

STRUCTURAL/GENERAL NOTES & SPECIFICATIONS

A. General

The following notes shall clarify and supplement the working drawings.

B. Codes & Standards

International Residential Code (IRC) – 2009 edition

/ ACI-318: ACI SP-15 / M.B.M.A Manual

(and comply with all local applicable codes as required by Building Official)

C. Live Loads

Roof.....30 lbs/sf

Floors.....40 lbs/sf

Stairs & Exist 100 lbs/sf

Wind..... 110 mph - 3 sec. gust

Seismic zone.....A, B, C

Earth Pressure30lbs/cf equiv. Fluid pressure

D. Soil & Foundation Data

1. Soil bearing data not available. Assumed soil bearing capacity = 1500 lbs/sf.

2. Extend all footings down to undisturbed soil of the specified strength with a minimum depth of 1'-6" below adjacent grade, or as required by local building official, based on local frost line depth.

3. Center all footings on columns and walls unless specifically dimensioned otherwise.

4. Compacted fill to be well graded and granular with not more than 5% passing a 200 sieve. Place in 8-inch loose lifts and compact to 95% modified AASHTO density at optimum moisture.

E. Cast-In-Place Concrete and Reinforcing Steel

1. Concrete of the following 28-day strength: 5 sack cement/cy (min. 2500 psi); max. 6 gal water/sack for all structural concrete, including foundations and slabs on grade. Maximum sized aggregate 3/4". Maximum slump 4". Add Master Builders Pozzolith per manufacturer's recommendations to all concrete except footings. Concrete for exterior walks to be air entrained (5% air).

2. Reinforcing steel ASTM A-615 grade 40/60. Use grade 40 for temperature steel, stirrups and dowels. Detail, fabricate and place in accordance with the latest edition of A.C.I. "Manual Of Standard Practice".

3. Concrete cover on reinforcing steel (clear dimensions):

Suspended slabs.....3/4"

Beams & columns (to ties).....1 1/2"

Non-exposed vertical faces.....1"

Vertical faces exposed to earth or weather.....2"

Bottom of footings.....3"

Slabs-on-grade (from top).....1 1/2"

4. Lap all field splices 24 diameters with minimum of 12". Bend outer wall footing bars 12 inches or use corner bars at all corners and wall intersections.

5. Provide min. one continuous #4 bar at top and bottom of foundation walls w/ #4 at 12" o.c. where wall height exceed two feet. Provide min. two continuous #4 bars in footings. Dowel foundation walls to footings w/ #4 x 1'-6" long @ 16" o.c. Embedded 6" into footing. (No shear keys required)

6. Reinforce around wall and slab openings, with sides of 12" or greater, with two #5 bars extending 24" beyond corners on all four sides. Provide one extra #5 diagonal bar, 4'-0" long, at each corner.

7. Slabs-on-grade: Roll sub grade and moisten before pour. Saw cut crack control joints within 24 hours of pour or install Zip-Strip, with maximum of 12'-0" for 4" non-reinforced slabs and 40'-0" for reinforced slabs. (min. reinforcing: w6 x 6 - w1.4 x 1.4, supported)

8. Vibrate all concrete. Segregation of materials to be prevented. Test cylinders not required.

9. Place no fill against foundation or basement walls until floors are in place or walls have been adequately shored to resist lateral earth pressures.

F. Masonry (as applicable)

1. Hollow masonry units: F'M=1350 (half & half c.m.u.)

Mortar type S: 1 pc, 1/2 lime putty, 4 sand (UBC)

Grout: 2000 psi pea gravel concrete (7 sack)

2. Reinforcing steel: ASTM A-615, grade 40.

3. Place grout in lifts no greater than 4'-0" height.

4. Wall reinforcing:

.....6" walls: #4 vertical @ 48" o.c. w/ #9 wire horiz. Joint reinf. @ 8" o.c.

.....8" walls: #5 vertical @ 48" o.c. w/ 3/16" dia. wire horiz. Joint reinf. @ 8" o.c.

Install two bars in corners, wall intersections, wall endings and around openings. Lap all bars 20 inches and joint reinforcing, 12 inches. Use corner bars for outer bars in bond beams and at intersecting walls.

5. Anchor brick veneer to wood framed wall as detailed with 22 ga. X 7/8" x 7" galvanized corrugated wall ties @ 16" o.c. ea. Way with one Simpson n20a nail.

G. Timber and Wood Framing

1. Substitution of wood species identified herein may be as approved by local Building Official and material strength and capacities shall equal or exceed that of the species identified herein.

2. All lumber to be graded per book 16 of the West Coast Lumber Inspection Bureau:

HF/DF no. 2 for joists, rafters, light framing, plates and bracing

DF no. 1 for posts and beams

HF/DF "stud" for stud wall framing

4. Joists and rafters (lumber) shall have 2" nominal thick solid blocking at supports.

3. Comply with the latest edition of the NFPA "National Design Specification" as modified by the applicable code for all structural timber requirements.

5. Spike laminated members together w/ 10d nails @ 12" o.c., staggered. Splice laminations at supports only.

6. Provide cut washers for all bolts bearing on wood.

7. All nails shall be common wire nails.

8. Glue-laminated timbers, Douglas Fir, A.I.T.C. grading: combination 24F-V3 for simple spans; 24F-V8 for cantilevered spans. Dry conditions of use. Architectural appearance grade where exposed to view. Fabrication plant A.I.T.C. inspected./ Wrap individual members.

9. Plywood: Roof sheathing to be 15/32" C-D int-apa plywood with exterior glue, P.I. 24/0 (use 5-ply for panelized roofs) Nailing 8d @ 6" o.c. at panel edges and 8d @ 12" o.c. at intermediate supports. Sub-flooring to be 3/4" C-D-apa plywood with exterior glue, P.I. 32/16. Use T&G if no underlayment. Glue and nail with 10d @ 6" o.c. at panel edges and @ 10" at intermediate supports.

10. Pre-fabricated trussed members to be designed by applicable state licensed engineer in accordance with requirements shown in the drawings. Contractor shall verify as-framed dimensions and conditions prior to truss fabrication and coordinate as required. All engineering data shall be made available for submittal to the Building Official as required.

H. Structural Steel

1. All steel, except tubing: ASTM A-36. Pipe: ASTM A-53, Type E or S, grade B. Tubular section: ASTM A500, grade B. All bolts: ASTM A-307.

2. All fabrication, erection and detailing shall be in accordance with the latest edition of the "Manual Of Steel Construction" of the American Institute Of Steel Construction.

3. All welding by WABO certified welders in accordance with the "Welding Handbook" by the American Welding Society.

4. All welds 3/16" min. continuous fillet welds using ASWA5, E70XX electrodes.

5. Provide washers on all bolted connections.

6. All steel not embedded in concrete or masonry shall receive one shop coat of an approved primer paint. Apply two coats of heavy asphaltic paint to all steel exposed to earth.

7. Furnish complete shop drawings prior to fabrication.

I. Miscellaneous

1. Contractor shall verify all site conditions and dimensions in field.

2. Provide temporary bracing as required until all permanent connections and stiffening have been installed.

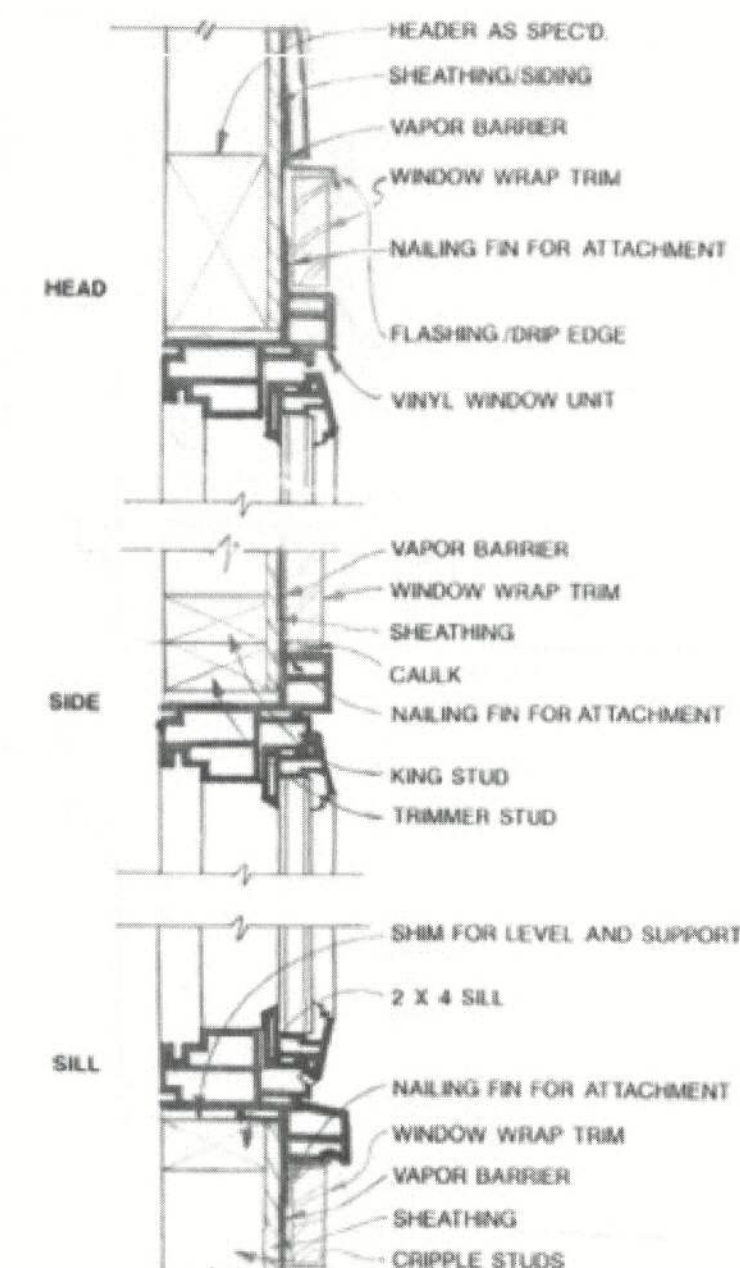
3. Verify size and locations of all openings in floor, roof and walls and coordinate with electrical and mechanical work.

4. Pre-fabricated items shall be handled and installed in accordance with manufacturers' recommendations. Pre-fabricated

assemblies shall be coordinated with any as-built conditions by the contractor regarding dimensions, clearance and applicable building code requirements.

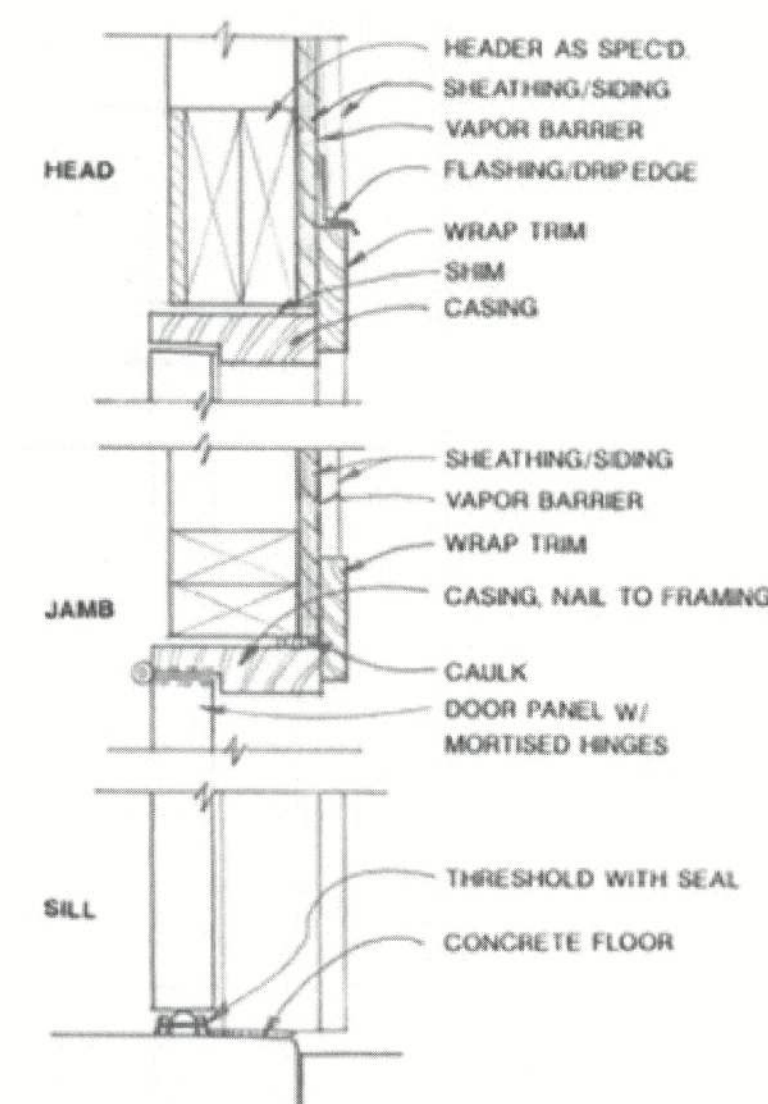
5. All HVAC equipment shall be determined by owner and/or contractor specific to this project and comply with all applicable codes. Performance data and distribution layout shall be provided by mechanical subcontractor. Submittals shall be coordinated by the contractor as required by the Building Official.

6. It is the intent of these drawings and specifications to comply with the requirements of the applicable Building Code and all other relevant codes and ordinances. Any discrepancies, omissions or errors shall be brought to the attention of the designer for clarification or correction before beginning the work. It is the responsibility of the general contractor to seek clarification or correction if needed.



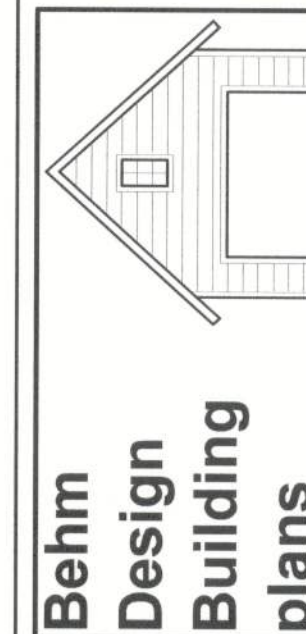
1 WINDOW DETAILS

(NOT TO SCALE)



2 DOOR DETAILS

(NOT TO SCALE)



QUESTIONS?...CALL

1-800-210-6776

www.behmdesign.com

816-0

PLAN NO.

DESIGN BY: JUB

DATE: 04/11

SHEET CONTENTS:
STRUCTURAL/GENERAL NOTES
WINDOW DETAILS
DOOR DETAILS

SHEET

7

OF 8