



Flood Control District of Maricopa County

Flood Control Advisory Board

Meeting Minutes for April 24, 2013

Board Members Present: Melvin Martin, Chairman; Hemant Patel, Vice Chairman; Scott Ward, DeWayne Justice; Ray Dovalina; Ex Officio; Bob Larchick, Ex Officio.

Board Members Absent: Dallas Tanner, Secretary;

Staff Members Present: Ed Raleigh for Tim Phillips; Julie Lemmon, General Counsel; Dennis Duffy; Christopher Fazio; Gary Wesch, Scott Vogel, Patrick Schafer, Frank Brown, Linda Reinbold, Anna Medina; and Ed Raleigh.

Guests Present: Frank Henderson; Ritoch-Powell, Mark McIntosh, URS; Chris Salas; Wood/Patel, Mike Heaton, Chris D'Arcangelis, Stanley Consultants, Raj Shah, Ritoch-Powell; David Buras, Kimley-Horn; Bob Eichinger, Kimley-Horn; ; Jeff Minch, Wood/Patel; Doug Both, Hoskin Ryan; and Alex Cornel, AMEC; Stephanie Munoz, Dibble Engineering; Patrick Wolf, RPA; Chad Drago, Michael Baker Jr.; Sam Malekooti, Premier Engineering; Dave Jensen, Olsson; Charles Andrews, City of Avondale.

1) **CALL TO ORDER**

Vice Chairman Patel called the meeting of the Flood Control Advisory Board (FCAB) to order at 2:00 p.m. on Wednesday, April 24, 2013.

2) **PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was recited.

3) **EMPLOYEE OF THE QUARTER**

Scott Vogel introduced the Employee of the Quarter for the first quarter of 2013, Bob Stevens. Mr. Stevens has been with the District for approximately 17 years. He manages the Environmental Program, supporting the design, construction, operation and maintenance activities. Mr. Stevens is in charge of environmental studies, including those for hazardous materials, archaeological investigations and habitat type investigations. He is also the "go to guy" for 404 permits, having great relationships with the Army Corps of Engineers and staff. Recent accomplishments include a social characterization for the 303 Project.

Chairman Martin arrived.

4) **APPROVE THE MINUTES OF FEBRUARY 27, 2013**

ACTION: It was moved by Mr. Patel and seconded by Mr. Larchick to approve the minutes as submitted. The motion carried unanimously.

5) **CAVE BUTTES DAM MODIFICATION PROJECT; 214 MEMORANDUM OF AGREEMENT**

Presented by Dennis Duffy, Ph.D., P.E., Project Manager

STAFF RECOMMENDS THE FOLLOWING ACTION: Endorse and recommend that the Board of Directors of the Flood Control Advisory District of Maricopa County approve the 214 Memorandum of Agreement for the Cave Buttes Dam Modification Project.

Mr. Duffy identified the project site on the map. Mr. Duffy reviewed staff's recommendation, which included review, issuance and oversight of a 408 permit, with the District funding the Engineers' work. He explained that the Corps of Engineers built four dams in the early '80s to protect Phoenix. Cave Buttes was the second and largest of the four, protecting central Phoenix. The watershed encompasses 191 square miles. The main dam is approximately one-half mile in length. He identified the dikes on the map. The proposed work is to be done at all three locations, with the new outlet located beneath dike number one.

The dam was originally constructed without a downstream seepage collection monitoring system. The proposed modifications would put such a system in place. The outlet is significantly smaller than comparable dams built even within a couple years, consisting of a 45-inch diameter concrete pipe. Abutment seeps were discovered in 1993 and in 2010. If significant additional filling is added, other seeps may occur and may not be clear flowing. As such, a system needs to be in place to control this. The Corps is the federal sponsor. Because of the District's 221 agreement with the Corps, the Corps must approve the modification work.

Mr. Duffy provided an illustration of the flooding that occurred previously at the Capitol, the event having been a factor in the dam's original construction. Additional photographs were provided to illustrate the structure and its location. The site has 46,000 acre-feet of storage at its spillway. In August of 2009, the Board unanimously approved the Resolution allowing the modification of the dam by installing an additional outlet, seepage collection system and a monitoring system. The Resolution also followed recognition that no federal funding was available.

He explained that as the original sponsor, the Corps must issue a permit for the District to complete the modification work. It was not until 2011 that it became evident that the project would require a 408 permit, which is a much more complicated, time intensive project for the Corps. The District cannot proceed with the modifications without the permit in place. The review process begins with the Los Angeles District and then must go to the Pacific Division, the Risk Management Center in Denver and then the Headquarters in Washington, D.C. Because of a lack of funding to expedite the program, the Corps has stated that this will be a lengthy process, with possibly three to four years between submittals.

The District will submit the 30 percent submittal during the summer of 2013. This initial cost will be \$500,000, including a 20 percent allowance for contingencies. Mr. Duffy stated that the Los Angeles District has never processed a permit such as this one. The total cost of the project is estimated to be approximately \$13 million. To control costs, quarterly progress reports will be reviewed, including expenditures. Under the agreement there will be no supervisory charges; only staff will be charged to the District. The District will authorize funding on an annual basis.

Before contingency funding is available, it will be reviewed for justification. Conference calls between the Chief Engineer and the Corps have already been taking place and will continue. Staff will have much more frequent interaction. There are provisions to terminate the agreement at any time.

Board member Ward asked whether the location was in a floodway. Mr. Duffy identified Cave Creek Wash, the river location, and the high flows cutting the channel. Board Member Ward asked for clarification that it was a delineated wash and requested a brief history. Mr. Duffy explained that the District and the Corps recognized serious flooding problems which have continued since 1905. The District worked with the Corps to build the four existing structures.

Board member Ward asked whether the construction was under a 401 or 404 permit. Ed Raleigh replied that the 401 and 404 permits did not exist until the 1980s. The Phoenix and vicinity project was conceived in the 1960s with final planning in the 1970s. The original Cave Creek dam, built in 1919, is inadequate and does not meet safety standards. He provided a more detailed explanation of the project location.

Board member Ward requested confirmation that the Cave Buttes Dam was built by the Corps and that the District was responsible for its maintenance. Mr. Duffy confirmed that the District entered a 221 agreement, whereby the District agreed to operate and maintain the dam. Ed Raleigh added that the District owns the land and the dams, as the local sponsor. Originally, the local sponsor's share of costs was over \$250 million. The Corps' share was slightly more than this amount.

Board member Ward asked whether the site is a public risk today. Mr. Duffy responded that the District, as guardians of public safety against flooding, needs to make the modifications. The EWR has not indicated there are deficiencies however, this dam was in design when the Teton Dam failed. The main lesson was that structures need seepage control systems as well as a way to monitor the seepage.

Board Member Dovalina asked whether recurrent modifications will be required. Mr. Duffy stated that potential failure modes have been studied and staff believes they have identified possible failures. It is felt that if the outlet is constructed, most of the problems will be directly impacted.

ACTION: It was moved by Mr. Dovalina and seconded by Mr. Patel to approve the item as submitted. The motion carried unanimously.

6) VAN BUREN STREET CHANNEL – 99TH AVENUE TO AUA FRIA RIVER DESIGN IGA W/AVONDALE

Presented by Gary Wesch, P.E., Project Manager

STAFF RECOMMENDS THE FOLLOWING ACTION: It is recommended that the Flood Control Advisory Board endorse and recommend that the Board of Directors of the Flood Control

District of Maricopa County approve IGA FCD 2012A017 for the Van Buren Street Channel Project.

Mr. Wesch reviewed that staff presented this project to the Board in February for the Resolution. The project was requested by the City of Avondale in the 2009 Capital Program Prioritization Process and was approved. Resolution 2012R006 was endorsed by the FCD in February and subsequently adopted by the Board. A design concept report has been prepared.

Mr. Wesch identified the project location as being in the City of Avondale between 99th Avenue and the Agua Fria River. The area drains generally from east to west and flattens out near the river on the west side. The channel will serve an area south of Interstate 10, bounded by 99th Avenue on the east, Agua Fria River on the west and Van Buren on the south. It also includes the City Center, which is a high density mixed use future development area with the City of Avondale.

The project will be implemented in two phases. Phase I is the downstream portion, extending from the Agua Fria River to the 113th Avenue alignment. The Phase II portion would extend toward 99th Avenue. The project is designed for a ten-year flow. Phase I, approximately 8,300 feet from Agua Fria River to 113th Avenue, will be a landscaped channel located on the north side of Van Buren which will incorporate a multi-use trail. It will utilize existing retention basins. The project will involve penetration of the east levy of the Agua Fria River with a box culvert and will have box culverts at road crossings. Phase II extends 9,500 feet from 113th Avenue up to 99th Avenue.

The project will provide a drainage outlet to the developing 2.2 square mile area south of Interstate 10 that includes the City Center and provides for drainage along Van Buren. It will provide passive recreational opportunities, including hiking and biking. He provided a photograph and identified the project location. The overall estimated project cost is \$13.8 million, with Phase I being \$10.5 million and Phase II being \$3.3 million. The terms on the IGA state that Avondale will be the lead on the project. The District will fund approximately \$4.3 million of the project, with Avondale funding \$9.5 million. If the project is approved, final design would be completed in 2013 and 2014. Right-of-way and utility relocations would occur during 2013 through 2015. Phase I construction is anticipated during 2015-2016 time frame, with Phase II to be constructed by Avondale in the future.

Board member Larchick inquired about the corridor width and whether the right-of-way is undeveloped. Mr. Wesch replied that the development on the north side of Van Buren is in various states of development. There will be some utility relocation. The facility will be as wide as 190 feet at the downstream end.

Chairman Martin inquired about the current width of the channel. Mr. Wesch responded that Phase I narrows to approximately 130 feet at the upstream. Phase II can be channeled in some areas, while others will have to go to a pipe.

Board member Ward questioned why the watershed area collects so much water. Mr. Wesch explained that the watershed is from I-10 south, or 2.2 square miles. The area north of I-10 is collected by facilities on the north side of I-10.

Board member Ward asked whether Avondale would be charging fees to developers in the area. Charles Andrews, representative from the City of Avondale, stated that the City has not decided

whether to charge developers at this time. However, they are working with the development community, including holding an open house to provide information.

Chairman Martin commented that most developers have to retain their own water. He added that since the area contains significant vacant land that will be developed, there is a concern about the amount of money spent and whether there will be any water left after the developers retain their own water. Mr. Andrews stated that the only area that will be allowed a first flush option would be the City Center East and West.

Board member Ward applauded Avondale for their efforts and complimented the quality of the athletic center. However, he expressed concern over the expense and asked whether one of the motivations was to encourage development. Mr. Andrews replied that the major goal is to provide an urban, high density look. He acknowledged that there is an effort to entice development.

Board member Ward queried whether the goal was to allow more density and volume in the City Center, so that just like downtown Phoenix, they solve the retention issue. Mr. Andrews confirmed that this is a goal. He added that developers must adhere to the master plan. He also detailed the City's desire for a multi-use corridor for bicycles and pedestrians. Mr. Wesch clarified that with regard to the no-retention in the City Center area, the formula for the cost share participation is that the District is funding a 50 percent share of the system, as if retention were required. Avondale is bearing the cost of not having retention in the City Center.

ACTION: It was moved by Mr. Patel and seconded by Mr. Dovalina to approve the item as submitted. The motion carried unanimously.

7) COMMENTS FROM THE CHIEF ENGINEER AND GENERAL MANAGER

Presented by Ed Raleigh per Timothy S. Phillips, P.E., Chief Engineer and General Manager

Ed Raleigh explained that Timothy Phillips was on vacation and would return for the next meeting.

PURPOSE: Information and discussion item only. No formal action is required.

8) SUMMARY OF RECENT ACTIONS

Presented by Ed Raleigh per Timothy S. Phillips, P.E., Chief Engineer and General Manager

PURPOSE: Information and discussion item only. No formal action is required.

9) OTHER BUSINESS AND COMMENTS

Presented by: Ed Raleigh per Timothy S. Phillips, P.E., Chief Engineer and General Manager

PURPOSE: Information and discussion item only. No formal action is required.

Julie Lemmon commented that Bob Stevens has done exceptional work in the area of the environment.

There was no other business and no comments from the public.

The meeting adjourned at 2:42 p.m.