

DESIGN CRITERIA

THE DESIGN OF THE STRUCTURE IS IN ACCORDANCE WITH PART 4 OF DIVISION B, NBCC 2010 AND THE 2011 MANITOBA BUILDING CODE AMENDMENTS.
 IMPORTANCE CATEGORY NORMAL
 SNOW DESIGN DATA $S_s = 1.9 \text{ kPa}$ $S_r = 0.2 \text{ kPa}$ $I_s = 1.0 \text{ ULS} / 0.9 \text{ SLS}$
 WIND DESIGN DATA $0.45 \text{ kPa } q(1/50)$ $0.35 \text{ kPa } q(1/10)$ $I_w = 1.0 \text{ ULS} / 0.75 \text{ SLS}$
 SITE CLASSIFICATION FOR SEISMIC SITE RESPONSE: SITE NOT CLASSIFIED, SEISMIC DESIGN NOT REQUIRED DUE TO MB CODE AMMENDMENT

REFER TO PLANS FOR DESIGN LOADING
 CONTRACTOR TO ENSURE THAT CONSTRUCTION LOADS DO NOT EXCEED DESIGN LOADS.

STRUCTURAL MOVEMENTS/ TOLERANCES

1. THIS STRUCTURE WILL UNDERGO NORMAL TYPES OF MOVEMENT AND DEFLECTION AND THE NON-STRUCTURAL COMPONENTS MUST BE DETAILED TO ACCOMMODATE THIS.
2. DRYWALL PARTITIONS, MECHANICAL EQUIPMENT, ELECTRICAL EQUIPMENT, BUILDING FIXTURES, GLAZING AND CURTAIN WALLS MUST BE DETAILED AND INSTALLED TO ACCOMMODATE SLAB MOVEMENT.
3. ALL STRUCTURES ARE SUBJECT TO CONSTRUCTION TOLERANCES. THIS SHOULD BE ALLOWED FOR IN DETAILING NON-STRUCTURAL COMPONENTS.

NON-STRUCTURAL ELEMENTS

1. "NON-STRUCTURAL" OR "SECONDARY STRUCTURAL" ELEMENTS ARE NOT THE RESPONSIBILITY OF STRUCTURAL ENGINEER. THEY ARE DESIGNED, DETAILED, AND REVIEWED IN THE FIELD BY OTHERS. THEY APPEAR ON DRAWINGS OTHER THAN THE STRUCTURAL ENGINEER. WHERE STRUCTURAL ENGINEERING RESPONSIBILITY IS REQUIRED FOR THESE ELEMENTS, THIS SHALL BE PROVIDED BY SPECIALTY STRUCTURAL ENGINEERS, WHO SHALL ALSO PROVIDE ANY CERTIFICATION REQUIRED BY BUILDING PERMIT AUTHORITIES. SPECIALTY STRUCTURAL ENGINEERS ARE TO DESIGN THESE ELEMENTS ACCORDING TO THE APPLICABLE DESIGN LOADS AS NOTED IN PART 4 OF THE MOST CURRENT NBCC.
2. EXAMPLES OF NON-STRUCTURAL OR SECONDARY STRUCTURAL ELEMENTS INCLUDE, BUT ARE NOT LIMITED TO:
 - A. ARCHITECTURAL COMPONENTS SUCH AS GUARDRAILS, HANDRAILS, CEILINGS, MILLWORK ETC.
 - B. LANDSCAPE ELEMENTS SUCH AS BENCHES, LIGHT POSTS, PLANTERS, ETC.
 - C. CLADDING, GLAZING, WINDOW MULLIONS, INTERIOR STUD WALLS AND EXTERIOR STUD WALLS.
 - D. ARCHITECTURAL PRECAST, PRECAST CLADDING.
 - E. MECHANICAL AND ELECTRICAL EQUIPMENT, COMPONENTS, AND THEIR ATTACHMENT DETAILS.
 - F. ELEVATORS, ELEVATOR HOIST BEAMS, ESCALATORS, AND OTHER CONVEYING SYSTEMS.
 - G. BRICK OR BLOCK VENEERS AND THEIR ATTACHMENTS.
 - H. NON-LOAD BEARING MASONRY.
 - I. NON-STRUCTURAL CONCRETE TOPPINGS
 - J. ALUMINUM SKYLIGHTS.
 - K. STAIRS
3. SHOP DRAWINGS FOR NON-STRUCTURAL ELEMENTS WHICH MAY AFFECT THE PRIMARY STRUCTURAL SYSTEM SHALL BE SUBMITTED TO CONTRACT ADMINISTRATOR THESE DRAWINGS WILL BE REVIEWED ONLY FOR THE EFFECT ON THE PRIMARY STRUCTURAL SYSTEM.

LUMBER

1. FRAMING LUMBER SHALL CONFORM TO THE LATEST EDITION CSA 0141 AND SHALL BE OF THE FOLLOWING MINIMUM GRADES: LINTELS, JOISTS, AND BEAMS: S-P-F No.1/No.2, STUD WALLS: S-P-F No.1/No.2
2. ALL SHEATHING MATERIAL TO BE MIN 1/2" THICK PLYWOOD IN ACCORDANCE WITH LATEST EDITION CSA 0325 U.N.O. ALL SHEETS TO BE STAGGERED. FASTEN SHEETS WITH 3" COMMON NAILS AT 12" O/C ALONG ALL STUDS AND AT 6" O/C ALONG EDGES OF SHEET, U.N.O. STAPLES ARE NOT ACCEPTABLE. OSB FOR VERTICAL SHEATHING ONLY
3. ALL FLOOR AND ROOF JOISTS TO BE NAILED AND GLUED AND TO HAVE CONTINUOUS CROSS BRIDGING AT 6'-0" MAX. SPACING U.N.O.
4. 48" WOOD BLOCKING FULL DEPTH CONTINUOUS FOR STUDS.
5. EDGE BLOCKING FOR PARALLEL WALLS AT 16", 32" AND 48" IN NEXT BAYS.
6. WOOD IN CRAWL SPACE OR IN CONTACT WITH STEEL, MASONRY OR CONCRETE IN ITS FINAL INSTALLED CONDITION IS TO BE PRESSURE TREATED U.N.O.
7. CONTINUOUS SILL GASKET REQUIRED AT JOIST BEARING POINTS ON CONCRETE.

CONCRETE

1. ALL CONCRETE CONSTRUCTION, COLD WEATHER CONSTRUCTION & CONCRETE TESTING TO BE IN ACCORDANCE WITH THE LATEST EDITION CSA STANDARDS A23.1 AND A23.2.
2. ALL CONCRETE TO BE NORMAL WEIGHT HARD ROCK CONCRETE WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH AS NOTED IN TABLE 2 OF THE LATEST EDITION CSA A23.1.
3. CONCRETE CLASSES OF EXPOSURE (REFER TO TABLE 1, LATEST EDITION CSA A23.1):
 A. GARAGE SLAB ON GRADE, THICKENED SLAB EDGE CLASS C-2 EXPOSURE (32 MPa @28d)
4. CONCRETE SLUMP TO BE COORDINATED BETWEEN CONTRACTOR AND CONCRETE SUPPLIER CONSIDERING THE PERFORMANCE CRITERIA AND THE CONTRACTOR'S CRITERIA FOR CONSTRUCTION AND PLACEMENT.
5. CONCRETE SAMPLING AND TESTING TO BE COMPLETE IN ACCORDANCE WITH THE LATEST EDITION CSA A23.1/A23.2

REINFORCING

1. REINFORCING STEEL SHALL BE GRADE 400 DEFORMED NEW BILLET STOCK CONFORMING TO THE LATEST EDITION OF CSA SPECIFICATION G30.18. WELDED WIRE MESH SHALL CONFORM TO THE LATEST EDITION CSA A23.1 CLAUSE 6.1.1.1.
2. CONCRETE COVER TO BE AS PER TABLE 17 OF THE LATEST EDITION CSA A23.1

EXPOSURE CONDITION	EXPOSURE CLASS		
	N	F-1, F-2, S-1, S-2	C-XL, C-1, C-3, A-1, A-2, A-3
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	-	75mm	75mm
BEAMS, GIRDERS, COLUMNS, AND PILES	30mm	40mm	60mm
SLABS, WALLS, JOISTS	20mm	40mm	60mm

3. CONCRETE COVER FOR EXPOSURE CLASSES NOT NOTED ABOVE TO BE 40 mm.
4. TOP STEEL IN GRADE BEAMS TO BE SPLICED AT CENTER SPAN AND BOTTOM STEEL TO BE SPLICED OVER SUPPORTS.
 SPLICE LENGTHS:
 A. TENSION ZONE SPLICE TO BE AVOIDED WHEREVER POSSIBLE, BUT IF REQUIRED, LENGTH SHOULD BE SPECIFIED BY SWP PROJECTS LTD..
 B. COMPRESSION ZONE SPLICE SHOULD NOT BE LESS THAN 30 BAR DIAMETERS.
5. CONCRETE COVER FOR FIRE RATING REQUIREMENTS AS PER CURRENT EDITION OF NBCC

FOUNDATION - CAST IN PLACE SKIN FRICTION PILES

1. FOUNDATION DESIGN FOR HAS BEEN DONE IN ACCORDANCE WITH GEOTECHINCAL REPORT AS PREPARED BY TREK GEOTECHNICAL AND DATED JANUARY 27, 2021.
2. CONTRACTOR SHALL OBTAIN AND FAMILIARIZE THEMSELVES WITH THE REQUIREMENTS OF THE GEOTECHNICAL REPORT INCLUDING BUT NOT LIMITED TO SITE CLEANING AND GRUBBING, EXCAVATION AND PROTECTION TO SUB GRADE ELEVATION LEVEL, PROOF ROLLING OF SUB-GRADE, PLACEMENT AND COMPACTION OF GRANULAR BASE COURSES. SPECIFICALLY, REPORT PROVIDES INFORMATION ABOUT THE POTENTIAL PRESENCE OF OLD FOUNDATIONS / RUBBLE IN THE GENERAL PROJECT AREA AND THE NEED FOR THE USE OF STEEL SLEEVES DURING PILE INSTALLATION
3. DESIGN HAS BEEN DONE ASSUMING ULS AND SLS SKIN FRICTION CRITERIA AS FOLLOWS:
 - A. 0 TO 3m BELOW EXISTING GRADE - 0 kPa
 - B. 3 TO 7m BELOW EXISTING GRADE - 8 kPa SLS / 10 kPa ULS
 - C. 7 TO 11m BELOW EXISTING GRADE - 7 kPa SLS / 8 kPa ULS



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THE CITY OF WINNIPEG

BID OPPORTUNITY 54-2021

No.	Description	Date
1	ISSUED FOR CONSTRUCTION	21-03-04

GENERAL NOTES - PAGE 2

Project number	20-104	S002
Date	2021-03-04	
Drawn by	DP	
Checked by	DP	
		Scale 1 : 100