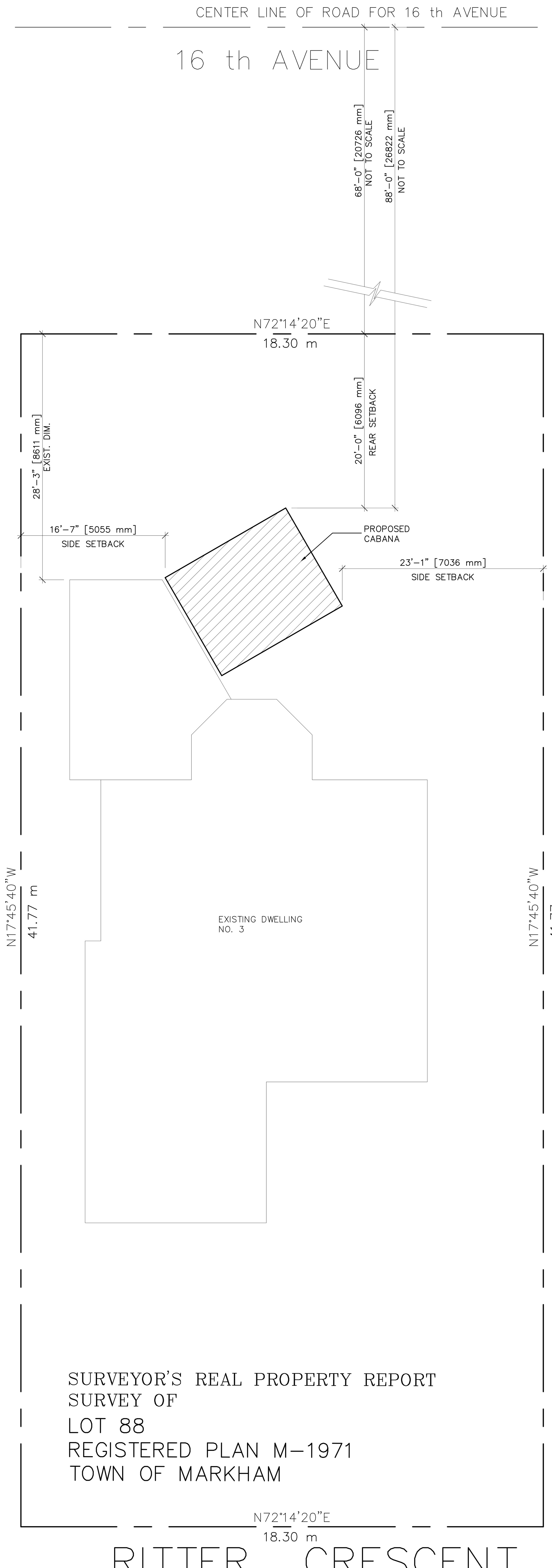
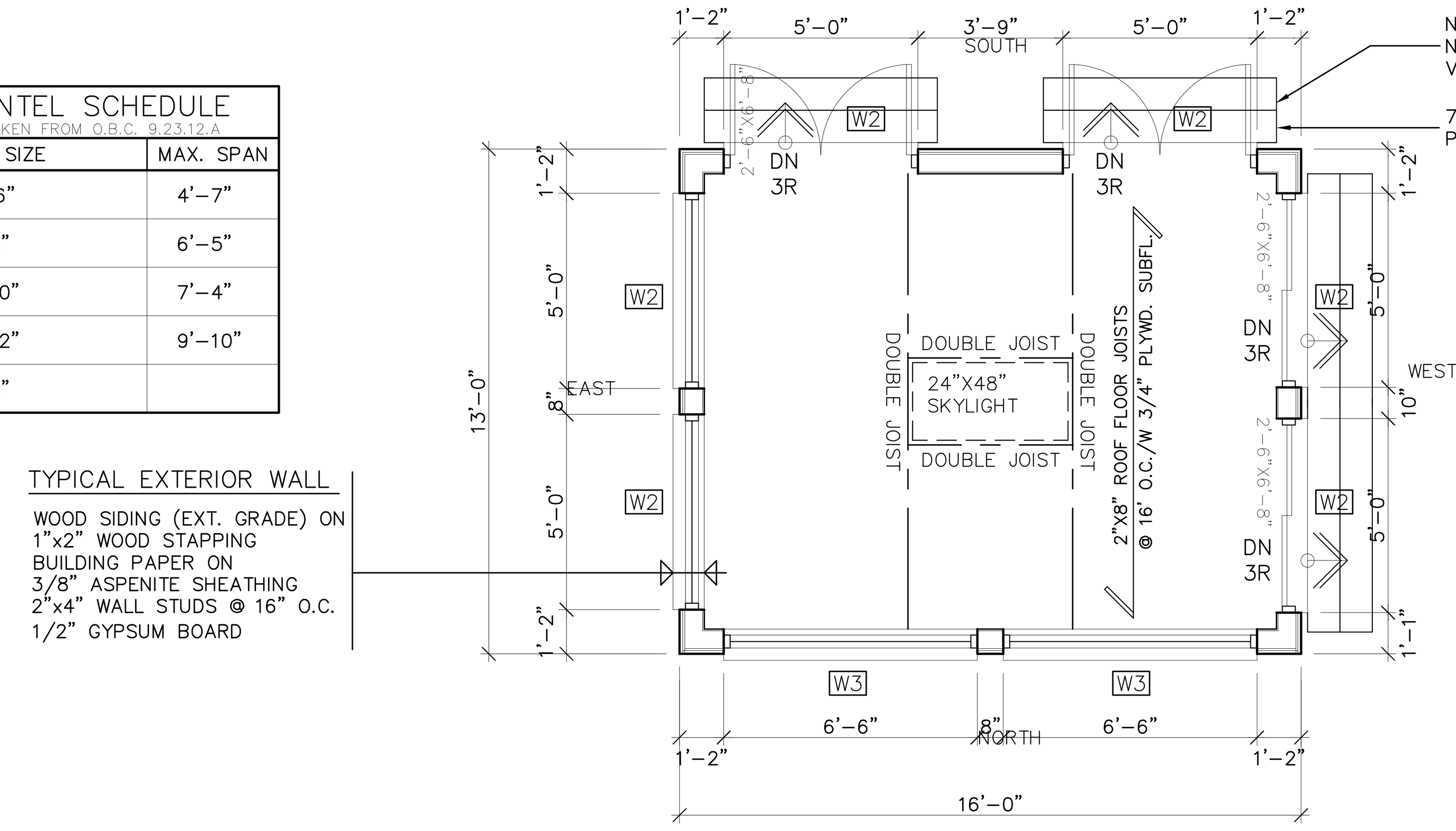


1 A1 SITE PLAN
1/8"=1'-0"

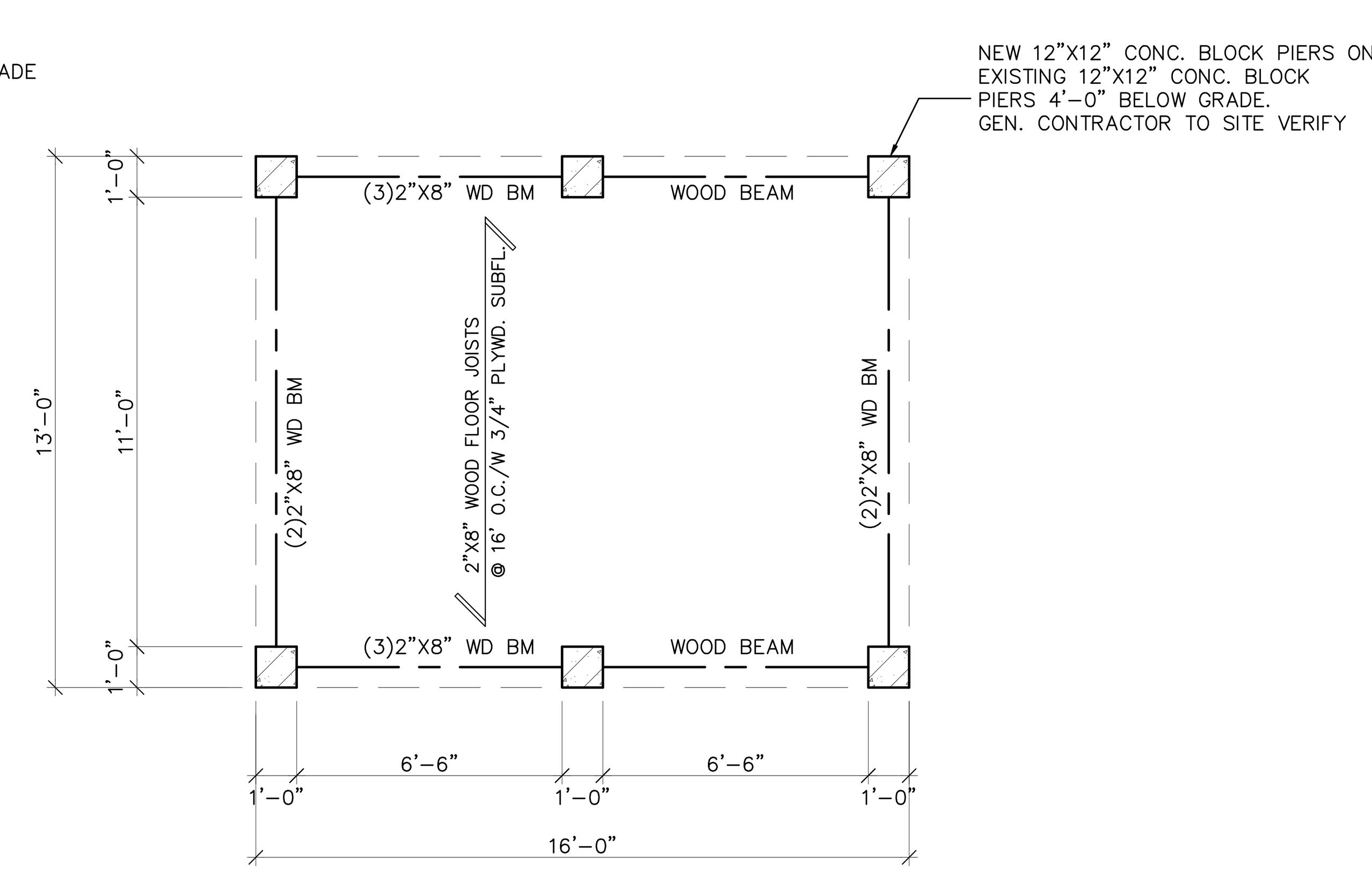
WOOD LINTEL SCHEDULE
INFORMATION TAKEN FROM O.B.C. 9.23.12.A

NO.	LINTEL SIZE	MAX. SPAN
W1	2-2"x6"	4'-7"
W2	2-2"x8"	6'-5"
W3	2-2"x10"	7'-4"
W4	3-2"x12"	9'-10"
W5	3-2"x8"	

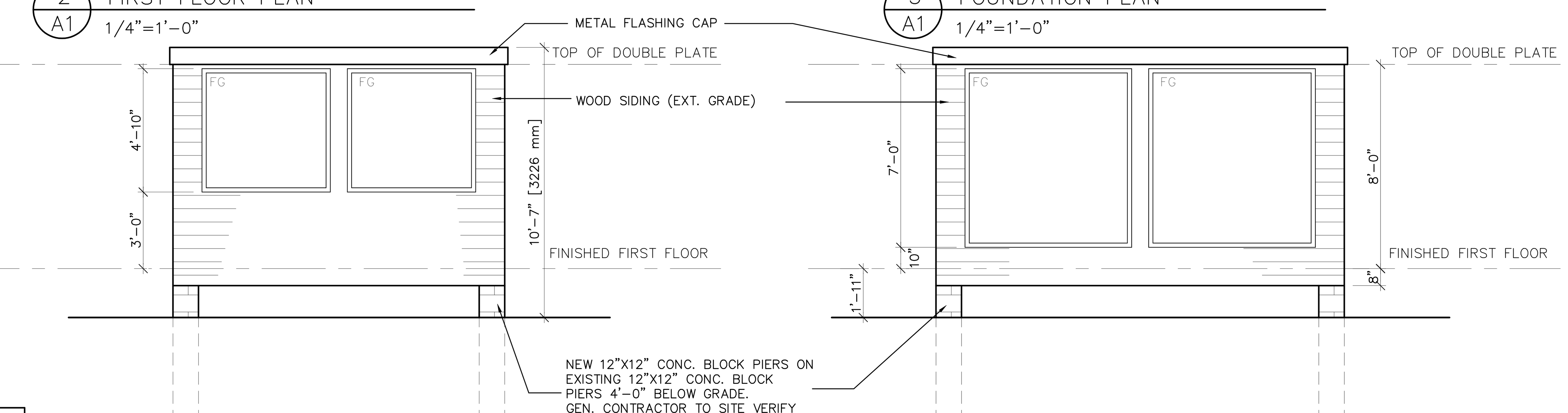
SITE STATISTICS		IMPERIAL	METRIC
SITE AREA		8,228 S.F.	764.4 SM
PROPOSED COVERAGE	29.1 %	2,391 S.F.	222.1 SM
EXIST. HOUSE COVERAGE		2,183 S.F.	202.8 SM
PROPOSED CABANA		208 S.F.	19.3 SM



2 A1 FIRST FLOOR PLAN
1/4"=1'-0"

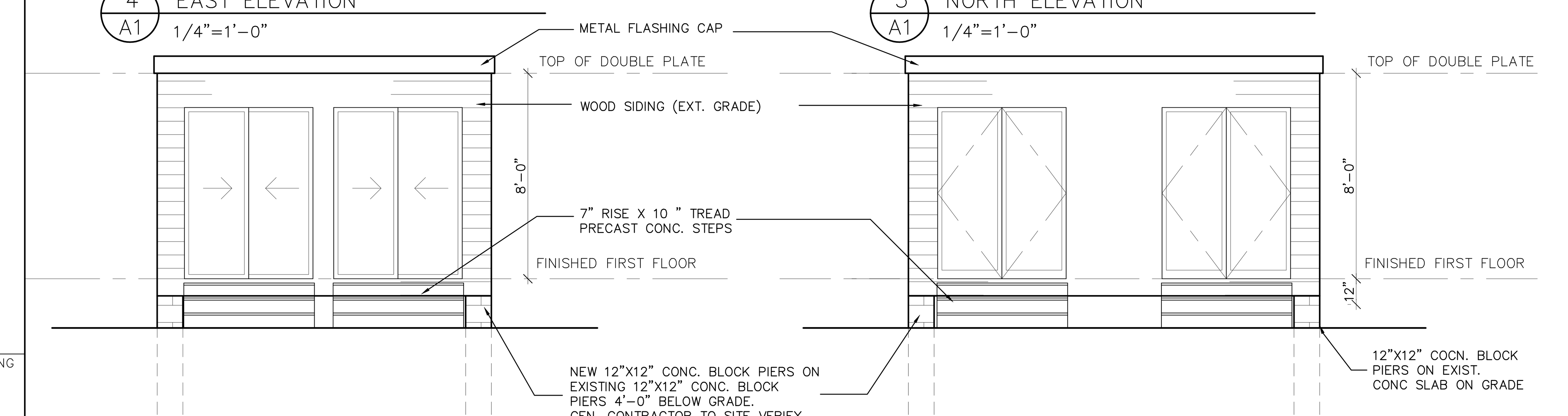


3 A1 FOUNDATION PLAN
1/4"=1'-0"



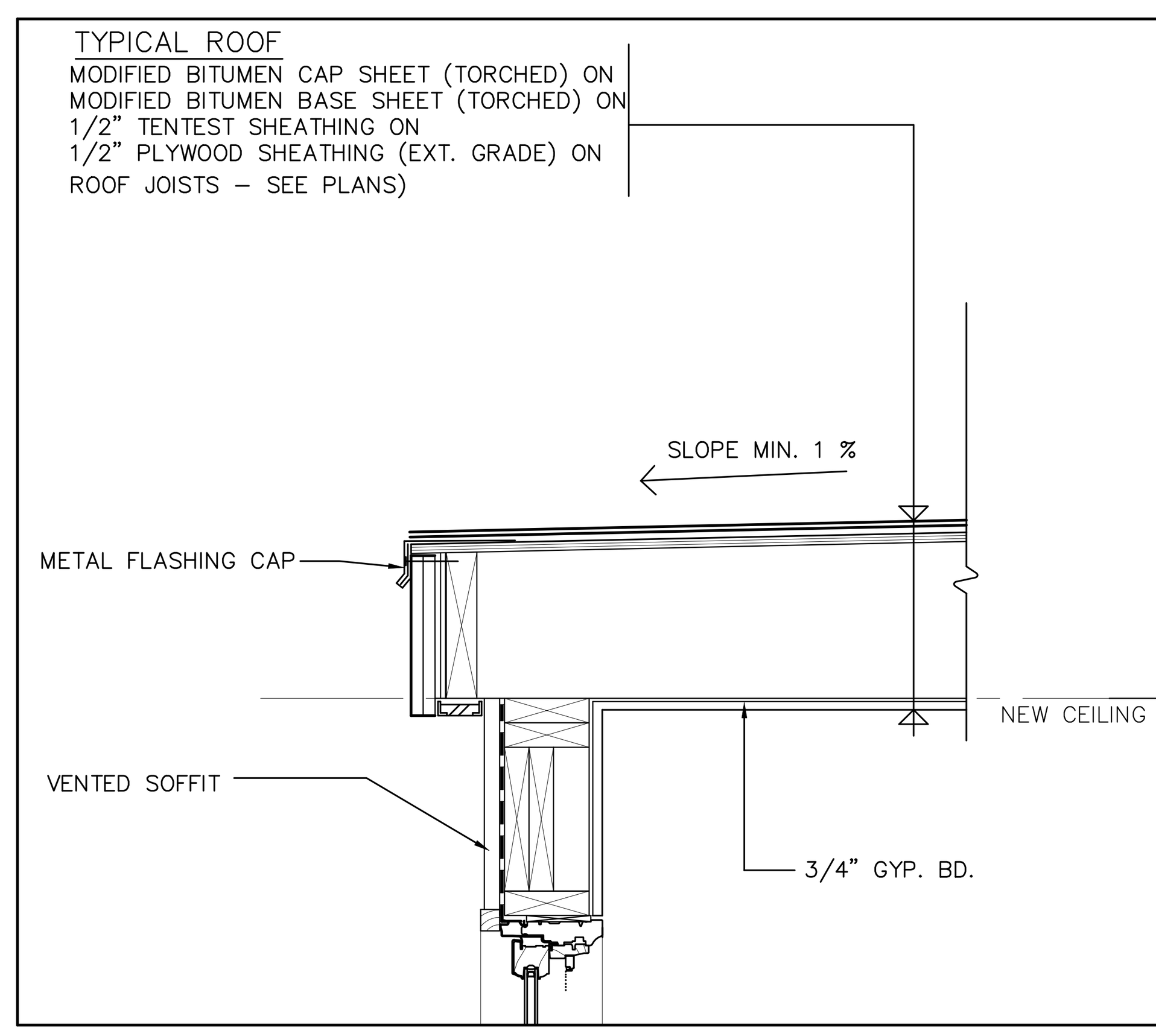
4 A1 EAST ELEVATION
1/4"=1'-0"

5 A1 NORTH ELEVATION
1/4"=1'-0"

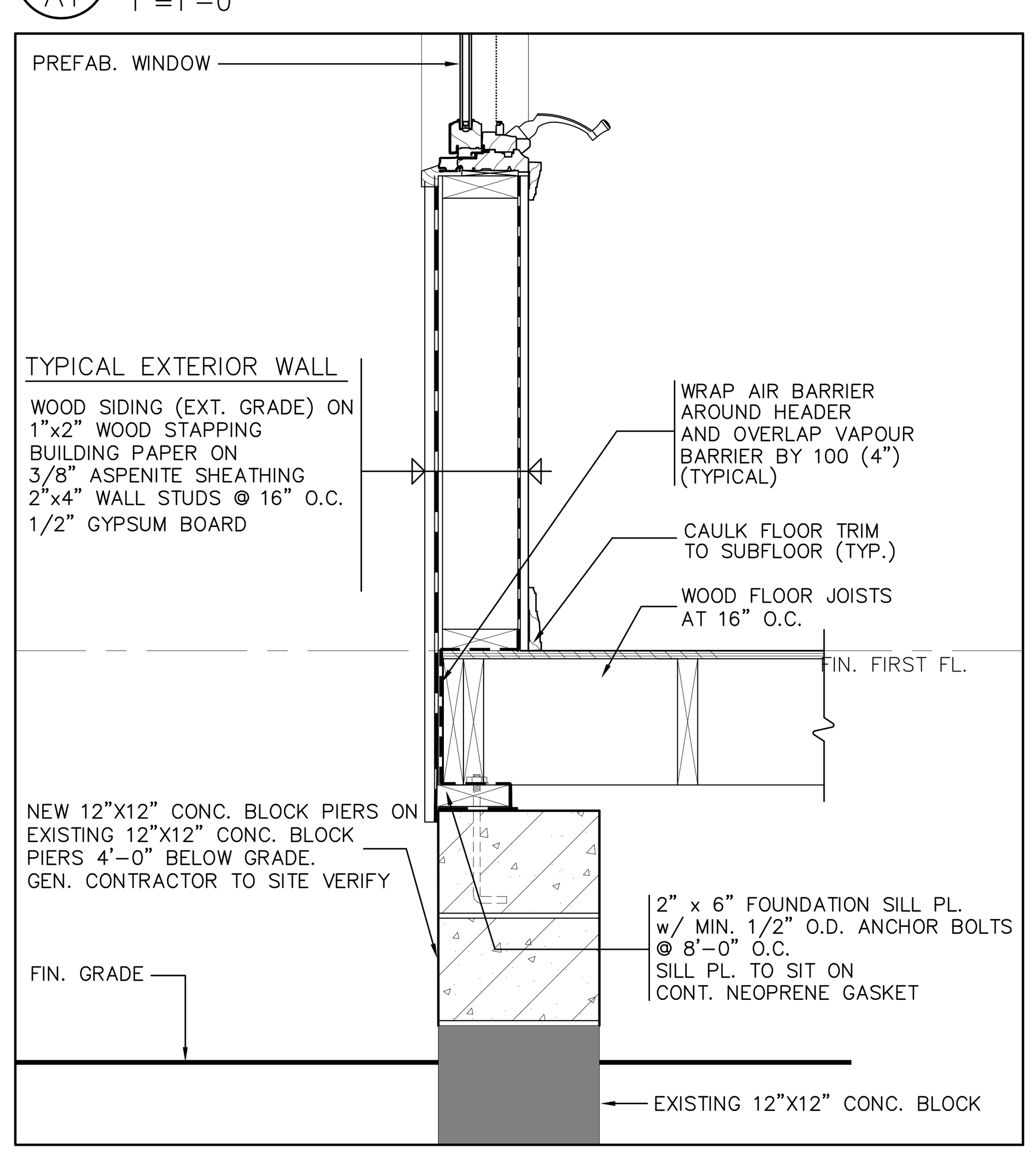


6 A1 WEST ELEVATION
1/4"=1'-0"

7 A1 SOUTH ELEVATION
1/4"=1'-0"



8 A1 DETAIL
1"=1'-0"



9 A1 DETAIL
1"=1'-0"

GENERAL NOTES

Excavation and Backfill

- Excavation shall be undertaken in such a manner so as to prevent damage to existing structures, adjacent property and utilities
- The topsoil and vegetable matter in unexcavated areas under a building shall be removed. The bottom of excavations for foundations shall be free of all organic material
- If termites are known to exist, all stumps, roots and wood debris shall be removed to a minimum depth of 11 3/4"in excavated areas under a building, and the clearance between untreated structural wood elements and the ground shall be no less than 17 3/4"
- Backfill within 23 5/8"of the foundation walls shall be free of deleterious debris and boulders over 9 7/8"in diameter

Dampproofing and Drainage

- In normal soil conditions, the exterior surfaces of foundation walls enclosing basements and crawl spaces shall be dampproofed. Where hydrostatic pressure occurs, a waterproofing system is required
- Masonry foundation walls shall be parged with 1/4"of mortar coved over the footing prior to dampproofing
- 4" foundation drains shall be laid on level, undisturbed ground adjacent to the footings at or below the top of the basement slab or crawl space floor, and shall be covered with 6" of crushed stone. Foundation drains shall drain to a storm sewer, drainage ditch, dry well or sump
- Window wells shall be drained to the footing
- Downspouts not directly connected to a storm sewer shall have extensions to carry water away from the building, and provisions shall be made to prevent soil erosion
- Concrete slabs in attached garages shall be sloped to drain to the exterior
- The building site shall be graded so that surface, sump and roof drainage will not accumulate at or near the building and will not adversely affect adjacent properties

Footings

- minimum 2200 psi poured concrete
- minimum 48" below finished grade
- Footings shall be founded on natural undisturbed soil, rock or compacted granular fill with minimum bearing capacity of 3000 psf

Footing Size

Floors Supported	Supporting Ext. Wall	Supporting Int. Wall	Column Area
1	9 7/8"	9 7/8"	4.3 ft2
2	13 3/4"	13 3/4"	8.1 ft2
3	17 3/4"	19 3/4"	10.9 ft2

- Increase footing width by 2 5/8"for each storey of brick veneer supported, and by 5 1/8"for each storey of masonry
- The projection of an unreinforced footing beyond the wall supported shall not be greater than its thickness

Step Footings

- Vertical Rise
23 5/8"Max. for firm soils
15 3/4"Max. for sand or gravel
Horizontal Run = 23 5/8"Min.

Foundation Walls

- To be poured concrete, unit masonry or preserved wood (see drawings for type and thickness)
- Dampproofing shall be a heavy coat of bituminous material.
- Foundation wall to extend minimum 5 7/8" above finished grade.
- A drainage layer is required on the outside of a foundation wall where the interior insulation extends more than 2'-11"below exterior grade. A drainage layer shall consist of
  - Min. 3/4" mineral fibre insulation with min. Density of 3.6 lb/ft^2
  - Min. 4" of free drainage granular material, or
  - An approved system which provides equivalent performance
- Foundation walls shall be braced or have the floor joists installed before backfilling

Concrete Floor Slabs

- Garage, carport and exterior slabs and exterior steps shall be 4650psi concrete with 5-8%air entrainment
- Other slabs 3600psi concrete
- Minimum 3" thick, placed on a minimum 4" of coarse, clean, granular material
- All fill other than coarse clean material placed beneath concrete slabs shall be compacted to provide uniform support

Masonry Walls

- Where constructed of 3 1/2"brick, wall shall be bonded with header course every 6th course
- Provide 2" solid masonry or continuous 1 1/2" plate under all roof and floor framing members
- Provide 7 1/2" solid masonry under beams and columns
- Masonry wall to be tied to each tier of joists with 1 9/16" x 3/16"corrosion resistant steel straps, keyed minimum 4" into masonry. When joists are parallel to wall, ties are to extend across at least 3 joists @ 6'-7" o.c.
- Inside back of wall to be parged and covered with No.15 breather-type asphalt paper
- For reduced foundation walls to allow a brick facing while maintaining lateral support, tie minimum 3 1/2"brick to minimum 3 1/2"back-up block with corrosion resistant ties at least 0.028in^2 in cross sectional area, spaced 7 7/8" vertically and 2'-11"horizontally, with joints completely filled with mortar
- Masonry over openings shall be supported on corrosion resistant or prime painted steel lintels with a minimum of 5 7/8"end bearing

Masonry Veneer

- Minimum 2 3/4"thick if joints are not raked and 3 1/2"thick if joints are raked
- Minimum 1" air space to sheathing
- Provide weep holes @ 31 1/2" o.c.at the bottom of the cavity and over doors and windows
- Direct drainage through weep holes with 20 mil poly flashing extending minimum 5 7/8" up behind the sheathing paper
- Veneer ties minimum 0.030" thick x 7/8" wide corrosion resistant straps spaced @ 23 5/8" vertically and 15 3/4"horizontally
- Fasten ties with corrosion resistant 0.125" diameter screws or spiral nails which penetrate at least 1-3/16"into studs

Wood Frame Construction

- All lumber shall be spruce-pine-fir No. 1 &2, and shall be identified by a grade stamp
- Maximum moisture content 19% at time of installation
- Wood framing members which are supported on concrete in direct contact with soil shall be separated from the concrete with 6 mil polyethylene

Walls

- Exterior walls shall consist of:
  - cladding
  - sheathing paper lapped 4"at joints
  - 3/8" fibreboard or gypsum board or 1/4" plywood sheathing
  - 2x6 studs @16" o.c.
  - 2x6 bottom plate and double 2x6 top plate
  - 2x4 studs @16"o.c. can be utilized provided the combined R value of the batt insulation and exterior rigid insulation achieves R-17.
- Interior loadbearing walls shall consist of:
  - 2x4 studs @16" o.c.
  - 2x4 bottom plate and double 2x4 top plate
  - 2x4 mid-girts if not sheathed
  - 1/2" gypsum board sheathing

Floors

- See S04 for floor joist size and spacing requirements
- Joists to have minimum 1 1/2"of end bearing
- Joists shall bear on a sill plate fixed to foundation with 1/2"anchor bolts @ 7' 10" o.c
- Header joists between 3' 11"and 10' 6" in length shall be doubled. Header joists exceeding 10' 6" shall be sized by calculations
- Trimmer joists shall be doubled when supported header is between 2' 7" and 6' 7". Trimmer joists shall be sized by calculations when supported header exceeds 6' 7"
- 2x2 cross bridging required not more than 6' 11" from each support and from other rows of bridging
- Joists shall be supported on joist hangers at all flush beams, trimmers, and headers.
- Joists located under parallel non-loadbearing partitions shall be doubled
- See S04 for subflooring requirements

Roof & Ceilings

- See S04 for rafter, roof joist and ceiling joist size and spacing requirements
- Hip and valley rafter shall be 2" deeper than common rafters
- 2x4 collar ties @ rafter spacing with 1x4 continuous brace at mid span if collar tie exceeds 7' 10" in length
- See S04 for roof sheathing requirements

Notching & Drilling of Trusses, Joists, Rafters

- Holes in floor, roof and ceiling members to be maximum 1/4 x actual depth of member and not less than 2" from edges
- Notches in floor, roof and ceiling members to be located on top of the member within 1/2 the actual depth from the edge of bearing and not greater than 1/3 joist depth
- Wall studs may be notched or drilled provided that no less than 2/3 the depth of the stud remains, if load bearing, and 1 9/16"if non-load bearing
- Roof truss members shall not be notched, drilled or weakened unless accommodated in the design

Roofing

- Fasteners for roofing shall be corrosion resistant. Roofing nails shall penetrate through or at least 1/2" into roof sheathing
- Every asphalt shingle shall be fastened with at least 4 nails
- Eave protection shall extend 2' 11"up the roof slope from the edge, and at least 11 3/4"from the inside face of the exterior wall, and shall consist of Type M or Type S Roll Roofing laid with minimum 4" head and end laps cemented together, or glass Fibre or Polyester Fibre coated base sheets, or self sealing composite membranes consisting of modified bituminous coated material. Eave protection is not required for unheated buildings, for roofs exceeding a slope of 1 in 1,5or where a low slope asphalt shingle application is provided
- Open valleys shall be flashed with 2 layers of roll roofing, or 1 layer of sheet metal min. 23 5/8" wide
- Flashing shall be provided at the intersection of shingle roofs with exterior walls and chimneys
- Sheet metal flashing shall consist of not less than 1/16"sheet lead, 0.013" galvanized steel, 0.018" copper, 0.018" zinc, or 0.019" aluminum

Columns, Beams & Lintels

- Steel beams and columns shall be shop primed.
- Minimum 3 1/2" end bearing for wood and steel beams, with 7 7/8" solid masonry beneath the beam.
- Steel columns to have minimum outside diameter of 2 7/8" and minimum wall thickness of 3/16"
- Wood columns for carports and garages shall be minimum 3 1/2" x 3 1/2";in all other cases either 5 1/2" x 5 1/2"or 7 1/4"round, unless calculations based on actual loads show lesser sizes are adequate. All columns shall be not less than the width of the supported member
- Masonry columns shall be a minimum of 11 3/8" x 11 3/8"or 9 1/2" x 15"
- Provide solid blocking the full width of the supported member under all concentrated loads

Insulation & Weatherproofing

Ceiling with attic
Roof without attic
Exterior Wall
Foundation Wall
Foundation > 50% exposed
Exposed Floor
Slabs on Grade

Supply Ducts in unheated space

- Insulation shall be protected with gypsum board or an equivalent interior finish, except for unfinished basements where 6 mil poly is sufficient for fibreglass type insulations
- Ducts passing through unheated space shall be made airtight with tape or sealant
- Caulking shall be provided for all exterior doors and windows between the frame and the exterior cladding
- Weatherstripping shall be provided on all doors and access hatches to the exterior, except doors from a garage to the exterior
- Exterior walls, ceilings and floors shall be constructed so as to provide a continuous barrier to the passage of water vapour from the interior and to the leakage of air from the exterior

Natural Ventilation

- Every roof space above an insulated ceiling shall
- be ventilated with unobstructed openings equal to not less than 1/300 of insulated area
- Insulated roof spaces not incorporating an attic shall be ventilated with unobstructed openings equal to not less than 1/150of insulated area.
- Roof vents shall be uniformly distributed and designed to prevent the entry of rain, snow or insects
- Unheated crawl spaces shall be provided with 1.1 ft^2 of ventilation for each 538 ft^2
- Minimum natural ventilation areas, where mechanical ventilation is not provided, are:
Bathrooms: 0.97 ft^2
other rooms: 3 ft^2
Unfinished basement: 0.2% of floor area

Doors and Windows

- Every floor level containing a bedroom and not served by an exterior door shall contain at least 1 window having an unobstructed open area of 3.8 ft2 and no dimension less than 15"which is openable from the inside without tools
- Exterior house doors and windows within 6' 7" from grade shall be constructed to resist forced entry. Doors shall have a deadbolt lock
- The principal entry door shall have either a door viewer, transparent glazing or a sidelight

Exterior Walls

- No windows or other unprotected openings are permitted in exterior walls less than 3' 11"from property lines
- 5/8" fire rated drywall shall be installed on the inside face of attached garage exterior walls and gable ends of roofs which are less than 3' 11" from property lines
- Non combustible cladding shall be installed on all exterior walls less than 23 5/8" from property lines

Ceramic Tile

- When ceramic tile applied to a mortar bed with adhesive, the bed shall be a minimum of 1/2" thick & reinforced with galvanized diamond mesh lath, applied over polyethylene on subflooring on joists at no more than 16"o.c. with at least 2 rows cross bridging

Access to Attics and Crawl Spaces

- Access hatch minimum 19 3/4"x 2' 4"to be provided to every crawl space and every roof space which is 108 ft^2 or more in area and more than 23 5/8"in height

Garage Gasproofing

- The walls and ceiling of an attached garage shall be constructed and sealed so as to provide an effective barrier to exhaust fumes
- All plumbing and other penetrations through the walls and ceiling shall be caulked
- Doors between the dwelling and attached garage may not open into a bedroom and shall be weatherstripped and have a self-closer

Alarms and Detectors

- At least one smoke alarm shall be installed on or near the ceiling on each floor and basement level 2' 11"or more above an adjacent level
- Smoke alarms shall be interconnected and located such that one is within 16' 5"of every bedroom door and no more than 49' 3" travel distance from any point on a floor
- A carbon monoxide detector shall be installed on or near the ceiling in every room containing a solid fuel burning fireplace or stove

Stairs

- Maximum Rise 7 7/8"
- Minimum Run 8 1/4"
- Minimum Tread 9 1/4"
- Minimum Head Room 6' 5"
- Minimum Width 2' 10"
- Curved stairs shall have a min. run of 5 7/8"at any point and a minimum average run of 7 7/8"
- Winders which converge to a point in stairs must turn through an angle of no more than 90°, with no less than 30° or more than 45° per tread. Sets of winders must be separated by 3' 11"along the run of the stair
- A landing minimum 2' 11"in length is required at the top of any stair leading to the principal entrance to a dwelling, and other entrances with more than 3 risers
- Exterior concrete stairs with more than 2 risers require foundations

Handrails and Guards

- A handrail is required for interior stairs containing more than 2 risers and exterior stairs containing more than 3 risers
- Guards are required around every accessible surface which is more than 23 5/8" above the adjacent level
- Interior and exterior guards min. 2' 11"high. Exterior guards shall be 3' 6"high where height above adjacent surface exceeds 5' 11"
- Guards shall have no openings greater than 4", and no member between 4"and 2' 11"that will facilitate climbing

Plumbing

- Every dwelling requires a kitchen sink, lavatory, water closet, bathtub or shower stall and the installation or availability of laundry facilities
- A floor drain shall be installed in the basement, and connected to the sanitary sewer where gravity drainage is possible. In other cases, it shall be connected to a storm drainage system, ditch or dry well

Electrical

- An exterior light controlled by an interior switch is required at every entrance
- A light controlled by a switch is required in every kitchen, bedroom, living room, utility room, laundry room, dining room, bathroom, vestibule, hallway, garage and carport. A switched receptacle may be provided instead of a light in bedrooms and living rooms
- Stairs shall be lighted, and except where serving an unfinished basement shall be controlled by a 3 way switch at the head and foot of the stairs
- Basements require a light for each 323 ft^2, controlled by a switch at the head of the stairs

Mechanical Ventilation

- A mechanical ventilation system is required with a total capacity at least equal to the sum of:
  - 10 cfm each for basement and master bedroom
  - 5 cfm for each other room
- A principal dwelling exhaust fan shall be installed and controlled by a centrally located switch identified as such
- Supplemental exhaust shall be installed so that the total capacity of all kitchen, bathroom and other exhausts , less the principal exhaust, is not less than the total required capacity
- A Heat Recovery Ventilator may be employed in lieu of exhaust to provide ventilation. An HRV is required if any solid fuel burning appliances are installed
- Supply air intakes shall be located so as to avoid contamination from exhaust outlets

LEGEND

Symbol	Meaning
(double line)	NEW DRYWALL PARTITION
(door swing)	NEW DOOR
(boxed X)	DENOTES EXHAUST FAN
(half-filled square)	SMOKE ALARM
CO	CARBON MONOXIDE DETECTOR

ALUM ALUMINUM
CARP CARPET
CONC. CONCRETE
CBK CONCRETE BLOCK
CT CERAMIC TILE
DIM. DIMENSION
D.G. DOUBLE GLAZED
EXIST. EXISTING
GL GLAZING
GB GYPSUM BOARD
HWD HOLLOW CORE WOOD
HM HOLLOW METAL
HW HARD WOOD
P PAINT
REIN. REINFORCING
ST. STEEL
SWD SOLID CORE WOOD
S STAIN
VCT VINYL COMPOSITE TILE
VB VINYL BASE
WP WATERPROOF
WD. WOOD

NOTE

HANDRAILS REFER TO ONTARIO BUILDING CODE 9.8.7.5.

GUARDS REFER TO ONTARIO BUILDING CODE 9.8.8.1.

CEMENT SHALL MEET THE REQUIREMENTS OF CAN3-A5

CONC. COMPRESSIVE STRENGTH AT 28 DAYS : 25 MPA UNLESS NOTED OTHERWISE

STEEL AND WOOD BEAMS TO HAVE A MINIMUM BEARING OF 4 INCHES

REIN. STEEL SIZE IN METRIC UNLESS NOTED OTHERWISE

CONFORM TO REQUIREMENTS OF THE ONTARIO BUILDING CODE AND THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.

OWNER, BUILDER/CONTRACTOR SHALL FOLLOW ALL PLANS, SECTIONS & DETAILS AS PER INDICATED

DESIGNER SHALL TAKE NO RESPONSIBILITY FOR THE CONSTRUCTION OF THE PROJECT.

ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH ALL BY-LAWS AND CODES HAVING JURISDICTION OVER THIS SITE LOCATION. ALL DIMENSIONS AND INFORMATION SHALL BE CHECKED AND VERIFIED ON THE JOB AND ANY VARIANCES OR DISCREPANCIES MUST BE REPORTED TO THE DESIGNER BY PHONE AND SUBSEQUENT WRITTEN CONFIRMATION, PRIOR TO COMMENCEMENT OF THE WORK.

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirements set out in the Ontario Building Code to design the work shown on the attached documents.

QUALIFICATION INFORMATION
Required unless design is exempt under 3.2.5.1 of Division "C" of the building code.

NAME	SIGNATURE	BCIN
SAM PASQUALE, M.A.A.T.O.	(signature)	19134

REGISTRATION INFORMATION
Required unless design is exempt under 3.2.4.1 of Division "C" of the building code.

FIRM NAME	BCIN
ARCHITECTURAL CADD STUDIO	26772

MEMBER OF
ASSOCIATION OF ARCHITECTURAL TECHNOLOGISTS OF ONTARIO

REVISIONS

NO.	DATE	ISSUED	BY	CKD
1	JULY/18/14	REVISED AS PER CITY COMMENTS		

THE CONTRACTORS SHALL VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCY TO THE DESIGNER PRIOR TO PROCEEDING WITH THE WORK

Architectural CADD Studio
ACS
Residential • Retail • Industrial • Commercial
Construction Drawings • Design Drawings • Measured Drawings
Details • Interior Design • Site Planning
27 Gillespie Avenue
Toronto, Ontario M6N 2Y5 Tel: (416) 656-1454

PROJECT
PROPOSED CABANA FOR:
TONG RESIDENCE
3 RITTER CRESCENT
MARKHAM ONTARIO

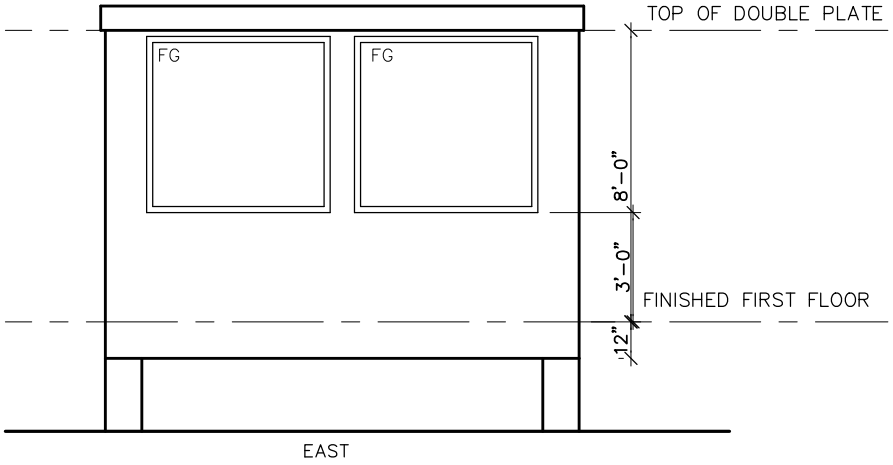
SHEET TITLE
SITE PLAN, FLOOR PLANS ELEVATIONS AND DETAILS

DATE	DATE PRINTED	PROJECT FILE
OCT., 25 2021		

DRAWN	CHECKED
S.J.P.	

SCALE
1/4"= 1'-0"

SHEET NO.
A1 of 1



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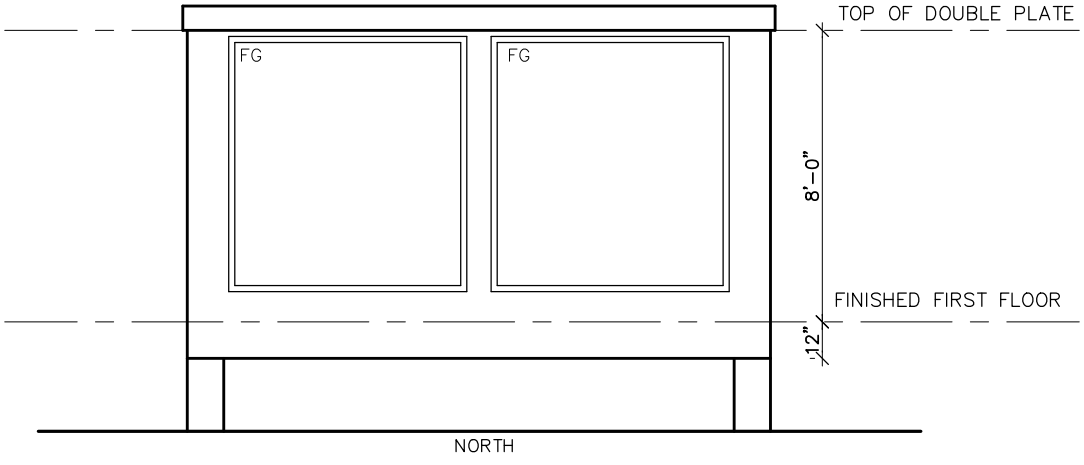

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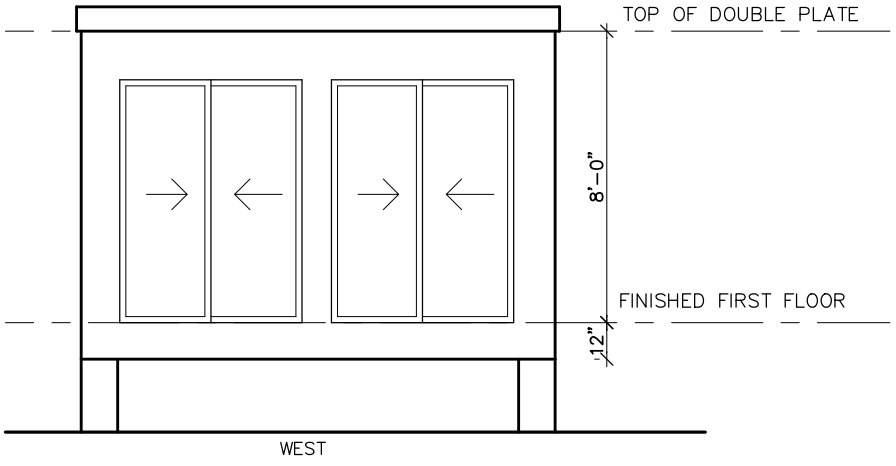

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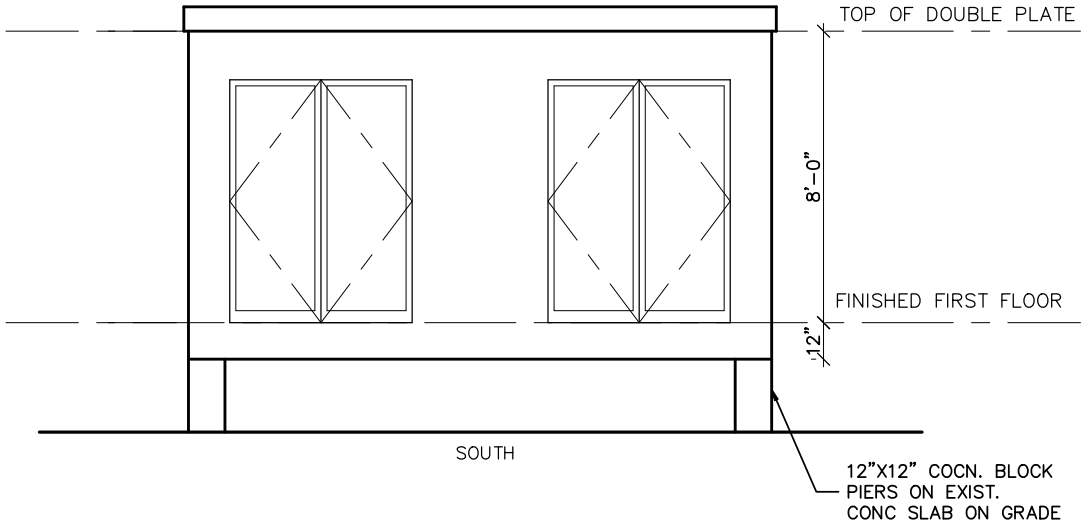

SOUTH