

GARAGE CONVERSION TO LIVING SPACE

The garage must meet all dwelling requirements

In attics with a vertical height of at least 30", provide a minimum of 22" x 30" attic access.

Specify number and size of attic vents - 1/150 of area (or 1/300 when 40%-50% of vents are 3' above eaves, and balance at eaves.)

Specify ceiling joists size, spacing, and spans; or specify if part of a truss system.

Show header sizes of any new and/or enlarged openings.

Show size, spacing, and attachment of new wall framing members (i.e., 2 x 6 @ 24" o.c.). Note: base plates in contact with concrete shall be pressure treated.

Specify R-value of ceiling, wall, and floor insulation. (Prescriptive requirements: R-38 ceiling, R-20 in walls (2x6), and R-30 raised floors. If the prescriptive requirements cannot be met, you must submit a calculation (i.e. Rescheck).

Specify sheetrock thickness (wall and ceiling).

If the floor will be a raised floor, specify the size, spacing, and span of the floor joists, support and attachment, and thickness of the subfloor/underlayment.

Pour concrete or set masonry block to existing foundation height - dowel in. (Garage must have a perimeter foundation for room conversion.)

Smoke detectors shall be installed in each bedroom (**including existing**) and at a point centrally located in the hallways or rooms giving access to each bedroom.

Carbon monoxide alarms shall be installed outside of each separate sleeping area (**including existing**) in the immediate vicinity of the bedrooms within dwelling units in which fuel-fired appliances are installed and in dwelling units that have attached garages with a communicating opening (R315.1 & WMC)

New electrical shall be on AFCI circuits (except if exempted by code).

Submit a **floor plan** demonstrating the following:

Floor layout (Interior walls)

Room dimensions

Use of each room or space

Type and size of windows (See note A below)

Header schedule for windows

Door and opening locations

Electrical (See note B below)

Plumbing (See note C below)

Heating (See note D below)

A. WINDOWS and DOORS

1. All habitable rooms require window areas to be not less than 8% of the floor area: ½ (4%) operable. Bathrooms or water closet compartments are to be provided with not less than 3 s.f. of window area, ½ operable unless mechanical ventilation is provided.
2. Every sleeping room shall have at least one operable window or exterior door approved for emergency escape with a minimum net clear opening of 5.7 sq. ft. (5 s.f. if at grade level). The min. net clear openable height shall be 24" and the minimum net clear openable width shall be 20". Sill heights of such windows shall have a finished height of not more than 44" above the floor
3. Safety glass shall be provided at all hazardous locations, including windows within 18" of walking surface when the individual pane is larger than 9 s.f and the top edge is more than 36" above the floor, ingress/egress doors (exceptions), sliding doors, storm doors, shower and bathtub enclosures (windows less the 60" above the standing surface), sidelights within 60" of the walking surface, and windows within a 24" arc of a door in the closed position.
4. Windows and doors shall comply with U-factor and/or Solar Heat Gain Coefficient (SHGC) requirements per the International Energy Conservation Code (except that up to 15 square feet of glazing is exempt). Specify the U-factor and/or SHGC of new windows/doors.

B. ELECTRICAL

1. Receptacle outlets shall be installed so that no point along the floor line in any wall space is more than 6' measured horizontally from an outlet in that space, including any wall space 2' or more in width.
2. Provide ground fault circuit interrupters per NEC 210-8 (a) on all bathroom receptacles. At least one bathroom receptacle shall be located within 36" of the edge of each sink basin. Bathroom receptacle outlets shall be supplied by at least one 20-amp branch circuit and shall have **no other outlets** (exception: where the 20-amp circuit supplies a single bathroom, outlets for other equipment in the same bathroom shall be permitted to be supplied). NEC 210.11
3. At least one wall switch-controlled lighting outlet shall be installed in every habitable room, bathroom, hallway and outdoor entrances (NEC 210-70(a)).
4. If installing laundry facilities, at least one 20-amp laundry branch circuit shall be provided to supply a laundry receptacle outlet. The outlet shall be installed within 6' of the appliance. This circuit shall have no other outlets. NEC 210-11(c)(2) & NEC 210-50 (c).
5. All 120-volt, single phase, 15- and 20- amp branch circuits in dwelling unit family

rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas are to be protected by arc-fault circuit interrupters, to provide protection of the branch-circuit, including smoke detectors and carbon monoxide detectors unless an exception is met. (NEC 210-12).

6. Suspended ceiling fans shall be installed using a fixture box marked as "ACCEPTABLE FOR FAN SUPPORT". Boxes designed to act as the sole means of support for the ceiling fan shall not be used. NEC 370-27(c).
7. When used, type NM (nonmetallic-sheathed cable) shall be installed in accordance with NEC Art. 336. Basic requirements are; secure cable in place within 12" of a box or other enclosure, secure at 4-1/2' intervals (cables run through holes in joists, rafters or studs are considered supported), do not staple flat cable on edge, holes bored in wood members shall be not less than 1-1/4" from either edge of the wood member unless a nailing protector a min. of 1/16" thick is installed. If metal boxes are used, protect cable by bushings or grommets covering all metal edges (NEC 300-4).
8. Light fixtures in clothes closets shall be located as per NEC 410-16.
 - a. Incandescent fixtures shall be either surface mounted or recessed with a totally enclosed light source.
 - b. Fluorescent fixtures shall be either surface mounted or recessed.
 - c. Surface-mounted fluorescent or LED luminaires identified as suitable for installation with the closet storage space.
 - c. Clearance for light fixtures:
 1. Surface mounted incandescent or LED fixtures shall have at least a 12" clearance between the fixture and the nearest point of storage.
 2. Surface mounted fluorescent fixtures shall have at least a 6" clearance between the fixture and the nearest point of storage.
 3. Recessed incandescent fluorescent fixtures shall have at least a 6" clearance between the fixture and the nearest point of storage.

C. PLUMBING

1. Each water closet shall be located in a clear space not less than 30" in width and 24" clear in front of the bowl .
2. All hot water heaters and boilers shall be provided with an over temperature safety protection device with a full bore diameter relief tube terminating **outside** the building, in a downward position (UPC 608.3 & 5).
3. All PVC plumbing vents exposed to sunlight must be painted (UPC IS 9-92).
4. No standpipe receptor for any clothes washer shall extend more than 30" nor less than 18" above its trap. No trap for any clothes washer standpipe receptor shall be installed below the floor (UPC 804.1)

5. All shower compartments, regardless of shape, shall have a min. finished interior of 1,024 sq. inches and shall be capable of encompassing a 30" circle. (UPC 408.6)

D. HEATING / MECHANICAL

1. Provide heating facilities capable of maintaining a room temperature of 68 degrees F at a point 3'-0" above the floor in all habitable rooms and 2' from exterior walls (portable space heaters do not comply).
2. A wood stove/pellet stove does not count as a primary heat source. However, if one is installed as a supplement, show location of stove, and provide manufacturer's installation instructions for the unit.
3. Provide working space for access to all appliances (UMC 307).
4. Provide door to furnace space large enough for removal.
5. Provide adequate combustion air to all fuel burning appliances.
6. Domestic clothes dryer exhaust ducts cannot exceed 25' in length from the dryer location to the termination. The maximum length of the duct is to be reduced 2.5' for each 45-degree bend and 5' for each 90-degree bend. Where the dryer manufacturer's installation instructions are provided, the maximum length allowed by the manufacturer is permitted. Flex duct cannot be concealed within construction nor exceed 6' in length. (UMC 504.3)

**THE ABOVE IS ONLY A SUMMARY OF VERY GENERAL REQUIREMENTS.
PLEASE PROVIDE INFORMATION SPECIFIC TO YOUR PROJECT.**

**CITY OF WINNEMUCCA BUILDING DEPT.
PATIO COVER HANDOUT**

It is the owner or contractor's responsibility to become familiar with the adopted code requirements. Patio covers shall only be used for recreational outdoor use and not for carports, garages, storage, or habitable rooms. The following are the minimum plan requirements:

1. **Site plan.** Indicate the location of the patio cover, distance to other buildings, and distance to property lines (contact the Planning Dept. at 623-6392 for setback requirements).

2. _____ Width _____ Headroom between walking surface and beams)
_____ Length _____ Height to eave (max. 10')

3. Approved foundation
 - A. 18"x18"x24" footing _____
 - B. Pressure treated posts buried 3 feet _____
 - C. It **may** be possible for a patio cover complying with this handout to be supported on a minimum 3½" concrete slab without footings providing the columns (posts) support a load of less than 750 lbs. per column (spans are generally very small). Provide calculation. _____
 - D. Code complying deck construction. _____

4. Posts
 - A. Posts shall be pressure treated if in contact with the earth or concrete; or specify model of post base with standoff _____
 - B. Size of posts _____
 - C. Distance between posts _____

5. Headers (See attached header schedule)
 - A. Required header size _____
 - B. Specify positive connection between posts and headers _____
NOTE: If using engineered headers (versalams, LVL's, etc.) the headers must be protected from the weather. This requires total encasement of the header with weatherproof materials.

6. Rafters (See attached rafter schedule)
 - A. Size, spacing and span of rafters _____
 - B. Specify positive connection between rafters and headers _____

7. Roofing
 - A. Type of roofing _____
 - B. Roof pitch _____
Note. Asphalt shingles cannot be used as a roof covering if the roof pitch is less than 2:12

8. Attached or free-standing. Specify: _____
NOTE: Attachment to the structure is **only** allowed as follows:

A. ***Stick built house.*** No support is permitted from the ends of the eaves or ends of trusses. Specify attachment, including ledger board size and lag size: _____

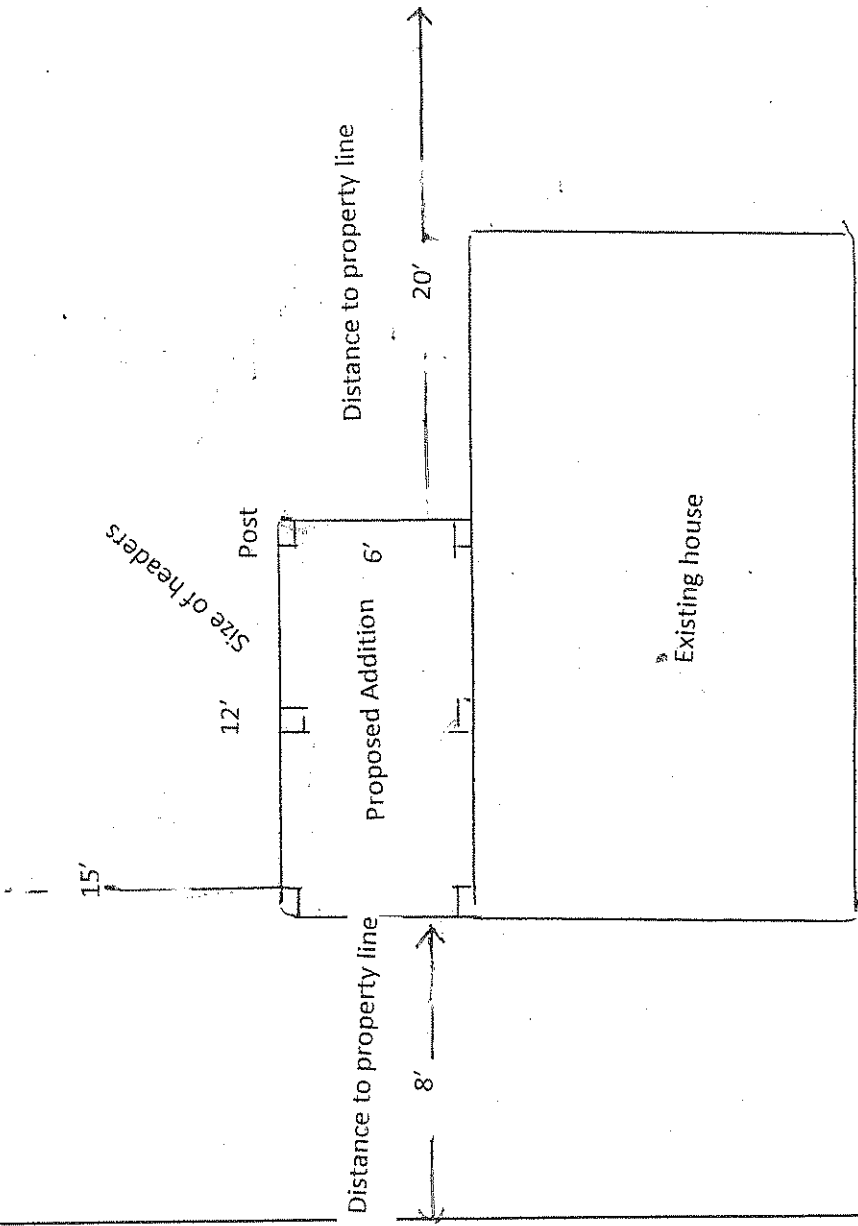
B. *Mobile home, manufactured homes, trailers.* The patio cover may **not** be attached to the structure unless the following criteria is met:

1. A building or patio cover cannot be attached to a manufactured home that is under warranty, unless a letter of approval is provided by the manufacturer.
2. The walls of the manufactured home must be supported on a full foundation. The owner shall provide evidence of support, **and**
3. The walls of the manufactured home shall be a minimum of 2 x 4 @ 24" o.c., **and**
4. Ledgers to the wall of the manufactured home shall be attached with 1/4" lag bolts attached to each stud, **and**
5. No support is permitted from the ends of the eaves or ends of trusses of the manufactured home, **and**
6. The manufactured home must meet real property conversion standards to allow a load to be added to the mobile home.
7. Singlewide's typically will not be permitted to add load to the manufactured home unless a Nevada Engineer's stamped drawing is submitted.
8. Plans are required for overbuild projects. Construction of overbuilds, which hip back onto the manufactured home roof must comply with the following:
 - a. Trusses of the manufactured home roof shall be a min. of 2 x 4 or 30lb roof.
 - b. Home must support on a full foundation.
 - c. A minimum of 1/2 the load of the overbuild shall be cantilever type construction, which distributes most of (or at least 1/2) the load back to the new patio covers support members.
 - d. Size of the overbuild may also affect the requirement for engineering.
 - e. As an alternative to the above plans may be wet stamped by a NV. Engineer.
9. A lightweight metal/aluminum premanufactured patio cover less than 1 pound per square foot (no wood rafters or headers) can be supported on a manufactured home (max. 12' in height). Provide manufactures spec sheet specifying weight.

GENERAL NOTES:

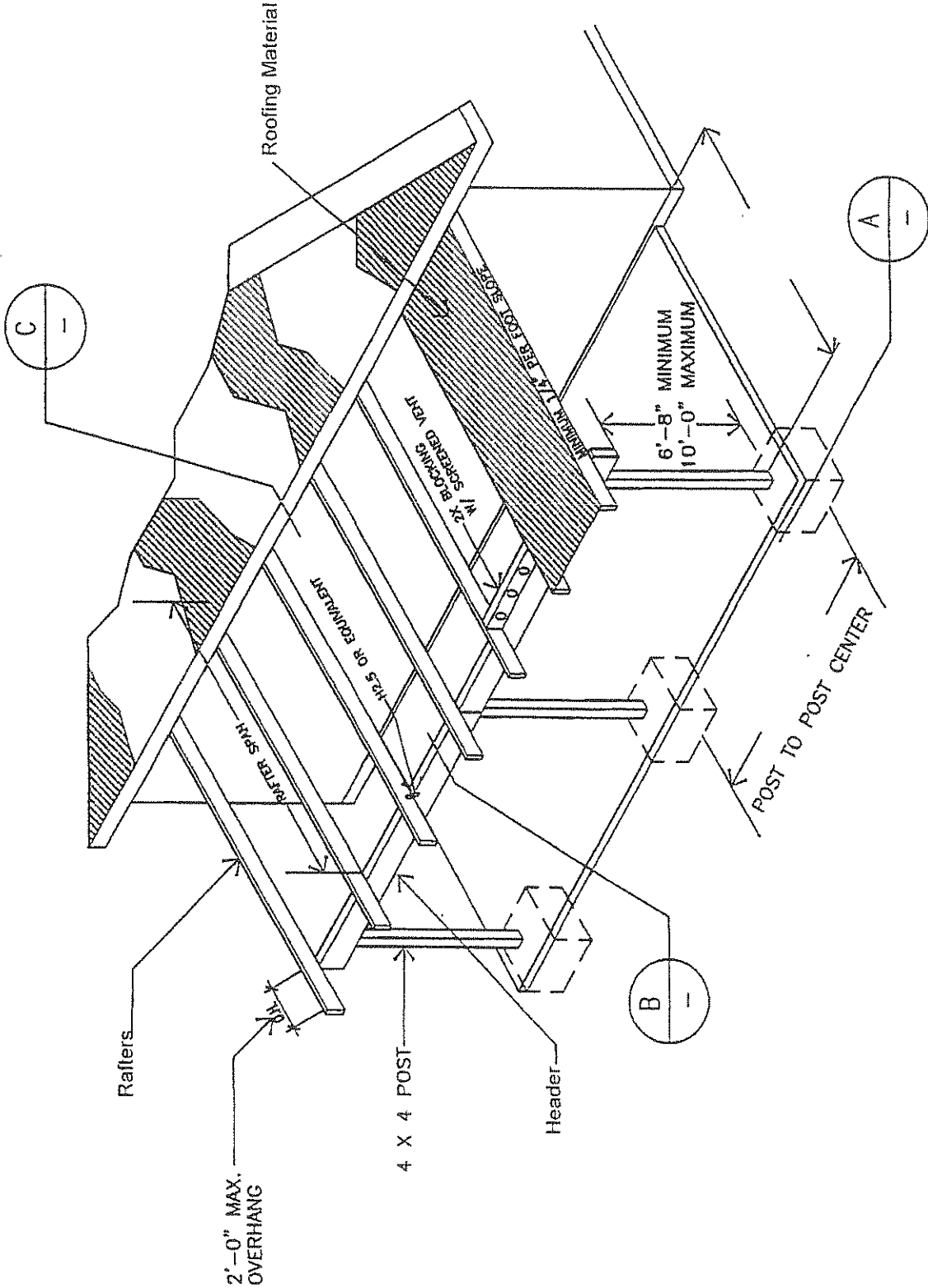
1. Patio cover shall not support on a manufactured home unless the above criteria is met.
2. If electrical is installed or relocated a permit is required. All work shall comply with the latest adopted edition of the National Electrical Code.
3. Building pads shall have a drainage gradient of 6" in the first 10' away from the patio cover.
4. A permit is required if, in the future, you enclose the patio cover for a porch, sunroom, or addition. If the enclosure is more than 150 square feet, a full foundation with footings placed below frost depth (24" below grade) will be required. Egress windows from the existing bedrooms are required to open directly outside. Plan accordingly for this requirement when designing your carport/future garage.

Provide a site plan showing the dimensions of your project or additions and its relationships to existing buildings or structures on the property and the distance to property lines.



On the site plan indicate details such as post locations and spacing, joist and beam spans, and any other pertinent information.

Name of Street



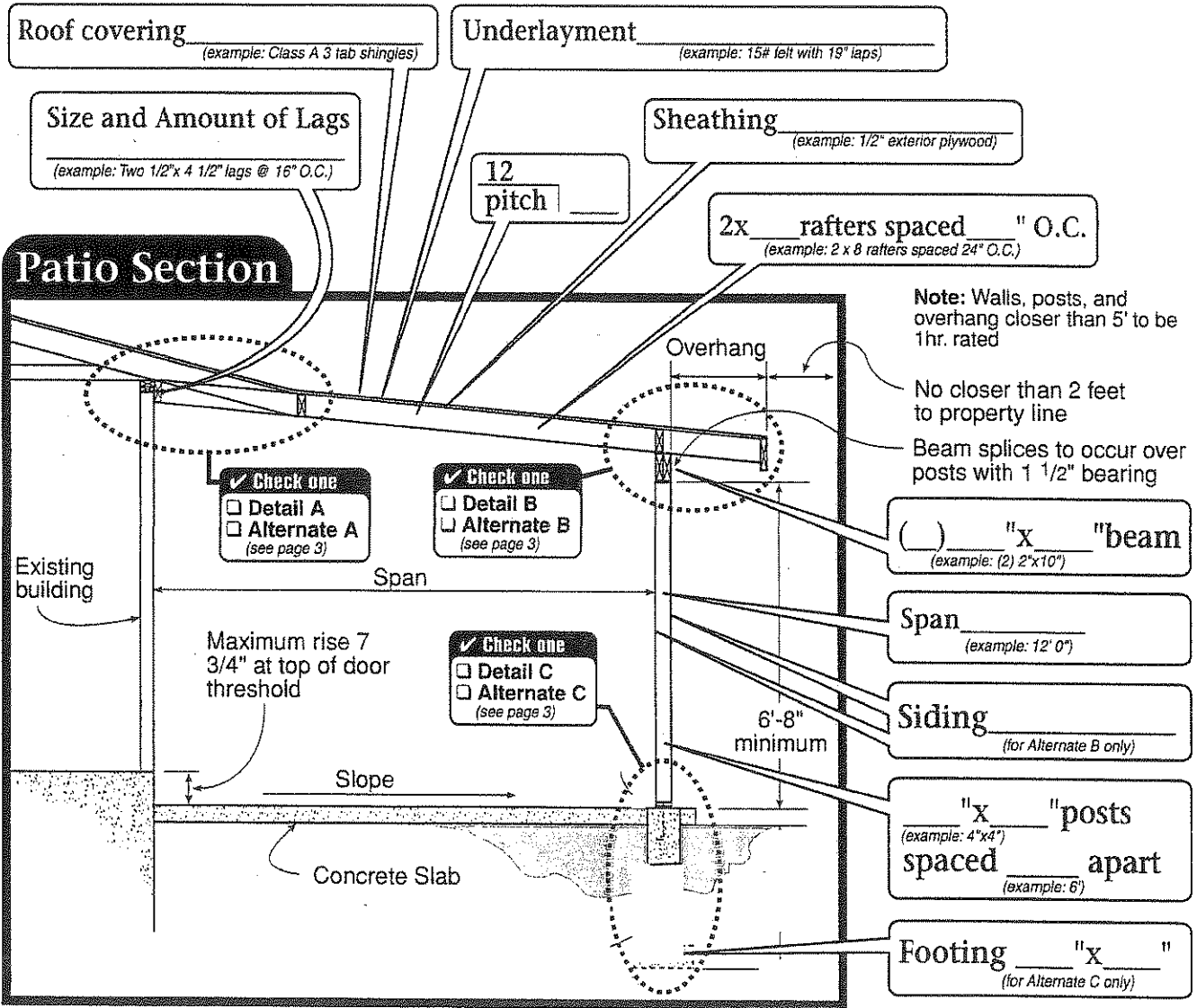
PATIO COVER

Single Family Residential Patio Covers & Carports

Directions

Address: _____

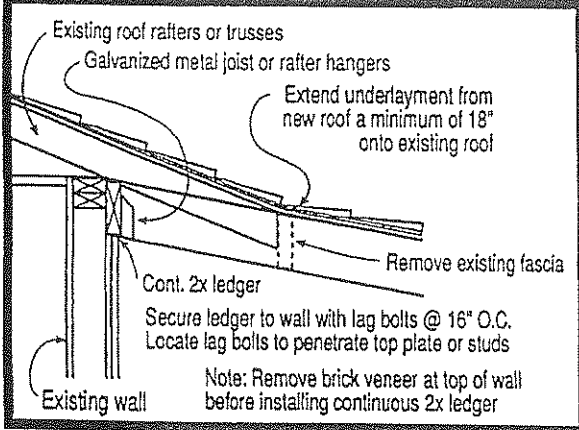
1. Fill in the blanks with dimensions and materials which will be used to build the structure. Please print legibly.
2. Indicate in the check boxes which details from page 3 will be used. Please note if any of the sides of your carport addition are closer than 5'-0" to the property line, that side of the carport must be enclosed with a solid 1 hour fire rated wall as shown in Alternate Details B and C. You must however, keep at least two sides of the carport open to conform to the building code requirements. Zoning approval is required.
3. Roofing to be installed per manufacturer's instructions, including low slope application and required inspections made.



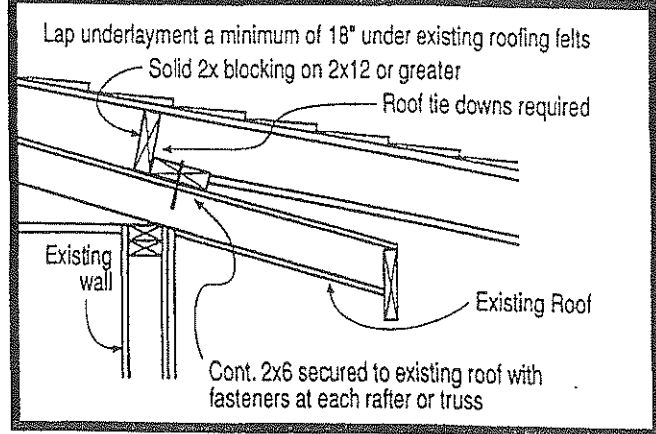
Manufactured Homes: Post are required against the MH unless a full perimeter foundation is provided. The patio cover cannot hip back on to the MH unless the MH has a 30 lb roof load.

Single Family Residential Patio Covers & Carports

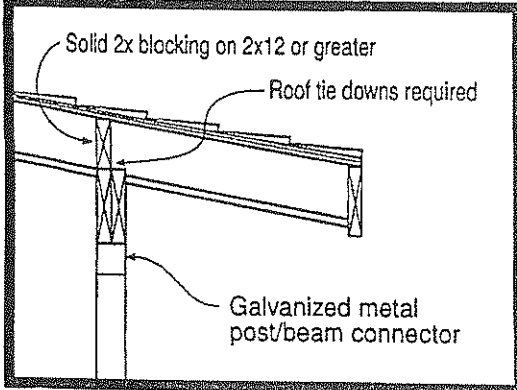
Detail A



Alternate Detail A



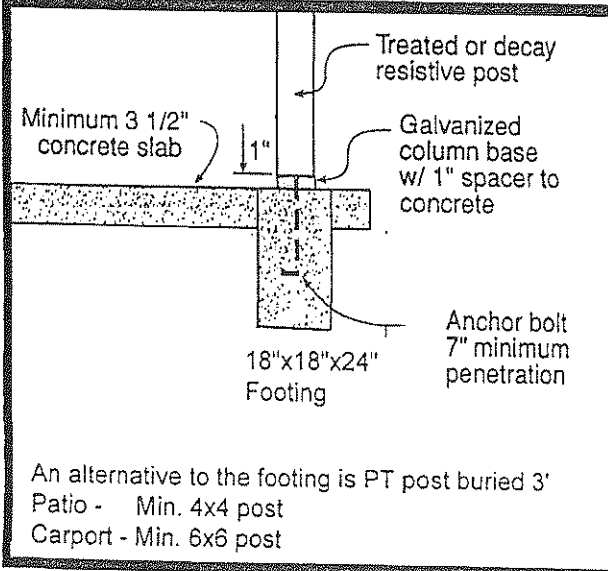
Detail B



Note: Rafters shall not be hung off existing fascia/ truss tails. They shall be installed:

1. by the use of a ledger
2. installed on the top of the existing wall
3. post & header against existing wall.

Detail C



HEADER SCHEDULE

LOAD BEARING EXTERIOR HEADERS-ROOF & CEILING ONLY (IRC TABLE R502.5(1))

BUILDING WIDTH						
Size	20'		28'		36'	
	Span	# of Jack Studs	Span	# of Jack Studs	Span	# of Jack Studs
2-2x4	3'6"	1	3'2"	1	2'10"	1
2-2x6	5'5"	1	4'8"	1	4'2"	1
2-2x8	6'10"	1	5'11"	2	5'4"	2
2-2x10	8'5"	2	7'3"	2	6'6"	2
2-2x12	9'9"	2	8'5"	2	7'6"	2
2-2x8	8'4"	1	7'5"	2	6'8"	2
3-2x10	10'6"	1	9'1"	2	8'2"	2
3-2x12	12'2"	2	10'7"	2	9'5"	2
4-2x8	9'2"	1	8'4"	1	7'8"	1
4-2x10	11'8"	1	10'6"	1	9'5"	2
4-2x12	14'1'	1	12'2"	2	10'11"	2

LOAD BEARING INTERIOR HEADERS-ROOF & CEILING ONLY (IRC TABLE R502.2(2))

BUILDING WIDTH						
Size	20'		28'		36'	
	Span	# of Jack Studs	Span	# of Jack Studs	Span	# of Jack Studs
2-2x4	3'1"	1	2'8"	1	2'5"	1
2-2x6	4'6"	1	3'11"	1	3'6"	1
2-2x8	5'9"	1	5'0"	2	4'5"	2
2-2x10	7'0"	2	6'1"	2	5'5"	2
2-2x12	8'1"	2	7'0"	2	6'3"	2
3-2x8	7'2"	1	7'7"	2	6'9"	2
3-2x10	8'9"	1	7'7"	2	6'9"	2
3-2x12	10'2"	2	8'10"	2	7'10"	2
4-2x8	9'0"	1	7'8"	1	6'9"	1
4-2x10	10'1"	1	8'9"	1	7'10"	2
4-2x12	11'9"	1	10'2"	2	9'1"	2

SPANS FOR MIN. #2 GRADE SINGLE HEADER SUPPORTING ROOF & CEILING ONLY (IRC TABLE R602.7.1)

BUILDING WIDTH			
	20'	28'	36'
2x8	5'3"	4'6"	4'0"
2x10	6'8"	5'8"	5'1"
2x12	8'1"	6'11"	7'2"

See IRC or header handout for construction of single header

RAFTER SPAN TABLES
2012 INTERNATIONAL RESIDENTIAL CODE

Rafter Spans for Douglas Fir-Larch #2 – Ceiling not attached to rafters (R802.5.1(1))

Rafter Spacing	2x6	2x8	2x10	2x12
12" o.c.	16'7"	21'	25'8"	*
16' o.c.	14'4"	18'2"	22'3"	25'9"
19.2 o.c.	13'1"	16'7"	20'3"	23'6"
24" o.c.	11'9"	14'10"	18'2"	21'0"

*Span exceeds 26 feet in length

2x4's can be used in limited situations with reduced span; higher slope; light roof covering. Table cannot be used to determine rafter sizes for tile or other heavy roof coverings.

Rafter Spans for Douglas Fir-Larch #2 – Ceiling attached to rafters (R802.5.1(2))

Rafter Spacing	2x6	2x8	2x10	2x12
12" o.c.	15'6"	20'5"	25'8"	*
16' o.c.	14'1"	18'2"	22'3"	25'9"
19.2 o.c.	13'1"	16'7"	20'3"	23'6"
24" o.c.	11'9"	14'10"	18'2"	21'

*Span exceeds 26 feet in length

2x4's can be used in limited situations with reduced span; higher slope; light roof covering. Table cannot be used to determine rafter sizes for tile or other heavy roof coverings.

Rafter Ties:

Where ceiling joists are not parallel to rafters, the rafters shall be tied to 2"x4" minimum size rafter ties and installed in accordance with the connection requirements in Table R802.5.1(9) or connections of equivalent capacities will be provided. (R802.3.1)

Collar Ties:

Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the attic space in accordance with Table R602.3(1). Collar ties shall be a minimum of 1"x4", spaced not more than 4 feet on center. (R802.3.1.)