



City of Victorville

Department of Public Works

Engineering ♦ Public Works ♦ Utilities ♦ Water

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Minimum Requirements for Grading Plans

GENERAL REQUIREMENTS

- The Grading Plan submission must be accompanied with a previously approved Hydrology Study, based on San Bernardino County method of calculations for 25 year and 100 year storms including both on-site and off-site runoff (assume ultimate upstream development) with special attention to concentrated flows on to and off of the property. Said hydrology study is to be wet stamped and signed by the preparing engineer.
- Geotechnical/Soils Report for the site and streets as specified in the City Standard Specification for Public Improvements.
- Engineer's estimate of construction costs for the proposed improvements (based on prevailing wage).
- 3 sets of check prints and one digital pdf copy
- Erosion Control Plans may be included with and as a part of the Grading Plan.
- Sheet size to be 24"x36" (no exceptions).
- All notes and dimensions to be read from the bottom or right side of the sheet.
- Plan to be drawn to standard engineering scale with the scale shown on each sheet.
- North arrow
- Street names shown on each sheet.
- All sheets to be wet stamped, signed and dated by the preparing engineer.
- All stationing to be from left to right.
- Adjoining sheets must be identified and referenced by match lines, design elevation and station.
- Plan must be based on an approved City of Victorville bench mark, located on plan, described and elevation given.
- Show owner's name, address and telephone number.
- Show name, address and telephone number of owner's representative, if other than owner.
- Show legal description for property involved.
- List Assessor's Parcel Number for property(ies) involved.
- Across the bottom of each sheet include the following from right to left:
 - Block for sheet number and total number of sheets.
 - Title Block including text "In The City of Victorville, CA", the tract map or other title of development, type of construction (street, storm drain, sewer, water, grading or erosion control plan), and limits of construction including stationing(if applicable).
 - City of Victorville Engineering Department Approval block with current consulting engineer's name, date, license number and expiration date.
 - Revision block.
 - Name, address and phone number of company that submitted the plans, initials of company designer and checker.
 - Signature Block for private engineer that prepared the plans with name, date, license number and expiration date.
 - Seal of the responsible Registered Engineer that plans were prepared by or under the direction of.
- Identify all improvements (existing, proposed and future). Existing improvements are to be shown by dashed lines, proposed improvements by solid lines and future improvements by broken lines.
- Show existing elevations and slopes in parenthesis where proposed data is shown.
- Include approved General Notes on Title Sheet.
- Include vicinity map, index map of and index of drawings on Title Sheet.
- Any specific construction notes must reference to approved City, County, State, APWA standards or other professional standards. If item design is other than an approved standard, it must be detailed on the plan.

- Plan must be in compliance all conditions of approval requirements or approved alterations for the subdivision map or permit and include a list by reference number to all that apply placed in the lower right hand corner of each sheet.
- Private engineer/developer is responsible for any and all coordination and approval(s) with San Bernardino County Flood Control District, State of California, Caltrans or any other governmental organization whose authorization and or approval is required.

DESIGN REQUIREMENTS (minimum)

- Design requirements are subject to the City Standard Specifications for Public Improvements and City Municipal Code.
- Improvements and elevations shown must match other plans for project.
- Bearings and distances along centerlines shall match the approved (recorded) tract map.
- All street names shall match the approved (recorded) tract map.
- All lot lines and lot numbers shall match the approved (recorded) map.
- Show all easements and natural drainage courses.
- All improvements on site and within street right-of-way shall be fully controlled and dimensioned to accommodate construction staking.
- All structures shall be drawn to scale and detail(s) provided for clarity where needed.
- Street centerline station and finish surface elevation for beginning & end of curves, points of reverse curvature(horizontal and vertical), grade breaks, low points & high points of vertical curves and beginning & end of construction and other design key points.
- Curb & gutter station and elevation of top & flowline for all beginning & end of curves, points of reverse curvature including the curb returns at intersections, change in direction, grade breaks, at the extension of property side lines, at beginning & end of construction and other design key points.
- Flowline elevations of cross gutters shall be shown.
- Station, existing elevation and proposed finish surface must be shown at construction match points.
- Station and elevation must be shown at grade breaks and key design points.
- Finish grade elevations at property corners, building corners, concrete corners and drainage design points must be shown.
- Existing elevation contours (typically 2' maximum interval) and topography mapping extending 100 feet minimum beyond project limits or further if design impacts to are a concern.
- Maximum design slope is 2:1 unless previously approved by Engineering Department. Cut and fill slopes are to be lightly shaded.
- Parkway slopes shall fall towards top of street curb at 2.00% (no exceptions)
- Minimum flow grade shall be 1.00% except for smooth concrete which will be 0.50%.
- Direction and gradient of all flow lines and sheet flows.
- All designed structures draw to scale or on detail drawing.
- Maximum grade for handicap parking is 2.00 % in any direction or as allowed by current ADA Design Standards which ever is most stringent.
- Maximum grade for handicap ramps shall be 8.33% along run and 2.00% cross slope.
- Driveway grade shall not exceed 12.00 %.
- Building pad and finish floor elevations must be shown for each lot. (finish floor must be 0.50' higher than building pad and building pad must be at least 0.30' higher than adjacent flowlines)
- Area within 5' of commercial doorways shall be maximum of 0.50% grade away. All other onsite walkways shall be no more than 6.60% on run and a maximum cross grade of 2.00%.
- All underground structures and utilities that may conflict or impact the proposed grading must be shown including exact location (if it can be determined) and proposed relocation. (if required)
- Any utility vaults, manholes, clean-outs, valve cans and other structures that must be adjusted to grade must be noted.
- Grading/improvement limits must be shown. If limits encroach onto adjacent property, letter(s) of permission or agreement must be obtained from the property owner(s).

- “Grade to drain” design situations must show sufficient existing conditions, finish elevations and control to provide direction on how it will be accomplished.
- The Index Map shall include direction of water flow around and through the project.
- Drainage crossing sidewalks to the street, drainage easement, or natural drainage course shall be conveyed through 4” pvc drainpipe other structure, under sidewalk through the face of curb, except in single family residential developments.
- Show where incoming water runoff enters project and address control of runoff through project.
- Show where water is leaving the site and how it will be returned to its natural drainage course.
- All slopes shall have the following setbacks from structures or property lines and shall also conform with Appendix, Chapter 33 of the Uniform Building Code:
 - Top of slope shall be set back from the property line or right-of-way line 0’ for a vertical slope height of 3’ or less, 2’ for a vertical height of up to 10’ but higher than 3’ and one-fifth (1/5) of the vertical height for vertical heights in excess of 10’.
 - Top of slope shall be setback from face of footing of structure by one-third (1/3) of the vertical height of the slope but need not exceed 40’.
 - Bottom of slope shall be setback from the property line or right-of-way line by one-half (1/2) of the vertical height of the slope with a 2 foot minimum and a 20 foot maximum setback.
 - Bottom of slope shall be set back from face of structure one-half (1/2) of the vertical height of the slopes.
 - Building footprint shall be shown and dimensioned to beginning of slopes, property lines and other key structures/improvements.
- Existing and proposed pavement limits shall be identified with shading, hatching or other acceptable clearly defined drafting method.
- All proposed and existing above ground utility structures including street lights shall be shown in order to determine possible conflicts.
- Street lighting may be shown on the grading plan for Commercial projects
- Subdivisions shall require a separate street lighting plan.
- An 8’-9” x 10’-8” 4” thick PCC slab at 0.50% maximum run grade shall be constructed in front of all trash enclosures.
- A 6” high PCC curb shall be required along the back of street sidewalks where the adjacent landscape area is planted with vegetation other than sod.

GRADING PLAN GENERAL NOTES (minimum)

1. Grading shall conform to Section 15.06 of the City of Victorville Municipal Code.
2. A Grading Permit shall be obtained from the City of Victorville Building Department prior to the start of grading work.
3. **Contractor** shall give the City of Victorville Engineering Department at least 2 working days notice to schedule a pre-construction meeting with the inspector prior to the start of work.
4. The **contractor** shall notify Underground Service Alert at 1 (800) 422-4133 at least 2 working days in advance of starting work.
5. It shall be the **contractor’s** responsibility to familiarize himself/herself with site conditions and of any underground utilities shown or not shown on these plans
6. The **contractor** shall give the City of Victorville Engineering Department at least 1 working day notice prior to all inspections at (760) 955-5158. A re-inspection fee will be rendered on each occasion when the **contractor** is not ready for the inspection at the scheduled time. No further inspections will be performed until said re-inspection fee is paid.
7. It shall be the **contractor’s** responsibility to protect surveying monuments in place and the **contractor** shall be financially responsible for resetting damaged or destroyed monuments.
8. Joshua trees shall be protected in place or relocated as approved by the Parks Division of the City of Victorville Department of Community Services at the **contractor’s** expense.
9. No grading shall commence prior to 7:00 a.m. each working day.
10. Dust control shall include:

- a. Provisions for continuous watering during grading operations including a 24-hour on call operator or as directed by City Staff.
 - b. Upon completion of the project, the entire site is to be stabilized by treating with magnesium chloride or other approved method and as approved by City Staff
11. Clear all cut and fill areas of vegetation and organic materials to a depth of six (6) inches or more.
 12. Fill shall be placed in lifts of eight (8) inches or less and sufficient moisture added and material compacted to achieve the required percent of compaction.
 13. No rocks greater than six (6) inches in diameter may be placed in fill.
 14. Compaction shall be a minimum of ninety percent (90%).
 15. Minimum slope for all graded areas shall be one percent (1.00%) unless on smooth PCC, then the minimum slope shall be one-half percent (0.50%).
 16. Maximum slopes shall be 2:1. Slope stabilization shall be provided on all slopes in accordance with Section 3316 of the Uniform Building Code.
 17. All off-site improvements shall be constructed to City of Victorville Standards
 18. All fences and walls are under separate permit.
 19. Retaining walls shall be constructed to City of Victorville Standards or wall calculations submitted to the Building Department for City approval.
 20. Building pad and grading plan certification shall be completed by a licensed engineer in accordance with Section 3317 of the Uniform Building Code.
 21. The maximum allowable foundation bearing pressure shall be 1500 psf unless approved by the City of Victorville Building Department.
 22. The **contractor** shall comply with the Grading Ordinance Section 15.06.080 and Section 15.06.090 as it relates to borrow pits, export sites and haul routes prior to issuance of a grading permit.
 23. A Paleontological Monitor must be present during all phases of grading when required by City Staff.
 24. Approximate Quantities:

Cut _____ cu. Yds.

Fill _____ cu. Yds.

Shrinkage _____ %

25. Construction activities of one (1) acre or more shall require a General Construction Storm Water Permit. For more information, you may call the State Water Resources Control Board – Division of Water Quality at (916) 657-1146.
26. All grading shall comply with this Grading Plan and the recommendations set forth in the soils report entitled _____, prepared by _____, and dated _____.

Note: Where **contractor** appears you may substitute owner, developer or engineer.