



City of Phoenix

Office of City Engineer

To: Jason Blakley
Planning & Development Deputy Director

Date: November 21, 2019

From: Eric Froberg, P.E.
City Engineer

Subject: REVISIONS TO STORM WATER POLICIES AND STANDARDS

The purpose of this memorandum is to establish minor revisions to 3rd edition of the City of Phoenix Storm Water Policies and Standards (published December 2013). The following changes provide clarity as to when access ramps are required for publicly and privately maintained basins and channels and provide specific requirements for construction of the access ramps.

6.1.10.1 Access for Basins and Channels

For all publicly maintained engineered channels and storm water storage facilities/basins with geometric depths greater than three feet, ramps into the channel or basin shall be required. For engineered channels or storm water storage facilities/basins with geometric depths of three feet or less with a portion of side slope set at 6:1 or flatter along at least one side to allow emergency or ordinary maintenance vehicle access, ramps into the channel or basin are not required.

For privately maintained engineered channels and storm water storage facilities/basins with geometric depths greater than 5 feet, ramps into the channel or basin shall be required unless other reasonable access is provided. Geometric depths shall be measured at the low point along the bank adjacent to roadways, parking areas or other practical vehicular access points.

6.1.10.4 Access Ramps

For all publicly maintained engineered channels and storm water storage facilities/basins, access ramps shall be a minimum of 16 feet wide with a longitudinal slope no steeper than 10%. Access ways approaching channels or basins shall be a minimum of 12 feet wide within a clear 16-foot wide tract (included as part of a City owned property, public right-of-way, public right-of-way easement, public drainage easement or private drainage tract) such that emergency and ordinary maintenance vehicles can freely maneuver. At a minimum, hard surface paving (such as concrete, soil cement, etc.) shall be required for the portions of access ramps that will be inundated during the 100-year event and shall be properly "toed-down" to protect the ramp from erosion during storm events. Ramps shall have lockable bollards or gates near the top of the ramps and shall be accessible from the

road by use of mountable curbs (MAG Details 220-2, Type E) and 9-inch thick MAG Class "A" concrete or soil cement slab with erosion protection.

For all privately maintained engineered channels and storm water storage facilities/basins, access ramps shall be a minimum of 8 feet wide, have a longitudinal slope of 6:1 or flatter, and have stabilization treatment selected by the developer to best fit the environment of the community. Stabilization treatments may include stabilized decomposed granite, lime treated soil, compacted ABC, soil cement, concrete or other approved equivalents.

6.5.12 Box Culvert Maintenance Ramps

For all publicly owned and/or maintained box culverts, ramped vehicular access for maintenance is required at the upstream and downstream ends of all box culverts (See Section 6.1.10). Ramps shall have lockable bollards or gates near the top of the ramps and shall be accessible from the road by use of mountable curbs (MAG Detail 220-2, Type E) and 9-inch thick MAG Class "A" concrete or soil cement slab with erosion protection.

For privately owned and/or maintained box culverts, vehicular access for maintenance is required at the upstream and downstream ends of all box culverts that are without other means of reasonable access. Such reasonable access may include a minimum 8-foot wide stabilized drivable surface between the roadway and the culvert invert having a longitudinal slope of 6:1 or flatter. Stabilization treatments may include lime treated soil, stabilized decomposed granite, compacted ABC, soil cement, concrete or other approved equivalents.

6.8.7.7 Basin Geometry

Storm water storage basin sides, edges, or top of slopes shall be of irregular geometry. Basins shall incorporate native materials (including native stone and boulders) and be revegetated in such a manner consistent with the engineering intent of the facility and conducive to maintenance activities. Storm water storage facilities in excess of 0.5 acre-ft. design storage (excluding freeboard) and over 5 feet in geometric depth shall incorporate benches no narrower than ten feet (level bench width) for at least 40 percent of the circumference of the basin. The bench shall be at least two feet higher than the basin bottom.