

**SECTION 3
IMPROVEMENT PLAN REQUIREMENTS**

3.1 ELECTRONIC SUBMITTALS

At the discretion of the City, plans prepared on a computer may be submitted in electronic format for review. Only plans prepared using AutoCAD (acceptable versions as determined by the City) will be accepted. Plans may be submitted on an electronic storage device or via e-mail, as required by the City. Electronic plan submittals shall include all that is required in these Standards.

3.2 PAPER SIZE AND SCALE

Improvement plans submitted in hard copy shall be on 24" X 36" paper. Only common engineering scales shall be used.

3.3 DRAFTING STANDARD

All line work must be clear, sharp and of appropriate weight. Letters and numerals must be 0.1 inch minimum height, well formed, and sharp. Line work shall not intersect numerals showing profile elevations. Sharp, solid arrowheads shall terminate dimension lines.

3.4 TITLE SHEET

When possible, all improvement plans shall have the following information as a minimum on the cover sheet:

- The entire subdivision or parcel and project
- Assessment district limits (if applicable)
- City limits (if applicable)
- Street names (and widths when practical)
- Adjacent subdivision and/or property information, including names, lot lines and lot numbers and/or Assessor's Parcel Number(s)
- Property lines
- Public easements
- Location map
- Scale of drawings, including scale bar
- Index of sheets
- Legend of symbols
- Signature and revision blocks conforming to the Standard Drawing
- Benchmark information
- MMRP control number
- WDID #

3.5 TITLE BLOCK

Each sheet within the set of drawings shall have an approved title block showing the following.

- Sheet title
- Sheet number
- Date
- Scale
- Engineer of Record's name, signature and seal. (Signature may be placed across the seal.)
- Project title

The title block shall be either across the bottom or along the right edge of each plan sheet.

3.6 DRAINAGE, SEWER, WATER, SIGNAGE AND STRIPING AND GRADING LAYOUT

On all subdivision plans, a separate plan is required for each of the following:

- Water
- Signage and Striping, including any required traffic calming features
- Street lights
- Grading and erosion control

In addition, the storm drainage, sanitary sewer and water systems shall be shown on the plan and profile sheets. On all other plans, a composite plan layout of each system will be acceptable.

All plans showing the domestic water systems shall include signature blocks and be approved by the responsible water and fire departments. The signature block shall conform to Standard Drawing D-1 and shall be on the cover sheet of the plan set.

3.7 PLAN DETAILS

In addition to the other requirements set forth in these Standards, the following details shall be shown on the plans submitted for approval. This does not in any way exempt the Engineer of Record preparing plans from the responsibility of preparing neat, accurate and comprehensive plans in keeping with the standards of the profession.

A. **Record Information** - All existing and proposed record information shall be shown, including:

- Right-of-way lines
- Boundaries of lots fronting on the street
- Easements
- Both on-site and off-site right-of-way and easement lines shall be properly dimensioned
- Existing street addresses, where applicable

- All Survey monuments including boundary and all centerline monuments and ties.
- B. **Existing Facilities** - All pertinent existing facilities shall be shown, including but not limited to:
- Pavement delineation and traffic signage
 - Medians
 - Driveways (on both sides of the street along the project frontage)
 - Curbs, specifying type (rolled curbs or vertical curbs)
 - Sidewalks
 - Sidewalk ramps
 - Pavement shoulders
 - Location and size of all underground utilities, including but not limited to water, storm drainage, and sanitary sewer lines
 - Limits of 100-year and 200-year floodplains, where applicable
 - Structures
 - Trees (6" and larger) and other foliage
 - Traffic signals, cabinets, pull boxes and traffic detector loops with detector hand holes
 - Street lights, cabinets, pull boxes, and underground electrical conduits
 - Drainage ditches
 - Utility poles and transformers
 - Fire hydrants
 - Retaining walls
 - Contractor's Surveyor or Engineer's Surveyor shall be responsible for maintaining all survey monuments and shall file corner records and/or a record of survey pursuant to Section 8871 of the Professional Land Surveys Act.
 - Any other features which may affect the design requirements for the project area
- C. **Contours and Elevations** - Existing contours and supporting spot elevations shall be shown on all plans that extend one hundred feet (100') minimum beyond limits of work. See Section 10," Grading " of these Standards for boundary grading requirements.
- D. **Profiles** - The plans shall show the existing profile of all roadway centerline, edges of pavement, gutter flow lines, 100-year hydraulic grade lines (HGL) at critical locations, drainage ditches, existing water, storm drainage and sanitary sewer systems. Designs of proposed public improvements shall include profiles showing centerline elevations at 50-foot intervals and rates of grades, vertical curves and other vertical alignment data as deemed necessary by the City. In pavement widening situations, profiles shall include elevations of the existing centerline, edge of pavement and proposed lip or flowline of gutter (if gutter is required) at a minimum of 50-foot intervals. Designs for vertical curves shall show elevations at 25-foot intervals. Where it exists, City stationing shall be used for profiles of public streets. The Engineer of Record shall contact Community Development for such

stationing. When clearance between utilities is less than two feet (2') the clearance shall be noted by dimension in the profile.

The plans shall show the existing ground profile for a minimum distance of 200 feet beyond temporary street endings to ensure proper vertical alignment within the proposed improvement limits. The 200-foot minimum requirement may be increased as requested by the City.

- E. **Stationing and Orientation** - The stationing on plan and profile shall read from left to right. Stationing shall increase from south to north or from west to east, except for cul-de-sacs, where stationing shall proceed from the intersection. Plans shall be so arranged that the North arrow points toward the top or upper 180 degrees, insofar as practical.
- F. **Benchmarks** - Location, description, and elevation of benchmarks and datum shall be clearly delineated on the plans. The datum shall be 1988 North American Datum (U.S.G.S. or U.S.C. & G.S.) unless otherwise approved by the City. The Engineer of Record shall contact Community Development for location and elevation of the official benchmark nearest their project.
- G. **California Coordinates System** - The City may require that proposed improvements be tied into the California Coordinates System if monument coordinate points are available within a reasonable distance (200 feet or less) of said improvement as determined by the City.
- H. **Cross Sections** - Cross sections shall be included in the plans where determined necessary by the City. In pavement widening situations, cross sections shall be included at a minimum of 50-foot intervals including the existing and proposed cross slope information. Sections shall include all pertinent structural and topographical features. Section calls shall be identified by a number and letter and the sheet on which the section appears.
- I. **Special Notes** - Special Notes shall be clearly indicated. Notes shall contain a statement regarding obtaining encroachment permits from other agencies when applicable.
- J. **Detail Sheets** - Detail sheets, if necessary, shall delineate special details, structural designs, etc., for which no City Standard Drawing exists, and when space is not available on the plan and profile sheets.
- K. **Structure Details** - Plan views of the structure for which details of design are to be provided shall be shown on the detail sheets depicting the location of said structure in relation to street centerlines, stations, bearings, skews, grades, etc. Structural details shall be delineated at a scale that will clearly define all facets of the design.
- L. **Other Plans** - Other plans that shall be incorporated in the improvement plans include, but are not limited to, landscaping and irrigation; retaining and decorative soundwalls; and traffic signals. The layout of meandering sidewalks, soundwalls, pedestrian pass-throughs, etc., shall be shown on the improvement plans along with

any grading associated with these improvements in addition to being shown on the landscaping plans.

3.8 REQUIRED NOTES

A list of City required notes shall be included on all improvement plans submitted to the City for approval. A list of current notes is available on the City's website (www.elkgrove.gov) and may also be obtained from Community Development.

3.9 STANDARD DRAWINGS

Engineer of Records shall not include the Standard Drawings included herein on improvement plans, but shall refer to the drawing by number. If a design exception to a Standard Drawing is intended, the drawing shall be shown with the exception noted. The design exception shall be processed in accordance with these Standards and City-adopted policies.