

<u>Oakville Garage</u> and Workshop Plans

Design Set #0G-1624G www.TodaysPlans.com

Eighteen different layouts of garages and workshops can be built with help from this set of plans. You can build the 16' wide Main Garage at 22', 24' or 26' depth and add Expansion Sheds, of matching depth, to either side to have exactly the design you want. You can also build the Main Garage now and add Expansion Sheds at any time in the future.

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<u>Drawings</u>

Sample Layouts

1 - One Car Garage 2 - Two Car Garage 3 - Three Car Garage 4 - One Car Garage with Workshop

> Notes and Building Resources N1 & N2

Plans

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Sections

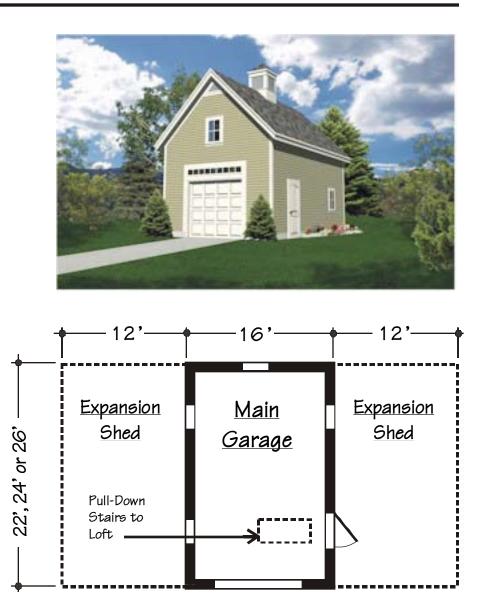
S1 - Building Section S2 - Main Garage Wall Sections S3 - Expansion Shed Wall Sections

Detalis

FD1 - Frost Wall Footing FD2 - Monolithic Slab Foundation FD3 - Thickened Slab D1 - Main Garage Post Connections D2 - Main Garage Door Framing D3 - Main Garage Walk Door and Window Framing D4 - Expansion Shed Door & Window Framing

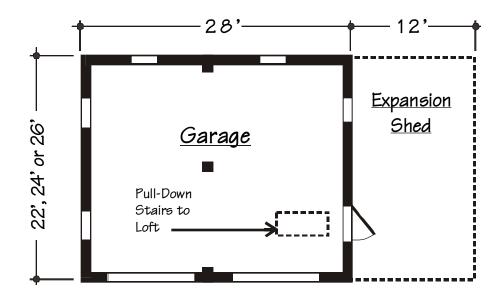
Material Lists

Building Material Lists for all size Main Garages and Expansion Sheds can be found online at: wwwTodaysPlans.com



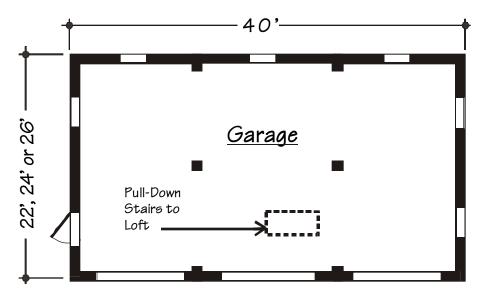
The Oakville series of garages and workshops starts with a sturdy, 16' wide, one bay Main Garage with pull-down stairs to a high and dry storage loft. You can build yours at 22', 24' or 26' deep. When you build, leave plenty of room on either side. These drawings include plans for 12' wide Expansion Sheds for more storage space or garage bays, or for your hobby shop.



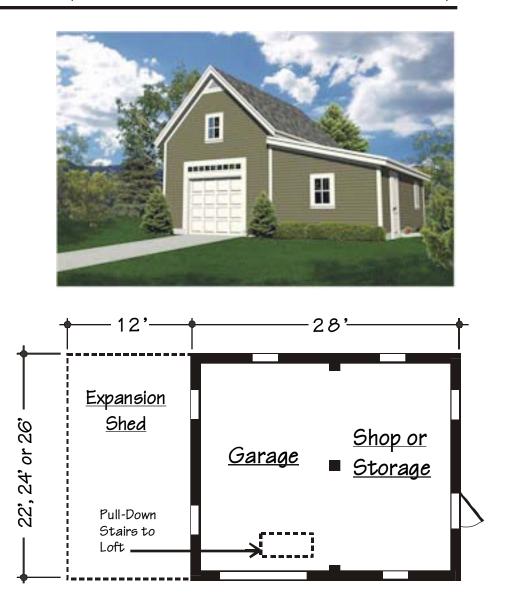


The Oakville series of garages and workshops starts with a sturdy, 16' wide, one bay Main Garage with pull-down stairs to a high and dry storage loft. Add an Expansion Shed garage to either side and you'll have parking for two cars, trucks or SUVs. You can add another Expansion Shed for more parking or storage space, or for your use as a workshop whenever you need.





The Oakville plans let you build this practical and attractive three bay garage at 40' wide by 22', 24' or 26' deep. Create it by building the Main Garage with Expansion Shed garages on both sides. Use all three bays for your cars, trucks or hobby vehicles, or use a section as your workshop. There are pull-down stairs to a 16' wide storage loft for even more storage.



Here's a practical storage building that might be just what you need in your backyard. The A 16' wide Main Garage is expanded with one Expansion Shed for more storage or your use as a workshop. Add a wall between the spaces to use the smaller section as your office or studio. The garage has pull-down stairs to a full loft for extra storage. Leave room on your property for another Expansion Shed garage or storage space. The Oakville plans let you expand at any time in the future.

TERMS OF USE

By using these drawings, the builder and property owner agree to the following conditions:

These drawings are intended to present the general layout and appearance of the building. They may also serve as a guide to construction in some locations. The publisher can not assure that these plans are suitable for all uses, for every site's conditions, for all codes, or for all building associations' criteria.

It's both the property owner's and the builder's responsibility to have these drawings reviewed by a local building professional and by the community's building and zoning officials prior to the start of construction.

The publisher accepts no liability for any use of these plans.

The publisher grants the purchaser of these plans permission to build one unit of this design. Copying these plans in any way is a violation of U.S. and international Copyright law.

DESIGN CRITERIA

These plans were designed to meet general standards and average weather and soil conditions. They must be reviewed and adapted by a local building professional for suitability to the actual site and for compliance with current codes, ordinances and standards.

The building was planned as a nonhabitable utility or accessory building. It must be built at a distance of more than 5' from any adjacent combustible building. It was designed to exceed the requirements for an A.S.C.E. Category 1 building with the following criteria: 70psf Ground Snow Load (Reduced to 40psf Design Snow Load per A.S.C.E 7-95); 5psfRoofDeadLoad; 40psfLoftLive Load; 10psfLoft Dead Load; 90mph Wind Load (10psf plus wind force); 1,500psf Soil Bearing Strength.

The Loft is intended for light storage, typical of a residential attic. The Loft's floor structure must be adapted by a local construction engineer for storage of lumber, metal, logs, hay or masonry, or for any operating machinery.

DESIGN CHANGES

These plans are intended to be suitable for use with various finish materials and with other sizes and locations of doors and windows. The materials, windows and

doors shown are suggested as reasonably inexpensive and available nationwide. For best appearance, the building should be finished and detailed to match or complement adjacent buildings on the site. Different or additional windows and doors may be installed using conventional framing methods. All changes should be coordinated by a local building professional, prior to the start of construction. SIDING

Any of a variety of siding materials may be used on this building. Follow manufacturers' or suppliers' recommendations for the installation and finishing of siding. Siding should be applied over 1/2" exterior grade plywood.

ROOF MATERIALS

Any of a variety of roof materials may be used on this building. They should be applied over a minimum 5/8" exterior grade plywood deck. The plywood deck is an important structural element and should be installed regardless of the roof material used. Metal roofing should be installed to the manufacturer's specifications on sleepers or fasteners applied to the roof deck. Wood shingles should be nailed to wood sleepers above the plywood deck. For slate, clay or ceramic tile roofs, use 3/4" exterior grade plywood for the roof deck and decrease the roof rafter spacing to 12" on center. Follow manufacturer's or supplier's recommendations for the installation and finishing of roofing. OPTIONS

This building is designed to accommodate optional expansion sheds, layouts, materials and details. The owner and builder should coordinate the selection of all options prior to the start of construction. Expansion sheds must be carefully aligned with the main building so that adjacent sheathing and siding are flush.

SITE DESIGN

The building should be plotted on its site by a surveyor or building professional. It must be located at least 5' away from any other combustible building. Review local ordinances for required setbacks. If the building is intended to shelter animals, review local Health Department regulations for

required distances from wells and residences.

DRAWING NOTES

Lumber sizes shown on these drawings are nominal unless marked as "true." Lumber marked "P.T." is to be pressure treated.

GENERAL SPECIFICATIONS

1. Codes: All work must comply with current codes, ordinances and industry standards.

2. Permits: The builder is responsible for obtaining and paying for all necessary permits, scheduling all required inspections and obtaining a Certificate of Occupancy.

3. Scope of Work: The builder should provide all materials, labor and equipment required to complete the building in reasonable time. The builder should provide, supervise and coordinate all necessary subcontractors. All workmanship and materials must be of the best quality. Materials and equipment must be installed or applied to the manufacturers' and suppliers' specifications.

4. Work by Owner/Others: All work required for a complete and finished building should be provided by the builder, except as acknowledged by the owner at the time of the contract agreement.

5. General Conditions: The building contract will be governed by standards outlined in the "General Conditions of Contract" published by the American Institute of Architects unless comparable published standards are mutually accepted by the owner and the builder.

6. Site Work:

1. Clear the building site of all shrubs, trees, rocks and stumps. Remove and store topsoil. Protect all other landscaping, paving and structures from damage by this construction. 2. Excavate for footings to the depth shown on drawings or deeper, if necessary, to reach solid stone or undisturbed soil that's entirely free of backfill. Footings must extend below the established frost line at the building site.

Excavate as required for all planned drives, parking areas and utility lines. 3. Provide clean gravel fill as shown on the drawings and as necessary to allow a flat, well drained building subfloor. 4. Grade the building site so that water flows away from the building. Replace topsoil to a minimum of 3" deep. Rake to remove all surface rocks, roots and debris, and seed and mulch as required.

7. Concrete:

1. All concrete must be a minimum of 3000 psi and must be handled and installed to the American Concrete Institute's standards.

2. Concrete slabs must be a minimum of 4" thick, reinforced with 6x6 (#10) wire mesh. Provide 1/2" neoprene or oiled felt expansion joints as shown on drawings. Slope floor slab toward the largest door at 1/8" per foot. Provide a smooth, trowel or brush finish.

8. Carpentry:

1. All framing lumber must be structural grade, with a min. 1,200 psi bending stress rating.

2. All framing must be plum, level and true and must be properly nailed, screwed or bolted.

3. Roof sheathing must be min. 5/8" CDX plywood. Exterior wall sheathing should be min. 1/2" CDX plywood.

4. Provide bridging or solid blocking at the midpoint of all joists that exceed 10' in span.

9. Structural Connections:

1. Follow manufacturers' nailing or bolting specifications for all metal connectors.

2. Loft Steel Joist Hanger to Beam Connections: Follow manufacturer's nailing specifications.

3. Rafter to Roof Plate Connections: Birdsmouth each rafter for minimum 2" bearing surface. Anchor all rafters at the top plate with steel framing anchors, Simpson Strong Tie #H1 or equal. Follow manufacturer's nailing specifications.

4. Additional wind resistance can be added with metal strapping and ridgeto-rafter connectors. Follow manufacturers' specifications for nailing or bolting.

5. Plywood: Nail all plywood to rafters and studs with 8d Common Nails or 10D Box Nails - 6" on center for all outside edges and 12" on center on the plywood panel field.

6. Wherever metal connectors, anchors, fasteners, bolts, screws or nails are in contact with pressure treated wood, they must be hot dip galvanized or stainless steel. Follow recommendations of wood suppliers and connector manufacturers.

10. Roofing:

1. Roofing shall be as selected by the owner, and installed to the

manufacturer's or supplier's standards. 2. All roof valleys, intersections and protrusions must be flashed with solidly backed aluminum or copper sheeting and must be entirely weatherproof.

3. Provide metal drip edging at all rakes and eaves.

11. Windows and Doors:

1. All prefabricated windows, doors, hardware and accessories must be as selected by the owner, and must be installed and finished to the manufacturers' specifications.

 The builder must make every effort to build custom doors that are straight, true, serviceable and durable.
 Provide durable drip caps above all windows, doors and framed openings.

12. Finishes:

Paint, stain or finish as selected by the owner and to the manufacturers' specifications.

13. Plumbing and Electrical:

If required by the owner and the intended use of the building, provide a plumbing system and an electrical system in accord with all state and local ordinances. The builder must secure all necessary design, permits, inspections, approvals and Underwriter's certificates.

CONSTRUCTION RESOURCES 1. Engineering:

All stock plans like these are designed to work in limited locations. To comply with specific local building codes, ordinances and weather conditions and for the best quality of construction these plans must be reviewed, and modified as necessary by a Professional Engineer.

These drawings must be reviewed and modified for higher wind resistance, for earthquake resistance, for higher snow loads and for sites with poor or poorly drained soil conditions. California, Pacific Coast and Rocky Mountain locations may necessitate modifications for earthquake resistance. High mountain locations and areas of northern Maine and northern Michigan may require higher snow load resistance. Florida, Long Island, coastal areas, high mountain areas and some other locations will require higher wind load resistance. Many northern locations will require deeper footings because of deeper frost penetration. The states of Florida and Nevada, and some other jurisdictions require that drawings be prepared or reviewed by an in-state architect or engineer. Some local building officials will waive some requirements if the building is planned for agricultural use or for property that is zoned as Agricultural.

Building departments may provide names of qualified Professional Engineers.

The National Council of Examiners for Engineering and Surveying lists the websites of Licensing Boards for all US states and territories:

www.ncees.org/licensure

Most of those websites have lists of licensed Professional Engineers.

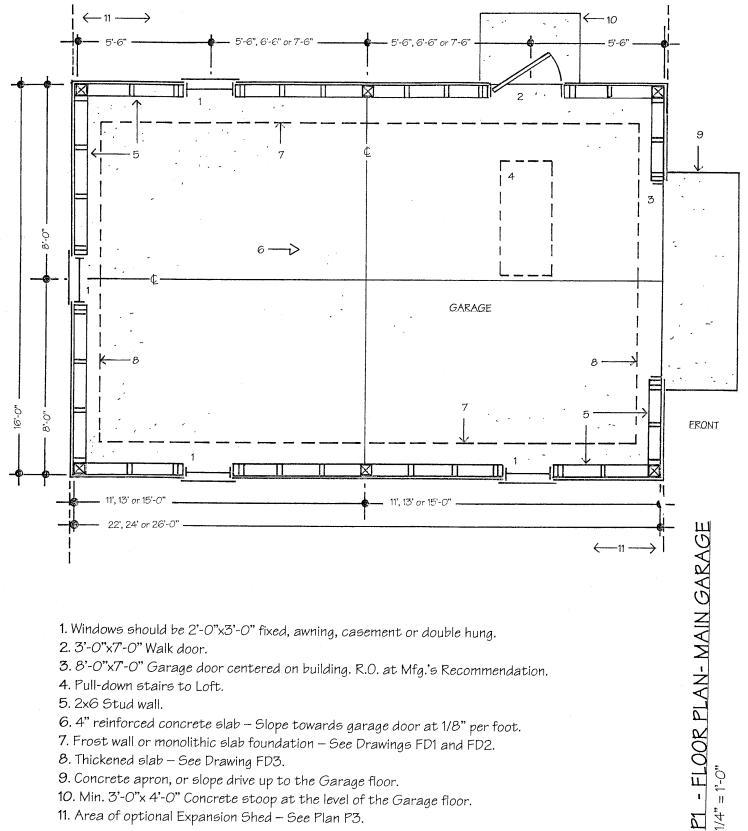
2. Building Components:

A variety of specialty products for this building can be found on the Internet. The **Building Help** resource directory at **www.todaysplans.com** features overhead doors, wrought iron hardware, barn doors, rolling track hardware, carriage house style garage doors and much more.

3. Cupolas:

An optional cupola for this design should be a minimum of 30" wide on each face of its base and a minimum of 40" in height above the building's ridge. It should be centered on the main ridge as shown on the Elevation drawings. A selection of prefabricated cupolas, cupola plans and weathervanes can be found in the **Building Help** resource

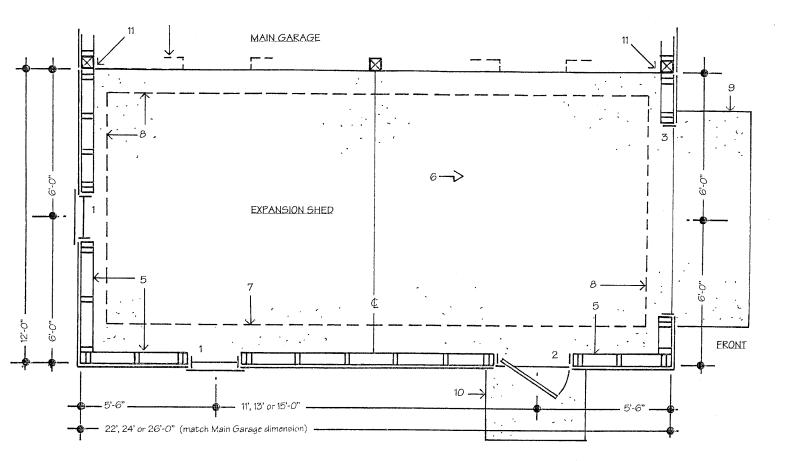
directory at www.todaysplans.com.



11. Area of optional Expansion Shed – See Plan P3.

Mirror this plan for an Expansion Shed on the opposite side of the Main Garage

ig - 6x6 Post $\, \, {igle C}$ - Center line of building and expansion joint in floor slab

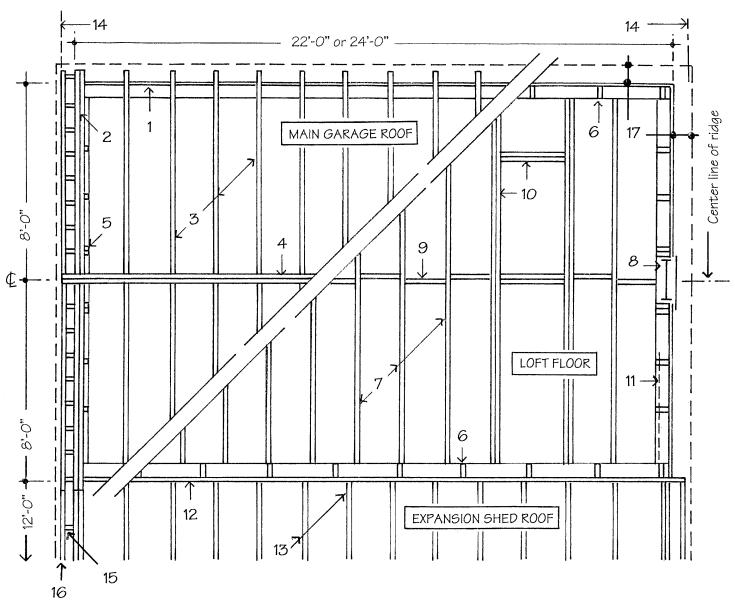


- 1. Windows should be 2'-0"x3'-0" fixed, awning, casement or double hung.
- 2. 3'-0"x7'-0 Walk door.
- **3**. 8'-0"x7'-0" Garage door.
- 4. Stud walls, between posts, may be omitted for open access.
- 5. 2x6 Stud wall.
- 6. 4" reinforced concrete slab Slope towards garage door at 1/8" per foot.
- 7. Frost wall or monolithic slab foundation See Drawings FD1 and FD2.
- 8. Thickened slab See Drawing FD3.
- 9. Concrete apron, or slope drive up to the Garage floor.
- 10. Min. 3'-0"x4'-0" Concrete stoop at the level of the Shed floor.
- 11. Bolt double 2x6 stude to Main Garage post with 1/2 "Diam.x7" lag bolts 24" O.C.

P3 - FLOOR PLAN- EXPANSION SHED 1/4" = 1'-0" Mirror this plan for an Expansion Shed on the opposite side of the Main Garage

Main Garage Roof Framing:

- 1. Double 2x6 Plate 2. Double outside rafters 3. 2x8 Rafters 16" O.C.
- **4**. Double 2x8 Ridge **5**. Notch outside rafters into wall studs



Loft Floor Framing:

6. 2x6 Stud wall 7. 2x10 Joists, on joist hangers - 16" O.C. 8. 2'-O"x 3'-O" Window
9. 2x10 Staggered bridging at the center of joist spans.
10. Frame for pull-down stairs with double joists and blocking.
11. Triple 2x10 below.

Expansion Shed Roof Framing:

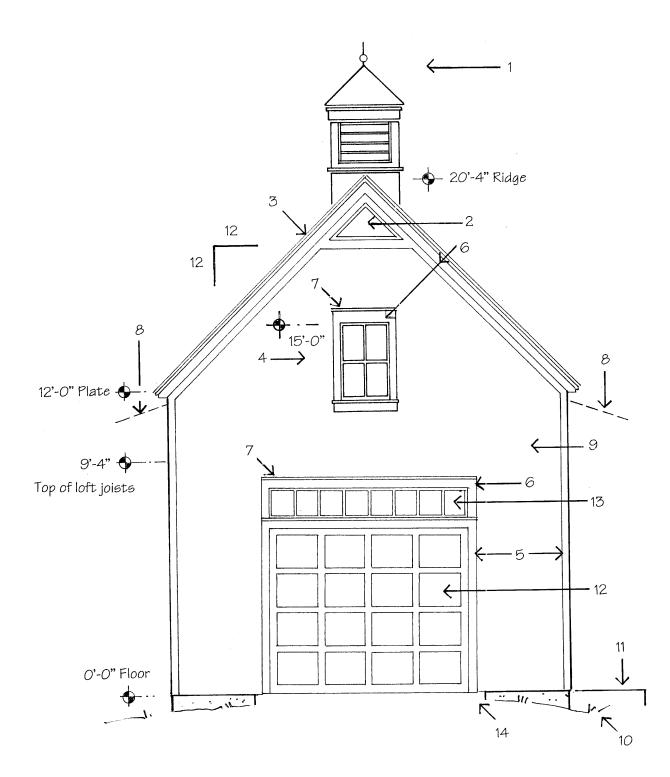
12. 2x10 Expansion Shed roof ledge – Secure at each Loft stud with 1/2" Diam. x 5" lag bolt

13. 2x8 Rafters – 16" O.C. 14. Area of optional Expansion Shed.

Roof Overhangs:

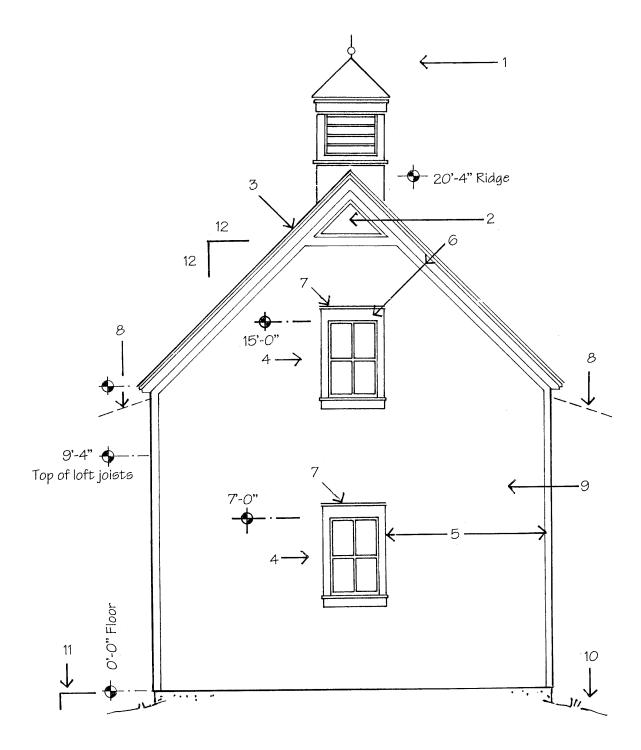
15. 6" long, 2x4 Lookouts at 24" O.C. 16. 2x4 Flying rafters. 17. 8" Roof overhang.





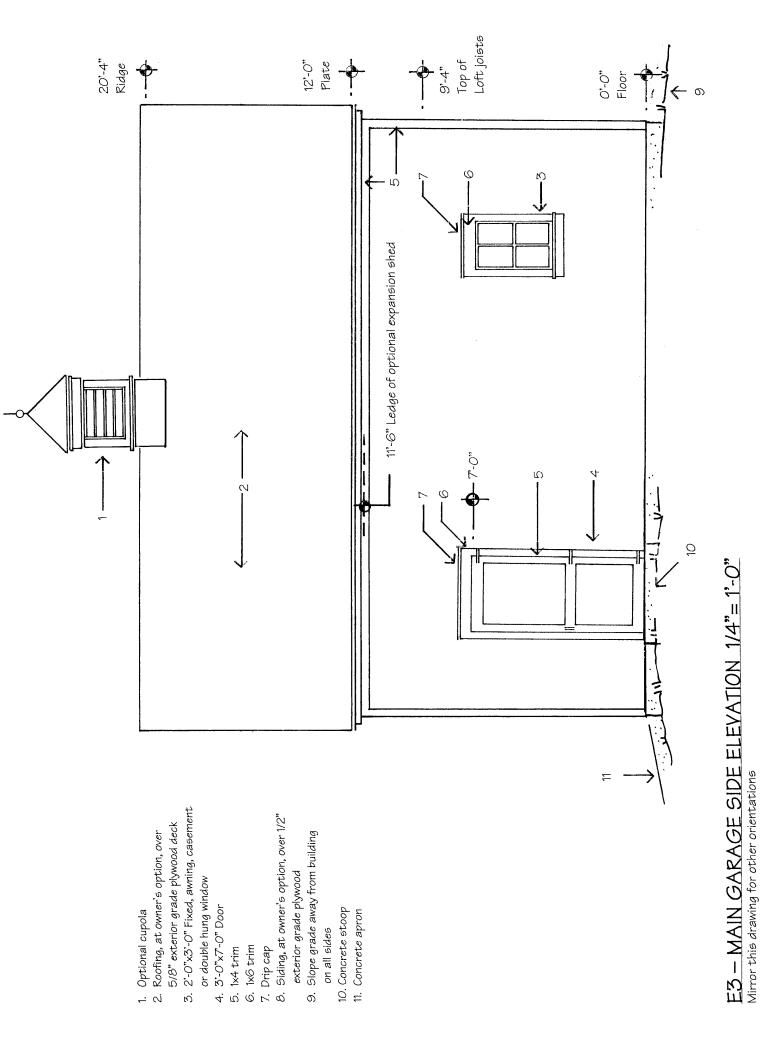
- 1. Optional cupola
- 2. Screened and louvered vent
- 3. Roofing, at owner's option, over 5/8" exterior grade plywood deck
- 4. 2'-0"x3'-0" Fixed, awning, casement or double hung window
- 5. 1x4 trim
- 6. 1x6 trim
- 7. Drip cap
- 8. Line of optional expansion shed
- 9. Siding, at owner's option, over 1/2" exterior grade plywood
- 10. Slope grade away from building on all sides
- 11. Concrete stoop
- 12. 8'-0"x7'-0" Overhead garage door
- 13. 8'-0"x1'-0" Fixed glass transom window
- 14. Concrete apron

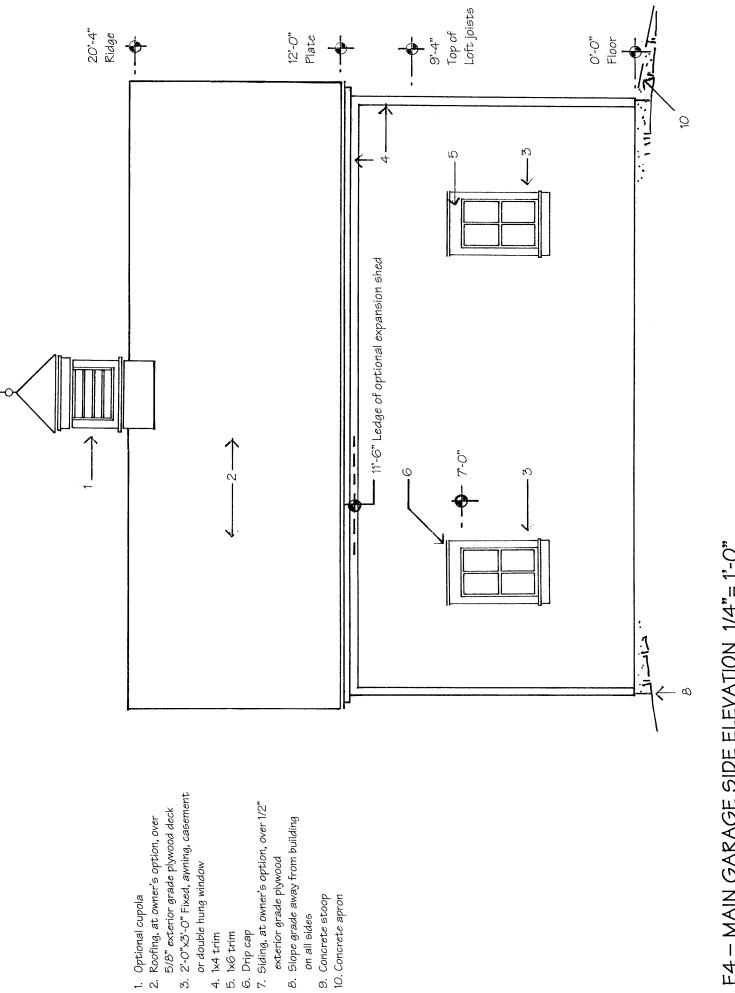
E1 - MAIN GARAGE FRONT ELEVATION 1/4"= 1'-0" Mirror this drawing for other orientations



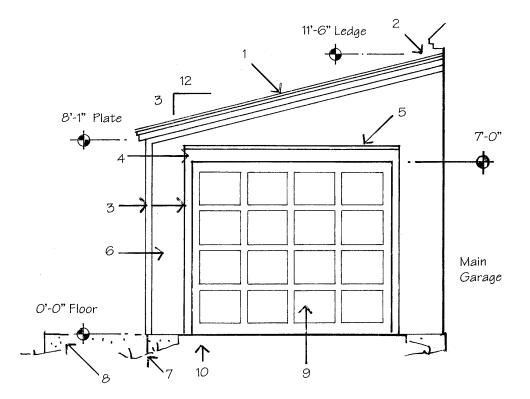
- 1. Optional cupola
- 2. Screened and louvered vent
- 3. Roofing, at owner's option, over 5/8" exterior grade plywood deck
- 4. 2'-0"x3'-0" Fixed, awning, casement or double hung window
- 5. 1x4 trim
- 6. 1x6 trim
- 7. Drip cap
- 8. Line of optional expansion shed
- 9. Siding, at owner's option, over 1/2" exterior grade plywood
- 10. Slope grade away from building on all sides
- 11. Concrete stoop

E2 - MAIN GARAGE REAR ELEVATION 1/4"= 1'-0" Mirror this drawing for other orientations

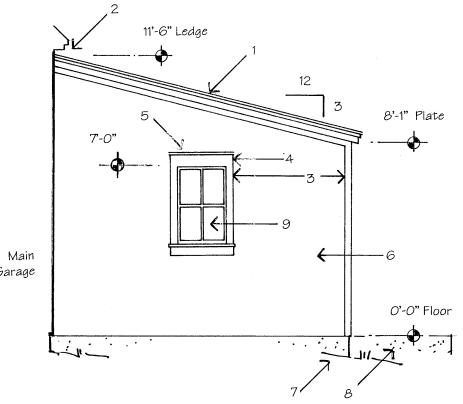




E4 – MAIN GARAGE SIDE ELEVATION 1/4"= 1'-0" Mirror this drawing for other orientations



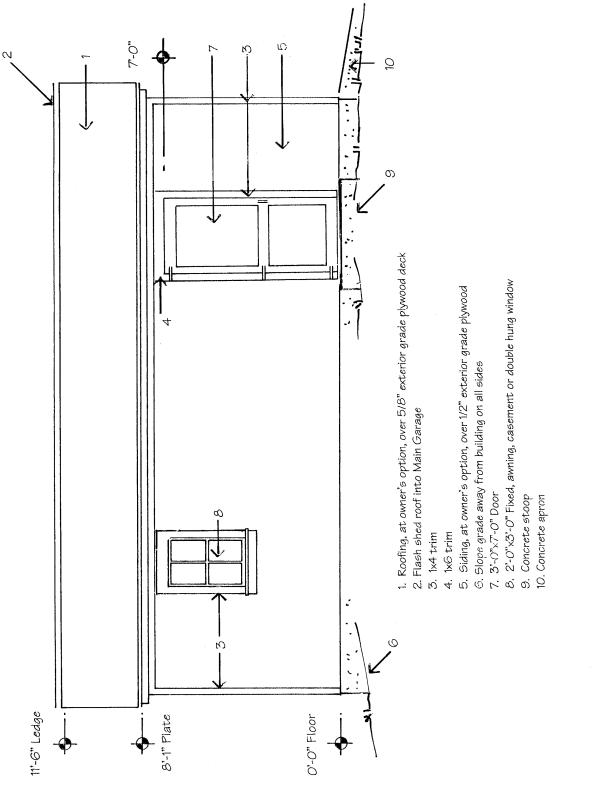
- 1. Roofing, at owner's option, over 5/8" exterior grade plywood deck
- 2. Flash shed roof into Main Garage
- 3. 1x4 trim
- 4. 1x6 trim
- 5. Drip cap
- 6. Siding, at owner's option, over 1/2" exterior grade plywood
- 7. Slope grade away from building on all sides
- 8. Concrete stoop
- 9. 8'-0"x7-0" Overhead garage door
- 10. Concrete apron



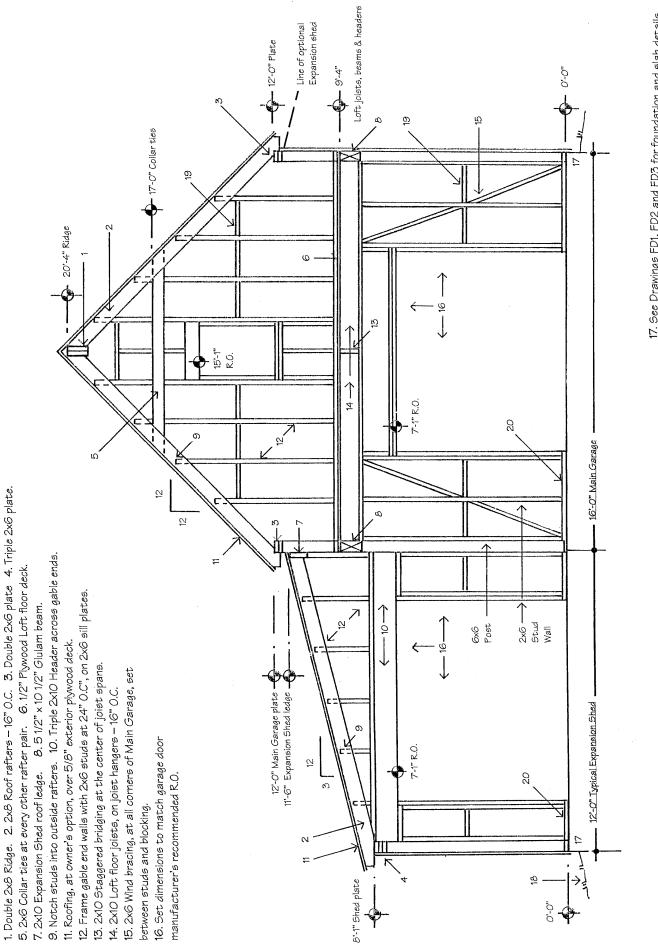
Garage

- 1. Roofing, at owner's option, over 5/8" exterior grade plywood deck
- 2. Flash shed roof into Main Garage
- 3. 1x4 trim
- 4. 1x6 trim
- 5. Drip cap
- 6. Siding, at owner's option, over 1/2" exterior grade plywood
- 7. Slope grade away from building on all sides
- 8. Concrete stoop
- 9. 2'-0"x3'-0" Fixed, awning, casement or double hung window

ES2 - EXPANSION SHED/GARAGE REAR ELEVATION 1/4"= 1'-0" Mirror this drawing for other orientations Match this drawing for an optional Front Elevation where a garage door is not required

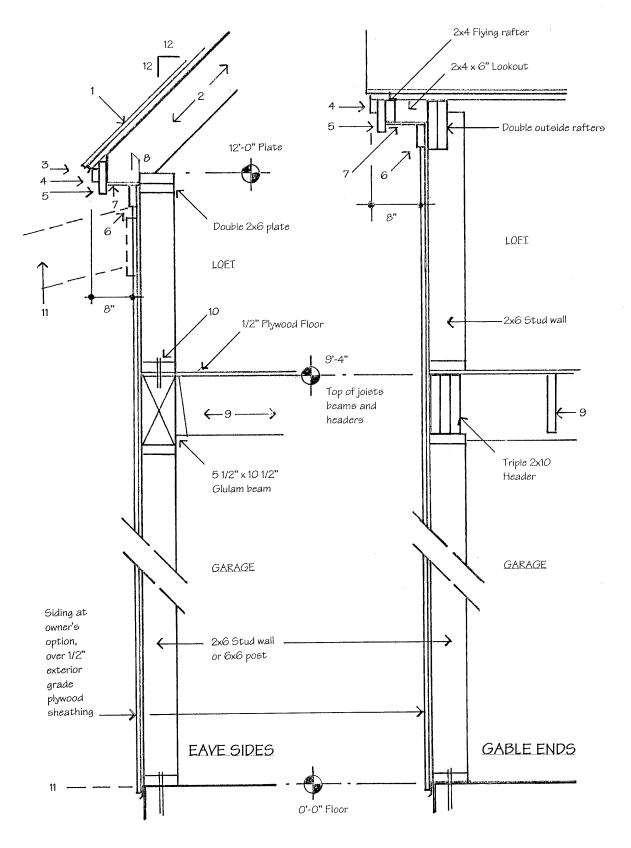


ES3 – EXPANSION SHED/GARAGE SIDE ELEVATION 1/4"= 1'-0" Mirror this drawing for other orientations



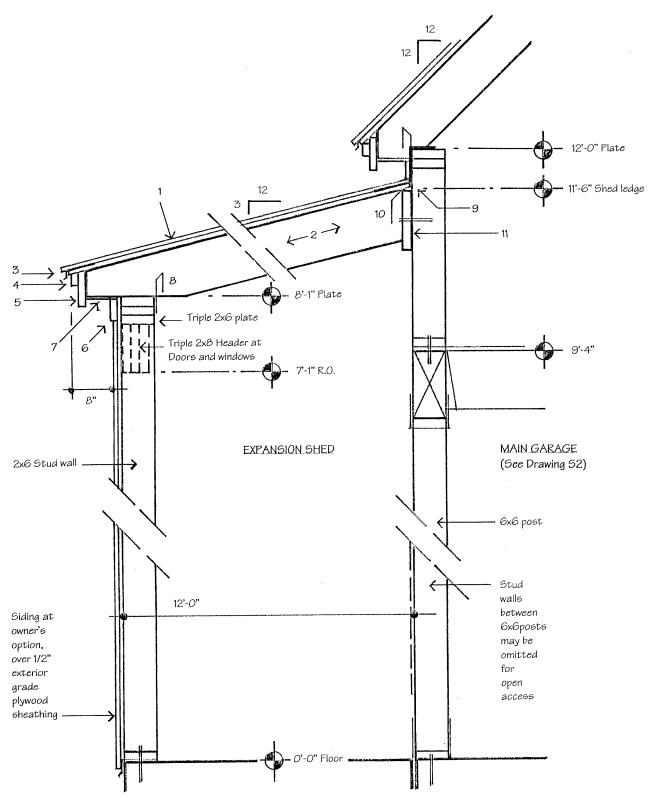
17. See Drawings FD1, FD2 and FD3 for foundation and slab details. 18. Slope grade away from building on all sides. 19. 2x6 Horizontal blocking at 4'-0" 20. Pressure treated 2x6 plates.

> **51 - BUILDING SECTION** 1/4" = 1'-0"



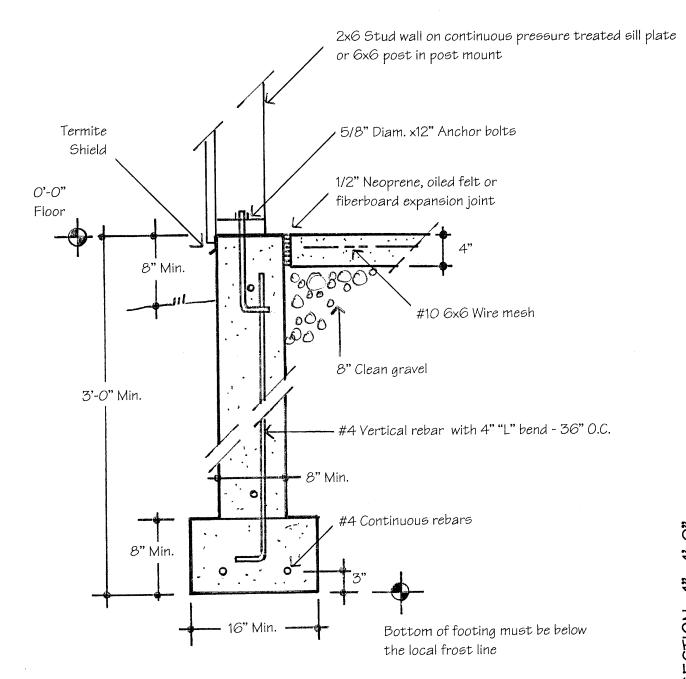
- 1. Roofing, at owner's option, over 5/8" exterior grade plywood sheathing.
- 2. 2x8 Roof rafters 16" O.C. Birdsmouth for a minimum 2" bearing at plate.
- 3. Drip edge 4. 1x2 5. 1x6 6. 1x4 7. 1/4" Exterior plywood soffit
- 8. Simpson StrongTie #H1 or equal metal tie-down.
- 9. 2x10 Loft floor joists, on joist hangers 16" O.C.
- 10. Secure Loft sill plate to glulam beam with 1/2" Diam. x 5" Lag bolts 4' 0.C.
- 11. Optional Expansion shed See Drawing S3

52 - WALL SECTIONS- MAIN GARAGE 3/4" = 1'-0"



- 1. Roofing, at owner's option, over 5/8" exterior grade plywood sheathing.
- 2. 2x8 Roof rafters 16" O.C. Cut for flat bearing at plate.
- 3. Drip edge 4. 1x2 5. 1x6 6. 1x4 7. 1/4" Exterior plywood soffit
- 8. Simpson StrongTie #H1 or equal metal tie-down.
- 9. Flash Expansion Shed roof into Main Garage.
- 10. Simpson StrongTie #RR or equal rafter hangers.
- 11. 2x10 Shed ledge Secure with 1/2" Diam. x 5" lag bolts at each stud.

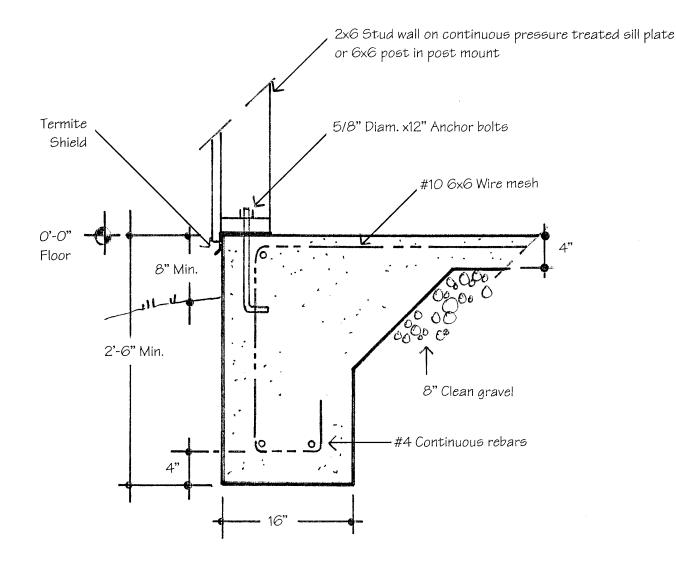
53 - WALL SECTIONS- TYPICAL EXPANSION SHED 3/4" = 1'-0"



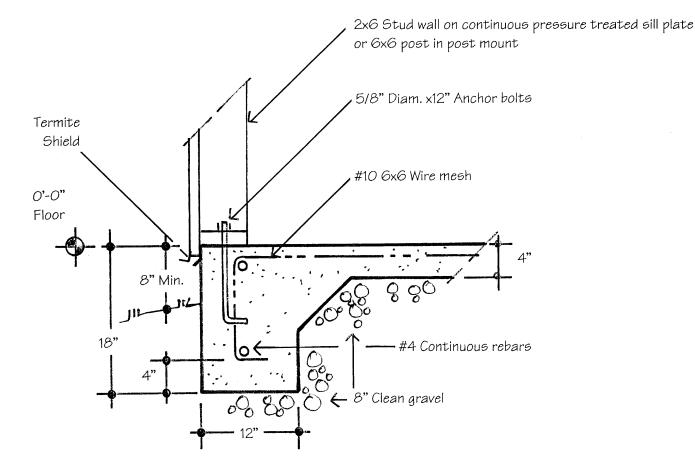
Provide anchor bolts at each post mount, within 12" of all sill ends and corners, and a maximum of 6' O.C. Each section of sill plate must have a minimum of two anchor bolts.

Foundation wall may extend above the floor slab height to adjust to the site's sloping grade.

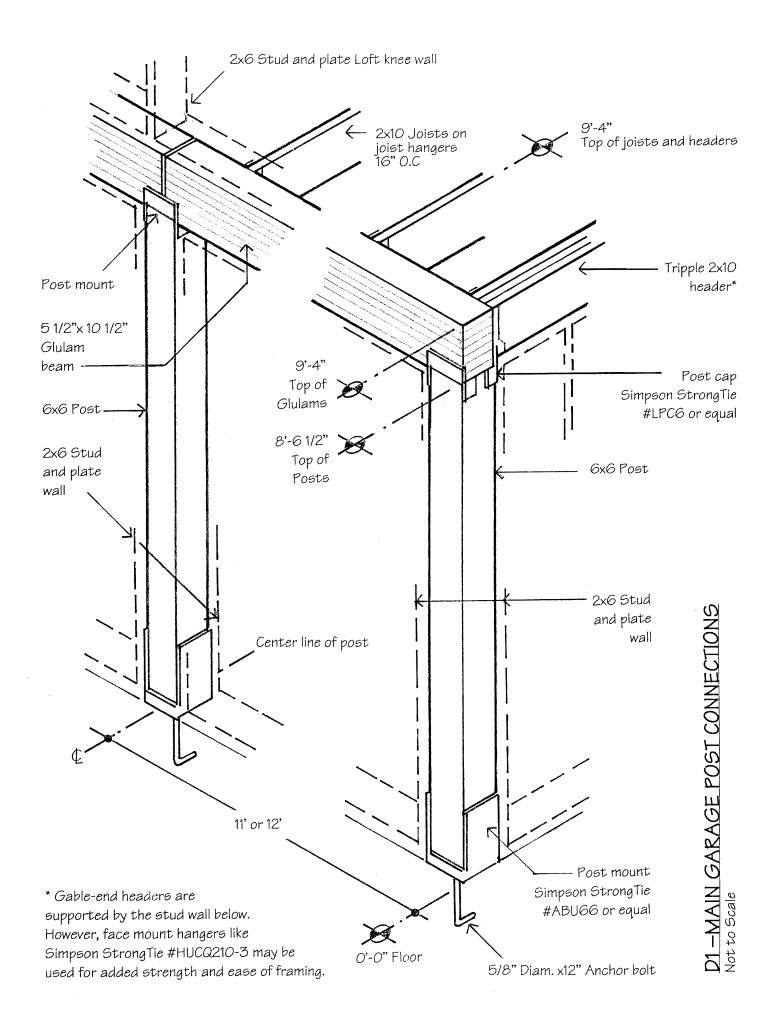
Foundation wall may be thickened and notched to allow stone or brick facing.

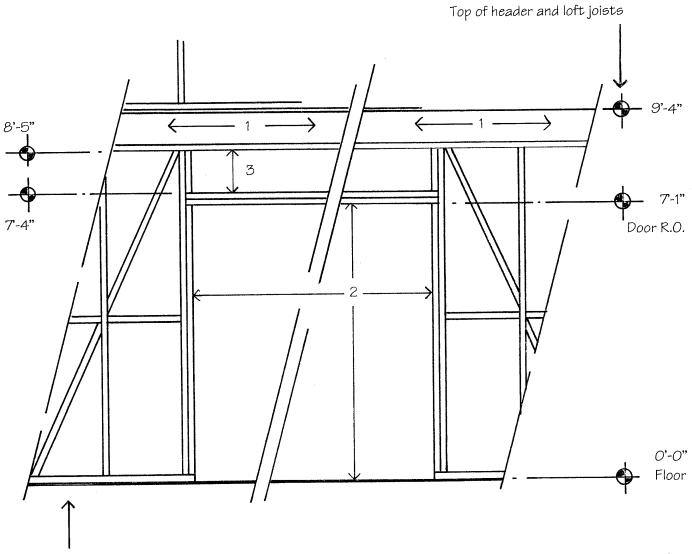


Provide anchor bolts at each post mount, within 12" of all sill ends and corners, and a maximum of 6' O.C. Each section of sill plate must have a minimum of two anchor bolts.



Provide anchor bolts at each post mount, within 12" of all sill ends and corners, and a maximum of 6' O.C. Each section of sill plate must have a minimum of two anchor bolts.





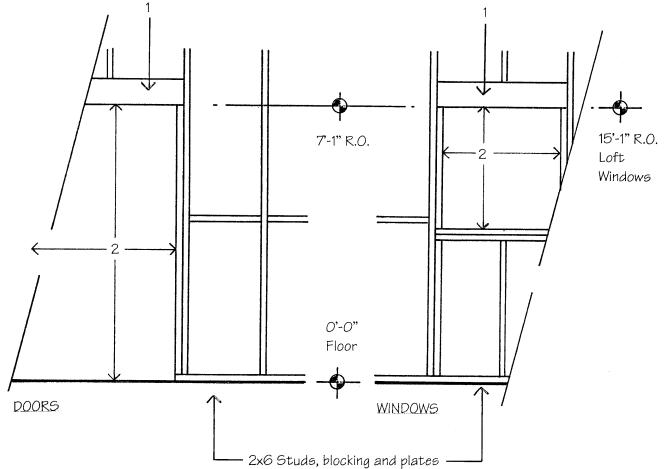
2x6 Studs, braces, blocking and plates

1. Triple 2x10 header – Header runs across the full width of the gable end walls.

2. Adjust dimensions to match door manufacturer's recommended R.O.

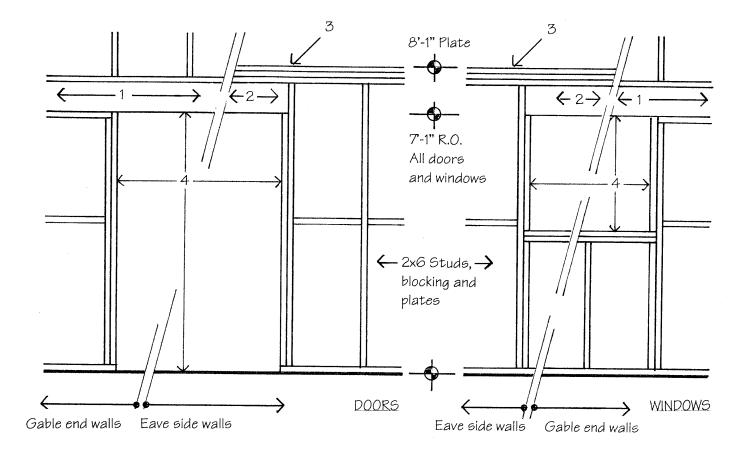
3. 13" Rough opening for custom transom window.

D2 -MAIN GARAGE DOOR FRAMING Not to Scale



Triple 2x8 header.
 Adjust dimensions to match door and window manufacturer's recommended R.O.

D3 – MAIN GARAGE WALK DOOR & WINDOW FRAMING Not to Scale



1. Triple 2x10 header – Header runs across the full width of the gable end walls

2. Triple 2x8 header.

3. Triple 2x6 plate.

4. Adjust dimensions to match door and window manufacturer's recommended R.O.

D4 -EXPANSION SHED DOOR & WINDOW FRAMING Not to Scale