Drainage Regulations for Maricopa County

Maricopa County Planning and Development Department
501 North 44th Street, Suite 200
Phoenix, AZ 85008

September 2004

Maricopa County

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Table of Contents

CHAPTER 1 – AUTHORITY, PURPOSE, SCOPE & TITLE		
Section		**Page**
101	Statutory Authority	1
102	Statement of Purpose	1
103	Scope	1
104	Title	1
CHAPTER 2 – RULES OF CONSTRUCTION & INTERPRETATION		
Section		**Page**
201	Rules of Construction	1
202	Rules of Interpretation	1
CHAPTER 3 – DEFINITIONS		
Section		**Page**
301	Definitions	1
CHAPTER 4 – ADMINISTRATION		
Section		**Page**
401	Drainage Administrator	1
402	Mandatory Duties	1
403	Discretionary Powers	1
404	Restriction on Regulation	2
CHAPTER 5 – DRAINAGE REVIEW BOARD, APPEALS & VARIANCES		
Section		**Page**
501	Drainage Review Board	1
502	Appeals	1
503	Drainage Variance	2
CHAPTER 6 – GENERAL PROVISIONS		
Section		**Page**
601	Drainage Clearance	1
602	Drainage Report/Plan (Development)	1
603	Design Parameters	2
604	Drainage Report/Plan (Site)	5
CHAPTER 7 – DRAINAGE REPORT/PLAN (MASTER)		
Section		**Page**
701	Drainage Report/Plan (Master)	1
CHAPTER 8 – DEVELOPMENT DRAINAGE REPORT/PLAN (RESIDENTIAL)		
Section		**Page**
801	Development Drainage Report/Plan	1
CHAPTER 9 – DEVELOPMENT DRAINAGE REPORT/PLAN (COMMERCIAL & INDUSTRIAL)		
Section		**Page**
901	Development Drainage Report/Plan	1
CHAPTER 10 – DEVELOPMENT DRAINAGE REPORT/PLAN (HILLSIDE DISTRICT)		
Section		**Page**
1001	Development Drainage Report/Plan	1
CHAPTER 11 – AREA DRAINAGE MASTER STUDY		
Section		**Page**
1101	Adoption	1
1102	Public Notification	1
1103	Minimum Standards	1

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Table of Contents

CHAPTER 12 – COMPLIANCE, ENFORCEMENT & PENALTIES CONTINUED		
Section		**Page**
1201	Deed Restrictions	1
1202	Performance Assurances	1
1203	Regulation Violation	1
1204	Civil Remedies	2
1205	Declaration of Public Nuisance	2
1206	Violation Removal	2
1207	Criminal Penalties	3
CHAPTER 13 – DEDICATIONS		
Section		**Page**
1301	Dedications	1
CHAPTER 14 – WARNING & DISCLOSURE OF LIABILITY		
Section		**Page**
1401	Warning & Disclosure of Liability	1
CHAPTER 15 – SEVERABILITY & EFFECTIVE DATE		
Section		**Page**
1501	Severability	1
1502	Effective Date	1
CHAPTER 16 – FEE SCHEDULE		
Section		
1601	Plan Review	1
1602	Planning and Development	1
1603	Subdivisions	1
1604	Precise Plan of Development	1
1605	Site/Drainage Plans	1
1606	Other Site Plans	1
1607	Approved Subdivision Lots	2
1608	Other Fees	2

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 1 – Authority, Purpose, Scope & Title

SECTION 101. STATUTORY AUTHORITY

This Regulation is adopted pursuant to ARS 11-151, Sections 30 and 36 and ARS 11-251.05 which authorizes the Board of Supervisors to adopt and enforce all ordinances necessary to the full discharge of the duties of the Board of Supervisors as the legislative authority of the county government; and to enforce standards for excavation, landfill and grading to prevent unnecessary loss from erosion, flooding and landslides.

SECTION 102. STATEMENT OF PURPOSE

The purpose of this Regulation is to promote and protect the health, peace, safety, comfort, convenience and general welfare of the citizens of Maricopa County by regulating drainage of all land within the unincorporated area of Maricopa County, Arizona.

SECTION 103. SCOPE

This Regulation shall apply to all development of land and conditions which may affect drainage systems and patterns.

SECTION 104. TITLE

This Regulation may be cited as the Drainage Regulation for Maricopa County and shall be referred to herein as the Regulation.

Chapter 2 – Rules of Construction & Interpretation

SECTION 201. RULES OF CONSTRUCTION

When not inconsistent with the context, words used in the present tense include the future; words in the singular include the plural; words in the plural include the singular. Words or phrases not specifically defined in this Regulation shall be given the meaning they have in common usage. The word "shall" is mandatory and the word "may" is permissive.

SECTION 202. RULES OF INTERPRETATION

1. This Regulation is remedial in nature and therefore shall be liberally construed to effectuate its purpose. The requirements set out herein shall be construed as minimum requirements.

2. Nothing contained in this Regulation shall be construed to limit or repeal other powers granted to Maricopa County. This Regulation shall not be construed to legalize existing conditions or uses which are in violation of other statutes, ordinances or regulations. Should provisions of this Regulation conflict or overlap with other regulations, ordinances and statutes, the regulation, ordinance or statute which imposes the more stringent requirement or restriction shall prevail.

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 3 – Definitions

SECTION 301. DEFINITIONS

In this Regulation, unless the context requires otherwise, the following definitions of words shall be used:

1. **Accessory building** - a building or manufactured/mobile home which is subordinate to, and the use of which is incidental to, that of the principal building or use on the same lot.

2. **Appeal** - a request for review of the Drainage Administrator's interpretation or application of the provisions of this Regulation.

3. **Area Drainage Master Study** - a study to develop stormwater hydrology for a watershed, to define drainage systems, identify potential flood hazard areas, drainage problems and recommend solutions and standards for sound floodplain and stormwater management. The ADMS identifies alternative solutions to a given flooding or drainage problem. An Area Drainage Master Plan (ADMP) identifies the preferred alternative. An ADMP, unique to the subject watershed provides minimum criteria and standards (for flood control and drainage) for land use and development.

4. **Building Site** - the area extending laterally a minimum distance of 10 feet beyond the foundation or support of a building.

5. **Design Flow** - the peak flow and peak volume of rainfall resulting from the design storm generated within a defined area.

6. **Design Storm** - the 100-year rainfall event that produces the design flow.

7. **Design Storm/Retention** - the 100-year, 2-hour rainfall event.

8. **Development** - any man-made change to property, including but not limited to, buildings or other structures, mining, dredging, filling, grading, landscaping, paving, excavation or drilling operations.

9. **Drainage** – runoff which flows over land as a result of precipitation. This shall include sheetflow and flows, which may concentrate in local drainage systems with or without defined channels.

10. **Drainage Administrator** - The Director of the Maricopa County Planning and Development Department or his duly authorized representative.

11. **Drainage Clearance** - the approval by the Drainage Administrator of a grading and drainage plan to develop a site. This plan may be a site plan, or engineered grading and drainage plan.

12. **Drainage Clearance (Final)** - A document issued by the Drainage Administrator when a final inspection has been completed which indicates that the site was developed in accordance with the approved plan.

13. **Drainage Design Manual** - Drainage Design Manual for Maricopa County: Volume I - Hydrology, Volume II - Hydraulics, and Volume III - Best Management Practices and Erosion Control.

14. **Drainage Easement** - A legal right or privilege to use an area defined and established to receive or convey runoff.

15. **Drainage Report/Plan (Conceptual)** - An overview drainage plan providing a minimum of drainage information with order of magnitude value for peak flows and retention requirements. Requirements shall be determined by the topography and proposed use of the site.

16. **Drainage Report/Plan (Area)** - A drainage plan based on a defined watershed which may include more than one political jurisdiction.

17. **Drainage Report/Plan (Master)** - A preliminary drainage plan encompassing all future phases or units within a development. A report/plan generally of greater detail and encompassing a smaller geographic area than a Drainage Report/Plan (Area).

18. **Drainage Report/Plan (Development)** - A drainage plan which may cover all or a portion of a development. A report/plan generally of greater detail and encompassing a smaller area than a Drainage Report/Plan (Master).

19. **Drainage Report/Plan (Site)** - A drainage plan for a single lot or the smallest increment of development. A report/plan generally of greater detail than a Drainage Report/Plan (Development).

20. **Drainage System** - A system of lakes, rivers, creeks, streams, washes, arroyos, channels, closed conduits, or other topographic features on, through, or over which stormwaters flow at least periodically.

21. **Drainage Variance** - A grant of relief from the requirements of this Regulation which permits construction or other uses of property in a manner that would otherwise be prohibited or restricted by this Regulation.

22. **Erosion** - The wearing away of the ground surface as a result of the movement of wind, water, ice and other geologic agents.

23. **Hillside District** - That area within the County defined as hillside in the Maricopa County Zoning Ordinance.

24. **Non-liveable Building** - A building on a residential lot used solely for the parking of vehicles, workshop, the storage of equipment or material, the keeping of livestock and other similar uses but not designed, constructed or utilized for human habitation.

25. **Off-site Runoff** - Runoff produced from precipitation which falls outside the limits of a development and which drains through a development or the site of proposed development.

26. **On-site Runoff** - Runoff produced from precipitation which falls within the limits of a development including easements and dedicated rights-of-way.

27. **Person** - An individual, developer or his agent, firm, partnership, association, corporation, municipality, or agent of the aforementioned groups, or its agencies or political subdivisions.

28. **Rainfall Event** - The amount of rain falling in a specified period of time.

29. **Retention System** - A system which retains runoff in a controlled manner through the use of storage facilities. Stored runoff is either evacuated by percolation or released to the downstream drainage system after the storm event.

30. **Road or Roadway** - That area, whether public or private, between right-of-way lines, dedicated, reserved or provided for roadway purposes and other uses not inconsistent therewith.

31. **Special Flood Hazard Area** - The area included within the delineated floodplains of Maricopa County as adopted by the Federal Emergency Management Agency.

[DELETED DEFINITION OF WATERCOURSE]

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 4 – Administration

This chapter sets forth the duties and powers of the Drainage Administrator and the limitations on regulation.

SECTION 401. DRAINAGE ADMINISTRATOR

The Board of Supervisors of Maricopa County shall appoint the Director of the Maricopa County Planning and Development Department or his duly authorized representative as the Drainage Administrator who shall enforce the provisions of this Regulation.

SECTION 402. MANDATORY DUTIES

The Drainage Administrator shall:

1. Review drainage reports and plans for all developments of land covered by this Regulation and approve such plans when the requirements of this Regulation are met.

2. Investigate violations and complaints of non-compliance with this Regulation.

3. Keep copies of all documents or other submissions made pursuant to the requirements of this Regulation.

4. Issue notices or orders necessary to enforce the provisions of this Regulation.

5. Upon determination that development of land subject to this Regulation has proceeded without drainage clearance, take action necessary to obtain compliance with this Regulation.

SECTION 403. DISCRETIONARY POWERS

The Drainage Administrator may:

1. Inspect properties for which approval of drainage and grading reports and plans has been requested.

2. Inspect properties in response to complaints and, if violations are found, require compliance with the provisions of this Regulation.

3. Upon determination that all reasonable means to gain voluntary compliance have been exhausted, a notice of non-compliance or disclaimer may be recorded with the Maricopa County Recorder in a manner so that it appears in the chain of Title of the affected parcel of land.

[DELETED PARAGRAPH ON INVALIDATING DRAINAGE CLEARANCES]

4. Issue notices of violation.

5. Require additional information necessary to make a determination concerning violations and compliance with the provisions of this Regulation.

6. Adopt drainage design standards, guidelines, administrative rules, procedures and policies to implement and effectuate the purposes of this Regulation.

7. Establish, collect and regulate fees for review and inspection of drainage. Fees will be waived for all Federal, State, County and Municipal governments that are developing in the unincorporated areas of Maricopa County.

8. Require appropriate financial assurances for one or more of the following drainage infrastructure projects:

   a. Drainage control features which provide protection for the development, such as dams, levees, dikes and interceptor channels or canals;

   b. Common area retention systems or drainage way easements affecting two or more tracts or phases of development;

   c. Whenever the Drainage Administrator determines that construction of a development has been interrupted and a partially completed drainage system presents a flood hazard to adjacent property;

   d. When a project has more than one phase and the schedule of construction of all phases is longer than one year.

SECTION 404. RESTRICTION ON REGULATION

1. This Regulation shall not:

   a. Prevent, restrict or otherwise regulate the use or occupation of land or improvements for railroad, mining, metallurgical, grazing or general agricultural purposes, if the tract concerned is five or more contiguous commercial acres. This restriction on regulation shall be construed to conform with the requirements of ARS 11-830 as written or as subsequently amended.

   b. Require a property owner to submit plans for or install or change a drainage system on property which was already developed at the time this Regulation became effective.

c. Require submission of a drainage report and plan in connection with the repair or alteration of property as it was developed at the time this Regulation became effective so long as the effect of such repair or alteration upon drainage would not be substantial or constitute an increased hazard to that or other properties.

2. A nonconforming business use may expand if such expansion does not exceed one hundred percent of the area of the original business, unless the effect thereof upon drainage would constitute a hazard.

3. This Regulation shall not pertain to or otherwise regulate cities, towns or other incorporated municipalities, the State or its agencies or political subdivisions. This paragraph does not exempt school districts, private utilities, private emergency or fire services from compliance with the provisions of this Regulation.

4. Compliance with or exemption from this Regulation does not relieve any person from liability if that person's actions cause flood damage to any other person or property.

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 5 – Drainage Review Board, Appeals & Variances

SECTION 501. DRAINAGE REVIEW BOARD

Pursuant to the authority granted in ARS 11-251, the Board of Supervisors shall appoint the Maricopa County Board of Adjustment as a Drainage Review Board which shall hear requests for variances to this regulation and appeals from interpretations made by the Drainage Administrator in accordance with the rules of this section.

1. The Drainage Review Board shall select a chair and a vice chair from among its own members who shall have the power to administer oaths and take evidence.

2. The Drainage Review Board shall by resolution fix the time and place of its meetings. The meetings shall be open to the public; minutes of its proceedings and records of its examinations and other official actions shall be kept and filed in the office of the Maricopa County Planning and Development Department as a public record.

3. The Drainage Review Board shall adopt rules of procedure consistent with the provisions of this Regulation for the conduct of Drainage Review Board business including establishment of a fee schedule to cover in part administrative costs incurred in the processing of appeals, drainage clearances, drainage variances, plans review and performance bonds. The fee schedule shall be referred to the Board of Supervisors for approval and adoption and may be separately amended from time to time as deemed necessary by the Board of Supervisors.

4. Property shall be posted a minimum of fifteen days prior to a public Drainage Review Board hearing date.

5. The Drainage Review Board may prescribe, in connection with the grant of any variance or appealed clearance, conditions determined necessary to fully carry out the provisions and intent of the Regulation.

6. If the Drainage Review Board has cause to believe, after approval of a variance, that any stipulations or conditions may have been violated, it may set a hearing for the purpose of determining whether to revoke the variance for such violation. The Drainage Review Board may revoke the variance upon finding a violation of the stipulations or conditions or it may grant a limited time to allow the violator to correct the violation in order to avoid revocation of the variance.

SECTION 502. APPEALS

1. Appeals of any decision of the Drainage Administrator to the Drainage Review Board shall be filed with the Drainage Administrator within 30 days from the receipt of notice of the decision to be appealed and shall be in writing on a form provided by the Drainage Administrator. The notice of appeal shall specify the grounds for said appeal.

2. During the pendency of an appeal all matters regarding the proceeding shall be stayed unless the Drainage Administrator certifies to the Drainage Review Board that by reason of facts surrounding the appeal the stay would, in his opinion, cause imminent peril to life or property. In such cases the other matters shall not be stayed.

3. The Drainage Review Board shall fix a time for hearing the appeal and give notice to the parties in interest and to the public as set forth herein. The Drainage Review Board shall hear and decide the appeal within a reasonable time.

4. Any person aggrieved by a decision of the Drainage Review Board may, within 30 days of such decision, appeal to the Board of Supervisors by filing a written notice of appeal with the Clerk of the Board of Supervisors on a form provided by the Drainage Administrator. Said notice of appeal shall specify the grounds of appeal. The Board of Supervisors shall conduct the appeal under such rules of procedure as they shall adopt. The decision of the Board of Supervisors shall be a final decision.

SECTION 503. DRAINAGE VARIANCE

Conditions for the issuance of a variance:

1. The Drainage Review Board shall hear and decide requests for variance from the requirements of the Regulation.

2. Before granting a variance the Drainage Review Board shall find that each of the following criteria are met:

   a. The grant will not result in an increase in the 100-year peak flow or discharge; and

   b. By reason of special physical circumstances, location or surroundings of the property, strict application of the Regulation would deprive the property of privileges enjoyed by similar property; and

   c. The variance would not constitute a grant of special privilege inconsistent with the limitations on similar property; and

   d. The variance request is the minimum necessary, considering the flood hazard, to afford relief; and

   e. There is a showing of good and sufficient cause; and

   f. Failure to grant the variance would result in exceptional hardship to the applicant; and

g. Granting the variance will not result in additional threats to public safety, health, welfare, or extraordinary public expense, create a nuisance, the victimization of or fraud on the public and that the variance does not conflict with existing local laws or ordinances.

1. The Drainage Review Board may attach such conditions or restrictions to the granting of a variance as it determines necessary to reduce or eliminate potential threats to public safety, health, welfare or to public or private property resulting from the granting of the variance. The applicant may be required to post bonds, assurances or other security to guarantee compliance with the conditions and restrictions imposed.

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 6 – General Provisions

This chapter sets forth the general requirements for Drainage Clearance, Drainage Report/Plan (Development), Design Parameters, and Drainage Report/Plan (Site).

SECTION 601. DRAINAGE CLEARANCE

A drainage clearance shall be required for any development or substantial improvement which may have an adverse effect on existing drainage. Unless substantial construction as approved by the Drainage Administrator has occurred within 180 days of such approval, the drainage clearance may be declared null and void and removal may be ordered of any partially completed or minor improvements which may adversely affect drainage as determined by the Drainage Administrator. Upon application, the Drainage Administrator may approve a renewal of an expired Drainage Clearance for an additional 180 days.

An exemption from requirements for Zoning Clearance, Building Permit, Health Department clearance or other permits does not constitute an exemption from this Regulation, except as set forth in ARS 11-830.

A Final Drainage Clearance must be requested prior to a final Certificate of Occupancy for permits issued to construct commercial, industrial, educational, institutional, and such dwelling units as condominiums and apartments.

A floor/stemwall/foundation inspection approval is required prior to a request for a final building inspection for a single family dwelling, additions thereto or accessory buildings.

The owner (builder/developer) is in violation of this Regulation, for failure to correct any deficiencies noted at the time of the final drainage inspection. Final drainage inspection approval shall be obtained within ninety (90) days of the date of notice of such deficiencies or final Building Inspection, whichever is the longer period.

SECTION 602. DRAINAGE REPORT/PLAN (DEVELOPMENT)

A drainage report/plan shall be required for all commercial, industrial, and multiple-family residential developments and all subdivisions. A revised drainage report may be required for any undeveloped or partially developed portions of an approved plan when no development or improvements have occurred for two or more years. The report shall address existing drainage conditions as compared to drainage conditions at the time of plan approval. Based upon conclusions of the report, reasonable modifications to the approved plan may be required by the Drainage Administrator. Single family residential development shall be governed by the provisions of Section 604 of the Regulation which applies to individual lot ownership.

All drainage reports/plans shall be prepared and sealed by an Arizona Registered Professional Civil Engineer. This section also applies to conceptual drainage report/plans.

SECTION 603. DESIGN PARAMETERS

The entire drainage retention and runoff conveyance system shall be designed to eliminate or minimize stormwater runoff effects and convey the runoff through the development with minimum detrimental effects to the development or to any other property. No system shall be approved if the effect may cause an increase in the peak discharge, volume or velocity of runoff or change the point of entry of drainage onto other property during the runoff event. No system shall be approved that does not conform to Best Management Practice Standards in controlling erosion and reducing sediment load.

All development shall conform to the standards and criteria contained in the Drainage Design Manual.

1. Storm Frequency Criteria.

   The rainfall event, based upon the 100-year storm duration generating the peak discharge for the area contributing runoff to the development shall be used in designing the overall development drainage system.

2. Retention of Storm Drainage.

   a. The retention system shall be designed to receive and retain the volume generated from the 2-hour, 100-year runoff event falling over the entire development site including all rights-of-way, excluding off-site flows.

   b. Drywell volume shall not be used as part of the retention volume.

   c. On-site retention facilities may include natural depressions, man-made basins, depressed parking areas, or other methods which do not result in water being ponded longer than 36 hours. No more than 25% of public parking shown on the plan shall be used for retention and the maximum depth of the retention facilities cannot exceed 12 inches in public parking areas. Private parking areas shall not be used for runoff retention.

   d. Individual lot retention shall not be permitted in single family residential developments with a lot size less than one gross acre.

   e. Retention basins shall not be located within 25 feet of septic system facilities.

   f. Utility lines and structures shall not be located within drainage facilities unless approved by the utility company and the Maricopa County Planning and Development Department.

g. If reasonable alternatives are not available, detention in the County right-of-way may be acceptable provided the Maricopa County Department of Transportation approves the design.

h. A right-of-way or public utility easement shall not be designated for drainage or retention without prior written approval of the appropriate agency or affected utility.

i. In any landscaping and maintenance agreement, provisions shall be made for an annual maintenance certification.

j. On-site drainage shall be either to the street or to a designated drainage easement/tract or approved drainage way with adequate outfall.

3. Stormwater Disposal.

On-site runoff that has been retained shall be disposed of within 36 hours either by percolation, drywells or draining into an approved drainage way. Flows from basins shall not exceed pre-development flows and shall be in the location and direction of the historic flows. If runoff is to be conveyed by an underground system, complete detailed plans shall be submitted.

4. Drywell Design.

a. If drywells are to be utilized for stormwater disposal, certification shall be required indicating that the drywells meet the provisions of the Arizona Department of Environmental Quality.

b. Drywells shall be used only for stormwater disposal and not for disposal or deposit of wastes or other contaminants.

c. Proof of drywell registration with the Arizona State Department of Environmental Quality shall be required prior to approval of any plans or issuance of any drainage clearance.

d. Certification that the drywell meets requirements of this regulation shall be submitted at the time of installation.

5. Road Design.

a. To facilitate drainage the design of roadways in the system shall conform to the Drainage Design Manual and Maricopa County Department of Transportation requirements.

b. Adequate drainage ways shall be constructed to convey the street design flow if that flow is designed to leave the public right-of-way. Such drainage ways shall be platted as drainage easements or as separate tracts with maintenance provisions designated.

c. The Drainage Administrator may require construction of a culvert or bridge where a road crosses a natural drainage way. The size of the culvert or bridge shall conform to Maricopa County Department of Transportation standards.

d. If roads are designed to convey runoff, the amount conveyed shall not exceed design standards. Additional flow shall be conveyed in drainage ways if the design standards are exceeded or the depth within roadways is greater than 8 inches.

e. To prevent back and head cutting, dip sections and culvert crossings of rights-of-way shall have adequate cutoff walls or aprons constructed of non-erodible material.

f. Each site shall have one all-weather road access with a maximum flow of 6 inches in depth over the roadway or overflow section during the 100-year peak flow event.

6. Finished Floor Elevation.

Finished floors of a building shall be elevated a minimum of one foot above the highest grade point within ten feet of the foundation of the building. A finished floor elevation lower than the minimum may be permitted provided it is determined by technical data and certified by an Arizona Registered Professional Civil Engineer to be the minimum necessary to be safe from inundation by the 100-year peak runoff event. Finished floor elevations may be required to be referenced to a known benchmark. Non-liveable buildings (see definitions) are exempt from this section.

7. Floodplain Development.

That portion of a development that is within a designated special flood hazard area shall comply with the Floodplain Regulation for Maricopa County. If a developer desires to re-delineate a floodplain, the required data shall be submitted to the Flood Control District.

Development within a delineated floodplain is not exempt from drainage and grading requirements of this Regulation.

8. Landscaping/Grading.

   Walls, fences, decorative borders, berms and other similar structures or features less than one (1) foot in height above grade are permitted without first obtaining a drainage clearance provided they do not have an adverse effect on adjacent land or obstruct, retard or divert any drainage way or other drainage feature.

[DELETED PARAGRAPH ON PERSONAL LIABLITY BEYOND REGULATION]

SECTION 604. DRAINAGE REPORT/PLAN (SITE)

For developments including but not limited to single family residence, building additions, swimming pools within already fenced property, utility sheds, cabanas or similar structures and similar uses within ineffective flow areas or adequately protected by upslope drainage control structures, a drainage report/plan is not required. However, in such cases, the following minimum information shall be submitted to obtain a drainage clearance:

1. A site plan of the property indicating:

   a. North point and scale of drawing.

   b. Property lines with dimensions, including easements.

   c. Legal description, property address and closest intersection.

   d. Location of existing and proposed structures.

   e. Location and size of any existing or proposed drainage easements.

   f. An on-site temporary elevation bench mark for verification purposes.

   g. Drainage arrows and topography with maximum 5 foot contour interval or sufficient spot elevations to determine building pad elevation.

   h. Appropriate floor elevation criterion.

2. Any supporting information which the Drainage Administrator deems necessary to evaluate the drainage clearance.

3. Finished Floor Elevation.

   Finished floors of a building shall be elevated a minimum of one foot above the highest grade point within ten feet of the foundation of the building. A finished floor elevation lower than the minimum may be permitted provided it is determined by technical data and

certified by an Arizona Registered Professional Civil Engineer to be the minimum necessary to be safe from inundation by the 100-year peak runoff event. Finished floor elevations may be required to be referenced to a known benchmark. Non-liveable buildings (see definitions) are exempt from this section.

If a drainage report/plan is required, it shall be prepared and sealed by an Arizona Registered Professional Civil Engineer.

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 7 – Drainage Report/Plan (Master)

This chapter sets forth requirements which are in addition to the requirements set forth in Chapter 6 and apply to all phases or units within a master planned area.

SECTION 701. DRAINAGE REPORT/PLAN (MASTER)

The landowner or developer shall submit for review and approval the following:

1. All existing drainage patterns affecting the land included in the proposed development shall be shown. Washes shall indicate the following:

   a. Size of contributing drainage area, in acres.

   b. Approximate length and width of contributing drainage area.

2. Type and amount of peak flow at lower boundary of the proposed development indicating the effect on neighboring property: The owner or developer is responsible for providing adequate drainage across the proposed development for off-site runoff and on-site runoff within the proposed development. The owner or developer shall also properly dispose of runoff in as nearly as possible the same manner as before development or by other approved means. Peak discharge and velocity at the lower boundary of the proposed development shall not be increased as a result of development.

3. The location and method of retention and runoff conveyance shall be included on the plan.

4. All information and calculations as required in this chapter shall be prepared by an Arizona Registered Professional Civil Engineer.

5. The amount and degree of hydraulic and hydrologic detail required shall be determined by the Drainage Administrator based upon the complexity of the master plan.

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 8 – Development Drainage Report/Plan (Residential)

This chapter sets forth requirements in addition to the requirements set forth in Chapters 6 and 7 and apply to multiple-family residential developments, unit plans of development, subdivisions, mobile home parks, travel trailer parks, plans of development and special use residential developments.

SECTION 801. DEVELOPMENT DRAINAGE REPORT/PLAN

A development drainage report/plan shall be required and shall be in accordance with any drainage report/plan (area or master). Where sufficient information has been shown on a drainage report/plan (area or master) it may also be submitted as the required development drainage report/plan. A revised drainage report may be required for any undeveloped or partially developed portions of an approved plan when no development or improvements have occurred for two or more years. The report shall address existing drainage conditions as compared to drainage conditions at the time of plan approval. Based upon conclusions of the report, reasonable modifications to the approved plan may be required by the Drainage Administrator.

The development drainage report/plan shall be prepared by an Arizona Registered Professional Civil Engineer. A preliminary drainage report is required for Preliminary Plat approval. The preliminary report shall address off-site and on-site runoff and the retention volume required. A more detailed drainage report shall be submitted for Final Plat approval and shall include but not be limited to the following information:

1. Compliance and continuity with the applicable master plan;

2. Location, size and capacity of all existing and proposed drainage system elements including natural washes and swales, drywells, underground systems, retention systems, drainage ways, culverts, pipes, easements and roads;

3. Provisions for conveyance of runoff through the site and the discharge of runoff to the lower boundary that minimizes the effects of the development upon drainage in the area;

4. Lot and roadway layout including designation and use of all land to be used for public or semi-public purposes;

5. Designation of existing and proposed land uses;

6. Site drainage reports and plans shall be consistent with such development drainage report/plan.

7. Finished Floor Elevation.

8. Finished floors of a building shall be elevated a minimum of one foot above the highest grade point within ten feet of the foundation of the building. A finished floor elevation lower than the minimum may be permitted provided it is determined by technical data and certified by an Arizona Registered Professional Civil Engineer to be the minimum necessary to be safe from inundation by the 100-year peak runoff event. Finished floor elevations may be required to be referenced to a known benchmark. Non-liveable buildings are exempt from this section.

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 9 – Development Drainage Report/Plan (Commercial & Industrial)

This chapter sets forth requirements which are in addition to the requirements set forth in Chapters 6 and 6 and apply to commercial and industrial developments.

SECTION 901. DEVELOPMENT DRAINAGE REPORT/PLAN

A development drainage report/plan shall be required and shall be in accordance with any drainage report/plan (area or master). Where sufficient information has been shown on a drainage report/plan (area or master) it may also be submitted as the required development drainage report/plan. A revised drainage report may be required for any undeveloped or partially developed portions of an approved plan when no development or improvements have occurred for two or more years. The report shall address existing drainage conditions as compared to drainage conditions at the time of plan approval. Based upon conclusions of the report, reasonable modifications to the approved plan may be required by the Drainage Administrator. The development drainage report/plan shall be prepared by an Arizona Registered Professional Civil Engineer and shall include but not be limited to the following information:

1. Location, size and capacity of all existing and proposed drainage system elements including drywells, underground systems, basins, drainage ways, culverts, pipes, easements and roadways;

2. Provisions shall be made for conveyance of runoff through the site and the discharge of runoff at the lower boundary and at the same location and as near as possible to the same conditions as before development;

3. Lot and street layout including designation and use of all land to be used for public or semi-public purposes;

4. A description of methods to be used to floodproof buildings, including utilities up to or above the calculated water surface elevation of the design storm.

5. Finished Floor Elevation.

   Finished floors of a building shall be elevated a minimum of one foot above the highest grade point within ten feet of the foundation of the building. A finished floor elevation lower than the minimum may be permitted provided it is determined by technical data and certified by an Arizona Registered Professional Civil Engineer to be the minimum necessary to be safe from inundation by the 100-year peak runoff event. Finished floor elevations may be required to be referenced to a known benchmark.

6. Site drainage reports and plans shall be consistent with such development drainage report and plan.

7. Retention facilities may include natural depressions, man-made basins, depressed parking areas or other methods which do not result in water being ponded longer than 36 hours. No more than 25% of public parking shown on the plan shall be used for retention and the maximum depth of the retention facilities cannot exceed 12 inches in public parking areas. Private parking areas shall not be used for runoff retention.

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 10 – Development Drainage Report/Plan (Hillside District)

This chapter sets forth requirements applicable to all hillside district developments, except single family residential, and are in addition to the requirements set forth in Chapters 6, 7, 8, and 9.

SECTION 1001. DEVELOPMENT DRAINAGE REPORT/PLAN

A development drainage report/plan shall be required and shall be in accordance with any drainage report/plan (area or master). Where sufficient information has been shown on a drainage report/plan (area or master) it may also be submitted as the required development drainage report/plan. A revised drainage report may be required for any undeveloped or partially developed portions of an approved plan when no development or improvements have occurred for two or more years. The report shall address existing drainage conditions as compared to drainage conditions at the time of plan approval. Based upon conclusions of the report, reasonable modifications to the approved plan may be required by the Drainage Administrator. The development drainage report/plan shall be prepared by an Arizona Registered Professional Civil Engineer and include but not be limited to the following information:

1. Grading.

    a. The entrance and exit points and continuity of all natural drainage ways on a development hillside site, and their preservation shall be provided for in the plan.

    b. All engineered grading and drainage plans with any cutting or filling of slopes shall meet the provisions of the Maricopa County Comprehensive Building Code.

    c. Subsurface drainage for cuts and fill slopes must maintain the stability integrity of the cut or slope.

    d. Drainage facilities designed to convey runoff to the nearest approved drainage way. Erosion of the ground in the area of discharge shall be prevented by installation of nonerosive cutoff walls, aprons or other approved devices.

    e. Cut and fill slopes must be protected against erosion by suitable plantings, check dams, riprap or other approved methods.

2. Finished Floor Elevation.

    Finished floors of a building shall be elevated a minimum of one foot above the highest grade point within ten feet of the foundation of the building. A finished floor elevation by an Arizona Registered Professional Civil Engineer to be the minimum necessary to be safe from inundation by the 100-year peak runoff event. Finished floor elevations may be

required to be referenced to a known benchmark. Non-liveable buildings are exempt from this section.

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 11 – Area Drainage Master Study

SECTION 1101. ADOPTION

Whenever an Area Drainage Master Study authorized under this regulation has been completed, such plan including uniform rules for development may be submitted to the Board of Supervisors for adoption as an Area Drainage Master Plan. If adopted by the Board of Supervisors, the Flood Control District of Maricopa County shall enforce the Area Drainage Master Plan under this Regulation.

SECTION 1102. PUBLIC NOTIFICATION

During the preparation of an Area Drainage Master Plan, the owners of record of real property within the drainage master plan area shall be publicly notified by the Flood Control District of Maricopa County so that the owners may have an opportunity to provide input to the planning process.

SECTION 1101. MINIMUM STANDARDS

Requirements for development within an adopted Area Drainage Master Plan shall meet or exceed the Uniform Drainage Standards adopted by the Board of Supervisors or this Regulation. In case of conflict, the most stringent requirements shall prevail.

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 12 – Compliance, Enforcement and Penalties

This chapter sets forth requirements applicable to all hillside district developments, except single family residential, and are in addition to the requirements set forth in Chapters 6, 7, 8, and 9.

SECTION 1201. DEED RESTRICTIONS

Recording of deed restrictions which include drainage easements, tracts, channels or common areas used for drainage purposes to be maintained by the property owner may be required. Recordation of such deed restrictions shall be noted on the final plat.

SECTION 1202. PERFORMANCE ASSURANCES

Financial assurances may be required by the Drainage Administrator to ensure construction, completion or maintenance of approved drainage facilities. Assurances shall be released upon verification of compliance with approved plans and all provisions of this Regulation.

SECTION 1203. REGULATION VIOLATION

It is a violation of this Regulation:

1. to develop, construct, alter, use, repair, improve, fill, divert, obstruct, remove or commence the creation, construction, alteration, repair, improvement, filling, diversion, obstruction or removal of any wash, culvert, easement, channel, ditch, berm, retention basin, wall fence, other structure or use which may affect any natural drainage or improved drainage design or drainage system without obtaining a drainage clearance from the Drainage Administrator;

2. for any person to place or allow to be placed any fill material, rubbish, trash, weeds, filth or debris which obstructs, retards or diverts any natural or improved drainage system upon any private or public property located in the unincorporated areas of Maricopa County;

3. for failure to maintain any natural drainage system or any drainage easement, tract, channel or common area created pursuant to this Regulation;

4. for failure to obtain the required Drainage Clearance or final drainage inspection approval prior to obtaining a final Certificate of Occupancy for permits issued to construct commercial, industrial, educational, institutional, and such dwelling units as condominiums and apartments;

5. for failure to obtain the required floor/stemwall/foundation elevation inspection approval prior to securing a final building inspection for a single family dwelling including mobile/manufactured home, additions thereto or accessory buildings;

6. for any owner (builder/developer) to fail to correct any deficiencies noted at the time of the final drainage inspection. A Final drainage inspection approval shall be obtained within ninety (90) days of the date of notice of such deficiencies or final Building Inspection, and/or occupancy of the dwelling unit, whichever is the longer period.

SECTION 1204. CIVIL REMEDIES

The County Attorney or any person who may be or has been damaged by the violation of any provision of this Regulation may institute legal action to enforce the provisions of this Regulation or seek damages and attorneys fees for violations of this Regulation.

SECTION 1205. DECLARATION OF PUBLIC NUISANCE

Violation of the requirements of this Regulation is a public nuisance, per se, and subject to all remedies as provided by law.

SECTION 1206. VIOLATION REMOVAL

1. If the property owner fails to remove fill material, rubbish, trash, weeds, filth, debris or any obstruction that is classified as a violation under Section 203 of this regulation or that which the Drainage Administrator determines obstructs, retards or diverts a natural or improved drainage system, after 30 days written notice from the Drainage Administrator to remove or abate the condition, the Drainage Administrator may, remove or cause the removal of the fill material, rubbish, trash, weeds, filth or debris upon his determination that failure to remove or abate the condition constitutes a threat to the public health, safety or welfare.

2. The charge for the removal shall be billed to the property owner and collected by the County Attorney by use of all appropriate legal remedies, including but not limited to a lien against the property for the costs of removal plus attorneys fees and costs of collection.

3. The determination that the condition constitutes a hazard to the public health, safety or welfare may be appealed in the same manner as appeals from decisions of the Drainage Administrator as set forth in Chapter 5 above and such appeal shall be filed within 30 days of receipt of the written notice from the Drainage Administrator.

4. The Drainage Administrator shall be under no affirmative duty pursuant to this section to either identify violations or undertake their removal. Removal pursuant to this section is discretionary with the Drainage Administrator.

5. The property owner shall be liable for any damages caused by failure to remove or abate the condition.

SECTION 1207. CRIMINAL PENALTIES

Any person, firm or corporation violating this Regulation, or any part thereof, is guilty of a class 2 misdemeanor which is punishable by fine, imprisonment or both. Each and every day during which the violation continues to exist is a separate offense.

Chapter 13 – Dedications

SECTION 1301. DEDICATIONS

The Board of Supervisors may require, as a condition of issuance of a drainage clearance or variance, dedication, or the use to the County or the Flood Control District of land necessary for construction of area drainage facilities to be constructed in accordance with a master drainage plan or development drainage plan if the need for the facility emanates at least in part from the proposed development. The amount of land required shall be proportionate to the amount of runoff contributed by a parcel to the total runoff calculated for the master drainage plan or development drainage plan.

Chapter 14 – Warning & Disclaimer of Liability

SECTION 1401. WARNING & DISCLAIMER OF LIABILITY

The degree of protection from flooding due to storm water runoff required by this Regulation is considered reasonable for regulatory purposes and is based on engineering and scientific methods of study. Compliance with this Regulation does not insure complete protection from flooding and is not to be taken as a warranty. Greater storms may occur or the water damage hazard may be increased by man-made or natural causes such as silting of channels and canals, pipe and culvert openings restricted by debris, natural erosion or man-made obstructions or diversions. This Regulation does not imply that land uses will be free from flooding or flood damage. This Regulation shall not create liability on the part of Maricopa County or any officer or employee thereof for any flood damages that may result from reliance on this Regulation or any administrative decision lawfully made thereunder.

Chapter 15 – Severability And Effective Date

SECTION 1501. SEVERABILITY

This Regulation and the various parts thereof are hereby declared to be severable. Should any section of this Regulation be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of this Regulation as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

SECTION 1502. EFFECTIVE DATE

This Regulation as amended by the Board of Supervisors of Maricopa County, Arizona, is effective on the 14th day of December 1994.

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 16 – Fee Schedule

Fee Schedule	
Drainage Regulations for Maricopa County, Arizona	
The following fees shall be charged for the processing of plan reviews, drainage clearances, appeals, drainage variances, and performance bonds with no provision for refund. For simultaneous review (as example, a submittal for an RUPD and Preliminary Plat), the higher single fee will be charged.	
SECTION 1601. PLAN REVIEW	
Area Master Plans (1 square mile)	$3,100
+$500/square mile; maximum (18 square miles)	$20,000
SECTION 1602. PLANNING AND DEVELOPMENT	
Case Review (Zoning, Board of Adjustment and Compliance Review)	$150
Development Review (Abandoned Easements, Adm. Approvals, and Amendment)	$300
+$50/acre; max	$8,000
With Public Meeting	+$75
With Plans/Drainage Report	+$175
Conceptual Plans	$500+$100/acre
Max (45 acres)	$5,000
SECTION 1603. SUBDIVISIONS	
IUPD/RUPD/CUPD, Preliminary & Final Plats (based on 28-acre subdivisions)	$1,000+$100/acre
Max (Based on 140/acres)	$15,000
SECTION 1604. PRECISE PLAN OF DEVELOPMENT	
Commercial//Industrial, Multi-family, Special Uses, Schools, Golf Courses,	
Municipal, Special Districts, Churches, and all other precise plans	$1,000+$200/acre
Max (Based on 45 acres)	$10,000
With TAC Hearing – total and additional	+$75
With Public Meetings – total and additional	+$75
SECTION 1605. SITE/DRAINAGE PLANS	
*Subdivision lots, Custom lots, Rural Single Family	$400
With Eng. Grading & Drainage Plan/Hydrology Report	+$130
With Requested Site Inspection by Supervisor	$150
Max	$680
*Non-approved subdivisions or non-engineered subdivisions	+$50/acre
Max	$5,000
SECTION 1606. OTHER SITE PLANS	
Drainage Clearances and other plans NOT requiring:	
A drainage report/plan	$45
With site investigation	+$110
Total	$155

DRAINAGE REGULATIONS FOR MARICOPA COUNTY

Chapter 16 – Fee Schedule

1607. APPROVED SUBDIVISION LOTS	
Drainage Clearance for:	
1 – 5 lots	$45/lot
6 – 10 lots	$35/lot
11 or more	$25/lot
Approved subdivisions with certified pad elevations on file	$20/each
Approved subdivisions with certified pad elevations & final grading as-builts on file	$15/each
Amended Drainage Reports to Approved Plans, Plan Revisions & Additions	$200
+$50/lot; Max	$5,000
1608. OTHER FEES	
Appeals/Variances (Drainage Review Board and Board of Supervisors	$450
Appeals sent to Drainage Administrator	
FR (Single Family Residence)	$100
All Others	$200
Continuance of Hearing (Applicant's Request)	$50
When New Posting Required	$200
Special Inspections	
Re-inspection Fee (site not ready, no show, etc.)	$75
Additional Inspections (due to applicant)	$150
On-site Consultation (citizen request)	$150
Set Reference Point for FFE	$50
Retention calculations for small site with less than 2 gross acres	$200
Pipe culverts for small washes	$75/hour
Max	$1,500
Drainage reports for floor elevations of site with 5 acres or less of watershed	$500