

DRAINAGE PLAN CHECK
COMPLIANCE LIST

Parcel Map/Tract No. _____
Engineer: _____

First	Checked By: _____	Date: _____
Second	Checked By: _____	Date: _____
Third	Checked By: _____	Date: _____
	Telephone: (661) _____	
	E-mail: _____	

Please provide compliance with all items circled below. Return a copy of this compliance list with your re-submittal. Provide your initials to the left of each circled item to indicate its completion and, where appropriate, indicate where the correction is addressed in your re-submittal. If you do not believe the item circled is applicable, provide your justification. Failure to return this list or address all items will result in the submittal being returned without review.

ADDITIONAL TIME & MATERIALS CHARGES (\$105/HOUR) WILL APPLY AFTER THE THIRD PLAN REVIEW IF COMMENTS ARE NOT ADEQUATELY ADDRESSED!

A. GENERAL

Provide the following:

- _____ 1) Flood Study (off-site 100 year Receive and Discharge analysis).
- _____ 2) Drainage Study (on-site 10-year flow calculations or 10-year off-site analysis, where applicable).
- _____ 3) Copy of preliminary grading plan.
- _____ 4) Soils report.

B. FEES

- _____ 1) Provide an engineer's estimate and fee calculations for plan review and inspection in accordance with the department's current fee resolution. The engineer's estimate shall be based on the unit costs shown in Division VII of the Development Standards, and include a 20% contingency factor.
- _____ 2) The plan review fee shall be based on all proposed items of work. The plan review fees shall be submitted prior to review of the second submittal of improvement plans. Resubmitted plans will not be reviewed until the fees are received.

- _____ 3) The inspection fees shall be based on all proposed work that will be inspected by county staff and/or maintained by the county or overlaid by a County Service Area (CSA). Facilities/utilities that are inspected by others, but are within the county roadway, must also be included. The inspection fee shall be submitted prior to issuance of a grading permit or commencement of any work on the project, whichever occurs first.

- _____ 4) Additional fees are due because plan review comments were not adequately addressed by the third submittal. _____ additional hours were spent on the latest review, and additional fees of \$_____ (\$105/hour) shall be submitted prior to performing the next review.

C. FLOOD/DRAINAGE

Provide the following:

- _____ 1) Flood/Drainage calculations signed and sealed by Registered Civil Engineer.
- _____ 2) Copy of all appropriate supporting reference materials. _____
- _____ 3) Drainage area map showing all sub-areas being routed (both off-site and on-site).
- _____ 4) On 8-1/2 x 11 sheets, a tabulation of lot numbers, flowline elevations, base flood elevations, proposed pad elevations and proposed finish floor elevations.

D. STORMDRAINS, PIPES AND INLETS

Show the following:

- _____ 1) Width of openings of all inlets. Minimum opening width is 3.5'
- _____ 2) Flowline elevations of all inlets. Call out normal and depressed FL elevation
- _____ 3) Invert elevations of all inlets.
- _____ 4) Profile of all stormdrain pipes.
- _____ 5) 2.5 feet minimum cover over all pipes.
- _____ 6) Provide hydraulic and energy grade line calculations of storm drain system. HGL shall be plotted on street plans.

- _____ 7) All stormdrain pipes to be Class III RCP with rubber gasket joints or other approved alternative.
- _____ 8) Slope of pipes on profile drawings.
- _____ 9) Water surface elevation in catch basins shall be 0.5 feet below inlet (FL) elevation.
- _____ 10) Pressure manholes shall be installed when the energy grade line is less than 0.5' below the top of the manhole.
- _____ 11) Length of all stormdrain pipes.
- _____ 12) Manholes or junction boxes shall be installed at all junctions and bends and at the following prescribed interval:

Pipe Size	Spacing Interval
≤ 30"	300'
> 30" but < 48"	400'
≥ 48"	500'

- _____ 13) Size of all stormdrain pipes.
- _____ 14) Storm drains shall be parallel or perpendicular to centerline of street R/W.
- _____ 15) Show easements for all storm drains located outside of public road R/W
- _____ 16) Drainage system is to be free flowing and shall not allow the retention of more than one (1) foot of water measured at the flowline after the flows have subsided.
- _____ 17) If grates are used, provide the following:
 - _____ a) Indicate size
 - _____ b) Manufacturer's name and catalog number of grate
 - _____ c) Supportive information and calculations
- _____ 18) Detail drawings of non-standard structures.

E. SUMP

Show the following:

- _____ 1) Design water surface elevation (1.0 foot free-board from lowest inlet)
- _____ 2) Bottom elevation.
- _____ 3) Distances around perimeter of sump lot.
- _____ 4) Bottom distances (length and width).
- _____ 5) Access ramp slope and width.
- _____ 6) Plan view with pipes and discharge structure.
- _____ 7) Profile view with pipes and discharge structure.
- _____ 8) Volume of sump, provided and required (acre feet).
- _____ 9) Sump fence shall be six (6) feet minimum in height and shall be constructed of concrete masonry units (CMU) and sealed with approved graffiti resistant paint.
- _____ 10) Finished grade elevations outside concrete fence footing.
- _____ 11) Finished elevations at top of sump corners at BC and EC.
- _____ 12) Other data:
 - _____ a) Sump volume calculations
 - _____ b) Copy of sump drainage test report
 - _____ c) Letter from the engineer (sealed and signed) to indicate that there are no water wells within 100 feet of the proposed sump location
 - _____ d) Indicate scale of drawings (check drawings $\pm 2\%$ error) on plans
 - _____ e) Show north arrow on plans
 - _____ f) Check all drawings for reference to plate number(s) of Kern County Development Standards
- _____ 13) Letter from the engineer to indicate that, in his opinion, based on appropriate

_____ testing the sump will drain in seven days or less.

- _____ 14) Check elevations to verify soil borings are three times the design ponding depth below invert of sump.

ADDITIONAL COMMENTS: _____

