## GENERAL NOTES - STRUCTURAL

1. DESIGN LOADS:
   Roof Live Load ..... 1992 Standard Building Code
   Floor Live Loads
   Apartments ..... 40 psf
   Apartment Balconies ..... 40 psf
   Mechanical & Electrical Rooms, Stairs, and Public Areas ..... 100 psf
   Corridors ..... 80 psf
   Wind .....1992 Standard Building Code: Basic Wind Speed 100 MPH

2. Unless noted otherwise, requirements given for one or more locations also apply at other locations at which conditions are similar. The requirements given shall be adapted to conditions at such other locations.

3. The structural drawings are to be read in view of all other drawings and all specifications. Coordinate all work shown with all other work.

4. Shop drawings for any part of the work shall show the interface with the provisions for related other work including such adaptations of requirements given as may be necessary.

5. The design of the structures shown is based on interaction of various materials and connected parts and the design loads noted above. The strength and stability of construction underway may, therefore, depend on supplemental temporary supports, bracing, or other measures. Determine the need for any provide all such measures.

6. Contractor shall cross check dimensions and elevations between architectural, mechanical, and structural plans and notify architect of any variance before contractor begins work.

7. FOOTING WORK: Designations for footings are noted on the foundation plan and refer to the Footing Schedule. The Footing Schedule is shown on several sheets and is the same schedule on all sheets. Coordinate footing work with all other work. All footings shall be reinforced.

   A. Bar footing and foundation wall reinforcing shall be continuous, see Note 9 below.

8. SLAB-ON-GRADE CONSTRUCTION: Slab on grade thickness and reinforcing are noted on the plans and detail. Provide 2 layers of vapor barrier beneath all slabs and footings which are integral with slabs. Construction joints shall be as shown on 1/S2.5✓ Slab contraction joint locations are shown on the foundation plans. Contraction joints shall be constructed per S-4 6/S2.5✓ Coordinate slab-on-grade work with all other work. Provide thickened slabs, depressed slabs, equipment pads, etc. as needed. Construct depressions in the slab per 1/4 2/S2.1✓

9. All reinforcing shall be continuous unless noted otherwise. Continuity at corner and intersections shall be as shown in 1/S6.1✓ Continuity at other locations may be achieved using contact lap splices shown on the shop drawings. Unless noted otherwise, the following lap splices shall be used:

| Bar Size | Masonry | Concrete |
|---|---|---|
| #3 | 20" | 20" |
| #4 | 24" | 20" |
| #5 | 30" | 26" |
| #6 | 36" | 33" |
| #7 | 49" | 45" |
| #8 | - | 54" |
| #9 | - | 74" |

10. MASONRY WORK

   (A) Masonry work shall be inspected; see specifications for requirements.

   (B) Designations for masonry walls are shown on the foundation plan. These designations refer to the wall schedule on S-2.0.✓

   (C) All reinforcing shall be continuous in grout filled cells. Provide continuity for horizontal reinforcing at corner and intersection per 1/S6.1✓

   (D) Vertical reinforcing shall be located at all corners, intersections, jambs at openings, end of walls, and at the spacings shown in the Wall Schedule between these locations. All vertical reinforcing shall have corresponding dowels in footings.

   (E) Horizontal joint reinf. is not required in walls with horizontal rebars at 4'-0" or closer spacing. Horizontal joint reinf. at these walls is only required if used as ties for veneer.

   (F) Control joints in masonry shall be a continuous vertical raked head joint. Provide building paper on one side of the joint. All horizontal reinforcing bars shall be continuous thru the control joint and all horizontal joint reinforcing shall terminate at the control joint. Control joint locations are shown on the architectural drawings. See arch. for control joints in brick.

   (G) Provide reinforcing and grouted masonry at the top of all openings. For openings not shown on the structural drawings, use an L1 lintel.

   (H) Submit reinforcing shop drawings for masonry work. Show the location of openings in masonry and the location of reinforcing including lap splices.

   (I) All bolts or sleeve anchors embedded in masonry walls shall be in grout filled masonry. Provide a minimum of 6" grout all around bolts. Sleeve anchors shall be Phillips Red Head Sleeve Anchors.

   (J) Brick Openings. Unless specifically noted, provide steel angle lintels at the heads of all brick openings as follows: - all L's shall be galvanized - Adel A

| BRICK OPENING | LINTEL Masonry Wall Backup w/3/8" Cavity | Cavity Greater than 3/8" |
|---|---|---|
| Less than or equal to 6'-10" | 6"x3 1/2"x5/16" angle | 6"x4"x5/16" angle |
| Greater than 6'-10" | 6"x3 1/2"x5/16" angle | 7"x4"x3/8" angle |

Bear angles 8" on brick at each end, see detail 19/S6.5✓ Locate edge of outstanding leg 1/2" from exterior face of brick.

11. STRUCTURAL STEEL WORK

   A. Designations for columns are shown at the lowest level they occur. These designations refer to the column schedule. The column schedule is shown on several sheets and is the same schedule on all sheets.

   B. All floor and roof areas shall be completely and adequately framed for the support of floor systems and metal roof deck.

   C. Steel beams at the floors shall be 5 1/2" below finish floor. When joists or 5 1/2" slab on metal deck bear on the beam and 3" below finish floor where 3" conc. slab on steel centering bears on the beam.

   D. Locations of steel beams shown at roof areas represent the beam centerline at the top flange unless noted otherwise.

      Top of steel elevations at roof areas shall be as required to support the metal roof deck. Coordinate top of steel elevations and roof slopes with architectural.

      Cope steel beams at roof areas in accordace with 4/S6.2✓ Some but not necessarily all locations where beams require coping are noted on the plans.

   E. Submit shop drawings in accordance with the specifications.

12. STEEL JOIST WORK

   Steel joists are designated on the plans using Steel Joist Institute designations. Steel joists shall be Series K designed for the criteria noted below.

   Design joists for the uniform loads published in the standard load tables of the S.J.I.

   Design joists for a single 100 pound concentrated load applied at any location on either the top or bottom chord in addition to 1/3* of the uniform loads noted above.

   Joists shall have a 2 1/2" deep bearing unless noted otherwise. Extend joist top chords as required. Design joist extended top chord for a 150 lb. concentrated load at the end in addition to the uniform design loads. The extended top chord shall not be used to reduce the simple span capacity of the joist.

   Limit total load deflection to 1/240 and live load deflection to 1/360 of the span.

   Provide diagonal cross-bridging at floor framing.

   Coordinate steel joist locations with all other work such as plumbing, partitions parallel to joists which extend to structure and ductwork. If necessary, revise joist spacings shown or add a joist if necessary. The maximum spacing between joists shall not exceed 4'-0" at apartment units and 2'-8" in public areas.

   Joist locations shall be shown on the shop drawings. Any deviations in locations for those shown on the drawings shall be highlighted.

13. CONCRETE FLOOR FRAMING

   A. All concrete slabs on steel centering shall be 3" and shall have 6 x 6 W2.9xW2.9 WWF. positioned in the slab in accordance with 11/S6.1✓

   B. Concrete slabs on metal deck shall have 6x6 W2.9xW2.9WWF. located 3/4" Min. to 1½" Max. from the top of the slab. 1½" - Adel B

   C. All WWF. shall be lapped 1 1/2 spaces and tied together. WWF. shall be secured in place prior to concrete placement.

   D. Openings in concrete slabs on metal deck or steel centering shall be reinforced in accordance with 12/6.2✓and 13/6.2✓

      The reinforcing shown is not required for a 6" and smaller opening provided there are no other openings within 12" (edge to edge).

      Several individual openings located near each other may be considered as one opening in determining the reinforcing requirements. For example, three 4" diameter openings 12" center - center along a single line may be considered as a 4" x 28" opening.

14. METAL ROOF DECK

   A. Metal roof deck shall be the depths and ga. noted on the plans. Weld metal deck to steel supports at each flute where flutes cross supports. Attach deck to steel where deck is parallel to steel per 6/7 & 8/S6.2. Weld sidelaps together at 12" centers. All edges and openings in deck shall be supported. Unless noted or approved otherwise, provide support for openings in accordance with the following:

      (1) Openings less than 12" in both directions: For 3" roof deck, where the opening occurs at a rib or flute, provide support with 2" x 2" x 3/16" angle framing welded to the underside of the deck. The angles parallel to the deck shall extend 24" beyond the opening at each end and shall be welded to the adjacent flute with welds @ 4" centers.

      (2) Openings greater than 12" in either direction. Support edges of opening with steel framing supported by the steel joists or beams. For the steel members which frame into the joists or beams, use 3" x 3" x 3/16" angle framing for spans less than or equal to 5'-0". For spans greater than 5'-0", use 6" x 3?" x 3/16" angles with the 6" leg vertical.

      For the steel members which frame into the members above, use 3" x 3" x 3/16" angle framing. The steel deck shall be welded to the angle framing with welds @ 12" centers.

   B. *Concentrated loads not to exceed 50 lbs. may be supported from the steel roof deck as follows:

      1. Concentrated loads shall be attached to a secondary framing member designed to distribute the weight of the concentrated load to at least 4 deck flutes. The "distributional member" shall not be less than 1 1/2" in depth and shall be securely attached to at least 4 deck flutes.

      2. Concentrated loads shall not be spaced closer than 4'-0" in the direction of the deck flutes nor less than 2'-0" perpendicular to the deck flutes.*.

   C. Concentrated loads greater than 50 lbs. shall not be supported from the steel roof deck.

15. STRUCTURAL COLD FORMED FRAMING (METAL STUD WALL FRAMING).

   All exterior metal stud wall and canopy framing and interior framing where specifically noted on the plans shall be structural cold formed framing. Requirements are given in the specification, Section 05400. Submit shop drawings in accordance with the specifications.

   Provide stud spacings in accordance with the following:

| Stud Size | Stud Spacing | MAXIMUM STUD SPAN* Brick Veneer or Canopy On Exterior | No Brick Veneer or Canopy On Exterior |
|---|---|---|---|
| 6" | 24". | 11'- 0" | 13'-0" |
| 6" | 16" | 12'- 8" | 15'-0" |
| 6" | 2 @ 24" | 14'- 0" | 16'-6" |
| 6" | 2 @ 16" | 16'- 0" | 19'-10"* |

*Stud span shall be the distance between locations where studs are attached to foundation walls, girts, floors, and roofs. If the stud span exceeds the maximum, provide diagonal bracing securely attached to the roof structure to reduce the span. Bracing shall be in accordance with 15/S6.5✓

   At openings in walls provide jamb studs at each jamb. The number of jamb studs shall be equal to: $\frac{1/2 \times (\text{opening width} + \text{stud spacing})}{\text{Stud spacing}}$

   Fractions of studs shall be rounded to the next higher number. Example: For a 6'-0" opening and studs spaced at 16", the number of jamb studs required is

   $$\frac{1/2\ (6+1.33)}{1.33} = 2.75$$

   Therefore, 3 jamb studs are required. All jamb studs shall be connected together.

   Provide track and/or studs at heads and sills of openings as shown on 16/S6.5✓

   Use the following:

| Detail | Brick Veneer On Exterior | No Brick Veneer on Exterior |
|---|---|---|
| 16A/S6.5 | Openings less than or equal to 7'-4" | Openings less than or equal to 8'-2" |
| 16B/S6.5 | Openings greater than 7'-4" and less than 10'4" | Openings greater than 8'-2" and less than 12'-4" |

   ~~Where openings~~ exceed the above spacings, brace opening at head in accordance ~~with 15/S6.5~~ and provide a C6x8.2 bolted to the foundation @ 4'-0" centers at ~~the jambs~~ the C6x8.2 shall be welded to a 1/2"x6"x8" steel plate bolted to ~~the jamb~~ with 1/2-3/4" dia. x 18" A307 A.B. Attach track to channel. } Revised

   where openings exceed the above spacing, brace opening at head in accordance with 15/S6.5. and provide a TS 5x3 x 5/16 below the opening. The TS shall be welded to a 3/4" x 5 1/2" x 9" base plate and bolted to foundation w/2-3/4" diameter x 16" A307 anchor bolts. Space TS @ 4'0" for window sill heights < 4'0" above the floor and 2'-6" for window sill heights > 4'0" above the floor. Attach bend at sill to TS. per Adel B

16. MECHANICAL ELECTRICAL, AND PIPING SYSTEMS LOADS:

   A. Unless noted otherwise on the drawings, provisions have been made for the following uniformly distributed loads:

      (1) Steel joist framed areas ..... 3 PSF

      (2) 5 1/2" thick concrete floor areas..... 10 PSF

      (3) Steel Beam Framed Roof Areas:

         a. Flat roofs..... 5 PSF
            (See plan where provision has been made for specific loads in addition to the uniform provision)

         b. Sloped roofs (3/12 or greater)..... 3 PSF

   B. Coordinate the arrangement, distribution, and location of mechanical, piping, and electrical systems work so that provisions noted above are not exceeded. Where necessary, secondary framing, bridging, or other means shall be provided to distribute loads. Such framing, bridging, or other means shall be shown on the shop drawings for the work of the mechanical, electrical and piping systems.

   C. Do not place loads between panel points of steel joists in excess 100 lbs.

   D. Do not support concentrated loads from steel roof deck exceeding allowances noted in Note 16.

17. EXPANSION JOINTS. All construction above the slab shall be discontinuous at the joint unless noted otherwise. Provide contraction joints in slab/footings where specifically noted on the drawings. A contraction joint does not occur at every expansion joint location.

18. WOOD FRAMING:

   A. All members shall be completely and adequately framed with the members, connections, ties, and braces needed to develop the strength and rigidity required to serve the intended purposes. Comply with all requirements given, and with recognized standards of practice for wood-framed construction. Where nailing requirements are not shown on the plans, nail in accordance with Table 1704.1 of the 1992 Standard Building Code.

   B. All framing anchors and hardware referenced on the plans are those of the Simpson Co. of San Leandro, California.

   C. Exterior Wall & Interior Load Bearing Wall Framing

      1) All exterior walls shall be framed with 2x6 studs. All interior walls shown on the framing plans shall be framed with 2x4 studs unless noted otherwise on architectural drawings.

      2) At openings in walls provide wood headers and bearing studs as noted on the plans. Provide bearing studs beneath headers and beams. Provide jamb studs at end of headers and beams continuous from the foundation to the top of the wall. Attach the bearing studs and header to the jamb stud.

   D. Roof System - Trusses & Rafters

      The general arrangement of roof framing is shown on the drawings. The wood roof truss supplier shall provide a complete roof system consisting of prefabricated trusses, girder trusses, supplemental prefabricated components where necessary, conventional framing where necessary, connection hardware where required, bracing and bridging.

      1) Prefabricated Trusses

         Design, fabricate and install prefabricated wood trusses in accordance with all applicable provisions of the local building code. Use metal truss plate connectors.

         All wood roof trusses shall be designed for the following loads:

         Top Chord DL 20 psf
         Top Chord LL 20 psf
         Bottom Chord DL 10 psf + Mech. Eqpt. Ht.

         Where the roof is of irregular shape, use conventional trusses with prefabricated components placed above and secured to the lower trusses. The lower trusses shall be sheathed prior to the placement of components above. Shaded areas on the plans indicate where supplemental prefabricated components are required to be placed above lower trusses.

         Provide special girder trusses where shown on the drawings. Determine the need for and provide adequate truss bracing as required and in accordance with the recommendations of the Truss Plate Institute.

         Trusses shall have a maximum spacing of 24". Coordinate spacing with plumbing work and all other work. Show truss spacings on the shop drawings.

         Provide complete shop drawings for the roof system showing all materials and components, together with connection details.

         Attach all roof trusses at bearings with one Simpson H5 anchor unless noted otherwise.

      2) Roof Sheathing

         Provide 1/2" thick, exboard sheathing as manufactured by Potlatch and the 8'-0" panel length perpendicular to supports and continuous over 2 or more spans. Stagger the 8'-0" panel length 4'-0". Attach to roof framing with 8d common nails at 6" o.c. at supported panel edges and with 8d common nails at 12" o.c. at all intermediate framing. Provide continuous blocking at all ridges and valleys.

19. DEFINITIONS

| | | | |
|---|---|---|---|
| T.O. | = top of | T.S | = tube steel |
| T.O.S. | = top of steel | TYP. | = typical |
| T.O.F. | = top of footing | CONT. | = continuous |
| U.N.O. | = unless noted otherwise | O.C. | = on center |
| SPA. | = spacing | MAX. | = maximum |
| B.F. | = braced frame | OPP. | = opposite |
| AFF. | = above finish floor | SIM. | = similar |

## MASONRY WALL SCHEDULE ✓

W1: CMU wall grouted solid
Vert. Reinf: #5's @ 4'-0" centered in wall.
Horiz. Reinf: 2 continuous #4's @ 4'-0" centers & 2 continuous #4's @ top of wall.
Lintels: Use an L1 at all openings unless noted otherwise.

W2: CMU Wall
Vert. Reinf: #5's @ 32" centered in the wall with corresponding dowels in footing.
Horiz. Reinf: 2 continuous #4's @ 4'-0" centers and 2 continuous #4's @ top of wall.

W3: Vert. Reinf: #5's @ 4'-0" centered in wall
Horiz. Reinf: 2 continuous #4's @ 4'-0" centers and 2 continuous #4's @ top of wall.

W4 - 12" wall - 4" brick - 4" grout - 4" brick

Where an 8" brick wall projects beyond the face of building, provide horizontal joint reinf @ 16" extending 2'0" into 8" cmu. Where the brick wall projects more than 3'0" beyond face of building, provide #4 horizontal reinf @ 16" centered in the wall extending 8'0" into 8" cmu wall in addition to horizontal joint reinforcing - Adel A

Vert reinf: #4's @ 12"

Horiz reinf: Horizontal joint reinf for a 12" wall at 8" centers and #4's @ 12" centers. Provide 1 #4 2" above brick at each. - Adel A

## LINTEL SCHEDULE ✓

| | |
|---|---|
| L1 | See 17/S6.5. ✓ |
| L2 | See 18/S6.5 ✓ |

L3 17/S6.5 - extend grouted masonry and #3's to top of wall - Adel A

General notes: Delete roof dormers where detailed on architectural drawings - per Adel F

Sheet S2.0 MASONRY WALL SCHEDULE. At W1, the following may be used:

Horiz. Reinf: 2 Continuous #4's @ 4'-0" Centers &
2 Continuous #4's @ Top of Wall

Where an 8" brick wall projects beyond the exterior face of the building, provide horizontal joint reinf. @ 16". The horizontal joint reinf. does not need to extend into the masonry. Where the brick wall projects more than 3'-0" beyond the exterior face of the building, provide one #5 horizontal rebar @ 16" centered in the brick wall extending 8'-0" into the 8" CMU wall. Where the brick wall projects less than 3'-0" beyond the exterior face of the building, provide one #4 horizontal rebar at each bond beam (4'-0" center) centered in the brick wall extending 3'-0" into the 8" CMU wall.

May be used per ASI #7

Per ASI 5 - add structural note: Where slab on grade changes direction, provide reinforcing in accordance with 8 & 9 on S/2.5

$\frac{4+2}{2} = 2$

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COVINGTON LOUISIANA

INTERIM REVIEW SET
PROJECT No. 94-0100
DATE

S2.0