



1. ALL CONCRETE STRUCTURES SHALL CONFORM TO CSA-A23.1 UNLESS NOTED OTHERWISE.
2. ALL CONCRETE, CONCRETE MATERIAL, FORMS, PRACTICE, ETC., SHALL CONFORM TO CSA-A23.1 UNLESS NOTED OTHERWISE.
3. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE 28 MPa UNLESS NOTED ON DRAWINGS:
  - 3.1. FOOTINGS (EXCEPT RETAINING WALL FOOTINGS) ..... 20 MPa
  - 3.2. EXTERIOR SLAB ON GRADE, SIDEWALKS & CURBS ..... 35 MPa
  - 3.3. EXTERIOR STRUCTURAL SLABS, BEAMS & COLUMNS ..... 35 MPa
  - 3.4. MUD SLAB ..... 15 MPa
4. ALL CONCRETE TESTING SHALL CONFORM TO CSA-A23.2.
5. FOR COMPRESSIVE STRENGTH TESTING OF CONCRETE A MINIMUM OF 3 CYLINDERS ARE REQUIRED FOR:
  - 5.1. EACH DAYS POUR
  - 5.2. EACH TYPE OR GRADE OF CONCRETE
  - 5.3. EACH CHANGE OF SUPPLIER
  - 5.4. EACH 20 cu. m. OR FRACTION THEREOF FOR COLUMNS.
  - 5.5. EACH 100 cu. m. OR FRACTION THEREOF FOR ALL OTHER CONCRETE
  - 5.6. ADDITIONAL TEST SPECIMENS SHALL BE TAKEN WHENEVER REQUIRED BY THE ENGINEER OR THE SUPERVISOR TO VERIFY THE CONCRETE QUALITY.
6. USE 20mm MAX. AGGREGATE SIZE THROUGHOUT. ALL CONCRETE EXPOSED TO WEATHER OR FREEZING CONDITIONS SHALL BE AIR ENTRAINED TO 6.5% ( $\pm 1.5\%$ ). SLUMP TO BE 75mm ( $\pm 25$ mm).
7. AT LEAST ONE SLUMP TEST SHALL BE TAKEN WITH EACH COMPRESSIVE STRENGTH TEST.
8. AT LEAST ONE AIR ENTRAINMENT TEST SHALL BE TAKEN WITH EACH COMPRESSIVE STRENGTH TEST AS APPLICABLE.
9. NO ADMIXTURES SHALL BE USED WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER.
10. CONCRETE PROTECTIVE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS (UNLESS NOTED ON DRAWINGS):
  - 10.1. CAST AGAINST FILL, NO FORMWORK ..... 75mm
  - 10.2. EXPOSED TO EARTH OR WEATHER ..... 40mm
  - 10.3. COLUMNS/BEAMS (TIES & STIRRUPS)-PROTECTED ..... 30mm
  - 10.4. WALLS - PROTECTED ..... 20mm
  - 10.5. SLABS (TOP BARS) - PROTECTED ..... 20mm
  - 10.6. SLABS (BOT. BARS) - PROTECTED ..... 25mm
11. TOP BARS IN SLAB MUST BE SUPPORTED ACCURATELY ON STEEL CHAIRS TO GIVE 20mm CONCRETE COVER. WHERE USE OF SLAB IS TO BE EXPOSED, USE PLASTIC COATED CHAIRS OR APPROVED EQUAL.
12. THE CONTRACTOR SHALL PROVIDE CONTINUOUS SUPERVISION DURING THE PLACEMENT OF CONCRETE TO ENSURE THAT THE REINFORCING STEEL IS MAINTAINED IN ITS CORRECT POSITION.
13. CONSTRUCTION JOINTS SHALL BE LOCATED SO AS TO AT LEAST IMPAIR THE STRENGTH OF THE STRUCTURE AND TO THE ENGINEER'S APPROVAL. CONSTRUCTION JOINTS SHALL BE KEVED AND 15M DOWELS x 900mm @ 600mm c/c SHALL BE ADDED. REINFORCING SHALL NOT BE INTERRUPTED.
14. AT LEAST SEVEN (7) DAYS SHALL ELAPSE AFTER CASTING CONCRETE WALLS BEFORE FLOOR MEMBERS OR ROOF MEMBERS SUPPORTED THEREON ARE PLACED.
15. FORMWORK MUST NOT BE REMOVED UNTIL CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO SUSTAIN ALL LOADING. FORMS FOR SLABS MAY BE REMOVED AFTER SEVEN (7) DAYS OF NORMAL CURING CONDITION, PROVIDED THAT REFORMING IS INSTALLED IMMEDIATELY AT NO MORE THAN 3.0m SPACINGS AND MAINTAINED UNTIL THE CONCRETE HAS ATTAINED ITS 28 DAY STRENGTH AND A MINIMUM OF 21 DAYS AFTER SLAB WAS CAST.
16. FOR OPENINGS REQUIRED BY OTHER TRADES, SEE MECH. AND ARCH. DRAWINGS. NO OPENINGS SHALL BE MADE IN FLOOR SLABS NEAR A COLUMN OR A WALL WITHOUT SPECIFIC APPROVAL FROM THE DEPARTMENTAL REPRESENTATIVE. WHERE SMALL DIAMETER PIPING IS ALLOWED, IT SHALL BE INDIVIDUALLY SLEEVED AND LOCATED SO THAT NO REINFORCING STEEL IS CUT.
17. ALL ABUTTING MASONRY SHALL BE ANCHORED TO THE CONCRETE STRUCTURE. DO NOT INSTALL DOVETAIL ANCHOR SLOTS IN STRUCTURAL SLABS, BEAMS, COLUMNS OR WALLS.
18. ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 400 MPa AND SHALL CONFORM TO CSA G30.18.
19. ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED, PLACED AND SUPPORTED IN ACCORDANCE WITH "REINFORCING STEEL MANUAL OF STANDARD PRACTICE" BY THE REINFORCING STEEL INSTITUTE OF CANADA.

## WOOD FRAMING NOTES

1. ALL TIMBER AND LUMBER SHALL COMPLY WITH CSA-084:01.
2. ALL PLYWOOD AND OSB SHEATHING SHALL COMPLY WITH CSA-0325.0 - CONSTRUCTION SHEATHING.
3. ROOF SHEATHING SHALL BE 19mm EXTERIOR GRADE PLYWOOD.
4. ALL LUMBER USED FOR STUD BEARING WALLS, LINTELS AND POSTS SHALL BE NUMBER ONE GRADE S.F.F. UNLESS NOTED.
5. ALL EXTERIOR STUD BEARING WALLS SHALL BE 38x140mm @ 400mm c/c WITH 38x140mm SHOE AND 38x140mm DOUBLE TOP PLATE UNLESS NOTED.
6. ALL INTERIOR STUD BEARING WALLS SHALL BE 38x140mm @ 400mm c/c WITH 38x140mm SHOE AND 38x140mm DOUBLE TOP PLATE UNLESS NOTED.
7. ALL EXTERIOR WALL SHEATHING SHALL BE 16mm EXTERIOR GRADE PLYWOOD.
8. ALL DIMENSION LUMBER SHALL COMPLY WITH CSA 0141.
9. CUTTING OF HOLES OR REMOVAL OF STRUCTURAL FRAMING BY TRADES FOR INSTALLATION OF PIPING, DUCTWORK, ELECTRICAL, ETC. SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENTAL REPRESENTATIVE.
10. ALL ROOF TRUSSES SHALL BE SPACED NOT MORE THAN 600mm c/c UNLESS NOTED OTHERWISE.
11. LOADS FOR PRE-ENGINEERED WOOD TRUSSES SHALL BE AS FOLLOWS:
  - 11.1 TOP CHORD LIVE LOAD TO BE DETERMINED IN STRICT ACCORDANCE WITH PART 4 OF THE N.B.C. (CALCULATE Cs & Ca IN ACCORDANCE WITH PART 4 OF THE N.B.C.)
    - 11.1.1.  $S_s = 1.9 \text{ kPa}$
    - 11.1.2.  $S_r = 0.6 \text{ kPa}$
    - 11.1.3.  $C_s = 0.6$
    - 11.1.4.  $C_w = 1.0$
  - 11.2 BOTTOM CHORD LIVE LOAD =  $0.5 \text{ kPa}$
  - 11.3 TOP CHORD DEAD LOAD =  $0.30 \text{ kPa}$  (INCREASE TOP CHORD DEAD LOAD TO  $0.60 \text{ kPa}$  IN LOCATIONS WHERE JACK TRUSSES ETC. ARE REQUIRED)
  - 11.4 BOTTOM CHORD DEAD LOAD =  $0.25 \text{ kPa}$
12. TRUSS SHOP DRAWINGS SHALL SHOW ALL STRUCTURAL INFORMATION INCLUDING MEMBER LOADS, MEMBER SIZES, CONNECTION DETAILS, BRACING, TRUSS PLACEMENT, FRAMING AROUND OPENINGS, ETC. AND MUST BE STAMPED AND SIGNED BY AN ENGINEER REGISTERED TO PRACTICE IN NOVA SCOTIA AND SUBMITTED TO THE CONSULTANT FOR REVIEW PRIOR TO FABRICATION OF THE TRUSSES.
13. SUBMIT DETAILS AND CAPACITIES OF ALL TRUSS CONNECTIONS (HANGERS, ETC.) FOR APPROVAL BEFORE TRUSS FABRICATION.
14. ROOF TRUSS SUPPLIER SHALL PROVIDE TRUSS BEARING SHOES WHERE REQUIRED IF ALLOWABLE STRESS PERPENDICULAR TO GRAIN IS EXCEEDED. SUBMIT DETAILS FOR REVIEW.
15. HANGING OF SERVICES FROM CHORDS OF TRUSSES MUST BE STAGGERED AND APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.
16. INSTALL WOOD SHEATHING TO STUD WALLS AND ROOF FRAMING WITH JOINTS STAGGERED AND ENDS BUTTED OVER FRAMING. NAIL WOOD SHEATHING WITH 63.5mm COMMON NAILS AT 150mm c/c ALONG EDGES AND 300mm c/c ON INTERMEDIATE SUPPORTS.
17. TRUSSES SHALL BE FASTENED TO PLATES WITH 1.214mm ZINC COATED TIE DOWN ANCHORS TYPICAL EACH END.
18. STRUCTURAL COMPOSITE LUMBER (SCL) SHALL BE LAMINATED VENEER LUMBER (VLV) OR PARALLAM (PSL) OR APPROVED EQUIVALENT, MINIMUM DESIGN PROPERTIES SHALL BE:
  - 18.1 Fb:  $37 \text{ MPa}$
  - 18.2 E\_v:  $3.7 \text{ MPa}$
  - 18.3 E:  $13,800 \text{ MPa}$