

**CITY OF PALM SPRINGS ENGINEERING DIVISION  
GRADING PLAN CHECK SHEET**

Revised April 16, 2012

**Most Recent Changes to this Document are Underlined**

I. Preparation of Plan Sheets

1. Mylar plan sheets (3 mil min. mylar) 24" x 36" or approved equal.
2. Drawings shall be black india ink and all work must be clearly reproducible.
3. **No applicate film** shall be used on final mylar plan.
4. Bulk earthwork volumes shall be shown on the Title Sheet for calculation of fees. All other quantities shall be shown on the Title Sheet or on an 8-1/2" X 11" sheet submitted to City.
5. **Existing features may be greyscaled, but no less than 40% black. Lines may be solid or dashed. No dotted lines are permitted for existing features.**

II. Vicinity Map

1. Scale 1" = 800'
2. Street names shown thereon with parcel location shaded in and indicated with arrow.

III. Research

1. Make sure Conditions of Approval have been conformed to.
2. Verify Title Report information.

IV. Title Block

1. City Standard Title Block (all sheets)
2. Show City of Palm Springs drawing and file numbers (all sheets)
3. Registered Engineer's Stamp, Signature, and R.C.E. number (all sheets), also printed name, address, phone number of engineer. This requirement only applies to grading plans involving more than 2000 CY of earthwork. Grading plans between 50 CY and 2000 CY can be prepared by a civil engineer or qualified architect.

4. Date plans prepared and checked by consulting engineer's staff.
5. City Benchmark (all sheets)

#### V. General Notes

1. General Notes shall be shown on the first sheet.

#### VI. Plan

1. North arrow and scale (1" = 20' or 1" = 40 or as approved by City Engineer) on all sheets
2. Owners name and address
3. List all required permits on plans
4. Complete boundary information shall be shown with dimensions consistent with record information (Tract Maps, Grant Deeds, etc.)
5. All easements shall be shown on plan and are to be verified by a Title Report. Title reports shall be submitted **with the first submittal of grading plan for city review** with all projects.
6. Existing features may be greyscaled, but no less than 40% black. Lines may be solid or dashed. No dotted lines are permitted for existing features.
7. Adjacent Record Map reference
8. Show all Street Dimensions (min. 1/2 street width): (centerline to face of curb or edge of pavement, as well as property line to face of curb or edge of pavement).
9. Curb return data
10. Turning radii shall be adequate for anticipated traffic.
11. Existing contours shall be shown with dashed line to a min. of 50' beyond all property lines, and spot elevations shall be shown to adequately depict relationship between existing vs. proposed grading. Perimeter grades on either side of all property lines shall be included.

Contour interval shall be 4' maximum.

Proposed contours shall be shown with heavy, solid line

Show proposed 1/2 foot contours in very flat areas

12. Show all pertinent finished surface and finished grade elevations

**Note: Finish floor or Pad elevations of adjacent buildings shall be provided. Grading plans will not be accepted without this information. Proposed pad elevations shall be consistent with adjacent pad elevations. Special circumstances requiring proposed pad elevations substantially higher than adjacent pad elevations shall require City Engineer's approval with first plan check submission.**

Tops and bottoms of stairs

Doorway thresholds

Tops of walls (where change in height) and wall heights

Building corners

Gradebreaks

All highpoints (H.P.), flowlines (F.L.), and ridge lines (R.L.)

Any other elevations pertinent to grade design

13. Tops and toes of slopes shall be clearly defined inclusive of maximum slope.

2:1 max unless otherwise approved by City Engineer

No drainage over 2:1 slopes - must conform to UBC for terracing & interceptors

14. Show surrounding topo sufficient to justify design (Min. 50 feet, unless otherwise approved by City Engineer)

15. In accordance with the City of Palm Springs Flood Damage Prevention Ordinance located in Sections 8.68.010 through 8.68.250 in the Municipal Code (updated in 2008 as Ordinance No. 1739): Finish floor elevation shall be a minimum of 2.0 feet above the base flood elevation if property is located in an A1-30, AE, AH and/or an unnumbered A FEMA zone; and if property is located in an AO FEMA zone, a minimum of 2 feet above the specified depth number or a minimum of 4 feet above the highest adjacent grade if no depth number is specified.

16. Join elevations and relationships to surrounding properties shall be shown.

17. Provide sufficient number of sections to depict critical areas.

18. Site grading must be done in accordance with the 2010 California Building Code Section 1804.3. Earthen swales used to divert water away from building foundations shall be sloped a minimum of 2% when the swale is located within 10 feet of the building foundation.

Minimum slope grades located more than 10 feet from the building foundation shall be as follows unless otherwise approved by the City Engineer:

Earth or Turf Swales.....1.00%; can be 0.5% with approval of City Engineer  
Rear Yard..... 2.00% min.- 10% max.  
Side yard ..... 2.00% min.- 20% max.  
High point in swale..... 0.3' min. below pad **elevation**  
Asphalt Pavement.....1.50% min.  
Concrete Pavement.....0.50% min.  
Behind driveway approach.....4 feet at 2.00% max.

19. Grade breaks are not to exceed 1% along curb line without using a vertical curve.
20. Show all grade breaks, ridge lines and flowlines
21. Average street grades along the property frontage shall not exceed 10% and shall not exceed 15% at any time.
22. Show name, telephone number and representative's name for all affected utility companies.
23. Show existing utilities in the right-of-way
24. Show elevations at utility crossings
25. Show specifications, e.g. size and material for utility(ies) in the right-of-way.
26. Show the existing/proposed sewer lateral location, size, and type.
27. Show elevations at all connections to existing utilities.
28. Check for conformance with Soils Engineer recommendations regarding on-site paved area structural sections and subdrains.
29. Show all necessary bench drains and back of wall drains.
30. Roof drains shall be shown on plans with both vertical and horizontal locations shown.

31. Show longitudinal slopes on all drainage devices
32. All drainage devices shall have top of curb (T.C.), top of grate (T.G.) and invert (INV.) elevations shown where applicable
33. Door openings shall be shown on plans.
34. Show dimensions of all tree wells in parking lot.
35. Show location and dimension of trash enclosures.
36. All required access ramps and accessible routes into commercial buildings shall be shown.
37. The location of block walls, retaining walls, and other structures shall be clearly defined on the plan. Show top of wall and existing ground elevations. Construction and structural details shall NOT be shown on the grading plan.
38. No drainage over retaining walls; use concrete "v" ditches, area drains, down drains or other approved drainage design.
39. Onsite drainage shall be pre-treated before being directed to adjacent streets or approved drainage carriers and shall not be directed to adjacent properties, unless approved by the City Engineer.
40. No clear spaces or "dead man zones" shall be created between existing and proposed walls.
41. Curbs shall be installed at a minimum of 5 feet from the face of walls, fences, buildings, or other structures. Areas that are not part of the maneuvering area shall have curbs placed at a minimum of 2 feet from the face of walls, fences, and buildings.
42. Concrete walks with a minimum width of 2 feet shall be installed adjacent to end parking spaces or end spaces shall be increased to 11 feet wide.
43. Show details of non-standard construction (i.e., all extended footings with depths and limits).
44. Off-site construction shall require "off-site construction letters" signed by the owner of the affected property and submitted to the City Engineer.

45. Provide a 1' wide bench at top of 2:1 slopes between lots. Slopes shall be on the downhill property.
46. The following shall be shown on the grading plan unless a separate horizontal control plan is provided with the following information:
  - A. Building setbacks
  - B. Parking stall dimensions
  - C. Lane widths
  - D. Driveway widths
  - E. Building locations

The horizontal control plan will not be plan checked if the above dimensions are not provided.

47. If separate demolition plan is submitted, it shall be plan checked under the same fee as the grading plan.
48. If a hydrology report/study is required, said document shall include, but not be limited to, the following:
  - A. Cover letter/sheet for report including, but not limited to, description of the lot and retention area(s), purpose of report, discussion, design, intent, conclusions, etc.
  - B. Drainage calculations
  - C. Supporting data (i.e., maps, etc.)
  - D. All off-site tributary drainage areas shall be included in calculations.
  - E. Use Riverside County Flood Control and Water Conservation District rational methods for drainage calculations and hydrology and the Master Drainage Plan for the Palm Springs Area, Zone 6 dated March 1982 for drainage policy.
  - F. Runoff from a 10 year frequency storm (Q10) is allowed to accumulate in the streets to the top of curb. Flows exceeding the 10 year frequency storm up to the 100 year frequency storm will be carried within the street rights-of-way and the combination of both the street and the underground storm drain provides a high level of protection. Appropriate Best Management Practices shall be implemented to remove pollutants to the maximum extent practicable prior to the release of storm water to the public streets or to storm drains.

#### 49. Retention/Detention Basins

Retention/Detention basins, if required, shall have volumes consistent with the approved hydrology study. The plan shall provide sufficient grades, side slopes and other information necessary to demonstrate that proposed retention/detention basins provide required storage volumes.

The following is recommended as policy for stormwater retention basins:

Single Family Residential In-Fill Lots: When a drainage area is 70% (or more) developed, single-family residential construction will be exempt from the on-site retention requirement, except in the case of hillside lots.

Non-Residential In-Fill Lots: When a drainage area is 70% (or more) developed, projects of 2 acres or less will be exempt from the on-site retention requirement, except in the case of hillside development.

Require Retention Plans to be Submitted: For all sites requiring on-site retention, staff shall require that **retention** plans be submitted with site plans so that issues can be addressed early in the process. The goal is to ensure that adequate area exists for on-site retention so that parkways and setback areas are not exclusively designed as basins. Parkway need to balance the need for retention and community/project design. The approval process will take into consideration the appearance of the proposed basin.

- A. As a general rule, no more than 40-50% of the street frontage parkway/setback areas should be designed as retention basins.
- B. On-site open space, in conjunction with dry wells and other subsurface solutions should be considered as alternatives to using landscaped parkways for on-site retention.
- C. Parkway should be discouraged as the primary retention areas.
- D. Rather than setting specific dimension limitations for retention areas, the City recommends simply that the “moat” effect be avoided. Adjusting the basin depth in proportion to its overall length and area will be reviewed on a case by case basis by staff.
- E. Retention requirements will be based on the runoff differential between the developed and undeveloped condition of the property, in areas where downstream drainage facilities are insufficient to handle the flows. In addition, staff is being directed to continue exploring other fee options on an ongoing basis, **which** could be used to expedite construction of the Master Storm Drain System, which when built-out would eliminate the need for on-site retention.

50. The Americans With Disabilities Act (ADA) Requirements must be complied with and shown on plans. The special criteria required at bay parking spaces shall be complied with. Proposed bay parking spaces must have City approval.
51. **A soils report shall be submitted with the first submittal of grading plan for city review on all projects. All provisions of the preliminary soils report prepared by a California registered Geotechnical Engineer, shall be complied with (with the date of the soils report specified on the Grading Plan in the General Notes).**



