

- GENERAL NOTES**
- READ THE STRUCTURAL DRAWINGS IN CONJUNCTION WITH THE SPECIFICATIONS AND OTHER CONTRACT DRAWINGS AND DOCUMENTS.
 - ALL DIMENSIONS ON THE DRAWINGS ARE IN MILLIMETRES (mm), UNLESS NOTED OTHERWISE.
 - BEFORE PROCEEDING WITH THE WORK, CHECK ALL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS WITH ALL OTHER CONTRACT DRAWINGS INCLUDING THE PROCESS, PROCESS & INSTRUMENTATION, ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE CONSULTANT AND AWAIT INSTRUCTIONS PRIOR TO PROCEEDING WITH THE WORK.
 - REFER TO THE PROCESS, PROCESS & INSTRUMENTATION, MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF PIPES, OPENINGS, SLEEVES, PITS, EQUIPMENT BASES, SUMPS, TRENCHES, DEPRESSIONS, GROOVES, CURBS, CHAMBERS AND SLABS NOT SHOWN ON THE STRUCTURAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE CONSULTANT AND AWAIT INSTRUCTIONS PRIOR TO PROCEEDING WITH THE WORK.
 - CONTRACTOR TO CONFIRM WITH ALL EQUIPMENT SUPPLIERS, PIT LOCATIONS, SHAFT SIZES, OPENING SIZES, CURB SIZES, AND ALL OTHER CRITICAL DETAILS PRIOR TO CONSTRUCTION. REPORT TO THE CONSULTANT ANY DIFFERENCES BETWEEN DETAILS OR SUPPLIED EQUIPMENT COMPARED TO INFORMATION SPECIFIED AND OBTAIN APPROVAL PRIOR TO PROCEEDING.
 - THE STRUCTURAL DRAWINGS ARE FOR THE COMPLETED PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF WORKERS AND THE STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE LOADS TABULATED IN THE DESIGN NOTES.
 - MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST EDITION OF THE NATIONAL BUILDING CODE (NBC) AND THE SPECIFIED MATERIALS STANDARDS UNLESS OTHERWISE NOTED.

DESIGN NOTES

- CODES, STANDARDS & REFERENCES
 - NATIONAL BUILDING CODE OF CANADA (NBC) (LATEST EDITION).
 - CSA CAN3-A23.3 (LATEST EDITION).
 - CSA CAN3-S16.1 (LATEST EDITION).
 - CSA CAN3-S17 (LATEST EDITION).
 - CAN/CSA-086.1 (LATEST EDITION).
 - PCA 'RECTANGULAR CONCRETE TANKS' 5th EDITION
 - ACI 350 'ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES' (LATEST EDITION)
- DESIGN LOADS

THE FOLLOWING UNIFORM SERVICE LEVEL LOADS APPLY. ADDITIONAL LOADS HAVE BEEN CONSIDERED IN LOCATIONS WHERE HEAVY BUILDING COMPONENTS SUCH AS BRICK PANELS, BLOCK WALLS, EQUIPMENT, ETC., ARE SUSPENDED FROM OR SUPPORTED ON THE STRUCTURE.

UNIFORM DEAD LOAD (BASIC) (NOT INCLUDING STRUCTURE SELF WT)	1.0 kPa
STRUCTURE SELF WEIGHT	AS PER DRAWINGS
GROUND SNOW (LIVE) LOAD	S _s 2.7 kPa
ASSOCIATED RAIN (LIVE) LOAD	S _r 0.2 kPa
BASIC SNOW LOAD COEFFICIENT (SNOW LOAD DRIFT AND SLIDING COEFFICIENTS AS PER NATIONAL BUILDING CODE SUPPLEMENT (NBCS - LATEST EDITION))	0.8
ROOF WIND COEFFICIENT	0.75
MINIMUM ROOF SNOW & RAIN (LIVE) LOAD	1.82 kPa
q ₃₀ WIND (AS PER NBC COMMENTARY)	0.55 kPa

- 2.2 FLOOR

USE AND OCCUPANCY - LIVE LOADS

GENERAL (INCL. FLOOR GRATINGS)	4.8 kN/m ²
EQUIPMENT	6.0 kN/m ² OR EQUIPMENT WEIGHT
STRUCTURE SELF WEIGHT	AS PER DRAWINGS
WATER LOAD	DEPTH OF WATER x 9.8 kN/m ³

2.3 TANK WALLS - LATERAL LOADS

WATER PRESSURE	9.8 x h (h=WATER DEPTH)
FILTER SAND	16.8 x h (h=DEPTH OF SAND)
FILTER COAL	3.0 x h (h=DEPTH OF COAL)
BACKFILL PRESSURE	p = 20 x h

2.4 SEISMIC LOAD CONSIDERATIONS

Z _a	= 1
Z _v	= 0
v	= 0.05

FOUNDATION NOTES

- GENERAL

THE FOUNDATION HAS BEEN DESIGNED BASED ON KNOWLEDGE OF EXISTING SITE CONDITIONS. REFER TO PLANS.
- COMPACTION DENSITIES AND FILL MATERIALS (U.N.O.)

LOCATION	FILL MATERIAL	*STANDARD PROCTOR DENSITY
BENEATH STRUCTURAL SLAB-ON-GRADE	150 mm (MIN.) THICK CRUSHED OR PIT RUN GRAVEL.	100%
AGAINST FOUNDATION WALLS AND GRADE BEAMS	SAND, PIT RUN GRAVEL OR CRUSHED GRAVEL FULL DEPTH EXCEPT FOR UPPERMOST 300 mm OF FILL AGAINST WALLS AND BEAMS WHICH EXTEND TO SURFACE. THIS 300 mm LAYER OF MATERIAL SHALL CONSIST OF CLAY.	97%
WITHIN UTILITY TRENCHES LOCATED BENEATH ROADWAYS, SIDEWALKS OR OTHER CONCRETE SLABS	CRUSHED GRAVEL, PIT RUN GRAVEL OR SAND.	100%
WITHIN UTILITY TRENCHES LOCATED BENEATH LANDSCAPED AREAS	CLAY, NATIVE OR IMPORTED.	97%

* NOTE: LISTED STANDARD PROCTOR DENSITIES ARE REQUIRED FOR BOTH THE SUB-GRADE AND THE FILL MATERIAL TO BE PLACED OVER THE SUB-GRADE.

CAST-IN-PLACE CONCRETE NOTES

- CONCRETE SHALL CONFORM TO CSA CAN3-A23.1-(LATEST EDITION), UNLESS NOTED OTHERWISE.
- CONCRETE SHALL BE NORMAL WEIGHT AND MEET THE FOLLOWING REQUIREMENTS, UNLESS NOTED OTHERWISE:

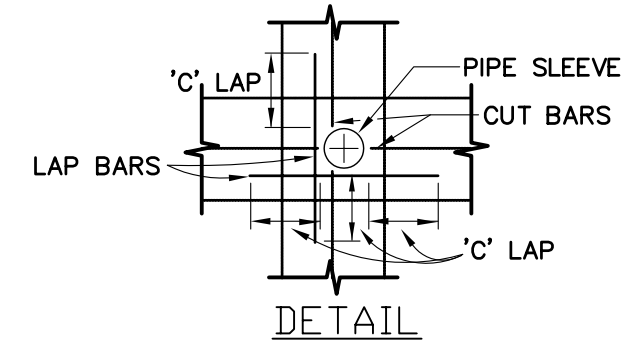
CONCRETE CLASS	MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS (MPa)	MAXIMUM WATER/CEMENTING MATERIALS RATIO	MINIMUM CEMENT CONTENT (kg)	NOMINAL SIZE OF COARSE AGG. (mm)	AIR CONTENT (%)	SLUMP ¹ (mm)
ALL LOCATIONS	30	0.43	280	20	5-7	70±20

¹ SLUMP PRIOR TO THE ADDITION OF ANY SUPERPLASTICIZER.

- TYPE 50 CEMENT SHALL BE USED FOR ALL CONCRETE.
- CALCIUM CHLORIDE IN ANY FORM IS NOT PERMITTED IN ANY CONCRETE.

REINFORCING STEEL NOTES

- ALL REINFORCING BARS SHALL CONFORM TO CSA G30.18-M92, GRADE 400. WELDING OF REINFORCING BARS TO CONFORM TO CSA STANDARD W186-(LATEST EDITION). WELDING OF REINFORCING BARS IN REINFORCED CONCRETE CONSTRUCTION, NOTIFY CONSULTANT IF WELDING OF REINFORCING IS REQUIRED AND RECEIVE APPROVAL PRIOR TO PROCEEDING.
- REINFORCING WORK SHALL BE IN ACCORDANCE WITH CAN/CSA3-A23.1- LATEST EDITION.
- REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI DETAILING MANUAL OR THE REINFORCING STEEL INSTITUTE OF CANADA DETAILING MANUAL.
- MECHANICAL COUPLERS ARE PERMITTED IF REQUIRED AND WHERE SPECIFIED. SUBMIT PROPOSED COUPLER TYPE TO CONSULTANT FOR REVIEW AND APPROVAL PRIOR TO USE. COUPLERS SHALL BE CAPABLE OF DEVELOPING 125% OF THE SPECIFIED YIELD CAPACITY OF THE BARS BEING COUPLED.
- 90° HOOKS AND 180° HOOKS WHERE SHOWN SHALL BE DETAILED AS STANDARD HOOKS UNLESS NOTED OTHERWISE.
- WHERE REINFORCEMENT LAPS ARE REQUIRED IN ADJACENT BARS, STAGGER LAPS MINIMUM 1200 UNLESS NOTED OTHERWISE.
- REINFORCEMENT THAT IS IN CONFLICT WITH PIPE SLEEVE LOCATIONS, OPENINGS, ETC. SHALL BE CUT AND SUPPLEMENTED WITH CLASS 'C' LAP BARS OF SAME SIZE ADJACENT TO THE CUT BAR AS INDICATED IN THE FOLLOWING DETAIL :



SITE CAST-IN-PLACE REINFORCED CONCRETE WORK

- REINFORCED CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF CAN/CSA-A23.1-LATEST EDITION, CAN/CSA-A23.2-LATEST EDITION, CAN/CSA-A23.3-LATEST EDITION. THE CONTRACTOR SHALL HAVE COPIES OF THESE STANDARDS ON SITE AT ALL TIMES FOR REFERENCE.
- CONCRETE COVER TO REINFORCING STEEL SHALL CONFORM TO THE MOST STRINGENT REQUIREMENT LISTED BELOW, UNLESS NOTED OTHERWISE:

CONCRETE CAST AGAINST EARTH OR ROCK	75 mm
CONCRETE CAST IN FORMS BUT EXPOSED TO EARTH, WEATHER, OR CONTAINED WATER	50 mm
CONCRETE NOT EXPOSED TO WEATHER OR NOT IN CONTACT WITH GROUND OR CONTAINED WATER	
WALLS	40 mm
SLABS	40 mm
BEAMS - TO STIRRUPS	40 mm
COLUMNS - TO TIES	40 mm
- UNLESS NOTED OTHERWISE, REINFORCING BAR LAPS SHALL BE CLASS C TENSION SPLICES.
- DOWELS AND ANCHOR BOLTS SHALL BE SECURED IN POSITION BY MEANS OF TEMPPLATES BEFORE CONCRETE IS PLACED.
- REINFORCING STEEL IN SLABS AND BEAMS SHALL BE ADEQUATELY SUPPORTED TO ENSURE THAT IT REMAINS IN POSITION DURING CONCRETE PLACEMENT. REINFORCING STEEL SHALL NOT BE LIFTED INTO POSITION DURING CASTING.
- CONTRACTOR SHALL SUBMIT TO THE CONSULTANT FOR APPROVAL WELL IN ADVANCE OF CONCRETE PLACEMENT DATE, THE LOCATIONS AND DETAILS OF ALL CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS.
- CONTRACTOR SHALL SUBMIT TO THE CONSULTANT FOR APPROVAL WELL IN ADVANCE OF CONCRETE PLACEMENT DATE, THE LOCATIONS OF ALL SLEEVES AND OPENINGS NOT SHOWN ON THE DRAWINGS. REVIEW ALL DRAWINGS FOR DETAILS OF FIXTURES, INSERTS, ETC., WHICH ARE REQUIRED TO BE CAST INTO CONCRETE ELEMENTS. THE CONSULTANT WILL PROVIDE STRUCTURAL DETAILS AS REQUIRED FOR SLEEVES AND OPENINGS.
- PROVIDE RECESSES IN THE TOP OF FOUNDATION WALLS AND GRADE BEAMS AT ALL DOOR OPENINGS, TO ALLOW SLAB-ON-GRADE TO CONTINUE OVER.
- REVIEW ALL DRAWINGS FOR FLOOR RECESS AND SLOPE REQUIREMENTS FOR CONCRETE SLABS AND COORDINATE AND PERFORM THIS WORK.
- TOOLED OR SAW CUT CONTROL JOINTS IN SLAB-ON-GRADE CONSTRUCTION TO BE AS PER CSA CAN3-A23.1. LOCATIONS AS PER DRAWINGS EXCEPT THAT WHEN LOCATIONS ARE NOT INDICATED, JOINTS SHALL BE SPACED AT 4500 mm ON CENTRE MAXIMUM. OBTAIN CONSULTANT'S APPROVAL OF LOCATIONS PRIOR TO PROCEEDING. FILL ALL JOINTS WITH DUOFLEX 2 SEALANT BY STERNSON.
- UNLESS INDICATED OTHERWISE, ALL SLABS-ON-GRADE SHALL BE 125 mm THICK PLACED ON AN APPROVED COMPACTED PIT RUN GRANULAR MATERIAL 150 mm MINIMUM THICKNESS. COMPACTION OF GRANULAR MATERIAL TO EQUAL 100% STANDARD PROCTOR DENSITY EXCEPT WHERE INDICATED OTHERWISE. REINFORCE WITH 10M AT 300 O.C. EACH WAY, CHAIR REINFORCEMENT TO ENSURE IT IS LOCATED IN TOP ONE THIRD THICKNESS OF SLAB.
- REFER TO SITE DRAWINGS FOR EXACT SIZE, EXTENT, AND LOCATIONS OF EXTERIOR WALKS AND PADS.
- PROVIDE 20 CHAMFER AT CORNERS/EDGES OF ALL WALLS, SLABS & BEAMS UNLESS NOTED OTHERWISE.
- SPECIFIED DRILLED & EPOXIED DOWEL LOCATIONS/SPACING MAY BE SLIGHTLY MODIFIED IN ORDER TO AVOID HITTING OR DAMAGING EXISTING REINFORCEMENT. CONTRACTOR TO USE REBAR LOCATING DEVICE TO AVOID CONFLICTS. REVIEW ALL CONFLICTS WITH ENGINEER AND RELOCATE CONFLICTING DOWELS TO AN APPROVED POSITION.
- DOWEL EPOXY: HILTI HIT HY150 INJECTION ADHESIVE OR CONSULTANT APPROVED ALTERNATE.

STRUCTURAL STEEL NOTES

- ALL STRUCTURAL STEEL SHALL BE FABRICATED AND ERRECTED IN ACCORDANCE WITH CSA CAN3-S16.1-(LATEST EDITION) AND THE CISG CODE OF STANDARD PRACTICE FOR BUILDINGS (LATEST EDITION) UNLESS NOTED OTHERWISE.
- MATERIAL REQUIREMENTS
 - STRUCTURAL SHAPES AND PLATE (EXCLUDING HSS): IN ACCORDANCE WITH CAN/CSA G40.20-(LATEST EDITION) AND CAN/CSA G40.21-(LATEST EDITION), GRADE 300W.
 - HSS SECTIONS: IN ACCORDANCE WITH CAN/CSA G40.20-(LATEST EDITION) AND CAN/CSA G40.21-(LATEST EDITION), 350W.
 - ROUND PIPE SECTIONS: IN ACCORDANCE WITH ASTM STANDARD A53, MIN. YIELD STR. 240 MPa.
 - ANCHOR BOLTS: THREADED ROD: GRADE 300W.
 - ALL OTHER BOLTS: IN ACCORDANCE WITH ASTM A325 OR A325M.
 - SHEAR STUD CONNECTORS: TO CSA W59-(LATEST EDITION).
 - HOT DIP GALVANIZING: TO CSA G164-(LATEST EDITION).
 - SHOP PAINT PROTECTIVE COATINGS - ALL EXTERIOR STRUCTURAL STEEL TO BE GALVANIZED U.N.O. - REFER TO SPECIFICATIONS.
 - SHOP EPOXY PRIMER (FIRST COAT) AND FIELD TOUCH-UP PRIMER: IN ACCORDANCE WITH CGSB 1-6P-153.
- ALL WELDING SHALL BE DONE WITH E480xx ELECTRODES AND SHALL CONFORM TO CSA W59-(LATEST EDITION). ALL WELDING TO BE PERFORMED BY CERTIFIED COMPANY APPROVED BY CANADIAN WELDING BUREAU UNDER REQUIREMENTS OF CSA W47.1-(LATEST EDITION).
- ALL GROUT UNDER BEARING PLATES AND BASEPLATES SHALL BE NON-METALLIC, NON-SHRINK TYPE WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 40 MPa, INSTALLED IN ACCORDANCE WITH SPECIFICATIONS AND MANUFACTURER'S RECOMMENDATIONS.
- CONNECTIONS, IF NOT SPECIFICALLY DETAILED, SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH CSA CAN3-S16.1-(LATEST EDITION) TO RESIST FORCES, MOMENTS AND SHEARS INDICATED ON DRAWINGS; ALTERNATIVELY WHERE THIS INFORMATION IS NOT GIVEN DESIGN CONNECTIONS TO RESIST THE SPECIFIED DEAD LOAD OF ALL MATERIALS AND THE SPECIFIED LIVE LOADS. ALL CONNECTION DESIGN AND DETAILING TO BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE PROVINCE OF ALBERTA.
- CONNECTIONS TO SIDE FACES OF HSS MEMBERS SHALL BE REINFORCED AS REQUIRED AND SHALL BE DESIGNED FOLLOWING GUIDELINES SET OUT IN THE STELCO PUBLICATION "HOLLOW STRUCTURAL SECTIONS - DESIGN MANUAL FOR CONNECTIONS" OR FOLLOWING OTHER SOUND ENGINEERING PRINCIPLES.
- PROVIDE BOLT HOLES IN STRUCTURAL STEEL WHERE SHOWN AND WHERE REQUIRED FOR THE ATTACHMENT OF BOLTED BLOCKING OR FASTENINGS BY OTHER TRADES.
- PROVIDE STIFFENER/BEARING PLATES ON BOTH SIDES OF W-SHAPE AND ON ONE SIDE OF C-SHAPE BEAMS AT ALL LOCATIONS WHERE CONCENTRATED LOADS OCCUR AND AT BEARING SUPPORTS. UNLESS INDICATED OTHERWISE, EACH STIFFENER SHALL EQUAL HALF THE BEAM WIDTH, BE FULL HEIGHT BETWEEN FLANGES, AND HAVE A MINIMUM THICKNESS OF 8 mm BUT SHALL NOT BE THINNER THAN THE WEB OF THE BEAM.
- PROVIDE CLOSURE PLATES AT ALL OPEN ENDS OF ALL HSS MEMBERS. PLATE THICKNESS TO EQUAL WALL THICKNESS OF HSS MEMBER UNLESS NOTED OTHERWISE.
- FRAME ALL OPENINGS IN ROOF AND FLOOR SYSTEMS, ROUND AND RECTANGULAR, THAT ARE LARGER IN AREA THAN A 400 mm DIAMETER HOLE. COORDINATE WITH MECHANICAL DRAWINGS, ARCHITECTURAL DRAWINGS AND OTHER CONTRACT DOCUMENTS AND PROVIDE FRAMES IN ALL SUCH LOCATIONS. IF FRAMES ARE NOT SPECIFICALLY DETAILED, DESIGN FRAMES TO SUPPORT SPECIFIED LOADS INCLUDING EQUIPMENT WHERE APPLICABLE.
- SHOP DRAWINGS SHALL BE SUBMITTED FOR CONSULTANT REVIEW PRIOR TO ANY FABRICATION.
- THE STRUCTURAL STEEL FRAMING IS BRACED FOR PERMANENT LATERAL STABILITY. ROOF DECKS ARE DESIGNED TO ACT AS HORIZONTAL DIAPHRAGMS TO CARRY LATERAL LOADS TO STRUCTURAL BRACING SYSTEMS. PROVIDE TEMPORARY BRACING AS REQUIRED DURING CONSTRUCTION. ERECTION BRACING TO BE REMOVED ONLY AFTER ROOF DECK, FLOOR DECK AND ALL PERMANENT STRUCTURAL FRAMING IS IN PLACE.
- ALL PERIMETER DECK ANGLES ARE REQUIRED TO BE CONTINUOUS TO FUNCTION AS PART OF THE DIAPHRAGM. ANGLE CONTINUITY SHALL BE MAINTAINED BY APPROVED SPLICES. SPLICES TO BE LOCATED AT SUPPORT POINTS ONLY.
- CLEAN ALL STEEL PRIOR TO PAINTING TO SSPC SURFACE PREPARATION SPECIFICATION NO. 7 "BRUSH-OFF BLAST CLEANING" EXCEPT STRUCTURAL STEEL MEMBERS WHICH ARE EXPOSED IN THE COMPLETED STRUCTURE IN WHICH CASE CLEANING SHALL CONFORM TO SSPC SURFACE PREPARATION SPECIFICATION NO. 6 "COMMERCIAL BLAST CLEANING".
- FIELD WELDING AND FIELD MODIFICATION OF STRUCTURAL STEEL SHALL NOT BE ALLOWED WITHOUT PRIOR REVIEW AND APPROVAL BY CONSULTANT.
- AT THE COMPLETION OF ERECTION, ALL FIELD JOINTS, BOLTS, WELDS, BURNED AND ABRASSED SURFACES SHALL BE THOROUGHLY CLEANED AND PAINTED WITH SPECIFIED PRIME AND FINISH COATS. IN THE CASE OF GALVANIZED SURFACES, APPLY MULTIPLE COATS OF ORGANIC ZINC RICH PAINT (DOD-P-21035) TO FORM A DRY FILM THICKNESS OF .8 MILS (IN ACCORDANCE WITH ASTM-A780).
- APPLY TWO COATS OF AN APPROVED ASPHALTIC BASED PAINT TO ALL STEEL EXPOSED TO SOIL.

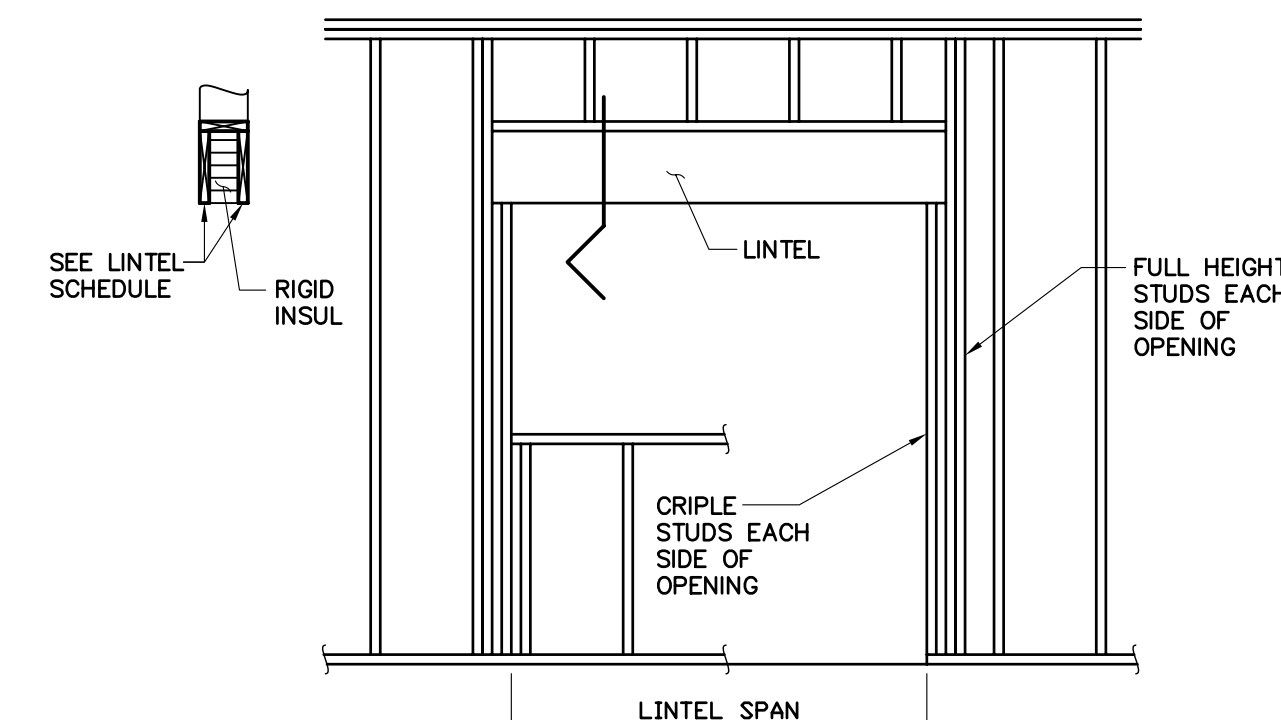
TIMBER NOTES

- GENERAL
 - TIMBER CONSTRUCTION SHALL CONFORM TO CAN/CSA 086.1 (LATEST) UNLESS NOTED OTHERWISE
 - WOOD FRAMING MATERIAL (UNLESS SPECIFIED OTHERWISE) :
 - LINTELS, BUILT-UP BEAMS : S-P-F NO. 1/NO. 2
 - WALL STUDS : KILN DRIED S-P-F NO. 1/NO. 2 (S-DRY)
 - JOISTS : PREFABRICATED WOOD I-JOISTS TO DEPTHS AND/OR CAPACITIES SHOWN ON PLANS. REFER ALSO TO SPECIFICATIONS.
 - STRUCTURAL COMPOSITE LUMBER BEAMS & COLUMNS: PROPRIETARY MANUFACTURED MEMBERS TO SIZES AS NOTED ON DRAWINGS.
 - PLYWOOD : CAN/CSA 0121 DOUGLAS FIR PLYWOOD
CAN/CSA 0151 CANADIAN SOFTWOOD PLYWOOD
CAN/CSA 0325.0 CONSTRUCTION SHEATHING
CAN/CSA 0437.0 WAFFERBOARD & STRANDBOARD
 - EXTERIOR SHEATHING TO BE PLYWOOD NOT O.S.B.
 - ALL LUMBER IN DIRECT CONTACT WITH MASONRY, CONCRETE, SOIL OR MOISTURE SHALL BE TREATED. REFER TO SPECIFICATIONS.
 - PLYWOOD FOR WALLS AND ROOF TO BE AS NOTED ON DRAWINGS. PLYWOOD FASTENING REQUIREMENTS (U.N.O.)
 - WALL & ROOF SHEATHING:
 - PANEL EDGES 150mm o.c. (U.N.O.)
 - INTERMEDIATE FRAMING MEMBERS 300mm o.c.
 - USE 65mm NAILS U.N.O.
 - ALL TIMBER BEAM CONNECTIONS MAY BE STANDARD EXPOSED CONNECTIONS WITH SIDE PLATES OR SHOES AND NO COUNTER SUNK BOLTS
 - PROVIDE TJI PURPOSE MADE X-BRACING ○ SUPPORT LINES BETWEEN ALL JOISTS AND ADDITIONALLY AT MANUFACTURER'S RECOMMENDED SPACING ALONG SPAN LENGTH
 - PROVIDE LINTELS OVER ALL OPENINGS OR RECESSES IN TIMBER WALLS, INCLUDING THOSE FOR MECHANICAL OR ELECTRICAL SERVICES AND EQUIPMENT.

PROVIDE LINTELS AS FOLLOWS, UNLESS NOTED OTHERWISE:

LINTEL* (mm)	SPAN (mm)	CRIPPLE STUDS EACH SIDE	FULL HEIGHT STUDS EACH SIDE
2 @ 38x184	0 - 1200	1	1
2 @ 38x286	1201 - 1800	1	2
3 @ 38x286	1801 - 2400	2	2
4 @ 38x286	2401 - 3000	2	3

* FILL LINTEL THICKNESS WITH RIGID INSULATION TO MAKE UP TOTAL THICKNESS OF WALL



FILTER TANK FLOOR POST-TENSIONING NOTES

- PROCEDURE:
 - ALL NEW CONCRETE WALL CONSTRUCTION AND FLOOR TOPPING CONCRETE SHALL BE COMPLETE AND CURED TO AT LEAST 80% f_c PRIOR TO PROCEEDING WITH THREADBAR STRESSING.
 - EACH 25mm DIAMETER THREADBAR SHALL BE STRESSED WITH A HYDRAULIC JACK TO PROVIDE A 250kN FORCE AFTER ALL SEATING LOSSES.

DO NOT OVERSTRESS ANCHORS
 - STRESSING SHALL OCCUR IN THE SEQUENCE INDICATED ON THE PLAN, OR WHERE NOT INDICATED IN AN ENGINEER PRE-APPROVED SEQUENCE.
 - A CERTIFIED CALIBRATION CURVE SHALL ACCOMPANY EACH HYDRAULIC JACK USED, SHOWING THE RELATIONSHIP BETWEEN GAUGE READINGS AND STRESS IN THE BAR. LOSSES IN STRESS DUE TO ANCHOR SET, STEEL RELAXATION, PLASTIC FLOW, ETC. SHALL BE CONSIDERED. SUBMIT ALL TO ENGINEER IN ADVANCE OF STRESSING OPERATIONS.
 - STRESS IN THE THREADBARS SHALL BE MEASURED BY MEANS OF BAR EXTENSION AND SHALL BE CHECKED CONTINUOUSLY BY MEANS OF THE JACK GAUGE. WHEN DISCREPANCIES BETWEEN EXTENSION AND GAUGE PRESSURE EXCEEDS 8% STRESSING SHALL STOP AND NOT PROCEED AGAIN UNTIL THE SITUATION IS RECTIFIED.
 - RECORDS SHALL BE MAINTAINED FOR ALL STRESSING OPERATIONS INCLUDING GAUGE PRESSURE, ELONGATION AND OTHER PERTINENT INFORMATION FOR EVERY STRESSING LOCATION. SUBMIT ONE COPY TO THE ENGINEER UPON PROJECT COMPLETION.
 - UNLESS OTHERWISE INDICATED POST TENSIONING PROCEDURES SHALL CONFORM TO CSA A23.1-00, AND TO GOOD PRACTICE FOR POST-TENSIONING OPERATIONS. IT SHALL BE EXECUTED BY QUALIFIED EXPERIENCED OPERATORS AND IN CONFORMANCE WITH ANY REQUIREMENTS OF THE SUPPLIER/MANUFACTURER.
- MATERIALS:
 - P-T THREADBAR - TO BE DYWDAG THREADBAR OR ENGINEER APPROVED EQUAL TO CSA G279-M82 F_{pu} = 1030 MPa. TO BE HOT DIPPED GALVANIZED AFTER FABRICATION.
 - P-T ANCHOR PLATES, NUTS, COUPLERS - AS MANUFACTURED BY DYWDAG OR ENGINEER APPROVED MANUFACTURER FOR SPECIFIED USE WITH THE SPECIFIED THREADBAR. TO BE HOT DIPPED GALVANIZED AFTER FABRICATION, UNLESS NOTED OTHERWISE

ET:55524/Cadd File: 55524-S01.dwg/Last Edit: 2003-04-22 (17:00)/Plot Scale: 1:1 (A1)

NO.	REVISION	DATE	INITIAL
2	RECORD DRAWING	23/04/04	
1	ISSUED FOR CONSTRUCTION	22/04/03	
0	ISSUED FOR TENDER	19/02/03	
A	ISSUED FOR FINAL REVIEW	03/02/03	

Company Permit _____ Engineer Seal _____

RECORD DRAWING
INFORMATION CONTAINED IN THESE DRAWINGS IS AS SUPPLIED BY:
NINETY NORTH CONSTRUCTION & DEVELOPMENT LTD.
THE COMPLETENESS AND ACCURACY OF THIS RECORD DRAWING IS NOT GUARANTEED. INFORMATION SHOULD BE VERIFIED AT THE ACTUAL LOCATION BEFORE USE.

STRUCTURAL

GENERAL AND DESIGN NOTES

lqaluit
CITY of IQALUIT,
Nunavut

CITY OF IQALUIT

IQALUIT WATER TREATMENT PLANT

EARTH TECH

Earth Tech (Canada) Inc.

DRAWN BY: BL
CHECKED BY: GJK
SCALE: AS NOTED
DATE: FEB. 19, 2003
SHEET NO. _____

CADD SYSTEM AutoCAD
DWG NO. S-1
REV. 1
CONTRACT 55524