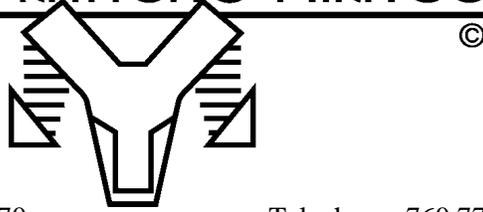


CITY OF RANCHO MIRAGE



69825 Highway 111, Rancho Mirage, CA 92270

Telephone: 760.770.3224 Fax: 760.770.3261

Date: September 10, 2013

To: All City of Rancho Mirage Plan Checkers and Frequent Grading Plan Filers

From: Leland E. Cole, Senior Civil Engineer

RE: Interim Update of Grading Plan Check List

Pages: 8, including cover sheet

Here is the updated checklist for preparation of Grading Plans. The changes from the 05/17/12 list are marked by underlining. Most noteworthy changes include:

Note that the previous 8" drop required from Finish floor to Pad Elevation, instituted in 2008, has been reversed back to the 6" drop for residential usage, by City adoption of the 2010 California Residential Building Code. (The 8" drop is still in effect for commercial projects.)



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PRECISE GRADING PLAN CHECK-LIST
Thursday, May 17, 2012 (Changes from 9/13/2011 form are underlined)

PROJECT DATA

Owner/Developer: _____
Design Engineer: _____
Street Location: _____
Legal Description: _____
Date of Plan Review: _____ RC.E. _____ Exp. _____
Consultant Project No. _____ City Permit Number.: E

(SEE MUNICIPAL CODE CHAPTER 15.64 FOR DETAILS OF GRADING CODE.)

(CHECK BOX IF OK. CIRCLE AND/OR QUESTION MARK, OR COMMENT IF THERE IS A PROBLEM.)

ENGINEER SIGNATURE REQUIRED UNLESS:

- R.C.E. signature may be waived **if:** the grading entails little hazard to any property and project meets criteria for:
 - Stockpile or Agricultural grading permit, or;
 - Grading does not exceed 100 c.y. (cut & fill combined) and all of the following are true:
 - Grading upon a single lot or parcel
 - Project does not necessitate construction of extensive drainage structures, erosion control facilities or other facilities.
 - Project does not interfere in any way with existing natural or improved drainage courses or channels.

ALL SHEETS

- Only un-modified, current, City of Rancho Mirage or CVWD Standards may be referenced without including a copy on the plans. If other "standard details" (CalTrans, Riv. Co., L.A. Co., etc.) are needed for special situations, you must copy them onto the plans or draw an independent detail. The City reserves the right to modify or reject any standards that do not satisfy our criteria.
- Plans done per Drafting Standard 614: especially, 24" X 36" format, using standard title block format, mylar (3mil+) for signature, lettering 0.08" min., with no "stick on" decals on final mylar. Smudging or flaking may be grounds for rejection of the final mylar.
- Standard Title block (Available in electronic format or "hard" copies, or see Drafting Standard 614)
 - Plan Name ("Grading Plan", "Rough Grading Plan", "Precise Grading Plan", "Finish Grading Plan", etc.)
 - Assessor Parcel Number (9 digit code)
 - Site Address (Usually assigned by Planning Department on new projects)
 - Brief Legal Description (Tract & Lot, MB/PG, note any lot line adjustments or parcel mergers done or pending)

- Section, Township, Range
- Engineering Department Permit Reference Number E _____ assigned during plan check process)
- Approval block for City Engineer, William A. Enos, R.C.E. 43910, exp. 6/30/2015 (expiration date optional)
- Approval block and stamp area for Plan Checker
- Revision block (1.5" x 4" min.)
- Preparer's company name, address, & phone number, or name, address & phone number of Design Engineer
- Design Engineer's block ("Prepared Under the Supervision of:")
 - Engineer's signature (on final mylar) (Unless waived under criteria shown above)
 - Engineer's stamp (on final mylar) (Unless waived under criteria shown above)
- Soil Engineer's approval block (**Signature required for slopes over 2:1, or if over-excavation or other special procedures are required by the preliminary soil report**)
- USA Dig Alert note with phone 1-800-227-2600 ("NO DIG" symbol may be added if desired)
- Standard** cautionary notes to contractor. (More Notes to Contractors may be added if so desired) Report and/or the City's Municipal Code Section 15.64 regarding Grading)

TITLE SHEET (Contents may be on Plan Sheet if there is room)

OK

- Standard City Title Block (See "All Sheets" above for contents details)
- General Notes (CRM Standard #700)
- Grading Notes (CRM Standard #702) (Includes blanks to fill in with applicable soil report, either new or previously done)
 - Preliminary Soils Report (waived if cut & fill <500 c.y. & not in soil problem area, at discretion of City Engineer.) (All projects must do compaction tests on building site prior to Building Permit issuance.)
- Vicinity Map with site position relative to freeway and major arterial roads for deliveries, "not to scale" okay if clear
- Legend of symbols used, includes Construction Note symbols, typical abbreviations, special lines, etc.
- Earthwork Quantities: includes cut, fill, shrinkage, stripping, and import/export estimates; or the "raw" cut and fill estimates along with a statement that the project will be balanced on site. Overexcavation or other non-standard procedures required by the Preliminary Soil Report should be mentioned and estimated here.
- Other Quantity Estimates (lot acreage and disturbed acreage (required), drainage device items or other things (opt.))
- FEMA/flood insurance rating information **if** construction is in an "A" designated area. Show map # & date. Lowest floor must be 1 foot plus the designated flood depth above crown of the adjacent street, typically.

PLAN SHEET, GENERAL GRADING REQUIREMENTS

OK

- Standard City Title Block (See "All Sheets" above for contents details.)

- Benchmark blank in standard title block should be filled in on this sheet or on all sheets. Describe what was really used to get the sea level reference for the site topo, either an official City Benchmark, or a reference point on a concrete structure, such as a curb, with the elevation assumed to be per the plans that put it in. If no curb exists near the project, contact the Public Works Department to discuss options.
- Basis of Bearing blank in standard title block should be filled in on this sheet or on all sheets. The preferred B.O.B. for all lots that were created by Parcel Map or Tract Map is to reference the line between two monuments that were found per said Map.
- North arrow (up, right, or left preferred)
- Scale (Engineering scales preferred: 10, 20, 30, 40, 50, 60, 100, etc., Non-standard scales may be rejected.)
- Graphic Scale, 4" long min., (Plans are eventually microfilmed and need this for reference on reproductions.)
- Building setback dimensions, 25' for front and rear, 10' sideyards, and 15' street sideyards for corner lots, unless modified by Planning Department. Show specific dimensions used at closest points; enough to define building footprint location.
- Building "Footprint" showing building outline, also outline any depressed or raised slab areas and garage floor.
- Roof overhang line or notation if no eaves are planned
- Original & proposed contours, flowlines, and structures to 15' outside project area
- Finish pad and floor elevations of adjacent properties (note if vacant)
- Lot/parcel numbers **and** Assessor's Parcel Number of adjacent properties (legal reference).
- Location and spot elevations on existing structures near property line, such as walls, hedges, trees, buildings, etc.
- Existing and proposed spot elevations at key locations, such as: flowlines, property corners, prolongations of property line to top of curb, retention basins, planters, & concrete surfaces.
- Pad elevation; finished floor elevation, including elevation of any depressed or raised slab areas (The Proposed Pad Elevation should be at or below the Pad Elevation from the Tract or Parcel Map Grading Plan, or shall be at or below the average of the adjoining property pad elevations, unless otherwise approved in advance by the Planning Department.)
- Lots > 1.0 acre located north of the Whitewater River shall retain 100 year, storm runoff, **for the worst case duration of the 1, 3, 6, or 24 hour 100 year storm** Use the Riverside County Hydrology Manual, Shortcut Unit Hydrograph method, for retention volume calculations, or some approved similar program. Hydraulic Calculations, based on 100 year peak flows, may be required for piped or channelized drainage systems, if said pipe or channel is the only safe route for the water.
- Lots < 1.0 acre or south of the Whitewater River may drain to an acceptable drainage carrier, such as a street with curb and gutter, a storm drain, channel, or as otherwise designed with the Tract or Parcel Map Hydrology Plans that apply to said lot. Permission from CVWD must be obtained for any concentrated flows into their storm drain facilities. **"Nuisance water" must be intercepted as a minimum condition.**
- Lots in areas designated as "Special Flood Hazard Areas", A, AE, AH, AO, A1-A30, A99, on FIRM maps shall comply with Municipal Code chapter 15.28. Show flood map designation on the Title Sheet **if** the project's in one of these.
- Flowlines around house
 - 2% minimum sheet flow away from house to a "swale", or to a piped drainage system.
 - Dirt "swales" shall be at least 0.5' below the dirt elevation next to the building, with a slope of 0.5% or better, 0.5' deep relative to lot perimeter, and located at least 3' away from buildings. Slopes over 20% require erosion control material approved by the City Engineer, to be noted on the plans.

- Where swales go to walls or other obstructions make clear notes about how water gets through. Recommended opening in block walls is a half block. Omitted head joints are not sufficient in swales since they clog easily.
- Concrete “swales” shall be at a slope of 0.5% or better, at least 3' away from buildings.
- In piped systems, flow shall be 2% minimum in 3" pipes, 1% minimum in 4" or larger pipes, unless engineered hydraulic calculations are submitted. Pipes 8" or larger need to have material specifications submitted to City.
- Show ground elevations to nearest 0.1'
- Show hard surface elevations to nearest 0.01'
- If used, show area drain systems with top of grate and flowline slopes and elevations. Pipes must flow downhill; “bubbler box” uphill flow outlets are not allowed unless provision is made for percolation of any remaining piped water into a percolation device acceptable to the City Engineer. (Core drilling of curb faces for pipe outlets may be done per City Standard #308 **with a separate Construction Permit.**)
- Drywells shall be designed and built per City Standard #306 or Standard #311. If used, all drywells must show top of grate elevation, intermediate slab elevation and bottom elevation and invert elevations of any pipes coming into or out of the drywell. If the drywell is not built per City Standard #306 or #311, full construction details must be included on plans and prior approval of the City Engineer should be obtained. Drywell construction does not require a separate permit if it is included in plans linked to either a Grading Permit or Construction/Encroachment Permit.
- If used, show roof main drain locations and their connection to any underground system. The roof emergency overflow drains must be on independent lines per the UBC, not included with the main drains or area drains.
- If used, retention basins shall be designed/built per City Standard #310. Note that the safety factor of 2 has been dropped in lieu of using calculations for the “worst case” 100 year storm, which usually ends up being shorter than 24 hours. Any slopes over 5:1 (20%) must have erosion control material identified on the plan.
- The percolation rate for retention basins shown in City Standard #310 as 1"/hour shall be used for drywells and any other similar percolation devices unless percolation tests are run by a Geotechnical Engineer that show higher actual rates at the site. With supporting data, the percolation rate may be brought up to half of the test rate, to a maximum rate of 5"/hour.
- Drainage easements are required for drainage into any other private lots, including Golf Courses or common areas.
- Slopes
 - 2:1 maximum cut and fill slopes, unless approved by the City Engineer, and the plans are signed by a Geotechnical Engineer.
 - A “berm” 1' high, 4' wide, shall be provided at the top of all cut or fill slopes steeper than 5:1 unless approved erosion control is used on the slope faces.
 - Any project proposing cut or fill slopes over 6' high and steeper than 5:1 shall be reviewed by the City Council or Planning Commission.
 - A 5' minimum horizontal distance shall be maintained from the face of the slopes to the bottom of the footings for any building or wall structure.
 - Within the street parkway distance from the curb, (17' for “local” and “collector” streets, 25' or 32' on “arterials”, (see Muni. Code 17.20.040) the landscape slopes must not exceed 20% (5:1), and mounds must not exceed 3 feet height.
- Garage floor, minimum 1% slope and show spot elevations at edge.
- Location, elevations, and slopes of: walls, slabs, “stem walls”, deep footings, and other concrete items.

- Location, elevations, of major landscape items such as: trees, mow strips, mailbox pedestals, edging, etc., that may interfere with drainage.
- 6"** min. from finish floor or top of stem wall to dirt. (**See 2010 Calif. Residential Building Code, Section R317**)
- 2" min. drop from finish floor or top of stem wall to concrete (unless covered by 3 feet or more of roof overhang)
- Residential driveways, per City Standard # 211, or attached to "wedge curb" such as Standard 222, or with no curb, shall be designed with 10% maximum slope, 1% minimum slope. (Per Muni. Code 15.68.030 a recorded "covenant" is required for all driveways built within the public right-of-way. Colored concrete, with moderate textures that are ADA compatible, and ADA compatible concrete pavers are now allowed, as well as the standard gray concrete.)
 - 17' minimum width to garage, 30' maximum width.
 - 14' minimum width for "circular" driveway leg, with 20' separation between the two driveway approaches. Grass pavers may be used for circular driveway, if approach to garage is solid concrete.
- Any sidewalks shall be routed behind the curb depression portion of the driveway approach, or the driveway shall be designed as if it was a handicap access ramp, per City Standards #215 or #223.
- Property line label on sides, and/or Right-of-Way label on street side must be shown.
- Accurate lot bearings, distances, and arc data from record information or from new Record of Survey or Corner Record must be shown. A copy of said document may need to be submitted to City if requested.
- Note property corner monuments that were found on-site. If corner monuments are missing, note that and show at least 2 found monuments that have been used to establish where the property is.** Copies of filed "Corner Records" may be required prior to Final Occupancy to document any corners that have been re-established, or replaced due to loss before or during construction.
- Concrete "stippling", shading, or other indicator at sufficient intervals to make concrete areas clearly different from others.
- Retaining walls cross section detail (dirt differential >6"). Whether or not they are designed by the same person doing the Grading Plan, the retaining walls detail must show:
 - Retaining height range
 - Footing orientation
 - Weep holes or "French Drain" location (piped wall drainage must be shown in plan views also)
 - Submit wall design calculations to Building & Safety Division for wall permits, if not on standard handout**
- Freestanding Block Walls** (dirt differential <6") per **Building & Safety Handout**, or show detail
- Existing and proposed utilities shown and dimensioned relative to property line. (Sewer and Water mandatory, others recommended.) **Any new service connections that involve street cutting require a separate permit. Note that sewer connections are now required for resale of buildings as well as for new construction, if they are within 200' of a sewer main.**
- Septic tank and leach field or seepage pit locations, if applicable.
- Sewer lateral under driveway **NOT ALLOWED unless permission is obtained from CVWD (See CVWD Standard S-44 or S-45 for typical alternative)**
- Water meter in driveway **NOT ALLOWED unless permission is obtained from CVWD**

- Show easements, if any
- Street centerline label
- Construction Notes, if needed.
- Demolition or Removal notes if applicable
- Pool rear set-back, 5' unless otherwise approved by Planning:
- Roof/patio column: 10' min. setback from property line in back yard setbacks, otherwise the same as the building setback.
- Roof overhang: 2' min. setback from property line
- Separate Construction Permits are required for all driveways, curb-cuts, any street related construction, and drywells.
- Plans shall conform to Conditions of Approval set by Planning Department.
- Planning Department review comments should be incorporated into next submittal. If copies of said comments were not sent out with this checkprint return, please contact Planning Department (760-328-2266) to confirm their review.

PARKING LOT STANDARDS (see Municipal Code Chapter 17.24)

- A.C. slopes 1% min. except at crest situations, 5% maximum in all general parking areas. Driveways may be up to 10% if alternate A.D.A. accessible routes are provided.
- Concentrated flowlines shall be in P.C.C. gutters @ 0.50% min. (see Valley Gutter Standard 220)
- Striping per City Standard #408 and/or most current A.D.A. Standards.
- Typical parking stalls shall be 9' wide by 18' deep, per City Standard #408.
- Landscaped areas to be 6' wide minimum, (10' min. between public streets and parking) or as otherwise approved by Planning Department.
- 3' min. landscape strip area between private driveways and walls (on single family driveways only, 6' min. on all others)
- 6" curbs around all landscape areas
- Wheel stops for protection of vertical elements
- Handicap stalls @ 2% slope or less in all directions**
- Access ramps per City Standard #502 or per Caltrans Standard detail sheets A88A and A88B and/or current ADA Standards. (The current Caltrans standards got rid of the minimum slope, and the 1/2" lip, but now require a 3' wide "truncated dome" panel at all ramps or sidewalk-to-drive-area connections. The truncated dome pattern is now parallel with the direction of travel.)**
- Access ramps must not stick out into driving areas, or into parking areas (See Caltrans ramp standards.)**
- 0.50% max. for grade breaks in direction of travel
- Curb returns per City Standard #209 & #210, or #215
- 3" of A.C. over 4" of Class II aggregate base min. structural section
- 0.1' min. A.C. overlay will require grinding for surface match at joints, no "feathering" of A.C. allowed.

- Conformance with Conditions of Approval
- All drainage shall be designed so it does not go over any sidewalk.
- Parking lot design shall provide for one tree for every 5 parking spaces with no more than 30' between trees.
- Minimum aisle width in parking lots shall be 24' per Standard 408.
- Parking lots shall be designed to handle the largest truck traffic that is allowed into the lot. (Approved truck turning templates should be used.)**

ENVIRONMENTAL DOCUMENTS

OK

- Local Air Quality Management Plan (LAQMP) sheet (24"x36" form, available in Engineering, shall be filled in and signed by the owner and Authorized Dust Controller prior to Grading Permit issuance.) For projects over ten acres, an 8.5x11 Air Quality Plan shall be prepared and submitted to the City and to SCAQMD per their guidelines in the "Fugitive Dust Control Handbook". **The preparer of these documents and the Authorized Dust Controller signing these documents shall be certified in a SCAQMD Fugitive Dust Control Class.** These documents should be submitted for City review by the time of the second Grading Plan Check so that any required temporary structures can be noted on the Grading Plans.

ADDITIONAL NOTES AND COMMENTS

- Plans are acceptable as submitted. Please send stamped and signed mylars to Plan Checker or City for approval. Return check prints and this checklist with mylar drawings (no stick-ons).
 - Plans are not yet acceptable. Please return check prints, check list, and 2 corrected copies for further review.
- Please also send the following additional information or materials: