

SUNSET POINT STRUCTURAL AND MECHANICAL REQUIREMENTS

Standards and Description of Work Performance

Job Address / Lot Number:
Owner:
General Contractor:
Date:

Weather Conditions:

Date of Inspection:
Are Plans On-Site?

Plan Name / Number:

QA Inspector's Information

Inspector:
Date of Report:

In my professional opinion, this structure was constructed in accordance with the construction documents approved by authorized Engineers, Designers, and Management. Any discrepancies were brought to the attention of the contractor and have been corrected.

Signature

ALL GENERAL REQUIREMENTS COMPLY WITH ACCEPTED INTERNATIONAL RESIDENTIAL BUILDING CODE STANDARDS. ALL CONSTRUCTION WILL STRICTLY FOLLOW ENGINEERED PLANS AND COMPANY SCOPES OF WORK.

FOOTINGS AND FOUNDATION

A footing inspection is required after the steel is in place, and before the concrete is poured.

All engineered documents and notations take precedence. Work must be completed per plan.

1. Where footings and foundations are stepped, the footing and foundation must be continuous without cantilevering of foundation walls.
2. Perimeter drainage allowances are required.
3. Sub-grades and Setbacks
 - a. Setbacks Comply with the Survey Plat:
 - b. Allowable Soil Bearing Pressure:
 - c. Method of Determining Soil Bearing Pressure:
 - d. Are Footing Sub-grades Clean, Free of Water, Debris and Organics?
 - e. Describe Any Corrective Measures Taken:
 - f. Are Footing Sub-grades Suitable For Placement of Concrete?
4. Footings
 - a. Depth Below Grade per Plans:
 - b. Actual Depth Below Grade:

- c. Strip Footing Width per Plans:
- d. Actual Strip Footing Width:
- e. Strip Footing Thickness per Plans:
- f. Actual Strip Footing Thickness:
- g. Pier Footing Length & Width per Plans:
- h. Actual Pier Footing Length & Width:
- i. Pier Footing Thickness per Plans:
- j. Actual Pier Footing Thickness:
- k. Reinforcing Steel per Plans:
- l. Actual Reinforcing Steel:

5. Concrete

- a. Mix Designation:
- b. Design Compressive Strength:
- c. Concrete Set and Cured According to Scope Requirements:

6. Additional Comments:

FRAMING GUIDELINES

Exterior Non-Axial Load Bearing Wall Section (Architectural and Engineering Reference)

Per Engineered Plan, no deviation acceptable

All Engineered Documents take precedence

- | | | |
|-------------------------------------|--|---|
| 1. Stud Section and Thickness | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 2. Vertical Deflection @ Structure | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 3. Stud Bracing and Blocking | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 4. Stud Attachment Bottom Track | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 5. Window / Door Openings | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 6. Header & Sill Attachment to Jamb | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 7. Jamb Attachment @ Bottom Track | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 8. Bracing | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |

Interior Non-Axial Load Bearing Wall Section: (Architectural and Engineering Reference)

- | | | |
|-------------------------------------|--|---|
| 1. Stud Section and Thickness | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 2. Vertical Deflection @ Structure | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 3. Stud Bracing and Blocking | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 4. Stud Attachment Bottom Track | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 5. Openings | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 6. Header & Sill Attachment to Jamb | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 7. Jamb Attachment @ Bottom Track | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 8. Blocking | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 9. Cabinet Blocking | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |

Axial Load Bearing Wall Section: (Architectural and Engineering Reference)

- | | | |
|---------------------------------------|--|---|
| 1. Stud Section and Thickness | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 2. Stud Bracing and Blocking | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 3. Stud Attachment Top & Bottom Track | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 4. Window & Door Openings | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 5. Header & Sill Attachment to Jamb | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 6. Jamb Attachment @ Bottom Track | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 7. Built-up Column(s) | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 8. Column Attachment @ Top & Bottom | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 9. Wall Ties | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 10. Bracing | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 11. Corner Framing | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 12. Bottom Plate Anchors | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |

- | | | |
|------------------------|--|---|
| 13. Splice Connections | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 14. Strap Bracing | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |

Floor Joist Plan: (Architectural and Engineering Reference)

- | | | |
|--|--|---|
| 1. Joist Section and Thickness | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 2. Joist Bracing and Blocking | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 3. Joist Attachment @ Ends | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 4. Openings | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 5. Stair Header Attachment to
Built-up Joist(s) | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 6. Built-up Girder(s) | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 7. Joist Plates | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 8. Joist Bracing | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |

Ceiling Joist Plan: (Architectural and Engineering Reference)

- | | | |
|---|--|---|
| 1. Joist Section and Thickness | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 2. Joist Bracing and Blocking | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 3. Joist Attachment @ Ends | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 4. Openings | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 5. Stair Header Attachment to
Built-up Joist | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 6. Built-up Girder | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 7. Joist Plates | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 8. Joist Bracing | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |

Roof Rafter Plan:

(Architectural and Engineering Reference)

- | | | |
|---|--|---|
| 1. Rafter Section and Thickness | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 2. Rafter Bracing and Blocking | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 3. Rafter Attachment @ Ends | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 4. Openings (skylight) | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 5. Header Attachment to Built-up Rafter | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 6. Ridge Member(s) | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 7. Rafter Bracing | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 8. Collar Tie(s) | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |

Stair Framing Plan:

(Architectural and Engineering Reference)

- | | | |
|-----------------------------|--|---|
| 1. Joist at Top / Sub-Floor | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 2. Stringers (x3) | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 3. Clip Angle Fasteners | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 4. Tread / Risers | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |
| 5. Stair Landing(s) | <input type="checkbox"/> - As Designed | <input type="checkbox"/> - Not Acceptable |

ELECTRICAL GUIDELINES

Rough-in is considered complete and may be inspected when the wiring, boxes, and recessed fixtures are installed. The wiring should be complete per plan and run to the service location. Wiring may be done concurrent with the framing process.

SERVICES: General Requirements

1. 100 AMP residential services shall have #4 copper or #2 aluminum service entrance conductors, with #6 copper grounding electrode conductors connected from the service neutral grounding bar to an 8 ft. ground rod where service enters the building.

2. 200 AMP residential services shall have #2 copper or #4 aluminum service entrance conductors, with #4 copper grounding electrode conductors connected from the service neutral grounding bar to a #6 copper grounding electrode conductor from the neutral grounding bar to an 8 ft. ground rod.

3. Grounding conductors must be protected from physical damage. Use of rigid metal conduit for conductors requires bonding at each end of the conduit.

WALL / FLOOR RECEPTACLES:

1. In every kitchen, family room, dining room, living room, parlor, library, den, sunroom, bedroom, recreation room, guest room or other similar rooms of dwelling units, receptacle outlets shall be installed so that no point along the floor line in any wall space is more than 6 ft. (1.8m), measured horizontally from an outlet in that space, including any wall space 2 ft. (60cm) or more in width. The fixed panel of a sliding door is considered as wall space. The wall space afforded by fixed room dividers, such as free standing bar-type counters, shall be included in the 6 ft. (1.8m) measurement. There should never be more than 12 ft. (4m) between each receptacle on a continuous wall space. Where floor receptacles are necessary, they shall be dust-proof. All receptacles will be at a height of 30cm from finished floor height. All switches will be at a height of 120cm from finished floor height, with the exception of appliances. Washer and dryer receptacles shall be at a height of 90cm above finished floor height.

**As used herein, a "wall space" shall be considered a wall unbroken along the floor line by doorways, fireplaces, and similar openings. Each wall space two or more feet wide shall be treated individually and separately from other wall spaces within the room. A wall space shall be permitted to include two or more walls of a room (around corners) where unbroken at the floor line.

2. Receptacle outlets, insofar as practicable, should be placed equal distances apart and at an agreed uniform height above floor level. Receptacle outlets in floors shall not be counted as part of the required number of receptacle outlets unless they are located close to the wall.

Counter Top(s):

In kitchen and dining areas of dwelling units, a receptacle outlet shall be installed at each counter space wider than 12" (30cm). Counter tops separated by range tops, refrigerators, or sinks shall be considered as separate counter spaces. Receptacles rendered inaccessible by appliances fastened in place or appliances occupying dedicated space shall not be considered as these required outlets. Counter top receptacles are required such that no point of the counter top is more than 24" (60cm) (horizontally) from a receptacle. Island and peninsular counter tops require 1 receptacle for each 4'-0" (120cm) of counter top when there are less than 6 other receptacles available over the counter tops.

Bathrooms:

In dwelling units, at least one wall receptacle outlet shall be installed adjacent to the basin location. (GFCI required). An exhaust fan, vented to outside air, is required if there is no operable window in the bathroom.

Outdoor outlet(s):

For one, two, and three-family dwellings, at least one receptacle outlet shall be installed outdoors for each unit. (Weatherproof covers are required, GFCI required.)

Garages and Carports:

For a dwelling unit, at least one receptacle outlet, in addition to any provided for laundry equipment, shall be installed in each garage. Receptacles placed in the garage should be kept at least 18" (45cm) above the floor surface.

General:

1. At least one wall switch controlled lighting outlet shall be installed in every habitable room, guest room, in bathrooms, stairways, hallways, garages, and outdoor entrances (A vehicle door in a garage is not considered as an outdoor entrance for this purpose).
2. Switches are required at each floor level to control the lighting of stairways with 6 or more risers.
3. At least one wall switch controlled lighting outlet shall be installed at the point of entrance to an attic, under floor space, utility room, and basement where these spaces are used for storage or containing equipment that might require service. The light shall be located near the equipment requiring service.
4. Hallways 10'-0" (3m) or more in length shall require at least one receptacle.

****Exceptions:**

- a. In habitable rooms other than kitchens, one or more receptacles controlled by a wall switch shall be permitted in lieu of lighting outlets.
- b. In hallways, stairways, and outdoor entrances, remote, central or automatic control of lighting shall be permitted (i.e. switch at bottom or top of stairs to control all required stair lighting).

BRANCH CIRCUITS**Appliances:**

Outlets for a specific appliance should have the circuit rating of the appliance served. Look for the name plate rating.

AC:

Cooling equipment is required to be on a separate circuit.

Receptacles:

A maximum of 10 outlets are permitted on a typical 15 AMP circuit. A maximum of 13 outlets are permitted on a typical 20 AMP circuit.

Kitchen small appliances:

1. Two or more 20 AMP circuits are required for the kitchen, pantry, breakfast room and dining room of a dwelling unit for the small appliance loads, including the refrigeration equipment. These circuits shall not be used for any lighting in these rooms.
2. Not more than 4 receptacles are allowed for each small appliance circuit.

Laundry / Utility:

The laundry area shall have a 20 AMP circuit. This circuit shall be exclusively for the laundry receptacles and shall not be used for any lighting in this area.

Clothes closets:

1. Lights in closets shall be installed with a minimum of 12" (30cm) clearance (measured horizontally) from the front of the shelf.
2. Recessed fixture with solid lenses, or florescent fixtures may be installed with a minimum clearance (measured horizontally) of 6" (15cm) from the front of the shelf.
3. Open incandescent fixtures and pendant fixtures are not permitted in clothes closets. Fixtures in clothes closets shall be permitted to be installed as follows:
 - a. Surface mounted incandescent fixtures with fully enclosed lamps installed on the wall above the door or on the ceiling provided there is a minimum clearance of 12" (30cm) between the fixture and the nearest point of a storage area.
 - b. Surface mounted florescent fixtures installed on the wall above the door or on the ceiling provided there is a minimum clearance of 6" (15cm) between the fixture and the nearest point of storage area.
 - c. Recessed incandescent fixtures with a completely enclosed lamp installed in the wall or the ceiling provided there is a minimum clearance of 6" (15cm) between the fixture and the nearest point of storage area.
 - d. Recessed florescent fixtures installed in the wall or on the ceiling providing there is a minimum clearance of 6" (15cm) between the fixture and nearest point of storage.

Recessed fixtures:

1. All recessed fixtures shall have thermal protection and fixtures shall be identified as thermally protected.
2. Recessed fixtures installed in thermal insulation shall be identified with the listing label for installation within thermal insulation (Type IC).

Smoke detectors:

1. Smoke detectors shall receive their primary power from the building wiring and shall be equipped with battery backup. The wiring shall be permanent and without a disconnecting switch other than required for over-current protection located at the main service (**DO NOT** connect to the GFCI circuit).
2. The detectors should be mounted on the ceiling, or wall within 12" (30cm) of the ceiling, located in the corridor or area giving access to the rooms used for sleeping and in each sleeping room. Where sleeping rooms are on an upper level, the detectors shall be placed on the ceiling in close proximity to the stairway.
3. In homes with more than one level, an additional smoke detector shall be installed on each level. These additional detectors shall be interconnected to the other detectors so as to be audible from the sleeping areas.
4. Additional detectors may be required due to unusual architectural features. Specifically, when ceiling heights of rooms open to hallways are higher than the ceiling height of the hallway.

****Exception:** Battery operated detectors may only be installed in existing buildings, or when unable to install permanent wire type for alterations, repairs, or additions.

GROUND-FAULT PROTECTION

Bathrooms:

All 15 and 20 ampere receptacles installed in bathrooms shall have ground-fault circuit-interrupter (GFCI) protection (a bathroom is an area including a basin with one or more of the following: a toilet, a tub, or a shower).

Garages and Carports:

All 15 and 20 ampere receptacles installed in garages and unfinished carports shall have GFCI protection for personnel.

****Exceptions:**

1. Receptacles which are not readily accessible.
2. Receptacles for appliances occupying dedicated space which are cord and plug connected (single purpose). (i.e. permanent range or micro-hood)

Outdoors:

All 15 and 20 ampere receptacles installed outdoors shall have GFCI protection for personnel (weatherproof covers are required). Underground 15 and 20 amp wiring buried 12" (30cm) to 24" (60cm) deep must have GFCI protection.

Kitchen:

All counter top receptacles within 6 ft. (1.8m or 182cm) of the kitchen sink shall have GFCI protection.

Construction Site:

All 15 and 20 ampere receptacle outlets which are not a part of the permanent wiring of the building or structure and which are in use by personnel shall have GFCI protection.

Spa or Hot Tub:

Receptacles for spa or hot tub equipment, receptacles within 20' (6m) of the water, and lighting within 5' (1.5m or 152cm) (measured horizontally) shall be GFCI protected.

WIRING METHODS AND MATERIALS**Conductors of Different Systems:**

1. Different systems should not be run together in the same raceway unless all conductors are insulated with the maximum voltage of any conductor within the enclosure. Conductors of high voltage and low voltage systems shall not occupy the same wiring enclosure.
2. Communications circuits should be kept separate from other electrical circuits by 2 inches.

Protection Against Physical Damage:

The cable shall be protected from physical damage where necessary by conduit, pipe, guard strips, or other acceptable means.

Wire Support:

Non-metallic sheathed cable shall be secured by staples, straps or similar fittings so designed and installed as not to injure the cables. Cables shall be secured in place at intervals not exceeding 4-1/2 ft. (1.3m) and within 12" (30cm) from every cabinet, box, or fitting.

Cable in Cold Air Returns:

Wire should not be run in environmental air enclosures.

****Exceptions:**

Cables passing through joist or stud spaces where wire passes through such space perpendicular to the long dimension are acceptable.

Splices and Connections:

1. All splices and connections are required to be made in junction, fixture, or switch boxes. All wires in junction boxes (including grounding conductors) must be properly spliced with twist locks or other approved devices.
2. At least 6" (15cm) of conductor shall be left at each outlet and switch point for connection of fixtures and devices.
3. All boxes should be adequate in size to allow the proper cubic inch area for the number of wires installed therein.
4. Metallic boxes are required to be connected to the grounding system by connectors or clamps, and a bushing or clamp shall be used for the wire where it passes through the box.
5. Outlet boxes shall not be used as the sole support for ceiling fans.

Circuit Identification:

Each circuit breaker shall be clearly and legibly labeled in the main panel box to identify its purpose.

PLUMBING GUIDELINES

The following inspections are required at each unit:

1. Sewer inspection
2. Water inspection
3. Rough inspection
4. Gas inspection
5. Water Retention inspection

Plumbing rough-in is considered complete when all plumbing, piping, draining, gas piping, and water retention placement is laid out within the framework of the structure. Plumbing may be done concurrent with the framing process.

Sewers:

1. Piping must be laid on a firm base for its entire length, bedded in and covered with gravel/compact soil, with a 1/4" per foot slope (0.6cm / m). Piping may be plastic schedule 40 PVC or ABS, SDR 35 PVC, cast iron, ductile iron, or vitrified clay pipe with neoprene gaskets.
2. Sewers must have clean-outs extended to grade at or in the building, and each 100' (30m) thereafter.
3. The connection of the building sewer at the common sewer needs to be visible at the time of an inspection.

Water:

1. Underground exterior water piping must be 42" (106cm) below grade. Approved CPVC material must be used within 10 ft. (3m) of meter/regulator and 20 ft. (6m) of building. CVPC shall extend into the building through the pressure regulator and the main shut-off valve.
2. 3/4 inches (1.9cm) minimum building supply line is required.
3. Hose bibs shall be of a listed self-draining, with integral non-removable backflow prevention.
4. An accessible shut-off valve is required where the water service enters a single family dwelling, duplex unit, or apartment unit.
5. An accessible shut-off valve is required ahead of all water closets and dishwashers.
6. Water piping should be sized according to the 2006 IRC generally accepted practices.
7. Interior plastic water piping shall be supported each 4 feet (1.2m).

Gas:

1. Black iron pipe is required for all interior gas piping, unless approved appliance connectors are used.

****Exception:**

ANSI/AGA LC 1-1991 listed corrugated stainless steel tubing is approved when approved by the Building Authority.

2. Interior gas piping must withstand a 15-minute mercury gauge pressure test with 6 inch (15cm) column of mercury. Welded piping, the test shall be 60 PSI for 30 minutes using air pressure only.
3. Exterior buried gas piping shall be coated pipe, wrapped pipe, or approved PVC or PE pipe.
4. Metallic piping requires 12 inches (30cm) of earth cover. Plastic piping requires 18 inches (45cm) of earth cover with #18 copper tracer wire attached to the piping and extended to grade.
5. Risers shall be metallic and be wrapped to a point 6 inches above grade.
6. No gas piping may be installed under any structure in or on the ground. All exposed piping shall be 6 inches (15cm) above grade.
7. Drip legs are required for the collection of condensation ahead of all appliance connections where necessary.

8. Accessible shutoff valves are required on the gas supply lines outside of each appliance, ahead of the union connection, and within 3 feet (91cm) of the appliance.

****All requirements are subject to change as a result of local building authorities, engineering documents, product or material availability, or Sunset Point management at any time. These requirements will be updated accordingly.**