

May 31, 2022

## **GENERAL NOTES – Storm Drain Plans**

1. All work must be in conformance with the current, approved County of Orange, OC Public Works (OCPW) Standard Plans and the Standard Specifications for Public Works Construction as published by BNi Building News (Greenbook) and both must be kept on the job site at all times.
2. Design of all storm drain work shall be in conformance with the latest edition of Orange County Hydrology Manual and OC Local Drainage Manual.
3. Prior to ordering any concrete or concrete products for use on the project, soil sulfates tests shall be performed by the OCPW Materials Laboratory.
4. All concrete and its placement in reinforced concrete structures shall conform to the requirements of OCPW Standard Plan 1803.
5. All concrete mix designs shall be prequalified by the OCPW Materials Laboratory.
6. All pipe lengths are horizontal projections, unless otherwise shown.
7. For trench excavations in native soil, shoring or benching shall be provided to satisfy the State of California OSHA safety requirements and OCPW standards. Shoring or Benching plans shall be under a separate permit.
8. Pipe construction in fill areas must be coordinated with the OCPW Inspector to ensure that when the fill operation has been completed at grade, there is a minimum of 2 feet above the top of pipe.
9. The contractor must notify the OCPW Inspector at least two (2) working days prior to commencement of any construction by telephoning (714) 245-4550.
10. All fills must be compacted to minimum 90% relative compaction per the latest OCPW Standard Plan 1801, Note 9.
11. All surveying required for vertical and horizontal alignment must be provided by the contractor or developer, and sufficient reference staking must be in accordance with the request of the OCPW Inspector and per OCPW Standard Plan 1801, Note 12.
12. All reinforced concrete pipes must be bedded in accordance with the pipe bedding detail per OCPW Standard Plan 1319.
13. Contractor will notify OCPW Materials Laboratory (714) 667-4996 at least two (2) working days prior to D-Load testing of R.C.P. for verification of results.

14. Prior to the placement of storm drain improvements, the developer's soils engineer shall certify and submit in writing to the OCPW Inspector that the storm drain's subgrade is of adequate strength to support the structures and any anticipated loads.
15. Prior to commencement of construction, the developer's contractor shall obtain a permit from Cal/OSHA. A copy of the permit shall be kept at the job site at all times.
16. Whenever applicable, the developer shall secure all required Federal, State, and Local environmental regulatory permits, agreements, and/or clearances prior to commencement of construction, and shall keep a copy of all such documents on site for examination for the entire duration of construction activities.
17. All reinforcing steel shall conform to the requirements of OCPW Standard Plan 1803.
18. All materials testing for the drainage facilities shall be provided by the OCPW Materials Laboratory in accordance with the number, location, and frequency determined by the OCPW Inspector.
19. Chamfer all exposed edges of concrete  $\frac{3}{4}$ " minimum.
20. An Encroachment permit is required from OC Public Works for any encroachment into public right of way necessary for construction.
21. The length of manhole structures may be increased to meet pipe ends at option of contractor as long as reinforcing steel is continued as required. Any change in spur location must be approved by the engineer and the OCPW Inspector.
22. Manholes shall not be located in street intersections.
23. The floor of manhole structure shall be steel troweled to spring line.
24. The body of manhole structure, including spur, must be poured in one continuous operation, except that a construction joint at the spring line with a longitudinal key way is permitted.
25. All reinforcing bars must be securely held in place in the forms. Two-way mats of steel must be wired together both ways at alternate intersections.
26. All pipe to be banded and grouted (less than 24" – outside only; 24" and greater – inside and outside).
27. Reinforced concrete pipe (RCP) shall comply with all A.S.T.M. applicable standards.
28. RCP will be the standard for local storm drain design.
29. All local depressions shall be constructed per Street Improvement Plans in accordance with OCPW Standard Plans or approved Alternative Design Standards where specified.
30. The contractor shall conduct construction operations in such a manner that storm and other waters may proceed uninterrupted along their existing street or drainage courses.

31. In the course of water control, the contractor shall conduct construction operations to protect waters from pollution with fuels, oils, bitumens, and other harmful materials per the State NPDES construction permit and accepted SWPPP.
32. Local depressions and decks of curb inlets shall not be poured until adjacent curb and gutter has been placed.
33. If a driveway encroaches within a local depression transition, use OCPW Standard Plan 1308 - Type "A".
34. Catch basin curb support and inlet angle shall be constructed per OCPW Standard Plan 1306 - Detail A, Sheet 2 of 3.
35. Curb inlet deck shall be constructed monolithically with sidewalk, if sidewalk is to be constructed.
36. All storm drains outside of Orange County right of way or easement will be maintained by others.
37. The minimum diameter of publicly maintained conduit shall be 18 inches. Privately maintained conduit in public right of way shall be 18 inches.
38. Locations of public utilities shown have been determined from available information. However, it shall be the responsibility of the contractor to determine the true location of any existing utilities and to exercise proper precautions.
39. Designate all storm drain lines showing "Private" or "Public" delineation at right of way for lines conveying public flows. If storm drain lines solely convey private flows, storm drain must be labeled to be privately maintained to the mainline connection or where co-mingling of private and public flows occurs.
40. Video/CCTV of storm drain is required upon completion of cap paving and prior to County storm drain facility acceptance.