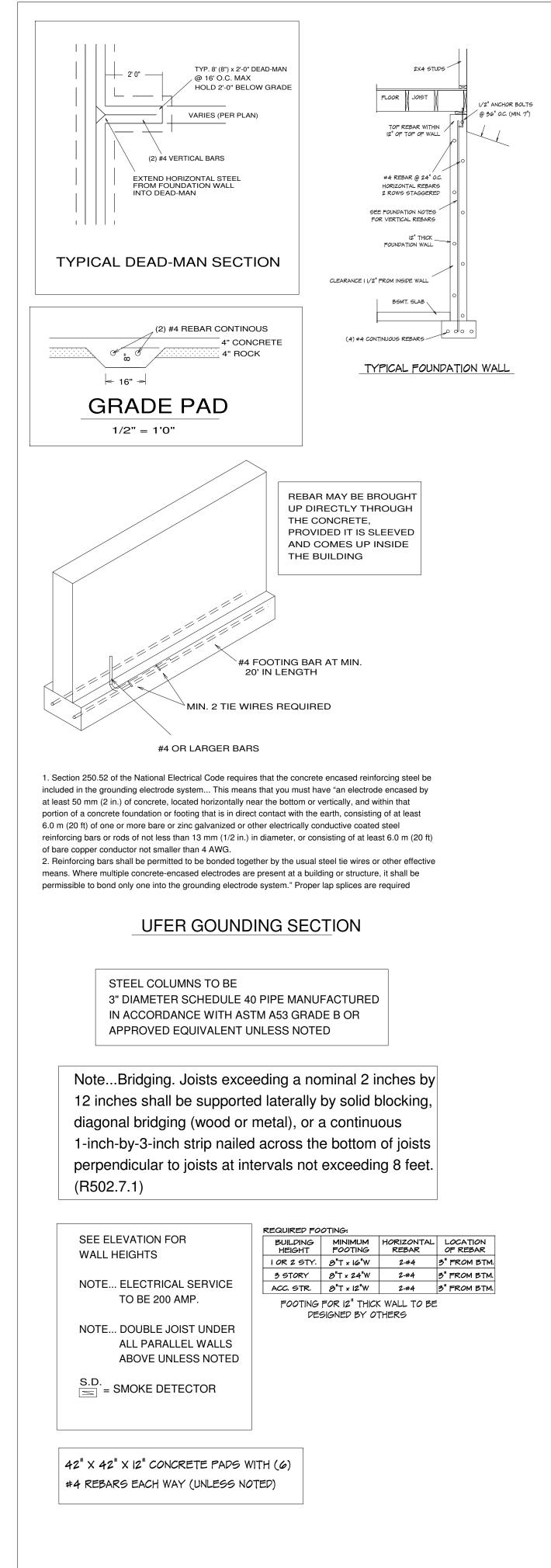
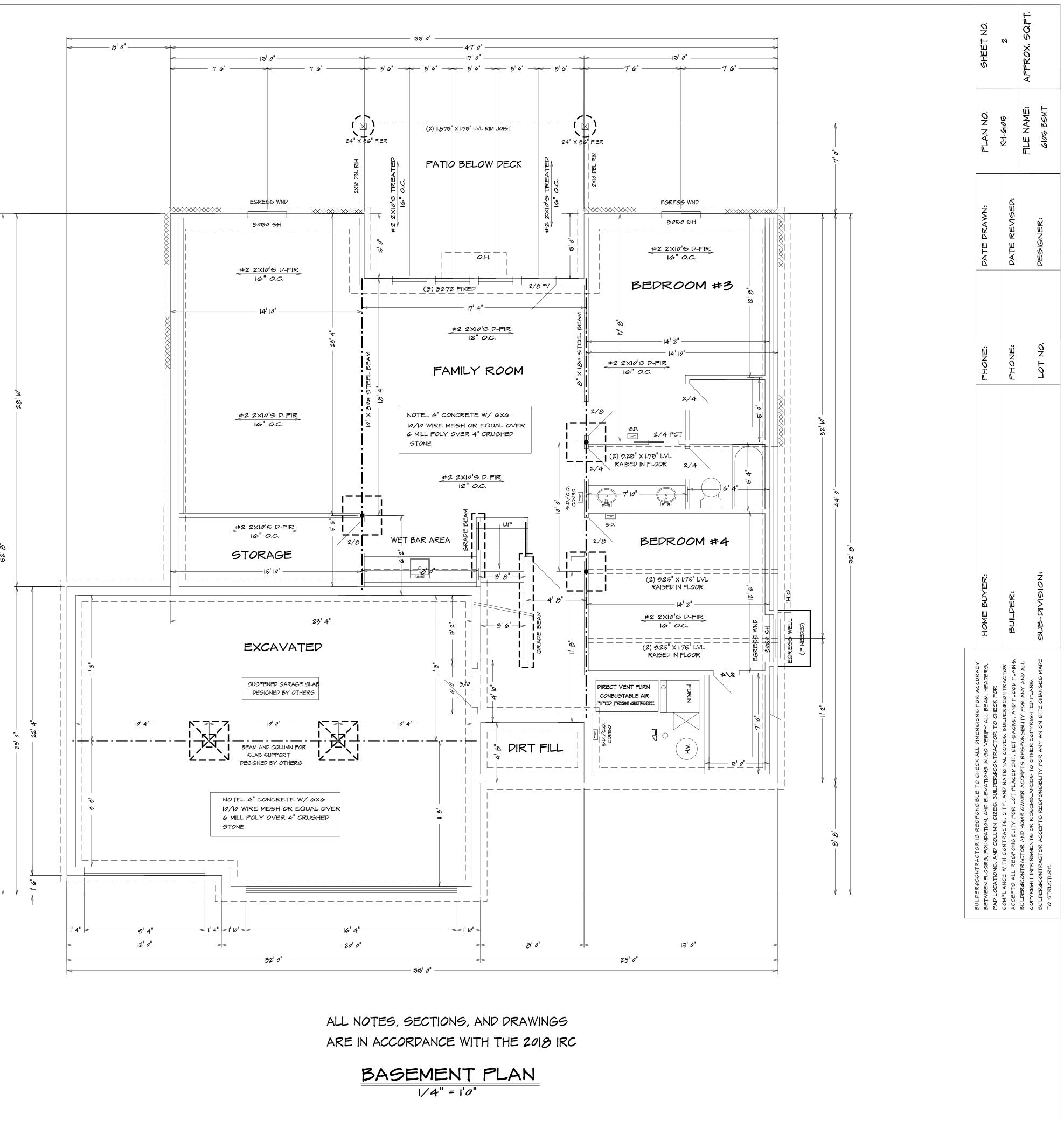


STORAGE BASEMENT = 257 GARAGE = 725 UNDER STOOP = 32 UNDER GARAGE = 672



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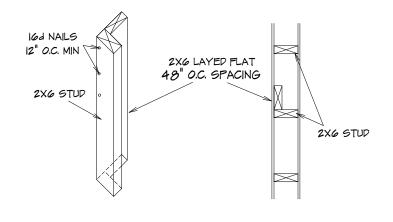


SEE ELEVATION FOR WALL HEIGHTS

NOTE ... ELECTRICAL SERVICE TO BE 200 AMP.

NOTE ... DOUBLE JOIST UNDER ALL PARALLEL WALLS ABOVE UNLESS NOTED

S.D. = SMOKE DETECTOR



EXTERIOR TALL WALL SECTION 10' TRU 18' TALL WALLS UNINTERRUPTED TO BE CONSTRUCTED WITH 2X6 STUDS 16" O.C. WITH STIFF BACK EVERY 48" O.C.

GENERAL HEADER SPECIFICATIONS:

REQUIRED AREAS NEEDING HEADERS: WINDOWS/DOORS UP TO 38" R.O.

- WINDOWS/DOORS 38" UP TO 72" R.O. WINDOWS/DOORS 72" UP TO 96" R.O.
- 8'0" GARAGE DOORS W/CEILING & ROOF LOAD
- 9'0" GARAGE DOORS W/CEILING & ROOF LOAD

8'0" GARAGE DOORS W/SECOND FLOOR

9'0" GARAGE DOORS W/SECOND FLOOR

16'0" GARAGE DOOR W/NO SECOND FLOOR

16'0" GARAGE DOORS W/SECOND FLOOR

HEADER DESCRIPTIONS: (2) #2 D-FIR 2X10'S (2) #2 D-FIR 2X10'S W/1/2" GLUE PLY (2) 9 1/2" L.V.L. (2) 9 1/2" L.V.L. (2) 9 1/2" L.V.L. (2) 9 1/2" L.V.L. (2) 11 7/8" L.V.L. (2) 11 7/8" L.V.L. (2) 14" L.V.L.

USE HEADERS FOR OPENINGS ABOVE UNLESS SPECIFIED OTHERWISE.

R312.2.1 Window sills.

In dwelling units, where the opening of an operable window is located more than 72 inches (1829 mm) above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches (610 mm) above the fininshed floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4-inch-diameter (102 mm) sphere where such openings are located within 24 inches (610 mm) of the finished floor.

Exceptions:

- l. Windows whose openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the opening is in its largest opened position.
- 2. Openings that are provided with window fall prevention devices that comply with ASTM F 2090.
- 3. Windows that are provided with window opening control devices that comply with Section R312.2.2.

R312.2.2 Window opening control devices.

Window opening control devices shall comply with ASTM F 2000. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section R310.1.1.

Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet, one-half of which must be openable. Exception: The glazed areas shall not be required where artificial

light and a local exhaust system are provided.

The minimum local exhaust rates shall be determined in accordance with Section MI507.

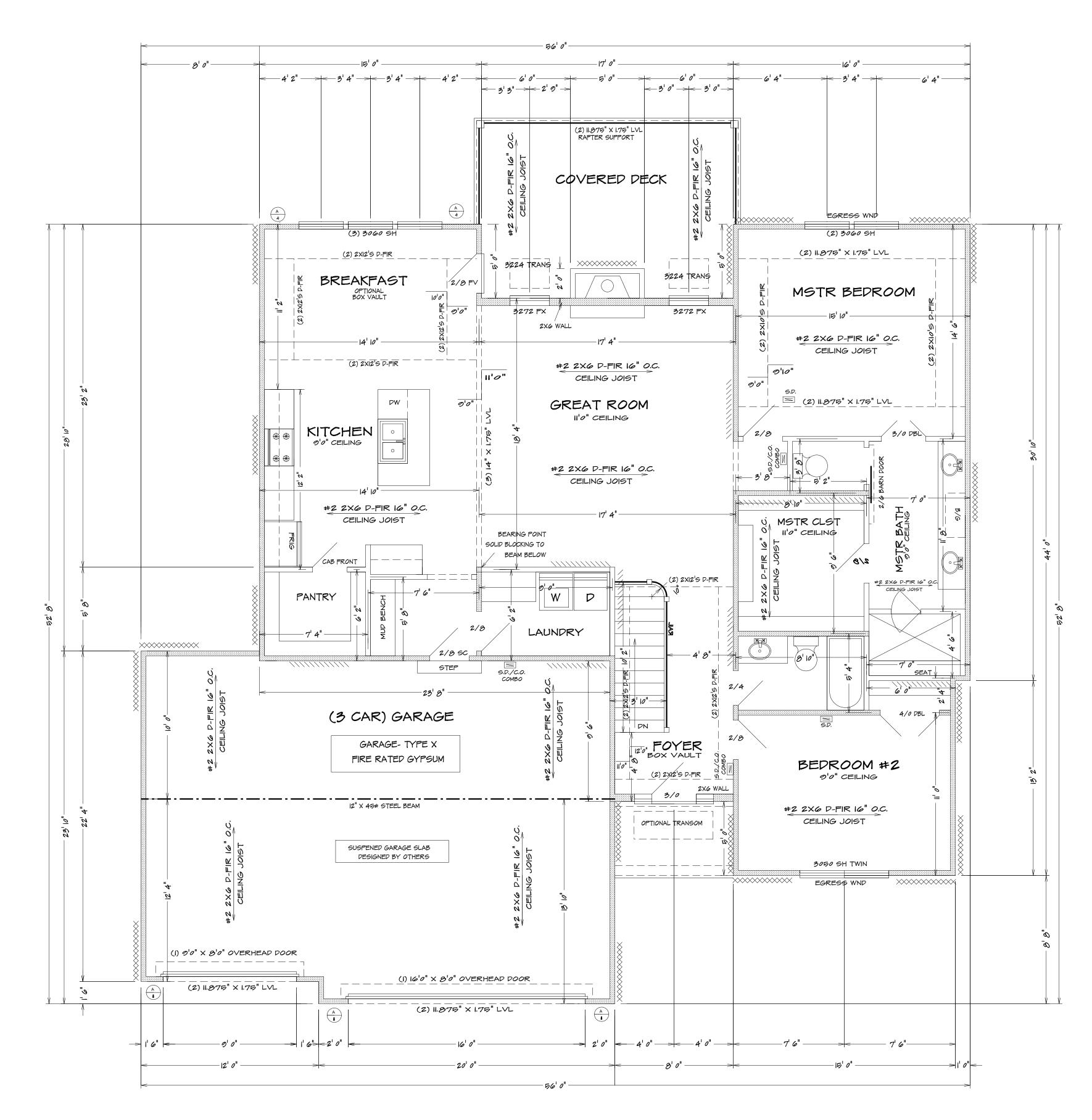
Exhaust air from the space shall be exhausted directly to the outdoors.

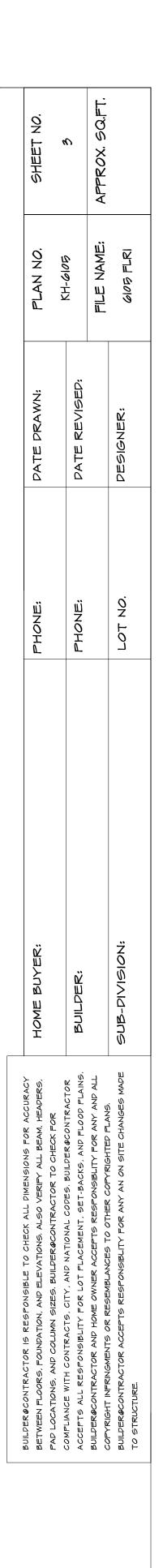
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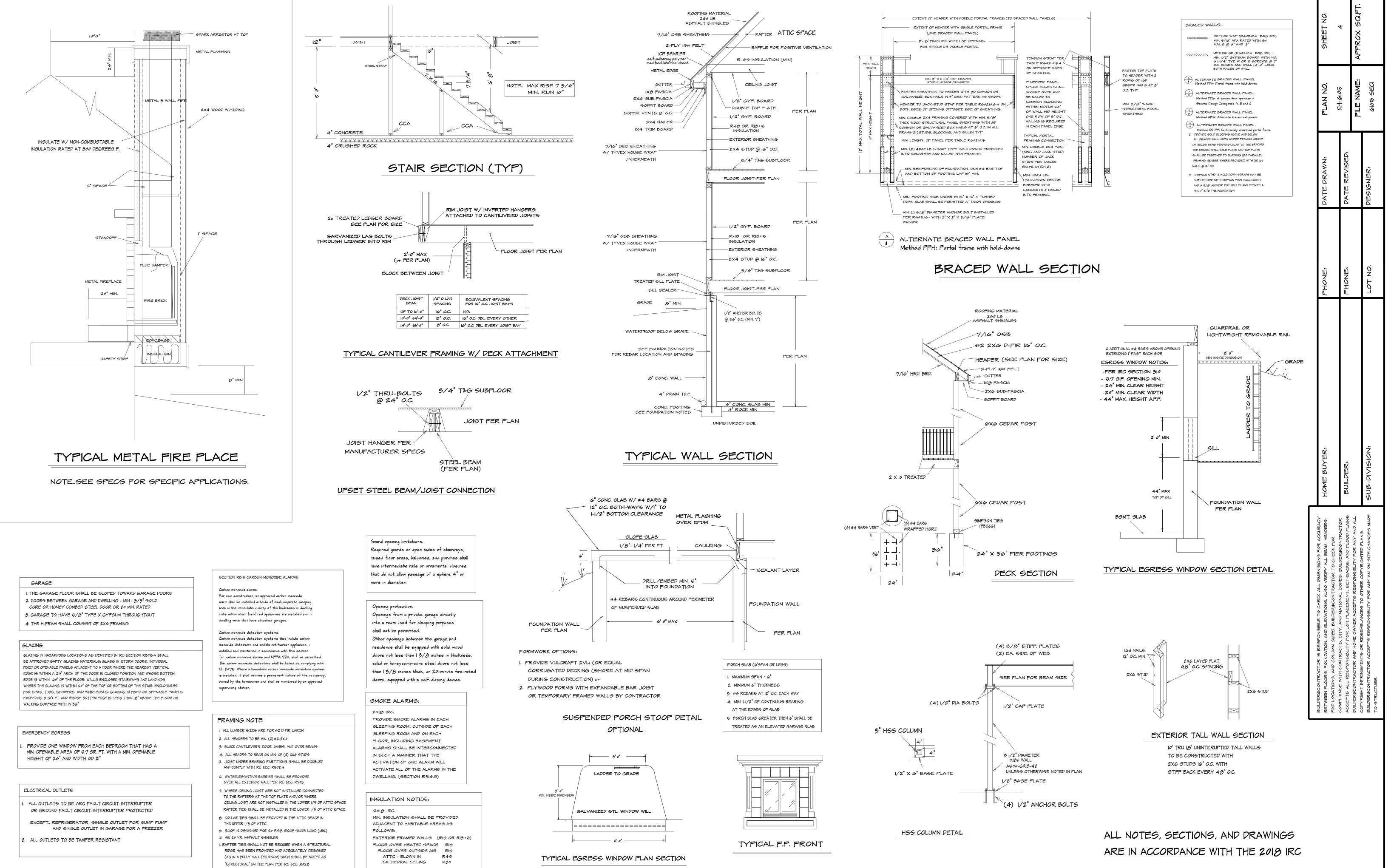
FIRST FLOOR PLAN 1/4" = 1'0"

BEARING WALL









Foundation Wall Reinforcement Schedule - Table 2

| Concrete strength/Grade | 8 inch thick wall | | 10 inch thick wall | | | |
|---|-------------------|-------|--------------------|---------|------|------|
| Reinforcement #4 bar | 8' | 9' | 10' | 8' | 9' | 10' |
| 3,000 psi / Grade 40 | 16 | 12 | NP | 24 | 16 | 12 |
| 3,500 psi / Grade 40 | 16 | 12 | NP | 24 | 24 | 12 |
| 3,000 psi / Grade 60 | 24 | 16 | NP | 24 | 20 | 16 |
| 3,500 psi / Grade 60 | 24 | 16 | NP | 24 | 24 | 16 |
| Horizontal reinforcement - | - Minim | um Gr | ade 40 |) steel | #4 I | bar |
| One bar 12" from top of wall; maximum spacing 24" o.c. | 4-#4 | 5-#4 | 6-#4 | 4-#4 | 5-#4 | 6-#4 |

1) Wall height is measured from the top of the wall to the top of the floor slab.

2) Vertical reinforcement for concrete walls that are not full height and for reinforcement spaced 24 inch on center may be placed in the middle of the wall. Other walls shall have vertical reinforcement place as follows:

a) 8-inch wall - Minimum 5 inches from the outside face. b) 10-inch wall - Minimum 6.75 inches from the outside face.

c) Extend bars to within 8 inches of the top of the wall.

3) Reinforcement clearances:

a) Concrete exposed to earth - minimum 1-1/2 inches. b) Not exposed to weather (interior side of walls) – minimum 3/4 inch.

c) Concrete exposed to weather (top clearance in garage and driveway slabs)- 1-1/2 inches. 4) Horizontal reinforcement:

a) One bar shall be placed within 12 inches of the top of the wall.

b) Other bars shall be equally spaced with spacing not to exceed 24 inches on center. c) Horizontal bars should be as close to the tension face as possible (interior) and behind the vertical reinforcement (i.e.2" towards the inside).

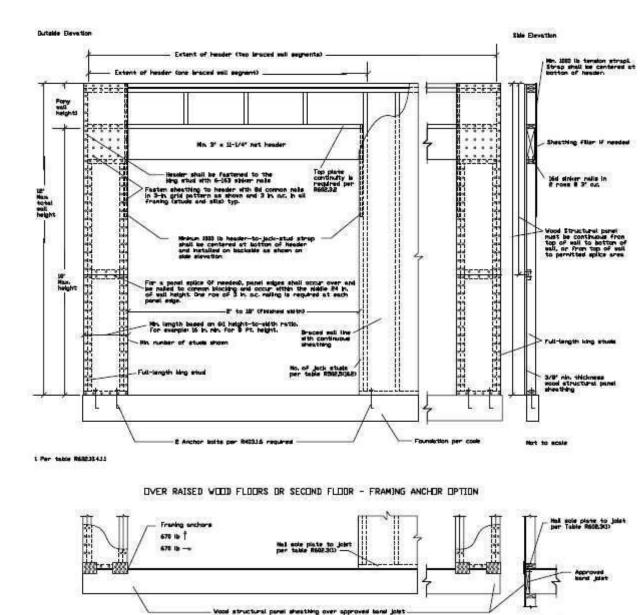
d) Supplemental reinforcement at corners - Place 1 #4 bar 48 inches long at 45 degree angle at corners of openings per Figure 4a. Place reinforcement within 6" of the edge of inside corners

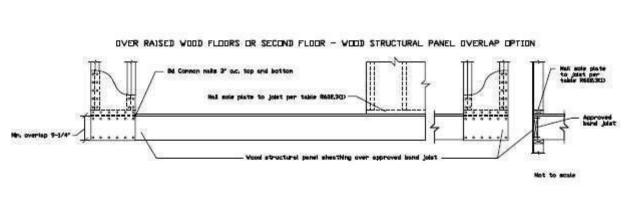
5) Reinforcement shall be lapped a minimum 24 inches at ends, splices, and around corners. 6) At masonry ledges the minimum wall thickness shall be 3-1/2 inches. Ledges shall not exceed a depth of more than 24 inches below the top of the wall. For wall thicknesses less than 4 inches provide #4 bars at maximum 24 inches on center to within 8 inches of the top of the wall.

 Straight walls more than 5 feet tall and more than 16 feet long shall be provided with exterior braced return walls. Wall length shall be measured using inside the shortest dimension between intersecting walls (See 7/S2).

| ITEM | | | SPACING OF FASTENERS |
|----------|---|--|---|
| | | Roof | |
| 1 | Blocking between joists or | 3-8d (2 ¹ /2" × | |
| 9:23 | rafters to top plate, toe nail | 0.113") 3-8d (2 ¹ /2" × | |
| 2 | Ceiling joists to plate, toe nail Ceiling joists not attached to | 0.113") | 8 |
| 3 | parallel rafter, laps over partitions, face nail | 3-10d | |
| 4 | Collar tie to rafter, face nail or 1 ¹ /4" × 20 gage ridge strap | 3-10d (3" × 0.128") | 18- |
| 5 | Rafter or roof truss to plate, toe nail | 3-16d box nails (3 ¹ / ₂ " × 0.135") or 3-10d common nails (3" × 0.148") | 2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss ^j |
| 6 | Roof rafters to ridge, valley or hip rafters: toe nail face nail | 4-16d (3 ¹ /2" × 0.135") 3-16d (3 ¹ /2" × 0.135") | 8- |
| 7 | Built-up studs-face nail | Wall 10d (3" × 0.128") | 24″ o.c. |
| 8 | Abutting studs at intersecting wall corners, face nail | 16d (3 ¹ /2" × | 12″ o.c. |
| 9 | Built-up header, two pieces | 0.135") 16d (3 ¹ /2" × | 16″ o.c. along each |
| 10 | with ¹ / ₂ " spacer Continued header, two pieces | 0.135") 16d (3 ¹ / ₂ " × | edge 16″ o.c. along each |
| 00000 | Continuous header to stud, toe | 0.135") 4-8d (2 ¹ / ₂ " × | edge |
| 11 | nail | 0.113") | |
| 12 | Double studs, face nail | $10d (3'' \times 0.128'')$ | 24″ o.c. |
| 13 14 | Double top plates, face nail Double top plates, minimum 24-inch offset of end joints, | 10d (3" × 0.128") 8-16d (3 ¹ /2" × | 24″ o.c. _ |
| 15 | face nail in lapped area Sole plate to joist or blocking, | 0.135") 16d (3 ¹ /2" × | 16″ o.c. |
| 10000 | face nail Sole plate to joist or blocking | 0.135") 3-16d (3 ¹ /2" × | |
| 16 | at braced wall panels Stud to sole plate, toe nail | 0.135") 3-8d (2 ¹ /2" × 0.113") or 2-16d | 16″ o.c. |
| | | (3 ¹ /2" × 0.135") 2-16d (3 ¹ /2" × | 20. 10.000 |
| 18 | Top or sole plate to stud, end nail Top plates, laps at corners and | 2-160 (3*72* × 0.135*) 2-10d (3** × | 8- |
| 19 | intersections, face nail | 0.128") | 11- |
| 20 | 1" brace to each stud and plate, face nail | 2-8d (2 ¹ /2" × 0.113") 2 staples 1 ³ /4" × | 94 <u>1988</u> |
| 21 | 1″ × 6″ sheathing to each bearing, face nail | 2-8d (2 ¹ /2" × 0.113") 2 staples 1 ³ /4" | |
| 22 | 1″ × 8″ sheathing to each bearing, face nail | 2-8d (2 ¹ /2" × 0.113") 3 staples 1 ³ / 4 | 2-05 |
| 23 | Wider than 1″ × 8″ sheathing to each bearing, face nail | 3-8d (2 ¹ /2" × 0.113") 4 staples 1 ³ /4" Floor | 1 |
| 24 | Joist to sill or girder, toe nail | 3-8d (2 ¹ /2" × | 8- |
| 25 | Rim joist to top plate, toe nail (roof applications also) | 0.113") 8d (2 ¹ /2" × | 6″ o.c. |
| 26 | Rim joist or blocking to sill plate, toe nail | 0.113") 8d (2 ¹ /2" × 0.113") | 6″ o.c. |
| 27 | 1″ × 6″ subfloor or less to each joist, face nail | 0.113") 2-8d (2 ¹ /2" × 0.113") 2 staples 1 ³ /4" | |
| 28 | 2″ subfloor to joist or girder, blind and face nail | 2-16d (3 ¹ /2" × 0.135") | 87 |
| 29 | 2″ planks (plank & beam - floor & roof) | 2-16d (3 ¹ /2" × 0.135") | at each bearing |
| 30 | Built-up girders and beams, 2-inch lumber layers | 0.135") 10d (3" × 0.128") | Nail each layer as follows: 32″ o.c. at to and bottom and staggered. Two nails at ends and at each splice. |
| 31 | Ledger strip supporting joists | 3-16d (3 ¹ /2" × | At each joist or rafte |

OVER CONCRETE OR MASONRY BLOCK FOUNDATION





CF-PF WALL BRACING SECTION

| | | DECODIDITION OF | SPACING | |
|------|---|---|--------------------------------|--------|
| ITEM | DESCRIPTION OF BUILDING MATERIALS | DESCRIPTION OF FASTENER ^{b, c, e} | Edges (inches) ⁱ | Int |
| W | ood structural panels, su | bfloor, roof and interior wa sheathing to fr | ll sheathing to aming | framin |
| 32 | ³ / ₈ " - ¹ / ₂ " | 6d common (2" × 0.113") nail (subfloor wall) ^j 8d common (2 ¹ /2" × 0.131") nail (roof) ^f | 6 | |
| 33 | ¹⁹ / ₃₂ " - 1" | 8d common nail (2 ¹ /2" × 0.131") | 6 | |
| 34 | 1 ¹ /8" - 1 ¹ /4" | 10d common (3" × 0.148") nail or 8d (2 ¹ /2" × 0.131") deformed nail | 6 | |
| | · | Other wall she | athing ^h | |
| 35 | ¹ / ₂ " structural cellulosic fiberboard sheathing | 1 ¹ /2" galvanized roofing nail, ⁷ /16" crown or 1" crown staple 16 ga., 1 ¹ /4" long | 3 | |
| 36 | ^{25/} 32" structural cellulosic fiberboard sheathing | $1^3/4^{"}$ galvanized roofing nail, $7/_{16}^{"}$ crown or 1" crown staple 16 ga., $1^1/2^{"}$ long | 3 | |
| 37 | ¹ /2" gypsum sheathing ^d | 1 ¹ /2" galvanized roofing nail; staple galvanized, 1 ¹ /2" long; 1 ¹ /4 screws, Type W or S | 7 | |
| 38 | ⁵ /8" gypsum sheathing ^d | 1 ³ /4" galvanized roofing nail; staple galvanized, 1 ⁵ /8" long; 1 ⁵ /8" screws, Type W or S | z | |
| Â | Wood stru | ictural panels, combination | subfloor unde | rlayme |
| 39 | ³ /4" and less | 6d deformed (2" × 0.120") nail or 8d common (2 ¹ /2" × 0.131") nail | 6 | |
| 40 | ⁷ /8" - 1" | 8d common (2 ¹ /2" × 0.131") nail or 8d deformed (2 ¹ /2" × 0.120") nail | 6 | |
| 41 | 1 ¹ /8" - 1 ¹ /4" | 10d common (3" × 0.148") nail or 8d deformed (2 ¹ /2" × 0.120") nail | 6 | |

TABLE R602.3(1)—continued FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

For SI: 1 inch = 25.4 mm. 1 foot = 304.8 mm. 1 mile per hour = 0.447 m/s: 1 Ksi = 6.895 MPa.

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26 No 19**2**3

| F FASTENERS rmediate supports ^{c, (} (inches) | i. |
|--|-----|
| (inches) and particleboard w | all |
| 12 ^g | |
| 12 ^g | |
| 12 | |
| 6 | |
| 6 | |
| 7 | |
| 7 | |
| t to framing | |
| 12 | |
| 12 | |
| 12 | |

Not to acale

