

REVIEW COMMENT RESOLUTION



PARADISE VALLEY WATERSHED STUDIES

Designer: Dibble Engineering
Reviewed By: Town of Paradise Valley Staff

Disposition Codes:

- A. Will Comply
- B. Consultant to Evaluate
- C. Client to Evaluate
- D. No Further Action



Responses: April 7, 2017

Scope of Review: Storm Drainage Design Manual (Dated 2/1/17)

MASTER ITEM #	ITEM #	REVIEWED BY	SHEET/PAGE	SECTION/PARA.	REVIEW COMMENT	DISPOSITION		RESPONSE
						INITIAL	FINAL	
1	1	Mayor Collins	8	3.3.B.2	Appears the manual prohibits underground retention for single family residential, is this true?	B	A	Revised to state..."Single family residences with an underground storage easement instead of a drainage easement."
2	2	Vice Mayor Bien-Willner	41	8-1.A	Is there another mechanism for documenting retention basins in lieu of an easement?	B/C	D	An easement is the least "invasive" method for ensuring that drainage infrastructure on private property continues to function to protect downstream property owners. A deed restriction is essentially the same. Other methods such as quitclaim deeds involve taking ownership of property
3	3	Councilmbr. Pace	11	3-5.F.1	The manual only discusses what's prohibited in regards to backwashing pools, can we list possible alternatives?	B/C	A	The Town's two sanitary sewer providers (City's of Scottsdale and Phoenix) currently allow the disposal of pool or spa water into their collection systems, as such we are recommending changing town policy to align with the sewer provider practice. If discharging into a sanitary sewer, pool or spa water shall enter the sanitary sewer on private property by appropriate means, such as through a sanitary clean out. Some other examples of appropriate locations to backwash a pool or spa water may include an onsite retention basin with adequate volume, and a private water hauling service.
4	4	Councilmbr. Moore	1	1-1.A	Change the word entitled to titled in final draft	A	A	Will revise with final printing
5	5	Councilmbr. Moore	5	3-2.A.2	Remove the text "unless the drainage can be conveyed directly to an existing major channel or natural drainageway, and the developer can demonstrate no adverse off-site impacts to the satisfaction of the Town Engineer."	B/C	D	It is common practice within the valley to include such text, as in certain but rare occasions this approach may be the most appropriate way to deal with onsite drainage. It is the responsibility of the developers engineer to ensure there will be no negative off-site impacts
6	1	J. Knapp	6	3-2.B.2.a	Is the town obligated by a federal or state requirement to require first flush retention or is it a policy decision each municipality can make on its own?	A	A	Revised to state..."Where detention is allowed, first flush volume shall be retained on all lots or within a common area, and a reasonable attempt shall be made to route all runoff from disturbed areas to the first flush basin(s) subject to grading plan approval."
7	2	J. Knapp	45	10-2.E	Remove the term visually significant corridors and the reference to guidelines being developed. . Maybe talk about how they are important landscapes to preserve naturally.	A	A	Revised to state..."Town rights-of-way and easements along natural wash corridors are important to maintain and preserve the natural environment and landscape features. Natural Wash Corridors shall include, whenever feasible, a landscape buffer area of at least 5 feet each side, perpendicular from the top of the bank."
8	3	J. Knapp	46	10-2.G	There are concerns regarding requiring a 10' wide clear zone along the wash. Revise to suggest during design incorporating a 10' wide access area to the wash for maintenance from the nearest driveway.	A	A	Revised to state..."For Natural Washes, new development should provide, if possible, a minimum 10-foot wide accessible clear zone area for emergency and ordinary maintenance vehicle access. For access to minor drainageways and basins including roadside swales, ditches and sediment basins, allow for reasonable access for regular maintenance and emergency use. Access may be combined with trails."
9	1	F. Fleet	5	3-2.A.1	Town code reference invalid	C	A	Stormwater storage facilities are designed primarily as retention facilities. Other stormwater management facilities, such as detention basins, dry wells, pumps and injection wells, will only be allowed as approved by the Town Engineer.

REVIEW COMMENT RESOLUTION



PARADISE VALLEY WATERSHED STUDIES

Designer: Dibble Engineering
Reviewed By: Town of Paradise Valley Staff

Disposition Codes:

- A. Will Comply
- B. Consultant to Evaluate
- C. Client to Evaluate
- D. No Further Action



Responses: April 7, 2017

Scope of Review: Storm Drainage Design Manual (Dated 2/1/17)

MASTER ITEM #	ITEM #	REVIEWED BY	SHEET/PAGE	SECTION/PARA.	REVIEW COMMENT	DISPOSITION		RESPONSE
						INITIAL	FINAL	
10	2	F. Fleet	5	3-2.A.3	May want to wordsmith lot to lot drainage to be clear we aren't talking about existing offsite flows	A	A	Revise to state..."Lot to Lot drainage within a new development is prohibited unless permanent drainage facilities are constructed in dedicated drainage easements or tracts that are maintained by the Town or a homeowners association (HOA)."
11	4	F. Fleet	6	3-2.B.2.c	What's referenced by "safety factor of 2"?	B/C	A	Revise to state..."If retention of the first flush volume is provided, the stormwater storage facility must be fully evacuated within 36 hours. The maximum allowable infiltration rate shall be 50% of the in-situ tested rate of the as-constructed basin. Testing shall be conducted using double-ring infiltrometer methodology in accordance with FCDMC standards.
12	5	F. Fleet	8	3-3.C.5.b	Vector control?	B/C	D	No need to define "vector control"
13	6	F. Fleet	8	3-3.D.2	Why are we prohibiting corrugated pipe for underground storage?	B/C	A	Corrugated pipes commonly trap debris within the pipe voids, lowering the pipe capacity. They also allow water to stand in the voids which is a potential breeding ground for misquitos.
14	1	P. Peshkin			Involve Planning Dept. at the beginning when elevation is involved.	C	C	Planning Department is involved with every permit at the beginning now as a policy
15	2	P. Peshkin			Observe adjacent existing properties and provide/require drainage protection to protect those properties. Do not rely on calculations to determine "meeting engineering requirements". For example if Retention Basins are included in the plans and they will capture runoff meeting the engineering requirements, look at the location of the retention basins and identify that they will capture runoff that could injure and cause harm to adjacent existing properties. This should be the Town's responsibility especially when alerted ahead of time by the neighbors living in those adjacent properties, i.e. prior to construction starting.	B/C	C	The town is reliant on the professional judgement of the professional who signs and seals the grading and drainage plan. It is their responsibility to address these concerns.
16	7	P. Peshkin			Evaluate Velocity issues affected by: elevation, impervious area, enlarged structure footprint, slanted roofs, front landscaping runoff direction, etc. which affects the existing neighboring properties. This violates the increased FLOW not allowed code	B/C	C	The town is reliant on the professional judgement of the professional who signs and seals the grading and drainage plan. It is their responsibility to address these concerns.
17	8	P. Peshkin			Review locations of retention basins on the property. Should be constructed where storm runoff will cause harm to existing properties.	B/C	C	This is a case by case review of the proposed plan by town staff.
18	9	P. Peshkin			Require provisions to capture storm runoff in submitted plans: culverts, catch basins, spillways, equalizer pipes...	B/C	C	This is a case by case review of the proposed plan by town staff.
19	10	P. Peshkin			Poll neighboring properties when not in a Floodplain, and in Zone X (less than 1% chance of flooding) to ask their experience with flooding and stormwater drainage BEFORE requiring (per TPV) to elevate a home. When a home is not in a Floodplain, not in a Special Hazard Zone, they will get NO professional support from FEMA. The damaged property will also NOT have a valid FLOOD claim with Flood Insurance NFIP due to the FEMA definition of a flood. Perhaps a modified elevation could be considered if there has been no history of flooding.	B/C	C	While this may be a good practice, it is difficult to require a professional engineer to design projects based on anecdotal information.

REVIEW COMMENT RESOLUTION



PARADISE VALLEY WATERSHED STUDIES

Designer: Dibble Engineering
Reviewed By: Town of Paradise Valley Staff

Disposition Codes:

- A. Will Comply
- B. Consultant to Evaluate
- C. Client to Evaluate
- D. No Further Action



Responses: April 7, 2017

Scope of Review: Storm Drainage Design Manual (Dated 2/1/17)

MASTER ITEM #	ITEM #	REVIEWED BY	SHEET/PAGE	SECTION/PARA.	REVIEW COMMENT	DISPOSITION		RESPONSE
						INITIAL	FINAL	
20	11	P. Peshkin			When elevating a structure look at the design of the house and require a design that is compatible with the existing neighborhood and does not interfere with drainage. For example a split level design where the garage area/front area is lower (not interfering with runoff pattern) and the home in the front elevates to the main floor which is elevated in the back. This maintains the existing storm runoff design that historically works.	C	C	The town does not have flatland architectural standards to enforce this type of requirement.
21	12	P. Peshkin			Require monsoon protection at the beginning of construction and extra protection when a storm is predicted in Monsoon Season.	C	C	Town and state required Storm Water Pollution Prevention Plans address runoff of construction debris during construction.
22	13	P. Peshkin			Research origination of calculation comparisons submitted by the engineer when historical calculations DO NOT EXIST. Calculations were never required in 1973. Verify current calculations and not rely on data from 1987 since the land has constantly changed due to erosion, construction, walls, etc. and these calculations are NOT always accurate.	C	C	Town requires existing conditions to be documented when a new project is proposed. The existing conditions are those on the site as of just prior to initiating the project, not historical conditions.
23	14	P. Peshkin			Give more authority to the onsite inspectors to question construction that although it was approved per the plan, it is not compliant with the existing site, the engineer, architect, contractor, owner, etc. must be advised that the submitted plan has deficiencies and must be corrected. Currently the onsite inspector just verifies that what is on the plan is what is being built. A second layer of protection to the residents should be enforced. Also contact with the adjacent property owners/residents should be available and considered valuable information throughout the construction.	C	C	The town inspectors are responsible to ensure the plans are built to the approved plans.
24	15	P. Peshkin			Keep ALL required G/D documents, AS BUILT plans and any other studies on file at a minimum, a digital file.	C	C	This is the policy of the town as of the early 2000's.
25	16	P. Peshkin			Do not encourage lawsuits/civil disputes between neighbors but rather have the town enforce the codes during the permitting process, onsite inspections, proactive/preventive alerts from neighbors, etc.	C	C	The town does not encourage lawsuits between neighbors.
26	17	P. Peshkin			Have the Town's Planning and Zoning Dept. be involved at the beginning of all construction when elevation is involved. An onsite visit with the neighboring residents should be required in situations where a larger footprint, elevation, change of natural water path, landscaping that does not respect the natural wash will complicate the development. A drainage review should be conducted.	C	C	The planning department is involved with all construction projects at the beginning.
27	18	P. Peshkin			Devise ways to protect existing residents in older properties when they do not own any property to correct a storm drainage challenge.	B/C	C	Town code requires individual residents to address storm water issues on their individual properties.
28	1	N. Prodanov	1	1-3	AS THESE CODES ARE SUBJECT TO UPDATES, THE LINKS MAY NOT WORK 3 YEARS FROM NOW. CONSIDER REMOVING.	B/C	D	Noted. Document can be updated as links change.
29	2	N. Prodanov	5	3-2.A.2	PLEASE CONFIRM INCREASE FROM THE CURRENTLY REQUIRED PRE- V. POST- DEVELOPMENT.	B	D	The proposed calculation more accurately reflects the actual impervious area of a development as opposed to the currently used Pre vs. Post. In some cases, more retention will be required, in others, it may not.
30	3	N. Prodanov	5	3-2.B.1.a	RUNOFF COEFFICIENT IS LEFT FOR OPEN INTERPRETATION. PLEASE CONSIDER ADDING A REFERENCE.	A	A	Revised to state..."C = Weighted average runoff coefficient over entire site, per the FCDMC Hydrology Manual tables 3.2 and 3.3."
31	4	N. Prodanov	6	3-2.B.2.b	TYPICALLY C=1.0 FOR FIRST FLUSH CONDITIONS.	B	D	Preference is to use the weighted C value.

REVIEW COMMENT RESOLUTION



PARADISE VALLEY WATERSHED STUDIES

Designer: Dibble Engineering
Reviewed By: Town of Paradise Valley Staff

Disposition Codes:

- A. Will Comply
- B. Consultant to Evaluate
- C. Client to Evaluate
- D. No Further Action



Responses: April 7, 2017

Scope of Review: Storm Drainage Design Manual (Dated 2/1/17)

MASTER ITEM #	ITEM #	REVIEWED BY	SHEET/PAGE	SECTION/PARA.	REVIEW COMMENT	DISPOSITION		RESPONSE
						INITIAL	FINAL	
32	5	N. Prodanov	6	3-2.B.3	ADD A TABLE TO THE PLAN VOLUME PROVIDED.	B/C	C	The calculation table, showing basins and area for certifying as built conditions is a good idea. "This is an in Town policy and will be added to Appendix 6A."
33	6	N. Prodanov	6	3-2.C.1	CONSIDER ADDING REQUIREMENT TO PROVIDE RETENTION FOR EACH CORRESPONDING TRIBUTARY AREA WITHIN THE DEVELOPMENT. IT DOES NOT MAKE SENSE TO HAVE RETENTION BASIN IF LIMITED RUNOFF COULD GET TO IT.	B/C	A	Added to 3-2.c.1
34	7	N. Prodanov	7	3-2.C.6	POOL BARRIER IS REQUIRED FOR OVER 18" DEEP BASIN. DRY WELL OR PERC TESTS WILL BE REQUIRED.	B	D	The building code only requires fences for inground, above ground, and on-ground swimming pools, hot tubs, and spas that contain 18" of water or more. It does not require a pool barrier for retention.
35	8	N. Prodanov	35	7-1.A	REQUIRE DRAINAGE REPORTS TO BE SUBMITTED ON EACH SITE WITH OFFSITE FLOWS IMPACTING THE DEVELOPMENT. HISTORIC, CURRENT AND PROPOSED CONDITIONS TO BE DISCUSSED AND ANALYZED.	B/C	D	This section states which activities may trigger the need for a drainage report. The existence of offsite flows onto a parcel would not be a triggering event. Making improvements to the parcel would.
36	9	N. Prodanov	40	7-6	CONSIDER ADDING NARRATIVE FOR LOTS THAT ARE HAVE GRADES BELOW THE STREET LEVEL.THE OUTFALL SHALL BE 14" BELOW THE FFE OF THE HOUSE.DRIVEWAY ENTRANCE TO HAVE 6" RIDGE ABOVE THE ADJACENT STREET PAVEMENT.TOP OF WINDOW WELL SERVING BASEMENT TO BE 12" ABOVE FINISH GRADE.	B/C	D	The Town may want to add a statement requiring protection of structures with FFE's lower than adjacent roads. However, we do not recommend requiring specific standards such as the ones proposed. They could result in unanticipated challenges. This should be left to the design engineer to propose and the Town to review/approve.
37	10	N. Prodanov	41	8-1.B	THE TOWN REQUIRES FROM TOP OF BANK TO TOP OF BANK +5' FOR EROSION.	B/C	A	Noted. See comment 3 response. However, this comment is not necessarily for erosion purposes.
38	1	Dibble Team	6	3-2.B.2.a	Change First Flush requirements for all lots to say "or within common retention areas."	A	A	Revised
39	2	Dibble Team	7	3-2.C.4	Change "Retention" to be "Retention/Detention"	A	A	Revised
40	3	Dibble Team	7	3-2.C.10	Change "As provided in 10..." to be "As provided in 11..."	A	A	Revised
41	4	Dibble Team	7	3-2.C.11.a and b	Combine into one subheading	A	A	Revised
42	5	Dibble Team	24	A.2	Change "Retention" to be "Retention/Detention"	A	A	Revised
43	6	Dibble Team	46	10-2.G	1st sentence, change "are" to "area"	A	A	Revised
44	7	Dibble Team	46	10-3.A.9	Change "detention" to "retention and detention"	A	A	Revised
45	8	Dibble Team	46	10-3.A.10	Change "detention" to "retention and detention"	A	A	Revised
46	9	Dibble Team	53	Header	Change "Detention" to "Retention and detention"	A	A	Revised
47	10	Dibble Team	53	1st Para.	Change "detention" to "retention and detention"	A	A	Revised