Chandler • Arizona
Where Values Make The Difference

Civil Engineering
On-Lot Retention Policy

Items required for submittal with building permit applications where single-family residential lots are subject to on-lot retention include:

1. Two sets of Grading and Drainage Plans for each lot; both sets with original seal and signature from a registered civil engineer. Make sure to show elevations on property corners (outfall included), bottom retention basin elevation, HWE, finish floor and pad elevations.

2. Calculations for weighted "C" coefficients:
   - 0.95 for roof areas, concrete and pavement
   - 0.95 for adjacent half street
   - 0.95 for future pool (min 750 sf) not to be used as retention
   - 0.50 for landscaping, unless a landscaping plan is submitted with application, then use 0.20 for grass and 0.50 for desert landscape
   - (Use calculated weighted C value or 0.65, which ever is greater.)

3. Calculations demonstrating required retention volume for subject property and the adjacent half street. $V_{required}$ =CIA*1.1: where V=volume, C=coefficient calculated above, I(intensity)=2.6in/hr, A(sf)=total area (lot + half street) and 1.1 is an additional 10% required for sedimentation. All basins must be connected (6" minimum equalization pipe) or provide separate calculations for each basin.

4. Calculations demonstrating provided retention volume:
   - $V_{proposed}$ =[(area of the top) + (area of the bottom)]/2 * depth of ponding
   - 1' depth preferred, 1.5' depth max
   - No underground storage of any kind permitted.

5. A original as-built plan and calculations, certified by a registered civil engineer, will be required prior to utility clearance.

6. Any changes to the single-family lot (including a pool) will require a revised submittal and all the above listed requirements will apply.

7. Completed Water Retention Addendum acknowledging on-lot retention requirements (see attached).

Mailing Address:
P.O. Box 4008, MS 406
Chandler, Arizona 85244-4008

Transportation and Development Department
Development Services Division
Civil Engineering Plan Review Section
215 E. Buffalo St., Chandler Arizona 85225

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www.chandleraz.gov
Form No: UDM-074/Civil
Rev: 6-13-11

_____
Your Company's Name

Water Retention Addendum

Buyer: _____ Date: _____

Subdivision: _____ Contract Date: _____

Lot Number: _____ Plan/Permit No: _____

Buyer acknowledges that they have been informed that lots within the community of _____ have been designed to retain surface water run-off in the depressed areas. The grading of each lot has been specifically engineered to accommodate certain areas for pool decking, as well as specific amounts of on-site water storage capacity.

Buyer acknowledges that their individual pool and landscaping design **will** require additional engineering or grading costs that will be their responsibility. Buyer further agrees that they will use the lot in a manner that does not interfere with or impede in any way each lots ability to meet the on-site retention requirement as established by the City of Chandler.

Buyers' Signature: _____ Date: _____

Buyers' Signature: _____ Date: _____

Sales Signature: _____ Date: _____