

**CITY OF SANTEE  
DEPARTMENT OF DEVELOPMENT SERVICES  
GRADING PLAN  
PLAN CHECK TRANSMITTAL**

TO: \_\_\_\_\_

Date: \_\_\_\_\_

\_\_\_\_\_

Check No.: \_\_\_\_\_

\_\_\_\_\_

Project No.: \_\_\_\_\_

Project: \_\_\_\_\_

The attached plans have been reviewed by the Engineering Division and are being returned for correction. Please complete all corrections noted both on the check sheets and the attached plans. If you have any questions on this review, please call the reviewing engineer at (619) 258-4100 at their extension listed below. The check sheets and the attached check print(s) must be returned with the corrected plans when they are resubmitted for approval.

Resolution of Approval:

Project Engineer: \_\_\_\_\_ Extension: \_\_\_\_\_

Project Planner: \_\_\_\_\_ Extension: \_\_\_\_\_

**CITY OF SANTEE - DEPARTMENT OF DEVELOPMENT SERVICES  
GRADING PLAN CHECK**

**I. SUBMITTAL REQUIREMENTS**

Unless specifically waived or modified by the Director of Development Services all of the following submittal requirements shall be complied with prior to issuance of a grading permit.

- A. Completed permit application.
- B. All plans submitted on City standard title block sheets.
- C. Preliminary Soil Engineering Report. (3 copies)
- D. Landscape and irrigation plans, if required, included in the plan set.
- E. Drainage study submitted.
- F. Grading plan check fee \$
- G. Soil engineering report review fee \$
- H. Deposit for independent third party review of the soils report -full cost paid prior to issuance of permit \$
- I. Grading commencement fee \$
- J. Grading inspection fee \$
- K. Grading permit cash deposit \$
- L. Performance Bond \$
- M. Labor and Materials Bond \$
- N. Erosion control cash deposit \$
- O. Erosion control bond \$
- P. Copy of a current title report.

**II. SPECIAL SUBMITTAL**

- A. Detailed soil erosion control plans.

- B. Hydrology and hydraulic studies related to flood plain determinations.
- C. Application for Environmental Initial Study (AEIS).
- D. Submit off-site letters for permission to grade and have owners sign a copy of the plan affecting their site. (City will provide required format)
- E. Waiver and release to divert or concentrate drainage affecting down stream off-site property.
- F. Drainage easement and flowage rights documents.
- G. Application for a Certificate of Compliance.
- H. Geological Investigation. (3 copies) Zone \_\_\_\_\_, Group \_\_\_\_\_ .

III. PRELIMINARY CHECK - Plans to conform with the following:

- A. Design is/is not substantially complete.
- B. Horizontal and vertical control from ROS 11252.
- C. Correct number of plans are submitted and if other than first submittal check prints are returned with the submittal.
- D. Tentative Map and Plot Plan: Typical section, street layout, other:
- E. Compliance with Tentative Map and Plot Plan conditions of approval:
- F. Compliance with Development Review Permit or Conditional Use Permit conditions of approval:
- G. Comments:

IV. DETAILED CHECK - Form and Standard

A. GENERAL

- 1. Drawing requirements.
  - a) All plans must be prepared on standard City of Santee title sheets.
  - b) Black waterproof ink on mylar (3 mil minimum).
  - c) Lettering is a minimum of 0.10" for mechanical lettering or 0.12" for free-hand lettering.

- d) Line weight is a minimum of "OO" for existing conditions and a minimum of "O" for proposed improvements.
  - e) Sheets numbered consecutively with total number of sheets in the plan set indicated.
  - f) Title block on each sheet titled:
    - (1) Grading Plan for
    - (2) Project title or name
    - (3) City of Santee tentative map number or conditional use permit number or development review permit number.
  - g) Bench mark description and datum reference on each sheet. Bench mark must be from ROS 11252 and shall include the station designation number in the description.
  - h) Include references on each sheet as appropriate to the information shown. The reference block is in the lower left hand corner of the title block next to the revisions block.
  - i) Plan scale shall conform to that stated in the resolution of approval. If none stated consult with the City Project Engineer for the desired scale. Minimum scale 1" = 20'.
  - j) North arrow and a 4 inch graphic scale on each sheet.
  - k) Each sheet shall be sealed and signed by the engineer of work or the person in responsible charge where a plan set contains more than one discipline such as structural engineering or landscape architecture.
  - l) Sheet size shall be 24" x 36".
  - m) It is the engineer of works responsibility that all development plans (site, improvement, landscape, plot, grading and drainage plans and elevations) are coordinated and consistent with each other.
2. Engineer of Work shall provide a cost estimate for the construction. The minimum unit prices for the work shall not be less than the unit prices stated in the City of Santee - Department of Development Services - Cost Estimate Unit Prices for Subdivision Permits, latest revision. The estimate

may be prepared in letter format and shall be revised based on the approved final design. Engineer of work to sign and seal the estimate.

**B. COVER SHEET (required)**

1. Vicinity map with north arrow and scale indicated.
2. Project title information.
3. Key map.
  - (a) North arrow.
  - (b) Scale: 1" = 200'.
  - (c) Shows general plan of subdivision boundary, streets and lots identified.
  - (d) Shows adjacent subdivisions and connecting streets.
  - (e) Shows sheet coverage.
  - (f) Legend identifies all symbols used.
  - (g) Show drainage facilities.
  - (h) Direction of drainage flow.
4. Legend identifying all symbols used and reference to the appropriate standard.
5. Approval blocks for other agencies, as applicable.
  - (a) Padre Dam Municipal Water District.
  - (b) City of Santee – Planning Division.
  - (c) City of Santee – Fire Department.
  - (d) County of San Diego - Flood Control District.
  - (e) County of San Diego – Department of Environmental Health Services.
  - (f) Lakeside Sanitation District.

6. Assessor parcel number(s).
7. Legal description of parcel(s).
8. Street address if available.
9. Label the right side of the sheet outside the border with the project name and the type of plan "PROJECT NAME – GRADING PLANS" in all caps. Label the cover sheet only.
10. Include design certifications in accordance with Attachment – A,"CITY OF SANTEE – DEPARTMENT OF DEVELOPMENT SERVICES GENERAL NOTES AND CERTIFICATIONS FOR GRADING PLANS", as appropriate to the plan set. Include all requested information such as names, addresses, registration numbers, etc., but do not sign or seal the certifications until the plan set is approved and the plans are being submitted for signature approval.

C. **DETAIL SHEETS (required)**

1. Separate detail sheets is required for general notes and details. We recommend limiting details on the plan drawings.
2. Street cross-sections:
  - (a) Each street is represented.
  - (b) Dimensions - right of way, sidewalks, medians, easements, etc. comply with City of Santee standards and tentative map conditions of approval.
  - (c) Rough grade line shown with width and depth of grading.
  - (d) Side slopes (2:1 min. cut, 2:1 min. fill)
3. Detail drawings to be provided for clarity as noted on the plans.
4. Show a typical detail of lot grading and drainage.

D. **GRADING SHEETS**

1. Boundaries and easements.
  - (a) Jurisdictional boundaries.

- (1) Federal - City
- (2) County - City
- (3) City - City
- (b) Subdivision or project boundaries.
- (c) Right of way lines.
- (d) Lot line dimensions.
- (e) Lot lines and boundaries of adjacent properties shown.
  - (1) Adjacent properties assessors parcel number shown.
  - (2) Map or parcel map references shown.
- (f) Show and dimension all existing and proposed easements that encumber the property. Reference source document.
  - (1) Utility easements.
  - (2) Drainage easements.
  - (3) Access easements.
  - (4) Slope right easements.
  - (5) Tree planting and maintenance easements.

2. Contours

- (a) Show existing contours and extend a minimum of 100' beyond the project boundaries or limits of grading which ever is greater.
- (b) Show proposed contours.

3. Lots

- (a) Numbered or lettered in agreement with final map.
- (b) Building pads shown with pad elevations.
- (c) Parking areas shown.

- (d) Sufficient elevations flagged front and rear to show slope/drainage of lots and/or portions of lots.

4. Grading

(a) Slopes:

- (1) Cut slopes - 2:1 maximum.
- (2) Fill slopes - 2:1 maximum (shaded)
- (3) Slope ratios shown.
- (4) Daylight line(s) shown.
- (5) Off-site grading shown with reference to authority given. (See II.D above)

5. Drainage

(a) Show existing drainage facilities in plan view.

- (1) Pipe or conduit size and material.
- (2) Strength classification or gauge if available.
- (3) Number structures such as cleanouts and inlets and designate the type.
- (4) Rim and flowline elevations.

(b) For proposed drainage facilities not intended to be constructed under the grading permit do not show the facilities.

(c) For proposed drainage facilities to be constructed under the grading permit, provide the following:

- (1) Plan and profile view of all proposed drainage facilities.
- (2) Number all structures for identification purposes such as cleanouts, inlets, brow ditches and headwalls. Designate their type.



- (3) In plan view show size of pipe, type of material and direction of flow.
  - (4) In profile give rim and flowline elevations on all pipes and structures.
  - (5) In profile specify strength classification or gauge of pipe.
  - (6) In profile show size of pipe, slope and length of pipes.
- (d) Storm drainage facilities may be detailed on the improvement plans for construction to avoid repetition on the grading plans. If this option is elected however, the improvement plans must be prepared concurrent with the grading plans and approved prior to grading permit issuance.

#### E. DRAINAGE DESIGN

1. Drainage design shall conform to the requirements of the Public Works Standards of the City of Santee and such additional requirements as stated herein.
2. If diversion or concentration of existing drainage courses occurs, a signed waiver and release from the affected downstream owners must be submitted.
3. Floodplain analysis submitted, as applicable, and in a format acceptable to the Department of Development Services.
4. If drainage is out-falling in proximity to the San Diego River design shall include conformance with the Department of Development Services "PROCEDURE FOR DESIGN OF STORM DRAINS OUTLETTING IN THE SAN DIEGO RIVER", dated March 22, 1991.
5. All drainage design requirements shall be in accordance with the latest adopted Master Drainage Plan, the requirements of the Director of Development Services and be based on full development of upstream areas.
6. The design of all master plan facilities shall be in accordance with the latest standards of the San Diego County Flood Control District.
7. Public drainage facilities shall be designed to carry a ten-year storm underground, and the 100-year storm to the right-of-way lines.

8. Permanent open drainage ditches will not be permitted in public right-of-way, without the specific permission of the Director of Development Services.
9. The type of drainage facility shall be selected on the basis of physical and aesthetic adaptability to the proposed land use. Open channels may be considered in lieu of underground systems when the peak flow exceeds the capacity of a 48-inch diameter RCP. Open channels shall be fenced.
10. Permanent drainage facilities and right-of-way shall be provided from the development to point of satisfactory discharge.
11. On site drainage shall be collected on-site and discharged to a storm drain system, or if no system is available within reasonable proximity to the site as determined by the Director of Development Services, the drainage may be discharged through the curb face to the street. Minor drainage areas less than one acre in size may drain from the site across the driveway.

#### F. GEOTECHNICAL DESIGN

1. The Soil Engineer and Engineering Geologist should refer to the "Geotechnical/Seismic Study for the Santee General Plan" in preparing the reports required by this section.
2. Three copies of a Preliminary Soils Engineering Report shall be submitted on all projects.
3. The Preliminary Soils Engineering Report shall be prepared by a registered civil engineer with demonstrated expertise in the field of geotechnical engineering.
4. The Preliminary Soils Engineering Report shall contain all information applicable to the project in accordance the generally accepted standards of the practice of geotechnical engineering. This shall include but not be limited to the following information:
  - (a) Information and data including boring logs and soil samples regarding the nature, distribution, and the physical and chemical properties of the soils.
    - (1) Expansive index.
    - (2) Dry densities.

- (3) Optimum moisture content.
  - (b) Location and the extent of faults as determined by a Registered Geologist or Certified Engineering Geologist.
  - (c) Conclusions as to the adequacy of the site for the proposed grading and the intended use.
  - (d) Recommendations for general and corrective grading procedures.
  - (e) Foundation design criteria.
  - (f) Allowable soil bearing capacity.
  - (g) Recommendations regarding retaining wall design.
    - (1) Drainage.
    - (2) Coefficient of friction.
    - (3) Active soil pressure.
    - (4) Passive soil pressure.
  - (h) Slope gradient, height and benching, or terracing recommendations.
  - (i) The potential for groundwater and seepage conditions and procedures for mitigation of the groundwater related problems.
  - (j) Other recommendations, as necessary, commensurate with the project grading and development.
5. A slope stability analysis shall accompany Soils Engineering Reports for all slopes in the Friars Formation, regardless of the slope ratio. The Soil Engineer shall provide a written statement indicating acceptable slope stability.
6. Three copies of a Preliminary Geological Investigation and report shall be required for all land development projects designated as Group I or Group II, except those Group II projects located in Zone "A" shown on Figure 20, Seismic Hazards and Study Areas Map, (for which a geological reconnaissance will be required), as outlined in Table 21 of the City of Santee General Plan. This requirement

may be extended to adjacent properties where known or reasonably inferred instability may adversely affect the property. The Preliminary Geological Investigation may be combined with the Preliminary Soils Engineering Report. The geological investigation shall include but not be limited to the following:

- (a) A comprehensive description of the site topography and geology including, where necessary, a geology map.
  - (b) A statement as to the adequacy of the proposed development from an engineering geological standpoint.
  - (c) A statement as to the extent that known or reasonably inferred stability on adjacent properties may adversely affect the property.
  - (d) A detailed description of the field investigation and findings.
  - (e) Conclusions regarding the effects geological conditions will have on the proposed development.
  - (f) Specific recommendations for plan modification, corrective grading and/or special techniques and systems to facilitate a safe and stable development.
  - (g) Provide other recommendations as necessary, commensurate with the project grading and development.
7. A Seismicity Study and report shall be required for all land development projects designated as Group I and for those designated as Group II and located in Zone "C" shown on Figure 22, Seismic Hazards and Study Areas Map, of the City of Santee General Plan. The report shall be prepared by an Engineering Geologist or a Soil Engineer with expertise in earthquake technology and its application to buildings and other civil engineering works. The seismic study may be combined with the soils engineering study and the geological investigation.
  8. The recommendations contained in the approved reports shall be incorporated into the grading plans and specifications and shall become conditions of the grading permit.
  9. All reports shall be sealed and signed by the engineer or geologist in responsible charge for preparation of the report.

## G. RETAINING WALL DESIGN

1. All retaining walls shall be shown in plan view.
  - (a) Each wall is numbered for identification.
  - (b) Top of wall and bottom of wall elevations are given.
  - (c) Drainage is depicted in sufficient detail to define construction.
  - (d) All walls are profiled unless this requirement is specifically waived by the Director of Development Services.
  - (e) Provide additional details and/or sectional views on plan as may be required for clarity.
2. Wall constructed in accordance with one of the regional standard drawings.
  - (a) Standard for each wall referenced.
3. Wall is a special design not in accordance with a regional standard.
  - (a) Design calculations prepared by a registered civil engineer shall be submitted with the design. All calculations shall be sealed and signed. (3 copies)
  - (b) Design calculations shall include but not be limited to the following:
    - (1) Design for overturning moment.  
(Minimum Safety Factor of 1.5)
    - (2) Design for lateral force and sliding.  
(Minimum Safety Factor of 1.5)
    - (3) Bearing capacity and foundation analysis.
    - (4) Allowable yield or shear strength in materials.
    - (5) Compressive strength of materials.
    - (6) Reinforcing requirements.
      - (a) Lap requirements.

- (b) Cover requirements.
    - (c) Size and placement.
  - (c) A detail drawing, which specifies as a minimum the following information for each wall, is included on the plans.
    - (1) Reinforcement steel, bar size, grade, spacing and cover requirements.
    - (2) Fully dimension to include wall, stem, footing and key dimensions.
    - (3) Complete material specifications to include block, concrete, mortar and backfill specifications.
    - (4) Wall drainage.
  - (d) Note that inspection requirements shall conform to Regional Standard Drawing C-7.
4. Wall meets Department of Planning requirements for material, location, and height.

#### H. LANDSCAPE AND IRRIGATION PLANS

1. Landscaping and irrigation facilities shall be required for but not be limited to:
  - (a) Public interest slopes.
  - (b) Graded slopes higher than three (3) feet.
  - (c) Graded areas determined by the Director of Development Services to be susceptible to erosion.
2. All trees within ten (10) feet of an improvement must have a root barrier along the improvement.
3. Low water/drought tolerant plants shall be used.
4. Forty (40%) percent of the trees shall be 24-inch boxed size or larger.
5. Turf areas in public maintenance areas shall be limited.

6. Ball valves shall be used in lieu of gate valves at each valve manifold.
  7. Irrigation system shall be automatic and shall be coded for reclaimed water if available.
  8. System shall be a low volume design.
  9. All trees shall be on a separate system than other plant material, except on slopes.
  10. Extra valve wires shall be run to each valve manifold.
  11. Show limits of area to be maintained through the City Landscape Maintenance District.
  12. Include specifications for the preparation of the existing soils and/or for the application of topsoil.
  13. Prepared on duplicate mylar of the grading plans unless otherwise approved.
  14. Name, address and telephone of firm or individual preparing the plans.
  15. Final plans sealed and signed by a Certified Landscape Architect.
- I. EROSION CONTROL PLANS – Shall be prepared corresponding to the Standard Development or Priority Development Storm Water Quality Management Plan and project SWPPP.
- J. TITLE REPORT AND GRANT DEED
1. Grant deed for each parcel must be dated prior to March 4, 1972 to establish proof of lawful parcel.
  2. Title report for each parcel must be dated within six months of permit application and updated prior to permit issuance if over one year at time of permit issuance.
  3. Copies of all documents listed in the title report shall be submitted:
- K. ADDITIONAL COMMENTS