

CITY OF MILPITAS

Office of Building Safety
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Milpitas, CA 95035
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ADDITION (RESIDENTIAL)

1. PERMIT INFORMATION

- Residential additions require building, mechanical, electrical, and plumbing permits. A demolition permit and a fire protection system permit from the Fire Department may also be required. Residential addition projects require plans to describe the work that will be performed.
- A Building Permit may be issued only to the Building Owner or their Authorized Agent [CRC 105.1].
 - See also [Authorized Agent Sample Letter](#).
 - Where the Contractor is acting as the Owner's Authorized Agent, they must be a State of California Licensed Contractor with the proper license classification.
- If the work is performed by the Building Owner personally or by his/her workers and an inspection indicates the work cannot be completed satisfactorily, then a licensed contractor must perform the work.
- If the Building Owner hires workers, State Law requires the Building Owner to obtain Worker's Compensation Insurance. Proof of this insurance is required prior to inspection.
- If the property is regulated by a Homeowners Association, any exterior work must have approval of the Association. It is the property owner's responsibility to obtain this approval.
- Before saw cutting or breaking a slab-on-grade, verify if it is a post tension slab. Cutting a tendon in these slabs can be very dangerous and expensive to repair.

2. PLAN REQUIREMENTS:

To expedite issuance of your permit, submit complete sets of plans, including all related disciplines. Incomplete submittals will delay the approval of your project. If you have any questions, contact the Office of Building Safety staff at City Hall or at the phone number above.

The following are guidelines for preparation and submittal of your plans. Specific plan requirements will depend largely upon the extent, nature, and complexity of the work to be done. Some items listed below may not be required for your specific project. BE SURE TO INCLUDE ALL PERTINENT INFORMATION AND DRAWINGS.

Refer to [Design Guidelines for Single Story Residential Addition with Conventional Framing](#) for sample of the plans required for a residential addition project, and to the many separate handouts for more detailed information regarding these projects, including kitchens, bathrooms, garage conversions, water piping, lighting, etc.

- Plan Size:** Prepare plans on paper that is at least ANSI C (22 inches x 17 inches) in size.
- Sets of Plans:** Submit one complete set of plans.
- Clarity:** All plans shall be prepared to be sufficiently readable and clear for creating a digitized record. Plans shall be quality drawings of blue or black lines on a uniform light (white) background color. Pencil drawings are not acceptable, but copies of pencil drawings can be submitted provided copies are readable with good contrast.
- Dimensions:** All drawing shall be fully dimensioned. Plot plans, floor plans and other plan view drawings shall have a north arrow.

Scale: All drawings shall be drawn to an adequate scale with scale indicated. Recommended scales for drawings are:

Plot Plans:	1/8" = 1'-0", 1"=10' or 1"=20'	Floor and Roof Framing:	1/4" = 1'-0" or 1/8" = 1'-0"
Floor Plans:	1/4" = 1'-0"	Building Cross Sections:	1/4" = 1'-0" or 1/2" = 1'-0"
Foundation Plans:	1/4" = 1'-0" or 1/8" = 1'-0"	Exterior Elevations:	1/8" = 1'-0" or 1/4" = 1'-0"

Existing (E) and New (N) Construction: Throughout the plans, be sure to label all new (N) and existing (E) construction, components, and fixtures to distinguish between new work to be done and the existing work.

Completeness: Please remember, the more complete and accurate the drawings and submittal documents, the sooner your permits can be issued.

Signature: The person who prepared the plans must sign each sheet. If any of the plan sheets are prepared by a licensed architect or registered engineer, that individual must stamp and sign at least two copies of each of the sheets he or she has prepared in accordance with the California Business and Professions Code prior to plan approval. Plans for elements of the structure designed by others must be reviewed and signed by the Engineer or Architect of record. [California Business and Professional Code 5536.1, 6735]

3. PROJECT INFORMATION - On the first sheet of the plans, provide the following information:

Name of Architect, Engineer, or Designer: The printed name, address and telephone number of the person who prepared the plans.

Address and Owner: List the street address of the property and the name of the legal owner of the property.

An Index of the Drawings: List each sheet number and a description in an Index of the Drawings.

Scope of Work: State the complete scope of work to be performed under this permit.

Building Area: State the area in square feet of the existing house, the area to be added and/or remodeled, and the total of the existing and new area.

Deferred Submittals: List all proposed deferred submittals (e.g., roof trusses, prefabricated stairs, etc.). Deferred submittal documents shall be reviewed by the Architect or Engineer of Record with a notation indicating that the documents have been reviewed and are in general conformance with the design of the building prior to being submitted to the City for approval.

Building Codes: All work must comply with the 2022 California Residential Code (CRC) or 2022 California Building Code (CBC), 2022 California Electrical Code (CEC), 2022 California Mechanical Code (CMC), 2022 California Plumbing Code (CPC), 2022 California Energy Code (CEnC), 2022 California Green Standards Building Code (CalGreen), and the 2023 Milpitas Municipal Code (MMC).

4. ARCHITECTURAL PLANS - The following are minimum plan requirements for most projects based on the CRC:

Site (Plot) Plan: Show the location of existing buildings, proposed addition, all other structures on the site, property lines, location of easements, and locations of adjacent streets or alleys.

- Show front, side and rear setback dimensions, dimensions to easements, and dimensions between buildings if there is more than one building on the site.
- Show finish floor elevations, elevations of finish grade adjacent to buildings, established street grades, drainage patterns, locations, and gradients of cut or fill slopes.
- Show the direction of true North.

- Show the existing and any proposed new parking.
 - **NOTE:** Planning Department requires the following off-street parking:
 - 3 bedrooms or less – 2 parking spaces.
 - 4 or more bedrooms – 3 parking spaces plus 1 space per bedroom exceeding 4.
- **Floor Plan:** The Floor Plan must show all existing rooms, new rooms, and rooms to be modified. Label the use of each room. Provide all information necessary to explain what, where and how the work will be done.
 - The building shall not exceed 3 stories [CRC 1.1.3].
 - Exterior walls, including projections from them and openings or penetrations in them, must comply with the requirements of CRC R302.
 - Habitable rooms must be no less than 70 square feet in area, and not less than 7 feet in any horizontal dimension [CRC R304].
 - Provide door and window schedule including hardware.
 - Means of egress (e.g., doors, landings, hallways, stairs, etc.) must comply with the requirements of CRC R311.
 - Provide at least one side-hinged exterior egress door compliant with CRC R311.2.
 - Provide emergency escape and rescue openings in basements, habitable attics, and every sleeping room compliant with CRC R310.
 - Provide safety glazing where required by CRC R308.4. Refer to the [Window and Door Replacement](#) handout for additional information.
 - Provide natural lighting and ventilation meeting the requirements of CRC R303.
 - Provide artificial lighting at stairways as per CRC R303.7 and R303.8.
 - Indicate the location of access to under-floor spaces and detail required ventilation [CRC R408].
 - Provide for fire separation between dwelling units and garages and/or carports so as to comply with CRC R302.5 and R302.6.
 - Only gas fireplaces, pellet-fueled devices or E.P.A. certified wood-burning devices may be installed in new construction, and replacement of existing devices not conforming to these categories may be required depending on the scope of work [MMC II-15].
- **Ceiling Plan:** Either on the Floor Plan or on a separate Ceiling Plan show all ceiling heights, finishes, electrical and mechanical work.
 - Indicate the location of access to attic spaces where required [CRC R807.1].
- **Roof Plan:** If skylights or other work on the roof is proposed, show a plan view of existing roof.
 - Indicate roof slope, roof slope direction, existing and proposed roofing materials and its fire-resistive classifications.
 - Roof coverings on houses in hillside construction must be Class A or B [MMC II-3.5-2.01].
 - Show the location and construction details of all skylights. Refer to the [Skylights](#) handout for additional information.
 - Provide enclosed attics and/or rafter spaces with ventilation so as to comply with CRC R806.
- **Elevations:** Show exterior elevations or views of all sides of the building that will have new doors, windows, siding, or other new construction. A minimum of two (2) exterior elevations should be provided along with exterior materials and notations. Show the existing building as well as the proposed new addition.
 - Clearly show the maximum building height, based on the definition in CRC R202.
 - Indicate if the lower level is a basement or story, based on the definitions in CRC R202.
 - Detail weather-resistant exterior wall envelope including wall finish, material, and thickness [CRC R703].
- **Cross Sections:** At least one (1) detailed cross section is required. Provide additional sections where needed to clarify the intended construction. Provide connection details between foundation, floors, walls, ceilings, roof, and other construction, and how the new addition will be connected to the existing building at foundation, walls and roof. Be sure to indicate cross section cut lines on the Floor Plan.

Details and Notes: Include all construction details of the foundation, floor, walls, ceilings and roof, connection details to existing building, details of fireplaces, handrails, guardrails, and stairs (including rise and run). Provide all necessary notes to explain the proposed construction.

5. STRUCTURAL PLANS: The following are minimum structural plan requirements for most projects based on CRC:

Foundation Plan Provide a dimensioned foundation plan with sufficient details to clearly show foundation construction including size and depth of footings. Include details for how the new floor and foundation will join the existing floor and foundation. New foundations must match the existing foundation design, or the foundation must be an engineered system prepared by a civil or structural engineer licensed in the State of California and requires a soils report.

- All foundation designs for new residences and additions in Hillside areas shall be designed and prepared by a civil or structural engineer licensed in the State of California [BDP-BLG09].

Floor Framing Plan: Provide size, spacing and direction of floor beams or joists; include sub-floor sheathing and nailing.

Roof Framing Plan: Show size and location of roof beams, roof rafters and ceiling joists span and sizes, overhangs, and details, and indicate any required modifications to the existing roof framing.

Prefabricated Roof Trusses: If trusses are to be used, provide copies of the truss shop drawings, layout plan, and calculations with the engineer's stamp and wet signature, reviewed and signed approved by the project architect, engineer or designer. If shop drawings are not submitted for review prior to issuance of the building permit, it shall be noted on the first page of the drawings the truss shop drawings will be a deferred submittal. The deferred submittal will require payment for an additional two hours of plan check review time. Submit the truss drawings for review and approval prior to fabrication of the trusses.

Wind and Seismic Bracing. Indicate on the plans how the construction is to be braced against wind and seismic forces, either by conventional construction means or by engineered shear walls. If bracing is by engineered shear walls, dimension the length of each shear wall, and show the structural sheathing material, nailing, bolting and hold downs where needed.

Structural Details and Notes: Provide structural details such as post-to-beam connections, framing details, shear transfer details, material notes and specifications.

Structural Calculations: Structural calculations are required for building components, including vertical load carrying members and the lateral force resisting system, which do not meet "Conventional Construction" provisions as defined in the California Residential Code. If calculations are required, they must be stamped and signed by a California licensed architect or engineer. Calculations must be numbered by page and indexed for complex projects.

6. MECHANICAL, ELECTRICAL and PLUMBING PLANS:

Plans shall include all information necessary to show how the space is to be heated, cooled, and ventilated, how the plumbing fixtures are connected to plumbing systems and how the electrical energy is distributed and connected to the building power system. This can be done on the architectural drawings or on separate plans.

Specific mechanical, plumbing and electrical plan requirements will depend largely upon the extent, nature and complexity of the work to be done. The following are general guidelines for preparation and submittal of these plans.

Mechanical Plans: Show on the plans the location of all mechanical equipment, exhaust fans, locations of supply and return registers with size and material of all ductwork and methods of support and bracing. Show how the system provides the required fresh outside makeup air. Provide an equipment schedule with all specifications noted.

- Provide one 8 1/2" x 11" copy of the Title 24 California Energy Code calculations for mechanical and reproduce full size the appropriate Certificate of Compliance forms on the plans.
- Show the location of all new HVAC equipment. Provide a single-line diagram of the proposed duct and register system. Include duct length, size, register/boot size, and cold air return location.
- Show how the ventilation system meets the energy efficiency requirements of the CEnC.
- All equipment weighing more than 400 pounds, or 20 pounds if suspended from the ceiling, floor or roof, requires structural calculations.
- For appliances installed in attics and under-floor spaces, provide sections detailing the equipment and showing how the dimensional and lighting requirements of CMC 304.4 will be achieved.
- Ducts in garages or through walls dwelling-garage walls must comply with CRC R302.5.
- Provide dryer duct layout, size, and length so as to comply with CMC 504.4.
- Detail and dimension chimneys so as to show compliance with CMC 802.5. Include note indicating that the manufacturer's instructions must be present on the job site for the installer and the inspector.
- Refer to the following residential handouts for more detailed information:
 - [Air Conditioning](#)
 - [Furnace](#)
 - [Brick, Masonry, and Precast Fireplace Reconstruction](#)

Electrical Plans: Show on the plans the size and location of the electrical service, any other panels, transformers, all switches, lights, receptacles, and any equipment requiring electrical connections. Note if existing or new. Note if a receptacle is GFCI protected. Provide panel schedules and load calculations to verify service is adequate for new and existing loads, a single-line power distribution plan, and a fixture schedule.

- If a new grounding electrode system is required, it shall be an electrode encased by at least two inches of concrete located horizontally near the bottom or vertically, and within that portion of a concrete foundation or footing that is in direct contact with earth. The electrode shall consist of at least 20 feet of one or more steel reinforcing bars or rods, of not less than 1/2 inch diameter, or consisting of at least 20 feet of bare copper conductor not smaller than 4 AWG. The connection side of this concrete-encased electrode shall be located remotely away from the main electrical service equipment [MMC II-6-2.03].
- Provide GFCI protected and outlets where required [CEC 210.8 (B)].
- Provide AFCI protection to branch circuits where required [CEC 210.12(A)].
- Ensure receptacles are noted as tamper-resistant [CEC 406.12] and provided so as to meet location and spacing requirements [CEC 210.52].
- Show branch circuit layout.
- Provide lighting and controls for new or altered lighting so as to meet requirements of the CEnC.
 - A list of JA8 high efficacy lighting certified as meeting the requirements of the CEnC is available through the California Energy Commission's [Modernized Appliance Efficiency Database System](#).
- See the following residential handouts for more detailed information:
 - [Bathroom Remodel](#)
 - [Electrical Panels](#)
 - [Kitchen Remodel](#)
 - [Lighting, Switches, and Receptacles](#)
 - [Electrical Vehicle Charging System](#)

Plumbing Plans: Show on the plans the location of all new plumbing fixtures, water heaters, floor drains, etc. Provide a piping layout plan showing the size, length, and material of all water, waste, vent, and gas piping. Provide detailed calculations for the sizing of the piping. Show the location, materials and installation requirements of all piping located outside the building.

- Include a complete list of fixtures and their gas/water demands.
- Provide isometric drawing for the proposed drain, waste and vent system. Drawing must include fixture count, pipe size and length, fixture location, clean-out locations, slope, and connection to existing system. Justify size of drainage piping as per CPC 703.
- Provide single-line diagram for the proposed water system, including total developed length (meter to most remote fixture), service and meter size, branch lengths, total fixture units, branch fixture units, pipe size and length. Indicate method used for sizing [CPC 610].
- Provide single-line diagram of the proposed gas piping system, including total developed length, total demand (BTU & CFH), appliance location with BTU/CFH listed for each appliance, branch length, and pipe size. Indicate method used for sizing [CPC Section 1215].

- Note the dimensions where minimums must be met at fixtures (toilets, shower stalls, etc.).
- Detail the installation of the water heater, including seismic bracing.
- Plastic and copper pipes running in stud walls require steel nail plates when within 1" of surface [CPC 312.9].
- Piping for temperature or pressure relief valves must discharge to an approved location and meet CPC 608.5.
- Provide an approved Excess Flow Gas Shut-off Device or Seismic Gas Shut-off Device downstream of meter if an addition or alteration is made to the gas line [MMC Chapter 170].
- See the following residential handouts for more detailed information:
 - [Bathroom Remodel](#)
 - [Kitchen Remodel](#)
 - [Natural Gas Piping](#)
 - [Sewer Line](#)
 - [Water Heater](#)
 - [Water Piping](#)

7. ENERGY REQUIREMENTS:

Efficiency Standards

- The City of Milpitas is in Climate Zone 4 [CEnC Figure 100.1-A].
- Residential additions must meet the energy efficiency requirements of CEnC 150.2(a).
- Remodeled portions of the existing building must comply with CEnC 150.2(b).

Plan Requirements: Show on the plans how energy requirements are being met.

- Insulation - Indicate on the plans the exterior wall, ceiling and under floor insulation type and thickness.
- Radiant Barrier - A radiant barrier above the attic space may be required depending on attic design.
- Windows - Indicate the size and type of all new windows and note the U-factor and SHGC ratings.
- Water Piping - Hot water piping and some cold-water piping must be insulated, see [Water Piping](#) handout for more information.
- Lighting – Show how lighting and lighting control requirements were met.
- Equipment – Equipment shall meet California Energy Code requirements. Indicate on the mechanical drawings the AFUE or HSPF ratings of heating equipment and SEER or EER rating of cooling equipment.
- Ducts – Indicate on the mechanical drawings the duct insulation type and thickness, and if HERS testing of the duct sealing is required.

Calculations and Forms: Provide one 8 ½" x 11" copy of the Title 24 California Energy Code calculations for the building envelope and reproduce full size the appropriate Certificate of Compliance forms on the plans. See electrical and mechanical for additional requirements. Include throughout the drawings the building components included on the Compliance forms.

- Required forms may be found through the California Energy Commission's [Online Resource Center](#).

8. ADDITIONAL REQUIREMENTS

- **Smoke/Carbon Monoxide Alarms and Spark Arrestor Inspection.** In all one- and two-family residences, installation and inspection of required smoke alarms, carbon monoxide alarms, and spark arresters must be completed prior to the final inspection. Refer to the [Smoke Alarm, Carbon Monoxide Alarm, and Spark Arrestor Certificate](#) handout for detailed information.
- **Water Conserving Fixture Inspection.** All one- and two- family residences must have replaced all non-compliant plumbing fixtures with water-conserving plumbing fixtures and verification of this is required as a condition of final approval of any permit [CA Civ Code § 1101]. Refer to the [Water Conserving Certificate of Compliance](#) handout for details and exceptions.

9. OTHER DRAWINGS:

- **Demolition Plans:** Removal of existing buildings or structures requires submittal of a demolition plan and recycling plan.
 - Demolition work requires written verification of notification to BAAQMD (J number) or a declaration that notification is not required, see [Bay Area Air Quality Declaration](#) for more information.

- Refer to the separate handouts [*Demolition \(Total Building\)*](#) and [*Demolition \(Other Than Total Building\)*](#), as appropriate, for more information.
- The demolition work may be included with the construction drawings or submitted separately. A separate submittal is required if applicant desires a demolition permit be issued prior to the building permit.
- **Swimming pool and/or Spa Plans:** New pools and/or spas require a separate permit.
 - Pool and spa drawings can be included with the construction drawings or submitted separately.
 - Refer to the [*Pool and Spa*](#) handout for additional information.
 - For demolition of an existing swimming pool or spa, refer to [*Pool or Spa Demolition*](#).

10. OTHER APPROVALS:

All plan submittals for Planning, Engineering, and Fire are made through the Building Safety Department at the Permit Center with the building permit application.

- **Engineering Department:** Prior to completion of any plans, the Engineering Department should be contacted at (408) 586-3329 to find out the requirements due to the location and any easements, and if the property is located in a special flood hazard area.
- **Planning Department:** Prior to completion of any plans, the Planning Department should be contacted at (408) 586-3279 to find out the requirements for the proposed location and type of the project.
- **Fire Department:** Fire protection systems for homes in “Hillside Areas” and all homes provided with fire sprinklers or fire alarms shall have separate approval by the Fire Department. Contact the Fire Department for more information at (408) 586-3365.
- **Santa Clara County Environmental Health Department:** Homes may be subject to Health Department review and approval if connected to a private sewage disposal system (septic) or if an on-site water well must be capped or relocated. If required, drawings approved by the Health Department must be submitted prior to permit issuance.
- **Homeowners Association:** If the property is regulated by a Homeowners Association (HOA), any proposed exterior or other work areas regulated by the HOA must have approval of the Association. It is the property owner’s responsibility to obtain the approval.
- **School District:** Residential additions of 500 square feet or more and Accessory Dwelling Units (ADU) of 750 square feet or more require payment of school impact (developer) fees. Refer to the handout [*School Impact \(Developer\) Fees*](#) for additional information.

NOTES:

- If one or more of the required items mentioned above are omitted from the submittal plans, the application may be considered as incomplete and not ready for checking or approving.
- Plan Check and Fire Department fees must be paid at time of submittal, either by check or credit card (except fees totaling \$5,000 or more must be paid by check).
- Fire alarm and fire sprinkler drawings will be submitted by the contractor directly to the Fire Department and are not to be included with the building permit submittals.
- All new buildings require submittal of the site plan in AutoCAD format to the City to aid the emergency responders with its mapping system.
- New addresses, if required for either the building shell or individual tenant spaces, must be assigned by the City. Refer to the [*Request for New or Change in Address Numbers*](#) handout for the application and additional information.

- **Revisions:** Once the permit has been issued, any changes in the design must be approved by the City. Submittal documents shall be reviewed by the Architect or Engineer of record with a notation indicating that the changes have been reviewed and are in general conformance with the design of the building prior to being submitted to the City for approval. Additional fees will be due for each revision at time of submittal.