

Drawing List

S101	GENERAL NOTES
S201	FOUNDATION PLAN, TABLES, DETAIL, AND ELEVATION

DRAWING USAGE NOTES:

- DO NOT SCALE FROM ANY OF THE ABOVE NOTED DRAWINGS.
- ALL OF THE ABOVE NOTED DRAWINGS ARE TO BE READ IN CONJUNCTION WITH EACH OTHER TO ASCERTAIN THE FULL EXTENT OF THE STRUCTURAL REQUIREMENTS.
- INFORMATION CONTAINED IN THE GENERAL NOTES, LEGENDS, TABLES, AND TYPICAL DETAILS SHOWS MINIMUM STRUCTURAL REQUIREMENTS AND SHALL ALWAYS APPLY UNLESS NOTED OTHERWISE ON THE PLANS, DETAILS, ELEVATIONS OR SCHEDULES.
- DO NOT BUILD FROM THESE DRAWINGS UNLESS THEY ARE MARKED AS 'ISSUED FOR CONSTRUCTION' IN THE ISSUES COLUMN IN THE TITLE BLOCK.
- ANY DRAWINGS THAT ARE NOT ISSUED FOR TENDER OR CONSTRUCTION ARE SUBJECT TO CHANGE WITHOUT NOTICE

1. General Requirements

- GENERAL:**
 - ALL STRUCTURAL DOCUMENTS, WHICH INCLUDE NOTES, PLANS, SPECIFICATIONS AND DETAILS, SHALL BE READ AS ONE DOCUMENT. FURTHER, THESE DOCUMENTS SHALL BE READ IN CONJUNCTION WITH ALL APPLICABLE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND CIVIL DRAWINGS. ANY DISCREPANCIES BETWEEN THE STRUCTURAL DOCUMENTS AND THOSE OF OTHER DISCIPLINES SHALL BE BROUGHT TO WHM'S ATTENTION IMMEDIATELY FOR INTERPRETATION AND/OR CORRECTION.
 - THE TERM 'CONTRACTOR' SHALL INCLUDE ANY OR ALL PARTIES RESPONSIBLE FOR THE CONSTRUCTION OF THE WORK.
 - THESE DRAWINGS SHOW THE DESIGN INTENT FOR THE COMPLETED BASE BUILDING STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY WORKS NECESSARY FOR THE COMPLETION OF CONSTRUCTION, THE MAINTENANCE OF STRUCTURAL STABILITY DURING CONSTRUCTION AND FOR ALL SAFETY CONSIDERATIONS IN AND AROUND THE CONSTRUCTION SITE. TEMPORARY WORKS SHALL BE DESIGNED TO CAN/CSA 269.1 BY A SPECIALTY ENGINEER RETAINED BY THE CONTRACTOR.
 - ALL PROFESSIONAL ENGINEERS RETAINED TO DESIGN STRUCTURAL SYSTEMS, COMPONENTS, OR TEMPORARY WORKS SHALL BE REGISTERED IN THE JURISDICTION OF THE PROJECT.
- CODES:**
 - STRUCTURAL MATERIALS AND ASSEMBLIES SPECIFIED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH PART 4 OF THE BRITISH COLUMBIA BUILDING CODE 2024. (HEREINAFTER REFERRED TO AS 'THE CODE').
 - ALL STRUCTURAL MATERIALS AND FRAMING ASSEMBLIES SHALL COMPLY WITH THE CODE AND THE MOST CURRENT CSA STANDARDS ENACTED IN THE JURISDICTION IN WHICH THE PROJECT IS TO BE BUILT.
 - WHM IS RESPONSIBLE FOR THE STRUCTURAL RENOVATION AND ADDITION ONLY AND NOT FOR ANY OF THE PRE-EXISTING CONDITIONS OF THE EXISTING STRUCTURE, A NO NET LOSS APPROACH.
- DESIGN PARAMETERS:**
 - SNOW LOAD:**
 - a. GROUND SNOW, S_s = 2.60 kPa
 - b. RAIN LOAD, S_r = 0.2 kPa
 - c. BASIC SNOW LOAD, S = 2.28 kPa
 - LIVE LOAD:**
 - a. ROOF = GREATER OF SNOW LOAD OR 1.0 kPa
 - b. GROUND FLOOR = 2.4 kPa
 - SUPERIMPOSED DEAD LOAD:**
 - a. ROOF = 1.0 kPa
 - b. GROUND FLOOR = 0.5 kPa
 - WIND LOAD:**
 - a. 150 YEAR WIND PRESSURE = 0.44 kPa

- ARCHITECT:**
 - THESE STRUCTURAL DRAWINGS ARE BASED ON ARCHITECTURAL DRAWINGS BY ph5 ARCHITECTURE INC.
 - THE ARCHITECT IS THE PRIME CONSULTANT AND THE COORDINATING REGISTERED PROFESSIONAL (RSP) AND AS SUCH IS RESPONSIBLE FOR OVERALL COORDINATION OF THE DESIGN OF THE PROJECT. ALL WRITTEN COMMUNICATION FROM THE CONTRACTOR TO WHM SHALL BE ROUTED THROUGH OR COPIED TO THE ARCHITECT.
- CONTRACTOR'S SUBMITTALS:**
 - WHM WILL REVIEW SUBMITTALS (WHICH INCLUDE SHOP DRAWINGS) TO THE EXTENT DEEMED NECESSARY BY WHM TO ASCERTAIN GENERAL CONFORMANCE TO THE DESIGN INTENT OF THE BASE BUILDING STRUCTURE AND/OR AS REQUIRED BY THE BUILDING AUTHORITY HAVING JURISDICTION.
 - REGARDLESS OF ANY TERMINOLOGY USED IN THE COURSE OF SUCH REVIEWS, WHM NEVER APPROVES SUBMITTALS AS THESE DOCUMENTS ARE AN INSTRUMENT OF SERVICE OF THE CONTRACTOR WHO PREPARED THEM, AND THEREFORE REMAIN ENTIRELY THE CONTRACTOR'S RESPONSIBILITY.
 - THE GENERAL CONTRACTOR / CONSTRUCTION MANAGER MUST REVIEW ALL SUBMITTALS FROM SUB-CONTRACTORS FOR CONFORMANCE TO THE CONTRACT DOCUMENTS BEFORE SUBMITTING THEM TO WHM AND AFFIX THEIR STAMP TO THE SUBMITTALS INDICATING COMPLETION OF THIS REVIEW.
 - SHOP DRAWINGS AND CALCULATIONS FOR ANY STRUCTURAL COMPONENT FOR WHICH DESIGN RESPONSIBILITY IS DELEGATED TO THE CONTRACTOR SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN JURISDICTION OF THE PROJECT.
 - PROCEEDING WITH CONSTRUCTION WORK PRIOR TO RECEIVING REVIEWED AND ACCEPTED SUBMITTALS WILL SOLELY BE AT THE CONTRACTOR'S RISK. THE CONTRACTOR WILL BE REQUIRED TO MODIFY THE STRUCTURE TO SUIT THE REVIEWED AND ACCEPTED SUBMITTAL AT THEIR OWN EXPENSE.
- FIELD REVIEW BY WHM:**
 - WHM IS RESPONSIBLE FOR UNDERTAKING FIELD REVIEWS OF STRUCTURAL COMPONENTS AND ASSEMBLIES CONSTITUTING THE BASE BUILDING STRUCTURE OF THIS PROJECT.
 - THE CONTRACTOR SHALL ARRANGE ADEQUATE OPPORTUNITY FOR WHM TO UNDERTAKE FIELD REVIEWS. ALL STRUCTURAL COMPONENTS AND ASSEMBLIES IN THESE DRAWINGS SHALL REMAIN UNCONCEALED AND VISIBLE UNTIL EITHER REVIEWED IN THE FIELD BY WHM AND TO WHM'S SATISFACTION, OR OTHERWISE PERMITTED BY WHM. WHM MAY REQUIRE ANY CONCEALMENT OR OBSTRUCTIONS TO BE REMOVED AS REQUIRED TO FACILITATE FIELD REVIEW. CONSEQUENT REPAIR COST WILL BE THE CONTRACTOR'S RESPONSIBILITY.
 - THE CONTRACTOR SHALL SCHEDULE FIELD REVIEWS WITH WHM AT LEAST 48 HOURS IN ADVANCE.
 - THE CONTRACTOR SHALL ENSURE THE WORK TO BE REVIEWED IS BUILT CORRECTLY PRIOR TO CALLING WHM TO SCHEDULE FIELD REVIEWS. THE CONTRACTOR SHALL NOT CONSIDER FIELD REVIEWS BY WHM AS A SUBSTITUTE FOR THEIR OWN INSPECTIONS OF THE WORK AND REMAINS COMPLETELY RESPONSIBLE FOR CONSTRUCTING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- SECONDARY STRUCTURAL AND ARCHITECTURAL BUILDING COMPONENTS:**
 - WHM IS RESPONSIBLE FOR THE DESIGN OF ONLY THE BASE BUILDING STRUCTURE. BUILDING COMPONENTS LISTED IN THIS SECTION ARE CONSIDERED SECONDARY STRUCTURAL OR ARCHITECTURAL BUILDING COMPONENTS (SSABCs) AND THEREFORE ARE NOT PART OF THE BASE BUILDING STRUCTURE. SUCH COMPONENTS INCLUDE BUT ARE NOT LIMITED TO:
 - a. STRUCTURAL ELEMENTS OUTSIDE THE FOOTPRINT OF THE BASE BUILDING STRUCTURE.
 - b. CLADDING, CEILINGS OR OTHER DECORATIVE ELEMENTS AND THEIR CONNECTIONS.
 - c. BRICK AND STONE VENEER CLADDING.
 - d. SUPPORT LEDGERS AND LATERAL TIE-BACKS FOR BRICK AND STONE VENEER.
 - e. NON-LOAD BEARING LIGHT-GAUGE STEEL, WOOD AND MASONRY FRAMING.
 - f. MECHANICAL AND ELECTRICAL EQUIPMENT, CURBS, SLEEPERS, THEIR BRACING AND CONNECTIONS.
 - g. GLAZING OR WINDOW WALL SUPPORTS AND RELATED CONNECTION HARDWARE AND HARDWARE EMBEDDED IN CONCRETE.
 - A SPECIALTY REGISTERED STRUCTURAL ENGINEER, REGISTERED IN BRITISH COLUMBIA, SHALL BE RETAINED TO DESIGN, DETAIL AND REVIEW THE INSTALLATION OF SSABCs AND THEIR CONNECTIONS TO THE BASE BUILDING STRUCTURE IN ACCORDANCE TO THE CODE.
 - SSABCs SHALL BE DESIGNED TO ALLOW FOR VERTICAL AND HORIZONTAL BASE BUILDING DEFLECTIONS. THESE DEFLECTIONS SHALL BE CONSIDERED EQUAL TO THE MAXIMUM ALLOWED DEFLECTIONS PERMITTED BY THE CODE AND RELEVANT MATERIAL CODES. NO COMPONENTS SHALL BE BUILT IN A MANNER WHICH WOULD ALLOW REDISTRIBUTION OF LATERAL OR GRAVITY LOADS BETWEEN IT AND THE BASE BUILDING STRUCTURE.

- BUILDING ENVELOPE AND OTHER WATERPROOFING:**
 - WHM DOES NOT OFFER ANY SERVICES, NOR HOLDS ITSELF OUT AS BEING QUALIFIED IN ANY WAY WHATSOEVER, IN THE FIELD OF WORK. WHM WILL NOT ACCEPT ANY LIABILITY FOR ANY ISSUES IN RELATION TO WATERPROOFING, WATER INGRESS, MOISTURE CONTROL, DRAINAGE, MOLD, MILDEW, FUNGUS, ETC.
 - THE OWNER IS ADVISED TO RETAIN A COMPETENT AND WELL-INSURED PROFESSIONAL IN THIS FIELD OF WORK TO PROVIDE WHATEVER ADVICE THEY MAY REQUIRE.
- OPENINGS:**
 - ANY OPENINGS THAT ARE NOT SHOWN OR INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE REPORTED TO WHM FOR REVIEW. THESE OPENINGS MAY NOT BE ALLOWED, MAY HAVE TO BE MOVED, OR MAY REQUIRE ADDITIONAL STRUCTURAL WORK AND DETAILING. DO NOT PROCEED WITH THESE OPENINGS WITHOUT WRITTEN PERMISSION FROM WHM.
 - THE CONTRACTOR SHALL CLEARLY MARK-OUT ALL NEW OPENINGS TO BE CUT THROUGH ANY CONCRETE OR MASONRY AND MARK-OUT PLACEMENT OF ENCASED REINFORCING BARS AND SERVICES. WHEN SUCH MARKINGS ARE COMPLETE, THE CONTRACTOR SHALL NOTIFY WHM SO THAT WHM CAN REVIEW THE PROPOSED LOCATIONS OF ALL NEW OPENINGS IN THE FIELD. NEW OPENINGS SHALL NOT BE CORED OR CUT UNTIL WHM HAS SO REVIEWED THE LOCATIONS AND HAS DEEMED THEM ACCEPTABLE.
 - NEW STRAIGHT-SIDED OPENINGS THROUGH CONCRETE SHALL NOT BE SAWCUT. OVERCUTS AT CORNER AND EXTERIOR ARE NOT PERMITTED. TO PREVENT OVERCUTS, CORE HOLES AT EACH CORNER PRIOR TO SAWCUTTING. ALTERNATIVE PROCEDURES ARE NOT PERMITTED UNLESS PRE-APPROVED BY WHM.
 - JACKHAMMERING IS NOT PERMITTED UNLESS PRE-APPROVED IN WRITING BY WHM.

2. Existing Conditions

- RENOVATION SCOPE**
 - THE PROJECT CONSISTS OF MINOR RENOVATIONS TO AN EXISTING CONCESSION BUILDING AT MACKIN PARK COQUITLAM.
- SITE VERIFICATION:**
 - THE STRUCTURAL DESIGN INTENT DEPENDS ON ASSUMED AS-BUILT DIMENSIONS FOR THE EXISTING BUILDING STRUCTURE AND ON ASSUMED DETAILING AND PLACING PRACTICES CURRENT AT THE TIME THE ABOVE NOTED DRAWINGS WERE BUILT. THESE ASSUMPTIONS MAY VARY FROM THE ACTUAL ON-SITE CONDITIONS. THE CONTRACTOR SHALL DOCUMENT WITH PHOTOGRAPHS OR SKETCHES ANY ACTUAL VARIATIONS FROM THE ASSUMED CONDITIONS AND SHALL IMMEDIATELY INFORM THE ARCHITECT AND WHM.
 - THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY AND SAFETY OF THE EXISTING STRUCTURE AND IS RESPONSIBLE FOR ALL TEMPORARY WORKS.
 - THE CONTRACTOR SHALL REPORT TO WHM ANY EXISTING CONDITIONS THAT APPEAR UNSAFE OR OTHERWISE INADEQUATE WITH RESPECT TO THE STRUCTURAL DESIGN OF THE STRUCTURE. SUCH CONDITIONS INCLUDE BUT ARE NOT LIMITED TO:
 - CORROSION.
 - SPALLING OR DECAYED CONCRETE.
 - ROT.
 - EXCESSIVE DEFLECTIONS.
 - LARGE OR UNUSUAL CRACKS IN CONCRETE OR TIMBER.
 - ANY OTHER EVIDENCE OF STRUCTURAL FAILURE.
 - PRIOR TO FABRICATION OF ANY STRUCTURAL MEMBERS, THE CONTRACTOR SHALL COMPLETE A SITE REVIEW OF CRITICAL "TIE-IN" DIMENSIONS AND CONFIRM ALL DIMENSIONS TO ENSURE PROPER FIT OF NEW WORK TO EXISTING. REPORT ANY DISCREPANCIES TO WHM PRIOR TO STARTING WORK.
 - THE CONTRACTOR SHALL ENSURE THAT ALL NECESSARY AS-BUILT AND TIE-IN DIMENSIONS ARE RECORDED FOR THE PURPOSE OF COORDINATING ALL WORK, INCLUDING THAT OF SUB-CONTRACTORS. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF SUCH DIMENSIONS AND FOR COORDINATION.
 - DUE TO ACTUAL SITE CONDITIONS, MINOR MODIFICATIONS TO THE WORK INDICATED ON THESE DRAWINGS MAY BE REQUIRED.
 - THE CONTRACTOR SHALL BE AWARE THAT UNDERGROUND OR IN-SLAB SERVICES ARE NOT DAMAGED THROUGH DEMOLITION, EXCAVATION, SAWCUTTING, HOLE AUGURING, OR OTHER CONSTRUCTION ACTIVITIES.

3. Concrete

- RESPONSIBILITY:**
 - THE CONTRACTOR SHALL ENSURE CONCRETE AND REINFORCEMENT IS DELIVERED, INSTALLED, AND CURED TO ALL CODE REQUIREMENTS AND TO REQUIREMENTS ON THESE DRAWINGS.
 - THE CONTRACTOR SHALL COORDINATE ALL CONCRETE AND REINFORCEMENT WORK WITH THE REQUIREMENTS OF OTHER DISCIPLINES INCLUDING BUT NOT LIMITED TO INSERTS, CANS, SLEEVES, CONDUIT, PIPES, DUCTS, CHASES, OPENINGS, NAILERS, REGLETS, REVEALS, ETC.
- CODE:**
 - CONCRETE AND REINFORCEMENT WORK SHALL CONFORM IN ALL RESPECTS TO THE CODE AND ALL REFERENCED DOCUMENTS.
 - a. CONCRETE CONSTRUCTION METHODS AND DESIGN: CSA – A23.1, A23.2, A23.3.
 - b. PARKING STRUCTURES: CSA A343.
 - c. NON-WELDABLE REINFORCEMENT: CSA G30.18.
 - d. WELDABLE REINFORCEMENT: CSA G30.18W.
 - e. WELDED WIRE MESH: CSA G30.5.
- WORKMANSHIP:**
 - ALL CONCRETE SHALL BE:
 - a. FULLY AND ADEQUATELY CONSOLIDATED BY VIBRATION WITH SPECIAL CARE AND ATTENTION GIVEN TO AREAS OF CONGESTED REINFORCEMENT AND EMBEDDED HARDWARE, INSERTS, DUCTS, PIPES, ETC.
 - b. BUILT LEVEL, PLUMB AND TO THE DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.
 - MINOR HONEYCOMBS SHALL BE REPAIRED WITH NON-SHRINK GROUT/PATCHING MATERIAL TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
 - MAJOR HONEYCOMBING (EXPOSED REINFORCEMENT OR AREAS GREATER THAN ONE SQ. FT) SHALL BE REPORTED TO WHM FOR REVIEW.
 - FORMWORK PATTERNS, QUALITY, TIE LAYOUT/TYPE, FINISHES ETC. MUST BE DETERMINED BY THE CONTRACTOR IN CONSULTATION WITH AND TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
 - ALL REINFORCEMENT:
 - a. SHALL BE CHAINED AND TIED SECURELY IN PLACE SUCH THAT IT WILL NOT DISPLACE AT ALL DURING CONCRETE PLACEMENT.
 - b. SHALL USE PLASTIC OR RUBBER COATED CHAIRS.
 - c. SHALL BE CONTINUOUS. WHERE LAP SPICES ARE REQUIRED USE TENSION LAPS.
 - d. LAPPED BARS SHALL BE IN CONTACT WITH EACH OTHER.

- CURING AND PROTECTION:**
 - WHM IS NOT RESPONSIBLE FOR DEFINING CURING AND PROTECTION METHODS AND PROCESSES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RETAIN A PROFESSIONAL MATERIALS ENGINEERING CONSULTANT TO ADVISE ON APPROPRIATE CURING AND PROTECTION METHODS TO ENSURE ALL CONCRETE WORK MEETS ALL STRUCTURAL AND ARCHITECTURAL REQUIREMENTS.
 - ALL CONCRETE SHALL BE CURED AND PROTECTED FROM ADVERSE CONDITIONS SUCH AS RAIN, WIND, COLD AND HEAT UNDER THE GUIDANCE OF A QUALIFIED MATERIALS ENGINEER AND IN CONFORMANCE WITH CSA A23.1.
 - WHEN TEMPERATURES ARE FORECASTED TO REACH ABOVE 25C OR BELOW 5C, EXTRA PROTECTION TO CONCRETE IS REQUIRED. CONTRACTOR TO RETAIN A MATERIALS ENGINEER TO PROVIDE GUIDANCE.
 - UNDER NO CIRCUMSTANCES SHALL CONCRETE BE CAST ON OR AGAINST FROZEN SOIL, FORMWORK OR REINFORCEMENT.
 - WHEN TEMPERATURES ARE FORECAST TO BE BELOW 5C, THE CONTRACTOR IS TO PROVIDE COLD WEATHER PROTECTION AS PER A23.1 AND THE MATERIALS CONSULTANT. AS A MINIMUM, THE FOLLOWING SHALL BE PROVIDED:
 - a. USE HEATED WATER AND AGGREGATES.
 - b. REMOVE ALL SNOW AND ICE FROM FORMS AND REINFORCING. CALCIUM CHLORIDE OR DE-ICING SALTS SHALL NOT BE USED AS A DE-ICING AGENT.
 - c. FOR CONCRETE <100MM (3'-4") THICK, FORMS, SOIL AND REINFORCING SHALL BE MAINTAINED AT 10C MINIMUM. FOR CONCRETE >100MM (3'-4") FORMS, SOIL AND REINFORCING SHALL BE MAINTAINED AT 5C MINIMUM. CONCRETE TEMPERATURES SHALL BE MAINTAINED FOR THE DURATION NOTED IN A23.1, TABLE 19 FOR THE SPECIFIC CURING TIMES NOTED IN A23.1, TABLE 2 AS MINIMUM. FOR N, C1, C2, F1 EXPOSURE CLASSES, MAINTAIN 10C TO 20C UNTIL THE CONCRETE REACHES 40% SPECIFIED STRENGTH BUT FOR 72 HOURS MINIMUM. FOR F2, C3 AND C4 EXPOSURE CLASSES AND ANY CONCRETE USING HVSCM, MAINTAIN 10C TO 20C UNTIL THE CONCRETE REACHES 70% SPECIFIED STRENGTH BUT FOR 7 DAYS MINIMUM.
 - d. PROVIDE HOARDING, INSULATED BLANKETS AND HEAT AS REQUIRED TO MAINTAIN CONCRETE TEMPERATURES AS PER A23.1 TABLE 19 AND AS DIRECTED BY THE MATERIALS CONSULTANT.

- MATERIALS - CONCRETE:**
 - CEMENT SHALL BE GENERAL USE HYDRAULIC CEMENT—TYPE GU. "EcoCem PLC" BY LEHIGH. CEMENT IS AN ACCEPTABLE ALTERNATIVE, PROVIDED ALL OTHER REQUIREMENTS ON THESE DRAWINGS ARE MET.
 - USE OF HIGH-EARLY-STRENGTH HYDRAULIC CEMENT—TYPE HE, IS PERMITTED AT THE CONTRACTOR'S DISCRETION FOR CONSTRUCTION SCHEDULING REASONS.
 - MAXIMUM AGGREGATE SIZE SHALL CONFORM TO THE TABLES. SMALLER AGGREGATE SHALL BE UTILIZED IN REGIONS OF CONGESTED REINFORCEMENT, FORMWORK, OR EMBEDDED HARDWARE.
 - WATER SHALL BE POTABLE, HEATED IF NECESSARY FOR APPROPRIATE CURING.
 - CONCRETE SHALL BE REGULAR WEIGHT.
 - ADMIXTURES SHALL BE UTILIZED AT THE DISCRETION OF THE CONCRETE SUPPLIER. HOWEVER, REGARDLESS OF THE ADMIXTURES USED, THE CONCRETE SUPPLIER SHALL REMAIN SOLELY RESPONSIBLE FOR PROVIDING CONCRETE MIXES THAT MEET ALL REQUIREMENTS OF THESE AND OTHER DISCIPLINES DRAWINGS.
 - ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED.
 - MIX DESIGNS SHALL BE PREPARED BY THE CONCRETE SUPPLIER.
 - NON-SHRINK GROUT SHALL BE NON-METALLIC CEMENTITIOUS PASTE WITH A MINIMUM 7-DAY COMPRESSIVE STRENGTH OF 50 MPa.
 - TESTING:**
 - a. ALL CONCRETE SHALL BE TESTED IN CONFORMANCE WITH THE CODE BY A TESTING AGENCY CERTIFIED BY THE CANADIAN STANDARDS ASSOCIATION (CSA). ALL TESTS SHALL ALSO CONFORM TO CSA A23.2. TESTING PERSONNEL SHALL BE CSA CERTIFIED. THE TESTING AGENCY SHALL BE INDEPENDENT FROM THE CONTRACTOR, CONCRETE SUPPLIER, PLUMBER OR FINISHER.
 - c. THE TESTING AGENCY SHALL BE RETAINED BY THE CONTRACTOR UNLESS ALTERNATIVE ARRANGEMENTS ARE MADE IN ADVANCE BETWEEN THE OWNER AND CONTRACTOR.
 - d. WHM IS NOT RESPONSIBLE FOR DEFINING THE SCOPE AND METHODS OF TESTING. THIS IS THE SOLE RESPONSIBILITY OF THE TESTING AGENCY.
- MATERIALS - BAR REINFORCEMENT:**
 - SHALL BE RATED FOR MINIMUM 400 MPa YIELD STRESS. SEE PLANS FOR BARS RATED FOR 500 MPa.
 - SHALL BE STANDARD DEFORMED BILLET STEEL BARS.
 - SHALL NOT BE WELDED IN ANY WAY EXCEPT AS SPECIFIED, IN WHICH CASE WELDABLE REINFORCEMENT SHALL BE USED.
 - SHALL BE FREE OF DIRT, OIL, AND ANY OTHER MATERIAL THAT MAY INHIBIT PROPER BONDING WITH CONCRETE.
 - THE CONTRACTOR SHALL RETAIN MILL CERTIFICATES FOR ALL REINFORCEMENT AND SHALL PROVIDE THESE TO THE TESTING AGENCY FOR REVIEW UPON REQUEST.
- MATERIALS - EMBEDDED HARDWARE:**
 - PRE-SET ALL EMBEDDED HARDWARE WITH TEMPLATES OR BY FASTENING SECURELY TO FORMS. WET-SETTING OF EMBEDDED HARDWARE IS NOT PERMITTED.
 - SPECIAL CARE SHALL BE TAKEN TO VIBRATE AND CONSOLIDATE CONCRETE COMPLETELY AROUND ALL EMBEDDED HARDWARE.
 - SHOP DRAWINGS SHALL BE PREPARED FOR ALL EMBEDDED HARDWARE EXCEPT PRE-DRILLED (EXPANSION AND ADHESIVE) ANCHORS.
 - STUDRAILS**
 - STUDRAILS SHALL BE FROM DECON USA INC. SUBSTITUTION WITH PRODUCTS FROM OTHER MANUFACTURERS OR WITH CUSTOM-FABRICATED HARDWARE SHALL BE APPROVED BY WHM IN WRITING.

- MATERIALS - PRE-DRILLED (EXPANSION AND ADHESIVE) ANCHORS:**
 - CAST-IN-PLACE ANCHORS SHALL NOT BE SUBSTITUTED WITH PRE-DRILLED ANCHORS.
 - HILTI CANADA CORP IS THE ONLY PRE-APPROVED SUPPLIER OF PRE-DRILLED ANCHORS.
 - ALL ON-SITE PERSONNEL INSTALLING PRE-DRILLED ANCHORS SHALL HAVE OBTAINED A CERTIFICATE FOR THIS ACCREDITED INSTALLER PROGRAM FROM HILTI. THE CONTRACTOR SHALL PROVIDE THESE CERTIFICATES TO WHM PRIOR TO INSTALLING ANY PRE-DRILLED ANCHORS.
 - ALTERNATE SUPPLIERS PROPOSED BY THE CONTRACTOR TO BE APPROVED IN WRITING BY WHM PRIOR TO USE.
 - SEE TABLES FOR ACCEPTABLE EXPANSION, ADHESIVE ANCHORS, AND PRE-APPROVED ADHESIVES.
 - ANCHORS SHALL BE CARBON STEEL WITH ELECTROPLATED ZINC FOR INTERIOR APPLICATIONS PROTECTED FROM MOISTURE, UNLESS OTHERWISE NOTED.
 - IN CASES WHERE ANCHORS WILL BE SUBJECTED TO MOISTURE, SUCH AS IN EXTERIOR APPLICATIONS, HOT-DIP GALVANIZED COATING SHALL BE USED UNLESS OTHERWISE NOTED.
 - THE LENGTH IDENTIFICATION MARK ON THE END OF EACH EXPANSION ANCHOR SHALL REMAIN CLEARLY VISIBLE UNTIL SATISFACTORY FIELD REVIEW IS COMPLETE. ANCHORS WITHOUT THE PROPER LENGTH IDENTIFICATION MARK WILL BE REJECTED.
 - ADHESIVE ANCHORS CONSIST OF AN ANCHOR ROD AND AN ADHESIVE INSTALLED INTO SOLID CONCRETE SUBSTRATE IN STRICT ACCORDANCE WITH HILTI'S LATEST PUBLISHED RECOMMENDATIONS.
 - ADHESIVE ANCHOR RODS SHALL COME COMPLETE WITH NUT AND STANDARD-CUT WASHER SIZED TO SUIT ROD DIAMETER. SEE TABLE AND PLANS FOR ACCEPTABLE ROD TYPES.
 - USE HILTI PROFIT KIT FOR PROPER HOLE PREPARATION.
 - OVERHEAD ANCHORS SHALL BE INSTALLED USING THE HILTI PROFIT ACCESSORIES TO ENSURE CORRECT ADHESIVE INJECTION.
 - NUTS FOR ADHESIVE ANCHORS SHALL NEITHER BE TIGHTENED NOR THE ANCHOR OTHERWISE STRESSED OR DISTURBED UNTIL THE ADHESIVE IS FULLY CURED.
 - TESTING:**
 - a. THE CONTRACTOR SHALL RETAIN AN INDEPENDENT TESTING AGENCY TO INSPECT AND TEST PRE-DRILLED ANCHORS. AS A MINIMUM THE FOLLOWING TESTING SCOPE SHALL BE PERFORMED:
 - ON-SITE INSPECTION OF THE INSTALLATION PROCESS OF THE FIRST 5% EACH ANCHOR TYPE.
 - TORQUE TESTS OR PULL-TESTS ON A REPRESENTATIVE SAMPLE OF EXPANSION ANCHORS.
 - PULL-TESTS ON A REPRESENTATIVE SAMPLE OF ADHESIVE ANCHORS.
 - b. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - c. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - d. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - e. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - f. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - g. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - h. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - i. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - j. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - k. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - l. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - m. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - n. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - o. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - p. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - q. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - r. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - s. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - t. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - u. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - v. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - w. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - x. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - y. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - z. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.

- CRACKING:**
 - ALL CONCRETE WILL CRACK, WHETHER REINFORCED OR NOT AND ARE DUE TO A VARIETY OF STRESSES INCLUDING SHRINKAGE, CREEP, TEMPERATURE FLUCTUATIONS, AND TENSILE STRESSES DUE TO BENDING, SHEAR, OR AXIAL LOADS AND THEREFORE CANNOT BE ACCURATELY PREDICTED.
 - CRACKS TYPICALLY DO NOT IMPAIR THE INTENDED FUNCTION OF THE STRUCTURE. HOWEVER, SOME CRACKS MAY NOT MEET THE AESTHETIC REQUIREMENTS OF THE ARCHITECT, IN WHICH CASE PATCHING OR GROUT/EPOXY INJECTIONS MAY BE REQUIRED.
 - CRACK-CONTROL JOINTS SHALL BE PROVIDED IN WALLS AND SLABS-ON-GRADE.

- FOOTINGS:**
 - SEE NOTE SECTION 7.

4. Masonry

- RESPONSIBILITY:**
 - THE CONTRACTOR SHALL ENSURE ALL MASONRY WORK IS DELIVERED, INSTALLED, AND CURED TO ALL CODE REQUIREMENTS AND TO REQUIREMENTS ON THESE DRAWINGS.
 - THE CONTRACTOR SHALL COORDINATE ALL MASONRY WORK WITH THE REQUIREMENTS OF OTHER DISCIPLINES INCLUDING BUT NOT LIMITED TO INSERTS, CANS, SLEEVES, CONDUIT, PIPES, DUCTS, CHASES, OPENINGS, NAILERS, REGLETS, REVEALS, ETC.
 - BRICK AND STONE VENEER CLADDING ARE THE RESPONSIBILITY OF OTHERS.
- CODE:**
 - STRUCTURAL MASONRY WORK SHALL CONFORM IN ALL RESPECTS TO THE CODE AND ALL REFERENCED DOCUMENTS.
 - a. MASONRY DESIGN AND CONSTRUCTION: CSA S304.1.
 - b. MATERIALS AND PRACTICE: CSA A371.
 - c. CONCRETE BLOCKS: CSA A165.1.
 - d. MASONRY GROUT: CSA A179.
 - e. MORTAR: CSA A179.
 - f. NON-WELDABLE REINFORCEMENT: CSA G30.18.
 - g. WELDABLE REINFORCEMENT: CSA G30.18W.
 - h. WELDED WIRE MESH: CSA G30.5.
 - i. HETICAL TIES: CSA A370.
- WORKMANSHIP:**
 - ALL MASONRY WORK SHALL BE BUILT LEVEL, PLUMB AND TO THE DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.
 - MASONRY SHALL BE CURED AND PROTECTED FROM ADVERSE CONDITIONS SUCH AS RAIN, WIND, COLD AND HEAT UNDER THE GUIDANCE OF A QUALIFIED MATERIALS ENGINEER AND IN CONFORMANCE WITH CSA A23.1.
 - WHM IS NOT RESPONSIBLE FOR DEFINING CURING AND PROTECTION METHODS AND PROCESSES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RETAIN A PROFESSIONAL MATERIALS ENGINEERING CONSULTANT TO ADVISE ON APPROPRIATE CURING AND PROTECTION METHODS TO ENSURE ALL MASONRY WORK MEETS ALL STRUCTURAL AND ARCHITECTURAL REQUIREMENTS.
 - ALL MORTAR BEDS AND JOINTS SHALL BE NEATLY TOOLED WITH ALL GROUT AND MORTAR SPILLAGE REMOVED.
 - ALL CELLS CONTAINING REINFORCEMENT OR EMBEDDED HARDWARE SHALL BE COMPLETELY FILLED WITH CONCRETE GROUT.
 - CONCRETE GROUT SHALL BE FULLY AND ADEQUATELY CONSOLIDATED BY VIBRATION WITH SPECIAL CARE AND ATTENTION GIVEN TO AREAS OF CONGESTED REINFORCEMENT AND EMBEDDED HARDWARE, INSERTS, DUCTS, PIPES, ETC.
 - UNDER NO CIRCUMSTANCES SHALL MASONRY WORK PROCEED WITH FROZEN MATERIALS, INCLUDING REINFORCEMENT.
 - PROVIDE BLOCK WALL CONTROL JOINTS AS PER STANDARD DETAIL.
 - ALL REINFORCEMENT:
 - a. SHALL BE POSITIONED AT THE CENTRE OF THE BLOCK COURSE AND TIED SECURELY IN PLACE SUCH THAT IT WILL NOT DISPLACE AT ALL DURING GROUT PLACEMENT.
 - b. SHALL BE CONTINUOUS. LAP SPICES TO BE MINIMIZED BUT WHERE REQUIRED SHALL BE TENSION LAPS. LAPPED BARS SHALL BE IN CONTACT WITH EACH OTHER.

- MATERIALS - CONCRETE MASONRY BLOCKS:**
 - CONCRETE MASONRY BLOCKS SHALL BE STANDARD HOLLOW CONCRETE MASONRY UNITS (CMU) OF STANDARD METRIC DIMENSIONS. STANDARD IMPERIAL SIZES SHALL NOT BE USED UNLESS EXPLICITLY SPECIFIED ON THE PLANS OR PERMITTED IN WRITING BY THE ARCHITECT. NOMINAL CMU SIZE SHALL BE 200 THICK x 200 HIGH x 400 LONG. ACTUAL SIZE IS 190 x 190 x 390.
 - CUT BLOCKS OR SQUARE HALF-BLOCKS SHALL BE USED ONLY WHERE REQUIRED TO ACHIEVE THE CORRECT ELEMENT DIMENSIONS AND EVEN THEN IN THE MINIMUM POSSIBLE NUMBERS.
 - BLOCKS SHALL BE COMPRISED OF REGULAR WEIGHT CONCRETE OF TYPE H15/AM (m = 15 MPa).
 - SEE ARCHITECTED DRAWINGS FOR SURFACE TEXTURE AND COLOUR.
- MATERIALS - MORTAR AND GROUT:**
 - MORTAR SHALL BE TYPE S PREPARED BY PROPORTION SPECIFICATION (TYPE 10 PORTLAND CEMENT).
 - GROUT FOR CORE-FILLS SHALL BE HIGH-SLUMP CONCRETE.
 - GROUT MIXES SHALL BE PROPORTIONED SO THAT PROPER CONSOLIDATION CAN BE ACHIEVED IN AREAS OF CONGESTED REINFORCEMENT, EMBEDDED HARDWARE, ETC.
 - WALLS TO BE RUNNING BOND UNLESS OTHERWISE DETAILED BY WHM.
 - CELLS TO BE GROUTED ARE TO BE KEPT CLEAN AND CLEAR OF ANY PIPING, CONDUITS OR OTHER MATERIAL.
 - POUR LIFTS FOR GROUT FILLED CORES ARE NOT TO EXCEED 5'-0" (1500MM). IF CLEAN OUTS OR SPECIAL PROCEDURES APPROVED BY WHM ARE PROVIDED, POUR LIFTS MAY BE INCREASED TO MAXIMUM 10'-0" (3000MM).
 - CORE-FILL ALL LOCATIONS RECEIVING ANCHOR RODS AND LOCATIONS WHERE STRUCTURAL STEEL MEMBERS ARE CONNECTED TO THE MASONRY STRUCTURE.
 - TESTING:**
 - a. MORTAR AND GROUT SHALL BE TESTED IN CONFORMANCE WITH THE CODE BY A TESTING AGENCY.
 - b. CLEANOUTS ARE REQUIRED TO DEMONSTRATE ADEQUATE FILL AND CONSOLIDATION. ALTERNATIVELY, THE CONTRACTOR CAN ENGAGE A TESTING AGENCY TO CONFIRM THE REQUIRED CELLS ARE FILLED.

- MATERIALS - REINFORCEMENT:**
 - SEE NOTES SECTION 3.
- MATERIAL - EMBEDDED HARDWARE:**
 - SEE NOTES SECTION 3.
- LOAD-BEARING WALLS:**
 - LOAD BEARING WALLS INCLUDE ALL EXTERIOR WALLS, ELEVATOR SHAFT WALLS, STAIRWAY WALLS, AND ALL WALLS NOTED AS SUCH ON THE PLANS.
 - LOAD BEARING WALLS SHALL BE RUNNING BOND. STACK BOND IS NOT PERMITTED.
 - SEE PLANS AND STANDARD DETAILS FOR REINFORCEMENT.
 - VERTICAL BARS MAY ONLY BE SPLICED AT FLOOR LEVELS.
 - VERTICAL BARS SHALL BE PROVIDED UNDER SUPPORT POINTS OF ALL BEAMS AND JOISTS EXCEPT WOOD JOISTS.
- BOND BEAMS AND HEADERS:**
 - BOND BEAMS SHALL BE PROVIDED ABOVE AND BELOW ALL OPENINGS IN ALL WALLS. SEE DETAILS.
 - BOND BEAM BLOCKS SHALL BE USED FOR ALL BOND BEAM COURSES CONTAINING HORIZONTAL REINFORCEMENT. STANDARD BLOCKS WITH WEBS BROKEN OUT ARE NOT PERMITTED.
 - IN SOME CASES, UNTEL BLOCKS MAY BE USED FOR THE FIRST COURSE OVER AN OPENING. SEE THE ARCHITECTURAL DRAWINGS.

- PILASTERS AND COLUMNS:**
 - PILASTERS SHALL BE BUILT INTEGRALLY WITH THE WALL AND COMPLETELY FILLED WITH CONCRETE GROUT.
 - HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL PILASTERS.
- Structural Steel**
 - N/A

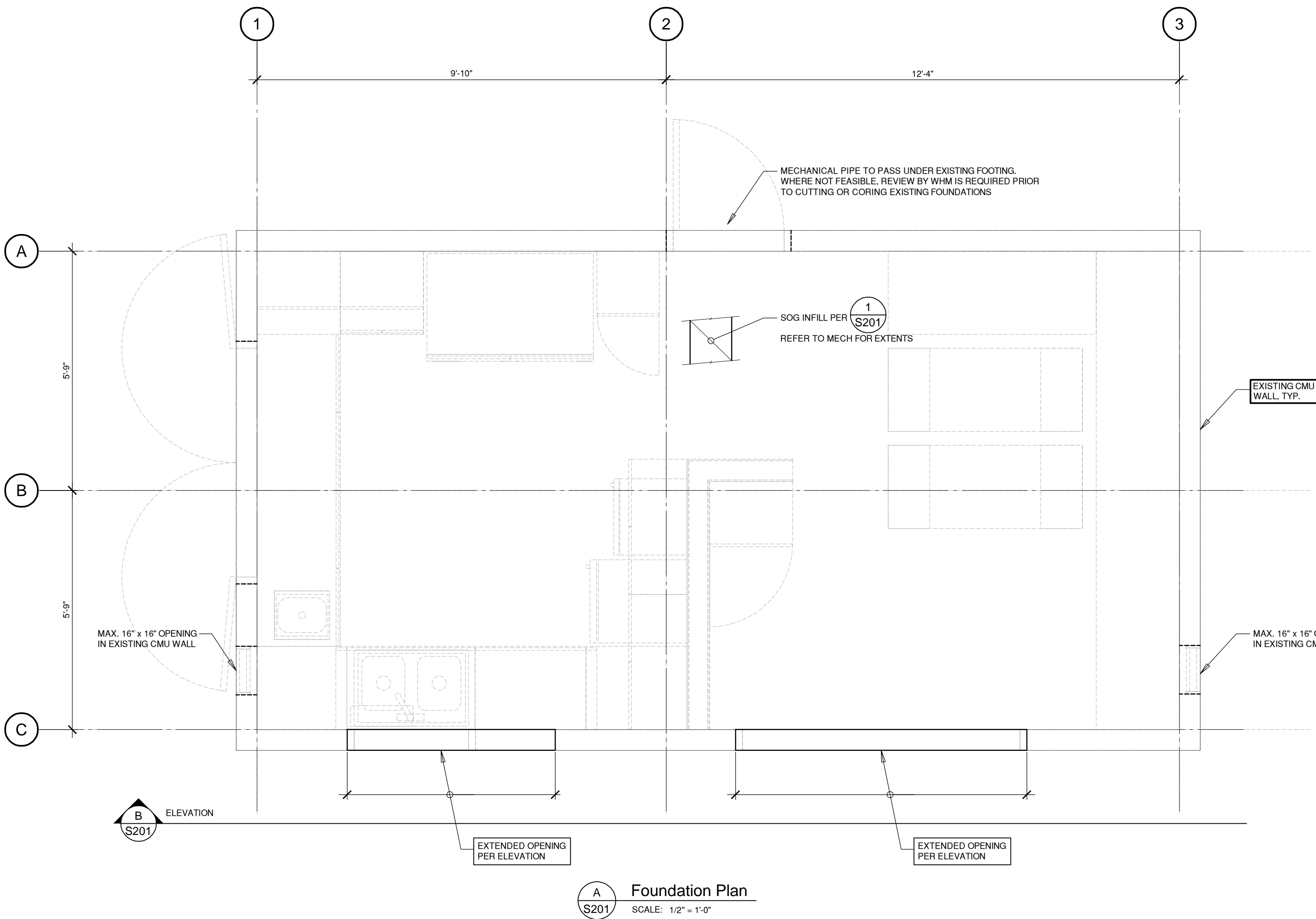
6. Wood Framing

- RESPONSIBILITY:**
 - THE CONTRACTOR SHALL ENSURE ALL WOOD FRAMING IS FABRICATED, DELIVERED, ERECTED, INSTALLED, AND TESTED TO ALL CODE REQUIREMENTS AND TO REQUIREMENTS ON THESE DRAWINGS.
 - THE CONTRACTOR SHALL COORDINATE ALL WOOD FRAMING WITH THE REQUIREMENTS OF OTHER DISCIPLINES INCLUDING BUT NOT LIMITED TO WIRING, SLEEVES, CONDUIT, PIPES, DUCTS, CHASES, OPENINGS, INSERTS, ETC.
 - WOOD FRAMING NOT COMPRISING PART OF THE BASE BUILDING STRUCTURE SHALL COMPLY WITH THE CODE AND MAY BE SPECIFIED ON OTHER DISCIPLINES DRAWINGS, PARTICULARLY THE ARCHITECTURAL DRAWINGS.
- CODE:**
 - WOOD FRAMING SHALL CONFORM IN ALL RESPECTS TO THE CODE AND ALL REFERENCED DOCUMENTS.
 - a. GENERAL WOOD DESIGN AND CONSTRUCTION: CSA O86.
 - b. ALL REFERENCE PUBLICATIONS LISTED IN SECTION 2.4 OF O86. THIS LIST CAN BE PROVIDED TO THE CONTRACTOR UPON REQUEST.
 - ADHERE TO PART 9 OF THE CODE FOR ALL WOOD FRAMING UNLESS MORE STRINGENT REQUIREMENTS ARE SPECIFIED IN THESE DRAWINGS.
- WORKMANSHIP:**
 - ALL WOOD FRAMING:
 - a. SHALL BE BUILT LEVEL, SQUARE, AND PLUMB AND TO THE DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.
 - b. SHALL BE APPROPRIATELY PROTECTED FROM ADVERSE CONDITIONS SUCH AS RAIN AND DELETERIOUS SHELING, ETC., IN CONFORMANCE WITH THE CODE. IN PARTICULAR, FOLLOW ALL RECOMMENDATIONS FROM THE MANUFACTURERS OF ENGINEERED WOOD PRODUCTS IN THIS REGARDS.
 - ALL SAWN TIMBER SHRINKS OVER TIME. FINISHES SHALL BE DETAILED TO ACCOMMODATE SUCH SHRINKAGE.
 - DRILLING AND NOTCHING OF STRUCTURAL MEMBERS SHALL CONFORM TO THE CODE. BEAMS AND POSTS SHALL NOT BE DRILLED OR NOTCHED UNLESS PRE-APPROVED BY WHM.
- MATERIALS - SAWN TIMBER:**
 - ALL SAWN TIMBER SHALL BE S4S UNLESS THE ARCHITECT SPECIFIES ROUGH-SAWN FINISH.
 - SPECIFIED SIZES FOR SAWN TIMBER ARE NOMINAL (i.e. 2x10 IS 1.5"x9.25" DEEP).
 - SAWN TIMBER SHALL BE GRADED AND CLEARLY STAMPED BY THE MANUFACTURER AS FOLLOWS:
 - a. WALL PLATES: D.FIR-L NO 2 OR BETTER
 - b. STUDS: NO STUD GRADE
 - c. BUILT-UP POSTS: AS STUDS
 - d. JOISTS: SPF NO. 2 OR BETTER; KILN DRIED
 - e. BUILT-UP BEAMS: AS JOISTS
 - f. GENERAL FRAMING: SPF NO. 2 OR BETTER
- MATERIALS - MANUFACTURED/ENGINEERED WOOD PRODUCTS:**
 - SPECIFIED SIZES FOR MANUFACTURED/ENGINEERED WOOD PRODUCTS ARE ACTUAL (i.e. 3.5"x9.5" PARALLAM IS EXACTLY 3.5"x9.5" DEEP). SEE TABLES.
 - MANUFACTURED/ENGINEERED WOOD PRODUCTS SHALL BE GRADED AND CLEARLY STAMPED BY THE MANUFACTURER AS FOLLOWS:
 - a. PSL: 2.2E GRADE PARALLAM BY WEYERHAEUSER OR 1.8E GRADE PARALLAM FOR POSTS
 - b. LSL: 1.5E GRADE TIMBERSTRAND BY WEYERHAEUSER OR 1.3E GRADE TIMBERSTRAND FOR 1 1/4" RIM BOARDS
 - c. LVL: 2.0E GRADE MICROLAM BY WEYERHAEUSER.
 - d. PLYWOOD: D.FIR PLYWOOD - UNSANDED SHEATHING GRADE. TYPE 1 (STANDARD) OR TYPE 2 (PLUS) DESIGN-RATED OSB.
- MATERIALS - HARDWARE:**
 - ALL FRAMING CONNECTORS CALLED OUT ON PLAN ARE BY SIMPSON STRONG-TIE. REFER TO THE LATEST SIMPSON STRONG-TIE CATALOGUE FOR INSTALLATION REQUIREMENTS, INCLUDING NAILS, SCREWS, AND APPROPRIATE ORIENTATION.
 - ANCHOR RODS/BOLTS: ASTM A36 OR F1554 GR 36 (Fy = 36ksi/248Mpa AND Fu = 58-80ksi/405-552 Mpa), UNLESS NOTED OTHERWISE ON PLANS.
 - NAILS:
 - a. CSA B111 OR APPROVED EQUIVALENT
 - b. NO.12 WOOD SCREWS OR SMALLER SHALL BE ONE OF THE FOLLOWING:
 - ASME B18.6.1;
 - SIMPSON STRONG-DRIVE (SD) SCREWS
 - SELF DRILLING WOOD SCREWS SHALL BE HARDENED HIGH STRENGTH STEEL BY ONE OF THE FOLLOWING PRE-APPROVED BRANDS, UNO:
 - DIAMETER SDS SCREWS BY SIMPSON STRONG-TIE
 - R6S SCREWS BY GRK
 - SWISSCREW BY SWISS
 - RAPID SCREWS BY SCHMID
 - REFER TO PLANS FOR SPECIFICATION OF ANY FULLY THREADED SELF DRILLING SCREWS OR SCREWS WITH DIFFERENT DIAMETERS THAN ABOVE.

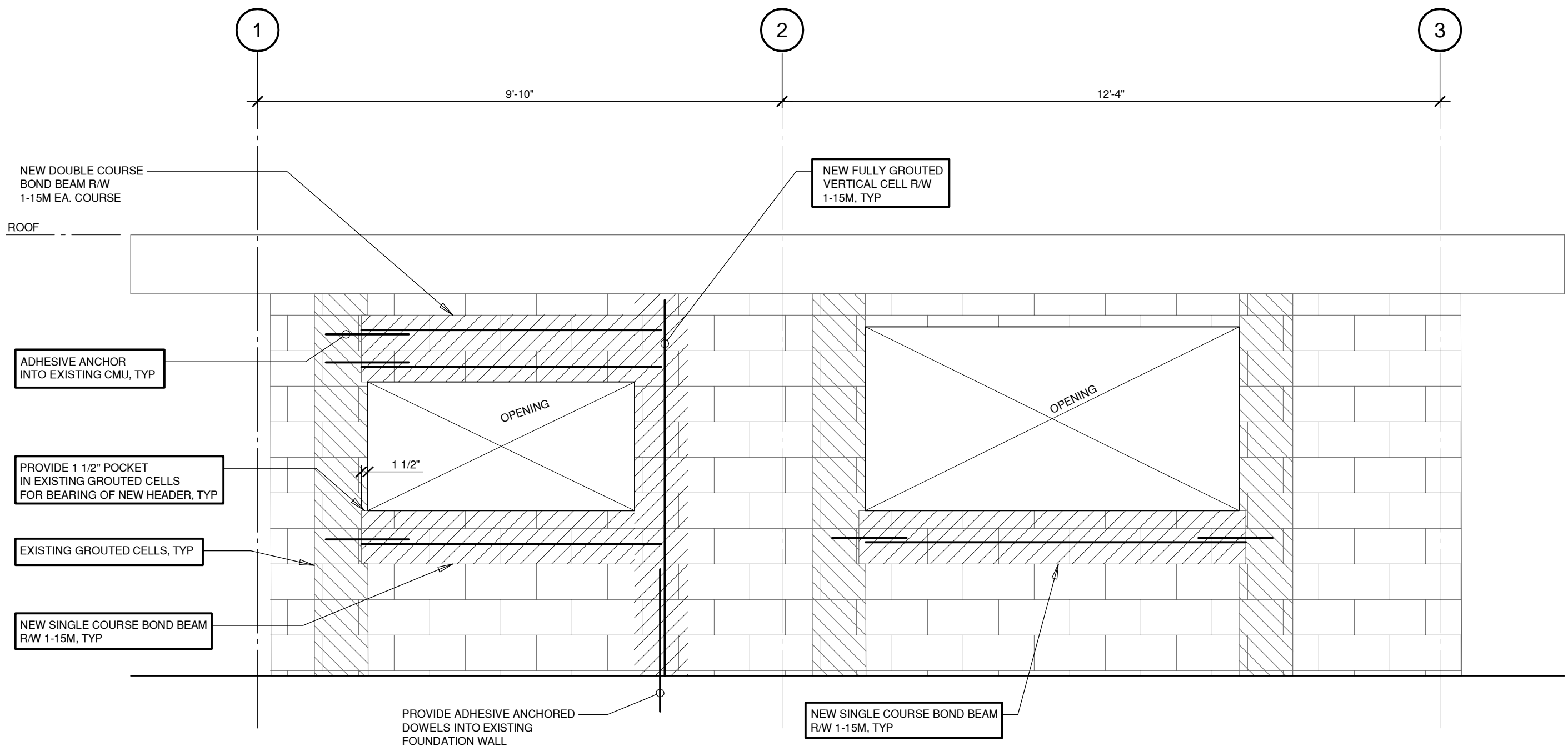
- MOISTURE:**
 - INTERIOR FRAMING (i.e. CONTAINED WITHIN THE BUILDING ENVELOPE) IS DESIGNED FOR DRY SERVICE CONDITIONS. SEE ARCHITECTURAL AND BUILDING ENVELOPE DRAWINGS FOR WATERPROOFING AND VENTILATION DETAILS.
 - EXTERIOR FRAMING IS DESIGNED FOR WET SERVICE CONDITIONS.
 - EXTERIOR FRAMING SHALL BE PRESERVATIVE TREATED BUT SHALL NOT BE INCISED TO FACILITATE THE TREATMENT. INCISIONS REDUCE TIMBER STRENGTH, AND THIS HAS NOT BEEN ACCOUNTED FOR IN THE DESIGN.
 - ALL CONNECTION HARDWARE FOR EXTERIOR FRAMING SHALL BE HOT-DIPPED GALVANIZED. THE CONTRACTOR SHALL ENSURE THAT PRESERVATIVE TREATMENT WILL NOT CORRODE OR OTHERWISE REDUCE THE STRENGTH OF THE HARDWARE.
 - ALL SAWN TIMBER MEMBERS SHALL HAVE A MOISTURE CONTENT NO GREATER THAN 19% AT THE TIME OF INSTALLATION. REFER TO THE BUILDING ENVELOPE AND ARCHITECTURAL DRAWINGS FOR MORE STRINGENT REQUIREMENTS.
 - AS A MINIMUM, COVER ANY TIMBER ELEMENTS STORED ON SITE WITH SLOPED AND VENTED PROTECTIVE TARPIS. STORE OFF THE GROUND ON SPACER BLOCKS.
 - PROVIDE A CONTIGUOUS MOISTURE BARRIER BETWEEN ALL WOOD ELEMENTS AND CONCRETE.
- SHEATHING:**
 - PLYWOOD PANELS SHALL BE USED FOR ALL SHEATHING APPLICATIONS. IF OSB IS PROPOSED AS A SUBSTITUTE, THE CONTRACTOR SHALL PROVIDE SPECIFICATIONS FROM THE MANUFACTURER FOR THE TYPE AND GRADE OF THE PROPOSED SUBSTITUTE PANELS. IF FOUND ACCEPTABLE TO WHM, THE OWNER SHALL ALSO REVIEW AND APPROVE THE SUBSTITUTION PRIOR TO ENACTMENT.
 - PANELS SHALL BE MINIMUM 4' x 8' IN SIZE AND SHALL SPAN ACROSS THE MAXIMUM NUMBER OF SUPPORTS AT ALL LOCATIONS.
 - PANELS SHALL BE LAID IN A STAGGERED PATTERN. STAGGER BY 50% OF THE LONG PANEL DIMENSIONS.
 - SHEATHING FOR FLOORS, ROOFS, AND EXTERIOR WALLS SHALL BE LAID WITH SURFACE GRAINS AT RIGHT ANGLES TO THE SUPPORTING JOISTS, TRUSSES, OR RAFTERS.
 - INTERIOR SHEARWALL SHEATHING SHALL BE LAID WITH SURFACE GRAINS EITHER PARALLEL OR PERPENDICULAR TO THE SUPPORTING STUDS. SEE SHEARWALL TABLE FOR ADDITIONAL REQUIREMENTS.
 - REFER TO PLANS FOR WALL, FLOOR, AND ROOF SHEATHING THICKNESS AND FASTENING.

- JOISTS, HEADERS, BEAMS, AND GIRDS:**
 - JOISTS:**
 - a. SHALL ALIGN WITH STUDS IN SUPPORTING WALLS WHEREVER POSSIBLE.
 - b. PROVIDE CROSS BRIDGING PER PART 9 OF THE CODE AT MAXIMUM 6'-10" SPACING.
 - HEADERS, BEAMS, AND GIRDS:**
 - a. PROVIDE BUILT-UP POSTS AT ALL GIRDER SUPPORTS AND CARRY DOWN TO FOUNDATIONS WITH SOLID BLOCKING OF CROSS SECTION GREATER THAN THAT OF POSTS. THE MINIMUM POST SHALL EQUAL THE NUMBER OF GIRDER PLUS PLUS ONE.
 - b. PROVIDE BUILT-UP POSTS AT ALL BEAM SUPPORTS AND CARRY DOWN TO FOUNDATIONS WITH SOLID BLOCKING OF CROSS SECTION GREATER THAN THAT OF POSTS.
- Foundations and Soils**

- ALL FOUNDATION AND SOILS WORK:**
 - SHALL CONFORM TO THE CODE, THE GEOTECHNICAL REPORT, AND AS NOTED HEREIN.
- THE GEOTECHNICAL ENGINEER:**
 - SHALL BE FULLY RESPONSIBLE FOR ALL ENGINEERING ASPECTS OF THE SOILS IN RELATION TO THE BASE BUILDING STRUCTURE. THESE ASPECTS INCLUDE, BUT ARE NOT LIMITED TO VERTICAL SOIL PRESSURE, LATERAL SOIL PRESSURE, RECOMMENDATIONS REGARDING THE TYPES OF FOUNDATIONS TO BE USED, SOIL-DEPENDENT CAPACITIES OF DEEP FOUNDATIONS (PIERS, PILES, ETC.) INCLUDING ANY CAPACITY LIMITATIONS IMPOSED BY DRIVING STRESSES. INSTALLATION PROCEDURES INCLUDING WELDED AND OTHER SPLICES FOR DEEP FOUNDATIONS.
 - RECOMMENDATIONS REGARDING CORROSION OF CONCRETE OR STEEL REINFORCEMENT, PILING, ETC.) FOUNDATION COMPONENTS. SUBGRADE FOR SLABS-ON-GRADE, SEISMIC SITE FACTORS, BACKFILL, EXCAVATIONS, UNDERPINNING OF EXISTING STRUCTURES TO TRANSMIT EXISTING FOUNDATION LOADS TO A LEVEL AT WHICH THEY WILL NOT EXERT ANY LOADS ON THE BASE BUILDING STRUCTURE. FIELD REVIEW OF ITEMS DOCUMENTED ABOVE WITH SIGNED AND SEALED FIELD REPORTS SUBMITTED TO THE BUILDING OFFICIAL AND WHM.
- FOUNDATIONS FOR THIS PROJECT:**
 - CONSIST OF EXISTING CONVENTIONAL SPREAD FOOTINGS

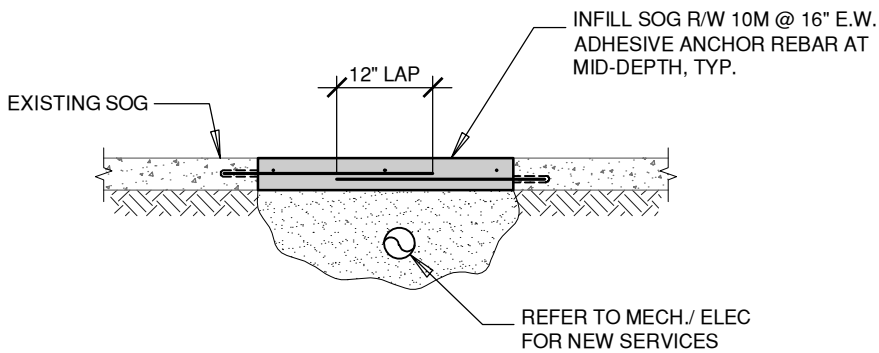


Foundation Plan
SCALE: 1/2" = 1'-0"



Elevation
SCALE: 1/2" = 1'-0"

Concrete Table: Mix Requirements			
COMPONENT	MIN. 28 DAY STRENGTH f _c (MPa)	MAX. AGGREGATE SIZE	EXPOSURE CLASS
FOOTINGS			
REGULAR	25	1 1/2" (40mm)	N
SLABS ON GRADE			
INTERIOR	25	3/4" (20mm)	N
WALLS			
REGULAR & LANDSCAPE	25	3/4" (20mm)	N, OR F-2 FOR EXT. EXP.
MASONRY GROUT / FILL	20	3/8" (10mm)	N
Notes: 1. AIR CONTENT AND SLUMP TO ADHERE TO THE CODE. 2. EXT. EXP. DENOTES "EXTERIOR EXPOSURE TO WEATHER OR FREEZING". 3. AS AN ALTERNATIVE TO CLASS C-XL CONCRETE, CLASS C-1 MAY BE USED WITH 14.4 Lit ³ OF 30% SOLUTION OF CALCIUM NITRATE. 4. FOR SHOTCRETE WALLS, INCREASE ABOVE-NOTED 28 DAY STRENGTH BY 5 MPa. 5. FOR AREAS OF CONGESTED REINFORCING, CONTRACTOR TO CONSIDER SMALLER AGGREGATE SIZE THAN THE MAX. AGGREGATE SIZE SHOWN.			



Typical Slab On Grade Repair
SCALE: NTS

Plan Notes
DIMENSIONS AND ELEVATIONS: <ul style="list-style-type: none">CONTRACTOR TO THOROUGHLY REVIEW ALL DIMENSIONS AND ELEVATIONS SHOWN ON THIS DWG. COMPARE THEM WITH ARCH. AND REPORT ANY DISCREPANCIES TO WHM AND THE ARCH IMMEDIATELY."MAX" OR "MIN" INDICATES STRUCTURAL REQUIREMENTS. BUILD TO THE ARCH. DIMENSIONS AND ELEVATIONS PROVIDED THE STRUCTURAL REQUIREMENTS ARE MET.
EXISTING CONDITIONS: <ul style="list-style-type: none">CONTRACTOR TO SITE VERIFY ALL EXISTING STRUCTURE NOTED ON PLAN AND REPORT TO WHM, IF DIFFERENT, PRIOR TO CONSTRUCTION.WHERE EXISTING STRUCTURE IS NOT NOTED ON PLAN, CONTRACTOR TO SITE CONFIRM AND REPORT ALL EXISTING STRUCTURE IN THE VICINITY OF NEW WORK TO WHM PRIOR TO CONSTRUCTION.
SLABS ON GRADE: <ul style="list-style-type: none">SAWCUT CONTROL JOINTS 1/8" (3.2mm) x 3/4" (19mm) DP, IN GRID PATTERN @ 15'-0" (4500mm) O.C. MAX. EACH WAY WITHIN 18 HOURS OF FINISHING SLABS. ZIP STRIPS MAY BE USED BUT MUST BE APPROVED BY THE ARCHITECT PRIOR TO USE. INSTALL DIAMOND-PATTERN CONTROL JOINTS AROUND ALL ISOLATED COLUMNS AND FREE ENDS OF WALLS.PREPARATION OF UNDERLYING SOILS AND SUB-BASE DESIGN PER GEOTECH.

Concrete Table: Anchors				
DESIGNATION	OPTION	ALLOWABLE TYPE		
ANCHOR(S): EG. 3/4" (19mm) Ø C.I.P. ANCHOR. NOTE: IF OPTION NOT SPECIFICALLY CALLED UP, USE ANY ADJACENT OPTION SHOWN.	CAST IN PLACE (C.I.P.)	J-BOLT OR DOUBLE NUT PER DETAIL BELOW		
	ADHESIVE ANCHOR	ADHESIVE OPTIONS: HIT-HY100, HIT-HY200 (TYPE 'A' OR TYPE 'R') OR HIT-RE500 V3 ANCHOR ROD OPTIONS: HIT-Z ROD, HAS V-36, ASTM 1554 GRADE 36 ROD OR REBAR		
	EXPANSION ANCHOR (NOT PERMITTED WITHIN 6" (150mm) OF ANY CONCRETE EDGE)	KWIK BOLT-TZ		
TENSION ANCHOR(S): EG. 3/4" (19mm) Ø C.I.P. TENSION ANCHOR. NOTE: IF OPTION NOT SPECIFICALLY CALLED UP, USE ANY ADJACENT OPTION SHOWN.	CAST IN PLACE (C.I.P.)	DOUBLE NUT PER DETAIL BELOW		
	ADHESIVE ANCHOR	ADHESIVE OPTIONS: HIT-RE500 V3 ANCHOR ROD OPTIONS: HIT-Z ROD, HAS V-36, ASTM 1554 GR.36 ROD OR REBAR		
	EXPANSION ANCHOR	N/A		
EMBEDMENT UNO ON PLAN/DETAIL (Also See Note 3 Below) :				
ANCHOR Ø / REBAR SIZE	CAST IN PLACE (C.I.P.) ANCHORS	EXPANSION ANCHORS	ADHESIVE ANCHORS	TENSION ANCHORS (ADHESIVE / C.I.P.)
3/8" (10mm)	2" (50mm)	2" (50mm)	3" (75mm)	5" (125mm)
1/2" (13mm)	3" (75mm)	3" (75mm)	4" (100mm)	6" (150mm)
5/8" (16mm)	4" (100mm)	4" (100mm)	4" (100mm)	7" (175mm)
3/4" (19mm)	4" (100mm)	4 3/4" (120mm)	4" (100mm)	8" (200mm)
7/8" (22mm)	5" (125mm)	N/A	5" (125mm)	10" (250mm)
1" (25mm)	6" (150mm)		6" (150mm)	12" (300mm)
1 1/4" (32mm)	8" (200mm)		8" (200mm)	16" (400mm)
10M	N/A		4" (100mm)	9" (225mm)
15M			6" (150mm)	12" (300mm)
20M			7" (175mm)	15" (375mm)
25M			8" (200mm)	17" (430mm)
30M			10" (250mm)	21" (525mm)

CAST IN PLACE ANCHORS

DOUBLE NUT (1 NUT EACH SIDE OF WASHER)

3" (75mm) HOOK

PER TABLE

PER TABLE

• FOR ANCHORS ≤ 3/4" (19mm) Ø PROVIDE 2" (50mm) Ø x 1 1/4" (6mm) THK. PLATE WASHER.

• FOR ANCHORS ≥ 7/8" (22mm) Ø PROVIDE 3" (75mm) x 3" (75mm) x 1/2" (13mm) THK. PLATE WASHER.

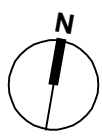
Notes:

- REFER TO GENERAL NOTES FOR FURTHER INFORMATION.
- ALL ANCHOR RODS INCLUDING NUTS AND WASHERS TO BE GALVANIZED OR ZINC PLATED CARBON STEEL UNO.
- IF LESS THAN 3" (75mm) FOR ANY TYPE OF ANCHOR CONTACT WHM FOR FURTHER INSTRUCTION.

Concrete Table: Embedment And Lap Lengths						
TYPE	28 DAY CONCRETE STRENGTH f _c (MPa)	BAR DIAMETER				
		10M	15M	20M	25M	30M
EMBEDMENT LENGTH (E. LEN.)	25 OR LOWER	13" (325mm)	18" (450mm)	22" (550mm)	36" (900mm)	43" (1075mm)
	30	12" (300mm)	17" (425mm)	20" (500mm)	33" (825mm)	39" (975mm)
	35 OR HIGHER	12" (300mm)	16" (400mm)	19" (475mm)	32" (800mm)	38" (950mm)
	35 OR HIGHER	14" (350mm)	20" (500mm)	25" (625mm)	40" (1000mm)	47" (1175mm)
TENSION LAP LENGTH (T. LAP)	25 OR LOWER	17" (425mm)	24" (600mm)	29" (725mm)	47" (1175mm)	55" (1375mm)
	30	16" (400mm)	22" (550mm)	27" (675mm)	43" (1075mm)	51" (1275mm)
	35 OR HIGHER	14" (350mm)	20" (500mm)	25" (625mm)	40" (1000mm)	47" (1175mm)
	35 OR HIGHER	14" (350mm)	20" (500mm)	25" (625mm)	40" (1000mm)	47" (1175mm)
COMPRESSION LAP LENGTH (C. LAP)	ALL f _c	12" (300mm)	18" (450mm)	24" (600mm)	30" (750mm)	36" (900mm)
	ALL f _c	12" (300mm)	18" (450mm)	24" (600mm)	30" (750mm)	36" (900mm)
LAP LENGTH - MASONRY:	24" (600mm)	32" (800mm)	36" (900mm)	54" (1350mm)	-	-
	24" (600mm)	32" (800mm)	36" (900mm)	54" (1350mm)	-	-
Note: 1. FOR HORIZONTAL BARS WITH MORE THAN 12" (300) CONCRETE COVER BELOW THE BAR, MULTIPLY LENGTHS NOTED ABOVE BY 1.3 (DOES NOT INCLUDE HORIZONTAL BARS IN WALLS) 2. LENGTHS NOTED ABOVE ARE FOR F _y = 400 MPa BAR REINFORCEMENT. FOR F _y = 500MPa, MULTIPLY LENGTHS BY 1.25						

Issue			
1	2025-04-15	Issued For	Schematic Design
2	2025-04-29	Issued For	Pricing
3	2025-06-02	Issued For	Building Permit
4	2025-07-11	Issued For	RFP

Revision	
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Scale	Status
AS NOTED	
Date	Project No.
2025-07-11	24262
Drawn	Checked
AD	JD