



City of Hesperia
BUILDING AND SAFETY DIVISION

PLAN PREPARATION and CONTENT:

1. **Plan Preparation**, who may prepare and who is required to prepare plans.
 - a) **Single Family Residential; Additions and Alterations:** Traditionally, anyone was allowed to prepare these types of plans. However, since the 1994, 1997 and the 2007 editions of the code, the attention of a licensed professional has become more common. Engineered plans are required when the provisions of CBC Section 2308 "Conventional Light-Frame Construction" cannot be met.
 - b) **Residential Accessory Structures (detached garages, sheds, etc.):**
 - 1) Such plans must prove to meet all requirements or limitation indicated by the Municipal Code prior to plan acceptance. (Examples include the minimum lot size for the approval of metal buildings.)
 - 2) Wood frame structures will require the attention of a licensed professional if the provisions of CBC Section 2308 cannot be met.
 - 3) Metal and masonry construction will require an engineered design.
 - c) **Non-residential structures and other structures not classified as single family and single family accessory** typically require the preparation by a licensed professional.
 - d) **Tenant Improvement Plans**, per City Policy, are to be professionally prepared.
2. **Professional Plan Preparation:** Professional preparation may include a California licensed Architect only, or an Architect and an Engineer. Typically, the "A" (Architectural) plan pages are prepared by an Architect and the "S" (Structural) plan pages are prepared by an Engineer.
 - a) Wet stamps and signatures of the professional who prepared the plans or portion of the plans shall be affixed to the plan pages and accompanying calculations or documentation. The use of electronically affixed stamps and signatures must be accompanied by a wet stamped and signed cover letter that references the plan pages bearing the reproduced stamps and signatures.
 - b) Plans not requiring professional preparation are to be signed by the person who prepared them.
3. **Number of plan copies:** The absolute minimum is three complete sets for single family residential plans and residential accessory buildings. A minimum of five plan sets is typically required for multi-family, commercial and industrial projects in order to enhance the review process by allowing concurrent reviews by Planning and Fire. One set is forwarded to the County Assessor.

4. Plan Content:

a) **Site or plot plan:** In Hesperia, this is the combination Site/Grading/Drainage Plan. Plans will often have a separate site or plot plan that does not address all of the site improvement, drainage issues and other issues.

1) **Common to all plans, residential and non-residential.**

- Vicinity map: Provides a general location of the site with respect to major roadways or other features in order to assist in the review process. Unusual or uncommon requirements are often brought to the attention of the counter technician or plans examiner by means of an accurate vicinity map. (FEMA areas; flood areas; Master Plan of Drainage, etc.)
- Lot identification: Lot and Tract number; Parcel map number; Assessor Parcel Number; address.
- North Arrow: As simple as it may sound, an accurately placed north arrow has saved many costly errors through the years by providing another means of verifying that the correct lot is being addressed on the plans. The arrow is also used to determine correct orientations for the purposes of Title 25 Energy Compliance.
- Lot size and configuration. All dimensions are to be consistent with the approved tract or parcel map that includes the subject property.
- All Right-of-way information is to be included. (Street name(s); street widths)
- Easements, etc: All Natural Drainage Courses, Drainage Easements, Public Utility Easements, alleys or other features shown on the recorded tract or parcel map are to be accurately shown on the plans for location and dimension.
- Location and placement of structure(s); all structural dimensions and distances between structure and distances between structures and property lines and easements.
- Location and dimension of proposed driveway approach and driveway.]
- Location and size of septic system and components or pipe size and location for connection to the public sewer; water service location, size and material; location of electric and gas meters; location of gas piping, underground service entrance conductors.

2) **Other than Single Family Residential:** The Site/Grading/Drainage Plan required for multi-family, commercial and industrial projects will require additional information. Examples are:

- Drainage and Drainage control and devices; location; identification of material and size.
- Accessibility requirements: Access from the R.O.W.; location and number of accessible parking spaces; signage and marking of accessibility requirements.
- Driveways; maneuvering areas; parking stalls; loading zones; trash enclosures; signs.

b) **Foundation Plan:**

- 1) Fully dimensioned; showing locations of all perimeter and interior foundations; post and pier locations.
- 2) Size and depth of foundation systems.

- 3) Location, size and type of anchor bolts; location, size and type of special holdown devices.
 - 4) Applicable plan notes and details; (see also comments on Cross-Sections to follow)
- c) Floor Plans:** Due to the possible complexity of multi-family, commercial and industrial plans, separate plans pages for structural, plumbing, mechanical and electrical requirements may be applicable. The following lists floor plan content, either as a single plan or separate specialized plan pages.
- 1) Floor plan for each floor or level. Fully dimensioned; all rooms and areas.
 - 2) Rooms and areas properly labeled for intended use.
 - 3) Door and window locations and dimensions. (Egress and accessibility requirements; light and ventilation requirements; bedroom egress window requirements; tempered glazing requirements, etc.)
 - 4) Structural components:
 - Header and beam locations, sizes, types, grade, etc.
 - Locations and size of posts.
 - Floor joists size, type, spacing and direction.
 - Roof truss or rafter size, type, spacing and direction.
 - Bracing method(s); size, type and location.
- d) Electrical:**
- 1) Location of electrical receptacles; placement at the interior; required exterior locations; GFCI protection.
 - 2) Location and type of light fixtures; location of light switches (consistent with the Energy Package requirements).
 - 3) Location and size of service panel; size and location of subpanels; panel schedules and load calcs.
 - 4) Wiring methods; size and type of conductors.
- e) Mechanical equipment:**
- 1) Location, size and type(s) of heating and cooling equipment. (Make, model, type of fuel, Input and Output BTU ratings, etc.)
 - 2) Location of equipment in approved and safe location(s).
 - 3) Access requirements (attic access, catwalks, work platforms, service light and outlet, access ladders, etc.)
 - 4) Location of return air openings; location of registers in rooms and areas.
 - 5) Fresh air introduction (required for most non-residential uses).
- f) Plumbing:** Isometric and plumbing layout plans (typically required on multi-family and non-residential projects; may be required on Single Family Residential if the project is complex or if PEX piping is proposed)
- 1) Location and identification of plumbing fixtures. (On non-SFR, fixtures to be clarified and identified for make and model and other features such as elongated bowls, split seats, handicap accessible, flushometer or tank, etc.)
 - 2) Water pipe sizes and materials; Water Service from meter to structure: (Sizes based upon the type of material, fixture unit demands, length of branches and runs; distance to meter, and pressure at the street.)

- 3) Waste pipe sizes and materials; applicable fire resistive construction restraints: (Size based upon the type of material, fixture unit demands, and length of branches and runs.)
- 4) Type of sewage disposal: Septic or public sewer. Sewer availability to be verified. Septic system sized per number of bedrooms for residential projects or calculated daily discharge of other than residential. Secondary component, leach line or seepage pit, sized per demand and EHS approved percolation report for the location.
- 5) Water heater size(s) and location(s): Verify approved location, access, combustion air and mechanical protection; verify elevation at garage location; verify pressure relief; verify fuel source.
- 6) Gas Pipe sizing: Based upon input BTU demands (calculated to CFH), distance from the meter to the most remote, and demands at the branch runs.

g) Cross-Sections:

- 1) Foundation cross-section: Width, depth, reinforcing steel number and placement; anchor bolt schedule.
- 2) Wall framing members (size, species, grade, spacing, height); Block size, reinforcing steel schedules, grouting, imbeds and anchors etc. for masonry; Concrete thickness, steel spacing, imbeds, etc. for tilt-up; steel building plan members and connection details.
- 3) Interior and exterior wall surfaces.
- 4) Insulation at entire envelope.
- 5) Roof framing members or trusses, size, species, grade, spacing, sheathing, roof covering.
- 6) Floor framing, if applicable, size, species, grade, spacing, sheathing.
- 7) Fire resistive construction components based upon required ratings; parapet framing, etc.
- 8) Decks, porches and patio cover framing members.

h) Elevations: Views of the proposed structure from all sides that shows wall finishes, roof coverings, window and door locations and other architectural and structural features consistent with other details in the plans

i) Roof Plan:

- 1) Indicating size, species, grade and spacing of rafters; ridge and hip ridges.
- 2) Location of roof mounted equipment; skylights, chimney; dormer vents, etc.
- 3) Trussed roof designs to include the truss layout package from an approved truss manufacturer.
- 4) Layout showing location of each type of truss; Details for each type of truss.
- 5) Truss engineer's stamp and signature. On engineered structural plans, the stamp and signature of the Engineer of Record must also appear on the truss package.
- 6) When beams or girder trusses are included, the truss or rafter hangers are to be indicated.
- 7) Roof covering material (to be consistent with required or allowable slopes for the type of covering used).

- j) Energy Compliance:** The submittal may be as an 8 ½" x 11" format attachment or printed directly onto plan size pages.
- 1) Correct Climate Zone (Climate Zone 14).
 - 2) Correct standards (those currently adopted by the State) performed on an approved program; or applicable Prescriptive package.
 - 3) All required signatures on both copies.
- k) Other plans or details:** On many non-residential plans, specialize equipment or appliances may be indicated. Plans, cut sheets, listing information would be required for but not limited to:
- 1) Rack systems.
 - 2) Fire Sprinkler systems.
 - 3) Vehicle lifts.
 - 4) Equipment weighing 400 # or more anchored for lateral forces on the structure (per CBC Section 1632.1)
 - 5) Specialized equipment or features.
- l) Engineering Calculations:** Wet stamped and signed by the Engineer of Record; current registration.