



City of Hemet

ENGINEERING DIVISION | MEMORANDUM ENGINEERING STANDARDS SUPPLEMENTAL UPDATE

DATE: February 10, 2021
TO: All Interested Users
Cc: City Manager
FROM: Steve Loriso, PE; Acting City Engineer
SUBJECT: SITE GRADING FOR DRAINAGE AROUND BUILDINGS

The following revises, updates, and/or clarifies respective applicable specifications, standards, policies, guidelines, procedures, and/or practices of the Engineering Division of the City of Hemet.

Topic	Revision
<p><u>SITE GRADING FOR DRAINAGE AROUND BUILDINGS</u></p> <p>Section 1804.4 of the 2019 California Building Code stated “The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5-percent slope) for a minimum distance of 10 feet measured perpendicular to the face of the wall. If physical obstructions or lot lines prohibit 10 feet of horizontal distance, a 5-percent slope shall be provided to an approved alternative method of diverting water away from the foundation. Swales used for this purpose shall be sloped a minimum of 2 percent where located within 10 feet of the building foundation.</p>	<p>Since the prescribed requirements in the CBC and CRC may be difficult to achieve in some cases, the following policy is an alternative method for compliance under Sections 1804.4 of the 2019 CBC and R401.3 of the 2016 CRC.</p> <p>The pervious surfaces immediately adjacent to the foundation may be sloped away from the building at a slope of 2-percent and the impervious surfaces may be sloped away from the building at a slope of 1-percent for a minimum distance of 10 feet measured perpendicular to the face of the wall, and also the swale within 10 feet of the building foundation may be sloped at a minimum of 1- percent if <u>all</u> of the following conditions are met:</p> <ol style="list-style-type: none">1. The surface soil is classified as having “very low” to “medium” expansion potential per City of Hemet approved geotechnical report.2. Soil design parameters for foundation provided by the geotechnical report have considered the effects of external environmental factors and the associated moisture content variations under the slab with respect to the initial condition.3. Sufficient area drains shall be provided with maximum 20 feet on center to facilitate site drainage adjacent to the building.4. All aspects of the surface drainage design shall be surveyed and verified by the Civil Engineer of Record and

Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building.” The CBC also provided an exception “Where climate or soil conditions warrant, the slope of the ground away from the building foundation shall be permitted to be reduced to not less than one unit vertical in 48 units horizontal (2-percent slope).”

2. Section R401.3 of the 2016 California Residential code stated “Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard. Lots shall be graded to drain surface water away from the foundation walls. The grade shall fall a minimum of 6 inches within the first 10 feet.” CRC also provided an exception, “Where lot lines, walls, slopes or other physical barriers prohibit 6 inches of fall within 10 feet, drains or swales shall be constructed to ensure drainage away from the structure. Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum 2 percent away from the building.”

3. Section 4.106.3 of the 2013 California Green Building Standards Code stated in part, “Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings.”

submitted to the Grading Inspector prior to precise grading permit final acceptance.

5. Within side yard setback where less than 10 feet is provided between face of the wall and property line, area drains shall be spaced at maximum 10 feet on center.