Typical Baffels

Insulate baffles @ soffit vent location.
Keep baffle 1" clear above insulation.

24"X 8" Concrete Footing With (2)-# 4 Bars

MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE

TYPE OR LOCATION OF CONCRETE CONSTRUCTION	MINIMUM SPECIFIED COMPRESSIVE STRENGTH (1) (F'c) WEATHERING POTENTIAL (2)		
	NEGLIGIBLE	MODERATE	SEVERE
BASEMENT WALLS AND FOUNDATIONS NOT EXPOSED TO THE WEATHER	2,500	2,500	2,500 (3)
BASEMENT SLABS AND INTERIOR SLABS ON GRADE, EXCEPT GARAGE FLOOR SLABS	2,500	2,500	2,500 (3)
BASEMENT WALLS, FOUNDATIONS WALLS, EXTEROOR WALLS, AND OTHER VERTICAL CONCRETE WORK EXPOSED TO THE WEATHER	2,500	3000 (4)	3000 (4)
PORCHES, CARPORT SLABS AND STEPS EXPOSED TO THE WEATHER, AND GARAGE FLOOR SLABS.	2,500	3000 (4)	3000 (4)

(1) AT 28 DAYS P.S.I.

(2) SEE CABO TABLE No. R-201.2 FOR WEATHERING POTENTIAL.

(3) CONCRETE IN THESE LOCATIONS WHICH MAY BE SUBJECT TO FREEZING AND THAWING DURING CONSTRUCTION SHALL BE AIR-ENTRAINED CONCRETE IN ACCORDANCE WITH FOOTNOTE (4).

(4) CONCRETE SHALL BE AIR ENTRAINED. TOTAL AIR CONTENT (PERCENT BY VOLUMN OF CONCRETE) SHALL BE NOT LESS THAN 5 PERCENT OR MORE THAN 7 PERCENT.

Cornice

FASCIA: 1"X8" Cedar-- Verify if plumb or square cut

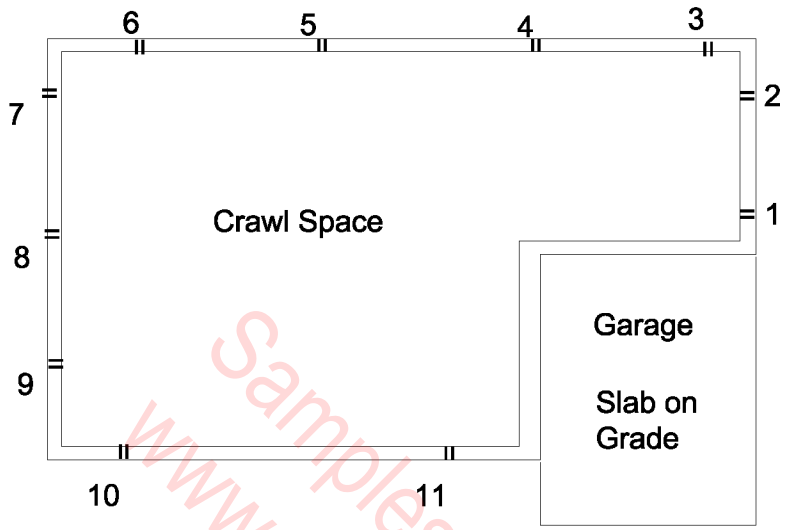
SUB-FACIA: 2"x 6" Continuous

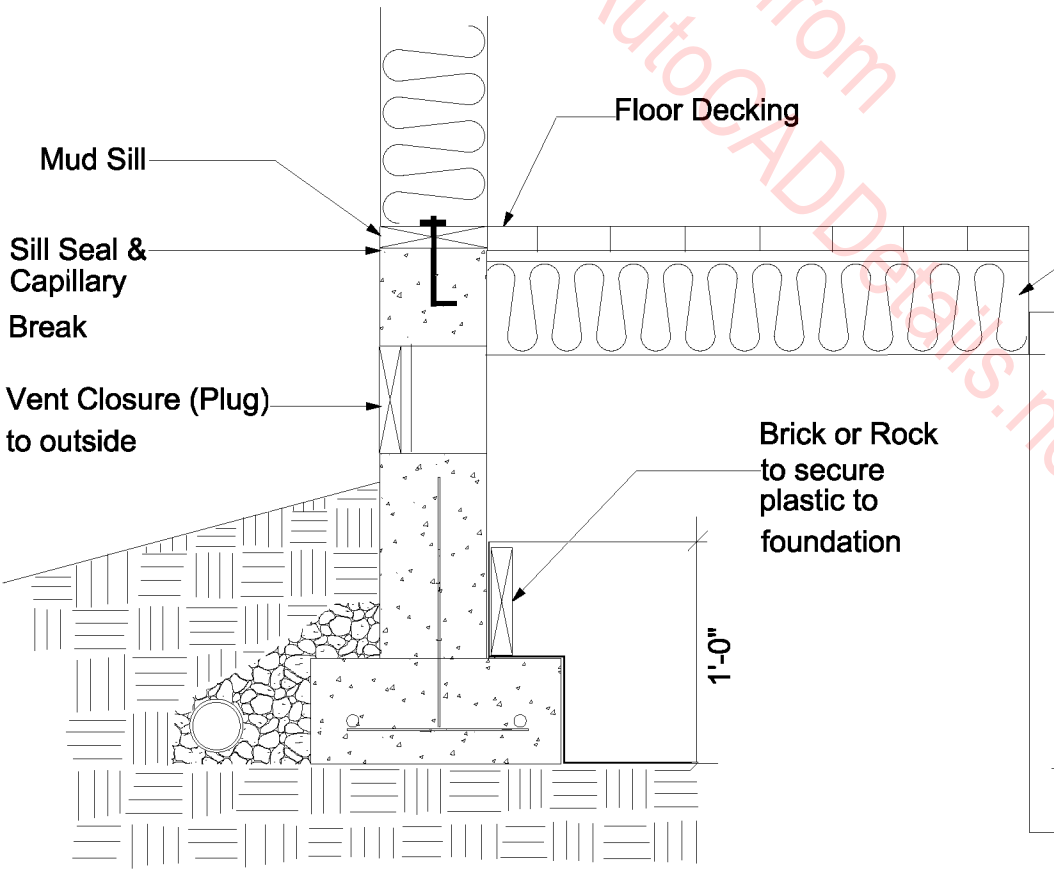
SOFFIT: 3/8" rough sawed plywood (TYP) (NO PLUGS) or as noted.

VENTS: Vents 4"X 6" Screened. One for each 100 Sq ft of attic area.

TRUSS BEARING: (4) 16d Nails.

CRAWL SPACE VENTILATION





Sample Venting Calculation

Per UBC Section 2516(c)6:
1sf NET FREE AREA /150sf
Underfloor Area

$$\frac{1400\ (\text{Crawl Area})}{150} = 9\text{sf (Total Vent Area Req'd)}$$

$$\frac{9\text{sf (Total Area Req'd)}}{.8\text{sf (Net Area Per Vent)}} = 11\ \text{Vents}$$

Crawl Space Vent Requirements

Cripple Wall

STUD WALL: 16" O.C. w/double top plate & single bottom plate.

SILL: 2"X 6" PT W /1/2" (min) Anchor bolts @ 48" O.C.

FOOTING: 8" DP X 12" WD concrete W/ (2) #4 bars. Must have 3" free soil.

NOTE: If over 4' high heigth & size shall be the same requirement for additional story. For Seismic zones see code for requirements.

LEGEND


RECESSED INCANDESCANT


RECESSED DIRECTIONAL
INCANDESCENT FIXTURE

WALL MOUNTED
INCANDESCENT


SURFACE MOUNTED
INCANDESCENT


SURFACE MOUNTED
FLUORESCENT


FAN/LITE COMBINATION


RECESSED EXHAUST FAN
VENTED TO THE EXTERIOR


"CASABLANCA" TYPE
CEILING FAN


DUPLEX OUTLET


QUADRUPLEX OUTLET


220V OUTLET

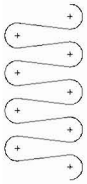

FLUSH FLOOR MOUNTED
DUPLEX OUTLET

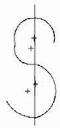

TELEPHONE OUTLET

TELEVISION OUTLET

110 V. SMOKE DETECTOR
INTERCONNECT W/ ALL THE
DETECTORS IN HOUSE


CONNECTION (ELECTRICAL)


INSULATION AS REQUIRED BY
LOCAL CODE.


LIGHT SWITCH

Fire Blocking

1..In concealed spaces every 10 feet horiz. or vertical.
2. In soffits, drops & cove ceilings
3. Under stair areas.
4. Staggered sound walls (may use mineral fiber)

FOUNDATION CHECKLIST

DETAIL DATA CHECKLIST

FOOTINGS & FOUNDATION WALLS

__Footing sizes: Refer to building code for typical sizing for light frame and residential buildings and for engineering requirements for larger structures
__Note soil frost line conditions that effect footing design and depth of footings
__Note elevation points of bottom & top of footings
__Note elevation points and identification of existing grade, finish grade, and compacted grade
__Note reference to foundation plan for footing and grade elevations
__Show cripple wall/floor joist framing
__Redwood or pressure treated wood mudsill: 2x4, 2x6, typical size
__Use non-shrink grout a top foundation wall to level the wood mudsill
__Reinforcing bars
#4 bars, continuous, centered within 4" of the top and bottom of the footing is typical
__Minimum clearance from reinforcing bars to outside surface of concrete is 3" but 4" is preferred
__Higher foundation walls (over 4') often include #4 bars @ 24" o.c. horizontally and vertically
__Higher walls require engineering computation and detailing
__Dowels
#4 deformed rebars typical as anchor dowels
#4 plain shape rebar typical for movement joints
Use dowels to connect two different pours of concrete
__Treated wood or redwood mudsill connects concrete footing to wood frame 2x6 mudsill typical
Steel anchor bolts--threaded on top end, bent at end embedded in concrete
1/2" x 10" anchor bolt typical for standard residential buildings
3/4" x 14" anchor bolt used for larger structures
Set anchor bent side down into footing concrete prior to concrete set
Attach wood sill to this bolt and secure with nut
__Mudsill and anchor bolts
Treated wood or redwood mudsill connects concrete footing to wood frame 2x6 mudsill typical
Steel anchor bolts--threaded on top end, bent at end embedded in concrete 1/2" x 10" anchor bolt typical for standard residential buildings
3/4" x 14" anchor bolt used for larger structures
Cast-in-place bolts @ 6'-0" o.c., starting 12" from corners typical for residential and other smaller framw buildings
3/4" x 14" anchor bolts are used for larger structures
Space bolts so they don't occur under joists or wall studs
Place anchors with bent side down into foundation wall or slab prior to concrete set
Attach wood sills, drilled to match bolt holes, and secure with nuts
For interior walls, bolt can be shot through wood into concrete with low-power concrete gun
Power-driven bolts or anchors are used at closer spacings such as 32" o.c. or 48' o.c.
__Girder pockets where a girder bares on a pocket in a foundation wall, allow minimum 4" bearing.
__Provide 1/2" air space at ends and sides of girder
__Protect bearing ends of girders from moisture with gasket of flashing or building felt
__Redwood or pressure-treated ledgers @ foundation walls
__Post to girder connection
__Metal post straps, T strap ties, and plywood gussets are typical.
__Floor joists, joist hangers, subfloor
See local code for span/spacing tables and nailing schedule.
__Double floor joists, header joists
Usually included at thru-floor openings
Under parallel partitions
At bathtubs and other concentrated loads
__Flashing
Sheet metal, building paper, or combination
Design as protective covering to prevent water entry.
Design to channel rain water that enters back to the outside.
Use as barrier between dissimilar materials that may corrode each other.
Building paper flashing--15# typical
Metal Flashing--No. 26 gauge galvanized sheet metal typical; affords protection while being easy to cut and form on the jobsite
__Thermal Insulation @ perimeter
1" rigid insulation board is typical
May be thicker in colder climates, as determined by heat loss calculations
__Drainage
Perimeter drain tile 4" dia. perforated tile pipe typical.
Tile pipes separated 1/4" at joints
Tile pipe is buried in crushed stone to facilitate drainage.
Building paper cover to block soil infiltration at tile pipe separations --#15 typical.
Grade site drain away from all sides of the building. (See local code requirements)
Provide added soil as necessary to slope and drain directly away from foundation walls.
Provide side slopes at concrete slab aprons
__Waterproofing
Waterproof foundation wall if floor level of interior is lower than exterior grade.
Use bituminous waterproofing, building felt, or polyethylene film.
__Waterproof concrete floor slabs
Provide moisture barrier directly under slab to block ground water.
6 mil. polyethylene moisture barrier is commonly used but it may deteriorate overtime.
Thorough underslab waterproofing requires building roofing felts with tar application, like roofing.
Place slab on 2" to 4" bed of sand or fine, well-compacted gravel.
__Termite protection:
At contact of wood with concrete
Termite-resistant wood treatment
Termite shield between wood and concrete
Termite-repellent soil treatment under concrete slab
Fill hollow masonry unit foundations to block termite entry
Keep all wood 12 or more above soil (6" is typical code minimum)

FOUNDATION NOTES:

1. FOOTINGS ARE TO BEAR ON UNDISTURBED LEVEL SOIL DEVOID OF ANY ORGANIC MATERIALS AND STEPPED AS REQUIRED TO MAINTAIN THE REQUIRED DEPTH BELOW THE FINAL GRAGE.

2. SOIL BEARING PRESSURE ASSUMED TO BE 1500 PSI.

3. ANY FILL UNDER GRADE SUPPORTED SLABS TO BE A MINIMUM OF 4" GRANULAR MATERIAL COMPACTED TO 95%.

4. CONCRETE:

- BASEMENT WALLS & FOUNDATIONS NOT EXPOSED TO WEATHER:	3000 PSI
-BASEMENT & INTERIOR SLABS ON GRADE:	3000 PSI
-BASEMENT WALLS & FOUNDATIONS EXPOSED TO THE WEATHER:	3000 PSI
(AS PER U.B.C. APPENDEX CHPT. TABLE A-26-A)	

5. CONCRETE SLABS TO HAVE CONTROL JOINTS AT 25' (MAXIMUM) INTERVALS EACH WAY.

6. CONCRETE SIDEWALKS TO HAVE TOOLED JOINTS AT 5' O.C. (MINIMUM)

7. REINFORCED STEEL TO BE A-615 GRADE 40. WELDED WIRE MESH TO BE A-185.

8. EXCAVTE THE SITE TO PROVIDE A MINIMUM OF 18" CLEARANCE UNDER ALL GIRDERS.

9. COVER ENTIRE CRAWLSPACE WITH 6 MIL BLACK "VISQUEEN" AND EXTEND UP FDTN. WALLS TO P.T. MUDSILL.

10. PROVIDE A MINIMUM OF 1 SQ. FT. OF VENTILATION AREA FOR EACH 150 SQ.FT. OF CRAWLSPACE AREA. VENTS ARE TO BE CLOSABLE WITH OPENINGS IN CORROSIVE RESISTANT SCREEN. POST NOTICE RE: OPENING VENTS ARE THE ELECTRICAL PANEL.

11. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED OR PROTECTED WITH 55# ROLL ROOFING.

12. BEAM POCKETS IN CONCRETE TO HAVE 1/2" AIRSPACE AT SIDES AND ENDS WITH A MINIMUM BEARING OF 3".

13. PROVIDE CRAWLSPACE DRAIN AS PER 2910 OF UBC.

14. WATERPROOF BASEMENT WALLS BEFORE BACKFILLING PROVIDING A 4" PERFORATED DRAIN TILE BELOW THE TOP OF THE FOOTING.

15. BACKFILL FORMS, SHORING AND POURING METHODS MUST CONFORM TO UP TO DATE A.C.I STANDARDS.

16. DAY STRENGTH AND NOT BEFORE STRUCTURAL FLOOR FRAMING (INCLUDING SUB-FLOOR) IS IN PLACE. (FRAMING MUST BE FULLY NAILED AND ANCHORED)

17. ALL CONCRETE IN FOUNDATION SHALL DEVELOP A MIN. COMPRESSION STRENGTH OF 3000 PSI IN 28 DAYS.

18. SINGLE STORY AND TWO STORY STRUCTURES SHALL HAVE A FOOTING 18" BELOW THE FINISHED GRADE LINE. A THREE STORY STRUCTURE SHALL HAVE A FOOTING AT 24" BELOW FINISHED GRADE

FOUNDATION REINFORCING

UNDER 4'-0" -- None Required

4'-0" & Over: Stem walls to have #5 rebar 16" O.C. vertically & horizontally & #5 dowels--16" O.C. & Alt. hooks under footing reinforcement.

All laps to be a minimum of 24" with hooked end and tied.

FOOTING FOR 4'-0" AND OVER FOUNDATION:
Walls: (2) #5 continuous, keep reinforcement 3" clear of soil.

Foundation Reinforcing

STEM WALLS: Install #5 rebar, 16" O.C. Vertically & Horizonally. (Over 4') (None required under4') Alt. hooks under footing reinforcement. All laps to be a min. of 24" with hooked end and tied.(or holdowns as indicated on plans).

REBAR: Min. rebar overlap is 12". No bricks, etc., shall be used to support rebar.

HOLDOWNS: Install Simpson HPAHD @ edge of stem wall. One #4 rebar will be place in shear cone. Rebar min. 2X embedment depth +12" except corners.

Embed holdowns 4" into slab & 6" into 8" stemwall.

Foundation Requirements

MUDSILL: 2"X 6" PT W/5/8" X 10" Anchor Bolts 4' O.C. Max. and 12" from all corners and openings. Embebment min. 7".. Must not be "wet set".

DEPTH: 24" min. below finish grade on firm undisturbed soil.

GROUNDING ROD: One #4 rebar Min. (#5 rebar suggested) shall be stubbed up at least 12" above floor plate line & tightly attached to rebar in footing.

Foundation Schedule

Number of Floors Supported By the Foundation	Thickness of Foundation Wall (Inches) Concrete	Width of Footing (Inches)	Thickness Of Footing (Inches)	Depth Below Undisturbed Ground Surface (Inches)
1	6	12	6	12
2	8	15	7	18
3	10	18	8	24

FOUNDATION FOR STUD BEARING WALLS--MIN. REQ.

Continous #4 Bars @ Top of Mud Sill Wall and in Footing.

FRAMING LUMBER SPECIFICATIONS

Stress rated framing mem,bers shall be used which equal or exceed the following specifications. If lower grade lumber is used, excessive deflection may occur.

Fiber Stress in Bending
(Fb)=875 psi (Base Value)

Modulus of Elasticty
(E)= 1,400,000 psi

First Floor Joist

40 lbs. Live Load
10 lbs. Dead Load

SIZE	INCHES O.C.	MAX. SPAN
2X6	12"	10'-3"
	16	9'-4"
2X8	12"	13'-6"
	16	12'-3"
2X10	12"	17'-3"
	16"	15'-5"
	24"	12'-7"
2X12	12"	20'-7"
	16"	17'-10"
	24"	14'-7"

Second Floor Joists

30 lbs. Live Load
10 lbs. Dead Load

SIZE	INCHES O.C.	MAX. SPAN
2X6	12"	11'-3"
	16	10'-3"
2X8	12"	14'-11"
	16	13'-6"
2X10	12"	19'-0"
	16"	17'-2"
	24"	14'-1"
2X12	12"	23'-0"
	16"	19'-11"
	24"	16'-3"

Ceiling Joist

20 lbs. Live Load
10 lbs. Dead Load

SIZE	INCHES O.C.	MAX. SPAN
2X4	12"	9'-5"
	16"	8'-7"
	24"	7'-2"
2X6	12"	14'-9"
	16"	12'-10"
	24"	10'-6"
2X8	12"	18'-9"
	16"	16'-3"
	24"	13'-3"
2X10	12"	22'-11"
	16"	19'-10"
	24"	16'-1"
2X12	12"	26'-6"
	16"	23'-0"
	24"	18'-8"

Rafters

30 lbs. Live Load
15 lbs. Dead Load

SIZE	INCHES O.C.	MAX. SPAN
2X6	12"	12'-11"
	16"	11'-3"
	24"	9'-2"
2X8	12"	16'-5"
	16"	14'-3"
	24"	11'-8"
2X10	12"	20'-1"
	16"	17'-5"
	24"	14'-2"
2X12	12"	23'-3"
	16"	20'-2"
	24"	16'-6"

FRAMING NOTES

1. ALL EXIERIOR WALL OPENINGS & BEARING WALL OPENINGS TO HAVE 4X12 HEADERS UNLESS OTHERWISE INDICATED.

2. JOISTS THAT ARE ATTACHED TO FLUSH BEAMS ARE TO BE HUNG WITH "SIMPSON" U-210 OR EQUIV.

3. PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS OVER PROVIDED FIREBLOCKING, DRAFTSTOPS & FIRESTOPS AS PER THE U.B.C SEC. 2516F.

4. LUMBER SPECIES:

A. POST, BEAMS, HEADERS, JOISTS & RAFTERS.	NO.2 DOUGLAS FIR.
B. SILLS, PLATES, BLOCKING, BRIDGING ETC.	NO. 3 DOUGLAS FIR.
C. STUDS	STUD GRADE D.F.
D. POST & BEAM DECKING	UTILITY GRADE D.F.
E. PLYWOOD SHEATHING	\"CDX PLYWOOD, 32/16
F. GLU-LAM BEAMS	Fb-2400, DRY ADH.

5. NAIL SCHEDULE:

JOIST TO SILL OR GIRDER	3-8d	TOE NAIL
BRIDGING TO JOIST	2-8d	TOE NAIL
2" SUBFLOOR TO GIRDER	2-16d	BLIND NAIL
SOLE PLATE TO LOIST	16d @ 16"	FACE NAIL
TOP PLATE TO STUDS	2-16d	END NAIL
STUD TO SOLE PLATE	4-8d	TOE NAIL OR
	2-16d	END NAIL
		FACE NAIL
DOUBLE STUDS	16d @ 16"	FACE NAIL
DOUBLE TOP PLATE	16d @ 16"	EDGE NAIL
CONTINUOUS HEADER (2 PC.)	16d @ 16"	TOE NAIL
CLG. JST TO PL.	3-8d	FACE NAIL
CLG.JST LAP OVER PL.	3-16d	FACE NAIL
CLG.JST. TO RAFTER	3-16d	TOE NAIL
RAFTER TO TOP PL.	3-8d	FACE NAIL
BUILD-UP CORNER STUDS	16d @ 24"	EDGE NAIL
PLYWOOD SUBFLOOR	8d @ 6"	INTERIOR
	8d @ 10"	EDGE NAIL
PLYWOOD & ROOF SHEATHING	8d @ 6"	INTERIOR
	8d @ 12"	FACE NAIL
		STAGGER NAIL
TOP PL. AT INTERSECTIONS	2-16d	
MULTIPLE JOISTS (UP TO 3)	16d @ 15"	
MULTIPLE JOISTS (OVER 3)	\"~BOLTS W/WASHERS EA. SIDE @ 24" O.C.	
1X6 SPACED SHEATHING	2-8d	FACE NAIL

GENERAL NOTES:

1. ALL WORK IS TO COMPLY WITH THE LATEST ADOPTED VERSION OF THE UNIFORM BUILDING CODE AND ANY APPICABLE STATE, COUNTY OR CITY CODE REQUIREMENTS.

2. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.

3. DESIGN LOADS:

ROOF	25 PSF (LIVE LOAD)
FLOORS	40 PSF
STAIRS	100 PSF
GARAGE FLOOR	50 PSF (3000# PT)
DECKS	60 PSF

4. INSULATION: (CHECK YOUR LOCAL CODE REQUIREMENTS)

ROOF (VAULTED)	R-30
ROOF (FLAT)	R-38
WALLS (EXTERIOR)	R-21
FLOORS (OVER UNHEARTED SPACE)	R-25
BASEMENT WALLS (W/1 12" OF GRADE)	R-21
SLAB ON GRADE	R-1- TO R-15
FURNACE DUCTS (UNHEATED SPACE)	R-8
CANTILEVERED FLOOR & FLOOR OVER GARAGE	R-25

5. ALL EXPOSED INSULATION IS TO HAVE A FLAME SPREAD RATING OF LESS THAN 25 AND A SMOKE DENSITY OF LESS THAN 450.

6. PROVIDE INSULATION BAFFLES AT EAVE VENTS.

7. 5/8" TYPE X SHEETROCK INSIDE GARAGE @ HOUSE FOR FIRE CODE REQUIREMENT.

8. PROVIDE 1 FT SQUARED NET FREE AREA OF VENT FOR EACH 150 FT SQUARED OF CRAWL SPACE FLOOR.

Ground Cover

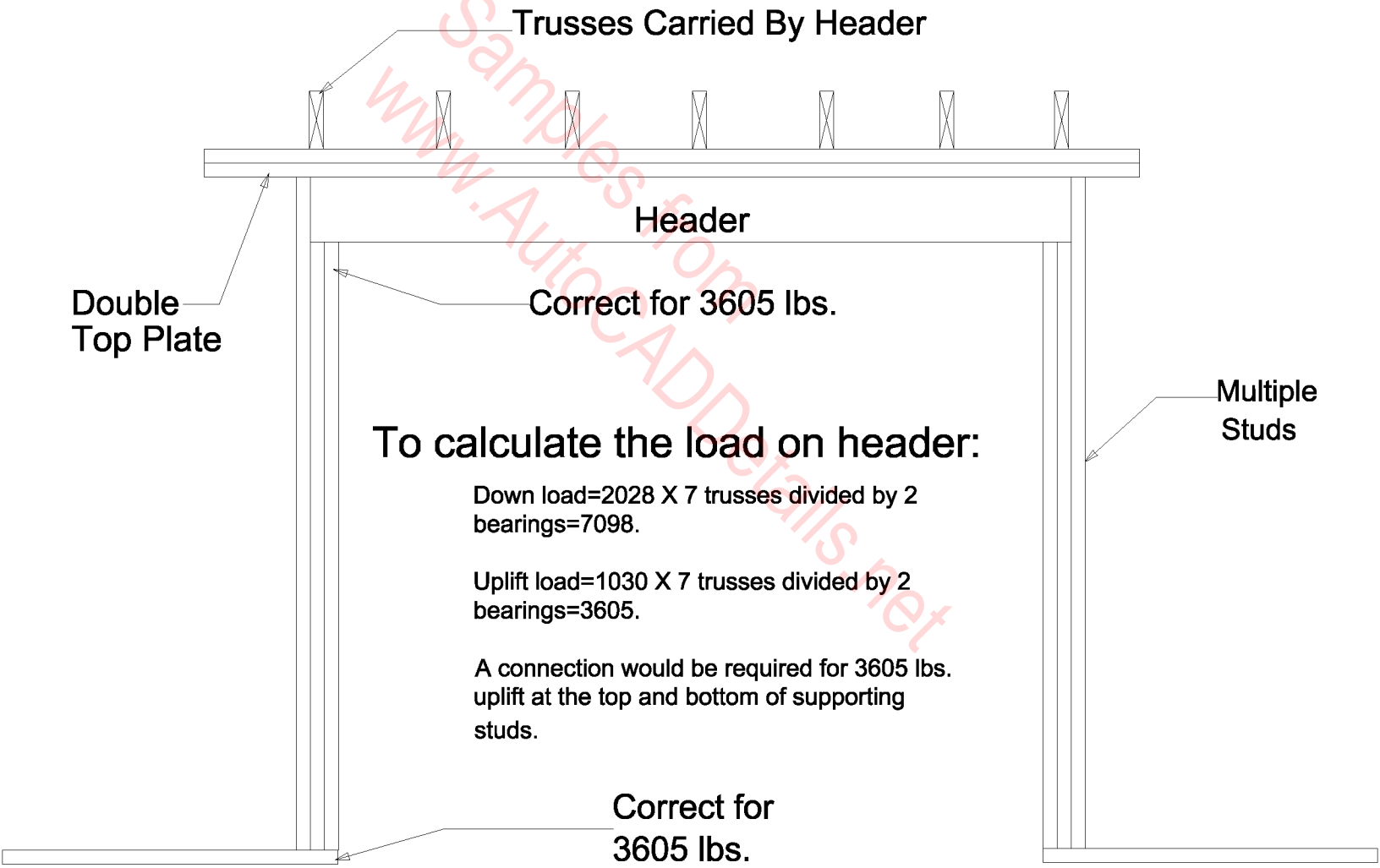
Use Black 6 mil poly ground cover.

NOTE: Lap ground cover 12" @ all joints and cover entire surface area extending full width & length of crawl space and turn 12" up the foundation wall.

Ground cover of 55lb roll roofing or approved equal shall be installed on ground beneath concrete floor slab.

Method of determining Uplift loads for headers over openings.

Example: Reaction=2028 lbs.
Uplift=1030 lbs.



To calculate the load on header:

Down load=2028 X 7 trusses divided by 2 bearings=7098.

Uplift load=1030 X 7 trusses divided by 2 bearings=3605.

A connection would be required for 3605 lbs. uplift at the top and bottom of supporting studs.

Header Spans
(exterior walls or 10' tributary loads)

Size of DF # 2 header	No story above	1 story above	2 stories above	Garages or walls not supporting floor or roof
2-2x4s	4' 0"			6'
2-2x6s	4' 6"	4' 0"		6'8"
2-2x8s	6' 8"	4' 6"		8'10"
2-2x10s	8' 10"	6' 8"	4' 6"	10'12"
2-2x12s	10'12"	8'10"	6' 8"	12'16"

INSULATION TABLE

1. All exterior walls to be R-21 fiberglass insulation.
2. All attic ceiling area to be insulated with R-30 or better.
3. All vaulted ceilings to be R-30 blanket insulation--Allow for 1/2" min. airspace between underside of sheathing to insulation face foil down to warm side.
4. All floors to be R-25 or better, foil back insulation between joists.
5. Perimeter concrete walls to be protected with R-21 ridged fiberboard insulation from top of concrete wall to not less than 24" below grade.
6. All exterior doors other than main entry doors, must be insulated to a U= value of 0.20. The main entry door U= value may not exceed 0.54.
7. Slab edge insulation is to be R-15.
8. Heating ducts to be insulated with R-8.
9. Windows shall be required to have a U=0.40 value and U=0.50 for skylights.
10. Flat ceiling shall have R-38 rating.

LANDSCAPING

NOTES

1. ALL CONSTRUCTION MATERIALS TO BE STORED IN DRIVE AREA DURING CONSTRUCTION.
2. AUTOMATIC DRIP SYSTEM TO BE INSTALLED IN ALL PLANTING AREAS.
3. OVER-DIG ALL TREE AND SHRUB HOLES TWO TIMES BALL SIZE AND REPLACE WITH MIX OF TOPSOIL AND ORGANIC MATERIAL.
4. MULCH ALL PERENNIAL BEDS WITH AT LEAST THREE INCHES OF ORGANIC MULCH.
5. RE-VEGETATE ALL AREAS TO REMAIN NATIVE WITH NATIVE GRASSES.
6. THERE IS TO BE NO SOD.
7. TRASH TO BE ENCLOSED IN GARAGE.
8. APPLY ROCK OVER 6 MIL PLOY WHERE WATER IS CHANNELED AROUND HOUSE. DESIGN FOR SHEET DRAINAGE WHERE WATER IS NOT CHANNELED.

Mechanical Duct

GIRDER: (3) 2"X10" W/ 4"X6" PT Posts under on 24"X24"X8" DP Footing. (TYP)

INSULATE: Use R-8 or better.

METAL DOOR FRAMES

Metal Door Frames

Rabbet Single or Double

1 9/16" for 1 3/8" doors, 1 15/16" for 1 3/4" doors.
A glazing stop may be added if the frame is used a a side light.
Rubber grommets may be provided to silience door slamming.
Include weather-stripping for exterior doors.

Metal Gauges

Typical standard #14, #16, #18, usually specifications.

Frame Sizes

Typical sizes are shown on drawings
Other dimensions 5/8" for the dewapth of rabbet, 2" for standard frames, 1" for narrow line.
Backbends are usually 1/2" each so that opening or throat is a total of 1" narrower than the overall frame.

Frame Anchors to Wall

Anchors vary to fit either wood or metal stud walls.
These are usually mounted 3 per jamb in outline in the drawing.

Grout in Frame

Full grouting in frames is used to resist damage in heavy traffic areas and/or for fire resistance.

MISCELLANEOUS NOTES

1. EACH BEDROOM TO HAVE A MINIMUM WINDOW OPENING OF 5.7 SQ.FT. WITH A MIN. WIDTH OF 20" AND A SILL LESS THAN 44" OFF THE FLOOR WITH A MIN. HGT OF 24".

2. ALL WINDOWS WITHIN 18" OF THE FLOOR AND WITHIN 12" OF ANY DOOR SHALL HAVE TEMPERED GLAZING.

3. SKYLITES TO BE GALZED WITH TEMPERED GLASS ON OUTSIDE AND LIMATED GLASS ON INSIDE(UNLESS PLEXIGLAS IS USED). GLASS TO HAVE MAXIMUM CLEAR SPAN OF 25". SKYLITE FRAME IS TO BE ATTACHED TO A 2X CURBED WITH A MINIMUM OF 4" ABOVE ROOF PLANE. (ONLY ABOVE 12' FROM FLOOR)

4. ALL TUB OR SHOWER ENCLOSURES ARE TO BE GLAZED WITH SAFETY GLAZING.

5. ALL EXTERIOR WINDOWS ARE TO BE DOUBLE GLAZED AND ALL EXTERIOR DOORS ARE TO BE SOLID CORE WITH WEATHERSTRIPPING. PROVIDE DEADBOLT LOCKS ON ALL EXTERIOR DOORS AND LOCKING DEVICES ON ALL DOORS OR WINDOWS WITHIN 10' (VERTICAL) OF GRADE.

6. CONNECT ALL SMOKE DETECTORS (SEE PLAN FOR LOCATION) TO HOUSE ELECTRICAL SYSTEM AND INTERLOCK EACH ONE SO THAT WHEN ANY ONE IS TRIPPED THEY ALL WILL SOUND.

7. PROVIDE COMBUSTION AIR VENTS (W/SCREEN) AND APPLIANCE WITH AN OPEN FLAME.

8. BATHROOMS AND UTILITY ROOMS ARE TO BE VENTED TO THE OUTSIDE WITH A MINIMUM OF A 90 CFM FAN OR WINDOW.

9. ALL RANGE HOODS WILL BE VENTED TO THE OUTSIDE.

Nailing Schedule

CONNECTION	NAILING
1. Joist to sill or girder, toenail.	3-8d.
2. Bridging to joist, toenail each end.	2-8d.
3. 1"x6" subfloor or less to each joist, face nail.	2-8d.
4. Wider than 1"x6" subfloor to joist, face nail.	3-8d.
5. 2" subfloor to joist or girder, blind and face nail	2-16d.
6. Sole plate to joist or blocking, face nail.	16d @ 16" 0.C.
7. Top plate to stud or blocking, face nail	2-16d.
8. Stud to sole plate.	4-8d toenail or 2-16d end nail.
9. Double studs, face nail.	16d @ 24"0.C.
10. Double top plates, face nail.	16d @ 16" 0.C.
11. Top plates, laps and Intersections ,face Nail	2-16d.
12. Continunous header, two pieces.	16d @ 16" 0.C. along ea. edge.
13. Ceiling Joists to Plate, Toenails	3-8d.
14. Contonuous header to stud, toenail	4-8d.
15. Ceiling joist, laps over partition, face nail.	3-16d.
16. Ceiling joists to parallel rafters, face nail.	3-16d.
17. Rafters to plate, toenail.	3-8d.
18. 1" brace to each stud and plate, face nail	2-8d.
19. 1"x8" sheathing or less to each bearing, face nail.	2-8d.
20. Wider than 1"x8" sheathing to each bearing, face nail.	3-8d.
21. Build up corner studs.	16d @ 24" 0.C.
22. Build up girder and beams.	20d @ 32" 0.C. at top and bottom and staggered. 2-20d @ each end.
23. 2" Planks	Each Splice.
24. Particleboard : (1)	2-16d at each bearing
Wall Sheathing (To Framing)	
3/8" --1/2"	6d Common.
5/8"--3/4"	8d Common
25. Plywood (2)	
Subfloor, Roof and Wall Sheathing (To Framing)	
1/2" and less	6d, Common or deformed shank.
5/8" -- 3/4"	8d, Deformed shank
7/8" -- 1"	8d, Common or deformed shank.
1 1/8"-- 1 1/4"	10d, Common or 8d Deformed shank.
Combination Subfloor--Underlayment (To Framing):	
3/4" and less	6d, Common or deformed shank.
7/8" --1"	8D, Deformed shank.
1 1/8" --1 1/4"	10d, Common or 8d, deformed shank.
26. Panel Siding (To Framing):	
1/2" or less	6d, Corrosion-Resistant siding or casting nails conforming to the requirements.
5/8"	8d, Corrosion-Resistant siding or cast nails conforming to the requirements.
27. Fiberboard Sheathing:(Fasteners spaced 3" o.c. @ exterior edges and 6" o.c. @ intermediate support).	No. 11 Ga. (Common-resistant roofing nails with 7/16" dia. head & 1 1/2" length for 1/2" sheathing & 1 3/4" length for 25/32" sheathing conforming to code requirement.
1/2"	6d, Common. No. 16 Ga. Corrosion-resistant staples with normal 7/16" crown & 1 1/8" length for 1/2" sheathing & 1 1/2" length for 25/32" sheathing conformain to code requirement.
25/32"	No. 11 Ga. Corrosion-resistant roofing nails with 7/17" diameter head & 1 1/2" length for 1/2" sheathing & 1 3/4" length for 25/32" sheathing conformatin to code requirements.

Roof Structure--Trusses

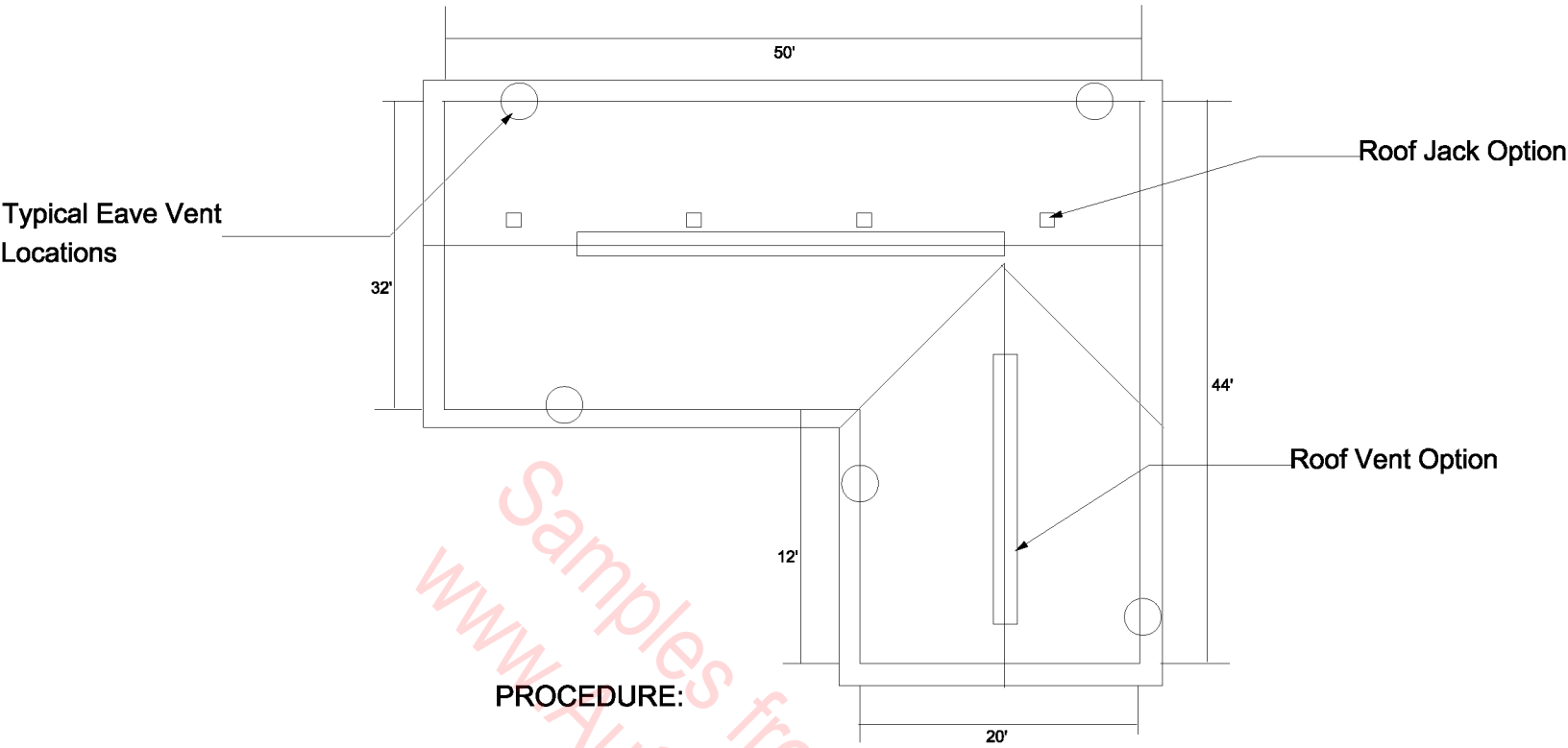
TRUSSES: 2" Truss System 24" 0.C. Max.
(or as notes on plans) ENGINEERED by supplier. Drawing, data and Specs. to be provided for approval prior to MFG.

NOTE: Ventilation shall comply with UBC Section 1505.3, Local Code requirement.

NOTE: Install one of the following Simpson ties between rafter to plate or studs :: H1, H2, H2.5, H3, H4, H5, H6, H7., or as directed by local code requirements

TRUSS NAILING: (4) 16d each bearing. UBC 23-11-B-1.

ROOF VENTILATION REQUIREMENTS



PROCEDURE:

1. Ceiling Area:
   Example: (32 x 50) + (12 x 20)= 1840 sf

2. Vent Area Required
   Example: 1sf Vent PER 300 sf ceiling area

$$\frac{\text{1840 sf Ceiling Area}}{\text{300}} = \text{6 sf Total Vent Area Required}$$

3. Distribution Vents
   Example: 50% (3sf) at Ridge
   50% (3sf) at Eave

4. Number of Vents:

Eave Vents:
$$\frac{\text{3sf Required Area}}{\text{0.9sf Net Free Area Per Vent}} = \text{3-4 Vents}$$

Ridge Vents:
$$\frac{\text{3sf Required Area}}{\text{0.6sf Net Free Area Per Vent}} = \text{5 Vents}$$

or

Continous Ridge Vents:
$$\frac{\text{18 sq.in. PER Lin Ft}}{\text{144 sq.in. PER Sq. Ft}} = \text{.125 sq.ft PER lin ft.}$$

$$\frac{\text{3sf REQUIRED AREA}}{\text{0.125 sf}} = \text{24 Lin Ft}$$

NOTE: VENT RATIO MUST BE INCREASED TO 1/150 IF VENTS ARE ALL ON ONE LEVEL.

Roof-Stick Framed

ROOFING: Customer Choice

Sheathing: 1/2" CDX Min. Plywood marked for 24" spans

NOTE: Comply W/ applicable requirements of International One and Two Family Dwelling Code, 2000 or your local code requirements.

INSULATION BAFFLES: At vents as required or shown.

Shearwall Schedule

1. 7/16" plywood with all edges to be nailed 8D @ Max. 4" O.C..
2. 7/16" plywood with all edges to be nailed 8D @ Max. 4" O.C., provide strapping around all windows and doors.

NOTE:
1. 7/16" particle board or OSB my be used in lieu of plywood in shearwalls.
2. Applications: Grade w/exterior glue.
3. Should staples be substituted for nails in shearwall application, use 14ga. staples in lieu of 8D nails.
4. Provide 3x blocking along all unsupported plywood panel edges unless otherwise noted.
5. Nail sheathing to holdown stud w/panel edge nailing per above shearwall schedule.
6. Use Simpson Anchor Bolts as indicated at foundation locations. Where multiple studs are substituted for 4x and 6x memebrs nail studs together w/16D @ 4" O.C. (Staggared along entire length. Provide required bolts and nutds to secure Simpson holdowns) (See Simpson catalog for proper installation of holdowns).

SPECIFICATIONS FOR CONTRACTOR
(GENERAL)

GENERAL REQUIREMENTS:

1. General Contractor shall be responsible for verifying all dimensions and conditions including opening with the archectural and electrical plans.
2. This structure shall be adequately braced for wind loads until the roof, floor and walls have been permanently attached together.
3. Any discrepency in plans is to be brought to the attension of the designer prior to proceeding with work.
4. Contractor shall fully comply with the current edition of the One and Two Family Dwelling Code Bookor local code requirements and all additional state requirements. Any work knowingly performed by the contractor contray to such laws, ordances, or regulations shall assume full responsibility of such work.
5. Contractor shall perform coordination with all utilities and services with state and local authorities and utilities.
6. Provide combustion air inlet for fireplaces and stoves per sec. R-906

DESIGN LOADS:

The contractor shall be responsible for complying with Chapter 4 of the current CABO for all framing excution and for verification of all local design loads.

Roof	Live Load = 30 PSF
Floor	Live Load = 40 PSF
Decks	Live Load = 60 PSF
Garage	Live Load 50 PSF (2000 lb pt. load 1' from support)
Stairs	Live Load = 100 PSF
Soil Bearing Capacity	1500 PSF (assumed)
Wind	90 MPH basic wind speed exposure C
Seismic	Zone III

SITE WORK:

Earthwork:

1. Footings to bear on undisturbed soil with min depth delow final grade of 1' 6" for 1 & 2 story and 2'-0 for 3 story, unless noted otherwise.
2. Do not excavate closer than 1 1/2 = 2 slope below footings.
3. Backfill shall not be placed against basement retaining walls until:
   A. Concrete or masonry grout has reached it's 28 day strength.
   B. And structural floor framing (including plywood subfloor) required to stabilize walls is completed and fully nailed and anchored.
4. Backfill shall consist of non-expansive, free-draining, predominatly granular material, free of debris and organic material.

Drainage:

1. Provide crawl space drain per Section 1506.5, 1804.7, 1806.5.5 and Appendix 3315 current UBC.

CONCRETE:

Accessories:

1. Foundation vents 16" X 8" with 8-mesh corr. resist screen (closable)- post closable vent notice on electrical panel door.
2. Cover entire ground area of crawl space with mil. black visqueen and extend up to mud sill.
3. Foundation wall to have 1/2" airspace @ sides and ends of beams @ girders.
4. Foundation thickness indicated are minimum.
5. All concrete shall develop a mim. 28 day strength per sec. 1905.1.2 or as indicated on plans.
6. Use air-entraining admixture in all concrete, providing not less than 4% nor more than 8% entraning air for concrete exposed to freezing and thawing, and from 2% to 4% for other concrete.
7. Concrete when placed shall have a temperature between 50 degrees F and 70 degrees F. Temperature of concrete during mixing or transporting shall never be lower than 40 degrees F nor higher than 90 degrees F.

A. During cold weather (ambinent temperature below 40 deg. F) builder shall maintain concrete at a minimum temp. of 50 deg. F for 3 days and above 32 deg. F for 14 days following ACI 306R recommendations for cold weather concreting.

B. During hot weather (ambinent tem. above 80 deg. F.) builder shall follow recommendations for hot weather concreting as described in ACI 305R as required to minimize temperature and shrinkage cracking of concrete.

REINFORCEMENT:

1. Reinforcement bars to be deformed bars conforming to current ASTM A615 Grade 40. All reinforcement steel shall be detailed, fabricated and placed in accordance with ACI Detailing Manual 315-80.
2. All welded wire fabric shall conform to current ACTM A185 specs.
3. Garage floor to have 6X6X6/6 WWM centered in slab.
4. Reinforcement shall be accurately placed and adequately supported by concrete, metal or other approved chairs, spacers, or ties and secured against displacement during concrete or grout placement. Tack welding not allowed.

STRUCTURAL STEEL:

1. All structural steel shall be ASTM A-36 detailed, fabricated and erected in accordance with AISC Manual Eight Edition.
2. All welding to be done by certified welders in accordance with minimum AWS specifications.
3. All anchor bolts to be ASTM 307.

STEEL ACCESSORIES:

1. Foundation bolts to be 1/2" dia X 10" with not less than 7" embedment into concrete.
2. Holdown at foundation and steel connectors to be Simpson Mfg. or approved equal.

MASONRY:

1. Concrete masonry units ASTM C90-70 grade N type I 1000 PSI ASTM C331 and C33 moisture content 30% maximum of total absorption. Linear shrinkage not to exceed 0.065%-1 5/8 face shells.
2. A. All mortar for reinforced masonry walls shall be UBC type "S".
   B. All mortar shall be mixed by mechanical means and porportioned by accurate measurements. Shovel measurements shall not be allowed.
3. A. All grout for grouted voids shall comply with all provisions for 3000 PSI concrete with a maximum aggregate size of 3/8".
   B. All voids containing reinforcement bars shall be reinforced with 1-#5 vertical bars, placed accurately at centerline of grout cores at 4'-0" lifts over 4'-0" may be made if cleanouts are provided.
4. Provide 2'-0" x 2'-0" corner bars equal in size and number to horizontal reinforcing at all intersectons and corners of brick walls.

MASONRY or STONE VENEER:

1. All veneer shall be anchored to structural elements using corrosion resistance anchor ties. The ties shall be minimum 22 ga. x 1" with maximum vertical and horizonal spacing of 16" O.C..

WOOD

Framing Lumber:

1. All sawn lumber shall be Douglas Fir-Larch Lumber erected as required by UBC nailing schedule, plane & details and in specifications.
2. Grading shall be in accordance with current WWPA standard grading rules.
   A. Grade No. 1 Post and Beams Floor and ceiling joist, rafters.
   B. Grade No 2. Sills, Plates, blocking and studs.
3. Soild interior beams visually exposed to be clear grade FIHC. All exterior and interior bearing wall openings shall have 4 X 12 No 1 DF headers unless otherwise shown.
4. All members 2x and less in least dimension shall be kiln dried.
5. All members 4x and greater in least dimension shall be free-of-heart center.

Sheathing Materials:

1. Plywood Wall sheathing	1/2" thick C-D interior with exterior glue index 32/16 nailed
2. Plywood Floor Sheathing	1/2" min thick C-D intelor glued & nailed.
3. Plywood Roof Sheathing	1/2" thick C-D interior with exterior glue index 32/16 nailed
4. Particle Board Underlayment	1/2" thick CS-236-66 mat formed type 1-B-2.
5. Water Resitant Particle Board Underlayment	1/2" thick phenolic resin treated type 2-B-2. Installed at kitchen and bathroom.

Interior Decking:

1. Use 2-4-1 T&G D/F plywood Subfloor over post & beam.

Exterior Decking:

1. Open decking and weather exposed material to be pressure treated.

Glue Laminated Members:

1. All glue laminated members shall be f2200 grade, detailed, fabricated and erected in accordance with current WWPA standards specifications for glue laminated Douglas Fir Timber.
2. All glue laminated members shall be fabricated with waterproof glue.
3. Connect all joists, purlins, to beams with Simpson standard U-straps hangers to develop full total load reactions unless otherwise shown.

Pre-Engineered Roof Trusses:

1. Trusses shall conform to all provisions of the current edition of of UBC (or local Code requirements) for standards for design and materials.

Pressure Treated Lumber:

1. All wood in permanent contact with concrete to be pressure treated or decay resistant.

CONSTRUCTION ACCESSORIES:

1. Building Paper—"Tyvek" Housewrap
2. Provide hurrican ties at eaves per current edition of UBC or local code requirements.
3. Provide earthquake ties as necessary as per earthquake zone requirements.

NAILING SCHEDULE:

1. Provide nailing per UBC tables 23-II-B-1, 23-II-2,

THERMAL and MOISTURE PROTECTION:

Dampproofing:

1. Apply standard Dry Wall Products. Inc. "Thoroseal Foundation Coating" foundation waterproofing on all backfill faces of walls below grade where interior face wall is toward an occupied space. Provide "Thoroglazed" dampproofing coating on all exposed surfaces of concrete walls above earth grade and flatwork not covered by finish materials all in strict conformance with MFG printed instructions.

Insulation: Prescriptive Path One

1. Roof Vaulted	R-30 with vapor barrier on warm side (winter).
Roof Flat	R-38 with vapor barrier on warm side (winter).
2. Wall (ext)	R-21 with vapor barrier on warm side (winter).

3. Floors over unheated spaces R-25 with vapor on warm side (winter).
4. Basement wall (if any) R-21 to floor slab.
5. Basement floor slab on grade R-15 in 24" at perimeter.
6. Furnace ducts in unheated spaces R-8.

Flashings:

1. Provide 26 ga. metal at roof counter-flashing, panetration flashing and base flashing.
2. Gutters and downspouts to be 25 ga. pre-finish metal.

Caulking and Sealants:

1. Caulk and/or seal all exposed interior and exterior joints above and below grade and all those interior and exterior joints and appendages concealed by other building materials, flashing, etc. with caulking and/or sealant material abutting natural or painted finishes.

WINDOWS and DOORS:

1. All windows to be U40 insulated glass or better. Provide tempered glass at sliding doors, windows within 12" of any door and windows less than 18" above finish floor.
2. All skylites to be U50 insulated, tempered glass.
3. All exterior wood doors to be solid core wood as selected by owner, or prefinished steel doors with wood frames. Main entry doors to be U54, all other exterior doors to be U20. All interior doors to be hollow core, wood frame.
4. Each bedroom to have at least one window with min. clear opening of 5.7 Sq. Ft., min., height opening of 24", min., width opening of 20" and max. 44" sill height above finish floor.

FINISHES:

Gypsum Wallboard:

1. Provide gypsum wallboard of type and thickness as indicated on drawings. Gypsum board work and materials shall meet requirements on ANSI No. 97-1 for the "Application and finish of Wallboard". Joint compound system mixed, applied and finished in compliance with MFG printed directions, to be invisible after finish, including all metal corner beadsand trim.
2. Provide 1/2" thick gypsum wallboard at all interior walls, except at tub and shower recess, walls to have 1/2" waterproof gypsum wallboard with hard moisture resistant surface up min. 6'-0". Walls between garage and residence to have 5/8" gypsum X Type Fire rated wallboard to roof or on all walls and ceiling or as indicated by drawings or local codes.

MECHANICAL:

1. General plumbing: Per current plumbing code. Use ABS/PVC plastic waste and vent piping. Use copper water supply piping.
2. Exhaust fans, range hood and clothes dryer to vent outside.

ELECTRICAL:

1. General Electrical: Per current electrical code and as notes on drawings.
2. Smoke detectors shall be connected to house power and interconnected floor to floor.

Typical Basement Floor

4" Min. Conc. slab w/ fiber mesh reinforcement
6" mil poly vapor barrier.
2" rigid insulation
4" min compacted granular fill

Typical Bedroom

Typical: 2" x 10" floor system.
2" x10" floor joists @ 16: O.C.
w/ 2" x 2" cross bridging.
1/2" (min) sheetrock, taped &
sanded.

Typical Ceiling

FINISH: 1/2"or 5/8" sheetrock taped & sanded or as noted.

VAPOR BARRIER: 6 Mil poly above (G.W.B.) sheetrock, except where ventilated space is 12" or more in average height.

Concrete Slab Floor

4" min. Conc. slab w/optional 6x6 10/10
W.W.M.on 4" granular fill. 12" thicken slab w/ (2)
#4 bars horiz cont.
tied to FND walls at garage
openings

CONCRETE PADS

24"x24"x12" Conc pad, w/(2) #4 rebars each way. Use Simpson CC46 Cap or AC series or AB adjustable post base in place of conc pad.

Typical Concrete Slab

1. Concrete strength shall have a min. compression strength of 2500 PSI in 28 days.
2. Slab shall have 6x6 W.W.F. reinforcement in the slab and the slab shall be keyed or tied into the foundation.

Typical Dining Room

. 2"x10" or better floor joist @ 16" o.c.
w-2"x2" cross bridging.
2. 1/2" or better sheetrock, taped &
sanded.

ENERGY NOTES

1. Caulk all exterior toe plates with latex caulk.
2. Caulk all wire and pipe holes where they penetrate all upper and lower exterior plates.
3. Use blown-in wall insulation if at all possible. If bat insulation is used pack behind all electrical boxes.
4. Seal all joints in HVAC ducts, with leakage no more than 3%. 3" fiber mesh tape should be used on all collar to plenum connections and all gaps that are 1/4" or wider. Insulate ducts with R-6.5 or greater.
5. Foam insulate betwen all exterior window and door edges and rough opening frame. Use non-expanding foam (W.R. Grace/ poly-cell one or equal).
6. Provide back draft damper on kitchen hood vent, dryer vent, and bathroom vent.
7. Insulate all hot water pipes.
8. Install wrap kit on water heater.

Typical Exterior Wall

HOUSEWRAP: Dupont "Tyvek"

SIDING: Customers Choice

SHEATHING: 1/2" CDX Min. Plywood or approved equal.

STUDS: 2"X6"--16"O.C. Double top plate, Single bottom plate.

HEADERS: (2) 2"X10" except as otherwise noted on plans. May substitute (2) 1 3/4" X 9 1/2" Microllm or equal as option.

Typical Floor Framing

1. All sill plates to be 2" x 6" pressure treated.
2. Rim joist to be 2" x 10" DF/PT.
3. All joists spans over 7'-0" to have 2" x 2" cross bridging @ 7'-0" O.C.
4. Provide solid blocking on first & last joist spans @ 7'-0" O.C.
5. Provide solid blocking between joists not on 16" O.C.

TYPICAL FLOOR PLAN NOTES

1. Each bedroom to have a minimum wondow opening of 5.7 Sq. Ft. with a min. 20" clear width and a sill less than 44" off floor.

2. All windows within 18" of the floor and within 12" of any door are to have tempered glazing.

3. Skylites are to be glazed with tempered glass on outside and laminated glass on inside (unless plexiglass). Glass to have a maximum clear span of 25". Skylite frame is to be attached to a 2X curb with minimum of 4" above roof plane.

4. All tub or shower enclosures are to be glazed with saftey glazing.

5. All exterior windows are to be double glazed and all exterior doors are to be solid core with weatherstripping. Provide 1/2" deadbolt locks on all exterior doors and locking devices on all doors or windows within 10' (vertical) of grade. Provide peep-hole @ 54"-66" above floor on exterior doors.

6. Connect all smoke detectors (See plan for location) to house electrical system and interconnect each one so that when one is tripped they will all sound.

7. Provide combustion air vents (w/screen and back damper) for fireplaces, wood stoves and any appliances with open flame.

8. Bathrooms and utility rooms are to be vented to the outside with a minimum of a 90CFM fan. Range hoods are also to be vented to the outside.

Typical Foundation

1. Install 1/2" or larger Anchor bolt (Type AL) must be 10" long. Bolts must be 4' O.C. & 12" from all corners.
2.. Place #4 rebar 3" to 5" from top center of foundation.

NOTE: May sub. anchor bolts with Simpson SSTB (best for monolithic & two-pour installations). Install #4 rebar 3" to 5" from top of foundation. SSTB doen't have to be tied to rebar. Min conc. strength compression is 2500 psi.

Typical Framed Roof (Trusses)

#225 Asphalt shingles or customer choice.
1/2" Roofing Plywood c/w "H" Clips
2"X8" Ridge Board
2"X8" Rafters @ 16' or 24" O.C. W/ ribbon ties.
2"X8" Ceiling joists @ 16" O.C. w/ribbon ties, &
R-40 Batt Insulation.
6 Mil Poly Vapor barrier
1/2" Drywall, taped & sanded.
2"X6" Facia board
Gutters & downspouts as req.

Typical Framed Roof
(Metal)

Roof: Customer Choice of metal Roof, with #15 lb roofing paper or better before installing roof.

Roof materials installed to MFG specs. Chapter 8. One and Two Family Dwelling Code, 2000, or local code requirements.

Garage Wall

Jse 5/8" Type "X" Gyp BD. on all CLGS, walls, & exposed members.

Typical Garage Wall (Exterior Brick)

Face Brick
1' Air Space
1/2" Exterior sheathing
2"x6" studs @ 16" O.C.
5/8" drywall

Typical Garage

1. 4" or 6" Concxrete slab w-6x6 W.W.M. on 4" granular fill.
2. Interior & exterior walls shall be 5/8" Type X Fire rated drywall.
3. 2"x6" stud walls.
4. R-20 Bat insulation or as local code requirement.
5. 4 mil vapor barrier on studs.
6. 1/2" or better drywall, taped & sanded.
7. Door into living area must be 1 3/8" solid core, self closing type.
8. Slope garage floor 1/8" per foot to garage door.
9. Install 2"x6" sway bracing @ 45 degrees, 10' min. length.
10. Footing to be 24"x24"x8" concrete w-(2) #4 rebars both directions.

Typical HPAHD22 Installation

Install Simpson HPAHD22 holdowns @ edge of concrete.
(Must be engineered if required by local code)

One #4 rebar in shear cone.
Rebar min 2X embedment depth +12" except corner.

1/2" min. distance from corner, fasteners use 13--16d nails.

8" min distance from corner, fasteners use 21--16d nails.

HPAHD22 must be embeded 4" into slab & 6" into 8" stemwall beneath.

Typical Interior Garage Wall

WALLS: 5/8" Fire Rated Sheetrock taped & sanded. (1 hr. rated min) Bearing walls under residence must be fire-protected.

STUDS: 2"X6" --16" O.C.

INSULATION: See Local code requirement.

Typical Interior Header

HEADERS: (2) 2"X10" except as otherwise noted.
May substitute (2) 1 3/4" X 9 1/2" or equivilent as option.
(4' & Less)

NOTE: ONLY REQUIRED FOR TYP BEARING WALLS.

IF OVER 4' PROVIDE 1 1/2" BEARING EACH SIDE.

Typical Interior Walls

FINISH: 1/2" Sheetrock taped & sanded. (5/8" for commercial work or where noted)

VAPOR BARRIER: 4 Mil Poly on studs.

INSULATION: R-19 or better, see local code requirement.

Typical Monolithic Slab

1. Slab shall be at least 8" above finish grade. Slab shall not be less than 3 1/2" thick.
2. Slab shall have 6x6 #10/10 W.W.F at mid-height or synthetic fiber reinforcement.
3. A double layer of 6x6 #10/10 W.W.F. 3 feet wide shall be provided around the perimeter of the slab.
4. Rebar at bottom of footing shall be at least 3" from the bottom of footing.

Typical Mudsill

Mudsill: 2"x ? P.T. W/1/2" min. x 10" Anchor bolts 72" O.C. max. (4' O.C. in Seismic zones 3 & 4) & 12' from all corners and openings.

NOTE: All wood in direct contact with concrete to be redwood cedar or pressure treated.

Typical Partition Wall

FINISH: 1/2" sheetrock (G.W.B.) each side, taped & sanded, each side.

STUDS: 2"X4"or 2"x6"--16" O.C. Double top plate & Single bottom plate.

ONLY REQUIRED FOR TYPICAL BEARING WALL

Typical Perimeter Framing

1. 2"x ? stuyd walls @ 16" o.c..
2. R-12 Bat insulation or local code requirement.
3. 6 mil poly vapor barrier.
4. 1/2" or better drywall, taped & sanded.

Typical Stone Exterior Wall

Man Made Stone: --Customer Choice
7 Gauge corrugated galvanized metal brick ties.
1" Air Space
7/16" plywood sheathing
2"x6" studs @ 16" O.C.
R20 Batt Insulation
6 Mil Poly V.B.

Typical Stucco Wall

1/2" Drywall

Vapor Barrier

2"x6" Studs

R20 Batt Insulation

1" Rigid insulation

Expansion metal lath

Exterior stucco

Typical Truss Roof

1. #225 Asphalt shingles or customer choice.
2. 1/2" (min) roofing plywood w/ Simpson "H" clips installed to rafters & Top plates. (See Simpson Catalog for type)
3. 2'X8" Ridge Board (Pre-engineered trusses @ 24" O.C. By MFG) Design drawing, data and Specs. to be supplied by MFG prior to MFG.
4. 2" X 4" Truss bracing
5. R-40 Insulation or local code requirement.
6. 6 mil poly vapor barrier on stud walls.
7. 1/2" min. sheetrock, taped & sanded.

Typical Weep Hole Assembly

Weep holes @ 24" O.C.
Mastic seal & metal flashing

Typical Floor Construction

FINISH: Customer Choice

UNDERLAYMENT: For tile, vinyl or hardwood floors use 1/2" A.D. solid core plywood or approved equal.

SUB-FLOOR: 1 1/8" T&G 2-4-1 plywood deck, or 2'x6' T&G Car Decking.

JOIST: See foundation or floor plan.

INSULATION: Insulate entire joist space w-R30 for electric heat, R-19 all others systems. (MIN.)

VAPOR BARRIER: 4 Mil or greater-- Support insulation 24" O.C. Max.

WINDOWS & GLAZING

Windows are usually bought as manufactured products in stock sizes. Window types, materials and sizes are shown in the Window Schedule, details of manufacture, finishes and workmanship are described in specifications.

Glazing
__Single, double, insulated, removable
__Glass types: obscure, wire, reflective, safety or tempered
__Thickness may be noted but is commonly sized in specifications

Glazing Clearances
__Commonly required clearances are 1/4" between glass to frame,1/8" between glass and rabbet, and 5/8" depth of rabbet

Rough Opening
__The difference between finish window frame and rough opening is often dimensioned or noted as a guide for the framing carpenters
__1/2" all way around is a common rough opening tolerance

Shim Space
__A commonly accepted rough opening framing tolerance is 1/4" on a side so that's often the space allowed for shim

Vents, Weep Holes, Wind Guards, Hardware, Sill Tracks, & Screens
__All vary according to window type and specific manufacture
__Consult catalogs of preferred manufacturers for notation

Background Frame Lines; Lines of Construction, & Finishes
__Lines of sills, Jambs, portions of frame and adjacent or background wall construction are commonly outline drawing and noted

Anchors & Screws
__Connection of window frames to walls is determined by wall type and manufacturers' specifications
__Attachment devices are commonly drawn in simple single line symbols and noted by generic material and type

Extension Jamb & Extension Sill
__See manufacturer's data sheets for variations in frame extenders

Sill, Sub-sill & Stool
__These are usually unique to a project, and sized and noted accordingly

Wood Trim & Casing
__Commonly drawn at net size to scale, and referenced to a Trim Schedule
__Wood type and quality is often noted on the drawing as well as referenced to specifications

Flashing & Caulking
__Typically named generically by material and function and referenced to specifications
__Drawings for small, simple projects often include flashing material and thickness

Sliding Glass Doors
__Notation and detail data is similar to window construction
__Add notes, drawing, and specifications for visual safety barriers, safety guardrails, added lock devices, interlocks, etc .

STORE FRONT WINDOWS

STORE FRONTS & ENTRANCES

__Since these are manufactured products, components need only be drawn in profile and noted in one or two words: Glazing Bar, Vertical Mullion, Transom, etc.
__Materials are typically aluminum, stainless steel or bronze
__Allow for expansion and contraction of large storefront units
__See manufacturer's instructions for allowances for movement

Connectors, hardware, vents, etc.
__These items are determined by manufacturers' specifications

Adjacent Construction
__Soffits or ceiling heights are often drawn, noted, and dimensioned
__Show enough of adjacent wall construction to indicate and note fastening of frame to structure and what finishes occur adjacent to frames
__Show caulking of contact of window frames to surrounding material or structure

Glazing
__Single, double, insulated, removable
__Glass types: obscure, wire, reflective, safety or tempered
__Thickness may be noted but is commonly sized in specifications

Glazing Clearances
__Commonly required clearances are 1/4" between glass to frame, 1/8" between glass and rabbet, and 5/8" depth of rabbet

Vents, Weep Holes, Wind Guards, Hardware, Sill Tracks, & Screens
__All vary according to window type and specific manufacture
__Consult catalogs of preferred manufacturers for notation

Anchors & Screws
__Connection of window frames to walls is determined by wall type and manufacturers' specifications
__Attachment devices are commonly drawn in simple single line symbols and noted by generic material and type

Flashing & Caulking
__Typically named generically by material and function and referenced to specifications
__Drawings for small, simple projects often include flashing material and thickness

WOOD DOORS & DOOR FRAMES

DOOR TYPES & SIZES
__Hollow core wood doors are commonly 1-3/8" thick, solid core 1-3/4"
__Thickness, finish, width and door type are usually referenced to the door schedule
__Metal door frames are usually referenced to a separate frame schedule.

LOUVERS, VIEW PANEL, UNDERCUT FOR VENTILATION
__Such items may be noted on the plans or details for smaller buildings but otherwise are commonly shown in the door schedule

DOOR FRAMES WITH STOP
__Stops may be integral rabbeted or applied, if applied, note fastening
__Net actual size of door frame may be dimensioned, referred to schedule, or noted

FIRE RATING, ACOUSTICAL TREATMENT, LEAD LINING
__These are all normally specified and/or shown in the door schedule

WOOD TRIM & CASING
__Commonly drawn at net size to scale, and referenced to a Trim Schedule
__Wood type and quality is sometimes noted on the drawing but more often referenced to specifications

ROUGH OPENING
__The difference between finish door frame and rough opening is sometimes dimensioned or noted as a guide for the framing carpenters.
__1/2" to 1" all way around is a common rough-opening size
__Provide shims in the rough opening shim space to plumb and straighten the door frame

FLASHING & CAULKING
__Flash and/or caulk where door frames are exposed to weather
__Typically named generically by material and function and referenced to specifications
__Drawings for small, simple projects often include flashing material and thickness
__Include weather-stripping at exterior doors

POCKET AND SLIDING DOORS
__Usually made of standard hollow or solid core doors with top-mounted hanging slider hardware
__3/16 to 1/4" clearance is normally provided between the face of the door and the pocket recess framing and trim
__Floor tracks and door pull hardware are referenced in specifications, general notes, or door hardware schedule
__Trim at the header is usually designed to hide the hanging hardware so rough opening to header may be higher than for a regular interior door.

BIFOLD DOOR
__Sometimes include bottom pivot and special hardware
__Trim may be required as in preceding note
__Magnetic or other surface-mounted catch may be used and so noted

ACCORDION DOOR
__These are bought as manufactured units, either in standard sizes or custom sizes
__Usually a vinyl covered metal frame door surface- mounted in a cased opening
__Magnetic or other surface-mounted catch may be used and so noted

METAL DOOR FRAMES

METAL DOOR FRAMES

Rabbet, Single or Double
__1-9/16" for 1-3/8" doors, 1-15/16" for 1-3/4" doors
__A glazing stop may be added if the frame is used as a side light
__Rubber grommets may be provided to silence door slamming
__Include weather-stripping for exterior doors

Metal Gauges
__Typical standard: #14, #16, #18, usually in specifications

Frame Sizes
__Typical sizes are shown on the tracer sheets
__Other dimensions are 5/8" for the depth of rabbet, 2" for standard frames, 1" for narrow line
__Backbends are usually 1/2" each so the back opening or throat is a total of 1" narrower than the overall frame

Frame Anchors to Wall
__Anchors vary to fit either wood, masonry, or metal stud walls
__These are usually mounted 3 per jamb and dotted in outline in the detail drawing

Grout in Frame
__Full grouting in frames is used to resist damage in heavy traffic areas and/or for fire resistance

FLASHING AT PARAPETS

The primary cost of flashing is labor, so the best materials add little to the cost of this crucially important part of construction.

Commonly used flashing materials:

- __Copper
- __Lead
- __Zinc
- __Aluminum
- __Galvanized steel
- __Plastic
- __Copper-backed paper
- __Building paper felt and impregnated fabric

__Parapet flashing typically consists of two overlapping L sections:

- __One L section is attached to the roof
- __The other is counterflashing, an inverted L that fits into a parapet reglet and slips down over the top of the lower base flashing

__26 gauge flashing is commonly used because it affords good protection while still being thin enough to bend, form, and work with comfortably

__Base flashing is bent upwards at 45 degrees to avoid sharp corners that might split the metal or roofing

__Minimum flashing width for most flashing situations is 8”

__Any extended lengths of flashing requires expansion joints

__Refer to the Manual of standards of the Sheet Metal and Air Conditioning Contractors National Association for varied detail conditions and installation standards

GUTTERS

DESIGN OF BUILT-UP ROOF SLOPES

When designing for roof drainage, the old standard minimum slope of 1/4" per linear foot for built-up roofs is not sufficient to allow for building settlement, structural deflection, clogged drains, etc.

Handbook values for roof drain sizes and gutter sizes are also inadequate for increasingly erratic and extreme storm conditions.

Recommend 1/2" slope per linear foot as minimum for built-up roof construction. Increase other handbook minimum slopes for shingle, tile, and other roof types by at least a half inch to help avoid roofing uplift and driven rain infiltration.

WOOD GUTTERS

__Provide 1/2" to 1" air space between gutter and wall surface to allow for overflow and allow ventilation

__Splice wood gutter joints with brass screws and lead splice plates or with brass joint connectors

ALL RAIN WATER GUTTERS

__See manufacturers' catalogs for selection of materials, sizes, hangers, closures, other fittings and special design and detail considerations

__Downspout Sizes:
  __3" minimum to 6" maximum for rounds, squares and rectangles
__Gutter sizes:
  __4" wide x 3" high minimum except for small porch roofs or other partial roofs
  __Maximum size typically 8" wide x 6" high

__Lap metal gutter joints 6" in direction of slope
  __Seal joints with solder or mastic
  __Provide expansion joints on gutters over 35 feet long to allow for thermal expansion (or as per manufacturers' instructions)

__Provide support brackets attached to wall at top and bottom of downspout, and at joints
__Gutter hangers at 3' o.c. maximum for normal rain loads
__Hangers at 1'-6" if gutters carry long-term ice and snow loads
__Electrical heat cables may be used to eliminate sustained ice and snow loads:
__Slope gutters towards rain water leaders minimum of 1/16" per linear foot, 1/8" per linear foot preferred
__Provide a snow slide clearance line between the top of the front edge of the gutter and the roof edge from 1/2" for steepest roofs to to 1" for flat roofs
__Provide sufficient roof edge overhang to stop "back dripping" of water and assure water runoff directly to the gutters
__Provide strainers at top of downspouts

Trouble spots:
__Inadequate slopes in roof and gutters
__Deflection from full water load and inadequate gutter supports
__Clogged leaders
__Small spaces between gutter and roof that allows debris build up, clogging, and rot
__Snow and ice accumulation and backup under eaves
__Corrosion from galvanic action due to contact of dissimilar metals

CERAMIC TILE FLOOR

CERAMIC TILE

__Mosaic tiles are 1" x 1", 1" x 2", 2" x 2" and 1/4" thick
__Glazed wall tiles are 4-1/4" x 4-1/4", 4-1/4" x 6", and 6" x 6"; typically 5/16" thick
__Quarry tiles and floor pavers are 2-3/4" x 6", 4" x 4", 4" x 6" , 6" x 6", 6" x 9", 9" x 9"; 1/2" to 3/4" thick

__Wall tile on wood frame walls:
- _Apply with waterproof glue over water resistant backing such as gypsum wallboard
- _Sometimes applied on cement mortar on metal or gypsum lath over wood frame
- _When using gypsum wallboard tile backing in wet rooms, use water proof or water resistant grade

__Tile on concrete or masonry walls:
- _Walls must be stable, not subject to extremes of expansion/contraction, soil movement, etc.

__Primary variations of tile setting are:
- _Mortar method on wood or metal frame: 3/4" to 1-1/2" mortar bed over scratch coat, lath and felt
- _Mortar method on masonry: 3/4" to 1-1/2" mortar bed over scratch coat
- _Thin-set over masonry or concrete: tile over 1/8" to 1/4" thick dry set mortar
- _Adhesive method: Tile over 1/16" adhesive over primed solid backing

__Cement mortar scratch coat is typically 3/4", with a leveling coat of 1/4" to 1/2"
__Reinforce floor mortar to prevent cracking
__Tile flooring substrate may have to be recessed to allow for different adjacent finish-floor thicknesses
__Floor reinforced mortar bed is typically 1-1/4" thick
__Quarry tile and pavers are typically 1/2" to 1-1/2" thick
__Promenade tile are 1" x 6" x 9" in size

__See tile manufacturers' and suppliers' catalogs for recommended detailing, specifications, and application of tile to different types of wall and floor surfaces

UNIT MASONRY

CONCRETE BLOCK

__Concrete block is also often referred to as "hollow masonry units" and "concrete masonry units"
__Most data on brick or block grades, types, mortar, anchors, reinforcing, ASTM categories, etc. will be in specifications rather than details

__Concrete block sizes
- __Nominal thickness: 4", 6", 8", 10" & 12"
- __Nominal lengths: 16" & 18"
- __Nominal heights: 4" & 8"
  - __Actual sizes are 3/8" less than nominal sizes to allow for typical mortar joints thickness

__Concrete block types
- __Solid load-bearing units
- __Hollow load-bearing units
- __Hollow non-load-bearing units

__Grades of load-bearing concrete block units are "N" and "S"
- __Grade N
  - __Use for veneers and facings requiring:
    - __High strength
    - __High resistance to water penetration
    - __High resistance to frost action
- __Grade S
  - __Use for typical conditions
    - __Moderate strength
    - __Moderate moisture resistance
- __Grades N and S come as Types I and II
  - __Type I--moisture resistant
  - __Type II--non-moisture resistant

__Provide concrete block wall movement control joints at:
- __All columns or pilasters at wall
- __Each corner within distance equal to 1/2 wall height
- __Each side of openings over 5' wide
- __Variations in wall height
- __Offsets and intersections
- __Intersection of load-bearing and non-load-bearing construction

__Provide concrete block wall movement control joint spacings of:
- __20' min., 8' high walls
- __25' min., 8-1/2' high walls
- __30' min., 12' and higher walls

__Concrete block at jambs
- __Reinforce and grout concrete block cells adjacent to door and window openings

__Movement control joints typically 1/2" minimum wide
- __With premolded compressible filler insert and elastic joint sealant over filler
- __Provide waterstop at solid masonry walls
- __Provide building paper as gasket at one side for complete bond break through wall expansion joints
- __Extend movement joints through facings rigidly attached to walls such as stucco or tile

__Wall movement is minimal below grade, so control joints aren't normally provided at block foundation walls
- __Use bond beam atop block foundation walls as boundary for control joints above

__Add slip joint material between slabs and load-bearing masonry control joints

BRICK

__Brick sizes
- __Standard modular brick is 4 x 2-2/3 x 8
- __Standard non-modular brick is 3-1/4 x 2-1/4 x 8
- __SCR is 6 x 2-2/3 x 12
- __There are a wide variety of special shapes and sizes, see Sweets, Time Saver Standards or other references
  - __Actual size is smaller than nominal size by 3/8" to 1/2", to allow for typical mortar joint thickness

__Brick types and grades
- __Common building brick
  - __SW--high moisture resistance for exposure to severe weather
  - __MW--for exposure to moderate weather
  - __NW--non-weather exposure
- __Face brick
- __Glazed
- __Hollow
- __Sand-lime
- __Concrete
- __Special-purpose bricks
  - __Brick paving (grave SW is OK)
  - __Chemical resistant
  - __Industrial floor brick
  - __Fire brick
  - __Prefabricated brick panels

__Metal ties at brick walls
- __Double wythes of brick and block are typically linked by 3/16" diameter metal ties
  - __Z or rectangular shapes
  - __Spaced every 6th course maximum vertically and 36" horizontally
    - __As necessary to have at least one tie for every 4.5 sq. ft. of wall area
  - __Z shaped ties are NOT recommended for use with concrete block

__Brick veneer and metal ties
- __To link brick veneer to wood framing through sheathing, corrugated metal ties; 22 gauge, 7/8" wide, 6" long are typical Maximum spacing at 24" o.c.
- __To fasten brick to metal studs, 9 gauge wire ties are typical

__Brick veneer air space and waterproofing
- __Add waterproof building paper on wall sheathing between grout or air space behind masonry
- __Air or grout space is typically 1" thick

__Anchors
- __To anchor unit masonry to concrete, dovetailed flexible anchors are typical
- __To tie brick or block to steel framing members, flexible anchors are typical

__Weep holes
- __Weep hole drain spacings at 24" o.c. maximum are typical
  - __At bottom of wall
  - __At all openings
  - __In head joints right above flashing

__Movement control joints typically 1/2" minimum wide
- __With premolded compressible filler insert and elastic sealant over filler
- __Provide waterstop at solid masonry walls
- __Provide building paper as gasket at one side for complete bold break through wall expansion joints
- __Extend movement joints through facings rigidly attached to walls such as stucco or tile

__Lintels and bond beams
- __Steel sizes and bond beam reinforcing are typically engineered for specific loads and spans and referenced to Lintel Schedules

See literature from the National Concrete Masonry Association, the Brick Institute of America, and your building code for complete engineering, specification, and construction application information.

CABINETS

Most cabinets are prefabricated units which are ordered in modules to fit the required building space. See manufacturers' catalogs for specifics.

When cabinets are custom-designed, they are usually shop fabricated rather than built on site. The cabinet shop will submit shop drawings based on your design and specifications. Their construction details will be as per the standards of a trade associations such as the Architectural Woodwork Institute Manual of Millwork or the Woodwork Institute of California, unless you specify otherwise.

Detailing for on-site construction usually pertains to fastening the cabinets to the floor, walls, ceiling, or soffit.

The two main types of cabinets are "architectural mill" and "showcase." Showcase cabinets are custom designed with unusually precise detailing, and fabricated like fine furniture. "Casework" refers to specialty cabinets such as for merchandise display, or medical, laboratory, and school storage. They're usually ordered from catalogs as prefab units.

"Architectural mill" cabinet work is fabricated in three grades:

__Economy: No backs on the cabinets, lip doors, wood edges are exposed open frame divisions between sections, undersides of counters are untreated, drawer guides are of inexpensive hardware, and base cabinet dividers rest directly on the floor.

__Custom: Backs are included, edges are covered, panels divide the cabinet sections, drawer guides are solid hardware or of hardwood, and base cabinet dividers rest on base cabinet floor panels.

__Premium: The features of Custom, plus mitered corners, horizontal dividers under drawers, hardwood drawers, joints solidly glued or screw fastened, tops and counters solidly attached with clips or screws, and sleeper supports are under floor panels of base cabinets spaced at 3' maximum.

Cabinet door types:

__Lip: Thin door panels that slightly overlap the front frames. Used for economy units.

__Flush: Fits snugly within frame opening. Used for custom or premium cabinets.

__Flush overlay: Full-thickness doors mounted over frames; closely fit to match, align, and snugly abut the adjacent doors.

__Limit door sizes to 24" wide maximum to minimize the chance of warpage

Shelves & supports:

__3/4" thick minimum, with 3' maximum length between supports to avoid deflection

__Adjustable shelf support standards with clips, or shelf support clips with pins for drilled shelf support pin holes

Sizes of wood members (thickness):

__Nominal 1" = actual 3/4"

__Nominal 1-1/4" = actual 1"

__Nominal 1-1/2" = actual 1-1/4"

__Nominal 2" = 1-1/2"

__Nominal 3" = 2-1/2" etc. up to 11"

__Kick or toe space at base: 3-1/2" high and deep (usually matches 2x4 base support)

Drawers:

__12" high by 16" wide is standard all-purpose size

__6" high, minimum for utility drawers

__Tilt strips at sides of drawers prevent drawers from tipping upwards when they're pulled outwards

Countertop finishes:

__Ceramic tile in two grades:

__Economy: 1/2" epoxy, mortar, or tile glue, atop Exterior Grade plywood counter platform

__stain-resistant grout for tile joints.

__Preferred: 15" building felt atop Exterior Grade plywood counter platform

__A layer of metal lath and 3/4" to 1-1/2" mortar bed

__Final thin coat (Neat Cement Coat) is added to the mortar bed to adhere the tile

Two other common counter top finishes:

__Laminated plastic, which is reasonably heat and stain resistant.

__"Corian" (dense, imitation marble-like material), 1/4" to 3/4" thick sheets.

__Nailing
Most building codes provide a nailing schedule for all wood framing, sheathing, and siding. These schedules are sometimes copied directly and included as part of working drawings.

__Joists, Joist Hangers & Rafters
Most joists are 2x framing members spaced at 16" O.C. See your local code for maximum joist spans for various joist depths.

__Double Floor Joists, Header Joists
Usually included at thru-floor openings, under parallel partitions, at bathtubs and other concentrated loads.

__Joist Bridging or Blocking
Blocking or cross bridging is usually provided at each 8' of joist span to stiffen joist framing. 2x solid members used as bridging are usually bottom nailed only after the subfloor is completed.

__Studs
Typically stud framing is 2x4, @ 16" O.C. for single story construction. Exterior framing of 2x6 @ 24" O.C. has become more common in recent years.

__Stud Blocking
2x members at mid-point of framed walls are used as fire blocking where required by code or as nailing surface horizontal plywood sheathing or siding.

__Double Top Plates
Joints are usually overlapped by at least 4' with no overlaps allowed at corners.

___Exterior Wall Bracing
Let-in wood diagonal bracing or metal roller bracing strips are typically set at 45 degrees at corners and approximately at every 25 linear feet of structure. Diagonal bracing isn't normally required if the wall is sheathed with 1/2" plywood.

__Thermal Insulation
Insulation is usually identified by type--foam, rigid panel, or batt--thickness and R rating. The R rating is commonly reserved for specifications but may be in drawing notation for simpler buildings.

__Framing Members. Other members that may require notation include:
- -Structural sheathing diaphragm w/engineered nailing schedule
- -Spaced wood sheathing
- -Wood decking
- -Ledger
- -Trimmer
- -Soab
- -Ribbon strip
- -Girt
- -Knee brace
- -Kick block
- -Cripple
- -Hip & Jack rafters
- -Valley rafter
- -Collar beam
- -Purlin
- -Cross tie
- -Truss chords

FINISH WALL CONSTRUCTION

__Gypsum wallboard and other finish material manufacturers provide comprehensive instructions and details for their products; use the data here as a preliminary guide

__Building codes provide extensive instructions on fireproofing requirements, those requirements have evolved from many years of fire experience and should be followed with extreme care

__Common wall finish combined with wood framing include:

__Interior Single Layer
- --3/8" plywood paneling
- --3/8" gypsum wallboard
- --1/2" gypsum wallboard
- --5/8" gypsum wallboard
- --3/4" 7/8" 1" metal lath & plaster

__Interior Double Layer
- --2 - 3/8" gypsum wallboard
- --2 - 1/2" gypsum wallboard
- --2 - 5/8" gypsum wallboard
- --1/2" gypsum wallboard plus 3/8" plywood paneling
- --3/8" gypsum lath plus 1/2" plaster (7/8")
- --3/8" gypsum lath plus 5/8" plaster (1")
- --3/8" gypsum lath plus 3/4" plaster (1 1/8")

__Gypsum Wallboard Walls & Ceilings. Special types of gypsum wallboard that might be identified in detail notation include:
- --Type X for fire resistance
- --Water resistant
- --Waterproof
- --Sound deadening
- --Insulative foil backed

__Gypsum wallboard assembly components commonly identified in detail drawing notes include:
- --Corner beads
- --Edge trim
- --Corner guards
- --Edge trim reciant @ floor and ceiling
- --Resilient channels
- --Angle clip reinforcement @ ceilings

__Lath & Plaster Walls & Ceilings
Plaster coats sometimes identified in large scale details are:
- --Scratch coat
- --Brown coat
- --Finish coat

__Lath and plaster components commonly identified in detail notation include:
- --Expanded metal lath
- --Wire lath
- --Gypsum lath
- --Rose screeds
- --Corner beads
- --Edge casing beads
- --Grounds
- --Picture mouldings
- --Window stools
- --Corner lath reinforcement
- --Control joints

Other wall and ceiling finishes that might be noted include veneer plaster, sprayed aqoustical surface, fabric or carpet, vinyl, laminated plastic, etc. Such applied finishes may be named in details but are commonly referenced to the finish schedule.

OTHER DETAIL AND NOTATION DATA THAT MAY BE USED WITH THESE DETAILS

__Wall-related detail items.
- -Mirrors
- -Attached casework
- -Shelving
- -Tack and chalkboards
- -Ornamental trim, casings, and special moldings
- -Casework at end walls and jambs
- -Coves and valances
- -Signs and support backing
- -Recessed compartments
- -Pass-thru openings
- -Access panels
- -Louvers or vents

UNIT MASONRY

CONCRETE BLOCK

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__Most data on brick or block grades, types, mortar, anchors, reinforcing, ASTM categories, etc. will be in specifications rather than details

__Concrete block sizes
- __Nominal thickness: 4", 6", 8", 10" & 12"
- __Nominal lengths: 16" & 18"
- __Nominal heights: 4" & 8"
  - __Actual sizes are 3/8" less than nominal sizes to allow for typical mortar joints thickness

__Concrete block types
- __Solid load-bearing units
- __Hollow load-bearing units
- __Hollow non-load-bearing units

__Grades of load-bearing concrete block units are "N" and "S"
- __Grade N
  - __Use for veneers and facings requiring:
    - __High strength
    - __High resistance to water penetration
    - __High resistance to frost action
- __Grade S
  - __Use for typical conditions
    - __Moderate strength
    - __Moderate moisture resistance
- __Grades N and S come as Types I and II
  - __Type I--moisture resistant
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__Provide concrete block wall movement control joints at:
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- __Each side of openings over 5' wide
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__Wall movement is minimal below grade, so control joints aren't normally provided at block foundation walls
- __Use bond beam atop block foundation walls as boundary for control joints above

__Add slip joint material between slabs and load-bearing masonry control joints

BRICK

__Brick sizes
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  - __MW--for exposure to moderate weather
  - __NW--non-weather exposure
- __Face brick
- __Glazed
- __Hollow
- __Sand-lime
- __Concrete

- __Special-purpose bricks
  - __Brick paving (grave SW is OK)
  - __Chemical resistant
  - __Industrial floor brick
  - __Fire brick
  - __Prefabricated brick panels

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  - __Z shaped ties are NOT recommended for use with concrete block

__Brick veneer and metal ties
- __To link brick veneer to wood framing through sheathing, corrugated metal ties; 22 gauge, 7/8" wide, 6" long are typical Maximum spacing at 24" o.c.
- __To fasten brick to metal studs, 9 gauge wire ties are typical

__Brick veneer air space and waterproofing
- __Add waterproof building paper on wall sheathing between grout or air space behind masonry
- __Air or grout space is typically 1" thick

__Anchors
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- __Steel sizes and bond beam reinforcing are typically engineered for specific loads and spans and referenced to Lintel Schedules

See literature from the National Concrete Masonry Association, the Brick Institute of America, and your building code for complete engineering, specification, and construction application information.

FOUNDATION TYPES

FOOTINGS & FOUNDATION WALLS
__Footing sizes: Refer to building code for typical sizing for light frame and residential buildings and for engineering requirements for larger structures
__Note soil frost line conditions that effect footing design and depth of footings
__Note elevation points of bottom & top of footings
__Note elevation points and identification of existing grade, finish grade, and compacted grade
__Note reference to foundation plan for footing and grade elevations
__Show cripple wall/floor joist framing
__Redwood or pressure treated wood mudsill: 2x4, 2x6 typical sizes
__Use non-shrink grout a top foundation wall to level the wood mudsill

__Reinforcing bars
__#4 bars, continuous, centered within 4" of the top and bottom of the footing is typical
__Minimum clearance from reinforcing bars to outside surface of concrete is 3" but 4" is preferred
__Higher foundation walls (over 4') often include #4 bars @ 24" o.c. horizontally and vertically
__Higher walls require engineering computation and detailing

__Dowels
__#4 deformed rebars typical as anchor dowels
__#4 plain shape rebar typical for movement joints
__Use dowels to connect two different pours of concrete

__Treated wood or redwood mudsill connects concrete footing to wood frame
__2x6 mudsill typical
__Steel anchor bolts--threaded on top end, bent at end embedded in concrete
__1/2" x 10" anchor bolt typical for standard residential buildings
__3/4" x 14" anchor bolt used for larger structures
__Set anchor bent side down into footing concrete prior to concrete set
__Attach wood sill to this bolt and secure with nut

__Mudsill and anchor bolts
__Treated wood or redwood mudsill connects concrete footing to wood frame
__2x6 mudsill typical
__Steel anchor bolts--threaded on top end, bent at end embedded in concrete
__1/2" x 10" anchor bolt typical for standard residential buildings
__3/4" x 14" anchor bolt used for larger structures
__Cast-in-place bolts @ 6'-0" o.c., starting 12" from corners typical for residential and other smaller frame buildings
__3/4" x 14" anchor bolts are used for larger structures
__Space bolts so they don't occur under joists or wall studs
__Place anchors with bent side down into foundation wall or slab prior to concrete set
__Attach wood sills, drilled to match bolt holes, and secure with nuts
__For interior walls, bolt can be shot through wood into concrete with low-power concrete gun
__Power-driven bolts or anchors are used at closer spacings such as 32" o.c. or 48" o.c.

__Girder pockets where a girder bares on a pocket in a foundation wall
__Allow minimum 4" bearing
__Provide 1/2" air space at ends and sides of girder
__Protect bearing ends of girders from moisture with gasket of flashing or building felt

__Redwood or pressure-treated ledgers @ foundation walls
__Post to girder connection
__Metal post straps, T strap ties, and plywood gussets are typical
__Floor joists, joist hangers, subfloor
__See local code for span/spacing tables and nailing schedule
__Double floor joists, header joists
__Usually included at thru-floor openings
__Under parallel partitions
__At bathtubs and other concentrated loads

__Flashing
__Sheet metal, building paper, or combination
__Design as protective covering to prevent water entry
__Design to channel rain water that enters back to the outside
__Use as barrier between dissimilar materials that may corrode each other
__Building paper flashing--15# typical
__Metal Flashing--No. 26 gauge galvanized sheet metal typical; affords protection while being easy to cut and form on the jobsite

__Thermal Insulation @ perimeter
__1" rigid insulation board is typical
__May be thicker in colder climates, as determined by heat loss calculations

__Drainage
__Perimeter drain tile
__4" diameter perforated tile pipe is typical
__Tile pipes separated 1/4" at joints
__Tile pipe is buried in crushed stone to facilitate drainage
__Building paper cover to block soil infiltration at tile pipe section separations--15# typical
__Grade site drain away from all sides of the building
__Provide added soil as necessary to slope and drain directly away from foundation walls
__Provide side slopes at concrete slab aprons

__Waterproofing
__Waterproof foundation wall if floor level of interior is lower than exterior grade
__Use bituminous waterproofing, building felt, or polyethylene film
__Waterproof concrete floor slabs
__Provide moisture barrier directly under slab to block ground water
__6 mil. polyethylene moisture barrier is commonly used but it may deteriorate over time
__Thorough underslab waterproofing requires building roofing felts with tar application, like roofing
__Place slab on 2" to 4" bed of sand or fine, well-compacted gravel

__Termite protection:
__At contact of wood with concrete
__Termite-resistant wood treatment
__Termite shield between wood and concrete
__Termite-repellent soil treatment under concrete slab
__Fill holloe masonry unit foundations to block termite entry
__Keep all wood 12 or more above soil (6" is typical code minimum)

Wood Products

1. All wood products in direct contact with concrete shall be pressure treated or Red Wood.

METAL STUD WALLS

__Studs shown in this series are steel members in the sizes indicated in the detail titles
__Metal wall manufacturers' instructions and details for these products are very comprehensive; use the data here as a preliminary design guide

__Partition notation mainly consists of naming the various components such as:
- __Metal studs:
  - __Channel,
  - __"C"
  - __Open web
  - __Nailable
- __Floor and ceiling tracks
- __Tracks connecting to other wall construction
- __Jamb anchor clips
- __Bolt or toggle bolt connection to ceiling
- __Movement sleeve at ceiling
- __Sealant at top and bottom tracks
- __Horizontal 3/4" channel stiffeners:
  - __At door jambs
  - __Above door heads
  - __Usually within 12" of other wall openings

FINISH WALL CONSTRUCTION

__Gypsum wallboard and other finish material manufacturers provide comprehensive instructions and details for their products; use the data here as a preliminary guide.
__Building codes provide extensive instructions on fireproofing requirements; those requirements have evolved from many years of fire experience and should be followed with extreme care.

__Common wall finishes combined with metal frame partitions include:

- __Interior Single Layer:
  - --3/8" plywood paneling
  - --3/8" gypsum wallboard
  - --1/2" gypsum wallboard
  - --5/8" gypsum wallboard
  - --3/4" 7/8" 1" metal lath and plaster

__Interior Double Layer:
- --2 – 3/8" gypsum wallboard
- --2 – 1/2" gypsum wallboard
- --2 – 5/8" gypsum wallboard
- --1/2" gypsum wallboard plus 3/8" plywood paneling
- --3/8" gypsum lath plus 1/2" plaster (7/8")
- --3/8" gypsum lath plus 5/8" plaster (1")
- --3/8" gypsum lath plus 3/4" plaster (1-1/8")

__Gypsum Wallboard Walls & Ceilings. Special types of gypsum wallboard that might be noted in details include:
- --Type X for fire resistance
- --Water resistant
- --Waterproof
- --Sound deadening
- --Insulative foil backed

__Gypsum wallboard assembly components commonly identified in detail drawing notes include:
- --Corner beads
- --Edge trim
- --Corner guards
- --Edge trim sealant @ floor and ceiling
- --Resilient channels
- --Angle clip reinforcement @ ceilings

__Lath & Plaster Walls & Ceilings. Plaster coats sometimes identified in large scale details are:
- --Scratch coat
- --Brown coat
- --Finish coat

__Lath and plaster components commonly identified in detail notation include:
- --Expanded metal lath
- --Wire lath
- --Gypsum lath
- --Base screeds
- --Corner beads
- --Edge casing beads
- --Grounds
- --Picture mouldings
- --Window stools
- --Corner lath reinforcement
- --Control joints

Other wall and ceiling finishes that might be noted include veneer plaster, sprayed acoustical surface, fabric or carpet, vinyl, laminated plastic, etc. Such applied finishes may be named in details but are commonly referenced to the finish schedule and specifications.

OTHER DETAIL AND NOTATION DATA THAT MAY BE USED WITH THESE DETAILS

__Wall-related detail items:
- --Mirrors
- --Attached casework
- --Shelving
- --Tack and chalk boards
- --Ornamental trim, casings, and special moldings
- --Casework at end walls and jambs
- --Coves and valances
- --Signs and support backing
- --Recessed compartments
- --Pass-thru openings
- --Access panels
- --Louvers or vents

ADD.	ADDITION or ADDENDUM	MFR.	MANUFACTURER
ALT.	ALTERNATE	MIN.	MINIMUM
ASPH.	ASPHALT	MISC.	MISCELLANEOUS
AVG	AVERAGE	N.I.C.	NOT IN CONTRACT
B.M.	BENCH MARK	N.T.S.	NOT TO SCALE
B/C	BACK OF CURB	NFC	NOT FOR CONSTRUCTION
C.A.P.	CONCRETE ASBESTOS PIPE	NOM.	NOMINAL
C.D.	CONSTRUCTION DOCUMENTS	P.L. or ℄	PROPERTY LINE
CL or ℄	CENTERLINE	PREFAB.	PREFABRICATED
CONST.	CONSTRUCTION	QTY.	QUANTITY
CONT.	CONTINUOUS	R.O.W. or R/W	RIGHT OF WAY
CONTR.	CONTRACTOR	REF.	REFERENCE
D.G.	DECOMPOSED GRANITE	REQ'D.	REQUIRED
DBL.	DOUBLE	REV.	REVISION
DEMO	DEMOLITION	RMV.	REMOVE
DIA. or ø	DIAMETER	SH	SHEET
EA.	EACH	SIM.	SIMILAR
EQ.	EQUAL	SPECS	SPECIFICATIONS
EQUIP.	EQUIPMENT	STD.	STANDARD
EST.	ESTIMATE	SYS.	SYSTEM
EXC	EXCAVATE	T.O.C.	TOP OF CURB
EXIST. or E	EXISTING	THRU	THROUGH
FAB.	FABRICATE	TYP.	TYPICAL
FIN.	FINISH	V.I.F.	VERIFY IN FIELD
FL	FLOOR	WT.	WEIGHT
HOR.	HORIZONTAL	W/	WITH
HYD.	HYDRAULIC	W/O	WITHOUT
M.H.	MANHOLE	YD.	YARD
MAT'L	MATERIAL		
MAX.	MAXIMUM		
MFG.	MANUFACTURING		

CIVIL ABBREVIATIONS

N.T.S.

01A-1001

A	AMPERES	DR	DOOR	INCL.	"INCLUDE, INCLUSIVE"	R	RADIUS
A.B.	ANCHOR BOLT	E.A.	EXPANSION ANCHOR	INSUL.	INSULATION	R.D.L.	ROOF DRAIN LEADER
A.F.F.	ABOVE FINISHED FLOOR	E.F.	EXHAUST FAN	INT.	INTERIOR	R.D.O.	ROOF DRAIN OVERFLOW
A.F.G.	ABOVE FINISHED GRADE	E.J.	EXPANSION JOINT	J-BOX	JUNCTION BOX	R.O.	ROUGH OPENING
A/C	AIR CONDITIONING	E.N.	END NAILING	JCT	JUNCTION	R.O.W. or R/W	RIGHT OF WAY
ABC	AGGREGATE BASE COURSE	E.W.	EACH WAY	JST.	JOIST	REF	REFRIGERATOR
ABS	ACRYLONITRILE-BUTADIENE-STYRENE	EA.	EACH	JT.	JOINT	REF.	REFERENCE
ABV.	ABOVE	EL	ELEVATION	K-D	KNOCK DOWN	REINF.	REINFORCED
ACB	ASBESTOS-CEMENT BOARD	ELECT.	"ELECTRIC, ELECTRICAL"	KD	KILN DRIED	REQ'D.	REQUIRED
ACOU.	ACOUSTIC	ELEV.	ELEVATOR	KO	KNOCK OUT	RET.	RETURN
ACT	ACOUSTICAL CEILING TILE	EMC	ELECTRICAL METALLIC CONDUIT	L.E.D.	LIGHT EMITTING DIODE	REV.	REVISION
ADD.	ADDITION or ADDENDUM	EMT	ELECTRICAL METALLIC TUBING	L.F.T.	LINEAR FEET	RM	ROOM
AG	ABOVE GRADE	ENT	ELECTRICAL NON-METALLIC TUBING	LAM	LAMINATE	RMV.	REMOVE
AHU	AIR HANDLER UNIT	EQ.	EQUAL	LAT.	LATERAL	S.C.	SOLID CORE
AL. or ALUM.	ALUMINUM	EQUIP.	EQUIPMENT	LAV	LAVATORY	S.D.	SMOKE DETECTOR
ALT.	ALTERNATE	EST.	ESTIMATE	LD.	LEAD	S.O.V.	SHUT OFF VALVE
ANL	ANNEALED	EVAP.	EVAPORATIVE COOLER	LIN.	LINEAR	S/L	SKYLIGHT
ASPH.	ASPHALT	EWC	ELECTRIC DRINKING COOLER	LINO.	LINOLEUM	S/S	STAINLESS STEEL
AVG	AVERAGE	EXC	EXCAVATE	LT.	LIGHT	SC	SELF CLOSING
AWG	AMERICAN WIRE GAUGE	EXH.	EXHAUST	LTG.	LIGHTING	SCHED.	SCHEDULE
∠	ANGLE	EXIST. or E	EXISTING	LVL	LAMINATED VENEER LUMBER	SECT.	SECTION
B.M.	BENCH MARK	EXT.	EXTERIOR	M.B.	MACHINE BOLT	SES	SERVICE ENTRANCE SECTION
B.N.	BOUNDARY NAILING	F.A.	FIRE ALARM	M.H.	MANHOLE	SH	SHEET
B.O.	BOTTOM OF	F.C.	FAN COIL	M.I.	MALLEABLE IRON	SHT'G.	SHEATHING
B.O.F.	BOTTOM OF FOOTING	F.C.O.	FLOOR CLEAN OUT	M.O.	MASONRY OPENING	SIM.	SIMILAR
B.U.	BUILT UP	F.D.	FLOOR DRAIN	MAR.	MARBLE	SPA.	SPACE
B/C	BACK OF CURB	F.E.	FIRE EXTINGUISHER	MAS.	MASONRY	SPECS	SPECIFICATIONS
BD.	BOARD	F.N.	FIELD NAILING	MAT'L	MATERIAL	SPKR.	SPEAKER
BLDG	BUILDING	F.O.	FACE OF	MAX.	MAXIMUM	SQ. FT.	SQUARE FEET
BLK.	BLOCK	F.S.	FLOOR SINK	MECH.	MECHANICAL	SQ. IN.	SQUARE INCHES
BLKG.	BLOCKING	F/G	FIBERGLASS	MED.	MEDIUM	STC	SOUND TRANSMISSION CLASS
BM.	BEAM	FAB.	FABRICATE	MFG.	MANUFACTURING	STD.	STANDARD
BR	BRASS	FACP	FIRE ALARM CONTROL PANEL	MFR.	MANUFACTURER	STL.	STEEL
BRG.	BEARING	FDC	FIRE DEPARTMENT CONNECTION	MIN.	MINIMUM	SUSP.	SUSPENDED
BRZ	BRONZE	FDN.	FOUNDATION	MISC.	MISCELLANEOUS	SW	SWITCH
C.A.P.	CONCRETE ASBESTOS PIPE	FHC	FIRE HOSE CABINET	MOD	MODULAR	SYM	SYMMETRICAL
C.D.	CONSTRUCTION DOCUMENTS	FIN.	FINISH	MTL.	METAL	SYS.	SYSTEM
C.I.P.	CAST IN PLACE	FL	FLOOR	MUL	MULLION	T & G	TONGUE AND GROOVE
C.J.	CONTROL JOINT	FLG.	FLOORING	N.I.C.	NOT IN CONTRACT	T.B.	THROUGH BOLT
C.O.	CLEAN OUT	FLUOR.	FLUORESCENT	N.T.S.	NOT TO SCALE	T.M.B.	TELEPHONE MOUNTING BOARD
C.T.	CERAMIC TILE	FP	FIRE PROOF	NCM	NON-CORROSIVE METAL	T.O.	TOP OF
CAB	CABINET	FTG.	FOOTING	NFC	NOT FOR CONSTRUCTION	T.O.B.	TOP OF BEAM
CAM.	CAMBER	FURN.	FURNISH	NLR.	NAILER	T.O.C.	TOP OF CURB
CCTV	CLOSED CIRCUIT TELEVISION	G.I.	GALVANIZED IRON	NO.	NUMBER	T.O.F.	TOP OF FOOTING
CEM.	CEMENT	GA.	GAUGE	NOM.	NOMINAL	T.O.J.	TOP OF JOIST
CER	CERAMIC	GALV.	GALVANIZED	O.C.	ON CENTER	T.O.M.	TOP OF MASONRY
CFM	CUBIC FEET PER MINUTE	GAR.	GARAGE	O.D.	OUTSIDE DIAMETER	T.O.S.	TOP OF SLAB
CH or ⊏	CHANNEL	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	O.H.	OVER HANG	T.O.W.	TOP OF WALL
CKT. BKR.	CIRCUIT BREAKER	GFI	GROUND FAULT INTERRUPTER	O.I.	ORNAMENTAL IRON	T.S.	TUBE STEEL
CL or ℄	CENTERLINE	GL	GLASS	O.R.	OUTSIDE RADIUS	T.V.	TELEVISION OUTLET
CLG.	CEILING	GLB	GLUE LAMINATED BEAM	OAI	OUTSIDE AIR INTAKE	TEL.	TELEPHONE
CLKG.	CAULKING	GM	GRADE MARK	OH	OVER HEAD	TH.	THRESHOLD
CLO.	CLOSET	GM	GATE VALVE	OPNG.	OPENING	THD.	THREADED
CLR.	CLEAR	GRC	GALVANIZED RIGID TUBING	OPPO.	OPPOSITE	THK.	THICK
CMU	CONCRETE MASONRY UNIT	GYP.	GYPSUM	P.C.	PRECAST CONCRETE	THRU	THROUGH
CNTRD.	CENTERED	GYP. BD.	GYPSUM BOARD	P.L. or ℙ	PROPERTY LINE	TLT.	TOILET
COL.	COLUMN	H.B.	HOSE BIBB	P.LAM.	PLASTIC LAMINATE	TRANS.	TRANSFORMER
COMB.	COMBINATION	H.C.	HOLLOW CORE	P.O.C.	POINT OF CONNECTION	TYP.	TYPICAL
CONC.	CONCRETE	H.M.	HOLLOW METAL	PERF.	PERFORATED	UNF.	UNFINISHED
CONST.	CONSTRUCTION	H/C	HANDICAPPED	PERP. or ⊥	PERPENDICULAR	UR	URINAL
CONT.	CONTINUOUS	HDBD.	HARDBOARD	PH or ø	PHASE	V.B.	VAPOR BARRIER
CONTR.	CONTRACTOR	HDW	HARDWARE	PL.	PLASTER	V.I.F.	VERIFY IN FIELD
CU	COPPER	HGT.	HEIGHT	PL. or ℙ	PLATE	VA	VOLT AMPERE
d	PENNY	HOR.	HORIZONTAL	PLAS.	PLASTIC	VCT	VINYL COMPOSITION TILE
D.F.	DRINKING FOUNTAIN	HTR	HEATER	PLUMB.	PLUMBING	VERT.	VERTICAL
D.G.	DECOMPOSED GRANITE	HVAC	"HEATING, VENTILATING & AIR CONDITIONING"	PLYWD.	PLYWOOD	W/C	WATER CLOSET
D.S.	DOWN SPOUT	HW	HOT WATER	PORC.	PORCELAIN	WDW	WINDOW
D/W	DISHWASHER	HYD.	HYDRAULIC	PREFAB.	PREFABRICATED	WCT	WAINSCOT
DBL.	DOUBLE	I.C.	INTERCOM OUTLET	PSF	POUNDS PER SQUARE FOOT	WP	WEATHER PROOF
DEMO	DEMOLITION	I.D.	INSIDE DIAMETER	PSI	POUNDS PER SQUARE INCH	WT.	WEIGHT
DIA. or ø	DIAMETER	I.F.	INSIDE FACE	PTN.	PARTITION	W/	WITH
DIAG.	DIAGONAL	ID	IDENTIFICATION	PVC	POLYVINYLCLORIDE	W/O	WITHOUT
DIM.	DIMENSION	IG	ISOLATED GROUND	PWR.	POWER	WD.	WOOD
DL	DEAD LOAD	IMC	INTERMEDIATE METALLIC CONDUIT	Q.T.	QUARRY TILE	W.I.	WROUGHT IRON
DN.	DOWN	IMPG	IMPREGNATED	QTY.	QUANTITY	YD.	YARD

ARCHITECTURAL ABBREVIATIONS

N.T.S.

01A-1002

A.B.	ANCHOR BOLT	LAT.	LATERAL
A.F.F.	ABOVE FINISHED FLOOR	LIN.	LINEAR
A.F.G.	ABOVE FINISHED GRADE	LVL	LAMINATED VENEER LUMBER
ABC	AGGREGATE BASE COURSE	M.B.	MACHINE BOLT
ABV.	ABOVE	M.I.	MALLEABLE IRON
ADD.	ADDITION or ADDENDUM	M.O.	MASONRY OPENING
AG	ABOVE GRADE	MAS.	MASONRY
ALT.	ALTERNATE	MAT'L	MATERIAL
AWG	AMERICAN WIRE GAUGE	MAX.	MAXIMUM
∠	ANGLE	MFG.	MANUFACTURING
B.N.	BOUNDARY NAILING	MFR.	MANUFACTURER
B.O.	BOTTOM OF	MIN.	MINIMUM
B.O.F.	BOTTOM OF FOOTING	MISC.	MISCELLANEOUS
BLKG.	BLOCKING	MOD	MODULAR
BM.	BEAM	MTL.	METAL
BR	BRASS	N.I.C.	NOT IN CONTRACT
BRG.	BEARING	N.T.S.	NOT TO SCALE
BRZ	BRONZE	NCM	NON-CORROSIVE METAL
C.D.	CONSTRUCTION DOCUMENTS	NFC	NOT FOR CONSTRUCTION
C.I.P.	CAST IN PLACE	NLR.	NAILER
C.J.	CONTROL JOINT	NOM.	NOMINAL
CAM.	CAMBER	O.C.	ON CENTER
CH or	CHANNEL	O.D.	OUTSIDE DIAMETER
CL or	CENTERLINE	O.H.	OVER HANG
CLR.	CLEAR	O.R.	OUTSIDE RADIUS
CMU	CONCRETE MASONRY UNIT	OPNG.	OPENING
CNTRD.	CENTERED	OPPO.	OPPOSITE
COL.	COLUMN	P.C.	PRECAST CONCRETE
CONC.	CONCRETE	PERP. or ⊥	PERPENDICULAR
CONST.	CONSTRUCTION	PL. or ℄	PLATE
CONT.	CONTINUOUS	PLYWD.	PLYWOOD
CONTR.	CONTRACTOR	PERF.	PERFORATED
d	PENNY	PREFAB.	PREFABRICATED
DBL.	DOUBLE	PSF	POUNDS PER SQUARE FOOT
DEMO	DEMOLITION	PSI	POUNDS PER SQUARE INCH
DIA. or ø	DIAMETER	QTY.	QUANTITY
DIAG.	DIAGONAL	R	RADIUS
DIM.	DIMENSION	R.O.	ROUGH OPENING
DL	DEAD LOAD	REF.	REFERENCE
DWL.	DOWEL	REINF.	REINFORCED
E.A.	EXPANSION ANCHOR	REQ'D.	REQUIRED
E.J.	EXPANSION JOINT	REV.	REVISION
E.N.	END NAILING	RMV.	REMOVE
E.W.	EACH WAY	SCHED.	SCHEDULE
EA.	EACH	SH	SHEET
ELEV.	ELEVATOR	SHT'G.	SHEATHING
EQ.	EQUAL	SIM.	SIMILAR
EQUIP.	EQUIPMENT	SPA.	SPACE
EST.	ESTIMATE	SPECS	SPECIFICATIONS
EXIST. or E	EXISTING	STD.	STANDARD
F.N.	FIELD NAILING	STL.	STEEL
F.O.	FACE OF	SYS.	SYSTEM
F/G	FIBERGLASS	T & G	TONGUE AND GROOVE
FAB.	FABRICATE	T.B.	THROUGH BOLT
FDN.	FOUNDATION	T.O.	TOP OF
FIN.	FINISH	T.O.B.	TOP OF BEAM
FL	FLOOR	T.O.F.	TOP OF FOOTING
FP	FIRE PROOF	T.O.J.	TOP OF JOIST
FTG.	FOOTING	T.O.M.	TOP OF MASONRY
G.I.	GALVANIZED IRON	T.O.S.	TOP OF SLAB
GA.	GAUGE	T.O.W.	TOP OF WALL
GALV.	GALVANIZED	T.S.	TUBE STEEL
GLB	GLUE LAMINATED BEAM	THD.	THREADED
GM	GRADE MARK	THK.	THICK
HGT.	HEIGHT	THRU	THROUGH
HOR.	HORIZONTAL	TYP.	TYPICAL
I.D.	INSIDE DIAMETER	V.I.F.	VERIFY IN FIELD
I.F.	INSIDE FACE	VERT.	VERTICAL
JST.	JOIST	WT.	WEIGHT
JT.	JOINT	W/	WITH
KD	KILN DRIED	W/O	WITHOUT
KO	KNOCK OUT	WD.	WOOD
L.FT.	LINEAR FEET	W.I.	WROUGHT IRON
LAM	LAMINATE	YD.	YARD

STRUCTURAL ABBREVIATIONS

N.T.S.

01A-1003

A/C	AIR CONDITIONING	MAX.	MAXIMUM
ADD.	ADDITION or ADDENDUM	MFG.	MANUFACTURING
AHU	AIR HANDLER UNIT	MFR.	MANUFACTURER
ALT.	ALTERNATE	MIN.	MINIMUM
C.D.	CONSTRUCTION DOCUMENTS	MISC.	MISCELLANEOUS
CFM	CUBIC FEET PER MINUTE	N.I.C.	NOT IN CONTRACT
CL or ℄	CENTERLINE	N.T.S.	NOT TO SCALE
CONST.	CONSTRUCTION	NFC	NOT FOR CONSTRUCTION
CONT.	CONTINUOUS	NOM.	NOMINAL
CONTR.	CONTRACTOR	OAI	OUTSIDE AIR INTAKE
DBL.	DOUBLE	PREFAB.	PREFABRICATED
DEMO	DEMOLITION	QTY.	QUANTITY
DIA. or ø	DIAMETER	REF.	REFERENCE
E.F.	EXHAUST FAN	REQ'D.	REQUIRED
EA.	EACH	RET.	RETURN
EQ.	EQUAL	REV.	REVISION
EQUIP.	EQUIPMENT	RM	ROOM
EST.	ESTIMATE	RMV.	REMOVE
EVAP.	EVAPORATIVE COOLER	SCHED.	SCHEDULE
EXH.	EXHAUST	SH	SHEET
EXIST. or E	EXISTING	SIM.	SIMILAR
F.C.	FAN COIL	SPECS	SPECIFICATIONS
FAB.	FABRICATE	STD.	STANDARD
FIN.	FINISH	SYS.	SYSTEM
FL	FLOOR	THRU	THROUGH
HOR.	HORIZONTAL	TYP.	TYPICAL
HTR	HEATER	V.I.F.	VERIFY IN FIELD
HVAC	"HEATING, VENTILATING & AIR CONDITIONING"	WT.	WEIGHT
INSUL.	INSULATION	W/	WITH
JCT	JUNCTION	W/O	WITHOUT
MAT'L	MATERIAL	YD.	YARD

MECHANICAL ABBREVIATIONS

N.T.S.

01A-1004

ABS	ACRYLONITRILE-BUTADIENE-STYRENE	MAT'L	MATERIAL
ADD.	ADDITION or ADDENDUM	MAX.	MAXIMUM
ALT.	ALTERNATE	MFG.	MANUFACTURING
C.A.P.	CONCRETE ASBESTOS PIPE	MFR.	MANUFACTURER
C.D.	CONSTRUCTION DOCUMENTS	MIN.	MINIMUM
C.O.	CLEAN OUT	MISC.	MISCELLANEOUS
C.T.	CERAMIC TILE	N.I.C.	NOT IN CONTRACT
C.W.	COLD WATER	N.T.S.	NOT TO SCALE
CL or ℄	CENTERLINE	NCM	NON-CORROSIVE METAL
CONST.	CONSTRUCTION	NFC	NOT FOR CONSTRUCTION
CONT.	CONTINUOUS	NOM.	NOMINAL
CONTR.	CONTRACTOR	O.D.	OUTSIDE DIAMETER
CU	COPPER	P.O.C.	POINT OF CONNECTION
D.F.	DRINKING FOUNTAIN	PORC.	PORCELAIN
D.S.	DOWN SPOUT	PREFAB.	PREFABRICATED
D/W	DISHWASHER	PSF	POUNDS PER SQUARE FOOT
DBL.	DOUBLE	PVC	POLYVINYLCLORIDE
DEMO	DEMOLITION	QTY.	QUANTITY
DIA. or ∅	DIAMETER	R.D.L.	ROOF DRAIN LEADER
EA.	EACH	R.D.O.	ROOF DRAIN OVERFLOW
EQ.	EQUAL	REF.	REFERENCE
EQUIP.	EQUIPMENT	REQ'D.	REQUIRED
EST.	ESTIMATE	RET.	RETURN
EWC	ELECTRIC DRINKING COOLER	REV.	REVISION
EXIST. or E	EXISTING	RM	ROOM
F.C.O.	FLOOR CLEAN OUT	RMV.	REMOVE
F.D.	FLOOR DRAIN	S.O.V.	SHUT OFF VALVE
F.S.	FLOOR SINK	SCHED.	SCHEDULE
F/G	FIBERGLASS	SH	SHEET
FAB.	FABRICATE	SIM.	SIMILAR
FDC	FIRE DEPARTMENT CONNECTION	SPECS	SPECIFICATIONS
FHC	FIRE HOSE CABINET	STD.	STANDARD
FIN.	FINISH	SYS.	SYSTEM
FL	FLOOR	THRU	THROUGH
GM	GATE VALVE	TLT.	TOILET
H.B.	HOSE BIBB	TYP.	TYPICAL
HOR.	HORIZONTAL	UR	URINAL
HW	HOT WATER	V.I.F.	VERIFY IN FIELD
I.D.	INSIDE DIAMETER	W/C	WATER CLOSET
JCT	JUNCTION	WT.	WEIGHT
LAV	LAVATORY	W/	WITH
M.H.	MANHOLE	W/O	WITHOUT
M.I.	MALLEABLE IRON	YD.	YARD

PLUMBING ABBREVIATIONS

N.T.S.

A	AMPERES	LT.	LIGHT
ADD.	ADDITION or ADDENDUM	LTG.	LIGHTING
ALT.	ALTERNATE	MAT'L	MATERIAL
AWG	AMERICAN WIRE GAUGE	MAX.	MAXIMUM
C	CONDUIT	MFG.	MANUFACTURING
C.D.	CONSTRUCTION DOCUMENTS	MFR.	MANUFACTURER
CCTV	CLOSED CIRCUIT TELEVISION	MIN.	MINIMUM
CKT. BKR.	CIRCUIT BREAKER	MISC.	MISCELLANEOUS
CL or ℄	CENTERLINE	N.I.C.	NOT IN CONTRACT
CONST.	CONSTRUCTION	N.T.S.	NOT TO SCALE
CONT.	CONTINUOUS	NFC	NOT FOR CONSTRUCTION
CONTR.	CONTRACTOR	NOM.	NOMINAL
DBL.	DOUBLE	PREFAB.	PREFABRICATED
DEMO	DEMOLITION	PWR.	POWER
DIA. or ø	DIAMETER	QTY.	QUANTITY
E.F.	EXHAUST FAN	REF.	REFERENCE
EA.	EACH	REQ'D.	REQUIRED
ELECT.	"ELECTRIC, ELECTRICAL"	REV.	REVISION
EMC	ELECTRICAL METALLIC CONDUIT	RM	ROOM
EMT	ELECTRICAL METALLIC TUBING	RMV.	REMOVE
ENT	ELECTRICAL NON-METALLIC TUBING	S.D.	SMOKE DETECTOR
EQ.	EQUAL	SCHED.	SCHEDULE
EQUIP.	EQUIPMENT	SES	SERVICE ENTRANCE SECTION
EST.	ESTIMATE	SH	SHEET
EWC	ELECTRIC DRINKING COOLER	SIM.	SIMILAR
EXIST. or E	EXISTING	SPECS	SPECIFICATIONS
F.A.	FIRE ALARM	SPKR.	SPEAKER
FAB.	FABRICATE	STD.	STANDARD
FACP	FIRE ALARM CONTROL PANEL	SW	SWITCH
FIN.	FINISH	SYS.	SYSTEM
FL	FLOOR	T.M.B.	TELEPHONE MOUNTING BOARD
FLUOR.	FLUORESCENT	T.V.	TELEVISION OUTLET
GA.	GAUGE	TEL.	TELEPHONE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	THRU	THROUGH
GFI	GROUND FAULT INTERRUPTER	TRANS.	TRANSFORMER
GRC	GALVANIZED RIGID TUBING	TYP.	TYPICAL
HOR.	HORIZONTAL	V.I.F.	VERIFY IN FIELD
HVAC	"HEATING, VENTILATING & AIR CONDITIONING"	VA	VOLT AMPERE
I.C.	INTERCOM OUTLET	WP	WEATHER PROOF
IG	ISOLATED GROUND	WT.	WEIGHT
IMC	INTERMEDIATE METALLIC CONDUIT	W/	WITH
J-BOX	JUNCTION BOX	W/O	WITHOUT
JCT	JUNCTION	YD.	YARD
L.E.D.	LIGHT EMITTING DIODE		

ELECTRICAL ABBREVIATIONS

N.T.S.

&	AND
△	ANGLE
◫	SQUARE
℄	CENTERLINE
⌀	DIAMETER
ℙ	PLATE / PROPERTY LINE
A.B.	ANCHOR BOLT
A.B.C.	AGGREGATE BASE COURSE
A.C.	AIR CONDITIONING
ACOUS.	ACOUSTICAL
A.C. PAVING	ASPHALTIC CONCRETE PAVING
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
AGGR.	AGGREGATE
ALUM.	ALUMINUM
ALT.	ALTERNATE
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASPH.	ASPHALT
BD.	BOARD
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
B.O.	BOTTOM OF
BOT.	BOTTOM
B.U.	BUILT-UP
CAB.	CABINET
C.B.	CORNER BEAD
C.T.	CERAMIC TILE
CHAN. (C)	CHANNEL
C.I.	CAST IRON
C.I.P.	CAST IN PLACE
C.J.	CONSTRUCTION / CONTROL JOINT
CLG.	CEILING
CLO.	CLOSET
CLR.	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
CNTRSNK.	COUNTERSINK
CNTR. TOP	COUNTER TOP
C.O.	CLEAN OUT
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CORR.	CORRIDOR
CTR.	CENTER
C.W.	COLD WATER
DBL.	DOUBLE
DEPT.	DEPARTMENT
D.F.	DRAINAGE FLOW
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
DN.	DOWN
DNSPT.	DOWNSPOUT
D.O.	DOOR OPENING
DR.	DOOR
DTL.	DETAIL
DWG.	DRAWING
DWR.	DRAWER
E.	EAST
EA.	EACH
E.J.	EXPANSION JOINT
ELEC.	ELECTRICAL
ELEC. PAN.	ELECTRICAL PANELBOARD
ELEV.	ELEVATION, ELEVATOR
EMER.	EMERGENCY
ENCL.	ENCLOSURE
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.W.C.	ELECTRIC WATER COOLER
EXIST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
FBRGL.	FIBERGLASS
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXT-GUISHER CAB.
FFE.	FINISH FLOOR ELEVATION
F.G.	FINISH GRADE
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FIXT.	FIXTURE
FLASH'G	FLASHING
FLR.	FLOOR
FLUOR.	FLUORESCENT
FPRF.	FIREPROOF
FRMG.	FRAMING
FT.	FOOT OR FEET
FTG.	FOOTING
FURN.	FURNITURE
FURR.	FURRING
GA.	GAUGE
GALV.	GALVANIZED
GL.	GRAB BAR
G.L.BM.	GLASS
GR.	GLU-LAM BEAM
GRND.	GRADE
GWB.	GYPSUM WALL BOARD
GYP. BD.	GYPSUM BOARD.
H.B.	HOSE BIBB
H.C.	HOLLOW CORE
HCP.	HANDICAP
CDWD.	HARDWOOD
HDWR.	HARDWARE
H.M.	HOLLOW METAL
HORZ.	HORIZONTAL
HT.	HEIGHT
HW.	HOT WATER
I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
INV.	INVERT
JAN.	JANITOR
JT.	JOINT
KIT.	KITCHEN
LAM.	LAMINATE
LAV.	LAVATORY
L.F.	LINEAT FOOT
LT.	LIGHT
MAX.	MAXIMUM
M.B.	MACHINCE BOLT/ MODIFIED BITUMINOUS
MECH.	MECHANICAL
MED.CAB.	MEDICINE CABINET
MEMB.	MEMBRANE
MTL.	METAL
MFR.	MANUFACTURER
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
M.R.	MOISTURE RESISTANT
MTD.	MOUNTED
MUL.	MULLION
N.	NORTH
N.I.C.	NOT IN CONTRACT
NO. OR #	NUMBER
N.T.S.	NOT TO SCALE
O.A.	OVERALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.C.I.	OWNER FURNISHED/ CONTRACTOR INSTALLED
OFF.	OFFICE
OPNG.	OPENING
OPP.	OPPOSITE
PNLG.	PANELING
PAR.	PARAPET
PART'N	PARTITION
PBWL.	PAPER BACKED WIRE LATH
PL.	PLATE OR PROPERTY LINE
P.LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PR.	PAIR
P.V.C.	POLYVINYL CHLORIDE
PWD.	PLYWOOD
Q.T.	QUARRY TILE
R.	RADIUS/RISER
R.A.	RETURN AIR
R.D.	ROOF DRAIN
REDWD.	REDWOOD
REF.	REFERENCE
REFRIG.	REFRIGERATOR
REINF.	REINFORCED
REQ'D	REQUIRED
RESIL.	RESILIENT
RM.	ROOM
R.O.	ROUGH OPENING
ROOF'G	ROOFING
R.W.C.	RAIN WATER CONDUCTOR
R.W.L.	RAIN WATER LEADER
S.	SOUTH
S.A.	SUPPLY AIR
S.C.	SOLID CORE
SCHED.	SCHEDULE
SECT.	SECTION
S.F.	SQUARE FEET
SH.	SHELF
SHR.	SHOWER
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION
SQ.	SQUARE
S.S.	STAINLESS STEEL
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
SYM.	SYMMETRICAL
T.	TREAD
TEL.	TELEPHONE
T & G	TONGUE AND GROOVE
THK.	THICK
T.O.	TOP OF
T.O.C.	TOP OF CURB
T.O.W.	TOP OF WALL
T.S.	TUBE STEEL
T.T.B.	TELEPHONE TERMINAL BOARD
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
UR.	URINAL
V.C.T.	VYNIL COMPOSITION TILE
VERT.	VERTICAL
VTR	VENT-THRU ROOF
W.	WEST
W/ & W/O	WITH AND WITHOUT
W.C.	WATER CLOSET
WD.	WOOD
WDW	WINDOW
WP.	WEATHERPROOF
WR.	WATER RESISTANT
W.S.	WEEP SCREEN
WT.	WEIGHT

LIST OF ABBREVIATIONS

N.T.S.

01A-1007

&	AND
∠	ANGLE
□	SQUARE
℄	CENTERLINE
ø	DIAMETER
ℙ	PLATE / PROPERTY LINE
A.B.	ANCHOR BOLT
A.B.C.	AGGREGATE BASE COURSE
A.C.	AIR CONDITIONING
ACOUS.	ACOUSTICAL
A.C. PAVING	ASPHALTIC CONCRETE PAVING
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
AGGR.	AGGREGATE
ALUM.	ALUMINUM
ALT.	ALTERNATE
APPROX.	APPROXIMATE
ARCH.	ARCHITECTURAL
ASPH.	ASPHALT
BD.	BOARD
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
B.O.	BOTTOM OF
BOT.	BOTTOM
B.U.	BUILT-UP
CAB.	CABINET
C.B.	CORNER BEAD
C.T.	CERAMIC TILE
CHAN. (C)	CHANNEL
C.I.	CAST IRON
C.I.P.	CAST IN PLACE
C.J.	CONSTRUCTION / CONTROL JOINT
CLG.	CEILING
CLO.	CLOSET
CLR.	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
CNTRSNK.	COUNTERSINK
CNTR. TOP	COUNTER TOP
C.O.	CLEAN OUT
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACTOR
CORR.	CORRIDOR
CTR.	CENTER
C.W.	COLD WATER
DBL.	DOUBLE
DEPT.	DEPARTMENT
D.F.	DRAINAGE FLOW
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER
DN.	DOWN
DNSPT.	DOWNSPOUT
D.O.	DOOR OPENING
DR.	DOOR
DTL.	DETAIL
DWG.	DRAWING
DWR.	DRAWER
E.	EAST
EA.	EACH
E.J.	EXPANSION JOINT
ELEC.	ELECTRICAL
ELEC. PAN.	ELECTRICAL PANELBOARD
ELEV.	ELEVATION, ELEVATOR
EMER.	EMERGENCY
ENCL.	ENCLOSURE
EQ.	EQUAL
EQUIP.	EQUIPMENT
E.W.C.	ELECTRIC WATER COOLER
EXIST.	EXISTING
EXP.	EXPANSION
EXT.	EXTERIOR
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
FBRGL.	FIBERGLASS
F.E.	FIRE EXTINGUISHER
F.E.C.	FIRE EXT-GUISHER CAB.
FFE.	FINISH FLOOR ELEVATION
F.G.	FINISH GRADE
F.H.C.	FIRE HOSE CABINET
FIN.	FINISH
FIXT.	FIXTURE
FLASH'G	FLASHING
FLR.	FLOOR
FLUOR.	FLUORESCENT
FPRF.	FIREPROOF
FRMG.	FRAMING
FT.	FOOT OR FEET
FTG.	FOOTING
FURN.	FURNITURE
FURR.	FURRING
GA.	GAUGE
GALV.	GALVANIZED
GL.	GRAB BAR
G.L.BM.	GLASS
GR.	GLU-LAM BEAM
GRND.	GRADE
GWB.	GYPSUM WALL BOARD
GYP. BD.	GYPSUM BOARD.
H.B.	HOSE BIBB
H.C.	HOLLOW CORE
HCP.	HANDICAP
CDWD.	HARDWOOD
HDWR.	HARDWARE
H.M.	HOLLOW METAL
HORZ.	HORIZONTAL
HT.	HEIGHT
HW.	HOT WATER
I.D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
INV.	INVERT
JAN.	JANITOR
JT.	JOINT
KIT.	KITCHEN
LAM.	LAMINATE
LAV.	LAVATORY
L.F.	LINEAT FOOT
LT.	LIGHT
MAX.	MAXIMUM
M.B.	MACHINCE BOLT/ MODIFIED BITUMINOUS
MECH.	MECHANICAL
MED.CAB.	MEDICINE CABINET
MEMB.	MEMBRANE
MTL.	METAL
MFR.	MANUFACTURER
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
M.R.	MOISTURE RESISTANT
MTD.	MOUNTED
MUL.	MULLION
N.	NORTH
N.I.C.	NOT IN CONTRACT
NO. OR #	NUMBER
N.T.S.	NOT TO SCALE
O.A.	OVERALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.C.I.	OWNER FURNISHED/ CONTRACTOR INSTALLED
OFF.	OFFICE
OPNG.	OPENING
OPP.	OPPOSITE
PNLG.	PANELING
PAR.	PARAPET
PART'N	PARTITION
PBWL.	PAPER BACKED WIRE LATH
PL.	PLATE OR PROPERTY LINE
P.LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PR.	PAIR
P.V.C.	POLYVINYL CHLORIDE
PWD.	PLYWOOD
Q.T.	QUARRY TILE
R.	RADIUS/RISER
R.A.	RETURN AIR
R.D.	ROOF DRAIN
REDWD.	REDWOOD
REF.	REFERENCE
REFRIG.	REFRIGERATOR
REINF.	REINFORCED
REQ'D	REQUIRED
RESIL.	RESILIENT
RM.	ROOM
R.O.	ROUGH OPENING
ROOF'G	ROOFING
R.W.C.	RAIN WATER CONDUCTOR
R.W.L.	RAIN WATER LEADER
S.	SOUTH
S.A.	SUPPLY AIR
S.C.	SOLID CORE
SCHED.	SCHEDULE
SECT.	SECTION
S.F.	SQUARE FEET
SH.	SHELF
SHR.	SHOWER
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION
SQ.	SQUARE
S.S.	STAINLESS STEEL
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
SYM.	SYMMETRICAL
T.	TREAD
TEL.	TELEPHONE
T & G	TONGUE AND GROOVE
THK.	THICK
T.O.	TOP OF
T.O.C.	TOP OF CURB
T.O.W.	TOP OF WALL
T.S.	TUBE STEEL
T.T.B.	TELEPHONE TERMINAL BOARD
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
UR.	URINAL
V.C.T.	VYNIL COMPOSITION TILE
VERT.	VERTICAL
VTR	VENT-THRU ROOF
W.	WEST
W/ & W/O	WITH AND WITHOUT
W.C.	WATER CLOSET
WD.	WOOD
WDW	WINDOW
WP.	WEATHERPROOF
WR.	WATER RESISTANT
W.S.	WEEP SCREEN
WT.	WEIGHT

LIST OF ABBREVIATIONS

N.T.S.

01A-1007

LEGAL DESCRIPTION

[NAME] PROPERTY LOCATED ON [STREET],
[CITY], [STATE].

A TRACT OF LAND LOCATED IN THE NW1/4SW1/4 SECTION 27, TOWNSHIP 6 NORTH, RANGE 84 WEST OF THE 6TH P.M., BOUNDED BY THE LINE DESCRIBED AS FOLLOWS:

COMMENCING AT THE W 1/4 CORNER SECTION 27,

THENCE S 00°00'55" W 52.37 FEET ALONG THE WEST LINE OF THE NW1/4SW1/4 OF THE SOUTH ROW OF [ROAD] AS SHOWN ON THE MAP OR PLAT AND BOUNDARY AGREEMENT AS FILED BY PLAT WITH THE CLERK AND RECORDER APPEARING IN FILE NO. [NUMBER],

THENCE N 86°20'46" E 354.50 FEET ALONG SAID SOUTH ROW TO THE TRUE POINT OF BEGINNING,

THENCE S 03°24'21" E 218.28 FEET TO THE NW CORNER OF LOT 3 [COMMUNITY], A SUBDIVISION AS FILED BY PLAT WITH THE CLERK AND RECORDER APPEARING IN FILE NO. [NUMBER] AND AS CORRECTED BY THAT CERTAIN LETTER OF CORRECTION APPEARING IN BOOK [NUMBER] AT PAGE [NUMBER],

THENCE N 86°35'39" E 78.00 FEET ALONG A NORTH LINE OF LOT 3,

THENCE S 88°35'39" E 97.00 FEET ALONG A NORTH LINE OF LOT 3 TO THE WEST LINE OF CONDO GREEN SUBDIVISION,

THENCE N 08°17'50" E 218.00 FEET ALONG SAID WEST LINE TO THE ABOVE SAID SOUTH ROW OF [ROAD]. SAID POINT BEING ON A CURVE FROM WHICH THE RADIUS POINT BEARS S 08°17'50" W 679.75 FEET,

THENCE ALONG SAID SOUTH ROW ON A CURVE TO THE LEFT A DISTANCE OF 141.79 FEET AND WHOSE CHORD BEARS N 87°40'42" W 141.53 FEET,

THENCE S 86°20'46" W 78.79 FEET ALONG SAID SOUTH ROW TO THE TRUE POINT OF BEGINNING.

LEGAL DESCRIPTION

NOT TO SCALE

PROJECT DATA

ADDRESS : [ADDRESS]
[ADDRESS, CONT.]

CODE : 1993 NEC, 1994 UMC, 1994 UPC
1994 UBC, 1994 UFC

ZONING : [ZONING]

CONSTRUCTION TYPE : [TYPE] WITH 2 HOUR AREA SEPARATION WALL

OCCUPANCY : B
S-3 (WITH ONE HOUR OCCUPANCY SEPARATION PER UBC TABLE 3-B)

OCCUPANCY LOAD : (USEABLE SPACE)

OFFICE #101	1,518.1	S.F.	÷	100	= 15.2
WAREHOUSE #101	3,819.6	S.F.	÷	500	= 7.6
OFFICE #102	1,562.6	S.F.	÷	100	= 15.6
WAREHOUSE #102	3,084.1	S.F.	÷	500	= 3.1

ONE EXIT REQUIRED FROM EACH SPACE

PARKING : (GROSS AREA)

OFFICE #101	1,607.1	S.F.	÷	375	= 4.3
WAREHOUSE #101	3,898.0	S.F.	÷	900	= 4.3
OFFICE #102	1,635.3	S.F.	÷	375	= 4.4
WAREHOUSE #102	3,151.5	S.F.	÷	900	= 3.5

TOTAL : 4.3 + 4.3 + 4.4 + 3.5 =

TOTAL PARKING SPACES REQUIRED 16.5

SPACES PROVIDED 19

EXIT HARDWARE : MAIN ENTRANCE / EXIT DOOR MAY BE KEY OPERATED FROM THE INTERIOR. PROVIDE A SIGN WITH 1" HIGH LETTERS ON OR ADJACENT TO THE DOOR STATING "THESE DOORS TO REMAIN UNLOCKED DURING BUSINESS HOURS".

EXIT SIGNS : PROVIDE EMERGENCY ILLUM-INATION WITH BATTERY BACK UP. SIGNS READING "EXIT" WITH DIRECTIONAL ARROW TO BE WALL MOUNTED.

ACCESSIBILITY : ARS TITLE 41, ADA, UBC CHAPTER 31

SCOPE OF WORK : NEW CONSTRUCTION OF OFFICE SUITES WITH 2 WAREHOUSE AREAS. SITE DEVELOPMENT WITH CONCRETE CURB PLANTERS AND LANDSCAPE & RETENTION AREAS.
ONLY OFFICE SUITE 101 AND WAREHOUSE TO BE BUILT OUT DURING INITIAL CONSTRUCTION.
OFFICE SUITE 102 & WAREHOUSE TO BE BUILT OUT AT FUTURE DATE.
MECHANICAL, PLUMBING AND ELECTRICAL IN UNDEVELOPED SUITES SHALL BE INCLUDED AS PART OF "TENANT IMPROVEMENT" BUILD OUT AT FUTURE DATE.

PROJECT DATA
NOT TO SCALE

PROJECT DATA

BUILDING NAME:	[BUILDING NAME] [BUILDING NAME, CONT.]
PROJECT DESCRIPTION:	[DESCRIPTION] [DESCRIPTION, CONT.]
TAX PARCEL NUMBER:	[NUMBER]
ADDRESS:	[ADDRESS]
OWNER / MANAGER:	[OWNER] [COMPANY] [ADDRESS] [ADDRESS, CONT.]
GOVERNING CODES:	ALL WORK SHALL CONFORM TO THE [YEAR] U.B.C. CODE AND ALL CURRENT [CITY] MODIFICATIONS, THE [YEAR] MECHANICAL CODE, [YEAR] UNIFORM PLUMBING CODE, THE [YEAR] N.E.C. THE WORK SHALL ALSO COMPLY WITH ALL APPLICABLE OSHA REGULATIONS.
ZONING:	[ZONING]
CONSTRUCTION TYPE:	[TYPE]
NUMBER OF STORIES:	[NUMBER]
FIRE SPRINKLERS:	[NUMBER]
STANDPIPES:	[NUMBER]
EXIT HARDWARE:	MAIN ENTRANCE / EXIT DOOR LOCK MAY BE KEY OPERATED FROM THE INTERIOR PROVIDED A SIGN WITH 1" HIGH LETTERS BE PROVIDED ON OR ADJACENT TO THE DOOR STATING "THIS DOOR TO REMAIN UNLOCKED DURING BUSINESS HOURS".
AGE OF BUILDING:	[YEAR]
TENANT NAME:	[NAME] [ADDRESS] [ADDRESS, CONT.]
SCOPE OF CONSTRUCTION:	[DESCRIPTION] [DESCRIPTION, CONT.]
OCCUPANCY TYPE:	[TYPE]

OCCUPANCY LOAD:

OFFICE AREA	607 SQ. FT.	÷ 100	= 6.07
SHOWROOM	3812 SQ. FT.	÷ 200	= 19.06
TOTAL	4419 SQ. FT.		
	TOTAL LOAD		= 25.13

EXITS REQUIRED:	25.13 < 30 = ONE REQUIRED
EXIT SIGNS:	PROVIDE EMERGENCY ILLUMINATION POWERED CEILING MOUNTED SIGNS STATING "EXIT" AND CONTAINING AN ARROW DIRECTED AT THE EXIT AS REQUIRED BY CODE AND AS SHOWN ON THE ELECTRICAL PLANS.
EXIT ILLUMINATION:	PROVIDE SEPARATE EMERGENCY POWERED AREA ILLUMINATION PER THE ELECTRICAL DRAWINGS.

PARKING REQUIRED:

OFFICE AREA	607 SQ. FT.	÷ 250	= 2.42
WAREHOUSE AREA	3812 SQ. FT.	÷ 375	= 10.16
	TOTAL LOAD		= 12.58

PARKING PROVIDED: 13 PROVIDED (EXISTING)

PROJECT DATA

NOT TO SCALE

SHEET INDEX

SHEET INDEX

NOT TO SCALE

01A-8004

SHEET INDEX

SHEET INDEX

NOT TO SCALE

PROJECT USAGE

WAREHOUSE SPACE: TO BE USED FOR ADDITIONAL PRODUCT STORAGE FOR [COMPANY].

TOTAL NUMBER OF EMPLOYEES: 0

PROJECT USAGE

NOT TO SCALE

ACCESSIBILITY NOTES

1. CHANGES IN FLOOR FINISH LEVEL BETWEEN 1/4" HIGH AND 1.2" HIGH MAXIMUM. SHALL BE MADE BY A MEANS OF A TRANSITION STRIP WITH A SLOPE NOT A MEANS OF A TRANSITION STRIP BEVELED NOT STEEPER THAN 1:2.

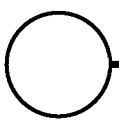
2. <u>AT ALL DOORS:</u>
   A. PROVIDE LEVER HANDLE TYPE LOCKSETS. HARDWARE FOR ALL DOORS PASSAGE SHALL BE MOUNTED NO HIGHER THAN 48" ABOVE FINISHED FLOOR.
   B. THE BOTTOM 12" OF DOORS SHALL HAVE A SMOOTH AND UNINTERRUPTED SURFACE.
   C. DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90°, THE TIME REQUIRED TO MOVE THE DOOR TO AN OPEN POSITION OF 12° 12° WILL BE 5 SECONDS MINIMUM. MAXIMUM INTERIOR OPENING FORCE SHALL NOT EXCEED 5 lbs.

ACCESSIBILITY NOTES

NOT TO SCALE

ADJACENT SUITES

SUITE #36 & #41	[COMPANY]	(B)	[DESCRIPTION]
SUITE #39	UNOCCUPIED		
SUITE #37	[COMPANY]	(B)	[DESCRIPTION]



ADJACENT SUITES

NOT TO SCALE

PROJECT INFORMATION

LOT AREA _____ 43,462 S.F. GROSS, 40,176 S.F. NET

UNIT HABITABLE AREA _____ 1,898 S.F.

TOTAL HABITABLE AREA _____ 1,898 S.F. X 7 = 13,286 S.F.=33.07%

GROSS BUILDING AREA _____ 2,498 S.F. X 7 = 17,466 S.F. = 43.47%

BUILDING LOT COVERAGE _____ 1,222 S.F. X 7 = 8,554 S.F. = 21.29%

DRIVEWAY AND PARKING COVERAGE _____ 8,263 S.F. = 20.57%

OPEN SPACE LANDSCAPED AREA _____ 23,359 S.F. = 58.14%

FRONT SIDE AND REAR SETBACKS _____ 8,556 S.F. = 19.8%

NET OPEN SPACE AREA _____ 14,803 S.F. = 36.84%

LANDSCAPE SETBACK AREA _____ 15' X 219.07'= 3,286 S.F.
AMENITIES AREA _____ 1135 S.F.
INTERIOR LANDSCAPE AREA _____ 18,938 S.F.

UNIT DESCRIPTION:
3 BEDROOM, 3 1/2 BATHROOM, DEN & WITH 2 CAR GARAGE
PARKING REQUIREMENTS:
.9 SPACES PER BEDROOM = .9 X 21 = 19 SPACES
PARKING PROVIDED:
2 PER GARAGE PER UNIT = 14 + 8 OPEN = 22 SPACES
TRASH ENCLOSURE:
ONE LOCATION AS SHOWN.
SNOW STORAGE:
4325/8263 = 52% OF PAVED AREA, SEE SHEET C-3
DRIVEWAYS AND PARKING ARE 2' ASPHALT AS INDICATED ON SITE PLAN.

A 15' STRIP OF FRONTAGE WILL BE DEDICATED TO THE CITY FOR STREET RIGHT OF WAY AT THE TIME OF ACCEPTANCE OF FINAL PLAT. THEREFORE NO TREES ARE TO BE PLANTED IN THIS FRONT 15' AREA. SEE LANDSCAPE PLAN FOR TREE LOCATIONS.

PROJECT INFORMATION

NOT TO SCALE

01A-8009

SHADOW LEGEND

SHADOW LEGEND

NOT TO SCALE

01C-7001