

# ENGINEERING DESIGN SUBMITTAL REQUIREMENTS

## *Drawing submittals*

Drawings shall be submitted on standard 24" x 36" bond paper for engineering review and approval. Each sheet shall be numbered and titled. Each sheet shall have a minimum text height of 0.10 inches.

## *Cover Sheet*

Minimum information required shall include a vicinity map, site map, project title, sheet index, owner/developer address and phone number, revision block, engineers stamp, city signature block (locate in lower right corner). General notes and legend may also be shown on this sheet.

## *Existing Conditions Sheet*

All pertinent as-built and existing utility information on and adjacent to the project shall be noted on this sheet. Existing utilities shall include: all manhole rim and invert flow line elevations, existing street lighting, gas mains, valves and services, water mains, valves and services, sanitary mains and services, electrical, TV, phone lines, power pole locations, utility risers and transformers, curb lines, catch basins, driveways, sidewalks, curb ramps and sign locations. All existing wells, septic drain fields, irrigation systems, and any other private or public service lines or easements shall be shown on this sheet. All sensitive lands, archeological sites, wetlands, stream courses and buffers including existing contours shall be shown.

## *Grading and Erosion Sediment Control Sheet (see design stds for grading/ESC)*

Information shown shall include a legend showing shaded or hatched cut and fill locations and erosion control BMP's. Existing contours screened back and proposed contours shall be shown including any grading associated with the storm water facilities. Locations of stripping stockpiles, building envelopes, and areas to be protected from damage shall be shown. Grading and Erosion control notes shall also be shown on this sheet. A table listing the total cubic yards of cut, fill, and strippings shall also be shown.

## *Street and Storm Plan Sheet (see design stds for street and storm)*

Information shown shall include the proposed storm system including manhole locations, catch basin locations and types. The rim, grate and pipe invert in and out elevations shall be listed to the hundredth of a foot. All pipe runs and catch basin lateral lines shall list pipe size, length, slope, and pipe material. The required street information shall include street centerline stationing and centerline curve information including radius, length, and central angle. Centerline tangent bearings shall be listed. All high and low points shall be identified. Curb return information shall include radius, length, and central angle. Sidewalk and curb ramp locations shall be shown. Street and Storm construction notes shall be included on this sheet.

### *Water and Sewer Plan Sheet (see design stds for water and sewers)*

Information shown shall include the proposed water and sewer system and service line locations. Water and Sewer main line lengths, sizes, material types, and where appropriate, slopes shall be listed. Sewer manhole rim and pipe invert elevations in and out shall be listed to the hundredth of a foot. All water and sewer system appurtenances including AARV's, cleanouts, blowoffs, hydrants, valves and PRV's shall be called out on the plans. The water and sewer construction notes shall be included on this sheet.

### *Street and Storm Profile Sheet*

Profile sheets shall include the street centerline proposed vertical alignment and vertical curve information including PVI station and elevation, high and low point station and elevation, vertical curve length, begin and end stationing, grades in and out of the vertical curve, algebraic differences, and "K" values shall be listed. Proposed finished grade and existing ground lines shall be shown. Where curb elevations left and right are not the same due to shed sections or cul-de-sacs, the left and right top of curb profiles shall also be shown on the profile sheet. Street intersections shall be identified. The proposed storm system shall be shown including manhole and catch basin stations and elevations of all pipe inverts, rims and grates. All pipe runs and laterals shall have line sizes, pipe diameters, slopes and materials labeled or noted. All proposed and existing utility crossings shall be shown.

### *Water and Sewer Profile Sheet*

The proposed finished grade and existing ground lines shall be shown. Street intersections shall be identified. The proposed water system shall be shown including blowoff, hydrant, valve, PRV and AARV locations and minimum depth of cover requirements. The proposed sewer system shall be shown including stations and elevations of all manholes, pipe inverts, rims and cleanouts. All pipe runs and laterals shall have line sizes, pipe diameters, slopes and materials labeled or noted. All proposed and existing utility crossings shall be shown.

### *Detail Sheets*

The detail sheets shall show specific city standard details for water, sewer, and storm system appurtenances as proposed on the engineering drawings. The typical street width sections and structural section requirements shall also be shown. Other detail sheets may include street intersection details, stormwater detention and treatment facility details, trail location, section and construction details, sanitary sewer pump station facility details, landscaping layout, irrigation and planting detail and or street signage and striping details.

### *Miscellaneous*

Based on submittal review the engineering department may require additional information to provide a complete understanding of the project. These requirements are provided as a minimum for a timely review.