

June 29, 2011

TO: Members of the MAG Standard Specifications and Details Committee

FROM: Troy Tobiasson, City of Goodyear, Chair

SUBJECT: MEETING NOTIFICATION AND TRANSMITTAL OF TENTATIVE AGENDA

Wednesday, July 13, 2011 at 1:30 p.m.

NOTE: CHANGE OF LOCATION.

Due to remodeling of the MAG second floor offices the meeting will be held at:

Arizona Rock Products Association (ARPA)

9 W Adams St, Ste 1, Phoenix, AZ 85007 (9th Avenue and Adams Street)

Parking is available on the street and in a parking garage across Adams Street.

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 in person. A videoconference and/or telephone conference call is not available at this site. If you have any questions regarding the meeting, please contact Committee Chair Troy Tobiasson at 623-882-7979 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. Your 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
July 13, 2011

COMMITTEE ACTION REQUESTED

- | | |
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| <p>1. <u>Call to Order and Introductions</u></p> <p>2. <u>Call to the Audience</u>
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.</p> <p>3. <u>Approval of June 1, 2011, Meeting Minutes</u></p> <p>Review of 2010 and 2011 Cases</p> <p>4. <u>Case 10-05:</u>
Revise FOREWARD to clarify use of the MAG Specifications and Details for Public Works Construction document.</p> <p>5. <u>Case 10-08:</u>
Re-write Section 717 ASPHALT-RUBBER.</p> <p>6. <u>Case 11-01: Miscellaneous Corrections</u>
A. Correct typographical errors in Table 711-1.
B. Correct typographical error in Table 705-1.
C. Correct errors in Detail 212.
D. Other potential corrections cases.</p> <p>7. <u>Case 11-02:</u>
Add an Asphalt Pavement Safety Edge option to Detail 201.</p> <p>8. <u>Case 11-03:</u>
Replace cadmium plated bolts referenced in Section 610.13 with zinc plated bolts as described in ASTM-B633.</p> | <p>2. Information.</p> <p>3. Review and approve minutes of the June 1, 2011 meeting.</p> <p>4. Information and discussion.
Sponsors: Javier Setovich, Peoria and Peter Kandaris, SRP</p> <p>5. Information and discussion.
Sponsor: Bob Herz, Maricopa County</p> <p>6. Information and discussion.
Sponsors: Bob Herz, Maricopa County and Peter Kandaris, SRP</p> <p>7. Information and discussion.
Sponsor: Bob Herz, Maricopa County</p> <p>8. Information and discussion.
Sponsor: Javier Setovich, Peoria</p> |
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9. Case 11-04:
Replace reference to MAG Detail 190 in MAG Section 301 with ASTM D4718. Delete MAG 190.
 10. Case 11-05:
Move MAG Section 225 Water Requirements into MAG Section 104.1.3. See item 10.
 11. Case 11-06:
Remove sections and details of the MAG specifications that are no longer used or refer to outdated technologies. See item 11.
 12. Case 11-07:
Revise Section 327 Hot In-Place Recycling.
 13. Case 11-08:
Revise Section 711 Paving Asphalt to update performance tables and reference AASHTO standards.
 14. Case 11-09:
Preservative Seal for Asphalt Concrete –
Revise sections 334 and 718.
 15. Case 11-10:
Curb Ramp Modification for Radial Installations–
Create new detail 234. Revise details 235-1,
235-2 and 235-3.
 16. Case 11-11:
Superseded ASTM Specifications:
A. Nuclear Density Testing of Soil.
 17. Case 11-12:
Modifications to Regulatory Requirements,
MAG 107.
 18. Case 11-13:
Replace Manhole Frame and Cover Details 423,
424 and 523 with new updated versions. See
item 18.
9. Information and discussion.
Sponsor: Peter Kandaris, SRP
 10. **Information, discussion and possible action.**
Sponsor: Peter Kandaris, SRP
 11. Information and discussion.
Sponsor: Scott Zipprich, Buckeye
 12. Information and discussion.
Sponsor: Jeff Benedict, AGC
 13. Information and discussion.
Sponsor: Jeff Benedict, AGC
 14. Information and discussion.
Sponsor: Jeff Benedict, AGC
 15. Information and discussion.
Sponsor: Bob Herz, MCDOT
 16. Information and discussion.
Sponsor: Peter Kandaris, SRP
 17. Information and discussion.
Sponsor: Peter Kandaris, SRP
 18. Information and discussion.
Sponsor: Scott Zipprich, Buckeye

New 2011 Cases

19. Case 11-14:
Update Fire Hydrant Detail 360, and Add Wet Barrel Option and Details. See item 19.
20. Case 11-15:
Modifications to Residential Speed Hump Detail 210. See item 20.
21. Proposed New Cases
Members can present new cases for information and discussion.
22. Potential Cases
Members can discuss other potential new cases which they are working on, or are planning to present at a future meeting.

General Discussion

23. Working Group Reports See item 22.
A. Outside Right-of-Way Working Group
Report on 6/29/2011 meeting.
B. Asphalt Working Group
Report on 6/17/2011 meeting.
C. Materials Working Group
Report on 6/17/2011 meeting.
D. Water/Sewer Working Group
Report on 6/21/2011 meeting.
E. Concrete Working Group
Report on 6/09/2011 meeting
24. Staff Reports
Report on room location for August meeting.
25. Open General Discussion
Members can report on any items of interest to the committee.
26. Request for Future Agenda Items
Topics or issues of interest that the Standard Specifications and Details Committee would like to have considered for discussion at a future meeting will be requested.

Adjournment

19. Information and discussion.
Sponsor: Scott Zipprich, Buckeye
20. Information and discussion.
Sponsor: Warren White, Chandler
21. Information and discussion.
22. Information and discussion.
23. Information and discussion.
A. Outside ROW Chair: Peter Kandararis, SRP
B. Asphalt Chair: Jeff Benedict, AGC
C. Materials Chair: Brian Gallamore, AGC
D. Water/Sewer Chair: Jim Badowich, Avondale
E. Concrete Chair: Jeff Hearne, ARPA
24. Information and discussion.
25. Information and discussion.
26. Information and discussion.

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

June 1, 2011

Held at the Valley Metro Offices
101 1st Avenue, Phoenix
Suite 1100 - Lake Mead Room (10th Floor)

AGENCY MEMBERS

Jim Badowich, Avondale	Mike Samer, Mesa
Scott Zipprich, Buckeye	* Javier Setovich, Peoria (Proxy)
Warren White, Chandler	* Syd Anderson, Phoenix (St. Trans.)
* Dave Emon, El Mirage	Jami Erickson, Phoenix (Water)
Greg Crossman, Gilbert	* Marc Palichuk, Queen Creek
Tom Kaczmarowski, Glendale	* Rodney Ramos, Scottsdale
Troy Tobiasson, Goodyear, Chair	Jason Mahkovtz, Surprise
Bob Herz, MCDOT	Tom Wilhite, Tempe, Vice Chair

ADVISORY MEMBERS

Jeff Benedict, AGC	Jeff Hearne, ARPA
Tony Braun, NUCA	Peter Kandaris, SRP
* Kwigs Bowen, NUCA	Paul R. Nebeker, Independent
Brian Gallimore, AGC	Mike Smith, ARPA

MAG ADMINISTRATIVE STAFF

Gordon Tyus

* Members not attending or represented by proxy.

GUESTS/VISITORS

Bob Erdman, Cutler Repaving
Val Johnson, Sunbelts
JoAnn Lichty, Stronggo
Shawn Reach, TetraTech
John-Paul Reis, Sunbelts

1. Call to Order

Chairman Troy Tobiasson called the meeting to order at 1:35 p.m.

2. Call to the Audience

JoAnn Lichty of Stronggo introduced herself and was available for questions regarding the detectable warnings potential case.

3. Approval of Minutes

The members reviewed the May 4, 2011 meeting minutes. Tom Wilhite introduced a motion to accept the minutes as written. Greg Crossman seconded the motion. A voice vote of all ayes and no nays was recorded.

Review of 2010 and 2011 Cases

4. Case 10-05 – Revise FOREWORD

Clarify use of the MAG Specifications and Details for Public Works document. Peter Kandaris said he will date and distribute the latest version of the foreword. Troy Tobiasson reminded the committee that one purpose of the revision was to help clarify that the MAG specifications were provided for use in the right-of-way, not for other applications (as they are often used). Members asked if the draft should have a legal review. Mr. Tyus said MAG has an attorney on retainer and that he would ask to see if this was something that could be reviewed by MAG's legal counsel. Mr. Kandaris suggested the case should be ready for a vote during the August meeting.

5. Case 10-08 – Revise Section 717 Asphalt Rubber

Revise Section 717 ASPHALT-RUBBER to obtain a uniform specification. Bob Herz deferred to Jeff Benedict to provide an update on the asphalt working group's discussion with John Shi of MCDOT. Mr. Benedict said Mr. Shi agreed to leave the binder requirements alone, as long as the revised specification would give the county a wide enough window to allow lower voids. Mr. Shi plans to bring more info and mix designs from previous performing projects to the next asphalt working group meeting. Jeff Benedict agreed to provide revisions back to Bob Herz to incorporate in the current case.

6. Case 11-01: Miscellaneous Corrections

- a. **Case 11-01A – Correct the formula in Table 711-1.** No new comments provided.
- b. **Case 11-01B – Correct percentage in Table 705-1.** No new comments provided.
- c. **Case 11-01C – Correct reference in Detail 12.** No new comments provided.
- d. No new corrections were submitted.

7. Case 11-02 – Safety Edge Detail

Add an Asphalt Pavement Safety Edge option to Detail 201. Bob Herz said that he planned to revise the case to show three types of details. One would be the safety edge for an overlay. Two other options would also be developed for new construction, including one that would have an eight inch paving thickness. Brian Gallimore said he participated in the safety edge webinar sponsored by FHWA, and said it was very informative. As shown in the webinar, the slope varied from 25 to 40 percent depending on the constructability. The videos all showed overlay construction methods. It was noted that you need a stable edge so that the safety edge does not break away. Members suggested updates to the drawings could show separate edges details (specifying ways to construct the angle point).

8. Case 11-03 – Replace Cadmium Plated Bolts.

Replace cadmium plated bolts referenced in Section 610.13 with zinc plated bolts as described in ASTM-B633. Javier Setovich emailed Mr. Tyus stating that he would be unable to attend the meeting, but would have materials for the July meeting.

9. Case 11-04 – Deletion of Detail 190, Rock Correction Procedure

Replace reference to MAG Detail 190 in MAG Section 301. Delete MAG Detail 190. Peter Kandararis provided an update to the case that added the *ARIZ* abbreviation and the *Arizona Test Method* definition. This was needed since there are numerous references to both items throughout the MAG sections. Mr. Kandararis asked for comments on the case.

10. Case 11-05 – Deletion of MAG Section 225, Watering

Move MAG Section 225, Water Requirements into MAG Section 104.1.3. Peter Kandararis said the case incorporated comments from Maricopa County. He asked that the case be put up for a vote at the next meeting.

11. Case 11-06 – Deletion of Out of Date MAG Standards

Remove sections and details that are no longer used or refer to outdated technologies. Scott Zipprich provided an updated handout of the MAG specifications and details slated for deletion. Section 410 and Detail 150 (Precast Curbs) was deleted from the list (meaning it stays in MAG) since they are used by some agencies. Added to the list was *Section 323 Heater Remix Resurfacing*. This was recommended for deletion by the asphalt working group because it is an out-of-date process that does not meet current environmental standards. at the suggestion of the working group, Mr. Zipprich said he may add the terrazzo sidewalks to the deletion case.

Mr. Tyus suggested adding the sample forms and contracts from the front of the book (pages i-xv) to the deletion case. He said that most cities have their own contracts anyway, and as he was reviewing them he noticed they have not been updated since the 1998 edition was

published, and probably not for years prior to that. Tom Wilhite of Tempe said he wanted to check to see if Tempe referenced any of them. Members agreed that deleting the sample forms was probably a good idea since they were out-of-date and other standardized contracts were available to agencies that had not already developed their own. Mr. Zipprich said he would add the list of forms (by name) to the deletions case.

12. Case 11-07 – Revise Section 327: Hot In-Place Recycling

Update section 327 to current industry standards. Jeff Benedict said the re-colored highlights better showed the revisions to section 327. Jim Badowich asked if specifying the depth was a design issue or not. Bob Erdman of Cutler Repaving said the depths describe the typical process used, where about one inch of material is recycled, and the additional materials in the mix typically added, result in up to two inches of pavement. A reference to section 717 was added to allow rubberized asphalt mixes. There was discussion on where this process was applicable. Since many residential streets have 2” or less of asphalt, this process would not be recommended. Recycling larger thicknesses uses a different method. The designer should determine if and when this process is used. Bob Herz asked about testing. Mr. Erdman said density testing is done but coring typically wasn’t. He also said that the process allows the use of larger aggregates since there is an inch of soft material underneath that they can settle into. A couple minor corrections noted were to change ‘or’ to ‘of’ in the first paragraph and delete the word ‘used’ in the last sentence to be consistent. Mr. Benedict said he would make the changes.

13. Case 11-08 – Revise Section 711: Paving Asphalt

Update performance tables, references to ASTM standards, and revise Section 711 to meet current practices. Jeff Benedict said the new highlighting identified the changes, which were to update the section with current ASTM and AASHTO specifications. He noted a change in the temperature from 100 to 110 degrees Celsius for our region. He also explained that the lower temperature minimums were based making the repeatability of the tests more consistent. Mike Smith asked if the title should be changed to *Asphalt Concrete*. Members agreed that it was a more accurate title, but that any references to *Paving Asphalt* would need to be updated. Mr. Smith agreed to do a search for these and include them in the case.

14. Case 11-09 – Update Preservative Seal for Asphalt Concrete

Revise Sections 334 and add new 718 to meet current industry materials and practice. Jeff Benedict said he made updates to correctly identify the Type A, B and C materials in section 718 and refer to the correct materials in section 334.2. Peter Kandarlis said he would provide comments for the next meeting. Bob Herz asked what the accelerated weathering test was. Mr. Benedict said it was a \$3000 test to show the materials passes X number of hours of UV resistance. Mr. Herz suggested information about the test be added as a footnote. Members also discussed application of preservative seal with a squeegee. Mr. Benedict responded that it was a different process that used more sealant and wasn’t appropriate for this specification.

15. Case 11-10 – Curb Ramp Modification for Radial Installations

Add new detail 234 and modify existing ramp details to show curb modification. Bob Herz said there had been no changes and asked for comments. A question was raised about having the domes aligned with the direction of travel. Mr. Herz said that the ramps may need to be aligned to the direction of travel (depending on a judgment of the DOJ), but the domes were not affected because they are aligned with the ramp. Mr. Badowich asked if a new detail was necessary. Mr. Herz explained that it was difficult to add all the information to each ramp detail, so instead they would just reference the new detail. He said that he would be updating the other ramp details to refer to it as necessary, and that he provided these updates to a drafter at MCDOT.

16. Case 11-11 – ASTM Revisions

- a. **Case 11-11A – Nuclear Density Testing of Soil.** Peter Kandaris said no changes have been made to this case, and he didn't have an opportunity to add any more ASTM revisions at this time. Feedback and other ASTM corrections were requested.

17. Case 11-12 – Modifications to Regulatory Requirements, MAG 107

Add references to Arizona native plant requirements update references to state statutes. Mr. Kandaris asked for feedback on this case, stating a new standard was needed since ARS 23-373 no longer exists. Members questioned why MAG pulled out a handful of ARS references when all state statutes must be followed. Others suggested having them help provide guidance for people in the field. Mr. Kandaris asked if the agencies could have their legal departments review this case. Jeff Hearne said he tried to search the web to see how the old law was changed, but was unable to find it. Members asked if a legal review of section 107 could be done by MAG. Mr. Tyus said he would look into it.

2011 New Cases

18. Case 11-13 – Replace Current Manhole Frame and Cover Details

Replace Details 423, 424, 523-1 and 523-2 with new details of products that are currently being manufactured. Scott Zipprich introduced a new case to replace the current MAG details for 24" and 30" manhole frames and covers (for the regular, water tight, and pressure tight applications) with new details 423-1, 423-2, 424-1, 424-2, 523-1 and 523-2. The Water/Sewer working group determined that new details are necessary to match that type of castings currently being made. Mr. Zipprich said Rita Chihanik of Deeter/Neenah helped provide new drawings. They removed much of the detail of the previous MAG drawings so manufacturers are allowed to design the frames and covers as needed in a way that meets ASTM requirements and AASHTO standards for load bearing. Other updates included adding the name of the manufacturer and model number on both frames and covers so that they can properly be matched if a cover is stolen, or during repaving projects.

In addition, Mr. Zipprich discussed other related and possibly upcoming revisions. These included modifying section 787 to match the new details, and updating 391 valve box details to allow a heavier-style lid (as currently used in Yuma and Phoenix). He also noted that MAG does not have anything for reclaimed water boxes. A brief discussion ensued about the pros and cons of round and square boxes, colors, and other reclaimed water-related topics. Finally he also mentioned that the Water/Sewer group was planning to introduce a separate adjustment detail for raising and lowering frames and covers.

19. Potential Cases

Bob Herz said he was reviewing the storm drain *Detail 520*. Currently it shows a centerline alignment, but ideally the crowns should match. There was some discussion about the limits of matching crowns on flat development, and how it could affect limits on matching depth. Several members said they should be designed by inverts, and that the centerline is not always the best option. It was suggested that instead of showing it on the centerline or by matching crowns it should just call out the invert design per the plans.

Mr. Tyus said he received an email from Syd Anderson stating that he was planning to put together a case revising the concrete pipe standard.

Mr. Tobiasson noted that a handout provided by Stronggo via the outside ROW working group had information and draft changes to the detectable warning specifications. Peter Kandaris said that the handout was provided to give some background on this topic, and that the working group was planning to make some revisions for a possible future case.

20. Working Group Reports

a. **Specifications and Details Outside the Right-of-Way Working Group (5/25/11)**

Peter Kandaris said the group is working on several draft cases for areas of the MAG document not covered by the other working groups. *Section 350 Removing Existing Improvements* is in rough draft format, and will add information on utilities. He hopes to revise it and propose it as a case during the July meeting. Other potential cases included the detectable warning specification previously mentioned, and guard rail standards. Mr. Kandaris said the existing guard rail details are out of date and should be removed. He reviewed the county supplement and the ADOT details they were based on, and suggested that he work with Maricopa County to incorporate their supplement into MAG. Bob Herz said he would be happy to help. Mr. Kandaris said there were many different end details of traffic terminals that could be left to the jurisdiction to specify.

He asked if anyone was using *Detail 204 Equipment Crossing*, and if not perhaps it should be added to the deletions case. Mr. Kandaris also noted the alley details (202) should be updated either by removing the unpaved alley option or adding information about dust abatement. He also asked about the use of inverted crowns, and whether the detail should be renamed as Access Roads. Another potential case under review was to

consolidate all of the street sign base details, since most were very similar. Finally it was discussed that the speed hump striping needed to be revised.

The remaining sections the group was reviewing, such as fencing, painting and landscaping, needed people with expertise in these areas. Members were asked if they could identify experts at their agency. Peter Kandaris said the group would try to have three or four cases ready to submit at the July meeting. The next meeting of the outside right-of-way working group is scheduled for June 29th at 1:30 p.m. at the ARPA offices.

b. Asphalt Working Group (5/13/11)

Jeff Benedict provided notes from the May meeting. In addition to the discussions with John Shi noted earlier, the working group is preparing RAP specifications. Whether payment for RAP should be specified differently was discussed. Brian Gallimore believed that if it is a MAG approved mix, there shouldn't be a difference in payment just because you are using recycled materials. Mr. Benedict described methods of recycling on site (such as Mesa has done) or off site, and how the amount of work done was similar. Bob Herz said they paid per ton of material based on a volume calculation. Mr. Benedict said he also expected minor revisions to section 321 and was planning to incorporate county revisions. The next meeting is scheduled for June 17th at 7:30 a.m. at the Speedy and Associates office.

c. Materials Working Group (5/13/11)

Brian Gallimore said their meeting followed the asphalt meeting. Items discussed by the working group included updating the lime slurry specifications, and possibly adding a materials section for lime. Also there was some discussion about ABC and the PI and R values, although addition work is needed in this area. Several other draft cases are under review. The next meeting is scheduled for June 17th at 8:45 a.m. following the asphalt meeting at the Speedy and Associates office.

d. Water/Sewer Issues Working Group (5/17/11)

Jim Badowich was unable to attend the May working group meeting, so Scott Zipprich filled in for him. Notes from the meeting were provided in the packet. Mr. Zipprich mentioned that in addition to the manhole frames and covers, he was working on new fire hydrant details, but that he needed additional time to revise them. He also said pre-cast manhole bases were discussed, and that he was developing a spec for Buckeye that MAG may want to use in the future. Jami Erickson said Phoenix was investigating precast bases, and a concern they had was making sure the grade was even and compacted so the bases didn't tilt. Peter Kandaris said SRP uses them for electric utilities. Mr. Badowich said the challenges are making the pipe connections work since the tolerances are tight and must work with gravity flow. He suggested adding the precast base an option, not removing the cast in place specifications. Scott Zipprich was asked if Jensen would be available to make a future presentation. He thought that they would, since they have had experience building precast bases in California, specifically in Sacramento, where they are required. The next meeting of the

water/sewer working group is scheduled for June 21st at 1:30 in the MAG Agave Room. (1st floor of the MAG building.)

e. **Concrete Working Group (5/18/11)**

Jeff Hearne said the group made its first pass at several sections identified for review by the concrete working group. He said four to five sections are in draft format, and agency participation is welcome to improve potential cases before they are presented to the full committee for review. One issue he raised was whether agencies wanted to continue to use class B concrete for curbs and sidewalks, or it should it all be specified as class A, which provides better durability. He said the group also received good comments on the riprap specifications and that updates for it were being developed. Mr. Hearne said to get a jump on things, the next concrete working group meeting was scheduled for June 9th at 1:30 p.m. at the ARPA office.

21. Staff Reports

Gordon Tyus said MAG currently is remodeling its second floor meeting rooms, and that the committee would need to find meeting space for the July and August meetings. He said Valley Metro has agreed to host MAG meetings; however, the Lake Mead room is relatively small for our committee, so other places are worth investigating. Tom Wilhite of Tempe and Jeff Hearne of ARPA agreed to check with their organizations to see if they can reserve meeting rooms.

Due to the July 4th holiday, and members' vacation plans for that week, it was suggested to reschedule the July 6th meeting to a week later on July 13th. A majority of members present preferred the later date, and none strongly objected, so it was decided to move July's meeting date to the 13th. Mr. Tyus said he would work with members to find a convenient location and notify every one of the change in date and venue.

NOTE: Since the meeting, ARPA has agreed to host the committee at their location on July 13th, and Tempe has reserved space (if needed) for the August 3rd meeting. Final confirmation of date and location changes will be posted on the MAG website and sent out via e-mail to members and e-list subscribers.

22. Open General Discussion

Mr. Tyus brought up the subject of the past committee practice of making July the last month to introduce new cases for the year. Several members, including working group chairs, expressed a desire to allow new cases to be introduced after the July meeting so the momentum and work being done by the groups would continue. Mr. Tyus said that bylaws stated that cases could only be carried over one year, so that may affect how long new cases have before they must be voted upon. Mr. Tyus also explained that a few months was needed to allow the cases to be reviewed by the public works directors and MAG Regional Council, in addition the time needed to make the changes to the document and details (especially if it is reformatted as a new edition) as well as time for print production. Chairman Tobiasson believed it was important to complete the current cases, and felt additional cases may distract

from finishing and voting on the existing ones. Mr. Tyus asked if the committee wanted to delay the new edition until more cases from the working groups could be incorporated. Mr. Herz recommended that MAG stick to a January release date. Mr. Tobiasson felt that enough changes had been made that a new edition was warranted even if it did not incorporate all the working group cases, especially with the document conversion. One suggestion was to allow working groups to continue to draft new cases, but add them to a cue of potential cases that would automatically be assigned official case numbers in January 2012.

A short discussion about the paint colors used to note utility lines was initiated because some paints seemed have the colors quickly fade, making them difficult to distinguish. Mr. Gallimore suggested fading may be due to the use of water-based paint.

Chairman Tobiasson reiterated his desire to focus on the current cases and try to review and schedule them for a vote as soon as possible. He noted that the meetings are currently lasting until about four o'clock, and that it was important to get some cases off the docket before adding many more in order to keep the meetings a reasonable length. He thanked members for their work and for staying late through the entire meeting.

23. Adjournment:

Chairman Tobiasson adjourned the meeting at 3:55 p.m.

2011 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=1136>)

CASE	DESCRIPTION	PROPOSED BY	MEMBER	SUBMITTAL DATE Last Revision	VOTE DATE	VOTE	
10-05	Case 10-05: Revise FOREWARD to clarify use of the <i>MAG Specifications and Details for Public Works Construction</i> document.	Peoria/ SRP	Javier Setovich Peter Kandarlis	03/03/2010 03/02/2011		0 0 0	Yes No Abstain
10-08	Case 10-08: Re-write Section 717 ASPHALT-RUBBER.	MCDOT	Bob Herz	05/05/2010 02/18/2011		0 0 0	Yes No Abstain
10-12	Case 10-12: New Section 361 – Shallow Depth Fiber Optic Micro-Conduit Installation.	Scottsdale	Rod Ramos	05/05/2010 02/02/2011	Withdrawn 05/04/2011	0 0 0	Yes No Abstain
11-01	Case 11-01: Miscellaneous Corrections. A. Correct typographical errors in Table 711-1. B. Correct typographical error in Table 705-1. C. Correct errors in Detail 212.	MCDOT/ SRP	Bob Herz Peter Kandarlis	01/05/2011 04/06/2011		0 0 0	Yes No Abstain
11-02	Case 11-02: Add an Asphalt Pavement Safety Edge option to Detail 201.	MCDOT	Bob Herz	01/05/2011 04/06/2011		0 0 0	Yes No Abstain
11-03	Case 11-03: Replace cadmium plated bolts referenced in Section 610.13 with zinc plated bolts as described in ASTM-B633.	Peoria	Javier Setovich	02/02/2011		0 0 0	Yes No Abstain
11-04	Case 11-04: Replace reference to MAG Detail 190 in MAG Section 301 with ASTM D4718. Delete MAG Detail 190.	OROW WG/ SRP	Peter Kandarlis	03/02/2011 05/23/2011		0 0 0	Yes No Abstain
11-05	Case 11-05: Move MAG Section 225 Water Requirements into MAG Section 104.1.3.	OROW WG/ SRP	Peter Kandarlis	03/02/2011 05/04/2011		0 0 0	Yes No Abstain
11-06	Case 11-06: Remove sections and details of the MAG specifications that are no longer used or refer to outdated technologies.	OROW WG/ Buckeye	Scott Zipprich	03/02/2011 06/01/2011	07/13/2011	0 0 0	Yes No Abstain
11-07	Case 11-07: Revisions to Section 327 - Hot In-Place Recycling.	AGC/ Asphalt WG	Jeff Benedict	05/04/2011 05/13/2011		0 0 0	Yes No Abstain

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CASE	DESCRIPTION	PROPOSED BY	MEMBER	SUBMITTAL DATE Last Revision	VOTE DATE	VOTE	
11-08	Case 11-08: Revise Section 711 Paving Asphalt to update performance tables and reference AASHTO standards.	AGC/ Asphalt WG	Jeff Benedict	05/04/2011 05/13/2011		0 0 0	Yes No Abstain
11-09	Case 11-09: Preservative Seal for Asphalt Concrete – Revise sections 334 and 718.	AGC/ Asphalt WG	Jeff Benedict	05/04/2011 05/13/2011		0 0 0	Yes No Abstain
11-10	Case 11-10: Curb Ramp Modification for Radial Installations – Create new Detail 234. Revise details 235-1, 235-2 and 235-3.	MCDOT	Bob Herz	05/04/2011		0 0 0	Yes No Abstain
11-11	Case 11-11: Superseded ASTM Specifications: A. Nuclear Density Testing of Soil	OROW WG/ SRP	Peter Kandarlis	05/04/2011		0 0 0	Yes No Abstain
11-12	Case 11-12: Modifications to Regulatory Requirements, MAG 107.	OROW WG/ SRP	Peter Kandarlis	05/04/2011		0 0 0	Yes No Abstain
11-13	Case 11-13: Replace Manhole Frame and Cover Details 423, 424 and 523 with new updated versions: 423-1, 423-2, 424-1, 424-2, 523-2 and 523-3.	Water/Sewer WG/ Buckeye	Scott Zipprich	06/01/2011		0 0 0	Yes No Abstain
11-14	Case 11-14: Update Fire Hydrant Detail 360-1, and add Wet Barrel Option (360-2) and Details (360-3).	Water/Sewer WG/ Buckeye	Scott Zipprich	07/13/2011		0 0 0	Yes No Abstain



P.O. Box 52025
Phoenix, AZ 85072-2025
(602) 236-5900

Case 11-05

DATE: May 4, 2011

TO: MAG Specifications and Details Committee Members

FROM: Peter Kandarlis, SRP Representative
Outside of Right-of-Way Working Group

RE: **Water Requirements – Revisions per Comments**

Purpose: MAG Section 225, “Watering,” provides no technical guidance for the performance of work and is general in scope. The section should be placed in Part 100, General Conditions.

Revisions: Move all of MAG 225 to MAG Section 104.1.3. Modify the last paragraph in this section to read as follows:

The cost of watering will be included in the proposal price ~~bid~~ for the construction operation to which such watering is incidental or appurtenant, ~~unless otherwise provided for in the special provisions or proposal.~~

Re-number MAG 104 as needed.

Delete MAG 225.

Delete all but the first sentence of the last paragraph of 104.1.1. These items are covered by MAG Section/paragraph 107.9.

Delete reference to MAG 225 in Section 311.2.

SECTION 104

SCOPE OF WORK

104.1 WORK TO BE DONE:

104.1.1 General: The Contractor shall perform all work as may be necessary to complete the contract in a satisfactory and acceptable manner in full compliance with the plans, specifications and terms of the contract.

In the event a conflict exists between Contract Documents the order of precedence listed in descending order shall be as follows:

- Change Orders
- Addenda
- Special Provisions
- Project Plans
- Contracting Agency's supplements to the MAG Uniform Standard Specifications and Details
- MAG Uniform Standard Specifications
- MAG Standard Details

Unless otherwise specified in the special provisions, The Contractor shall furnish all labor, materials, equipment, transportation, utilities, services and facilities required to perform all work for the construction of the project within the time specified. ~~All existing concrete or bituminous surfaced sidewalks, driveways and alleys which were disturbed by the Contractor at the direction of the Engineer, shall be replaced. Private concrete or bituminous surfaced sidewalks and driveways, which were disturbed by the new improvements must be replaced. The slope of the replaced sidewalk or driveway must comply with the agency's minimum standards. If the standard cannot be constructed within the disturbed area, the Contractor shall remove and replace to a distance required to obtain the slope. Payment for such work will be made under the respective pay items provided for in the contract, or by agreed prices in advance, if no pay items are provided for in the contract.~~

104.1.2 Maintenance of Traffic: The Contractor's operations shall be in accordance with the traffic manual and/or policies of the appropriate public agency having jurisdiction over the project and Section 401. These operations shall cause no unnecessary inconvenience to the public and public access rights shall be considered at all times. Unless otherwise authorized in the specifications or on a temporary basis by the Engineer, traffic shall be permitted to pass through the work area. The Contractor shall coordinate with the various agencies both commercial and public, involved in the collection and removal of trash and garbage, so that adequate services are maintained.

Safe and adequate pedestrian and vehicular access shall be provided and maintained to fire hydrants, commercial and industrial establishments, churches, schools, parking lots, motel, hospitals, fire stations, police stations, and establishments of a similar nature. Access to residential properties shall be in accordance with Section 107.

Grading operations, roadway excavation and fill construction shall be conducted and maintained in such a manner as to provide a reasonably satisfactory and safe surface for vehicular and pedestrian traffic. When rough grading is completed, the roadbed shall be brought to and maintained in a reasonably smooth condition, satisfactory and safe for vehicular traffic at the posted speed limit. Pedestrian walkways shall be provided and maintained in a like manner. The Contractor shall accomplish any additional grading

operations and/or repairs, including barricade replacement or repairs during working and nonworking periods which, in the opinion of the Engineer, are required.

In the event of abnormal weather conditions, such as windstorms, rainstorms, etc., the Contractor shall immediately inspect his work area and take all necessary actions to insure that public access and safety are maintained.

The Contractor shall provide the Engineer with the emergency address of his representatives as required by Section 105.

104.1.3 Water Supply:

Water shall consist of providing a water supply sufficient for the needs of the project and the hauling and applying of all water required.

The Contractor shall make arrangements for and provide all necessary water for his construction operation and domestic use at his own expense.

If the Contractor purchases water from a water utility at a fire hydrant on or near the project, all arrangements shall be made by him at his own expense and payment made direct to the water utility as agreed upon.

The Contractor shall use only those hydrants designated by the water utility in charge of water distribution and in strict accordance with its requirements for hydrant use.

The Contractor shall furnish all connections, wrenches, valves and small tools that may be necessary to meet the requirements of the water utility pertaining to hydrant use.

The tank truck and/or trailer shall meet all safety and licensing regulations and the water shall be applied by sprinkling with tank trucks equipped with spray bars and suitable apparatus.

No measurement will be made of water, unless otherwise provided for in the special provisions or proposal.

The cost of watering will be included in the proposal price for the construction operation to which such watering is incidental or appurtenant.

104.1.3-4 Cleanup and Dust Control: Throughout all phases of construction, including suspension of work, and until final acceptance of the project, the Contractor shall keep the work area clean and free from rubbish, excess materials and debris generated by Construction Activities.

At disposal sites and storage sites, other than agency landfills, the Contractor shall be responsible for all required dust control measures. This includes temporary yard or staging areas.

The Contractor shall take whatever steps, procedures or means required to prevent any dust nuisance due to his construction operations. The dust control measures shall be maintained at all times to the satisfaction of the Engineer and in accordance with the requirements of the Maricopa County Bureau of Air Pollution Control Rules and Regulations.

Failure of the Contractor to comply with the Engineer's cleanup orders may result in an order to suspend work until the condition is corrected. No additional compensation or time will be allowed as a result of

such suspension and the Engineer has the authority to take such other measures as may be necessary to remedy the situation. Subsection 104.2.5 applies.

104.1.45 Final Cleaning Up: Before final acceptance, all private or public property and grounds occupied by the Contractor in connection with the work shall be cleaned of all rubbish, excess materials, temporary structures and equipment, and all parts of the work area shall be left in an acceptable condition.

104.2 ALTERATION OF WORK:

***104.2.1 By the Contracting Agency:** The Contracting Agency reserves the right to make, at anytime 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.

104.2.2 Due to Physical Conditions:

*(A) Should the Contractor encounter or discover during the process of the work, subsurface or latent physical conditions at the site differing materially from those indicated in the contract, or unknown physical conditions at the site of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the contract, the Engineer shall be promptly notified in writing of such conditions before they are disturbed. The Engineer will thereupon promptly investigate the conditions and, if he finds they do so materially differ and cause an increase or decrease in the cost of or the time required for performance of the contract, an equitable adjustment will be made and the contract modified in writing accordingly.

*(B) If at the time of opening up any portion of the work, material from which the subgrade, backfill or bedding is to be constructed contains an excess of moisture so that the required compaction cannot be obtained without additional manipulation, the Engineer will determine the cause of such condition. If the cause of such condition is determined to have been unforeseeable and beyond the control of and without fault or negligence of the Contractor, the Engineer will determine whether the material shall be aerated or removed and replaced. Such work shall be done as directed and will be paid for as provided in Section 109.

*(C) Failure to notify the Engineer of the conditions described in A and B above prior to doing any work may be just cause to reject any claims for additional monies and/or time. *(D) Material in ditches and ditch banks that contains moisture in an amount considered excessive by the Engineer shall be removed and shall be aerated to the extent required by the Engineer before compaction is effected. No measurement or direct payment for the removal and aeration of such material will be made.

*(E) After any portion of the work has been opened up, saturation of material caused by irrigation water, storm drainage, weather or such similar causes will be considered as within the responsibility of the Contractor.

***104.2.3 Due to Extra Work:** The Contractor shall perform unforeseen work, for which there is no unit bid price in the proposal, whenever it is deemed necessary or desirable by the Engineer in order to fully complete the work as contemplated. Such work shall be governed by all applicable provisions of the contract documents and payment will be made in accordance with the provisions set forth in Section 109.

Should the Contractor claim that any instructions received involve extra work under the contract, he shall give the Engineer written notice within two work days after receipt of such instructions, and in any event before proceeding to execute the work, except in emergencies endangering life or property. No claim shall be valid unless written notice is given.

If this extra work is performed by others, the Contractor agrees to cooperate fully with the other source accomplishing this work and agrees that this action shall not invalidate the Contract or release the surety.

104.2.4 At the Contractor's Request: Changes in the plans or specifications, which do not materially affect and are not detrimental to the work or to the interests of the Contracting Agency, may be granted to facilitate the work. Requests shall be in writing and submitted to the Engineer for approval. These changes, if approved and when resulting in a saving to the Contractor, will be made at an equitable reduction in cost or in no case at any additional cost to the Contracting Agency.

104.2.5 Due to the Failure of the Contractor to Properly Maintain the Project:

(A) If the Contractor fails to provide adequate Maintenance of Traffic or Cleanup and Dust Control or to correct deficiencies resulting from abnormal weather conditions, the Engineer has the authority to suspend the work wholly or in part until this condition has been corrected.

(B) If the Contractor fails to comply with the Engineer's written order to provide adequate maintenance of traffic, cleanup, dust control, or to correct deficiencies resulting from abnormal weather conditions, the Engineer has the authority to have this work accomplished by other sources.

(C) The Contractor agrees to cooperate fully with the other source accomplishing this work and agrees that this action shall not invalidate the Contract or release the surety.

*Not applicable to Improvement District Projects.

SECTION 311

SOIL CEMENT BASE COURSE

311.1 DESCRIPTION:

This item shall consist of a base course composed of a mixture of local soil, portland cement, and water compacted at optimum moisture content.

311.2 MATERIALS:

Portland cement and water shall comply with Sections 725 ~~and 225~~. The soil for the mixture shall consist of the material in the area to be paved. The material shall not contain more than 5 percent gravel or stone retained on a 3 inches sieve. It shall be demonstrated by laboratory tests that the plasticity and hardening characteristics of the soil will be adequately modified by the specified cement content.

311.3 EQUIPMENT:

An ample number of machines, combination of machines and equipment shall be provided and used to produce the complete soil cement base course meeting the requirements for soil pulverization, cement distribution, water application, incorporation of materials, compaction, finishing, and for application of the curing material as provided in these specifications.

Mixing shall be accomplished by means of multiple-pass soil-cement mixer, single-pass soil-cement mixer or central plant mixer.

Water may be applied through the mixer or with the water trucks equipped with pressure sprays. Water trucks providing fine fog-type sprays shall be furnished for finishing and curing. Properly adjusted garden type nozzles on a pressure bar may be used to produce fog spray if approved by the Engineer.

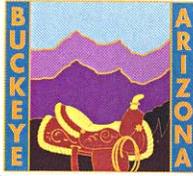
Cement spreader shall be a specially constructed device to distribute bulk cement uniformly at rate specified either in windrows or on the flat as determined by method of mixing.

311.4 CONSTRUCTION METHODS:

Before undertaking construction of the soil cement base course, the area to be paved shall be brought to a compacted condition, true to line and grade as directed by the Engineer or as shown on the plans. During this process any unsuitable soil or material, including excess material retained on a 3 inches sieve, shall be removed and replaced with acceptable material. The compacted surface shall be at the proper elevation as specified, shown on the plans, or as directed by the Engineer, for the top of the soil cement base. At completion of this phase, the material and surface shall be approved by the Engineer before proceeding with the next step.

The material shall be scarified, pulverized, mixed with water and cement, compacted and finished and cured in lengths permitting the full roadway width to be complete in not more than 4 hours from the time that cement is exposed to water. Such lengths will generally be not less than 600 feet or the length of one City block and preferably more. Where a gutter section exists the material shall be pulled back from the gutter face for the full depth of the course before processing.

TOWN OF BUCKEYE



Date: June 1, 2011
To: MAG Specifications and Details Committee
From: Scott Zipprich, Town of Buckeye Representative
Subject: Section 302, 313, 323, ~~410~~, 501, 780, 781, 782, 785, and 786 and details
~~150~~, 170, 402, and 425
Case: 11-06

PURPOSE: To remove sections of the MAG specifications that are no longer used or refer to outdated technologies.

REVISION: At this time there are no revisions planned. The specifications will just be removed from the document. However there may be opinions that may want to keep certain specifications so those sections may be modified so they can remain as a MAG specification.

Section 313: Bituminous Treated Base Course
After a review of the ADOT standard specifications the State has removed this specification from their standards as well. It appears to be an outdated and unused specification.
Recommendation: Delete section 313 from the MAG specifications.

Section 323: Heater Remix Resurfacing
Recommendation for this specification is to delete it due to the fact it is old antiquated and against most EPA standards.
Recommendation: Delete section 323 from the MAG specifications.

~~Section 410: Precast Safety Curbs~~
~~Recommendation for this specification is to delete it due to the fact it is not used within the right of way.~~
~~Recommendation: Delete section 410 from the MAG specifications.~~

Section 501: Driving Piles
This section has general information that is no longer used or referred to. Specifying piles is a structural design requirement and should be done by a structural engineer. This section needs to be removed.
Recommendation: Delete section 501 from the MAG specifications.

Section 780: Timber Piles
This section has general information that is no longer used or referred to. Specifying piles is a structural design requirement and should be done by a structural engineer. This section needs to be removed.
Recommendation: Delete section 780 from the MAG specifications.

Section 781: Steel Piles
This section is no longer used or referred to. Specifying piles is a structural design requirement and should be done by a structural engineer. This section needs to be removed.
Recommendation: Delete section 781 from the MAG specifications.

Section 782: Concrete Piles
This section is no longer used or referred to. Specifying piles is a structural design requirement and should be done by a structural engineer. This section needs to be removed.
Recommendation: Delete section 782 from the MAG specifications.

Section 785: Steel Castings
This section is no longer used or referred to. Specifying structural steel requirements should be done by a structural engineer. This section needs to be removed.
Recommendation: Delete section 785 from the MAG specifications.

Section 786: Bronze Casings

This section is no longer used or referred to. This section needs to be removed.

Recommendation: Delete section 786 from the MAG specifications.

~~Detail 150: Precast Safety Curb~~

~~Recommendation for this detail is to delete it due to the fact it is typically not used within the right of way.~~

~~Recommendation: Delete detail 150 from the MAG specifications.~~

Detail 170 Typical Runway or Taxiway Edge Lighting Detail

Recommendation for this detail is to delete it due to the fact it is typically not used within the right of way.

Recommendation: Delete detail 170 from the MAG specifications.

Detail 302 Joint Restraint with tie Rods

Recommendation for this detail is to delete it due to the fact it is typically not used within the right of way due to using other forms of joint restraint that are utilized.

Recommendation: Delete detail 302 from the MAG specifications.

Detail 402 Encased Pipe for Canal Crossing

Delete this detail since irrigation district standards supersede MAG on canals.

Recommendation: Delete detail 402 from the MAG specifications.

Detail 425 24" Aluminum Manhole Frame and Cover

Recommendation for this detail is to delete it due to the fact it is typically not used within the right of way.

Recommendation: Retain detail 425 from the MAG specifications.

Note:

The City of Flagstaff still uses these manhole frames and covers exclusively per this detail.



TOWN OF BUCKEYE

Date: June 1, 2011
To: MAG Specifications and Details Committee
From: Scott Zipprich, Town of Buckeye Representative
Subject: Detail 423, 424, 523-1, 523-2
Case: 11-13

PURPOSE: To replace the current manhole frame and cover details with updated details of products that are currently being manufactured. This also includes referencing the proper Class and AASHO references.

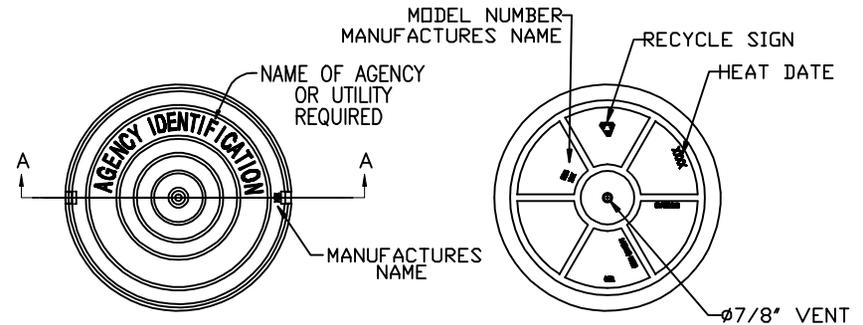
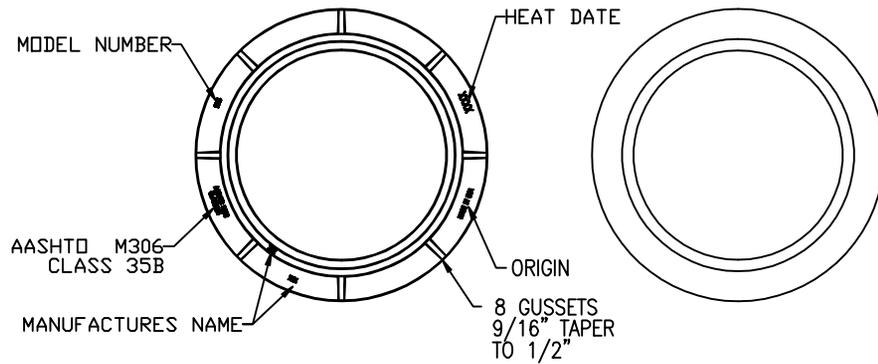
REVISION: The revisions will consist of replacement details 423-1, 423-2, 424-1, 424-2, 523-1 and 523-2.

FRAME TOP VIEW

FRAME BOTTOM VIEW

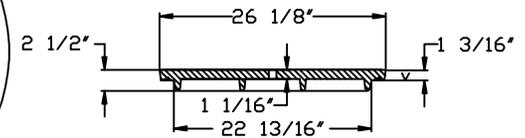
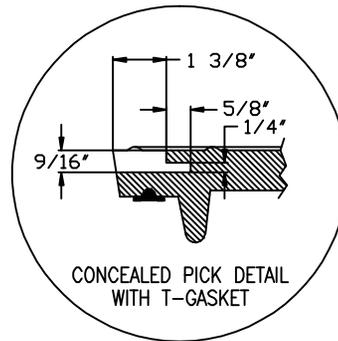
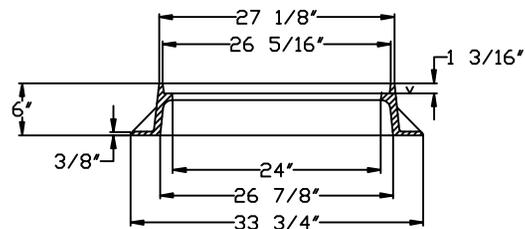
COVER TOP VIEW

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FRAME WT. (CL. 35) - 130 LBS

COVER WT. (CL. 35) - 188 LBS



24" MANHOLE FRAME AND COVER

NOTE:

LETTERING ON MANHOLE COVER TO CONTAIN NAME OF AGENCY AND UTILITY FOR WHICH MANHOLE IS NEEDED, (I.E. "PHOENIX SANITARY SEWER"), OR AS DIRECTED. THE TOTAL WIDTH OF INDIVIDUAL LETTERS TO BE SUCH THAT LETTERS AND WORDS ARE EQUALLY SPACED AND BALANCED TO FORM A COMPLETE CIRCLE WITH SPACERS BEFORE AND AFTER THE WORD IDENTIFYING THE AGENCY INVOLVED. LETTERS TO BE 2" IN HEIGHT AND RAISED FLUSH W/ TOP OF COVER. TYPE OF LETTERS TO BE SUBMITTED FOR APPROVAL. WEIGHT OF CASTINGS SHALL BE NO MORE THAN 2% LESS THAN THE APPROXIMATE WEIGHT SPECIFIED. CASTINGS SHALL CONFORM TO ASTM A-48, CLASS 35 AND AASHTO M306. THE BEARING SURFACES OF THE FRAMES AND COVERS SHALL BE MACHINED AND THE COVERS SHALL SEAT FIRMLY WITHOUT ROCKING.

DETAIL NO.
423-1



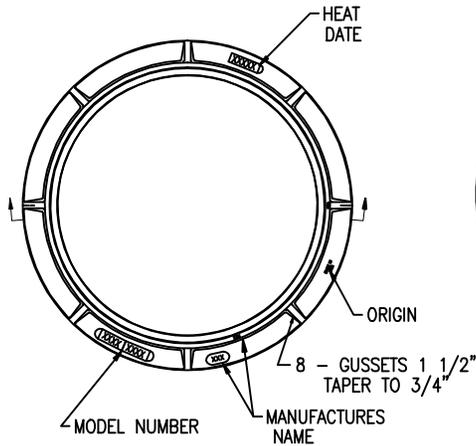
STANDARD DETAIL
ENGLISH

WATER TIGHT 24" CAST IRON
MANHOLE FRAME AND COVER

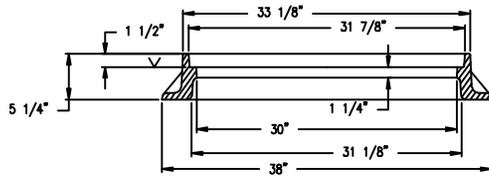
REVISED
05-26-2011

DETAIL NO.
423-1

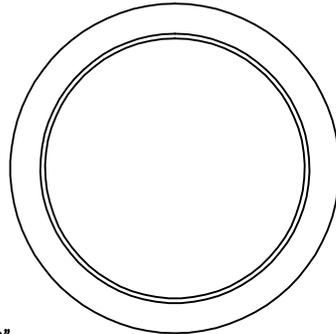
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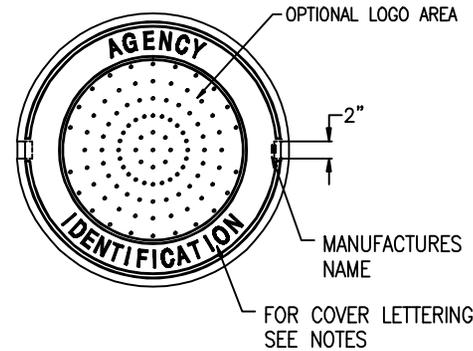
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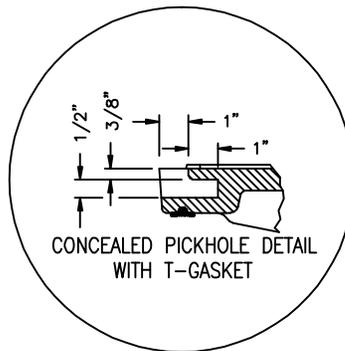
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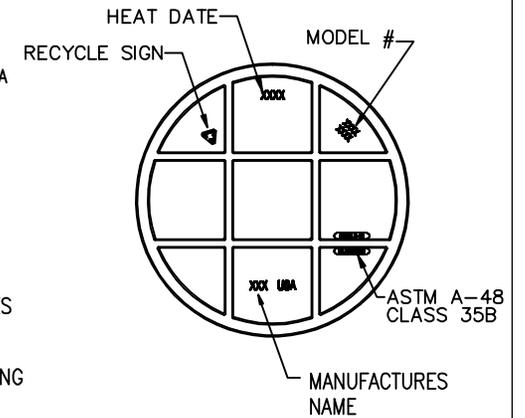
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COVER WT. (CL. 35) - 210 LBS



COVER BOTTOM VIEW



30" MANHOLE FRAME AND COVER

NOTE:

LETTERING ON MANHOLE COVER TO CONTAIN NAME OF AGENCY AND UTILITY FOR WHICH MANHOLE IS NEEDED, (I.E. "PHOENIX SANITARY SEWER"), OR AS DIRECTED. THE TOTAL WIDTH OF INDIVIDUAL LETTERS TO BE SUCH THAT LETTERS AND WORDS ARE EQUALLY SPACED AND BALANCED TO FORM A COMPLETE CIRCLE WITH SPACERS BEFORE AND AFTER THE WORD IDENTIFYING THE AGENCY INVOLVED. LETTERS TO BE 2" IN HEIGHT AND RAISED FLUSH W/ TOP OF COVER. TYPE OF LETTERS TO BE SUBMITTED FOR APPROVAL. WEIGHT OF CASTINGS SHALL BE NO MORE THAN 2% LESS THAN THE APPROXIMATE WEIGHT SPECIFIED. CASTINGS SHALL CONFORM TO ASTM A-48, CLASS 35 AND AASHTO M306. THE BEARING SURFACES OF THE FRAMES AND COVERS SHALL BE MACHINED AND THE COVERS SHALL SEAT FIRMLY WITHOUT ROCKING.

DETAIL NO.

423-2



STANDARD DETAIL
ENGLISH

WATER TIGHT 30" CAST IRON
MANHOLE FRAME AND COVER

REVISED

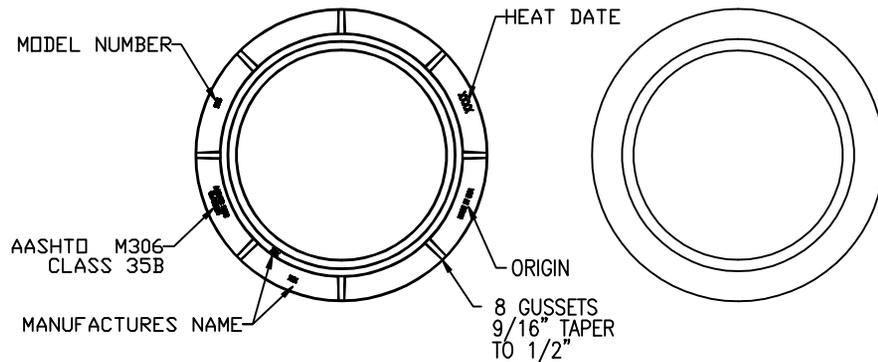
05-26-2011

DETAIL NO.

423-2

FRAME TOP VIEW

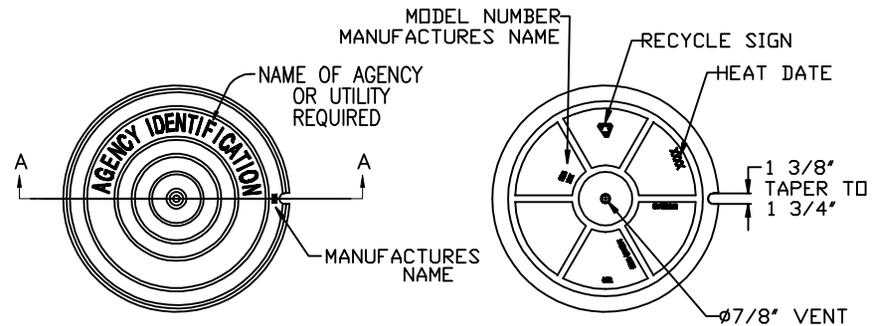
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FRAME WT. (CL. 35) - 130 LBS

COVER TOP VIEW

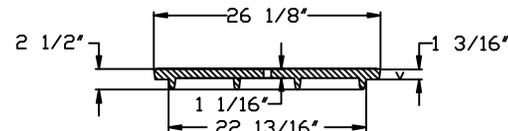
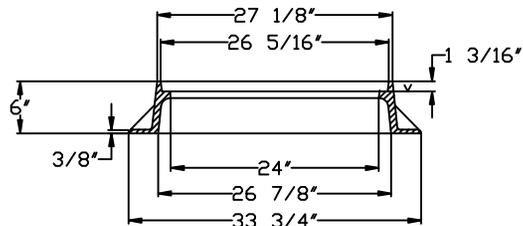
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TOP VIEW

BOTTOM VIEW

COVER WT. (CL. 35) - 188 LBS



24" MANHOLE FRAME AND COVER

NOTE:

LETTERING ON MANHOLE COVER TO CONTAIN NAME OF AGENCY AND UTILITY FOR WHICH MANHOLE IS NEEDED, (I.E. "PHOENIX SANITARY SEWER"), OR AS DIRECTED. THE TOTAL WIDTH OF INDIVIDUAL LETTERS TO BE SUCH THAT LETTERS AND WORDS ARE EQUALLY SPACED AND BALANCED TO FORM A COMPLETE CIRCLE WITH SPACERS BEFORE AND AFTER THE WORD IDENTIFYING THE AGENCY INVOLVED. LETTERS TO BE 2" IN HEIGHT AND RAISED FLUSH W/ TOP OF COVER. TYPE OF LETTERS TO BE SUBMITTED FOR APPROVAL. WEIGHT OF CASTINGS SHALL BE NO MORE THAN 2% LESS THAN THE APPROXIMATE WEIGHT SPECIFIED. CASTINGS SHALL CONFORM TO ASTM A-48, CLASS 35 AND AASHTO M306. THE BEARING SURFACES OF THE FRAMES AND COVERS SHALL BE MACHINED AND THE COVERS SHALL SEAT FIRMLY WITHOUT ROCKING.

DETAIL NO.

424-1



STANDARD DETAIL
ENGLISH

24" CAST IRON
MANHOLE FRAME AND COVER

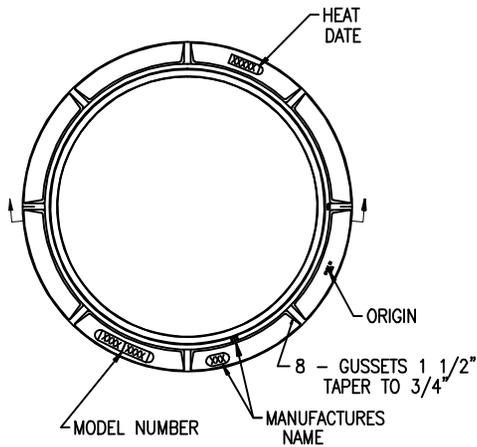
REVISED

05-26-2011

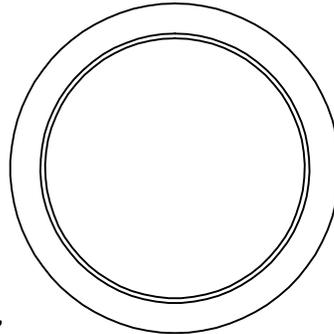
DETAIL NO.

424-1

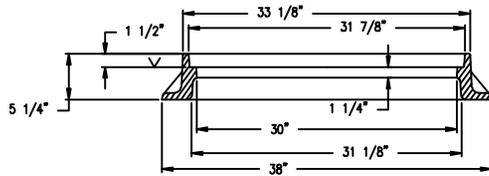
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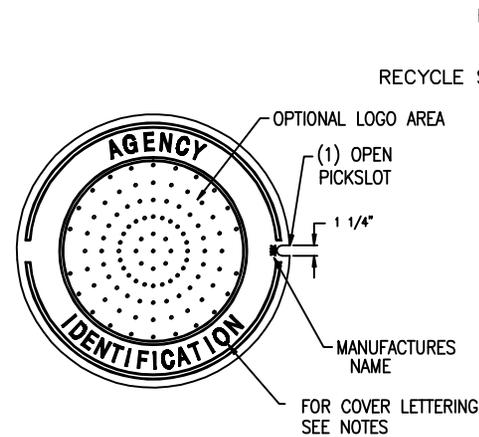
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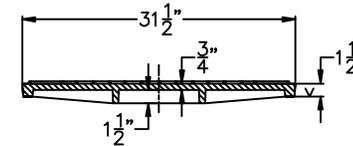
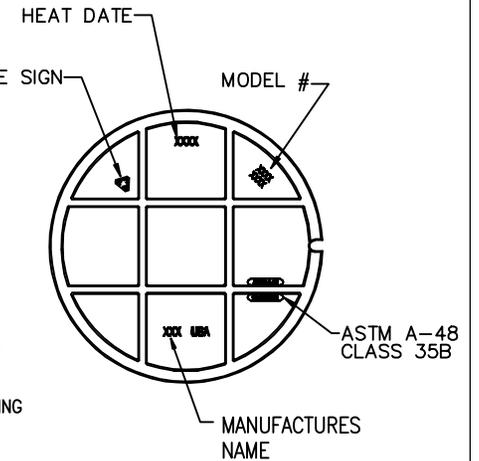


COVER TOP VIEW



COVER WT. (CL. 35) - 210 LBS

COVER BOTTOM VIEW



30" MANHOLE FRAME AND COVER

NOTE:

LETTERING ON MANHOLE COVER TO CONTAIN NAME OF AGENCY AND UTILITY FOR WHICH MANHOLE IS NEEDED, (I.E. "PHOENIX SANITARY SEWER"), OR AS DIRECTED. THE TOTAL WIDTH OF INDIVIDUAL LETTERS TO BE SUCH THAT LETTERS AND WORDS ARE EQUALLY SPACED AND BALANCED TO FORM A COMPLETE CIRCLE WITH SPACERS BEFORE AND AFTER THE WORD IDENTIFYING THE AGENCY INVOLVED. LETTERS TO BE 2" IN HEIGHT AND RAISED FLUSH W/ TOP OF COVER. TYPE OF LETTERS TO BE SUBMITTED FOR APPROVAL. WEIGHT OF CASTINGS SHALL BE NO MORE THAN 2% LESS THAN THE APPROXIMATE WEIGHT SPECIFIED. CASTINGS SHALL CONFORM TO ASTM A-48, CLASS 35 AND AASHTO M306. THE BEARING SURFACES OF THE FRAMES AND COVERS SHALL BE MACHINED AND THE COVERS SHALL SEAT FIRMLY WITHOUT ROCKING.

DETAIL NO.
424-2



STANDARD DETAIL
ENGLISH

30" CAST IRON
MANHOLE FRAME AND COVER

REVISED
05-26-2011

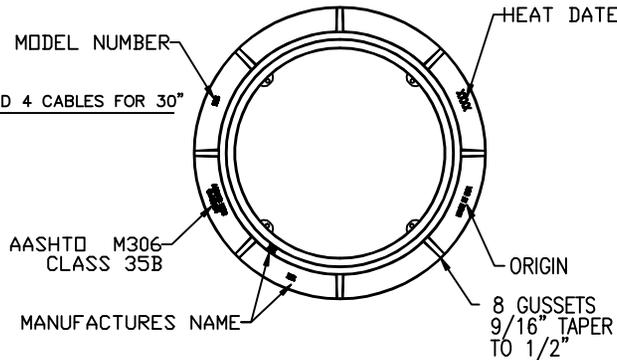
DETAIL NO.
424-2

BOTH 24" AND 30" FRAMES TO BE ANCHORED AS FOLLOWS:

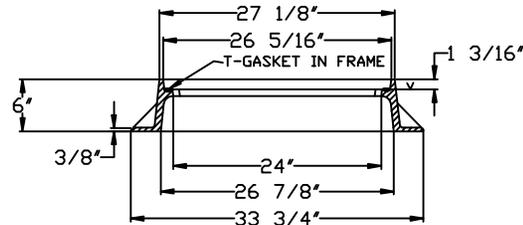
1. 1/2" HOLE IN FILLET.
2. 1/4" STAINLESS STEEL CABLE. SECURE WITH CABLE CLAMPS
3. 1/2"x9" HOOK AND EYE TURNBUCKLE.
4. 1/2" EYE BOLT WITH 1" DIA. EYE.
5. TRIPLE WRAP TURNBUCKLES AND CABLE CLAMPS WITH 1" WIDE TAPE, SAFE-T-CLAD, F.O.S. 655, OR APPROVED EQUAL.

FOR ANCHORING INSTALL 3 CABLES FOR 24" AND 4 CABLES FOR 30"

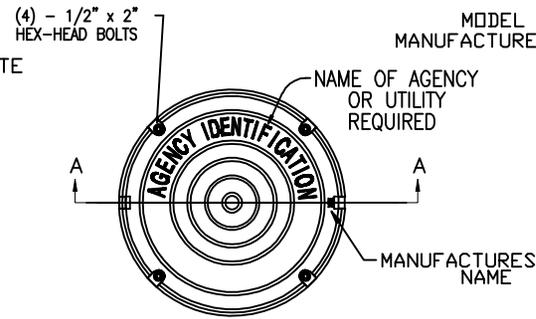
FRAME TOP VIEW



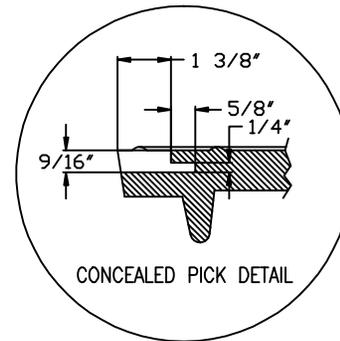
FRAME WT. (CL. 35) - 130 LBS



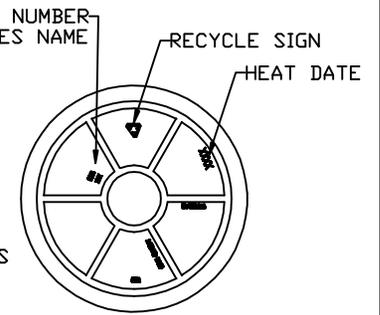
COVER TOP VIEW



TOP VIEW

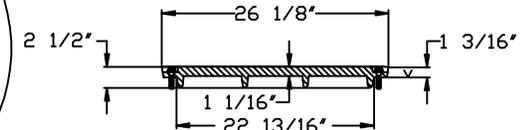


COVER BOTTOM VIEW



BOTTOM VIEW

COVER WT. (CL. 35) - 188 LBS



24" PRESSURE MANHOLE FRAME AND COVER

NOTE:

LETTERING ON MANHOLE COVER TO CONTAIN NAME OF AGENCY AND UTILITY FOR WHICH MANHOLE IS NEEDED, (I.E. "PHOENIX SANITARY SEWER"), OR AS DIRECTED. THE TOTAL WIDTH OF INDIVIDUAL LETTERS TO BE SUCH THAT LETTERS AND WORDS ARE EQUALLY SPACED AND BALANCED TO FORM A COMPLETE CIRCLE WITH SPACERS BEFORE AND AFTER THE WORD IDENTIFYING THE AGENCY INVOLVED. LETTERS TO BE 2" IN HEIGHT AND RAISED FLUSH W/ TOP OF COVER. TYPE OF LETTERS TO BE SUBMITTED FOR APPROVAL. WEIGHT OF CASTINGS SHALL BE NO MORE THAN 2% LESS THAN THE APPROXIMATE WEIGHT SPECIFIED. CASTINGS SHALL CONFORM TO ASTM A-48, CLASS 35 AND AASHTO M306. THE BEARING SURFACES OF THE FRAMES AND COVERS SHALL BE MACHINED AND THE COVERS SHALL SEAT FIRMLY WITHOUT ROCKING.

FRAME AND COVER TO BE DRILLED AND TAPPED IN SETS.

FOR ANCHORING INSTALL 3 CABLES FOR 24" AND 4 CABLES FOR 30"

DETAIL NO.

523-2



STANDARD DETAIL
ENGLISH

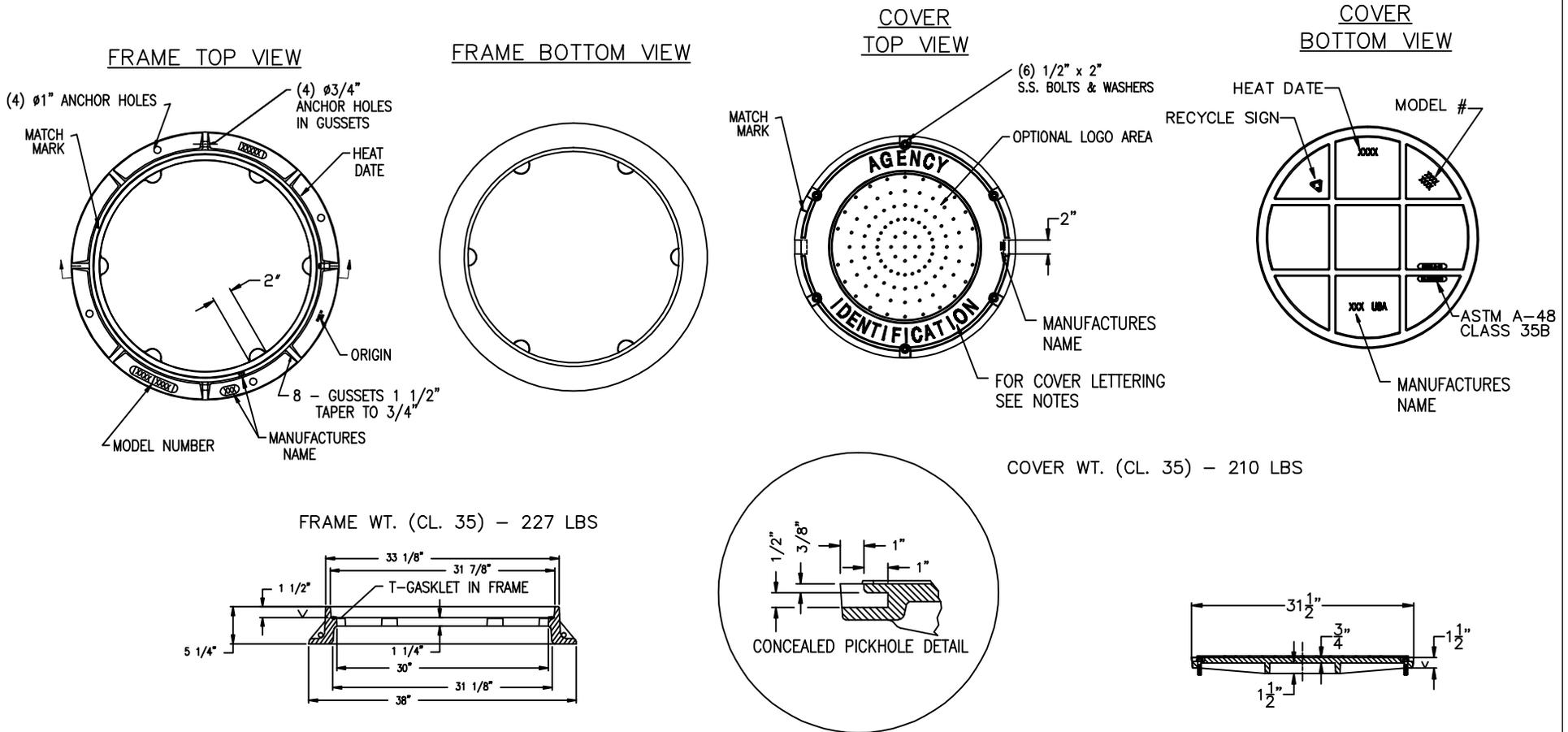
WATER TIGHT 24" CAST IRON
PRESSURE MANHOLE FRAME AND COVER

REVISED

05-26-2011

DETAIL NO.

523-2



30" PRESSURE MANHOLE FRAME AND COVER

NOTE:

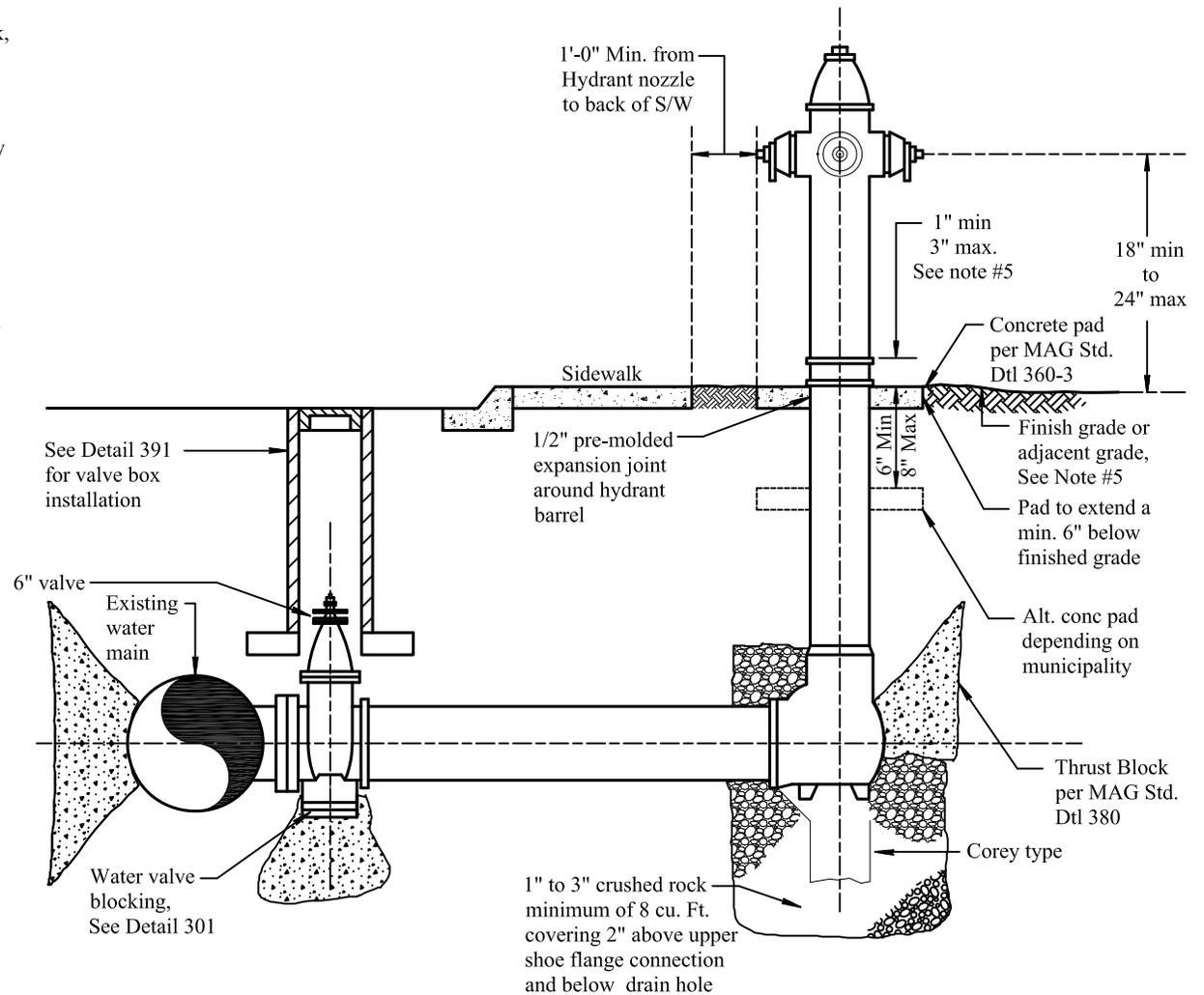
LETTERING ON MANHOLE COVER TO CONTAIN NAME OF AGENCY AND UTILITY FOR WHICH MANHOLE IS NEEDED, (I.E. "PHOENIX SANITARY SEWER"), OR AS DIRECTED. THE TOTAL WIDTH OF INDIVIDUAL LETTERS TO BE SUCH THAT LETTERS AND WORDS ARE EQUALLY SPACED AND BALANCED TO FORM A COMPLETE CIRCLE WITH SPACERS BEFORE AND AFTER THE WORD IDENTIFYING THE AGENCY INVOLVED. LETTERS TO BE 2" IN HEIGHT AND RAISED FLUSH W/ TOP OF COVER. TYPE OF LETTERS TO BE SUBMITTED FOR APPROVAL. WEIGHT OF CASTINGS SHALL BE NO MORE THAN 2% LESS THAN THE APPROXIMATE WEIGHT SPECIFIED. CASTINGS SHALL CONFORM TO ASTM A-48, CLASS 35 AND AASHTO M306. THE BEARING SURFACES OF THE FRAMES AND COVERS SHALL BE MACHINED AND THE COVERS SHALL SEAT FIRMLY WITHOUT ROCKING.

DRILL AND TAP (6) 1/2" x 2" BOLTS AND S.S. WASHERS. COVER AND FRAME MUST BE MATCH MARKED, DRILLED AND TAPPED IN SETS. DIM.'S, WEIGHTS LETTERING AND MATERIALS SHALL CONFORM TO DET. 424. REFER TO 523-2 FOR INSTALLATION PROCEDURES.

DETAIL NO. 523-3	MARICOPA ASSOCIATION of GOVERNMENTS	STANDARD DETAIL ENGLISH	WATER TIGHT 30" CAST IRON PRESSURE MANHOLE FRAME AND COVER	REVISED 05-26-2011	DETAIL NO. 523-3
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General Notes:

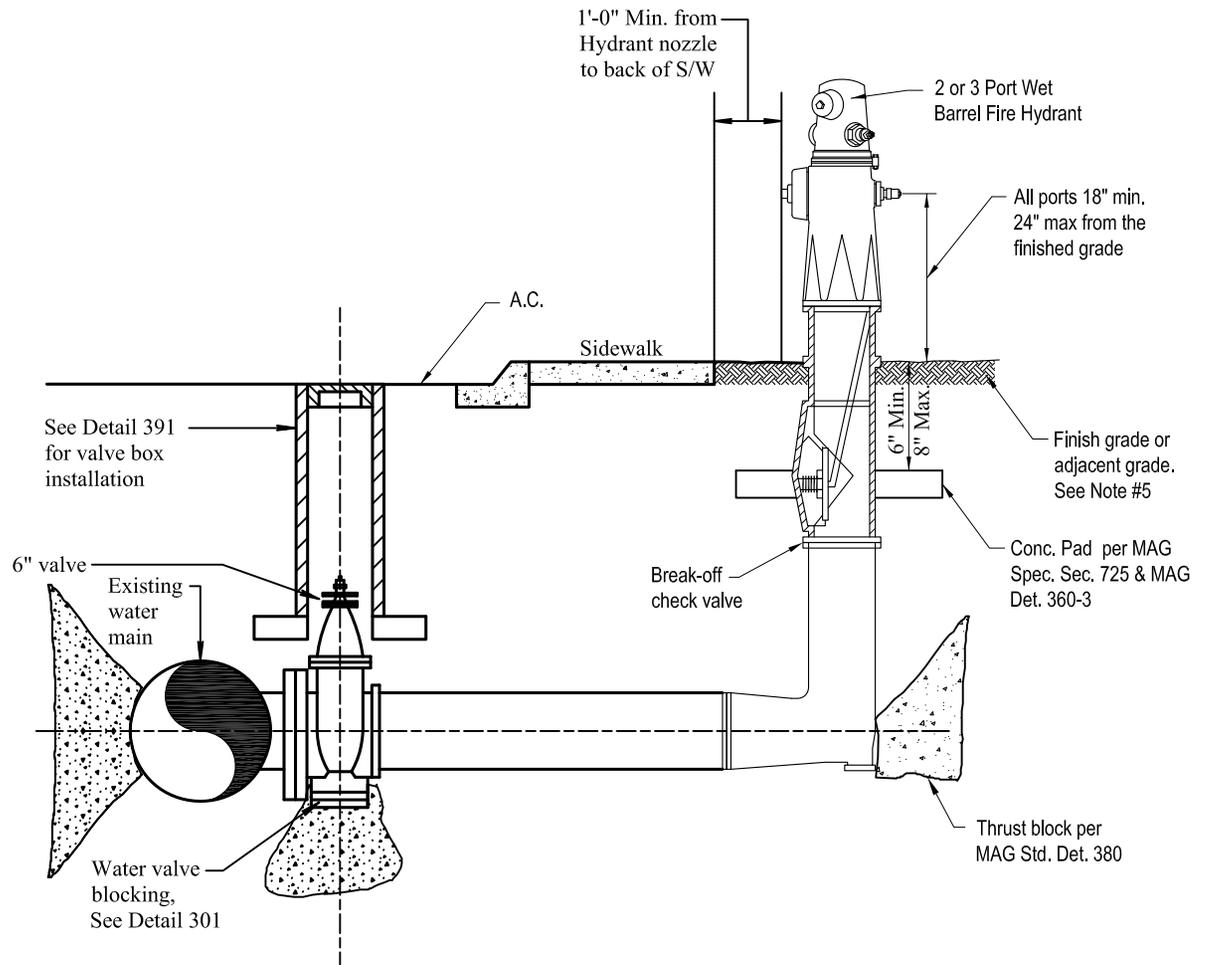
1. Joints between the valve and the main shall be flanged type. Joints between the valve and hydrant shall be restraint or mechanical type.
2. For concrete thrust blocks, See Detail 380.
3. A flange joint by mechanical joint valve may be used as the transition between the joint types.
4. Piping between water valve and hydrant shall be ductile iron.
5. Finish grade shall be ground level, sidewalk, adjacent sidewalk, pavement, adjacent curb or other nearby obstruction denying wrench access to the bottom flange bolts.
6. See Detail 362 for location of hydrant.
7. In lieu of thrust blocks, an approved joint restraint system may be used.
8. Main steamer nut shall face the street.
9. No valves are to be in concrete.
10. Minimum 3-foot diameter clearance around hydrant.
11. National standard threads required on all connections.
12. 1/2" bituminous expansion shall be placed around the barrel of the F/H.
13. See Detail 360-3 for Concrete Pad.



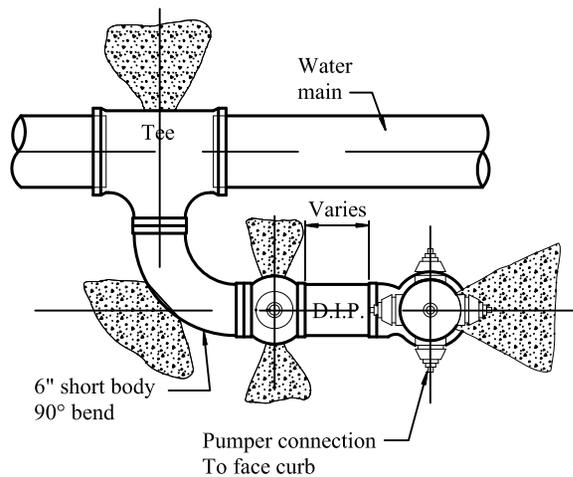
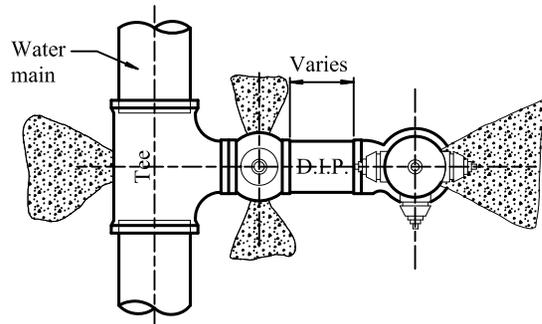
DETAIL NO.		STANDARD DETAIL ENGLISH	DRY BARREL FIRE HYDRANT INSTALLATION	REVISED 04-27-2011	DETAIL NO. 360-1
360					

General Notes:

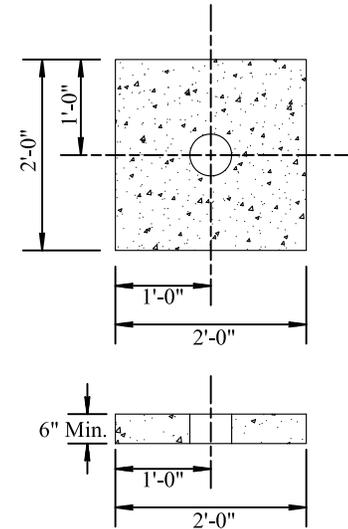
1. Joints between the valve and the main shall be flanged type. Joints between the valve and hydrant shall be restraint or mechanical type.
2. For concrete thrust blocks, See Detail 380.
3. A flange joint by mechanical joint valve may be used as the transition between the joint types.
4. Piping between water valve and hydrant shall be ductile iron.
5. Finish grade shall be ground level, sidewalk, adjacent sidewalk, pavement, adjacent curb or other nearby obstruction denying wrench access to the bottom flange bolts.
6. See Detail 362 for location of hydrant.
7. In lieu of thrust blocks, an approved joint restraint system may be used.
8. Main steamer nut shall face the street.
9. No valves are to be in concrete.
10. Minimum 3-foot diameter clearance around hydrant.
11. National standard threads required on all connections.
12. 1/2" bituminous expansion shall be placed around the barrel of the F/H.
13. See Detail 360-3 for Concrete Pad.
14. The hydrant shall have 2- 2½" port and 1- 4½" port (industrial or commercial).
15. The hydrant shall have 1- 2½" port and 1- 4½" port (residential).



DETAIL NO. 360-2	 STANDARD DETAIL ENGLISH	WET BARREL FIRE HYDRANT INSTALLATION	REVISED 04-27-2011	DETAIL NO. 360-2
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Pad Detail
 Square or round is acceptable
 If Round: 24" diameter min. required



General Notes:

1. Concrete for pad shall be Class "B".
2. Round pads shall have a diameter not less than 24".
3. Score line shall bisect this pad at mid point of all sides.
4. Concrete color shall match adjacent concrete.
5. The finished concrete surface shall have a rough broken finish (surface only).

DETAIL NO.
 360-3



STANDARD DETAIL
 ENGLISH

FIRE HYDRANT INSTALLATION

REVISED
 04-27-2011

DETAIL NO.
 360-3



MEMORANDUM

Case # 11-15

DATE: July 13, 2011

TO: MAG Specifications and Details Committee Members

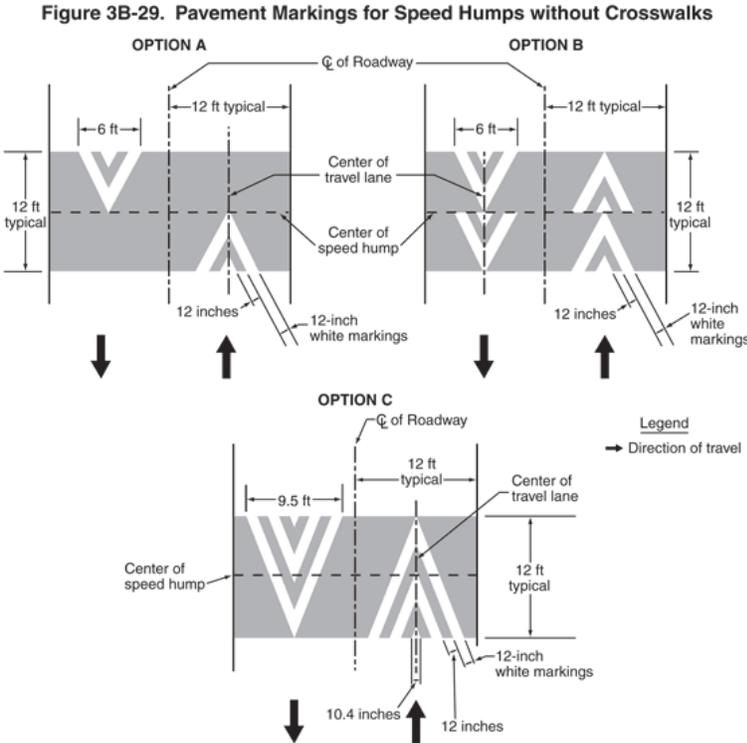
FROM: Warren White, City of Chandler Representative

SUBJECT: Modifications to Detail 210: Residential Speed Hump

The current MAG Detail 210, Residential Speed Hump has become non-compliant with MUTCD marking requirements (see below). The point of the each chevron marking should face toward oncoming traffic.

Section 3B.25 Speed Hump Markings
Standard:

01 If speed hump markings are used, they shall be a series of white markings placed on a speed hump to identify its location. If markings are used for a speed hump that does not also function as a crosswalk or speed table, the markings shall comply with Option A, B, or C shown in [Figure 3B-29](#). If markings are used for a speed hump that also functions as a crosswalk or speed table, the markings shall comply with Option A or B shown in [Figure 3B-30](#).

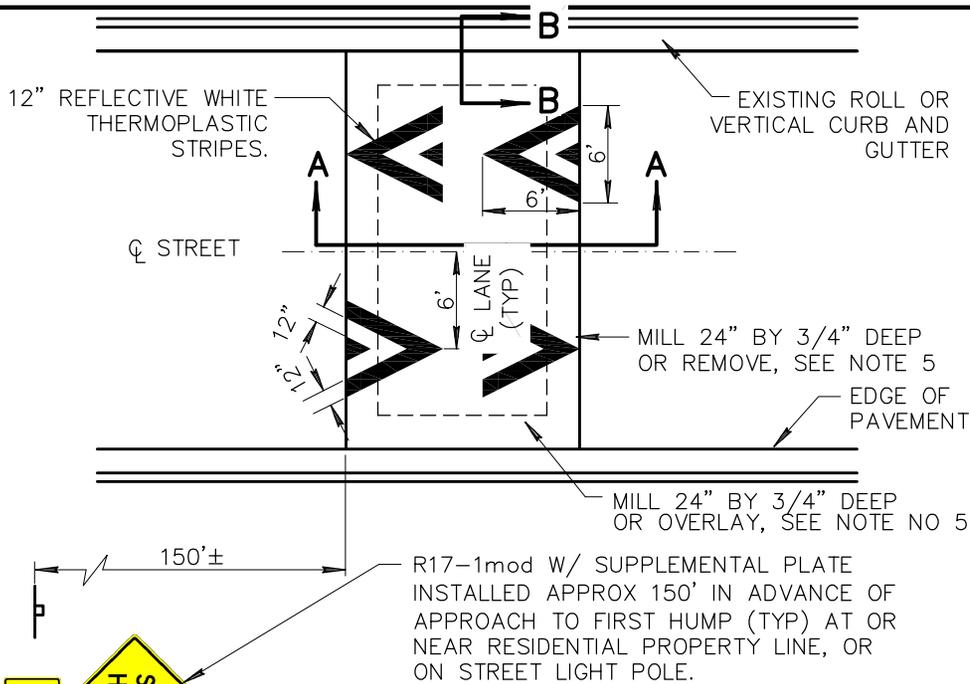


We have inventoried various Agency's speed hump details and have identified characteristics amongst the details. Please see the ledger attached.

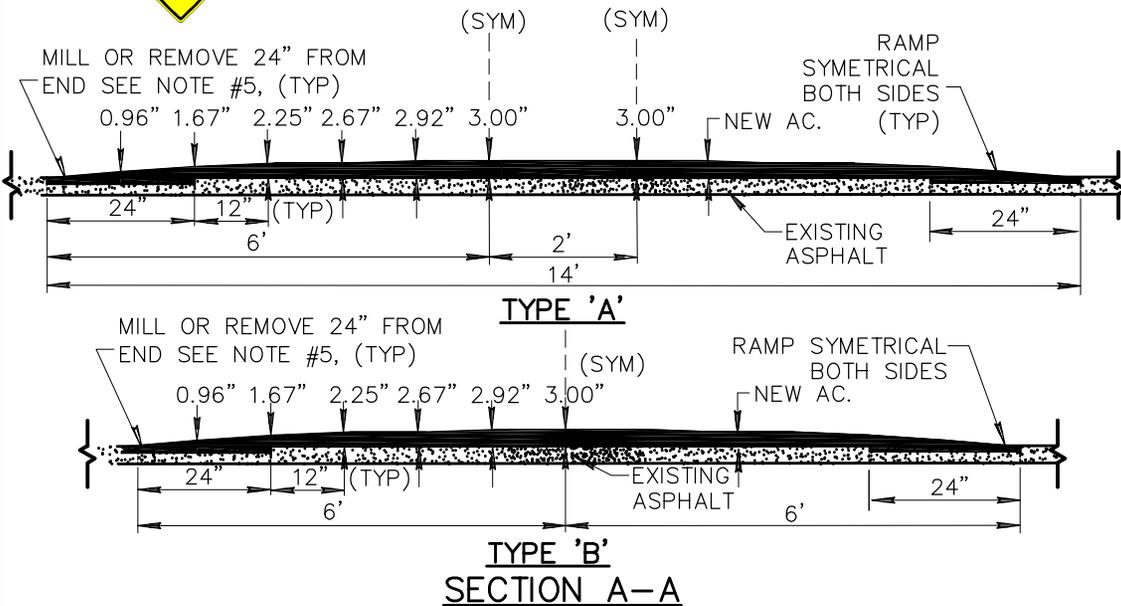
The draft changes to Detail 210 include:

- Markings in accordance with MUTCD Figure 3B-29, Option B.
- Calling out 12" thermoplastic markings.
- Calling out the use of 1/2" asphalt mix.
- Clarifying the mill surface in the section views.
- Consolidating the profile requirements into one note.
- Creating two types: Type 'A' - 14' and Type 'B' - 12'.
- Specifying advance signing for the hump series.
- Locating the chevrons close to centerline to avoid obscuration by parked cars.

Also, we'd like to note that the alternate installation longitudinal joint method consisting of tapering the AC profile may be problematic to achieve.



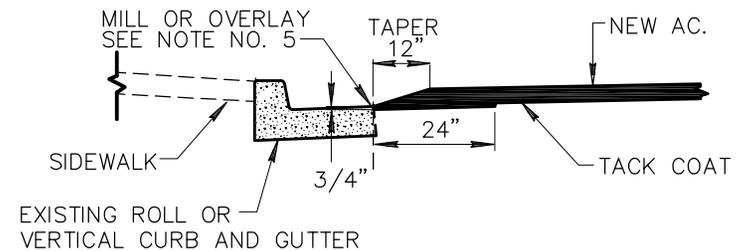
PLAN VIEW



SECTION A-A

NOTES:

1. HUMPS SHALL BE A MINIMUM OF 3" AND SHALL NOT EXCEED 3.25". HUMPS CONSTRUCTED OVER 3.25" OR LESS THAN 3.00" SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. CROSS-SECTION ELEVATIONS SHALL HAVE A MAXIMUM TOLERANCE OF ±0.25". CONTRACTOR SHALL PROVIDE VERIFICATION OF CROSS-SECTION DIMENSIONS.
2. SPEED HUMPS SHALL NOT BE PLACED OVER MANHOLES, WATER VALVES, SURVEY MONUMENTS, JUNCTION CHAMBERS, ETC. OR IN CONFLICT WITH DRIVEWAYS.
3. SPEED HUMPS SHALL BE PLACED AT LOCATIONS APPROVED BY THE AGENCY.
4. HUMP SHALL BE CONSTRUCTED WITH AN 1/2" ASPHALT MIX APPROVED BY THE AGENCY. ASPHALT COMPACTION SHALL BE PER SECTION 321. A TACK COAT PER SECTION 713 SHALL BE APPLIED PRIOR TO APPLICATION OF PAVEMENT.
5. INSTALLATION JOINTS:
 - A. STANDARD INSTALLATION:
THE EXISTING ROADWAY SHALL BE MILLED TO A MINIMUM DEPTH OF 3/4" AROUND THE PERIMETER. CROSS SECTION DIMENSIONS DO NOT INCLUDE THE 3/4" DEPTH OF MILLING.
 - B. ALTERNATIVE INSTALLATION (ONLY WITH AGENCY APPROVAL):
FOR TRANSVERSE JOINTS (CROSS ROADWAY), THE EXISTING ASPHALT SHALL BE SAW CUT AND REMOVED FOR A WIDTH OF 24". THE ASPHALT SHALL BE REPLACED WITH THE SAME ASPHALT AND AT THE SAME TIME AS THE HUMP ASPHALT. FOR LONGITUDINAL JOINTS, THE EXISTING ASPHALT SHALL BE OVERLAID AND TAPERED IN 12". CROSS-SECTION DIMENSIONS REFLECT DISTANCES FROM THE SURFACE OF EXISTING ASPHALT.
6. CONTACT THE AGENCY (OR INSPECTOR) ONE WEEK PRIOR TO INSTALLATION TO COORDINATE PAVEMENT MARKINGS AND SIGNING.



SECTION B-B

DETAIL NO.

210



**STANDARD DETAIL
ENGLISH**

RESIDENTIAL SPEED HUMP

REVISED
6-23-2011
DRAFT

DETAIL NO.

210

<u>Municipality</u>	<u>Detail Number</u>	<u>Span</u>	<u>Height</u>	<u>Profile</u>	<u>Marking</u>	<u>Material</u>	<u>Transverse Edge Details</u>	<u>Longitudinal (gutter) Edge Details</u>	<u>Signing</u>
Avondale	A1060	12'	3", +/- 1/4" enforced	parabolic. Contractor shall verify cross section	2 -12" white thermo chevrons in direction, MUTCD Fig 3B-30 Option 'B'	D 1/2 coarse hot mix	edge milled inlay 24" x 1 - 1/2"	12" surface taper at gutter	none
Chandler	C-234	14'	3", in excess of 0.27' to be corrected	6' parabolic ramps, 2' flat center, tolerance +/- 0.02'	2 - white reflectorized tape (proprietary) chevrons in direction	EVAC A 12.5	edge milled inlay 24" x 3/4"	2" over 12" taper at gutter	R17-1(mod) 'Speed Humps' w/ 20 mph Speed Plate at property line or street light, 150' in advance of first hump
MAG	210	12'	12', nte 3.25" or less than 3.00"	Avondale similar. Each elevation nte tolerance of + 0.25" Contractor shall verify profile of milled inlay construction	for each quarter, 3 x 10" reflective white stripes angled 45d first to, then from curb	Agency choice	edge milled inlay 24" x 3/4" or transverse pavement removal and replacement	12" taper at gutter	contact agency
MCDOT	2010 w/o gutter	12'	3 - 1/4" 12 month warranty of at least 3"	parabolic. Tolerance + 0.25" enforced	2 x 12" white chevrons in direction	1/2" Marshall mix for high traffic	24" remove full depth pavement. If pavement is less than 1.5", construct thickened edge.		M-3-R delineators at mid hump and 25' upstream
	2010 w/ gutter	12'	3 - 1/4" 12 month warranty of at least 3"	parabolic. Tolerance + 0.25" enforced	2 x 12" white chevrons in direction	1/2" Marshall mix for high traffic	24" remove full depth pavement. If pavement is less than 1.5", construct thickened edge	12" mill and taper to lip plus 1/4" at gutter.	
Mesa	M-15	14'	3"	2' flat center, parabolic ramps for 6'.	2 x 12" white chevrons in direction, preformed	R 1/2" EVAC	18" x 1/2" inlay by grinding	12" feather at gutter	
Peoria	PE-210	12'	3 - 1/2" over 3.75" rejected. 24 month warranty of at least 3.25"	parabolic. (approximate +/- 1/4") Contractor shall verify	2 x 12" white thermo Hot Tape or 3M SMS-5730 chevrons in direction per latest MUTCD Chap 3	D -1/2 coarse hot mix	24" inlay	24" mill and 12" taper	
Tempe	T-356 Striping	per MAG Std Dtl 210			2 x 12" white chevrons in direction				

Water/Sewer Working Group Meeting

Meeting Notes

June 21, 2011

Opening:

A meeting of the Specifications and Details Water/Sewer Working Group was called to order by chair Jim Badowich on June 21, 2011 at 1:35 p.m. in the MAG Agave Room.

1. Participants

Jim Badowich (Avondale), Rita Chihanik (Deeter/Neenah), Craig Sharp (W. C. Scoutten for Buckeye), Gordon Tyus (MAG).

2. Review May Meeting

Gordon Tyus provided notes from the May 17th meeting for members to review.

3. Manhole Spec and Detail Updates

Mr. Badowich began the discussion with an update on the pre-cast manhole bases. Mr. Tyus said they were discussed during the last committee meeting and one concern was making sure the subgrade was well compacted so the bases didn't settle. Mr. Badowich said he also had concerns that sewer pipes needed flexible connections (such as an A-LOC gasket). He also had concerns about using metal in the connections, the ease with which clay pipe can break if the base settles, as well as needing very close tolerances for inverts (of less than 5 hundredths of an inch). Craig Sharp said they have used precast bases in Flagstaff successfully, including such close tolerances. An advantage of the pre-cast bases is the speed of the process, which allows a manhole to be completed all in one day. It does require a change in scheduling to make sure the surveyor is ready when needed. Mr. Sharp said Buckeye is going to specify 8" ABC subgrade for all manholes, and said they are working on developing a detail for a precast base that could be submitted as an additional option for MAG in the future.

Mr. Badowich also proposed making revisions to manhole details 420-1 and 420-2. Some suggested revisions included removing the brick patterns, removing the steps, updating the sealant type note for all joints (and removing the brand name), and showing the location of the grade. He said most cities don't allow steps because they can be unsafe. Craig Sharp agreed noting that deeper manholes could cause a risk of falling. The references to frame and cover details 423, 424 and 425 would need to be updated if the current manhole frame covers case and/or deletion case is approved. Also Mr. Badowich said there should be limits to when these details could be used based on the depth of the manhole, and the size of the pipe. For example, those deeper than 15'-16' feet should be designed, with bases that have reinforced concrete in order to support the extra weight. He also suggested that the details were not appropriate for pipes larger than 24" in diameter. There were also some missing or incorrect dimensions on detail 420-2. Jim Badowich said that he planned to make some revisions to 420-1 and 420-2 to present as a case and get feedback from other committee members. He also noted that 421 and 422 also should be revised for similar reasons and to remove references to brick construction. Additional work was also needed to update the adjustment details for different applications such as when they are in the street, median, sidewalk, etc.

4. Manhole Frames and Covers

Mr. Badowich noted that Scott Zipprich introduced the manhole frame and covers details provided by Rita Chihanik at the previous meeting as MAG case 11-13 at the June committee meeting. He suggested Rita may want to attend upcoming full committee meetings to help answer questions about the revisions.

5. Wet Barrel Fire Hydrant Spec and Detail Update

Craig Sharp passed out new details 360-1 (dry barrel), 360-2 (wet barrel), and 360-3 (installation details) to replace the current MAG detail 360. The wet barrel detail is based on the detail from Avondale, and the dry barrel detail updates the current MAG 360. Mr. Sharp said Scott Zipprich plans to introduce these as a case at the July committee meeting. He also said the pipe between the water valve and hydrant is noted as ductile iron. Mr. Badowich described the advantages and disadvantages of both types. He said the dry barrel hydrants sometimes become difficult to open and can break the linkage down to the valve below grade. He said a check valve now will automatically shut off the water in a wet barrel hydrant if it is hit. Detail 360-3 shows the location of thrust blocks (as currently shown on MAG 360) and adds a pad detail.

6. Update on Specs/Details Being Considered for Removal

Mr. Badowich asked participants their thoughts on removal of the sample forms from the front of the MAG Specs. Mr. Tyus said he suggested adding these to the deletion case at the last full committee meeting since they were out-of-date and not used by MAG jurisdictions. Other members agreed and suggested that leaving them in could raise liability issues. Mr. Tyus did say that just recently he was asked for these forms by the Town of Miami, Arizona. Mr. Badowich noted that sample contracts are available from other sources that would be more appropriate. Rita Chihanik noted that if steps are removed from manholes, you would not need the detail for them (428). The removal of details for brick manhole construction was also discussed.

7. Valve Boxes: Frames, Covers and Adjustments

Rita Chihanik handed out sample details of revisions she worked on for different frames and covers. One detail she helped prepare and sent to Brian Gallimore was an access frame and cover for corrugated pipe, since currently there is no MAG detail. She also handed out alternate frame and cover details for valve boxes that use a thicker, heavier cover that is less prone to pop out. She showed sample details of the new cover, with and without a chain. The group discussed at length changes needed to valve boxes to update them, and add additional options as well as to separate the details for the boxes and covers from the final installation adjustments. There was also discussion about the square reclaimed water covers, plastic covers Phoenix is testing, and possible locking mechanisms. In summary it was determined to make several details - one for each valve box type, and separate details (in the 270s) for the installation adjustments. For example:

- 391-1 Valve Box (Type A) – Similar to the work Ms. Chihanik did on a revised 270, but it would remove adjustment info and have just a basic installation detail similar to the Type A detail on current MAG 391-1. Also could show (or note) cover options such as the current chained type, a heavier cover and maybe locked or plastic options.

- 391-2 Valve Box (Type B) – Same as above – for the Type B on current 391-2. The current 391-2 could become the basis for the new 270 (-1, -2, etc) Valve Adjustment Detail series – along with the adjustment info currently on 391-1 and 270. (This is a separate issue that will need to be worked on in the future.)
- 391-3 Valve Box (Type C) – The type C detail from current 391-1, without the grade adjustment info and with general dimensions based on existing manufacturers. Also the revised detail could add the frame and cover options similar to the two above.
- 391-4 Valve Box (Type D?) – Future details could be created such as for the reclaimed water boxes or others as needed.

Rita Chihanik agreed to update her draft details as noted above. Mr. Tyus agreed to send her existing MAG AutoCAD drawings.

8. Voluntary Case Assignments

Members agreed to continue work on the draft cases discussed.

9. Next Meeting Date

Members agreed to meet again on Tuesday, July 19th at 1:30 at the MAG office. Mr. Tyus said he would try to again reserve the Agave room.

MAG Concrete Working Group

Meeting Notes

Thursday, June 9, 2011, 1:30 pm at the ARPA Offices

Present:

See attached attendance sheet.

Discussion:

The following were emailed to members prior to the meeting for review and comments:

	Meeting notes from 5-18-11 with attendance sheet
220	Riprap Construction
701	Rock, Gravel, and Sand
703	Rip Rap
342	Decorative Pavement Concrete Paving Stone or Brick – with Detail 225
525	Pneumatically Place Mortar (Shotcrete)

- 1) A brief presentation was made by Harry Boettcher on a new articulating sidewalk joint system that will soon be available for use – called Trip Stop. He provided a couple of hand-outs and the website information on the system and attached is a copy of the technical sheet from the website. He was advised to check out the current MAG Section 340 regarding this system or how it might be potentially revised.
- 2) A draft of section 341 on Terrazzo Sidewalks was presented representing a move to have it added to Case 11-06 involving Sections to be removed due to lack of use or need for right-of-way applications. This Section could be considered for out-of-right-of-way applications and potentially included in that document.
- 3) The group went over the drafts section 220, 701, and 703 pertaining to Riprap with no proposed changes. The draft of 220 and 701 will be prepared for case submittal incorporating any additional group comments. Section 703 will be introduced into Case 11-06 involving sections to be removed.
- 4) The group went over the draft of Section 342 for potential case submittal with no proposed changes. Detail 225 was discussed regarding the appropriate use – vehicular traffic areas versus pedestrian only areas. The suggestion was to change the title of the detail to reflect the design rather than change or add another detail. Something like “Concrete Pavers in Vehicular Traffic Applications” would probably work and be easiest. These will be prepared for case submittal incorporating any additional group comments.
- 5) A new draft of Section 525 was discussed with a few changes to the sections on Testing, Acceptance, and Payment. These will be incorporated into the draft by Raphael Tixier of WTI and re-submitted to the group for further review.
- 6) Due to the sparse attendance at the meeting, it was determined to adjourn and continue work on selected Sections for the next meeting.

Action Items:

Sub-group leaders and members are encouraged to continue work outside the Group meetings to review and revise assigned Sections and to utilize email and word documents for tracking of proposed changes.

Date and Agenda for Next Meeting:

The next meeting is scheduled for **Wednesday, July 20th at 1:30 in the ARPA Offices.** We will finalize draft versions of several sections for case submittal and continue to discuss specific revisions to other sections being reviewed.

Attendance
Initials

MAG Concrete Working Group

Thursday, June 09, 2011

GT	Gordon Tyus	MAG	Maricopa Association of Governments	602-254-6300	GTyus@azmag.gov
	Bob Herz	McDOT	Maricopa County	602-506-4760	rherz@mail.maricopa.gov
	Peter Kandar	Utility	Salt River Project	602-236-8613	pmkandar@srpnet.com
	Chris Shaw	Municipality	City of Phoenix	602-534-7050	chris.shaw@phoenix.gov
	Equbal Charania	Municipality	City of Phoenix	602-495-2049	equbalali.charania@phoenix.gov
	Syd Anderson	Municipality	City of Phoenix	602-495-2047	syd.anderson@phoenix.gov
	Jesse Gonzales	Municipality	City of Peoria	623-773-7548	jesse.gonzales@peoriaaz.gov
	Don Hansen	Municipality	City of Chandler	480-215-9264	don.hansen@chandleraz.gov
	Joe Mueller	Municipality	City of Mesa	480-644-6937	joe.mueller@mesaaz.gov
	Tom Kaczmarowski	Municipality	City of Glendale	623-930-3640	tkaczmarowski@glendaleaz.com
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	Art Tyson	Producer	W. R. Grace Admixtures		Art.E.Tyson@grace.com
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	Jakkaraju Vishal	Testing Laboratory	AMEC	480-940-2320	Vishal.Jakkaraju@amec.com
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HB	Harry Boettcher		Trip Stop	480-280-7258	

TRIPSTOP™

TripStop™ is a revolutionary new Australian invention used in footpath construction and replacement.

TripStop controls misalignment and displacement in footpath slabs, the cause of enormous repair, replacement and legal costs, environmental damage and personal injury.

TripStop is a new type of construction joint set into position prior to pouring the concrete and separates the footpath into a series of linked slabs. TripStop acts as a hinge that allows concrete to articulate, controlling displacement caused by trees or soil movement, eliminating trip hazards.



TripStop allows concrete to move with the earth and delivers substantial cost, safety and environmental benefits.



Reduced pavement repair means a cost reduction



Reduction of trip hazards means reduced personal injury and litigation costs



Reduced pavement repair means a reduction in the use of natural and human resources

Many Australian Councils are now using TripStop in new and replacement footpaths to solve the frequently occurring problems caused by tree root invasion, soil movement and temperature changes that shift and displace concrete





Cost benefits:

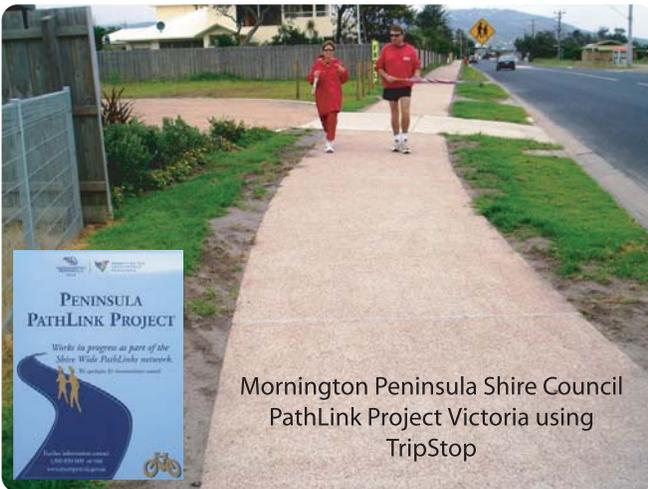
In times of increasing demand for social, health and community services, TripStop delivers substantial savings of financial resources. Ongoing repair and replacement costs are reduced.

Safety benefits:

For an aging population, TripStop makes footpaths safe. TripStop will also be valuable in and around schools, hospitals, aged care facilities and public areas generally.

Environmental benefits:

TripStop will put an end to the seemingly endless grinding and replacing of displaced pavements thereby reducing damage and disturbance. TripStop allows footpaths to co-exist with trees.



Fully tested:

TripStop has undergone extensive testing at RMIT University Civil & Chemical Engineering Laboratory. Results are posted on the TripStop web site.



TripStop was the winner of the ABC 'The New Inventors' episode 27 best invention award, winner of the INNOVIC 2005 'The Next Big Thing' award, 'CivEnEx 2005 Best New Product Award' and 'A Gold Medal at GENEVA 2006'!



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Specifications & Details Outside Right-of-Way Working Group

June 29, 2011 Meeting (1:30 pm to 3:00 pm)

at

Arizona Rock Product Association
9th Avenue and Adams Street
Phoenix, AZ

Meeting Agenda

INTRODUCTION

- Welcome participants – Introductions

DISCUSSION ITEMS

- Review draft revisions to MAG (see attached summary)
 - Section 350 – Removal of Existing Improvements
 - Section 340 – Detectable Warnings
 - Section 415/Details 135-1 thru 4 – Guardrails
 - Section 520 – Handrails
 - Section 772 – Chain Link Fence
 - Detail 202 – Alley Details
 - Detail 210 – Speed Humps
- Discuss other potential cases
 - Section 515 – Steel Structures
 - Detail 131 – Street Sign Base
 - Others?
- Next meeting date

Cases for Removal from MAG Specifications and Details

Section	Title	Recommended Action by Outside ROW Working Group	Status
313	Bituminous Treated Base Course	Delete this section as this procedure is no longer used.	case submitted
410	Precast Safety Curbs	Delete this section as this is for outside of ROW locations.	
501	Driving Piles	Delete this section as it is outdated, rarely used and partly a design document.	
780	Timber Piles	Delete this section as it is outdated, rarely used and provides little guidance.	
781	Steel Piles	Delete this section as it is outdated, rarely used and provides little guidance.	
782	Concrete Piles	Delete this section as it is outdated, rarely used and provides little guidance.	
785	Steel Castings	Delete this detail as these materials are no longer used.	
786	Bronze Casting	Delete this detail as these materials are no longer used.	
Detail	Title	Recommended Action by Outside ROW Working Group	Status
150	Precast Safety Curb	Delete from ROW standard as these are used outside ROW.	case submitted
170	Typical Runway or Taxiway Edge Lighting Detail	Delete from ROW standard. Detail is for work outside of the ROW and may not be current.	
402	Encased Pipe for Canal Crossing	Delete this detail since irrigation agency standards supercede MAG on canals.	
425	24" Aluminum Manhole Frame and Cover	Delete this detail as it is rarely (if ever) used.	

Cases for Removal from MAG Specifications and Details - Minor Changes Needed in Other Standards/Details

Section	Title	Recommended Action by Outside ROW Working Group	Status
225	Watering	Delete this section since it provides minimal technical guidance - mostly general conditions. Modify earthwork and dust control specifications if needed and include general conditions in Section 104.	case submitted
787	Gray Iron Castings	Delete this section; place essential information from 787.3 in existing details referencing gray iron castings.	
Detail	Title	Recommended Action by Outside ROW Working Group	Status
190	Rock Correction Procedure for Maximum Density Determination	Delete from ROW construction standard. This is a QC testing requirement that can be specified in Section 301 using ASTM D4718.	case submitted

Cases for Review by Various Members & Agency Staff (green shading denotes minor revisions)

Section	Title	Recommended Action by Outside ROW Working Group	Status
350	Removal of Existing Improvements	Modify to include utility abandonment/removal requirements.	drafted
340	Sidewalks, Curbs, Gutters, (etc)	Update detectable warnings section	drafted
360	Telecommunications Installations	Revise to meet current agency practices and requirements.	
401	Traffic Control	Revise to meet current agency practices and requirements.	
415	Flexible Metal Guardrail	Revise to meet current agency practices and requirements.	drafted
430	Landscaping and Planting	Revise to include current practices and innovations (hydroseeding)	
440	Sprinkler Irrigation System Installation	Revise to include current practices and innovations (drip systems)	
515	Steel Structures	Revise section to delete references to major structures that fall under building code regulations; section should be for minor steel structures only.	???
520	Steel and Aluminum Handrails	Revise to match existing details and current codes/standards.	drafted
530	Painting	Section is outdated and needs to be revised to meet current industry standards.	
757	Sprinkler Irrigation Systems	Suggest changing title to "Landscape Irrigation" and update for current materials (drip systems).	
770	Structural And Rivet Steel, Rivets, Bolts, Pins, And Anchor Bolts	Antiquated specification. Update for current materials.	
772	Chain Link Fence	Review and change ASTM standards that are out of date.	drafted
779	Wood Preservatives	Section is outdated and needs to be revised to meet current industry standards.	
790	Paint	Section is outdated and needs to be revised to meet current industry standards.	
795	Landscaping Material	Revise to include current materials used by agencies.	
Detail	Title	Recommended Action by Outside ROW Working Group	Status
131	Street Sign Base	Update to include materials currently used by agencies for street sign supports.	???
135	Steel Guard Rail	Include end attenuation details.	drafted
145	Safety Rail	Modify to accommodate OSHA onsite needs	
160	Chain Link Fence and Gate	Include options for higher fencing as allowed in Section 420.	
202	Alley Details	Modify inverted crown alley for access road use; delete unpaved surface or include aggregate or RAP surfacing	drafted
204	Equipment Crossing	Review to determine if this is still needed. When would it be used?	
210	Residential Speed Hump	Include option for speed table (Tempe design); include a note on drainage impacts.	COC