

July 31, 2009

ACTION/APPROVAL OF SSCAFCA'S DEVELOPMENT PROCESS MANUAL

BACKGROUND SUMMARY:

SSCAFCA's mission is to provide flood protection for the public health, safety and welfare of residents and property within our boundaries. Properly planning for and regulatory oversight of development is essential to accomplishing our mission. In the past, SSCAFCA had utilized the City of Albuquerque's Development Process Manual (DPM) to oversee development, but it never completely matched our system.

Additionally, since starting with SSCAFCA in 1997, I came to realize that there were significant physical differences between the Albuquerque area and areas within SSCAFCA's jurisdiction (e.g., antiquated platting of Rio Rancho Estates and the highly erosive, wind-blown soils are two of the more prominent examples). With the rapid rise in development in Rio Rancho between 2003 and 2005 (i.e., approximately 1200 building permits in 2003 to over 3000 in 2005) and at the urging of some members in the development community, SSCAFCA agreed to work with the City of Rio Rancho to begin to develop our own Development Process Manual for our community. The process was formally started in January 2007 with the original goals outlined below:

1. Meet or exceed SSCAFCA's goals, mission statement and vision statements.
2. Match, as much as possible, the City of Albuquerque's DPM process to insure community continuity.
 - a. All agreed that the current Albuquerque DPM was a time tested document accepted by the engineers and developers in the greater Albuquerque area and, since a majority of the development in SSCAFCA's jurisdiction was being done by these same individuals and companies, this was viewed as a positive reason to use it as a template.
3. Provide knowledge to the development community of what will be required of them before they start the project. A secondary effect to improve transparency and "fairness" between projects should also be realized.
4. Simplify and update the DPM whenever and wherever possible to ease the regulatory/approval process burden.

A DPM Implementation project team was formed to oversee the project and insure the highest quality product. Member firms included WHPacific, BHI, HZ, Stantec, MEI and JMA. Both staffs from the City of Rio Rancho and SSCAFCA were deeply involved. Fred Aguirre, retired City Engineer from Albuquerque was hired to help with the process and to provide valuable oversight. Input was received from the development community through meetings held by the City of Rio Rancho. All issues received were reviewed and addressed.

One issue of concern that arose during the process was a continued reliance on a privately owned and maintained hydrologic model (i.e., AHYMO). After much discussion and investigation, it was decided to convert to a publicly held hydrologic model and, after much investigation, HEC/HMS was selected because of its capabilities, government support and overwhelming acceptance across the nation. In the process of implementing the HEC/HMS model, many issues arose and all were resolved. Below is a list of some of the issues discussed. Section 2.E in the DPM provides a more complete explanation of issues covered in

the process and it directs the reader to more in-depth information covering the subject including, but not limited to the following:

1. Selection of the Clark Hydrograph and molding it to match the current AHYMO unit hydrograph.
2. Selection of the "Initial and Constant Loss" method for calculating rainfall losses.
3. Selection of the Muskingum-Cunge routing method.

It has been my personal experience that the AHYMO model provides results that are protective of the public's interest. The designs produced using this model provide 100-year protection when constructed properly. During all major storm events over the past 12 years and, especially during the 2006 FEMA declared flood event, all of SSCAFCA's facilities functioned well, yet were not so conservative that it unduly burdened the public by costing too much. Therefore, I approved matching the HEC/HMS unit hydrograph to AHYMO's.

Another concern that I had about the new model was in its use. Training was provided to insure the engineering community understood the new HEC/HMS model. During the training it became apparent that the engineering community fully understood the model and had been using it for some time.

To supplement the DPM and address the concern over the highly erosive soil within SSCAFCA's jurisdiction, a Soil and Erosion Design Guidance document was developed by Dr. Mussetter, the same person that had developed AMAFCA's guidance some time ago. Two days of training were provided to the engineering community upon the completion of the draft document and comments were requested and addressed at this time. The training was videotaped and has been made available on SSCAFCA's website for reference.

A complete list of reference material has been assembled to support SSCAFCA's DPM. These documents and materials have been made available for viewing at SSCAFCA's office and on our website at www.sscafca.com.

Every attempt was made to QA/QC the DPM and the associated documents. Still, I recognize that no document or process is ever perfect. So, please help SSCAFCA by reporting every issue and concern. By working together we can make this a better world.

APPROVAL/ACTION:

SSCAFCA's Development Procedures Manual has been prepared under my oversight and personally reviewed by me. Therefore, it is hereby approved for use on July 31, 2009.

By:



David Stoliker, P.E.
Executive Director