



Settled 1813

CITY OF BEDFORD BUILDING DEPARTMENT SPECIFICATIONS FOR DETACHED GARAGES

Before a new garage is built or an existing garage is expanded, plans must be approved by the Building Commissioner and a permit issued for the work. A garage building shall conform to all items listed below and contained in the attached "Example Plans" and all other applicable Codes and Ordinances. All work shall conform to the requirements of the 2013 Residential Code of Ohio, effective January 1, 2013.

REQUIRED PERMITS

- General Building Permit
- Demolition permit (if old garage is being torn down)
- Electrical Permit (if applicable)
- Plumbing Permit (if applicable)

REQUIRED DRAWINGS

- Site Plan - Provide dimensions on attached generic site plan.
- Floor Plan - Floor plan shall be drawn to scale. Show size of garage, location of windows, man door (required), and overhead garage door(s).
- Elevations - Elevations shall show height of garage (Maximum 15'), windows, man door, and garage door(s).
- Wall Section - Typical wall section shall fully describe structural members, materials, foundations and slab, wall construction, and roof construction.

MISC. REQUIREMENTS

- Yard Dimensions - Garage shall be located in a rear yard not less than 3' from a side and 6' from rear lot line and not less than 10' from the dwelling.
- Land Coverage - The size of any garage shall not exceed 500 square feet for lot sizes up to 5,000 square feet. For each additional complete increment of 2,500 square feet of lot area, the size of the garage may be increased by 200 square feet. The total of all garages on a lot shall not exceed 1,100 square feet unless approved by the Planning Commission.
- The architectural size and design of any structure, whether residential or commercial in nature, shall be architecturally compatible with the structures in the general neighborhood in which it is constructed.
- Garage Door - No garage door shall exceed seven (7) feet in height.

REQUIREMENTS (plus all items contained in the attached "Example Drawings")

1. All garages require a footer/foundation assembly. Footers for garages larger than 600 square feet in net area shall be a minimum of 42-inches in depth measuring from the exterior grade which is exposed to freezing to the bottom of concrete. Footer/foundations may be all concrete of a minimum width of 12 inches or a combination of a poured concrete footer in conjunction with concrete block masonry. Footers used with cement block must be a minimum of 8-inches wider than the size of block used and 8 inches in depth or thickness. Foundations for light-frame construction up to and including 600 square feet in area may be comprised of a concrete slab of a minimum nominal thickness of 4-inches, thickened to a minimum of 12-inches in an area 12-inch wide around the entire perimeter of the garage. Garage foundations shall continue around all sides of the garage including the door side. Attached garages do not require a foundation wall on the indoor portion of wall. Concrete used for **footers or foundations must be 3,500 psi concrete**. All footers must bear on solid, undisturbed virgin soil. Ground or rain water must be removed from footer excavations prior to inspection and placing of concrete.
2. Garage floors shall be concrete with a minimum nominal thickness of 4-inches and shall be placed on 4-inches of undisturbed earth or compacted granular fill. Reinforcement in the form of wire mesh or "fibermesh" shall be placed or added prior to the pour. Dirt or gravel floors are not permitted. Floor drains are permitted but not recommended. Garage floors with no drain shall be sloped toward the door the minimum of 1 inch in ten feet. The elevation of the garage floor shall be a minimum of 4 inches lower than the floor level of an attached dwelling. Basement stairs terminating in the garage shall have a continuous 4 inch masonry or concrete curb completely surrounding the stairwell.
3. Slope garage slab to overhead door. Driveway must provide positive drainage to street. Where the driveway slopes down toward the garage, there shall be a low spot in the driveway grade not less than 3 feet outside garage with a transverse grating, whose top is not less than 6 inches below the garage floor.
4. A curb four inches above finished floor grade, eight inches above the exterior grade and a minimum of four inches wide shall be constructed of either poured concrete or concrete block on which to place the wall assembly.

5. Before anchoring the bottom plate, a 1/2 inch flex cell shall be applied to the curb top to assure a seal.
6. Headers over a sixteen-foot wide garage door that are located in a bearing wall shall be a minimum of two 2 X 12's bolted together with a 1/2 inch steel flitch plate in between. Similar headers located in non-bearing walls may utilize 1/2 inch plywood for the flitch plate.
7. Anchor bolts (which secure the garage framing to the concrete or masonry curb) shall be placed 12 inches from each corner and a maximum of six feet apart. No section of wall, regardless of length, shall have less than two bolts.
8. Garages of all types shall have gutters and downspouts. Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of 6 inches (152 mm) within the first 10 feet (3048 mm).
9. Wood framed top plates shall be doubled and shall lap each other at corners to tie walls together.
10. Provide double studs at each corner and frame all openings with double studs.
11. All wood within 6 inches of grade is required to be "preservative treated" or natural decay resistant.
12. Ceiling collar ties, sized according to the length of span, may be 2 X 6 or 2 X 8 nominal lumber. Maximum spacing of ceiling ties shall be four foot on center. Note that 2 X 4 lumber is **NOT** acceptable for ceiling ties.
13. Roof rafters shall be spaced 16 inches on center. Ceiling collar ties shall be spaced a maximum of four foot on center. Manufactured roof trusses may be spaced 24 inches on center. Plywood or OSB board will require "H" clips when being applied to members spaced at 24 inches on center. Plywood or OSB sheathing materials must be a minimum of 17/32 - inch nominal thickness.
14. Roof covering may be asphalt shingles 240 pounds in weight and may be installed directly over sheathing lumber without the use of felt paper when roof pitch is 4/12 or greater.
15. All detached garages must have a man door (2' 6" x 6' 8" minimum size).
16. Garage floor surfaces shall be constructed of concrete. Asphalt is not permitted as a garage floor material.
17. All garages with electrical service shall have a snap switch or set of 3-way or 4-way snap switches to serve as the disconnecting means. The minimum service shall be two (see note) 15 or 20 amp circuits with one (1) GFCI type receptacle outlet, one (1) switch operated lighting fixture inside, one (1) switch or photo controlled outside lighting fixture at the man door, and one (1) receptacle shall be located for the overhead garage door opener in the ceiling area. The receptacle for the garage door opener is not required to be GFCI protected if a single receptacle is used. All electrical work shall conform to the 2014 edition of the National Electrical Code. A separate permit is required. NOTE: exterior garage lighting is not permitted to be feed off of same circuit as interior of the garage

REQUIRED INSPECTIONS

It is the responsibility of the permit holder to secure all the required inspections. Failure to comply with required inspections may cause revocation of building permit and/or cause court action.

INSPECTIONS

Although a 24-hour notice is a normal request for an inspection, a telephone request (440) 735-6530 before 9:00am on a weekday may qualify the authorized caller for inspection that same day. Inspections are required:

1. When ready to pour concrete with forms in place.
2. When header beam at overhead door opening is exposed showing proper flitch plate between 2 - 2 x 12's.
3. When trapped floor drains and sewer pipes are exposed before backfilling (if applicable).
4. Underground electrical for trench before backfill (if applicable).
5. When building and grounds are ready for final inspection. Owner or contractor representative should be present during inspections.

REQUIRED DESIGN LOADS AND PERFORMANCE STANDARDS

- Structural Wood - fiber-bending stress "f/b" rating of 1450-1500 psi either yellow pine or #2 Douglas fir.
- Manufactured Pre-Engineered Trusses - fiber-bending stress "f/b" rating of 1450-1500 psi.
- Wire Mesh - 6 x 6 - W2.9 or fibermesh placed or added prior to pour.

COMPLETE THE FOLLOWING MATERIAL LIST

Items not applicable state N/A.

Size of Garage

Foundation Type (see attached) (check one)

Type 1A Type 1B Type 2

Type of Porous Fill

4" Gravel Crushed Stone

Concrete Slab Thickness

4" Minimum (Provide copy of mix report to Building Dept. prior to Final Inspection)

Slab Reinforcement

6 x 6 - w2.9 x w2.9 Fiber Mesh

Anchor Bolt Size, Length, Spacing

1/2" dia. at 6' o.c., 12" max. from corners and 1 1/2" washer at each bolt

Exterior Wall Stud Size

2" x 4" at 16" o.c.

Exterior Wall Sheathing Size & Grade

Corner Bracing (check one)

Notch into studs (Diagonally from upper to lower plate at both rear and side)

4' x 8' x 1/2" thick plywood or equivalent

Exterior Wall Finish Siding

Roof Pitch

Roof Sheathing Size & Grade (check one)

7/16" C-D, C-C, Sheathing 24/16 Span

1/2" C-D, C-C, Sheathing 24/16 Span

Rafter Size and Spacing

2" x 6" at 16" o.c.

Engineered Truss Spacing

_____ (must provide truss spec sheet)

Ceiling Joist Size and Spacing

2" x 6" at 48" o.c.

Collar Tie Size and Spacing

2" x 6" at 48" o.c.

Roof Shingle Type

Overhang Soffit Material

Garage Door Header Size Up to 16ft. (check one)

Gable Roof - (2) 2 x 12's with glued plywood flitch plate

Reverse Gable Roof - (2) 2 x 12's with glued and bolted flitch plate or 4" x 14" header

Garage Door Size (check one)

16' x 7' 9' x 7'

Man Door Header Size

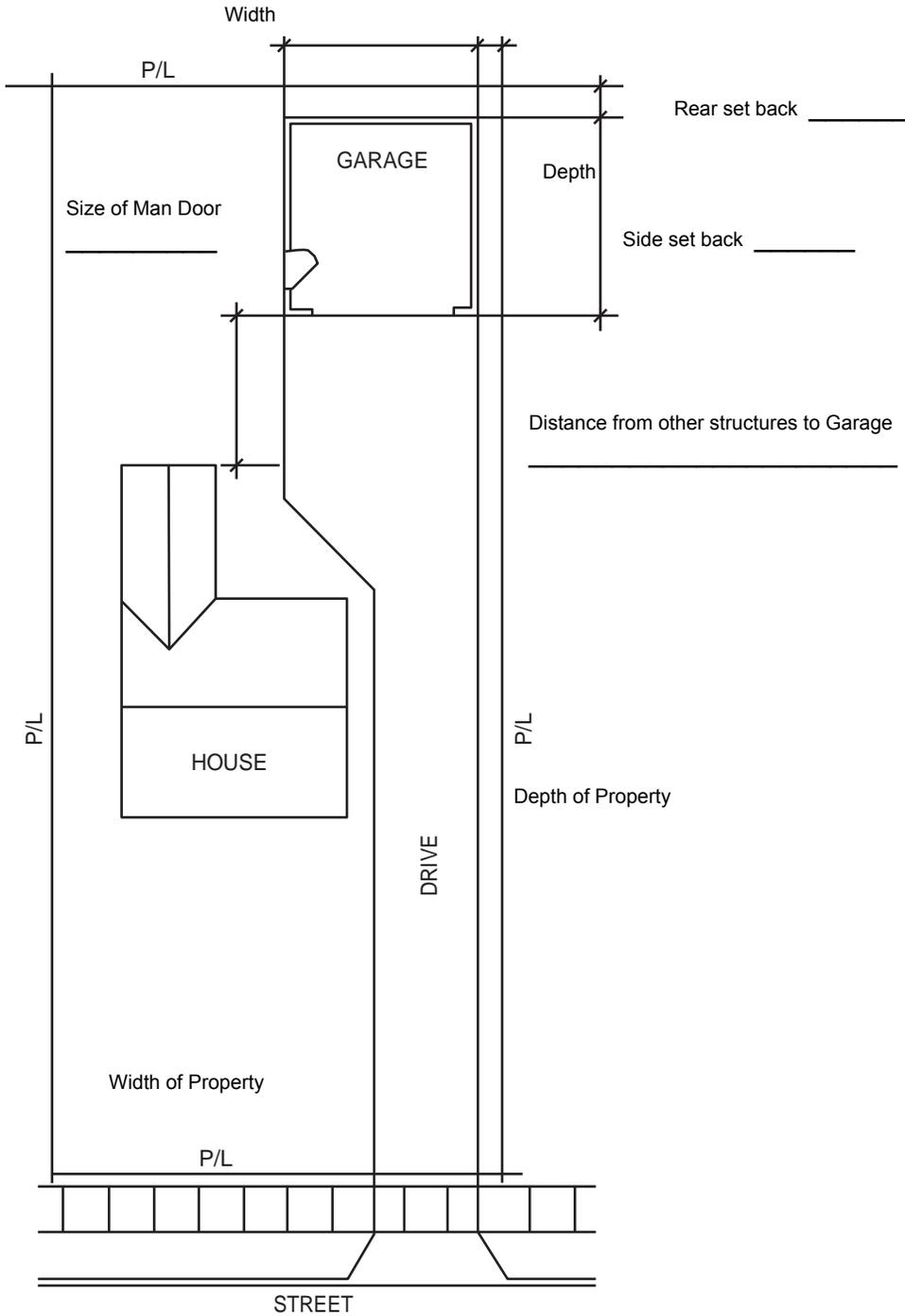
(2) 2 x 6's up to 36" in width

Window Header Size

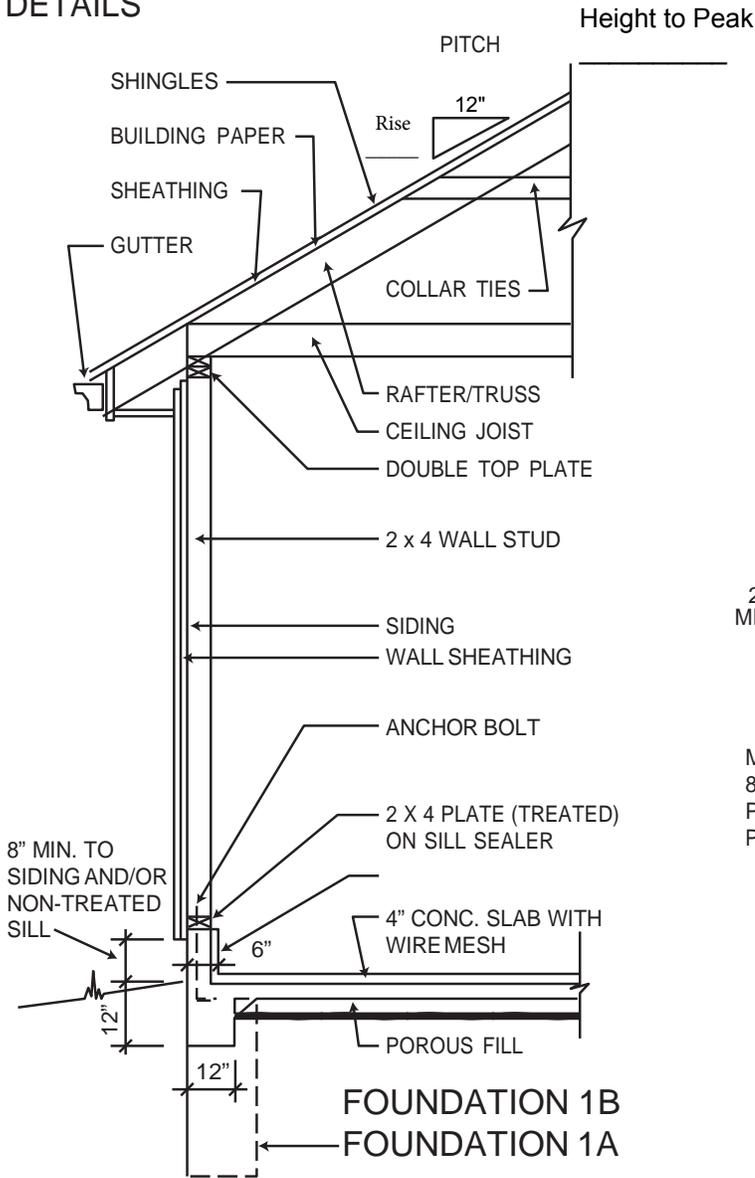
(2) 2 x 6's up to 36" in width

SITE PLAN

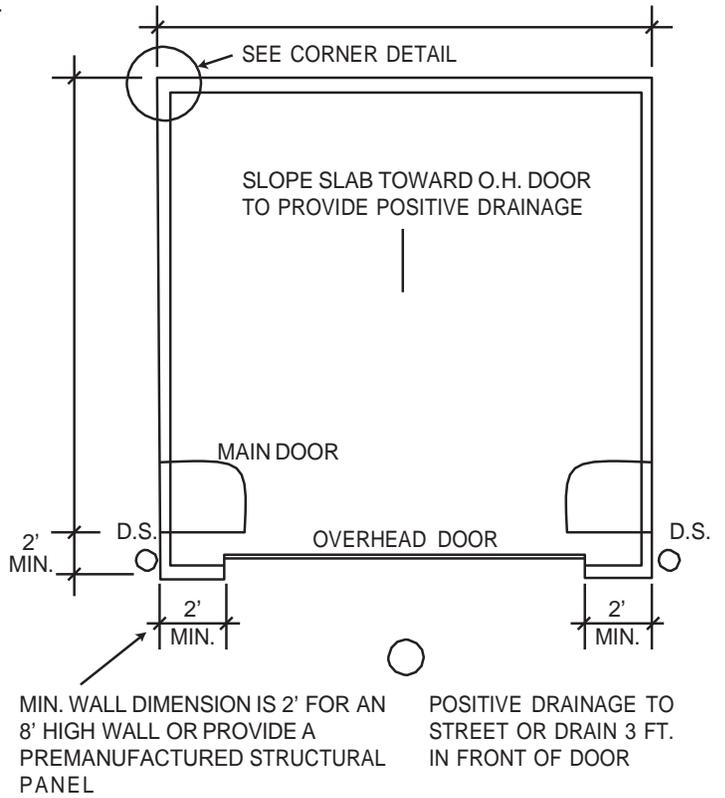
- Site plan shall be drawn to scale and accurately show lot dimensions, size, and location of principal structure and proposed location of garage.
- Garage shall not be closer than three (3) feet to any side lot line or 6' from the rear property line. See Construction Regulations for distance from principal dwelling.
- Show location and size of storm water downspouts, show yard drain (splash pan) if applicable.



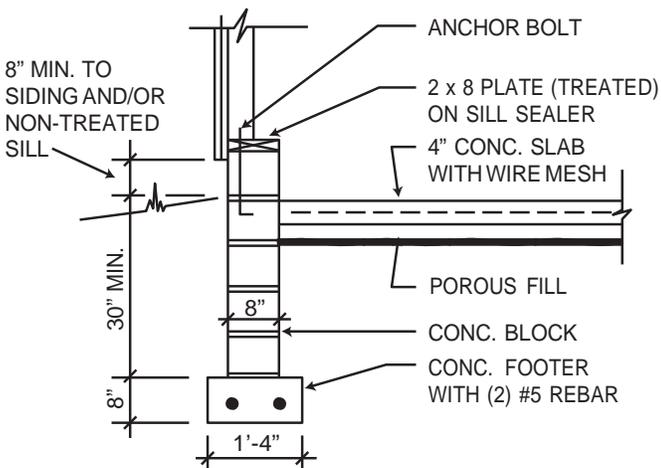
DETAILS



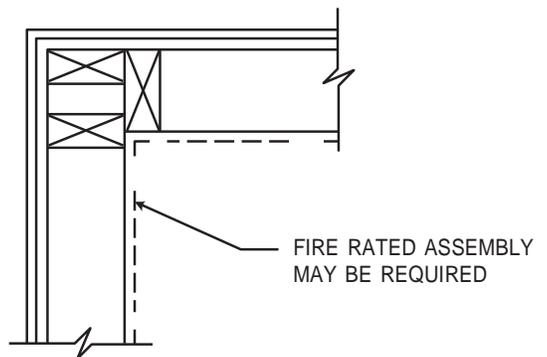
GARAGE PLAN



FOUNDATION 2

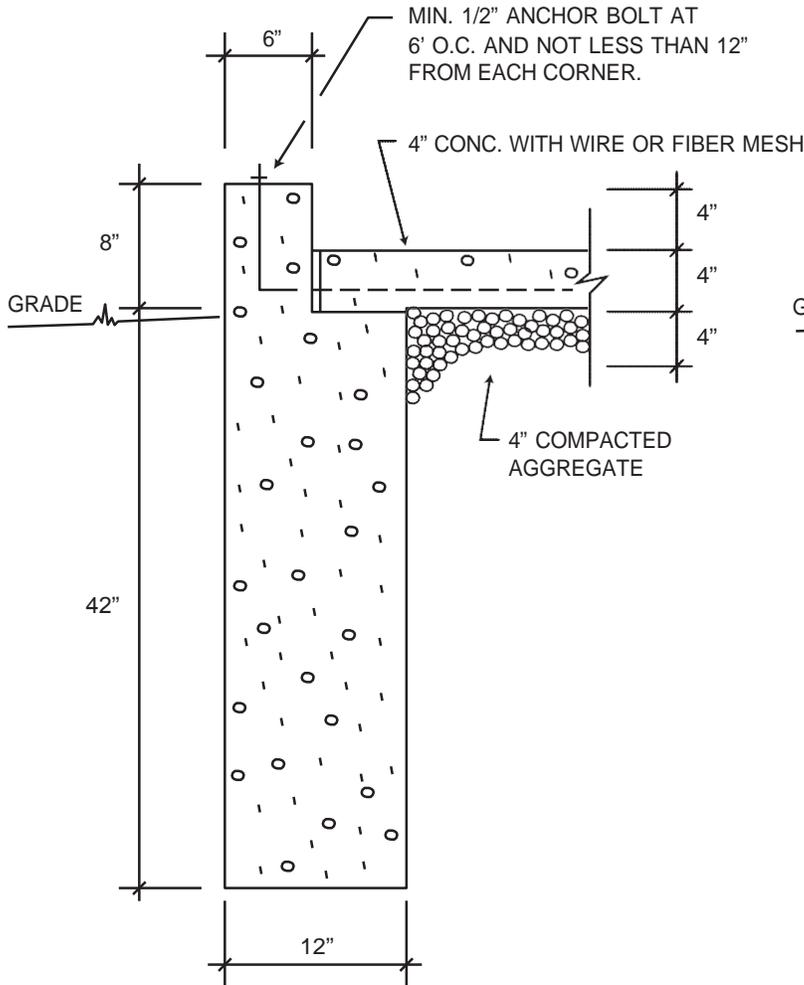


CORNER DETAIL

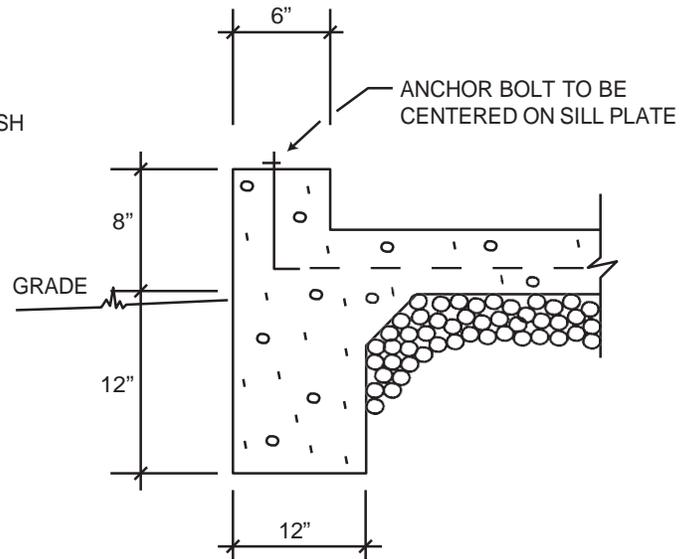


The following detail is for clarification of the footing and framing requirements for garages. If the foundation wall is constructed of masonry block, use a 2" x 8" plate (treated) in lieu of the 2" x 4".

ANCHOR BOLTS MUST BE A MIN. OF 7 INCHES INTO CONCRETE AND NO LESS THAN 2 BOLTS PER PLATE SECTION.



FOUNDATION FOR GARAGES
OVER 600 SQUARE FEET
(TYPE 1A)



FOUNDATION FOR GARAGES
600 SQUARE FEET OR LESS
(TYPE 1B)

OHIO RESIDENTIAL CODE - SECTION R403

Contractor/Owner Signature: _____