

City of Palos Verdes Estates

GRADING AND DRAINAGE PLAN CHECK CORRECTION LIST

PLAN CHECK

NUMBER _____ ADDRESS _____

DATE _____ PLAN CHECKED BY _____

NOTE: IN SPACE PROVIDED AT LEFT, INDICATE WHERE THE CORRECTION APPEARS ON PLANS OR CORRESPONDING MATERIAL. DO NOT RE-SUBMIT UNLESS LOCATION OF CORRECTIONS ARE DENOTED.

1st check _____

2nd check _____

3rd check _____

Plan Checker

Status

Date

(A) Grading

1. _____ Indicate the name, address and telephone number of the Architect and/or Engineer (or preparer of the plans) on plans. Architect and/or Engineer shall sign and wet stamp 2 sets on final plans. As per Chapter 15.08 of the Municipal Code, all projects valued at \$4,000 or more shall be certified by a licensed Architect or registered Civil Engineer.
2. _____ Show North Arrow, plan scale and numbering on each page.
3. _____ Show the legal description and street address on the plans.
4. _____ Provide index sheet if more than one sheet.
5. _____ Provide vicinity map.
6. _____ All elevations must be based on the same datum.
7. _____ Clearly show all property lines, dimensions and bearings.
8. _____ Show easements and setbacks.
9. _____ Single lot plans shall be minimum 20 scale.
10. _____ Provide benchmark.
11. _____ Locate all existing and proposed structures.
12. _____ Provide horizontal control and dimensions from property lines (curve data and stationing when required by the Building Official or City Engineer).
13. _____ All slopes 2:1 (cut/fill) or greater specifically called out on plans.
14. _____ Provide: a cut and fill index which includes all remedial grading quantities, this shall include over-excavation and recompaction. Use the City's Lot Coverage form.
15. _____ Topographical survey of entire lot shall depict the natural grade, the grade as it currently exists, and the proposed finished grade. Survey must be signed by a land surveyor and must extend thirty (30) feet beyond the property lines except where the lot fronts on a street or unimproved street right-of-way, in which case the survey must extend to the centerline of same. Contours must be at one foot intervals.

16. _____ Show elevations of all improvements on the plot plan including the following:
 - _____ Graded pads
 - _____ Finish roof ridge
 - _____ Patio slabs, decks, walks and driveways
 - _____ Tops of retaining walls, property line walls, garden walls and fences
 - _____ Swales, catch basins and other drainage devices
17. _____ Show cut/fill daylight line transitions in relation to proposed improvements.
18. _____ Where slopes are steeper than five to one and the height is greater than 5 feet, benching into sound bedrock or other competent material is required as determined by soils engineer. Bench shall be 10 feet minimum in width. (**Note on plan**)
19. _____ Provide details for any retaining walls that are required to complete the grading operation. Include french drains, top-of-wall swales and wall backfill material. Cross reference all detached yard retaining walls to appropriate details. Building permits are to be obtained for retaining walls prior to approval of the grading plans.
20. _____ Note all fault line, landslides, or other know hazardous conditions.
21. _____ Provide a haul route and the size of equipment to the Building Official for review and approval.
22. _____ Show all on and off-site utilities, proposed tie-ins which affect or are affected by this project. Note on plans that contractor must contact utilities for tie-ins and contact public works for excavation in City property.
23. _____ Show closest hydrant, meter or other source of water. Give size and GPM on Fire Flow Availability Form (see attached).
24. _____ Detail dust control measures and specify that measures are to continue throughout the grading operation.
25. _____ Provide a bond or other security.
26. _____ Please provide a note: A pre- demo\grading meeting shall be held prior to commencement of grading. This meeting shall be attended by the Grading Contractor, Soils or Geologic Engineer, City Inspector and the General Contractor or Owner's representative and shall be held at the site of the grading.

27. _____ Incorporate final planning conditions of approval as notes on the plan (if applicable).
28. _____ Approvals must be obtained or fees paid to the following agencies prior to grading permit issuance: (), Geology and or Soils approval of initial reports, (), Cal OSHA permit, (), Public Works Department Approval, (), Art Jury Stamp and Approval of Final Plans **recommended**, (), Planning Dept. (), Fire Dept.
29. _____ Note on plans that Rough and Final Grading Certifications are to be provided on City forms.
30. _____ Note on plans that the Final As-Graded Report shall include the following:
 - A. Fill compaction and shear test data.
 - B. Location of the compaction and shear test data plotted on a copy of the grading plan.
 - C. Amount of natural or existing fill removal if unsatisfactory materials have been encountered.
 - D. Verification by the geotechnical engineer that the fill material shear values meet or exceeded design values utilized in the geotechnical report.
 - E. Items required as part of the conditions of grading plan approval.
 - F. Any changed subsurface conditions requiring design changes.
 - G. Analyses demonstrating that, based on any changed design, the site will be safe for the intended use and will be in conformance with State and County Codes.
 - H. Section “324” Statement: The final as-graded report must contain all the above data and an as-graded plan showing original and final topographic contour lines. This report must also be coordinated with the geology final report and will be kept as permanent record.

(B) Drainage

1. _____ Provide a complete yard drainage system including gutters and downspouts. Conduct all hard surface storm run-off to a street, storm drain or natural drainage course in non-erosive devices.
2. _____ Where possible, and when it will not endanger structures, hillsides or other property, conduct surface runoff over vegetated ground cover before it leaves the site.
3. _____ Show sizes, materials, bedding and details for all drainage systems.
4. _____ Provide hydrology and hydraulic study to demonstrate that the proposed drainage system has adequate capacity (including those portions of existing systems utilized in the proposed system.)

6. _____ Enclosed drainage inlets shall be provided approved grates or trash racks.
7. _____ Justify d-loads or provide adequate protection for drains and culverts under streets, driveways, easements and trails.
8. _____ Provide positive drainage away from tops and toes of slopes and buildings. Surfaces adjacent to foundations shall slope away from buildings at a slope of not less than 5 percent if pervious, or 2 percent if impervious, for a distance of 10 feet. See CBC Section 1804.3 for exceptions.
9. _____ Detail energy dissipaters where drains discharge on natural ground. Discharge onto manufactured slopes or any slope greater than 3:1 is not allowed.
10. _____ Provide secondary overflow route for all sumps.
11. _____ No increase, diversion, or concentration of drainage across property lines is permitted.
12. _____ Plot plan and section showing lot drainage.
13. _____ Drainage to be conveyed in a minimum 6 in. diameter rigid pipe with 4 in. down spouts.
14. _____ Size and locations of drains for planters and planter walls.
15. _____ When collection basins are used, the plans shall note that basin grates shall be a minimum of 10" X 10" with 50 openings.
16. _____ Interceptor drains are required at the top of manufactured slopes for interceptor surface drainage with details included.
17. _____ Roof drain downspouts, including flow line of outlets.
18. _____ Drainage over a manufactured slope is not permitted except in approved devices.
19. _____ Energy dissipaters are required where drains discharge onto natural ground. If a rip-rap is to be used, specify class and size and provide detail.
20. _____ Concentrated drainage exceeding 4% gradient requires concrete, gunite or other approved non-erosive device.
21. _____ Show flow line elevations of all swales and other drainage devices.
22. _____ Maximum gradient for sheet flow is 10%.

23. _____ Minimum acceptable gradients for concentrated flows:
Earth 2.0%
Asphaltic concrete 1.0%
Concrete in earth 0.5%
Terrace drains 6.0%
Interceptor drains 2.0%

Erosion Control/NPDES

1. _____ Provide appropriate erosion control details per California Storm Water Best Management Practice (BMP) Handbooks and as approved by the Building Official. Erosion Control measures shall be implemented and functional when grading is to occur between October 15 and April 15, or when manufactured slopes will remain unprotected between those dates.
2. _____ A Standard Urban Stormwater Mitigation Plan (SUSMP) is required for the following projects. (SUSMP requirements include conserving natural areas, protecting slopes and channels, providing storm drain system stenciling and signage, diverting roof runoff and surface flow to vegetated areas before discharge unless the diversion would result in slope instability):
_____ Development of 10 or more units;
_____ Parking lots of 5,000 or more square feet or 25 or more spaces;
_____ Industrial/Commercial development that disturbs one or more acres;
_____ Gas and service stations, and restaurants, of 5,000 or more square feet;
_____ Projects in environmentally sensitive areas;
_____ All hillside developments (hillside is an area with known erosive soil conditions, on any natural slope that is 25% or greater).
3. _____ Applications for a grading permit for a project that disturbs 1 or more acres of soil will need to:
_____ Show proof that a Notice of Intent (NOI) has been submitted to the State Water Resources Control Board (SWRCB) for Storm Water Pollution Prevention Plan (SWPPP).
_____ Submit SWPPP for City review and approval.
_____ Obtain a Waste Discharger Identification (WDID) number from SWCRB.
_____ Provide written certifications from both the project architect/engineer of record and the project owner/owner's agent that appropriate BMP's have been selected and that the SWPPP has been properly prepared.
_____ File a Notice of Termination (NOT) upon completion of construction.
4. _____ Best Management Practices including but not limited to: drip pans under vehicles, wash out pits, hazardous material handling and storage, designated refueling and maintenance areas, etc. shall be noted on the plans.

5. _____ Verification of maintenance provisions for all long term structural and treatment BMP's shall include at a minimum:
_____ Developer's signed statement;
_____ Conditions of lease or sale;
_____ Recorded agreement acceptable to the City of Palos Verdes Estates.

Note: SUSMP requirements also affect projects of lesser magnitudes if those projects are part of a larger common plan of development.

The State Water Resources Control Board can be contracted at (916) 654-3765 or (916) 657-0757.

Landscaping and Irrigation

1. _____ Specify planting of graded slopes.
2. _____ Slopes required to be planted shall be provided with an approved system of irrigation, designed to cover all portions of the slope, unless deemed unnecessary by a landscape architect, or equivalent. Plans shall be submitted for approval.
3. _____ Where new or altered landscaping is 2,500 square feet or more on new developments (vacant sites, additions to existing buildings, or change in land use), or is 5,000 square feet or more on previously developed residential property (homeowner-provided or homeowner-hired) Water Efficient Landscaping is required per Palos Verdes Estates Ordinance No. _____.

Rodent Control

1. _____ Fill slopes steeper than two horizontal to one vertical within a grading project located adjacent to undeveloped and unoccupied land determined by the Agricultural Commissioner to be infested by burrowing rodents, shall be protected from potential slope damage by an effective program of rodent control.

Geotechnical

1. _____ Provide a Geotechnical Engineering report signed by a qualified engineer.
2. _____ Provide an Engineering Geology report signed by a qualified engineering Geologist.
3. _____ Incorporate geotechnical engineering/geology recommendations into the grading plan including:
_____ Benching of fills
_____ Subdrains

- _____ Terrace swales
- _____ Planting
- _____ Show a section through fills
- _____ Other

4. _____ Plans shall be signed and wet stamped by the Soils Engineer and/or Engineering Geologist.
5. _____ Incorporate the following notes on the plans:
 - _____ All grading inspections must be made by the consulting Geologist and Geotechnical Engineer.
 - _____ An as-graded Soils and Geology report must be submitted and approved prior to building permit issuance.
 - _____ Foundation and/or retaining wall excavations must be inspected and approved by the consulting Geologist and Geotechnical Engineer prior to placing of steel and concrete.

(C) Shoring

1. _____ No grading is approved within 3 feet of a property line.
2. _____ Show how neighboring properties will be supported during grading. Submit construction summary with timetable.
3. _____ Shoring and/or other means of support to be approved by project Geotechnical and Structural Consultant.
4. _____ Note on Plans: All required shoring shall be inspected and approved by the design professionals prior to commencement of project construction.

Additional Comments:
