

DO NOT SCALE DRAWINGS		
5		
4		
3	-	-
2	-	-
1	ISSUED FOR TENDER AND CONSTRUCTION	DCT 10.10.10
0	99% CONSTRUCTION DOCUMENTS	AMS 30.10.10
Revision/Description	Description/Description	Date/Date

**Public Works and  
Government Services  
Canada**

176 Lombard Avenue  
Winnipeg, Manitoba

**Lab Renovations**  
**Morden Research Station**  
**Morden, Manitoba**

**Agriculture and Agri-Food**  
**Canada**

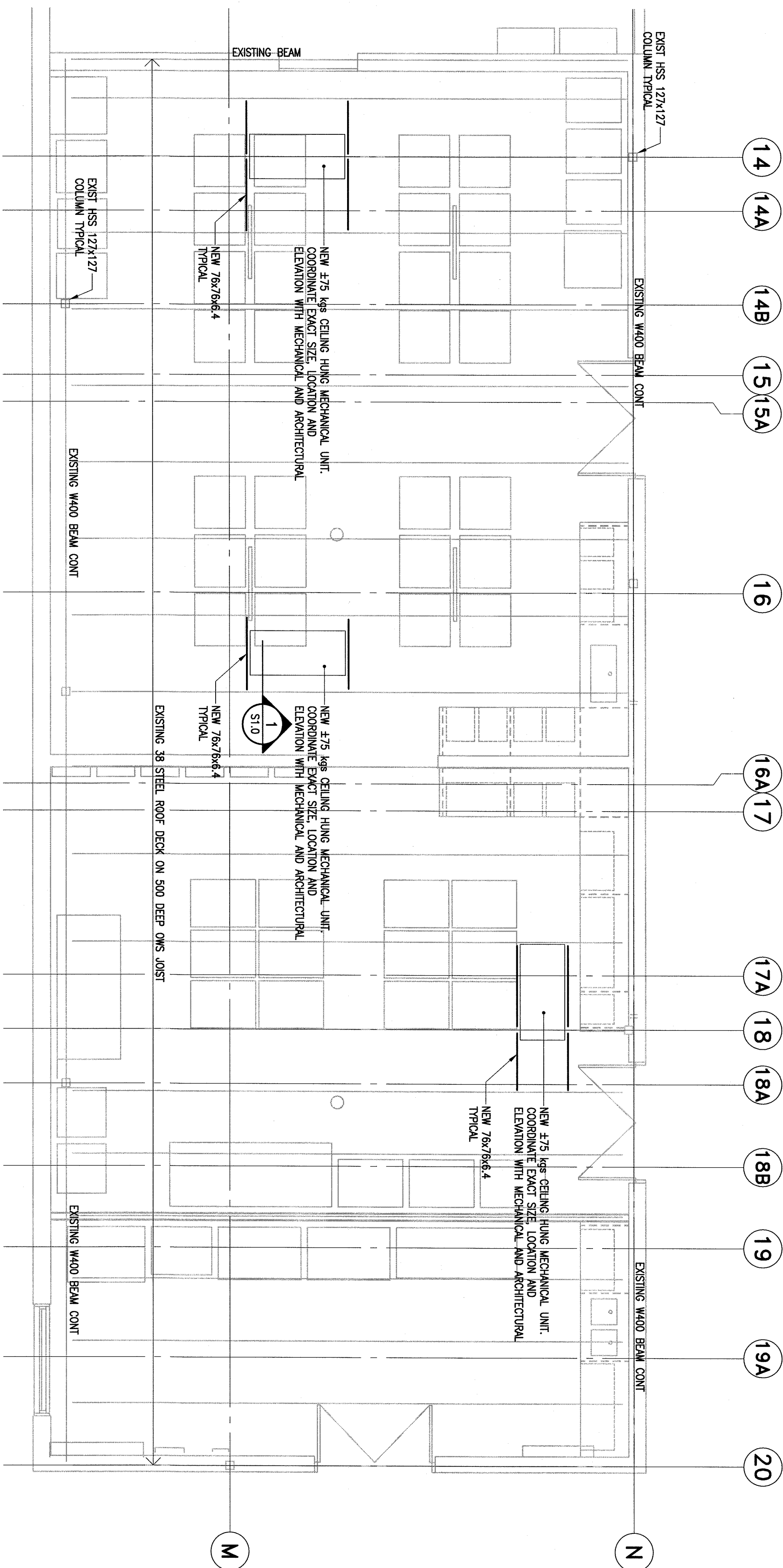
Approved by/ Approuvé par	BF
Designed by/ Conçue par	NM
Drawn by/ Dessiné par	MDB
PW/SC: Project Manager/ Administrateur de Projets TPSC	Steve Munkittrick
PW/SC: Architect/ingénieur en Architecture	Steve Munkittrick
PW/SC: Architectural Designer/ Dessinateur d'Architecture, TPSC	
Client/ Client	
Drawing title/ Titre du dessin	

# MAIN FLOOR FRAMING PLAN

## SECTIONS

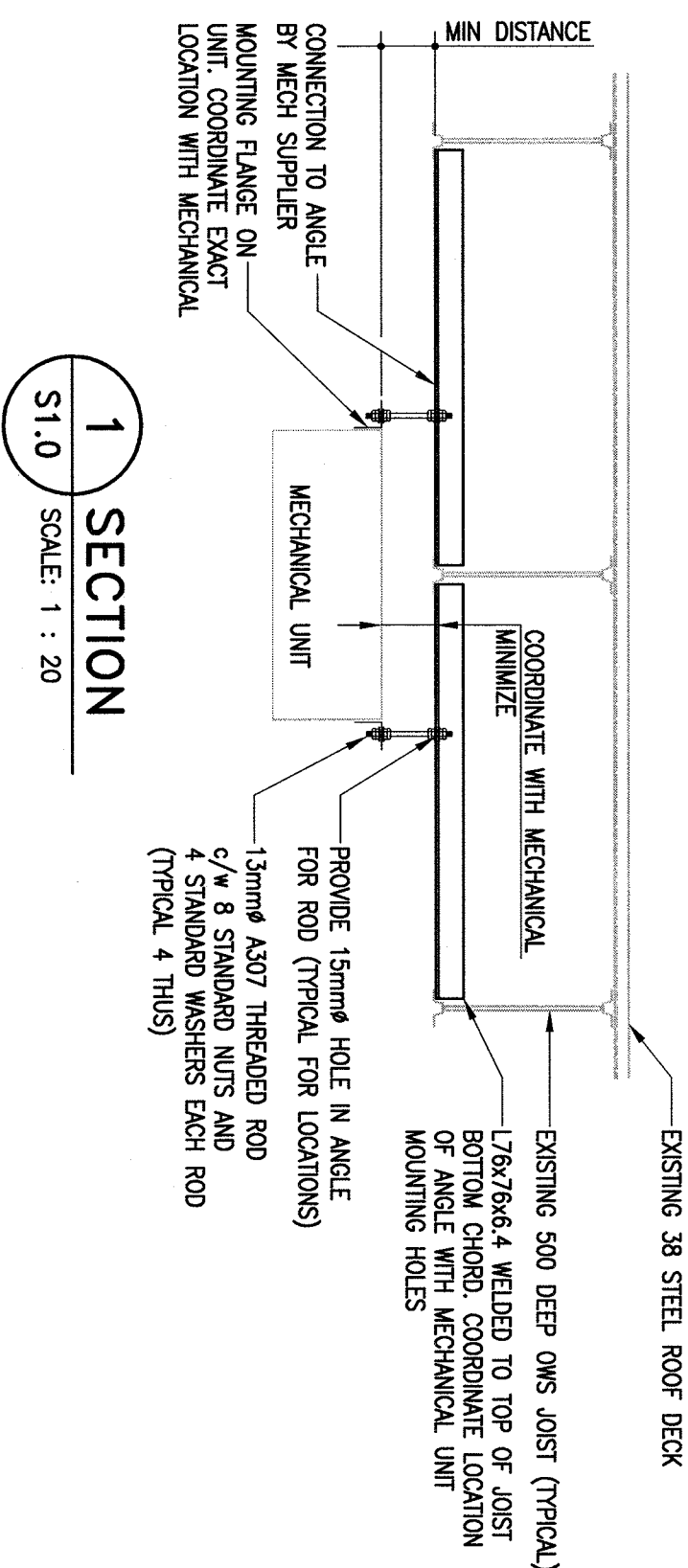
Project No./No. du projet	Steel/Traville	Revision no./ la version no.
R.059536.001	<b>S1.0</b> OF	<b>1</b>

PWGSC - B1 - 1000X707



## PARTIAL ROOF FRAMING PLAN

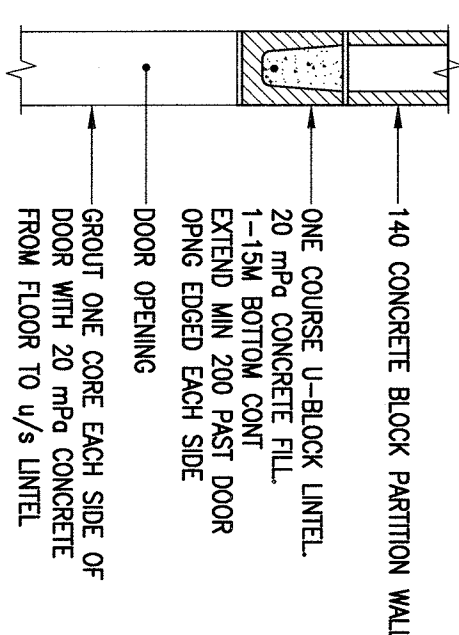
SCALE: 1 : 50  
DESIGN SNOW LOAD = 1.72 kPa  
DESIGN DEAD LOAD = 1.2 kPa



**TYPICAL DOOR LINTEL SECTION**

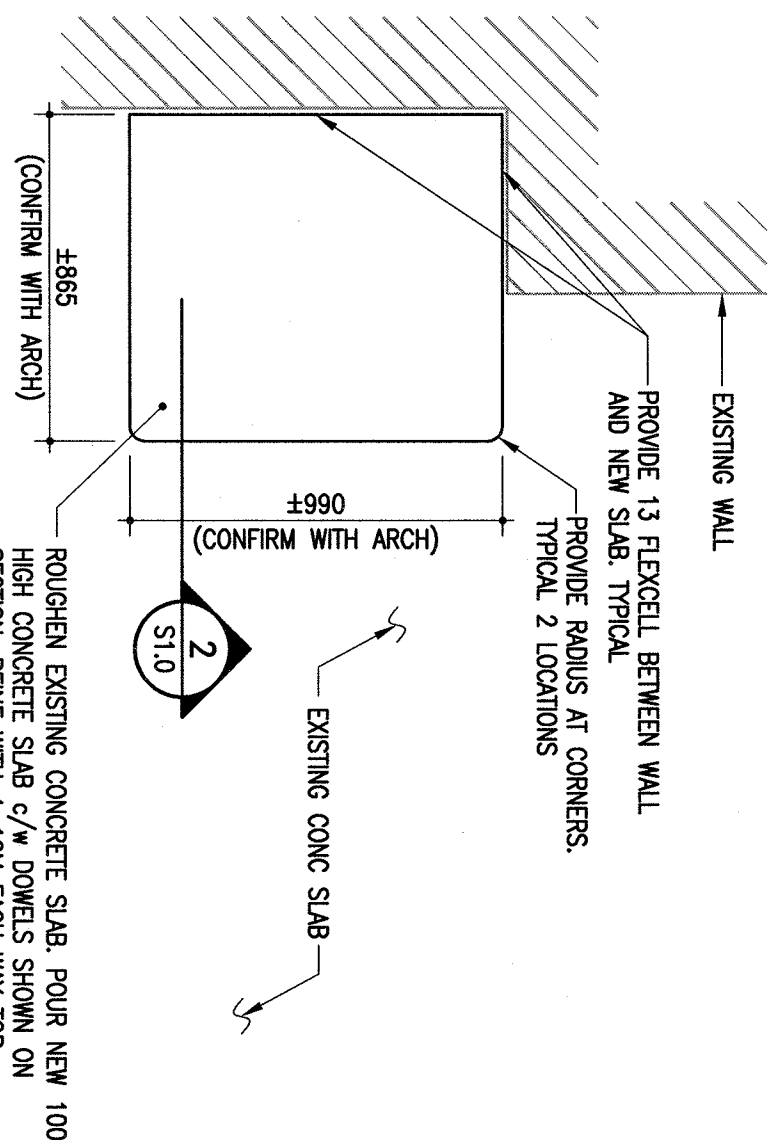
SCALE: 1 : 10

**NOTE:** SEE ARCH FOR LOCATION



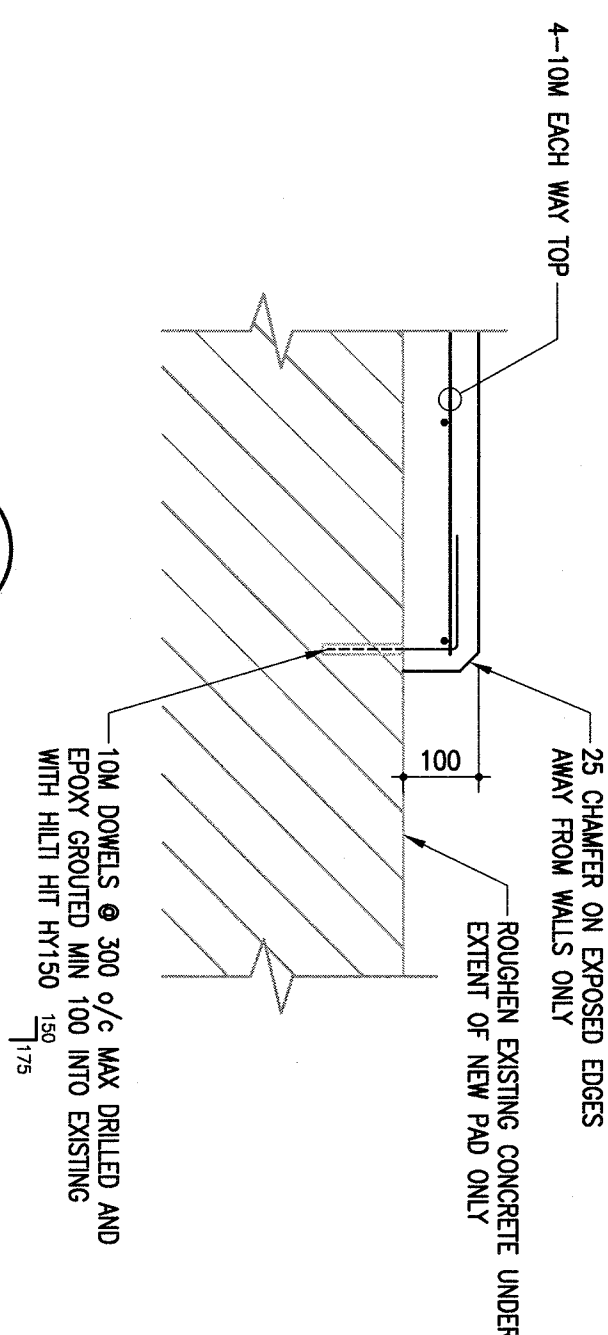
## TANK STORAGE PAD

SCALE: 1 : 20



## 2 SECTION

SCAL S1.0



## GENERAL NOTES

1. STRUCTURAL DESIGN BASED ON THE AMERICAN BUILDING CODE 2011 EDITION.
  - a) MATERIALS CATEGORY: NORMAL
  - b) DESIGN CATEGORY: 1
  - c) DESIGN WIND SPEED: 100 KPH
  - d) ASSIGNED PAIL LOAD: SP = 0.2 KPA
  - e) GROUND SNOW LOAD: SS = 1.5 KPA
2. ALL DIMENSIONS ARE TO BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS AND EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
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4. ALL DIMENSIONS ARE TO BE VERIFIED WITH THE ARCHITECTURAL DRAWINGS AND EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE SAFELY RESPONSIBLE FOR SAFETY ON AND AROUND THE JOBSITE DURING CONSTRUCTION.

### CAST-IN-PLACE CONCRETE

1. ALL CONCRETE IS TO BE UNARMED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF CAN/CSA-12.1-79.
  2. PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED FOR THE CONCRETE WILL YIELD A MINIMUM STRENGTH OF 28 DAYS.
  3. PROVIDE CERTIFICATION THAT MIX PROPORTIONS SELECTED FOR THE CONCRETE WILL COMPLY WITH REQUIREMENTS OF CAN/CSA-12.1-79.
  4. PROVIDE CERTIFICATION THAT PLANT, EQUIPMENT AND MATERIALS TO BE USED IN CONCRETE COMPLY WITH REQUIREMENTS OF CAN/CSA-12.1-79.
  5. PROVIDE CERTIFICATION LETTER TO BE SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA.
- CONCRETE STRENGTH IS 28 DAYS SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- EXTERIOR SLABS—ON-GRADE      32 MPa MIN AT 28 DAYS

EXTERIOR SLABS--ON--GRADE

CLASS OF EXPOSURE: C-2  
ENTRAINED AIR/CATEGORY: 1 (5% TO 8%)  
AGGREGATE MAX. 20 MM  
CURING TYPE: TYPE 2 - ADDITIONAL

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UNLESS INDICATED OTHERWISE THE CONTRACTOR SHALL SPECIFY CONCRETE SLUMP APPROPRIATE WITH PLACEMENT METHODS AND SITE CONDITIONS. THE CONTRACTOR SPECIFIED SLUMP MUST BE SHOWN ON THE CERTIFICATION LETTER AND CONCRETE DELIVERY TICKET.

3. UNLESS NOTED OTHERWISE, CONCRETE CONFORMING TO THE LATEST EDITION OF CAN/CSA-423.1-09 AS FOLLOWS:
  - A) TYPE 1 - BASIC: 3 DAYS  $\geq 10^{\circ}\text{C}$  AND FOR A TIME NECESSARY TO ATTAIN 40% OF THE SPECIFIED STRENGTH.
  - B) TYPE 2 - ADDITIONAL: 7 DAYS  $\geq 10^{\circ}\text{C}$  AND FOR A TIME NECESSARY TO ATTAIN 70% OF THE SPECIFIED STRENGTH.
  - C) TYPE 3 - EXTENDED: 7 DAYS WET CURING  $\geq 10^{\circ}\text{C}$ .

6. AN ENTRAINED ADVERTISEMENTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C260/260M-10, "STANDARD SPECIFICATION FOR AIR-ENTRAINING ADVERTISEMENTS FOR CONCRETE," SUPERPLASTIC ADVERTISEMENTS SHALL CONFORM TO ASTM C494/C494M, "STANDARD SPECIFICATION FOR CHEMICAL ADVERTISEMENTS FOR CONCRETE," OR ASTM C1017/C1017M, "STANDARD SPECIFICATION FOR CHEMICAL ADVERTISEMENTS FOR USE IN PRODUCING FLOWING CONCRETE," WHEN FLOWING CONCRETE IS APPLICABLE. AN ENTRAINED ADVERTISEMENTS TO HAVE A DURABILITY FACTOR GREATER THAN 75, WHEN TESTED TO ASTM STANDARDS C666/C666M, "STANDARD SPECIFICATION FOR AIR-ENTRAINING ADVERTISEMENTS," MUST BE 0.11% OR LESS WHEN TESTED IN ACCORDANCE WITH ASTM C457 "STANDARD TEST METHOD FOR MICROSCOPICAL DETERMINATION OF PARAMETERS OF THE AIR-VOID SYSTEM IN HARDENED CONCRETE."

## II REINFORCING STEEL

1. ALL REINFORCING STEEL TO BE CAN/CSA-630, 18M GRADE 40M DEFORMED BARS EXCEPT COLUMN TIES AND BEAM STIRRUPS WHICH SHALL BE GRADE 40M STEEL. ALL REINFORCING IS TO BE DETAIL IN ACCORDANCE WITH THE LATEST EDITION OF THE REINFORCING STEEL INSTITUTE OF CANADA - HANDBOOK OF STANDARD PRACTICES, EXCEPT OTHERWISE NOTED.
2. REINFORCING STEEL COVER IS TO CONFORM TO CAN/CSA-43.3-04 "DESIGN OF CONCRETE STRUCTURES FOR BUILDINGS" AND AS FOLLOWS:

EXTERIOR SLABS-ON-GRADE  
EXPOSURE CLASS: C-2

3. ALL REINFORCING TO BE HELD IN PLACE, AND TIED BY THE USE OF PROPER ACCESSORIES, SUCH AS HI-CHAINS, SPACERS, ETC. TO BE SUPPLIED BY THE REINFORCING STEEL FABRICATOR. HI-CHAINS TO HAVE 4 LEGS AND TO BE STAPLED OR NAILED TO THE FORMWORK.

## STRUCTURAL STEEL

1. STRUCTURAL STEEL CONFORM TO CSA-G40.21, STRUCTURAL QUALITY STEEL AND CSA-G40.20 GENERAL REQUIREMENTS FOR ALL BOLTS, CHANNELS AND PLATES SHALL BE CSA-T144.
2. FABRICATION AND DESIGN OF STRUCTURAL STEEL SHALL BE PERFORMED IN ACCORDANCE WITH CAN/CSA S16-09, STEEL DESIGN FOR BUILDINGS.
3. STRUCTURES FOR BUILDINGS TO BE IN THE LATEST EDITION OF CSA S16, WELDED STEEL CONSTRUCTION, FABRICATORS SHALL BE APPROVED IN ACCORDANCE WITH CSA W47.1, VERIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL STRUCTURES.
4. PROTECTED STRUCTURAL STEEL IS A DESIGN ONE OF CSA/G40.21-15A QUALITY DRIVING SHAPE PAPER SHALL BE CLAMPED IN PAPER, STEEL TO BE CLAMPED IN CONFORMANCE WITH SPEC-597.
5. FABRICATOR TO OBTAIN EVIDENCE OF ANY PROCESS IMPROVEMENTS AND CHANGED CONSTRUCTION DETAILS.