

GENERAL NOTES

1. GENERAL

1. READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH SEPARATELY BOUND SPECIFICATIONS, TYPICAL DETAILS AND ALL OTHER CONTRACT DOCUMENTS. DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY DOCUMENTS.
2. WHERE DOCUMENTS ARE REFERENCED IN THE GENERAL AND DESIGN NOTES, THEY SHALL BE THE LATEST EDITIONS, UNLESS OTHERWISE NOTED OR SHOWN.
3. BEFORE PROCEEDING WITH WORK, CHECK ALL THE DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS AGAINST ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND EXISTING SITE CONDITIONS. REPORT INCONSISTENCIES TO DEPARTMENTAL REPRESENTATIVE BEFORE PROCEEDING WITH THE WORK.
4. CHECK AND VERIFY IN THE FIELD ALL SIZES AND DIMENSIONS INVOLVING THE EXISTING STRUCTURE AND COORDINATE WITH NEW CONSTRUCTION.
5. DO NOT EXCEED DURING CONSTRUCTION, DESIGN LIVE LOADS SHOWN ON PLANS, REDUCE LOAD AS NECESSARY UNTIL MATERIALS REACH DESIGN STRENGTH.
6. DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE. ELEVATIONS ARE IN METERS UNLESS NOTED OTHERWISE.
7. SCALES NOTED ON DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DO NOT SCALE DRAWINGS.
8. TYPICAL STRUCTURAL DETAILS SHOWN IN DRAWING SERIES S2 SHALL GOVERN THE WORK. IF DETAILS DIFFER ON OTHER DRAWINGS, THE MOST STRINGENT GOVERNS.
9. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
 - a) SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED. WHERE NOMINAL DIMENSIONS ARE SHOWN, MAKE NECESSARY PROVISIONS FOR ROUGH OPENINGS TO ALLOW PROPER INSTALLATION OF ALL BUILDING SYSTEMS.
 - b) SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-LOAD BEARING PARTITIONS. MAKE NECESSARY PROVISIONS TO ALLOW FOR DEFLECTION OF THE STRUCTURE WITHOUT LOADING ANY NON-LOAD BEARING PARTITIONS.
 - c) SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS SLOPES, INSERTS, ETC. EXCEPT AS SHOWN.
 - d) TRENCHES, PITS, AND SUMPS.
 - e) ROOF, WALL AND FLOOR FINISHES.
 - f) WATERPROOFING AND DAMP PROOFING.
 - g) ELEVATIONS AND DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS. NOTE THAT STRUCTURAL DRAWINGS DO NOT INTEND TO DUPLICATE DIMENSIONS SHOWN ON OTHER CONTRACT DOCUMENTS.
10. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:
 - a) PIPE AND DUCT RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS ETC. EXCEPT AS SHOWN OR NOTED.
 - b) ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
 - c) CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
 - d) SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS, EXCEPT AS SHOWN OR NOTED.
11. ALL ARCHITECTURAL, ELECTRICAL OR MECHANICAL LOADS IMPOSED ON THE STRUCTURE THAT EXCEED 50 kg SHALL BE SUBMITTED FOR REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION, UNLESS SPECIFICALLY DETAILED OR NOTED ON THE STRUCTURAL DRAWINGS.
12. DRAWINGS AND DETAILS ARE INTENDED TO SHOW THE END RESULT OF DESIGN. MODIFICATIONS TO THE DESIGN NECESSARY TO SUIT MEANS AND METHODS OF CONSTRUCTION, SITE DIMENSIONS OR CONDITIONS SHALL BE SUBMITTED TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW BEFORE PROCEEDING.
13. IN THE CASE OF DISCREPANCIES BETWEEN THE GENERAL NOTES, SPECIFICATIONS, PLANS/DETAILS OR REFERENCE STANDARDS THE DEPARTMENTAL REPRESENTATIVE SHALL DETERMINE WHICH SHALL GOVERN.
14. MISCELLANEOUS METAL, PRECAST AND STAIR FABRICATORS SHALL:
 - a) PROVIDE SHOP DRAWINGS TO THE DEPARTMENTAL REPRESENTATIVE PRIOR TO FABRICATION, STAMPED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER.
 - b) DESIGN ALL GUARDS TO MEET LATERAL LOADS DESCRIBED IN ABC 4.1.5.14.
 - c) DESIGN ALL HANDRAILS TO MEET LOADS DESCRIBED IN ABC 4.1.5.14.
 - d) DESIGN ALL STAIRS TO SUPPORT A MINIMUM LIVE LOAD OF 4.8 kPa UNLESS NOTED OTHERWISE ON DRAWINGS.

2. CONSTRUCTION

1. THE CONTRACTOR SHALL PROPOSE A FULL METHODOLOGY FOR EXECUTING THE WORK DETAILED IN THE CONTRACT DOCUMENTS.
 2. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, NO PROVISIONS HAVE BEEN MADE IN THE DESIGN FOR CONDITIONS OCCURRING DURING CONSTRUCTION.
 - a) THE CONTRACTOR SHALL DEMONSTRATE THE STABILITY AND SAFETY OF ALL ELEMENTS OF THE BUILDING DURING EVERY STAGE OF CONSTRUCTION.
 - b) THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING AND SHORING REQUIRED FOR ALL STRESSES AND INSTABILITY OCCURRING DURING CONSTRUCTION. THE CONTRACTOR SHALL ACCEPT FULL RESPONSIBILITY FOR ALL SUCH MEASURES.
 - c) THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACING, SHORING, SHEET PILING OR OTHER TEMPORARY SUPPORTS TO SAFEGUARD ALL EXISTING OR ADJACENCY AFFECTED BY THIS WORK.
 3. THE CONTRACTOR SHALL LIAISE WITH DEPARTMENTAL REPRESENTATIVE AND ASSOCIATED UTILITIES AUTHORITIES REGARDING THE REMOVAL AND DISCONNECTION OF EXISTING UTILITIES IN THE BUILDING. NO UTILITIES SHALL BE REMOVED OR DISCONNECTED WITHOUT THE APPROVAL OF DEPARTMENTAL REPRESENTATIVE AND ASSOCIATED UTILITIES AUTHORITIES.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK. THE DEPARTMENTAL REPRESENTATIVE HAS NO OVERALL SUPERVISION AUTHORITY AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SIDE AND/OR FOR ANY HAZARDS RESULTING FROM ACTIONS OF ANY TRADE CONTRACTOR. THE DEPARTMENTAL REPRESENTATIVE HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE DEPARTMENTAL REPRESENTATIVE, CONTRACTORS, OR OTHER ENTITIES OR PERSONS ON THE PROJECT SITE.
 5. THE CONTRACTOR SHALL DETERMINE THE LOCATIONS OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO EARTHWORK, FOUNDATIONS SHORING AND EXCAVATION. ANY UTILITY INFORMATION SHOWN ON THE DRAWINGS AND DETAILS IS APPROXIMATE AND NOT NECESSARILY COMPLETE.
 6. THE PROPOSED SCHEDULE OF WORK IS TO BE COORDINATED WITH ALL SUB-TRADES.
 7. INSPECT THE EXISTING CONSTRUCTION AND BECOME THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS. DETAILS SHOWN ARE BASED ON INFORMATION AVAILABLE FROM EARLIER CONSTRUCTION PHASES.
- ### 3. SHOP DRAWINGS
1. FOR ALL STRUCTURAL COMPONENTS SHOWN ON THE STRUCTURAL DRAWINGS, SUBMIT COPIES OF SHOP DRAWINGS AS DIRECTED TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW.
 2. SHOP DRAWINGS SHALL SHOW COMPLETE INFORMATION FOR THE FABRICATION AND ERECTION OF THE STRUCTURAL COMPONENTS.
 3. CONCRETE REINFORCEMENT SHOP DRAWINGS SHALL CLEARLY SHOW BAR LENGTHS, BENDS, LOCATION OF BARS, METHOD OF SUPPORT, DETAILS OF PLACEMENT, COORDINATION WITH FORMWORK, EMBEDMENT, AND CONCRETE VIBRATION. PROVIDE AT MINIMUM, WALL AND COLUMN ELEVATIONS, WALL AND BEAM SECTIONS, MATERIAL SCHEDULES, BAR LAP SCHEDULES AND LOCATIONS.
 4. WOOD FRAME SHOP DRAWINGS (INCLUDING BUT NOT LIMITED TO FLOOR FRAMING AND CONNECTIONS, ROOF FRAMING AND CONNECTIONS TO STRUCTURE BELOW, STAIRS) SHALL BE ACCOMPANIED BY DETAILED CALCULATIONS AND SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE PROVINCE OF ALBERTA.
 5. REVIEW OF SHOP DRAWINGS BY THE CONSULTANT IS ON A SAMPLING BASIS AND SOLELY TO ASSESS THAT THE SUBMITTED SHOP DRAWINGS REFLECT THE INTENT OF THE STRUCTURAL DESIGN. INTENDED OR PROPOSED DEVIATIONS FROM THE DESIGN INTENT MUST NOT BE SUBMITTED ON SHOP DRAWINGS.

6. REVIEW BY THE DEPARTMENTAL REPRESENTATIVE SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR ENSURING THAT THE WORK IS COMPLETE, ACCURATE AND IN CONFORMITY WITH ALL CONTRACT DRAWINGS, AND SPECIFICATIONS.
7. SHOP DRAWINGS FOR STRUCTURAL COMPONENTS DESIGNED BY THE FABRICATOR/CONTRACTOR'S ENGINEER MUST BE SEALED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE PROVINCE OF ALBERTA.

4. SOILS, BACKFILLING, AND COMPACTION

1. THE CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEER LICENSED TO PRACTICE IN THE PROVINCE OF ALBERTA.
2. THE GEOTECHNICAL ENGINEER RETAINED BY THE CONTRACTOR SHALL INSPECT THE CONDITION AND ASSURE THE ADEQUACY OF ALL SUB-GRADES, FILLS, AND BACKFILLS BEFORE PLACEMENT OF PILES, FOUNDATIONS, FOOTINGS, SLABS AND WALLS. AT THE COMPLETION OF THE PROJECT, THE GEOTECHNICAL ENGINEER SHALL ISSUE AN AUTHENTICATED LETTER OF ASSURANCE STATING THAT ALL FOOTINGS/PILES HAVE BEEN INSTALLED AND MEET THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
3. BACKFILL MATERIAL SHALL CONSIST OF CLEAN, WELL GRADED GRANULAR SOILS FREE OF ORGANIC MATERIAL, SILT AND CLAY AS SPECIFIED IN THE EARTH WORKS SPECIFICATION SECTION.
4. BACKFILLING SHALL BE CARRIED OUT IN MAXIMUM LIFTS OF 200mm OF LOOSE FILL, EACH COMPACTED THE STANDARD PROCTOR MAXIMUM DRY DENSITY INDICATED IN THE SPECIFICATIONS.
5. DO NOT PLACE BACKFILL AGAINST WALLS RETAINING EARTH (OTHER THAN CANTILEVER WALLS) UNTIL THE WALLS AND THE FLOOR CONSTRUCTIONS AT TOP AND BOTTOM OF THE WALLS HAVE BEEN CAST AND ATTAINED THEIR DESIGN STRENGTH.
6. WHERE BACKFILL IS PLACED ON EACH SIDE OF FOUNDATION WALLS, DO NOT EXCEED A GRADE DIFFERENCE OF 600 mm.
7. WHERE THE SLAB ON GRADE IS USED TO TIE THE TOP OF A WALL RETAINING EARTH, THAT WALL SHALL BE ADEQUATELY SHORED UNTIL THE SLAB HAS BEEN CAST AND ATTAINED ITS DESIGN STRENGTH.
8. USE LIGHT, HAND-OPERATED COMPACTING EQUIPMENT TO COMPACT BACKFILL ADJACENT TO FOUNDATION WALLS OR RETAINING WALLS.
9. EXCAVATED MATERIAL SHALL BE LEGALLY DISPOSED OF, STORED AT THE SITE, OR USED FOR BACKFILLING OPERATIONS AS REQUIRED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS AND PROJECT SPECIFICATIONS.
10. GROUNDWATER LEVEL IS ASSUMED TO BE AT MINIMUM 5.0m BELOW GRADE FOR PURPOSES OF DESIGN AND CONSTRUCTION. WATER PUMPING WOULD BE REQUIRED DURING CONSTRUCTION. REFER TO THE GEOTECHNICAL INVESTIGATION REPORT FOR SPECIFIC RECOMMENDATIONS.
11. BEDROCK IS ASSUMED TO BE AT MINIMUM 3.0m BELOW GRADE; NO EXCAVATION IS EXPECTED IN THE SHALE BEDROCK.
12. IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY THE GEOTECHNICAL INFORMATION AND TO OBTAIN HIS OWN DATA AND TO POINT DISCREPANCIES TO THE DEPARTMENTAL REPRESENTATIVE WHERE THEY OCCUR.

5. FOUNDATIONS

1. REFER TO ALL NOTES UNDER FOUNDATION PLANS.
2. FOUND ALL FOOTINGS IN NATURALLY CONSOLIDATED UNDISTURBED SOIL OR ENGINEERED FILL CAPABLE OF SAFELY SUSTAINING A FACTORED ULTIMATE LIMITS STATE BEARING RESISTANCE OF 100 kPa. IF THESE CONDITIONS DO NOT PREVAIL AT THE ELEVATIONS SHOWN, EXCAVATE DOWN TO THE UNDISTURBED SOIL AND REPLACE WITH ENGINEERED FILL (REFER TO TYPICAL DETAILS) OR AS OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER.
3. ENGINEERED FILL SHOULD CONSIST OF WELL-GRADED SAND AND GRAVEL WITH LESS THAN 5% FINES (MATERIAL PASSING THE 0.075MM SIEVE) AND A MAXIMUM AGGREGATE SIZE NOT EXCEEDING 77MM. ANY GRANULAR MATERIALS PROPOSED FOR USE AS ENGINEERED FILL SHOULD BE TESTED AND APPROVED BY A GEOTECHNICAL ENGINEER BEFORE PLACEMENT.
4. WHERE STRUCTURAL ELEMENTS, FOOTINGS, TUNNELS, PITS, PIERS, ETC. BEAR ON SHALE, PROTECT THE BEARING SURFACE WITH A 65 mm MUD SLAB WITHIN MAXIMUM 7 DAYS OF EXPOSURE. OBTAIN SOIL DEPARTMENTAL REPRESENTATIVE APPROVAL PRIOR TO MUD SLAB PLACEMENT.
5. CONTRACTOR SHALL CARRY OUT EXCAVATION, DEWATERING, BACKFILLING, PILING AND FOUNDATION CONSTRUCTION IN ACCORDANCE WITH RECOMMENDATIONS OF SOILS REPORT.
6. SIDES OF FOUNDATIONS SHALL BE FORMED UNLESS CONDITIONS PERMIT EARTH FORMING. FOUNDATIONS POURED AGAINST EARTH REQUIRE THE FOLLOWING PRECAUTIONS BE ADHERED TO:
 - a) PROVIDE APPROPRIATE CONCRETE COVER
 - b) SLOPE SIDES OF EXCAVATIONS AS APPROVED BY GEOTECHNICAL ENGINEER.
 - c) CLEAN UP SLOUGHING BEFORE AND DURING CONCRETE PLACEMENT.
7. CARRY EXTERIOR FOOTINGS DOWN **1500** mm MINIMUM BELOW FINISHED GRADE OR FOUND THEM ON SOUND UN-WEATHERED BEDROCK. PROTECT FOOTINGS EXPOSED TO FROST DURING CONSTRUCTION WITH MINIMUM **1500** mm OF EARTH OR ITS EQUIVALENT TO PREVENT FREEZING OF SOIL UNDER FOOTINGS.
8. WHERE FOOTING STEPS ARE NECESSARY, THEY SHALL BE NO STEEPER THAN ONE VERTICAL TO TWO HORIZONTAL U.N.O.
9. FOOTING SHALL BE CENTERED UNDER COLUMNS AND WALLS UNLESS SPECIFICALLY DETAILED OTHERWISE ON THE DRAWINGS.
10. DOWELS SHALL BE PLACED BEFORE CONCRETE IS CAST. "WET-STICKING" DOWELS IS NOT PERMITTED UNLESS APPROVED BY THE DEPARTMENTAL REPRESENTATIVE. TEMPLATES SHALL BE USED TO ENSURE CORRECT PLACEMENT OF DOWELS.
11. NO FOOTINGS OR SLABS SHALL BE PLACED ON OR AGAINST SUB-GRADE CONTAINING FREE WATER, FROST OR ICE. SHOULD WATER OR FROST, HOWEVER SLIGHT, ENTER A FOOTING EXCAVATION AFTER SUB-GRADE APPROVAL, THE SUB-GRADE SHALL BE RE-INSPECTED BY THE GEOTECHNICAL ENGINEER AFTER REMOVAL OF THE WATER OR FROST.
12. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUB-GRADE BEFORE AND AFTER CASTING CONCRETE UNTIL THE FULL BUILDING ENCLOSURE IS COMPLETED AND HEATED.
13. FOUNDATION INSULATION SHALL CONSIST OF EXTRUDED POLYSTYRENE WITH A MINIMUM COMPRESSIVE STRENGTH OF 0.24 MPa UNLESS OTHERWISE NOTED.
14. DO NOT EXCEED A RISE OF 7 IN A RUN OF 10 IN THE LINE OF SLAB BETWEEN ADJACENT EXCAVATIONS. MAXIMUM STEP 600 mm APPROXIMATELY UNLESS NOTED OTHERWISE.
15. WHERE NEW FOOTINGS ARE ADJACENT OR ABUT EXISTING FOUNDATIONS, CAREFULLY HAND EXCAVATE AND DETERMINE THE BOTTOM OF THE EXISTING STRUCTURE. ANY DISCREPANCIES BETWEEN THE EXISTING FOUNDATIONS AND DESIGN DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE DEPARTMENTAL REPRESENTATIVE.
16. FOUND NEW FOOTINGS, LOCATED IMMEDIATELY ADJACENT TO EXISTING FOOTINGS, AT THE SAME ELEVATION AS THE EXISTING FOOTINGS UNLESS NOTED OTHERWISE. IN NO CASE SHALL THE NEW FOOTING BE LOWER THAN THE EXISTING WITHOUT PROTECTION AGAINST UNDERMINING.
17. IN LOCATIONS WHERE EXISTING MECHANICAL SERVICES INTERFERE WITH NEW FOOTINGS, ESTABLISH TOP OF FOOTING MINIMUM 200 mm (8") BELOW INVERT ELEVATION. SEE ARCHITECTURAL ELEVATIONS FOR LOCATION OF SERVICES.
18. INSULATION IS SHOWN WHERE REQUIRED FOR PROTECTION OF THE FOUNDATIONS FROM DAMAGE DUE TO FROST ACTION ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR FOUNDATION INSULATION NOT SHOWN ON THE STRUCTURAL DRAWINGS.
19. FOUNDING ELEVATIONS/HEIGHT OF RETAINING WALLS SHOWN ON STRUCTURAL DRAWINGS ARE BASED ON SURVEY INFORMATION PROVIDED BY A THIRD PARTY SURVEYOR. THOROUGHLY REVIEW THE SITE AND CONFIRM ALL GRADES PRIOR TO EXECUTING THE WORK. REPORT ANY INCONSISTENCIES TO THE DEPARTMENTAL REPRESENTATIVE.

6. SLAB ON GRADE

1. UNDER SLAB FILL SHALL CONSIST OF A MINIMUM OF 150mm THICKNESS OF FREE-DRAINING COMPACTED GRANULAR MATERIAL. THE FILL SHOULD BE MINUS 19MM CLEAR CRUSHED GRAVEL, WITH NOT MORE THAN 5% PASSING THE #200 SIEVE AND WELL COMPACTED.
2. PLACE SLABS-ON-GRADE ON MATERIAL CAPABLE OF SUSTAINING 25 kPa SURCHARGE WITHOUT SETTLEMENT RELATIVE TO THE BUILDING FOUNDATIONS.
3. A GEOTECHNICAL ENGINEER RETAINED BY CONTRACTOR SHALL CONFIRM SUBGRADE INSTALLATION PRIOR TO PLACEMENT OF SLAB ON GRADE.

MATERIALS

1. CAST IN PLACE CONCRETE

1. CONCRETE: CONFORM WITH CAN-CSA A23.1 REQUIREMENTS AND THOSE SHOWN IN THE CONCRETE MIX SCHEDULE BELOW, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

CONCRETE MIX SCHEDULE					
LOCATION		MIN. COMPRESSIVE STRENGTH AT 28 DAYS (MPa)	EXPOSURE CLASS*	CEMENT TYPE*	AIR CONTENT* (%)
FOOTINGS	PAD/STRIP FOOTINGS	25*	R-2	GU*	4 - 7
WALLS	FOUNDATION WALLS	BELOW GRADE	R-1	GU*	4 - 7
		ABOVE GRADE	R-1	GU*	4 - 7
SLABS	BASEMENT SLAB ON GRADE	25*	R-3	GU*	4 - 7
	EXT. SLAB ON GRADE	32	C - 2	GU*	4 - 7
OTHER	LEAN MIX CONCRETE	0.4			

* CONTRACTOR TO CONFIRM WITH GEOTECHNICAL.

2. DESIGN CONCRETE MIXES TO SUIT REINFORCEMENT DETAILS SHOWN ON THE PLACEMENT DRAWINGS. PROVIDE SMALLER AGGREGATES OR SELF CONSOLIDATING CONCRETE IN AREAS OF HIGHER REINFORCEMENT DENSITY.
3. SUBMIT MIX DESIGNS FOR EACH CLASS OF CONCRETE TO BE USED ON THE PROJECT.
4. ALL CONCRETE SHALL BE NORMAL DENSITY, UNLESS NOTED OTHERWISE.
5. ADMIXTURES THAT CONTAIN CHLORIDES SHALL NOT BE USED.
6. EXTERIOR CONCRETE AND INTERIOR CONCRETE SUBJECTED TO FREEZE/THAW CYCLES, SALT, ETC, INCLUDING WALLS SHALL BE AIR ENTRAINED.
7. REFER TO CAN CSA A23.182 AND CONCRETE SPECIFICATIONS SECTION 03 30 00 FOR THE HOT AND COLD WEATHER CONCRETE PLACEMENT PROCEDURES.
8. REFER TO THE CONCRETE TYPICAL DETAILS FOR THE FOLLOWING INFORMATION:
 - a) CONCRETE COVER TO REINFORCING.
 - b) CONCRETE COVER FOR FIRE RATINGS.
 - c) TENSION DEVELOPMENT LENGTH AND LAP SPLICES.
 - d) COMPRESSION DEVELOPMENT LENGTH AND LAP SPLICES.
9. FOR ALL STRUCTURAL MEMBERS PROVIDE COVER FOR A MINIMUM 2 HOUR FIRE RATING UNLESS NOTED OTHERWISE.
10. REINFORCED CONCRETE WALLS EXPOSED TO FIRE ON BOTH SIDES SIMULTANEOUSLY SHALL HAVE THE MINIMUM COVER REQUIREMENTS FOR COLUMN.
11. DOWELS TO EXISTING CONCRETE SHALL USE THE HILTI RE500 DOWELING SYSTEM, UNLESS OTHERWISE APPROVED BY THE CONSULTANT. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. OBTAIN DEPARTMENTAL REPRESENTATIVE'S APPROVAL PRIOR TO DRILLING/DOWELING ANY REINFORCEMENT.
12. THE CONTRACTOR SHALL MODIFY THE LAYOUT OF NEW THROUGH BOLTS, EXPANSION ANCHORS AND OTHER ANCHORING DEVICES TO AVOID EXISTING CONCRETE REINFORCEMENT.
13. DOWELS FROM WALLS TO SLABS SHALL HAVE A MINIMUM EMBEDMENT OF 600 mm INTO WALLS AND SLABS UNLESS OTHERWISE NOTED OR SHOWN.
14. PROVIDE DOWELS TO WALLS AND COLUMNS SIMILAR IN NUMBER, SIZE AND SPACING TO THE VERTICAL STEEL IN THE WALL OR COLUMN ABOVE UNLESS OTHERWISE NOTED OR SHOWN.
15. CONSTRUCTION JOINTS SHALL BE DOWELED, KEYS AND THOROUGHLY CLEANED. ALL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL CONSTRUCTION JOINT DETAILS AND ANY CORRESPONDING NOTES BELOW:
 - a) HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE MADE IN BEAMS UNLESS SHOWN OR REVIEWED AND APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.
 - b) HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE MADE IN WALLS OR COLUMNS WITHOUT PRIOR APPROVAL FROM THE DEPARTMENTAL REPRESENTATIVE.
 - c) VERTICAL CONSTRUCTION JOINTS MAY BE MADE ONLY AT MIDSPAN OF BEAMS OR SLABS UNLESS OTHERWISE NOTED OR SHOWN OR DIRECTED, AND THEIR LOCATION SHALL BE REVIEWED AND APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.
 - d) WHERE THE SIZE OF KEY IS NOT SHOWN ON THE DRAWINGS, THE KEY SHALL BE 25% OF THE CROSS SECTION DIMENSION AND A MINIMUM OF 38mm INTO THE FIRST POUR OF CONCRETE.
 - e) REFER TO SPECIFICATIONS FOR POUR LENGTH LIMITATIONS.
16. CONTRACTOR TO SUBMIT PROPOSED LOCATIONS OF CONSTRUCTION JOINTS FOR APPROVAL PRIOR TO START OF WORK.
17. PROVIDE WATERSTOPS AT ALL CONSTRUCTION JOINTS IN ELEMENTS RETAINING EARTH OR EXPOSED TO WEATHER.
18. OPENINGS, SLEEVES, EMBEDDED DUCTS:
 - a) COORDINATE AND INSTALL ALL REQUIRED EMBEDDED ITEMS, INSERTS SLEEVES, POCKETS, ETC. AS REQUIRED PRIOR TO PLACEMENT OF CONCRETE.
 - b) PIPE OR DUCT PENETRATIONS EXCEEDING ONE QUARTER OF THE SLAB OR WALL THICKNESS ARE NOT PERMITTED UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS.
 - c) NO ALUMINUM CONDUIT OR OTHER SUCH PRODUCTS WITH MATERIAL DETRIMENTAL TO THE LONGEVITY OF THE CONCRETE SHALL BE EMBEDDED IN THE STRUCTURE.
 - d) PROVIDE ADDITIONAL REINFORCING AT OPENINGS AS DETAILED IN THE TYPICAL DETAILS.
 - e) OBTAIN DEPARTMENTAL REPRESENTATIVE'S APPROVAL FOR ANY OPENINGS REQUIRED BUT NOT SHOWN ON STRUCTURAL DRAWINGS.
19. CONCRETE CAST ON SLOPED SURFACES SHALL BEGIN AT THE LOWEST ELEVATION AND CONTINUE MONOLITHICALLY TOWARD THE HIGHER ELEVATION UNTIL THE INTENDED CAST IS COMPLETED.
20. PROVIDE 19 mm x 19 mm CHAMFER STRIP AT ALL EXPOSED CORNERS OF CONCRETE WALLS, INCLUDING EXPOSED CORNERS OF CONCRETE PIERS UNLESS NOTED OTHERWISE ON ARCHITECTURAL DRAWINGS.
21. PROVIDE DOVETAIL SLOTS IN CONCRETE WALLS WHERE MASONRY ABUTS.
22. IN CASES WHERE CONCRETE FINISHES ARE GROUND OR POLISHED ENSURE THAT ADEQUATE COVER IS ACHIEVED IN THE FINAL CONDITION.



Revision	Description	Date
5	ISSUED FOR CONSTRUCTION 2	2020/03/06
4	ISSUED FOR CONSTRUCTION	2019/10/29
3	ISSUED FOR 90% REVIEW	2019/08/29
2	ISSUED FOR 60% REVIEW	2019/05/09
1	ISSUED FOR 30% REVIEW	2019/03/14

Revision	Description	Date
Client	client	

PSPC

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GENERAL NOTES

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R.100429.001	S1.1 OF	5