 25 percent, to the actual amount of work performed.

_____

*Not applicable to Improvement District Projects.





Curb Detail

USE WHEN EXISTING ROAD HAS A CURB

GENERAL NOTES

1. TEMPORARY SITE ACCESS WITHIN RIGHT-OF-WAY SHALL BE PAVED, MINIMUM STRUCTURAL SECTION SHALL BE 2 ½" OF ASPHALT CONCRETE ON NATIVE SOIL.
2. TEMPORARY SITE ACCESS SHALL NOT ALTER OR IMPEDE EXISTING DRAINAGE.
3. TRACKOUT PAD SHALL BE COARSE AGGREGATE 6" THICK WITH 1" TO 3" DIAMETER GRAVEL OR AN APPROVED ALTERNATE DEVICE.
4. THE MINIMUM REQUIRED CLEAR DISTANCE FROM AN INTERSECTION IS 50 FEET.
5. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRACKOUT AND DUST CONTROL.
6. CONTRACTOR SHALL SWEEP ROADWAY AS NECESSARY.
7. CONTRACTOR IS RESPONSIBLE FOR RESTORING RIGHT-OF-WAY TO ORIGINAL CONDITION, INCLUDES ROADWAY AND SIDEWALK.
8. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AN APPROVED TRAFFIC CONTROL PLAN.
9. TEMPORARY SITE ACCESS SHALL BE REMOVED WHEN NO LONGER REQUIRED.

DETAIL NO.			REVISED	DETAIL NO.
115	MARICOPA ASSOCIATION of GOVERNMENTS — STANDARD DETAIL ENGLISH	TEMPORARY SITE ACCESS WITH TRACKOUT PAD	01-01-2017	115

CASE 16-13

MAG Discussion Topic:

DOJ/DOT's requirement to provide curb ramps when streets, roads or highways are altered through **resurfacing**. Terminology has caused some confusion.

- The DOT/DOJ supplement Q&A in many cases states the best practice is for the public entity to work together with the State transportation agency and the FHWA Division to come to an agreement on how to consistently handle these situations and document their decisions. (http://www.ada.gov/doj-fhwa-ta-supplement-2015.html)

- The FHWA Q&A (item 18) they mention that the DOJ does consider resurfacing beyond normal maintenance to be an alteration. **The FHWA has determined that maintenance activities include actions that are intended to preserve the system, retard future deterioration, and maintain the functional condition of the roadway without increasing the structural capacity.** (http://www.fhwa.dot.gov/civilrights/programs/ada_sect504qa.cfm#q18)

MAG Revisions:

1) Revise specs to include language regarding intention to maintain pavement only vs. specs that when applied may increase structural capacity. Add this statement to the General section.
2) In particular, revise Section 331 and 714 renaming from Microsurfacing to Microsealing, and replace 'surfacing' to 'sealing' within.

FHWA Approval:

Provide DRAFT MAG Specifications to FHWA through MAG Street Committee for discussion and final approval.

Curb Ramp Working Group Meeting

Meeting Notes
May 16, 2016

Opening:
The meeting of the Specifications and Details Curb Ramp Working Group was called to order by chair Warren White on May 16, 2016, at 1:30 p.m. in the MAG Palo Verde Room.

1. Attendance
Bob Herz (MCDOT), Gordon Tyus (MAG), and Warren White (Chandler)

2. Update on FHWA Submission
Warren White said the draft details were submitted to the FHWA for comments. They recommended to include tolerances (which have been added since the submission), and to consult with Chris Cooper at ADOT.

3. Revisions to Specifications (Section 340.3.9 Tolerance)
Bob Herz had suggestions to update this subsection. In the 3rd paragraph he thought some tolerance should be included. Since ½ inch was too large Mr. White suggested ¼". Mr. Herz also suggested rewording the last paragraph to read, "Slopes of pedestrian facilities shall not exceed the maximum grades indicated in the ADA guidelines…" He also noted that there were exceptions to the 2% cross-slope requirement to match the slope of streets exceeding 2%.

4. Curb Ramp Draft Details (Details 236-1, 236-2, 237-1, 237-2)
Mr. Herz provided many of his comments on the draft details as Mr. White marked up the suggested changes. Items discussed included:

- Directional ramps details need to indicate ramp alignments. Mr. Herz suggested the alignment be defined by the ramp control point and the control point of the receiving ramp.
- Showing the 10% maximum slope for wings perpendicular to the ramp centerline.
- Reviewed details to ensure a 5' unobstructed clearance is maintained at the top of ramps.
- Locating the control point at the face of curb to be consistent with Detail 234.
- Location of push-buttons based on MUTCD requirements. It was determined that pedestrian push-button locations will not be shown on the curb ramp details.
- Checking with Tempe on whether to include the 7" curb option.
- Where to locate the transition between the 6" concrete thickness and the 4" sidewalk thickness. A taper transition is needed unless located at an expansion joint.
- Whether to remove the curb option adjacent to the ramp and only show wings. There were maintenance concerns about debris collecting along this curb.
- The call out for broom surface texturing on ramps and ramp wings.

5. MCDOT Draft Radial Ramp Details

Mr. Herz brought in some sample details that MCDOT is working on. They are planning to use radial rather than directional ramps. He showed options for dual ramps for residential intersections with attached sidewalks, and a detail for 30' and 35' curb return radius with detached sidewalks (8' offset). The group discussed how to incorporate elements of MCDOT details, and also how to encourage the use of the new MAG details by agencies to reduce supplements.

6. Adjournment

The meeting was adjourned at 3:20 p.m.

7. Written Comments:

After the meeting Mr. Herz provided these additional written comments:

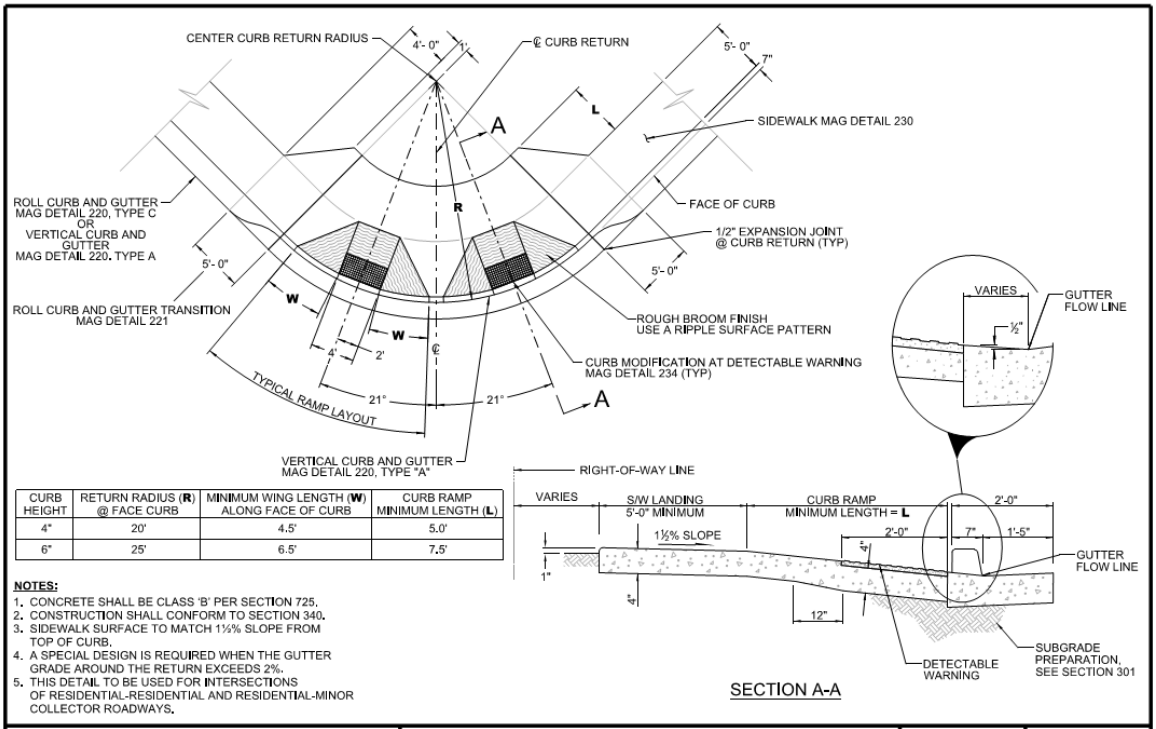
Identify the curbing within the curb return as VERTICAL CURB AND GUTTER DETAIL 220, TYPE A.

Section A-A Details Delete the maximum allowable slopes shown in parentheses: S/W LANDING (2% MAX) and CURB RAMP (8.33% MAX) – Section 340.3.9 Tolerance identifies the maximum values allowed. Placing those values on the standard details makes the desired slopes appear to be optional since they are allowed to vary up to the listed maximum values.

The gutter counter slope of 5.0% MAX is unnecessary and should be deleted since Detail 220 Vertical Curb and Gutter, Type A is referenced and the detail is compliant with the ADA requirement. How is the 5.0% MAX notation expected to change or impact the Contractor's work?

Section A-A Details for directional ramps: Delete at the bottom of the ramps both the 1.5% SLOPE and (2% MAX) – The slope between the detectable warnings and gutter flowline will not be constant and will vary across the entire width.

Plan View: Delete the ramp and landing cross slope call-out 1.5% CROSS SLOPE (2% MAX), the callout incorrectly suggests that the indicated areas should have 1.5% cross slope. No cross slope is required for the radial curb ramps and Section 340.3.9 Tolerance identifies the maximum allowed value as 2%.



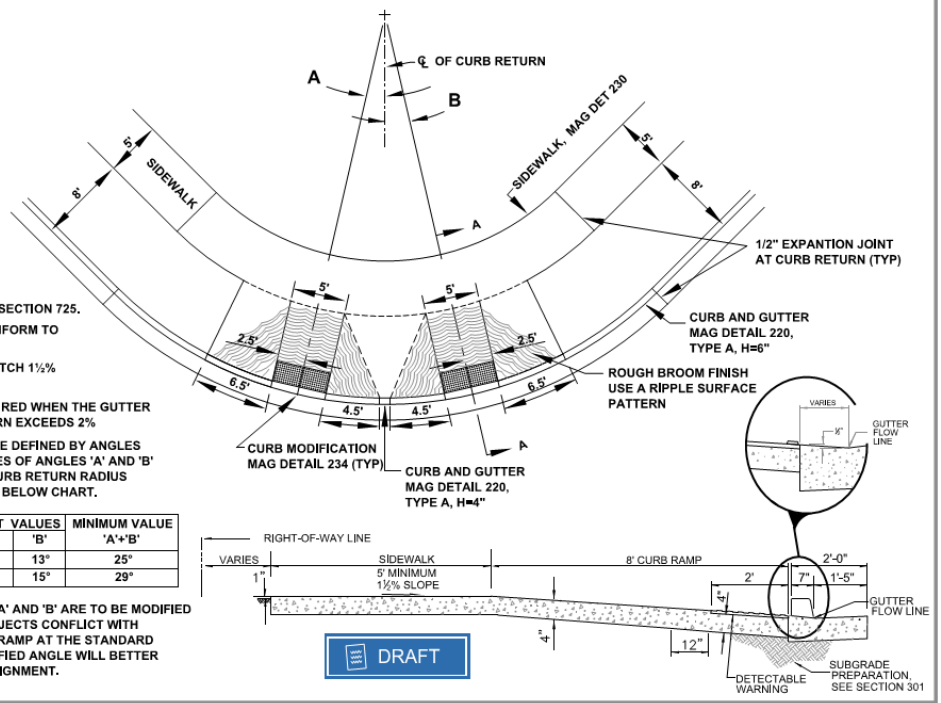
CURB HEIGHT	RETURN RADIUS (R) @ FACE CURB	MINIMUM WING LENGTH (W) ALONG FACE OF CURB	CURB RAMP MINIMUM LENGTH (L)
4"	20'	4.5'	5.0'
6"	25'	6.5'	7.5'

SECTION A-A

NOTES:

1. CONCRETE SHALL BE CLASS 'B' PER SECTION 725.
2. CONSTRUCTION SHALL CONFORM TO SECTION 340.
3. SIDEWALK SURFACE TO MATCH 1⅛% SLOPE FROM TOP OF CURB.
4. A SPECIAL DESIGN IS REQUIRED WHEN THE GUTTER GRADE AROUND THE RETURN EXCEEDS 2%.
5. THIS DETAIL TO BE USED FOR INTERSECTIONS OF RESIDENTIAL-RESIDENTIAL AND RESIDENTIAL-MINOR COLLECTOR ROADWAYS.

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION	DUAL CURB RAMPS FOR RESIDENTIAL INTERSECTIONS	DATE:	DETAIL NO.
STANDARD DETAIL		05/02/2016	2032



NOTES:

1. CLASS "B" CONCRETE PER SECTION 725.
2. CONSTRUCTION SHALL CONFORM TO SECTION 340.
3. SIDEWALK SURFACE TO MATCH 1⅛% SLOPE FROM TOP OF CURB.
4. A SPECIAL DESIGN IS REQUIRED WHEN THE GUTTER GRADE AROUND THE RETURN EXCEEDS 2%
5. CURB RAMP LOCATIONS ARE DEFINED BY ANGLES 'A' AND 'B'. DEFAULT VALUES OF ANGLES 'A' AND 'B' ARE DEPENDENT ON THE CURB RETURN RADIUS AND ARE AS SHOWN IN THE BELOW CHART.

RADIUS @ FACE OF CURB	DEFAULT VALUES 'A'	'B'	MINIMUM VALUE 'A'+'B'
35'	13°	13°	25°
30'	15°	15°	29°

THE DEFAULT VALUES FOR 'A' AND 'B' ARE TO BE MODIFIED BY THE ENGINEER WHEN OBJECTS CONFLICT WITH CONSTRUCTION OF A CURB RAMP AT THE STANDARD LOCATION OR WHEN A MODIFIED ANGLE WILL BETTER MATCH THE CROSSWALK ALIGNMENT.

DRAFT

MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION	DUAL CURB RAMPS (RADIAL) DETACHED SIDEWALK	DATE:	DETAIL NO.
STANDARD DETAIL		05/18/2016	2031

Water/Sewer Working Group Meeting

Meeting Notes
May 17, 2016

Opening:
A meeting of the Specifications and Details Water/Sewer Working Group was called to order by chair Jim Badowich on May 17, 2016, at 1:30 p.m. in the MAG Palo Verde Room.

1. Introductions/Attendance
Tony Ayala (Avondale), Jim Badowich (Avondale), Chris Considine (Oldcastle), Jami Erickson (Phoenix), Leann Johnson (Chandler), Troy McGahey (New Horizon Sales), Craig Sharp (Buckeye), Brian Sitarz (Oldcastle), Matt Stoltenborg (Oldcastle), Gordon Tyus (MAG), Arvid Veidmark (SSC Boring), Warren White (Chandler).

2. Case 16-01: Misc. Corrections
Jim Badowich asked if anyone had any related blooper cases to discuss. None were announced.

3. Section 611: Water/Sewer Testing
Tony Ayala said he was still putting supplements together and plans to compile them into a draft for the group to review. Jami Erickson said Phoenix has an update from their development department that she will send to him. Leann Johnson said Chandler currently follows the MAG standards. Jim Badowich said Avondale videos lines 24" and larger. He also mentioned that laser testing was an option brought up earlier. Mr. Badowich said they would initially model the specs from Phoenix and Goodyear. Mr. Ayala said hopefully he would have a draft ready for next month. Mr. Badowich asked him to compare it to the current AWWA specifications as well.

Leann Johnson said they have had issues in Chandler flushing reclaimed water lines because the pressure is lower. Mr. Badowich liked the flushing requirements and minimum velocities for fire lines in NFP24. He said they use a 4" turbo metered system, and said MAG needs specs for minimum orifice size to allow 3 times the volume in order to clean out the pipe of debris. Ms. Erickson said Phoenix has used jumpers from two 4" hydrants to get 1500 gpm. Mr. Ayala said in Avondale they don't have the same water pressure and there were times when flushing caused alarms to go off when their water supply dropped. Ms. Erickson said you need inspectors paying attention in the field, but admitted the cities don't have a lot of control on private developments. Ms. Johnson said they have had debris in reclaimed water lines get into booster pumps. Tony Ayala said one problem is contractors don't understand the process. Jim Badowich said he thinks contractors should pay for flushing water, because this will give them an incentive to keep the pipe clean during installation.

4. Meter Boxes/Vaults
Warren White said he received help from Oldcastle to revise existing water valve box and lid details. They also created draft details for two sizes of traffic-rated boxes based on the H20 standard. Brian Sitarz said the sizes are based on industry standards and noted that the H20 standard is not the same as a 20K rated box. Members gave examples of types of lids that were damaged by trucks running over them in alleys for example. Mr. Sitarz said Los Angeles has pedestrian and traffic rated boxes similar to this proposal. He also said you don't want the pedestrian and traffic rating box lids interchangeable. The traffic rated boxes need to have the steel lids. Mr. Badowich suggested making the traffic rated boxes a separate case.

For the other boxes the draft details replaced all the cast iron lids with steel replacements since the cast iron ones are no longer made. The also added polymer concrete lids details as an option. The box detail added the radius of the lid corners to the chart to ensure they are interchangeable for each sized box. Jim Badowich suggested making a table for the lids rather than having detail sheets for each of them, especially since most agencies are moving to the polymer concrete lids rather than steel. Mr. Tyus asked if the dimensions for different materials would need to change in the box detail table. Mr. Badowich said he wanted the outside, lid & frame, and inside dimensions to remain the same. Reps from Oldcastle said they are reviewing ASTM specs for materials other than concrete. The new lid details have a slotted opening to allow for universal AMR (automatic meter readers). Mr. White said he would work with Oldcastle to make revisions with the goal of submitting a case at the June 1st meeting.

5. Case 16-08: Valve Stem Extension Sleeve

Craig Sharp introduced a new case at the last committee meeting to separate the valve steam extension from Detail 391-2 and to allow adjustable lengths to be more easily manufactured. The revised details added Detail 391-1 to refer to the new extension detail. It also adjusted some dimensions on the new detail based on feedback from the committee. Mr. Badowich suggested adding the concrete ring and rebar around the Type C boxes on 391-1 similar to 391-2 for installation in dirt areas. Mr. Sharp said he could add the rebar to 391-2 as well. He said he would work with Oldcastle to revise the details with the goal of having revisions ready for the June 1st meeting mail out next week.

6. Next Meeting

The next meeting is planned for 1:30 on Tuesday, June 21st at the MAG offices.

7. Adjournment

The meeting was adjourned at 3:40 p.m.

MAG Asphalt & Materials Working Groups

Meeting Notes

Thursday, May 19, 2016, 12:00 pm at the ARPA Offices

Present:

See attached attendance sheet. Greg Groneberg chaired this portion of the meeting.

Discussion:

1) Case 16-02 Certificates of Compliance/Analysis – Bob Herz
   A list compiled by the City of Phoenix was presented that identified other potential sections that may need text revisions in relation to this case. Mr. Herz was going to review further.

2) Case 16-09 - MAG Section 710 revisions– Greg Groneberg
   One punctuation error was identified and corrected. No additional comments have been made on this case.

3) Proposed New MAG Section 719 (proposed) – Greg Groneberg
   Some comments were brought forward by the City of Phoenix and Maricopa County regarding the proposed gradations. While the ½" band is proposed as 90-100 and the 3/8" band at 75-90, there was discussion that they should stay at 85-100 & 62-85, respectively. It should be noted, the proposed bands meet the current production mix designs from multiple suppliers and closely resemble a 95% + passing the ½", while being 82-83% passing the 3/8". The reason for such fine gradations is to accommodate the minimum binder requirements of 6.0-6.2% by the agencies. MCDOT also suggested that since this section resembles a dense graded 710 mix, it should be added to that section. This will be further discussed.

4) Follow Up – A continuing discussion on MAG Section 310 was had in reference to language and methods regarding rock correction procedures. Adjoining sections were identified that may be impacted by any change to this section. This will be addressed further at the next meeting. Additionally, MAG 321 is continued to be reviewed in regards to miscellaneous/trench paving and methods for testing. This will also be discussed further in the next meeting.

5) New Business – Mr. Bob Herz shared copies of three new cases. These include 16-11, the use of non-potable water in lime stabilization, suggesting that there be a pH range for water to be used in the process. Case 16-12, revisions to contracts and case 16-13 which shows a proposed new detail for track out for temporary access. These will all be presented at the next committee meeting on June 1st. Mr. Al Fausto from the City of Chandler was present and we had a discussion (touched on briefly in the last committee meeting by Mr. Warren White) in relation to Micro versus Slurry sealing and the ADA trigger for updating sidewalk ramps, etc. It was suggested that the best approach might be to consult with other stakeholders at the main committee meeting before going further.

Date for Next Meeting

The next meeting is scheduled for **June 16, 2016 @ 12:00 pm** in the ARPA

offices. Anyone who wishes to attend is welcome

MAG Concrete Working Group

Meeting Notes

Thursday, May 19, 2016, 12:00 pm at the ARPA Offices

Present:

See attached attendance sheet.

Discussion:

1) Copies of comments from Mike Riggs of Progressive Hardscapes (local Pervious Contractor) to the new Pervious Concrete Sections 3XX and 7XX and ACI 522 (Specification for Pervious Concrete Pavement) were distributed for review. All members were encouraged to get these into the hands of those who might be interested in this work for participation and comment. Jeff Hearne will work on incorporating applicable items into the draft sections for the next meeting.

Date for Next Meeting:

The next meeting is scheduled for **June 16, 2016 @ 1:00 pm** in the ARPA offices.

Any and all participants are welcome and encouraged to be involved.

MAG Working Group

Thursday, May 19, 2016

Company Name	Name	E-mail Address	Signature
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AMEC Foster Wheeler	Bob Kostelny	robert.kostelny@amecfw.com	
City of Goodyear	Rob Godwin	rob.godwin@goodyearaz.gov	
City of Peoria	Scott Clark	scott.clark@peoriaaz.com	
City of Phoenix	Rob Duvall	robert.duvall@phoenix.gov	
City of Scottsdale	Rod Ramos	rramos@scottsdaleaz.gov	
Cutler Repaving	Bob Erdman	berdman@cutlerrepaving.com	
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DGA	Peter Kandaris	pkandaris@digioiagray.com	
Drake	John McClafferty	jmcclafferty@drakeus.com	
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Fisher Sand & Gravel	Trey Billingsley	tbillingsley@fisherind.com	
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Southwest Asphalt	Richard Kissling	rkissling@fisherind.com	
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Speedie & Associates	Don Cornelison	dcornelison@speedie.net	
SRMG - ARPA	Jeff Hearne	jhearne@srmaterials.com	

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Vulcan	Alex Carter	cartera@vmcmail.com	
Vulcan	Llyoyd Glover	gloverl@vmcmail.com	
CITY OF CHANDLER	AL FAUSTO	alberto.fausto@chandleraz.gov	