



# TRANSPORTATION & INFRASTRUCTURE COMMITTEE

February 21, 2008

The Transportation and Infrastructure Committee of the City of Mesa met in the lower level meeting room of the Council Chambers, 57 East 1st Street, on February 21, 2008 at 9:56 a.m.

## COMMITTEE PRESENT

Kyle Jones, Chairman  
Scott Somers  
Darrell Truitt

## COMMITTEE ABSENT

None

## STAFF PRESENT

Jack Friedline

### 1. Items from citizens present.

There were no items from citizens present.

### 2. Hear a presentation, discuss and give direction to staff on the City's Stormwater Engineering Standards for Gateway Airport Commerce Park.

City Engineer Beth Huning introduced Jeff Welker of Welker Development Resources, LLC, representing the developers of the Gateway Airport Commerce Park.

Chairman Jones clarified that the purpose of this agenda item is for the Committee to review the City of Mesa's Stormwater Engineering Standards in general and not merely the stormwater requirements for the Gateway Airport Commerce Park.

Mr. Welker introduced Mike Olson, an associate of Brent Payne (one of the developers of the Gateway Airport Commerce Park), and Clint Garner of Allen Consulting Engineers, who were present in the audience and available to respond to any questions the Committee may have. He reported that Mr. Payne has pursued a deviation to Mesa's historic drywell policy relative to the Gateway Airport Commerce Park. Mr. Welker explained that after a series of meetings with City staff, it was the opinion of Mr. Payne that rather than try to obtain specific relief for his development, it might be appropriate for the Transportation & Infrastructure Committee to consider the issue of amending the City's drywell policy and making a recommendation to the full Council in this regard.

Mr. Welker indicated that the Committee has been presented a proposal to change Mesa's current drywell requirements. He stated that the intent of such a proposal is to update the City's current policy in order to be more consistent with drywell standards and policies in other Valley communities and also to recognize a variety of soil conditions that exist throughout Mesa. Mr. Welker noted that Mesa's "policy-based" drywell standard is over 30 years old and said that to

the best of his knowledge, it has never been substantially reviewed or updated. He added that in speaking with individuals who were City employees at the time the policy was implemented, including Committeemember Truitt, it was their belief that the standard was developed, in part, as a result of soliciting input from drywell installers and constructors.

Mr. Welker offered a series of comments regarding Mesa's drywell policy as follows:

- Mesa has established that each drywell shall not drain more than 9,300 cubic feet of stormwater volume.
- Implementing a "technical-based" analysis, as opposed to the current "policy-based" standard, would address the diverse soil conditions that currently exist at individual development sites throughout the 133 square miles of land within Mesa's corporate limits.
- The current process by which a developer is permitted to appeal a decision of the City Engineer to the Deputy City Manager is arbitrary.
- A "technical-based" policy would allow a developer to install/maintain the correct number of drywells that meet the standards established by the Arizona Department of Environmental Quality (ADEQ) and the City's Environmental Services Department.
- Mesa's current drywell policy has the potential to add hundreds of thousands of dollars in development costs as compared to an identical project in an adjacent municipality.
- Mesa owns many retention basins throughout the community and a "technical-based" standard would allow for the installation of fewer drywells, thereby resulting in less maintenance costs to the City.
- If Mesa continues to maintain its current drywell policy, developers may be faced with increased development costs and elect to develop in neighboring communities with updated drywell standards.

Mr. Welker concluded his presentation and stated that he is seeking the Committee's concurrence that it would be appropriate for the City of Mesa to amend its drywell policy and that the matter move forward to the full Council for approval.

Ms. Huning displayed a PowerPoint presentation (A copy is available for review in the City Clerk's Office) and provided an extensive overview of Mesa's Stormwater Engineering Standards. She reported that Section 9-6-4 (D) of the City Code delegates authority to develop standards and the flexibility to change such standards to the City Engineer and said that Section 9-6-7 provides the developer with an opportunity to appeal the City Engineer's decisions to the Deputy City Manager.

Ms. Huning commented that it was important to note that during Mr. Welker's presentation, he reviewed only the drywell criteria for draining a basin, but did not address other stormwater standards such as the storm event (i.e., inches of rain over a set period of time), runoff coefficients (how much water reaches the basin), 36-hour drain time, and a positive means of draining the basin. She stated that the City prefers a bleed-off line to a pipe or floodway and noted that when that is not feasible, the installation of drywells is allowed. Ms. Huning also reviewed other important criteria to consider relative to drywells including the type (single chamber versus dual chamber), depth, location and drainage rate.

Discussion ensued relative to variables considered in stormwater design (i.e., rainfall quantity, stormwater quality, soils (type and percolation rate), and construction workmanship); the fact

that percolation rates, or the rate at which water seeps into the soil and down into the groundwater table, vary substantially across Mesa; that the greatest intensity of storms in Arizona is in July and August, with slower rains in January and February; an overview of isopluvial maps, which establish 100 year/2-hour precipitation criteria utilized by the City of Mesa; a review of charts depicting the annual rainfall at the Phoenix-Mesa Gateway Airport and area percolation rate data; and an analysis of the Gateway Airport Commerce Park site map, including the site plat, plan approval, and an engineering drawing of the approved plan.

Ms. Huning provided a historical timeline of various actions that occurred between staff, the developer of the Gateway Airport Commerce Park and his representative subsequent to permit issuance. (See Attachment 1.) She commented that in May 2007, soon after she began her employment with the City, she and staff met with the developer and his representative to discuss the developer's request that percolation tests be conducted and the number of drywells reduced at the development site.

Ms. Huning explained that staff subsequently prepared a detailed testing protocol, which indicated that the maximum reduction allowed in the number of drywells would be 50%. She also stated that the group agreed to test 4 of the 13 drywells that had been installed to obtain an indication of the permeability of these wells. Ms. Huning also noted that subsequent to the field tests, she advised the developer that the tests were acceptable and a 50% reduction in the number of drywells would be allowed. She said that the approved variance from the study was a reduction in the number of drywells from 43 to 22, with a savings to the developer of \$252,000. Ms. Huning added that the basin size remained 3.6 acres and staff continued to use the Mesa runoff coefficients and storm event of 100-years/2 hour.

Further discussion ensued relative to the specific protocol testing procedure; and that Maricopa County requires that all basins drain in 36 hours in order to prevent the development of nuisance conditions such as standing water (i.e., bird baths) in the basins and public health concerns, including the breeding of mosquitoes.

Ms. Huning offered a comparative analysis of stormwater engineering standards in Scottsdale, Chandler, Gilbert, Glendale, Phoenix and Mesa. (See Attachments 2, 3, 4, 5, 6 and 7). She reported that Chandler has created a Stormwater Coordinator position whose duties include, among other things, working with residents to address flooding in basins and also monitoring concerns relative to the community's stormwater system. Ms. Huning also commented that the Town of Gilbert has experienced significant retention basin drainage problems in Power Ranch and Coronado Ranch.

Additional discussion ensued relative to the fact that the Gateway Airport Commerce Park is within 3,000 feet from the end of the runway at Phoenix-Mesa Gateway Airport; that the property falls within the Federal Aviation Administration's (FAA) policies for a 10,000-foot separation distance for hazardous wildlife attractant mitigation; that the number two cause of airplane crashes is bird strikes; that per FAA requirements, the basins in the Gateway Airport Commerce Park must be dry between storm events (not to exceed 48 hours); that the FAA also recommends that communities consider designs based on multi-storm events, using a probability analysis of 2-year, 10-year and 100-year events around major airports; that staff intends to consider such recommendations in conjunction with their updating of Mesa's Stormwater Master Plan, including the possible implementation of "protection zones" around the airport; that staff also intends to review Mesa's 75-foot maximum depth standard for drywells as a component of the Stormwater Master Plan; that Engineering and Street Maintenance staff

receive approximately 200 stormwater calls/complaints annually, but few related to basins with drywells not draining properly; and that with the City's current budgetary difficulties, the Engineering Department has limited resources with which to hire additional staff to respond to citizen complaints relative to stormwater issues.

Ms. Huning reported that with regard to the Gateway Airport Commerce Park development, it is her recommendation that the variance be granted. She explained that this would allow the developer to install 22 drywells in the basin as opposed to 43. Ms. Huning also stated that the flow rate that was agreed to of 18,600 cubic feet per second is double the current flow rate allowed by City standards. She commented that she is currently soliciting Requests for Qualifications (RFQs) for a Stormwater Master Plan update and added that she further recommends that all of the stormwater standards included in the Plan be reviewed so that they work in congruence as a system.

In response to an inquiry from Committeemember Truitt, Ms. Huning clarified that pending the selection of a consultant for the Stormwater Master Plan, she anticipates that it would take approximately one year for staff to update all of the stormwater standards.

Ms. Huning further commented that with regard to "technology based" standards, she has yet to find any that truly apply to this situation. She spoke regarding her inclination to review the City's maximum depth drywell standard and the pros and cons of single versus dual chamber drywells. She added that when she was the City Engineer in Chandler, she learned that the distribution of the drywells over the bottom of a basin is very difficult to grade at the percent slopes in order to maintain reasonably level surfaces and said it is often necessary to "sink" additional drywells in order to deal with "bird baths" that form in those locations. She explained that one of the things that she found most effective in Chandler was to pursue a good distribution of drywells to cover the area and not just consider the drainage rate. Ms. Huning added that as City Engineer, she has to live with decisions she makes and has a different fiduciary responsibility now than when she was a consultant.

Committeemember Truitt offered a series of comments with regard to this agenda item as follows: 1.) Encouraged the City to try to "compartmentalize" grading from discharge, assess where the "bird baths" are occurring in basins, and be more flexible to allow inlets to address such occurrences and not necessarily implement discharge methods; 2.) Agreed that the City may need a greater frequency of inlets, but stated that drywells are not the only way to address that particular issue; 3.) Preferred that the City implement a drywell standard that staff believes is appropriate, but not one in which the City expends more funds than are prudent; 4.) Suggested that if staff already believes that Mesa's drywell standard is a "bit over conservative," that staff "get the word out" to developers that Mesa is "a little more flexible" in that regard; 5.) Suggested that perhaps the City's drywell policy could be brought more in line with the City Engineer's recommendations as related to the Gateway Airport Commerce Park development; and 6.) Stated the opinion that the City's policy is more conservative on volumes and less conservative on discharge rates.

Chairman Jones invited Mr. Welker to respond to any comments or concerns expressed by Ms. Huning during her presentation.

Clint Garner inquired whether the City Engineer is recommending that the drywell capacity throughout the City be doubled.

Chairman Jones clarified that the Committee is currently discussing the City's drywell policy and stated that it is anticipated that staff would bring back a new policy to the Committee for further discussion and consideration.

Committeemember Truitt stated that he does not want to "micromanage" the City Engineer with regard to this issue and expressed appreciation to staff for their efforts and hard work in researching this item.

Mr. Welker offered a series of comments relative to this agenda item. His statements included, but were not limited to, the following: that although the Gateway Airport Commerce Park development is being used as a case study to change the City's Stormwater Engineering Standards, he would submit that this is as much a policy issue for the City Council as it is a technical issue for the City Engineer; that the developer believes, based on the test data, that Mesa's standards do not address the variety of soil conditions that exist in the community, thereby resulting in an excessive expenditure of funds for developer; that if a storm drain line had been available to the developer, he would have preferred that method of drainage as opposed to the installation of drywells; and that the developer is requesting that the City amend its drywell policy to account for a variety of soil conditions that exist in Mesa and that the determination not be driven by the City's current economic conditions, but rather the evaluation of empirical data.

Chairman Jones disagreed with Mr. Welker's comment that the current policy is driven by the City's economic conditions and stated that it is based on the professional engineering judgment of the City Engineer.

Committeemember Somers said that the City Code specifically delegates authority to the City Engineer to develop and change the City's engineering standards and not the Transportation & Infrastructure Committee. He added that in his opinion, the Committee cannot arbitrarily determine the correct number of drywells that should be installed at a development and said that such authority should remain with the City Engineer.

Committeemember Truitt commented that he "does not care" whether the Committee has the authority to undertake a review of the City's drywell standards because he does not want to micromanage the City Engineer or her staff. He suggested that staff conduct "needs-based" assessments, as opposed to a "one size fits all" approach, with regard to the City's drywell standard, allow testing and, if necessary, rely on third-party certifications.

It was moved by Committeemember Truitt, seconded by Committeemember Somers, that the recommendations of the City Engineer be accepted.

Chairman Jones stated that relative to the issue of the Gateway Airport Commerce Park development, it is the consensus of the Committee that any decisions with regard to that case be delegated to the City Engineer. He also noted that as part of the City's Stormwater Engineering Master Plan update, staff intends to review the drywell policy in order to provide developers with a better understanding of the City's requirements, including specific site conditions.

Committeemember Truitt clarified that he believes staff has garnered sufficient Committee input today and that they could exercise greater flexibility and be more "site-specific oriented" in their

analyses now and not delay the implementation of such changes until the Stormwater Master Plan is completed.

Chairman Jones stated that the Committee concurred with Committeemember Truitt's comments.

Deputy City Manager Jack Friedline assured the Committee that Engineering staff would apprise the development community of the Committee's suggestions and input.

Chairman Jones called for the vote.

Carried unanimously.

In response to a question from Mr. Welker, Mr. Friedline clarified that today's presentation was not an appeal process for the developer, but rather an opportunity for the Committee to discuss and give direction to staff with regard to the City's Stormwater Engineering Standards.

Chairman Jones thanked everyone for the presentation.

### 3. Adjournment.

Without objection, the Transportation and Infrastructure Committee meeting adjourned at 11:13 a.m.

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the Transportation & Infrastructure Committee meeting of the City of Mesa, Arizona, held on the 21<sup>st</sup> day of February 2008. I further certify that the meeting was duly called and held and that a quorum was present.

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LINDA CROCKER, CITY CLERK