

GENERAL NOTES

GENERAL

- WHERE CODES AND STANDARDS ARE REFERENCED IN THE GENERAL NOTES, THEY SHALL BE THE LATEST EDITIONS, UNLESS OTHERWISE NOTED OR SHOWN.
- READ STRUCTURAL DRAWINGS IN CONJUNCTION WITH SEPARATELY BOUND SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS. WHERE DISCREPANCY IS FOUND BETWEEN STRUCTURAL DRAWINGS AND SPECIFICATIONS, COMPLY WITH THE MORE STRINGENT REQUIREMENT.
- 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 CONSULTANT BEFORE PROCEEDING WITH THE WORK.
- CHECK AND VERIFY IN THE FIELD ALL SIZES AND DIMENSIONS INVOLVING THE EXISTING OR CONSTRUCTED STRUCTURE AND COORDINATE WITH NEW CONSTRUCTION.
- VERIFY AND OBTAIN PRIOR APPROVAL OF DIMENSIONS AND LOCATIONS OF ALL OPENINGS, PIPE SLEEVES, SLOTS, TRENCHES AND ELECTRICAL FLOOR DUCTS AS REQUIRED BY OTHER TRADES.
- NO OPENINGS OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE MADE THROUGH SLABS, BEAMS OR BEARING WALLS, UNLESS PRIOR APPROVAL IS OBTAINED FROM THE CONSULTANT.
- DO NOT EXCEED DURING CONSTRUCTION, GRAVITY LOADS SHOWN ON PLANS, REDUCED AS NECESSARY UNTIL MATERIALS REACH DESIGN STRENGTH.
- DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE. ELEVATIONS ARE IN METERS UNLESS NOTED OTHERWISE.
- DO NOT USE THESE DRAWINGS FOR CONSTRUCTION UNLESS AN "ISSUED FOR CONSTRUCTION" REVISION IS INDICATED.
- SCALES NOTED ON DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DO NOT SCALE DRAWINGS.
- TYPICAL, STRUCTURAL DETAILS SHOWN IN DRAWING SERIES S10 SHALL GOVERN THE WORK. IF DETAILS DIFFER ON OTHER DRAWINGS, THE MOST STRINGENT GOVERNS. TYPICAL DETAILS SHOW STRUCTURAL INTENT AND MAY NOT MATCH PROJECT SPECIFICS.
- ALL MECHANICAL SYSTEMS SUSPENDED LOADS EXCEEDING 50 kg SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION UNLESS SPECIFICALLY DET AILED OR NOTED ON THE STRUCTURAL DRAWINGS.
- UNIT FLOOR AND ROOF LOADINGS GIVEN ON DRAWINGS ARE UNFACTORED. MEMBER FORCES GIVEN ON DRAWINGS ARE FACTORED.
- REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FIRE RATINGS AND REQUIREMENTS.
- NO LOAD RESTRICTIONS WERE ASSUMED IN THE DESIGN FOR THE PURPOSES OF MEETING SPECIFIC ULC ASSEMBLIES. CONTRACTOR SHALL VERIFY COMPLIANCE OF SELECTED ASSEMBLIES AND APPLY NECESSARY FIRE PROOFING MATERIAL TO MEET THE SPECIFIED FIRE RATINGS.
- REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ALL WATER PROOFING AND THERMAL INSULATION REQUIREMENTS. WHERE INFORMATION IS GIVEN BOTH IN STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR THE SAME LOCATION, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
- DO NOT DISTURB EXISTING OR CONSTRUCTED FOUNDATIONS ADJACENT TO THE PROPOSED CONSTRUCTION. MAKE GOOD ANY DAMAGE.

CONSTRUCTION

- THE CONTRACTOR SHALL PROPOSE A FULL METHODOLOGY FOR EXECUTING THE WORK.
- THE CONTRACTOR SHALL DEMONSTRATE THE STABILITY AND SAFETY OF ALL ELEMENTS OF THE BUILDING DURING EVERY STAGE OF CONSTRUCTION.

MATERIALS

- SEE SPECIFICATIONS FOR CLASS OF CONCRETE AND OTHER REQUIREMENTS.

CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS:
- FOOTINGS 30 MPa
- SLAB ON GRADE 30 MPa
- SHEAR WALLS 30 MPa
- CONC. FILL, MUD SLABS 15 MPa
- SIDEWALKS AND SOO EXPOSED TO SALT 32 MPa (C-2)
- STRUCTURAL MEMBERS EXPOSED TO SALT 35 MPa (C-1)
- OTHER 35 MPa
- STRUCTURAL STEEL:
- STRUCTURAL WIDE FLANGES AND WELDED WIDE FLANGE SHAPES (W WVF) TO CONFORM TO CSA/CAN-G40.20/G40.21 GRADE 350W.
- CHANNELS AND ANGLES (C L) CSA/CAN-G40.20/G40.21 GRADE 300W.
- ALL PLATE AND PLATE FABRICATED MEMBERS TO CONFORM TO CSA/CAN-G40.20/G40.21 GRADE 300W.
- HOLLOW STRUCTURAL SECTIONS (HSS) TO CONFORM TO CSA/CAN-G40.20/G40.21 CLASS C OR C GRADE 300W UNLESS NOTED OTHERWISE.
- REINFORCEMENT:
- CONFORM TO CSS G30 SERIES, fy = 400 MPa FOR ALL CONCRETE REINFORCEMENT EXCEPT fy = 440 MPa FOR WELDED WIRE FABRIC. PROVIDE WELDED WIRE FABRIC IN FLAT SHEETS ONLY. ALL REINFORCEMENT OS TO BE BLACK EXCEPT WHERE THE SUFFIX 'C' IS USED TO DESIGNATE EPOXY COATED REINFORCEMENT.
- REINFORCING AREAS ARE 100, 200, 300, 500, 1000, 1500 AND 2500 sq. mm FOR BAR DESIGNATIONS 10, 15, 20, 25, 30, 35, 45 AND 55 RESPECTIVELY.
- ANCHOR RODS:
- CONFORM TO ASTM A36 / ASTM F1554 GRADE 36, WELDABLE, UNLESS OTHERWISE NOTED OR SHOWN.
- STRUCTURAL BOLTS, NUTS AND WASHERS:
- CONFORM TO ASTM F3125 GRADE A325M.
- HEADED STUDS:
- CONFORM TO ASTM A108 GRADE C-1015 THROUGH C-1020, Fy = 350 MPa.
- NON-SHRINK GROUT: COMPRESSIVE STRENGTH 35 MPa (@ 28 DAYS)
- MISCELLANEOUS
- FOUNDATION INSULATION:
- EXTRUDED POLYSTYRENE WITH A MINIMUM COMPRESSIVE STRENGTH OF 0.24 MPa UNLESS OTHERWISE NOTED.

FORMWORK

- FORMWORK SHALL CONFORM TO THE REQUIREMENTS OF CSA S269.1 AND AGI 347 AND AGI SP-004.
- FORMWORK SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER OF THE PROVINCE OF ONTARIO TO WITHSTAND ALL SUPERIMPOSED LOADS DURING CONSTRUCTION.
- SHORING, RE-SHORING AND CONSTRUCTION LOADS SHALL BE CONTROLLED TO ENSURE THAT NO STRUCTURAL ELEMENT IS OVERTRESSED.
- MAKE NECESSARY ALLOWANCE FOR FORMWORK CREEP AND DEFLECTION AND ADJUST ACCORDINGLY TO ACHIEVE THE ELEVATION FOR THE COMPLETION OF THE JOB.
- CONSTRUCTION JOINTS SHALL BE MADE AND LOCATED AND SO AS NOT TO IMPAIR THE STRENGTH OF THE STRUCTURE.
- IF CONSTRUCTION JOINTS ARE NOT SPECIFICALLY LOCATED AND THERE IS ANY DOUBT OR DISCREPANCY REGARDING THE LOCATION, THE CONTRACTOR SHALL INFORM AND OBTAIN APPROVAL OF THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
- INDICATE THE CONSTRUCTION JOINTS AND POURING SEQUENCES FOR THE REVIEW OF THE CONSULTANT PRIOR TO PLACING OF CONCRETE. THE CONTRACTOR SHALL MAKE NECESSARY ALLOWANCE FOR ANY VARIATION AND/OR ANY REVISIONS MADE ON ACCOUNT OF SUB-TRADES AND PRODUCT SELECTION FOR THE COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL MAKE NECESSARY ALLOWANCE FOR ANY VARIATION AND/OR ANY REVISIONS MADE ON ACCOUNT OF SUB-TRADES AND PRODUCT SELECTION FOR THE COMPLETION OF THE PROJECT.

DESIGN AND ERECTION OF TEMPORARY WORK

- STRUCTURAL DRAWINGS DO NOT NECESSARILY INDICATE THE FULL EXTENT OF TEMPORARY WORKS REQUIRED TO COMPLETE THE PROJECT.
- DESIGN OF TEMPORARY WORKS, INCLUDING DEMOLITION, SHORING, AND UNDERPINNING SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER REGISTERED IN ONTARIO WITH DEMONSTRATED EXPERIENCE IN SIMILAR SIZE AND SCOPE OF TEMPORARY WORKS.
- SUBMIT DRAWINGS AND CALCULATIONS SEALED BY THE CONTRACTOR'S PROFESSIONAL ENGINEER SHOWING COMPLETE DESIGN INCLUDING TEMPORARY CONDITIONS, FINAL CONDITIONS AND SEQUENCE OF WORK.

EXISTING CONSTRUCTION

- CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS.
- NOTED DIMENSIONS AND CONDITIONS OF EXISTING BUILDINGS AND OTHER STRUCTURES ARE SHOWN BASED ON THE ORIGINAL DRAWINGS OR PARTIAL SURVEY INDICATED BELOW AND HAVE NOT BEEN COMPLETELY FIELD VERIFIED. THE OWNER AND ARCHITECT/ENGINEER TAKE NO RESPONSIBILITY FOR THE ACCURACY OF EXISTING DIMENSIONS SHOWN. FIELD MEASURE EXISTING DIMENSIONS PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO ARCHITECT/ENGINEER IN WRITING.
- VERIFY CONDITIONS COVERING OR AFFECTING THE WORK: OBTAIN VERIFIED ALL DIMENSIONS AND ELEVATIONS TO ENSURE THE PROPER STRENGTH, FIT AND LOCATION OF THE WORK. REPORT TO THE ARCHITECT/ENGINEER ANY AND ALL CONDITIONS WHICH MAY INTERFERE WITH OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK. FULLY RESOLVE ALL DISCREPANCIES PRIOR TO COMMENCING WORK.
- EXISTING CONSTRUCTION NOT UNDERGOING ALTERATION IS TO REMAIN UNDISTURBED. WHERE SUCH CONSTRUCTION IS DISTURBED AS A RESULT OF THE OPERATIONS OF THIS CONTRACT, REPAIR OR REPLACE AS REQUIRED AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- VERIFY THE EXISTENCE, LOCATION AND ELEVATION OF EXISTING UTILITIES, SEWERS, DRAINS, ETC. IN DEMOLITION AREAS BEFORE PROCEEDING WITH THE WORK. ALL DISCREPANCIES SHALL BE DOCUMENTED AND REPORTED TO THE ARCHITECT/ENGINEER.
- SHOULD UNCHARTED OR INCORRECTLY CHARTED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONSULT THE OWNER'S REPRESENTATIVE FOR DIRECTION.
- PROVIDE FIRE WATCH DURING THE FIELD CUTTING AND WELDING OPERATIONS, MEETING THE OWNER'S REQUIREMENTS.
- PROVIDE TEMPORARY PROTECTION OF EXISTING EQUIPMENT DURING EXECUTION OF THE WORK, SATISFYING THE OWNER'S REQUIREMENTS.
- COORDINATE WORK WITH THE OWNER'S PERSONNEL TO AVOID ANY INTERFERENCE IN THEIR OPERATIONS.

CONCRETE AND REINFORCEMENT

- UNLESS OTHERWISE NOTED, ALL DOWELS SHALL HAVE A MINIMUM EMBEDMENT EQUIVALENT TO THE STRAIGHT TENSION EMBEDMENT LENGTH CORRESPONDING TO THE SIZE OF BAR. DOWELS FROM WALLS TO SLABS SHALL HAVE A MINIMUM EMBEDMENT OF 600 mm INTO WALLS AND SLABS UNLESS OTHERWISE NOTED OR SHOWN.
- PROVIDE DOWELS SIMILAR IN NUMBER, SIZE AND SPACING TO THE VERTICAL STEEL IN THE WALL OR COLUMN ABOVE UNLESS OTHERWISE NOTED OR SHOWN.
- TACK WELDING OF REINFORCEMENT IS NOT PERMITTED. WELDED SPLICES IN REINFORCING BARS WILL ONLY BE PERMITTED IF EXPLICITLY SHOWN ON THE STRUCTURAL DRAWINGS OR IF WRITTEN APPROVAL IS GIVEN BY THE CONSULTANT.
- ALL REINFORCEMENT SHALL BE SECURELY HELD IN PROPER POSITION WHILE POURING CONCRETE. CHAIRS, TIES, SPACERS, ADDITIONAL BARS AND STIRRUPS SHALL BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL REINFORCEMENT.
- CONSTRUCTION JOINTS SHALL BE DOWELED, KEYED AND THOROUGHLY CLEANED. ALL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
- OPENINGS, SLEEVES, EMBEDDED DUCTS:
NO OPENINGS, SLEEVES OR EMBEDDED DUCTS OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE MADE PLACED THROUGH SLABS, BEAMS OR BEARING WALLS, UNLESS PRIOR APPROVAL IS OBTAINED FROM THE CONSULTANT.
- MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 150 mm (6") OR ONE FULL MESH, WHICHEVER IS GREATER.
- COORDINATE AND INSTALL ALL REQUIRED EMBEDDED ITEMS, INSERTS, SLEEVES, POCKETS, ETC. AS REQUIRED PRIOR TO PLACEMENT OF CONCRETE.
- ALL CONCRETE SURFACES INDICATED AS "ACC" ON STRUCTURAL OR ARCHITECTURAL DRAWINGS SHALL COMPLY WITH REQUIREMENTS FOR ARCHITECTUALLY EXPOSED CONCRETE. SEE SPECIFICATIONS.

MASONRY WALLS

- DESIGN OF MASONRY IS IN ACCORDANCE WITH CSA S304-14, "DESIGN OF MASONRY STRUCTURES."
- DO NOT CUT HOLES THROUGH MASONRY BEARING WALLS, OTHER THAN HOLES SHOWN ON STRUCTURAL DRAWINGS, UNLESS APPROVED BY CONSULTANT.
- CONCRETE MASONRY SHALL CONFORM TO CSA A79, 15 MPa (2175 psi) MINIMUM COMPRESSIVE.
- MASONRY GROUT SHALL CONFORM TO CSA A179, 15 MPa (2175 psi) MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS, 250mm (10") SLUMP, MAXIMUM AGGREGATE SIZE 10mm (3/8").
- ALL MASONRY CONSTRUCTION SHALL CONFORM TO CSA-A371 MASONRY CONSTRUCTION FOR BUILDING.
- WHERE DOWELS, ANCHOR RODS, ETC. ARE SHOWN PROJECTING INTO MASONRY, BUILD THESE TIGHTLY INTO MASONRY VOIDS WITH MASONRY GROUT.
- BENEATH STEEL AND CONCRETE BEAMS, JOISTS AND TRUSSES PROVIDE A MINIMUM DEPTH OF 400mm (16") 100% SOLID MASONRY UNITS PROJECTING A MINIMUM OF 200mm (8") BEYOND THE EDGES OF BEARING PLATES, UNLESS OTHERWISE NOTED OR SHOWN.
- PROVIDE MINIMUM LENGTH OF 200mm (8") AND A MINIMUM DEPTH OF 200mm (8") OF 100% SOLID MASONRY UNITS FOR STEEL, CONCRETE OR REINFORCED MASONRY UNITS.
- MAINTAIN SUPPORT OF MASONRY UNITS FOR A MINIMUM OF SEVEN DAYS OR UNTIL SUFFICIENT STRENGTH IS GAINED TO SUPPORT LOADS IMPOSED.

FOUNDATIONS

- REFER TO GEOTECHNICAL REPORT BY DATED
- WHERE FOOTINGS BEAR ON ROCK, PROTECT THE BEARING SURFACE WITH A 65mm MUD SLAB WITHIN MAXIMUM 7 DAYS OF EXPOSURE. OBTAIN GEOTECHNICAL CONSULTANT'S APPROVAL PRIOR TO MUD SLAB PLACEMENT.
- CARRY EXISTING FOOTINGS DOWN TO BELOW FROST DEPTH OF 1000mm FROM FINISHED EXTERIOR GROUND.
- DO NOT EXCEED A RISE OF 7 IN A RUN OF 10 IN THE LINE OF SLOPE BETWEEN ADJACENT EXCAVATIONS EXCEPT IN BEDROCK AND AS EXPLICITLY SHOWN ON DRAWINGS. MAXIMUM STEP 600 mm APPROXIMATELY.
- 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.
- 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 100% OF THEIR DESIGN STRENGTH.
- WHERE BACKFILL IS PLACED ON EACH SIDE OF FOUNDATION WALLS, DO NOT EXCEED A GRADE DIFFERENCE OF 600 mm (2'-0").
- CONTRACTOR TO PROVIDE ALL NECESSARY TEMPORARY BRACING OF NEW CONSTRUCTION AND MEASURES TO PREVENT DAMAGE TO THE STRUCTURE BY HEAVY EQUIPMENT. USE LIGHT, HAND-OPERATED COMPACTING EQUIPMENT TO COMPACT BACKFILL ADJACENT TO FOUNDATION WALLS OR RETAINING WALLS.
- IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY THE GEOTECHNICAL INFORMATION, TO OBTAIN T OWN DATA AND POINT DISCREPANCIES TO THE CONSULTANT WHERE THEY OCCUR.
- ALL SHOP DRAWINGS FOR DESIGN OF SHORING SYSTEM MUST BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER.
- ALL EXCAVATIONS MUST BE DRAINED AND FREE OF WATER AT ALL TIMES, UNLESS OTHERWISE INSTRUCTED BY THE GEOTECHNICAL CONSULTANT.
- ALL CONCRETE ELEMENTS ARE DESIGNED TO BE CAST AGAINST FORMWORK. IF ELEMENTS ARE TO BE CAST AGAINST EARTH FORMS, REVEIVE CONSULTANT'S APPROVAL AND INCREASE SIZE OF ELEMENTS TO OBTAIN THE CONCRETE COVER.

SLAB ON GRADE

- UNDERSLAB FILL SHALL CONSIST OF A MINIMUM OF 200mm (8") OF GRANULAR B MATERIAL, COMPACTED TO 98% STANDARD PROCTOR MAXIMUM DRY DENSITY UNLESS NOTED OTHERWISE ON DRAWINGS.
- PLACE SLABS-ON-GRADE ON MATERIAL CAPABLE OF SUSTAINING 25 kPa SURCHARGE WITH NEGLIGIBLE SETTLEMENT RELATIVE TO THE BUILDING FOUNDATIONS.
- FOUND ELEVATOR FIT SLABS ON NATURALLY CONSOLIDATED UNDISTURBED SOIL, CAPABLE OF SAFELY SUSTAINING AN UNFACTORED BEARING PRESSURE OF 200 kPa. IF THESE CONDITIONS DO NOT PREVAIL AT THE ELEVATIONS SHOWN, ADVISE THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.

STRUCTURAL STEEL

- PROVIDE MINIMUM BEARING OF 200 mm FOR ALL STEEL BEAMS BEARING ON CONCRETE AND A MINIMUM OF 100 mm ON STRUCTURAL STEEL, UNLESS OTHERWISE NOTED ON PLAN.
- CENTER BEARING PLATES UNDER BEAMS UNLESS OTHERWISE NOTED OR SHOWN.
- BEARING PLATE DIMENSION GIVEN FIRST INDICATES SIDE PARALLEL TO BEAM WEB.
- NO STRUCTURAL STEEL SHALL BE CUT IN THE FIELD UNLESS REVIEWED AND APPROVED BY THE CONSULTANT.
- ALL WELDS EXPOSED TO VIEW SHALL BE GROUND SMOOTH EXCEPT AS NOTED IN THE SPECIFICATIONS.
- REFER TO TYPICAL DETAIL TD-1 FOR ABBREVIATIONS USED FOR THE CONNECTION FORCES GIVEN ON THE DRAWINGS. FORCES INDICATED ARE FACTORED LOADS UNLESS OTHERWISE NOTED OR SHOWN. SUBSCRIPTS D, L, V AND O REFER TO UNFACTORED DEAD, LIVE, WIND AND EARTHQUAKE LOADS, RESPECTIVELY.
- WHERE MOMENT CONNECTIONS ARE CALLED FOR BUT VALUES ARE NOT INDICATED, DESIGN CONNECTIONS FOR FULL MOMENT CAPACITY OF THE SMALLER MEMBER JOINED.
- SPLICES SHALL BE DESIGNED TO DEVELOP THE FULL CAPACITY OF THE MEMBER AT THE POINT OF THE SPLICE. MEMBERS SHALL NOT BE SPLICED AT POINTS OF MAXIMUM STRESS. NO SPLICES SHALL BE MADE UNLESS SHOWN ON THE DRAWINGS OR REVIEWED AND APPROVED BY THE CONSULTANT.
- PROVIDE WELDED STIFFENER PLATES ON BOTH SIDES OF THE WEB OF BEAMS AT POINTS OF CONCENTRATED LOAD INCLUDING BEAMS SUPPORTING COLUMNS OR RUNNING OVER TOPS OF COLUMNS.
- CONNECT ALL COLUMNS TO THE BASE PLATES FOR THE LARGER OF THE FOLLOWING FORCES IN ADDITION TO THE OTHER FORCES SHOWN: a) AT BRACING FOR THE HORIZONTAL COMPONENT OF THE BRACING LOAD. b) FOR 3% OF THE FACTORED VERTICAL COLUMN LOAD APPLIED HORIZONTALLY.
- SHAPE AND SIZE OF GUSSET PLATES TO CLEAR ARCHITECTURAL FINISHES AND MECHANICAL DUCTS AND PIPES AND ELEVATOR SHAFTS.
- PROVIDE ALL ANCHOR BOLTS, CAST-IN PLATES WITH STUDS AND DRILLED ANCHORS REQUIRED TO CONNECT STRUCTURAL STEEL TO CAST-IN-PLACE CONCRETE.
- PROVIDE THE JOISTS ALONG COLUMN LINES AS REQUIRED FOR ERECTION STABILITY. BOTTOM CHORD ATTACHMENT MUST BE SLOTTED SO AS NOT INDUCE AXIAL LOAD IN THE BOTTOM CHORD, UNLESS OTHERWISE INDICATED.
- PROVIDE SUFFICIENT CAMBER TO JOISTS TO ENSURE "O" CAMBER AFTER APPLICATION OF ALL DEAD LOADS SHOWN. ADJUST STIFFNESS AND REQUIRED CAMBER OF JOISTS ADJACENT TO MASONRY WALLS, STEEL BEAMS OF SHORTER SPAN AND THE LIKE TO PERMIT THE PROPER FASTENING OF THE STEEL DECK. AS A GUIDE, LIMIT THE DEFLECTION OF THE ADJACENT JOIST, UNDER ALL DEAD LOADS, TO L/120, WHERE 'L' IS THE SPAN OF THE STEEL DECK PERPENDICULAR TO THE JOISTS.
- MAINTAIN TEMPORARY BRACING UNTIL COMPLETION OF ENTIRE STRUCTURE INCLUDING ROOF DECKS AND OTHER ELEMENTS WHICH ARE PART OF THE LATERAL LOAD RESISTING SYSTEM.
- PROVIDE CAMBER TO BEAMS, GIRDERS AND TRUSSES AS SHOWN ON BEAM SCHEDULES AND DRAWINGS. CAMBERS SHOWN ARE FOR ERECTED IN-PLACE CONDITION OF MEMBERS BEFORE INSTALLATION OF STEEL DECK. WHERE CONCRETE ON STEEL DECK IS CALLED FOR, SLOPED SLAB TO SUIT BEAM CAMBERS.
- INSTALL L76x76x7 9 mm (L3x6x516") SEATS FOR STEEL DECK AT CONNECTIONS, AT COLUMNS OR OTHER REGULARITIES, TO PROVIDE SUPPORT TO THE RIBS OF THE DECK.
- BOLT HOLES IN STEEL SHALL BE 3 mm (1/8") LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED, EXCEPT AS NOTED. PROVIDE NOT LESS THAN 2AND 4ASD BOLTS IN ANY BOLTED CONNECTION.
- ALL WELDS SHALL CONFORM TO CSA W59-13 AND ALL WELDERS SHALL BE CERTIFIED IN CONFORMANCE WITH CSA W47-1:09.
- WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE LENGTH OF WELD IS NOT SHOWN IT SHALL BE FULL LENGTH OF JOINT. ALL BUTT WELDS SHALL BE FULL PENETRATION UNLESS NOTED OTHERWISE.
- ALL STRUCTURAL STEEL INDICATED AS "AESS" ON STRUCTURAL OR ARCHITECTURAL DRAWINGS SHALL COMPLY WITH THE PROVISIONS OF THE CISC GUIDELINES FOR SPECIFYING ARCHITECTUALLY EXPOSED STRUCTURAL STEEL CATEGORY 3 UNLESS OTHERWISE NOTED.
- ALL BEAMS, EXCEPT CANTILEVER BEAMS SHALL BE FABRICATED AND ERECTED WITH NATURAL CAMBER UP. ALL CANTILEVER BEAMS SHALL BE FABRICATED AND ERECTED SO THAT THE NATURAL CAMBER RAISES THE CANTILEVER END.
- ALL STEEL EXPOSED TO THE EXTERIOR ENVIRONMENT SHALL BE HOT-DIP GALVANIZED UNLESS OTHERWISE NOTED.
- FIRE RATED STRUCTURAL STEEL MEMBERS SHALL BE FIREPROOFED IN ACCORDANCE WITH REQUIREMENTS SHOWN ON ARCHITECTURAL DRAWINGS AND SPECIFICATIONS.

TESTING AND INSPECTION

- THE CONTRACTOR SHALL ARRANGE FOR THE FOLLOWING ITEMS TO BE INSPECTED AND/OR TESTED BY AN INDEPENDENT THIRD-PARTY INSPECTION/TESTING AGENCY ACCEPTABLE TO THE OWNER AND THE CONSULTANT. COPIES OF ALL TEST REPORTS SHALL BE FORWARDED TO THE OWNER AND CONSULTANT ON THE SAME DAYS TESTS ARE MADE. ITEMS TO BE TESTED SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

2. GEOTECHNICAL:
PERFORM ALL TESTING AND INSPECTION (COMPACTION, BEARING CAPACITY, PILE INSTALLATION, SUBGRADE PREPARATION ETC.) AS PER THE REQUIREMENTS OF THE DRAWINGS AND THE GEOTECHNICAL REPORT.

3. CONCRETE:
CONCRETE TO BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA A23.1 AND A23.2, INCLUDING THE REQUIREMENTS FOR AIR, SLUMP AND AGE PRIOR TO BEING USED. CONTRACTOR TO MAINTAIN RECORDS OF FOUR DATES, TESTING PERFORMED, CLASS OF CONCRETE USED AND TEST RESULTS FOR ALL ITEMS POURED. RESULTS OF CYLINDER STRENGTH TESTING TO BE SENT TO OWNER AND CONSULTANT. ALL MIX DESIGNS TO BE REVIEWED AND APPROVED BY TESTING AGENCY.

4. MASONRY:
SAMPLE AND TEST JOB-MIXED GROUT IN ACCORDANCE WITH CSA A179 AND CSA S304.1. TEST FREQUENCY TO BE IN ACCORDANCE WITH S304.1. CONTRACTOR TO SUBMIT LABORATORY TEST REPORTS OF MANUFACTURER FOR CONCRETE MASONRY UNITS.

5. STRUCTURAL STEEL AND STEEL DECK:
PERFORM VISUAL INSPECTION OF ALL WELDS, TORQUE TESTING OF BOLTED CONNECTIONS AND CHECK ON BEARING, PLUMBNESS, ALIGNMENT AND PAINTING. BASIS OF INSPECTION SHALL BE FINAL REVIEWED SHOP DRAWINGS. PERFORM NON-DESTRUCTIVE TESTING OF WELDS WHERE RESULTS OF VISUAL INSPECTION ARE NOT ACCEPTABLE OR INCONCLUSIVE.

6. REINFORCING STEEL:
INSPECTION OF REBAR PLACEMENT, SIZES AND CONFORMANCE WITH REVIEWED SHOP DRAWINGS SHALL BE MADE BY AN INSPECTION AGENCY, CONTRACTOR.

DEMOLITION

- THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF DEMOLITION AND THE INTEGRITY AND STABILITY OF THE EXISTING STRUCTURE DURING DEMOLITION UNTIL THE WORK IS COMPLETED. THE CONTRACTOR SHALL PROVIDE SHORING IN REQUIRED LOCATIONS WHERE EXISTING CONSTRUCTION TO REMAIN WILL BE AFFECTED BY DEMOLITION. CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO TO DESIGN SHORING.
- THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS TO ANY STRUCTURAL ELEMENTS WHICH ARE TO REMAIN AND THAT HAVE BEEN DAMAGED DURING THE DEMOLITION PROCESS TO THE COMPLETE SATISFACTION OF THE OWNER. THE REPAIRS SHALL BE AT NO EXPENSE TO THE OWNER. ALL REPAIR WORK SHALL BE DESIGNED BY PROFESSIONAL ENGINEER LICENSED IN THE PROVINCE OF ONTARIO AND SUBMITTED TO THE CONSULTANT FOR REVIEW AND APPROVAL PRIOR TO COMMENCING REPAIR WORK.
- ALL EXISTING FRAMING IS INDICATED FOR REFERENCE ONLY AND IS TO BE FIELD VERIFIED BY THE CONTRACTOR. VERIFY THE EXACT EXTENT OF DEMOLITION AT THE SITE. DETERMINE THE NATURE AND EXTENT OF DEMOLITION THAT WILL BE NECESSARY BY COMPARING THE CONTRACT DOCUMENTS WITH THE EXISTING CONSTRUCTION. IMMEDIATELY NOTIFY THE DESIGN PROFESSIONALS OF ANY INCONSISTENCIES.
- THE CONTRACTOR SHALL USE THE STRUCTURAL CONTRACT DOCUMENTS IN CONJUNCTION WITH THE ARCHITECTURAL AND MEP DEMOLITION CONTRACT DOCUMENTS IN THE EVENT OF CONFLICTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN PROFESSIONALS.
- THE CONTRACTOR SHALL USE QUALIFIED, EXPERIENCE PERSONNEL FOR DEMOLITION AND REMOVAL OPERATIONS. PERFORM DEMOLITION AND REMOVAL OPERATIONS IN A CAREFUL AND ORDERLY MANNER TO PREVENT HAZARDS TO PERSONS, DAMAGE TO PROPERTY AND THE SPREADING OF DUST AND DEBRIS.
- DO NOT PERMIT PORTIONS OF THE STRUCTURE TO FALL NOR DEBRIS TO DROP EXCEPT BY METHODS WHICH WILL INSURE INTEGRITY OF THE STRUCTURE.
- PRIOR TO THE START OF WORK VERIFY THAT THE SCOPE OF DEMOLITION INDICATED ON THE CONTRACT DOCUMENTS SHALL NOT DAMAGE, CUT OR DISRUPT EXISTING OR ANY EXISTING MECHANICAL, ELECTRICAL SYSTEM OR UTILITY EMBEDDED IN THE EXISTING STRUCTURE.
- DO NOT REMOVE MORE OF THE EXISTING STRUCTURE THAN INDICATED ON CONTRACT DOCUMENTS. DO NOT DAMAGE, MARK, CUT OR DEFACE THE REMAINING STRUCTURE OR MATERIALS TO BE REUSE.
- THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF REMOVING DEMOLISHED MATERIALS FROM THE SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS.
- WHERE NEW OPENING IN EXISTING CONCRETE SLABS OR WALLS ARE TO BE CREATED, THE DEMOLITION CONTRACTOR SHALL CORE HOLES AT THE OUTSIDE OF THE NEW OPENING PRIOR TO DEMOLITION. SAW, CUT AND DEMOLISH SLAB OR WALL ONLY AFTER THE INSTALLATION OF ALL REQUIRED NEW STRUCTURAL TRAINING AND/OR REINFORCEMENT ON PLAN OR SECTION, UNON. SAW CUTTING SHALL BE STRAIGHT AND SHALL NOT EXTEND INTO EXISTING SLAB OR WALL TO REMAIN NOR BEYOND THE HOLES CORED AT THE CORNERS OF THE NEW OPENING.

RAILINGS

- THE CONFIGURATION OF THE RAILING SYSTEM SHALL BE AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- ENGINEERED RAILING SYSTEM AND CONNECTION TO THE STRUCTURE SHALL BE DESIGNED BY ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.
- RAILING SYSTEM AND CONNECTIONS SHALL BE DESIGNED FOR LOADS INDICATED ON THE DRAWINGS AND INDICATED IN THE APPLICABLE CODES.
- SUBMIT SIGNED AND SEALED SHOP DRAWINGS, INDICATING THE LOADING UTILIZED, PRIOR TO FABRICATION.

STEEL STAIRS

- THE CONFIGURATION OF THE STEEL STAIR SYSTEM SHALL BE SHOWN ON THE ARCHITECTURAL DRAWINGS.
- ENGINEERED STEEL STAIR SYSTEM AND CONNECTIONS OF SAME TO THIS STRUCTURE SHALL BE DESIGNED BY AN ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.
- SHOP DRAWING SHALL BE DESIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROVINCE OF ONTARIO.
- STEEL STAIR SYSTEM AND CONNECTIONS SHALL BE DESIGNED FOR APPLICABLE LOADS AS INDICATED ON THESE DRAWINGS AND IN THE BUILDING CODE.
- THE LOADS SHALL BE CLEARLY INDICATED ON SHOP DRAWINGS.
- SHOP DRAWINGS SHALL SHOW AND SPECIFY CONNECTIONS UTILIZED WITH THE STEEL STAIR SYSTEM AS WELL CONNECTIONS TO AND LOADS IMPOSED UPON THE STRUCTURAL SYSTEM SHOWN ON THESE DRAWINGS.
- SUBMIT SHOP DRAWINGS AND CALCULATIONS FOR REVIEW PRIOR TO FABRICATION.

SEQUENCE OF CONSTRUCTION

- WHERE CONSTRUCTION SEQUENCING / PHASING REQUIREMENTS ARE INDICATED OR IMPLIED IN THE CONTRACT DOCUMENTS, COORDINATE CONSTRUCTION OF BUILDING STRUCTURE TO SUIT SEQUENCING / PHASING REQUIREMENTS. PROVIDE TEMPORARY BRACING, CONNECTIONS AND TEMPORARY SUPPORTS AS REQUIRED TO SAFELY CONSTRUCT THE STRUCTURE.
- THE STEEL FRAME ALONE IS NOT STABLE UNTIL CONCRETE CORE WALLS ARE BUILT AND TIED INTO THE STRUCTURE AND THE STEEL FLOOR AND ROOF DECK IS INSTALLED.
- MAINTAIN ERECTION BRACING UNTIL COMPLETION OF ENTIRE STRUCTURE INCLUDING ROOF DECK AND OTHER ELEMENTS WHICH ARE PART OF LATERAL LOAD RESISTING SYSTEM, OR UNTIL SUCH TIME AS THE ENGINEER OF RECORD FOR THE TEMPORARY WORKS' ERECTION CONFIRMS IN WRITING THAT THE BRACING MAY BE REMOVED.

CHEMICAL / ADHESIVE AND MECHANICAL ANCHORS

- CHEMICAL ADHESIVE ANCHORS SHALL BE HILTI HIT-RE 500 VE ADHESIVE SYSTEM, UNLESS NOTED OTHERWISE.
- MECHANICAL ANCHORS SHALL BE HILTI KWIK-BOLT III, UNLESS NOTED OTHERWISE.
- WHERE DETAILS NOTE EPOXY GROUT, USE HILTI HIT-RE 500 VE ADHESIVE SYSTEM.
- ALTERNATIVE ENGINEER APPROVED ANCHOR TYPES ARE PERMITTED. SUBMIT PROPOSED ANCHOR TYPE AND MANUFACTURER'S PUBLISHED DATA INCLUDING LOAD CAPACITY, EDGE DISTANCE REQUIREMENTS AND SPACING REQUIREMENTS FOR APPROVAL PRIOR TO USING ALTERNATIVE ANCHOR.
- INSTALL ANCHORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- THE MANUFACTURER'S REPRESENTATIVE SHALL TRAIN INSTALLERS.
- CONTINUOUS SPECIAL INSPECTION IS REQUIRED FOR ALL ADHESIVE ANCHORS AND EXPANSION ANCHORS. INSPECT AND PULL TEST EXPANSION ANCHORS AND ADHESIVE (EPOXY) ANCHORS ACCORDING TO MANUFACTURER'S WRITTEN RECOMMENDATIONS.

DESIGN NOTES

GENERAL

- GENERAL

THE STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ONTARIO BUILDING CODE 2012 EDITION AND THE "USER'S GUIDE - NATIONAL BUILDING CODE 2010 STRUCTURAL COMMENTARIES".

a) LOCATION FOR CLIMATIC AND SEISMIC DATA: KINGSTON.

b) IMPORTANCE CATEGORY : NORMAL.

2. ALL STRUCTURAL CONCRETE ELEMENTS HAVE DESIGNED IN ACCORDANCE WITH CSA A23.3-14, "DESIGN OF CONCRETE STRUCTURES".

a) THE STRUCTURAL STEEL DESIGN IS BASED ON "SIMPLE" CONSTRUCTION, UNLESS OTHERWISE NOTED.

b) THE CONNECTIONS ARE ASSUMED TO BE BEARING TYPE JOINTS, UNLESS OTHERWISE NOTED. THE BOLT SHALL BE BROUGHT TO A SNUG-TIGHT CONDITION AS DEFINED IN ASTM F3125/F3125M.

3. DEAD AND LIVE LOADS:

THE FOLLOWING LOADS ARE SHOWN ON PLAN. VALUES GIVEN ARE UNFACTORED SERVICE LOADS UNLESS OTHERWISE NOTED OR SHOWN.

a) SUPERIMPOSED DEAD LOAD (SDL) ALL NON-STRUCTURAL DEAD LOADS

b) SELF WEIGHT (SW): WEIGHT OF STRUCTURE, INCLUDING SLABS

c) DEAD LOAD (DL): SDL + SW

d) LIVE LOAD (LL) ACCORDING TO OCCUPANCY, REDUCED AS PERMITTED BY CODE UNLESS NOTED.

5. LIVE LOADS ON ROOF:

THE ROOF AREAS HAVE BEEN DESIGNED TO RESIST SNOW, RAIN AND WIND LOADS IN ACCORDANCE WITH THE ONTARIO BUILDING CODE 2012 EDITION. THE DESIGN PARAMETERS FOR THESE LOADS ARE AS NOTED BELOW.

SNOW LOAD:
Ss = 2.1 kPa
Sf = 0.4 kPa
W (SL) = 1.0
W (SL) = 0.9
ADDITIONAL SNOW ACCUMULATION ADJACENT TO HIGHER WALLS, ROOFS AND MECHANICAL UNITS ARE INDICATED ON PLAN.

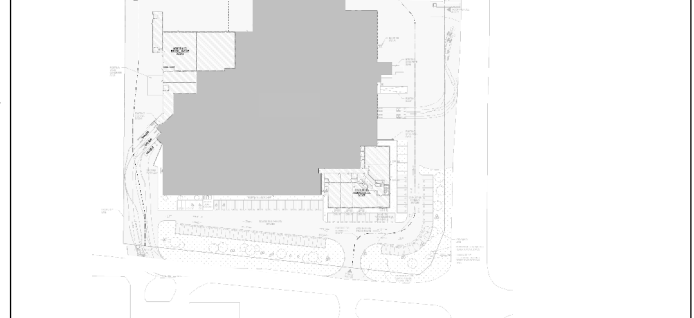
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Project Component

Key Plan



Consultants

Architecture: NORR
Structural: NORR
Mechanical: NORR
Electrical: NORR

Seal(s)

2

NORR

NORR Architects & Engineers Limited

175 Bloor Street East
North Tower, 15th Floor
Toronto, ON, Canada M4W 3R8
norr.com

Project Manager P. RANCHAL	Drawn R. ENDAYA
Project Leader A. HUSAIN	Checked G. ALEXANDER

Client

CYCLIC MATERIALS

32 Bay St., Toronto, ON M5H 4A6, Canada

CYCLIC MATERIALS HUB CENTER - Q/A LAB

650 Cataraqui Woods Dr., Kingston, ON, K7P 2Y4, Canada

Drawing Title
GENERAL NOTES - Q/A LAB

Scale
1 : 100

Project No.
IN1024-0349

Drawing No.
S01-01L

NON-LOAD BEARING CONCRETE LINTEL						TDM-1
CLEAR SPAN	LINTEL UNIT	90 WALL	140 WALL	190 WALL	240 WALL	290 WALL
190 DEEP LINTEL						
UP TO 1200	190	1-10 B	1-10 B	2-10 B	2-10 B	3-10 B
1200 TO 1800	190	1-15 B	2-10 B	2-15 B	2-15 B	3-15 B
1800 TO 2400	190	1-15 T&B	2-15 T&B	2-15 T&B	2-15 T&B	3-15 T&B
390 DEEP LINTEL						
2400 TO 3000	390	1-15 B	1-15 B	2-15 B	2-15 B	3-15 B

NOTES:

1. USE ONLY FOR NON-LOAD BEARING MASONRY WALLS.
2. USE LINTELS ON THIS TYPICAL DETAIL ONLY IF THE HEIGHT OF THE MASONRY ABOVE THE OPENING IS EQUAL TO OR GREATER THAN HALF THE CLEAR SPAN OF THE OPENING AND IF THERE ARE NO CONCENTRATED LOAD DIRECTLY ABOVE THE LINTEL.
3. CONCRETE FILL FOR LINTELS TO HAVE MINIMUM 20 MPa COMPRESSIVE STRENGTH AT 28 DAYS.
4. WHERE LINTELS ABUT CONCRETE COLUMNS OR CONCRETE WALLS PROVIDE SEAT ANGLE AS SHOWN BELOW. WHERE LINTELS ABUT STEEL COLUMNS, WELD SEAT ANGLE TO THE COLUMN.

2-200
ADJUSTABLE
INSERTS

BENT PLATE 190 x 100 x 10

SEAT DETAIL FOR LINTELS UP TO 150 WIDE

2-200
ADJUSTABLE
INSERTS

L 100 x 100 x 10

SEAT ANGLE DETAIL FOR LINTELS GREATER THAN 150 WIDE

STEEL LINTEL SCHEDULE

TDS-01

CLEAR SPAN	TYPE	200 WALL MATERIAL	TYPE	250 WALL MATERIAL	TYPE	300 WALL MATERIAL
UP TO 1200		2-Ls 90x90x8		2-Ls 100x100x8		3-Ls 90x90x8
1200 TO 1800		2-Ls 100x90x8		2-Ls 100x100x10		3-Ls 125x90x8
1800 TO 2100		2-Ls 125x90x10		2-Ls 150x100x8		3-Ls 150x90x8
2100 TO 2500		2-Ls 150x90x10		2-Ls 150x100x10		3-Ls 150x90x8
LARGER THAN 2500 PROVIDE STRUCTURAL LINTEL W SECTION			W SECTION		W SECTION + ANGLE	

NOTES:

- USE ONLY FOR WALLS OR PARTITIONS 200 OR OVER.
- USE LINTELS ON THIS TYPICAL DETAIL ONLY IF THE HEIGHT OF THE MASONRY ABOVE THE OPENING IS EQUAL TO CLEAR SPAN OF THE OPENING AND IF THERE ARE NO CONCENTRATED LOADS DIRECTLY ABOVE THE OPENING.
- CONCENTRATED LOAD AT TOP OF MASONRY SHALL BE NO CLOSER THAN 1 SPAN LENGTH AWAY FROM EDGE OF LINTEL.
- MAINTAIN A DISTANCE OF 1000 mm BETWEEN VERTICAL EDGE OF OPENING AND ANY CONTROL JOINT. DO NOT PLACE ANY OPENING ABOVE LINTEL OR LINTEL BEARING.
- MINIMUM BEARING FOR LINTELS SHALL BE 200. SEE PLAN BELOW.
- PROVIDE STEEL PACKING PLATES TO ENSURE EVEN BEARING.
- FOR OPENINGS OVER 1200 IN WIDTH, BOLT DOUBLE ANGLES BACK TO BACK USING 16 BOLTS AT 750 c/c COMMENCING 75 FROM EACH END. ALTERNATIVELY, 5 x 50 LONG FILLET WELDS AT 750 TOP AND BOTTOM MAY BE USED IN PLACE OF BOLTS.
- WHERE LINTELS ABOUT CONCRETE COLUMNS OR CONCRETE WALLS, PROVIDE SEAT ANGLE AS SHOWN BELOW. WHERE LINTELS ABOUT STEEL COLUMNS, WELD SEAT ANGLE TO THE COLUMN.

SEAT ANGLE DETAIL

PLAN

SLAB ON COMPOSITE STEEL DECK (COMPOSITE BEAMS)

TDS-12

TYPICAL FRAMING PLAN

PERIMETER GIRDER

INTERIOR GIRDER

PURLIN

NOTES:

1. PROVIDE COMPOSITE STEEL DECK WITH WIDE RIB PROFILE SUCH THAT CONCRETE FILLED FLUTE AVERAGE WIDTH IS AT LEAST 150mm.
2. WHERE DECK EDGE PROJECTION "X" IS LARGER THAN 150mm, PROVIDE OUTRIGGERS & KICKERS AS PER TYPICAL DETAILS TDS-25 & TDS-28.

LATERAL SUPPORT FOR PARTITIONS

TDS-14

PARALLEL TO JOIST OR BEAMS

PERPENDICULAR TO JOIST OR BEAMS

SUPPORT FRAMING FOR ROOF OPENINGS
TDS-19

1200 MAX.

SPAN OF DECK

TRIM L 76 x 76 x 6.4
ALL AROUND
OPENING

C200 x 21

BEAM OR JOIST

EXHAUST FAN

C200 x 21

C200 x 21

EXHAUST FAN / MECHANICAL OPENING
SUPPORT FRAMING PLAN

1L- 150 x 150 x 10 x 150 L.G.
EACH END WELD CHANNEL
TO ANGLE FOR R/F= 6.7 AN

BEAM OR JOIST
TOP CHORD

R/F

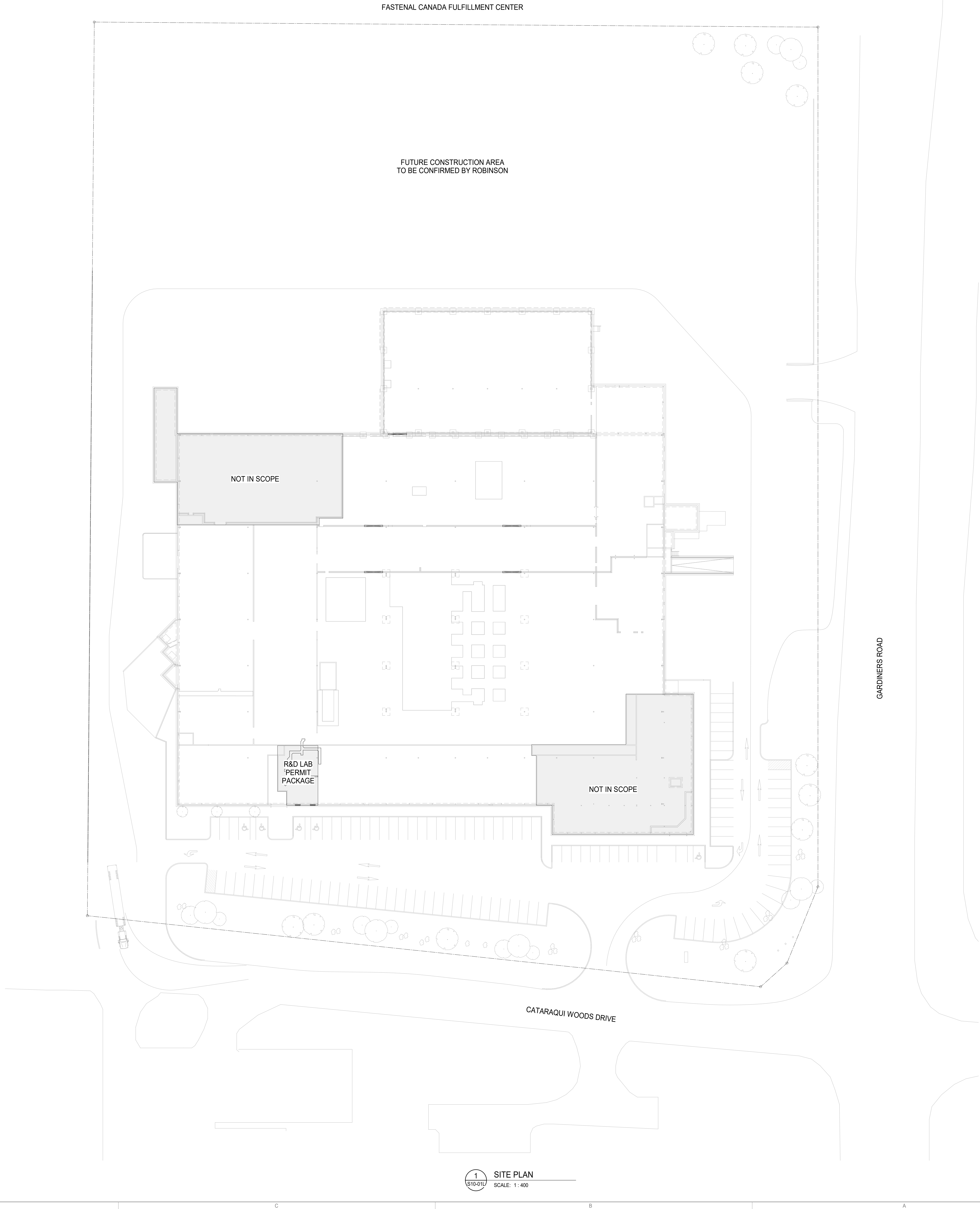
C200

SECTION

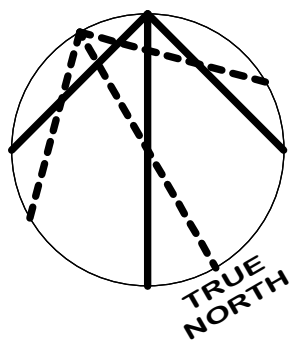
TYPICAL ROOF OPENING
SUPPORT FRAME

1. PROVIDE FRAMING AS SHOWN FOR OPENINGS ON ROOF DECK GREATER THAN 450 mm.
2. FOR OPENINGS OVER 900 mm CONSULTANT WILL PROVIDE FRAMING, SEE PLANS.

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1 SITE PLAN
S10-011 SCALE: 1:400



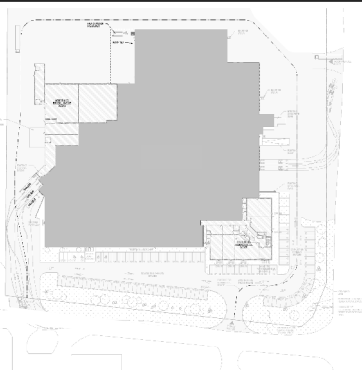
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Project Component

Key Plan



Consultants

Architecture: NORR
Mechanical: NORR
Electrical: NORR

Seal(s)

2

NORR

NORR Architects & Engineers Limited

175 Bloor Street East
North Tower, 15th Floor
Toronto, ON, Canada M4W 3R8
norr.com

Project Manager

P. RANCHAL

Drawn

R. ENDAYA

Project Leader

A. HUSAIN

Checked

G. ALEXANDER

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CYCLIC MATERIALS

**Cyclic
Materials**

32 Bay St., Toronto, ON M5H 4A6, Canada

Project: 650 Cataraqui Woods Dr., Kingston, ON, K7P 2Y4, Canada

**CYCLIC MATERIALS HUB
CENTER - Q/A LAB**

650 Cataraqui Woods Dr., Kingston, ON, K7P 2Y4, Canada

Drawing Title

SITE PLAN - Q/A LAB

Scale

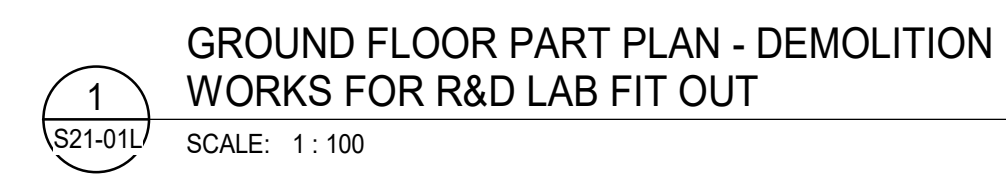
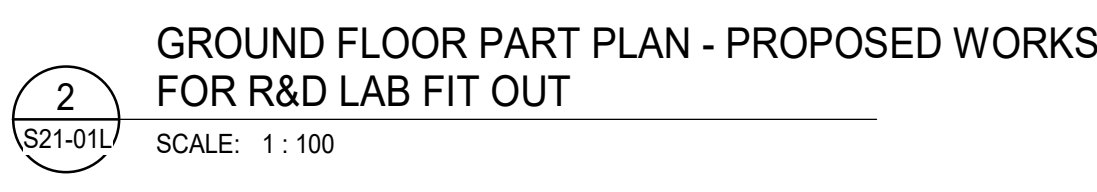
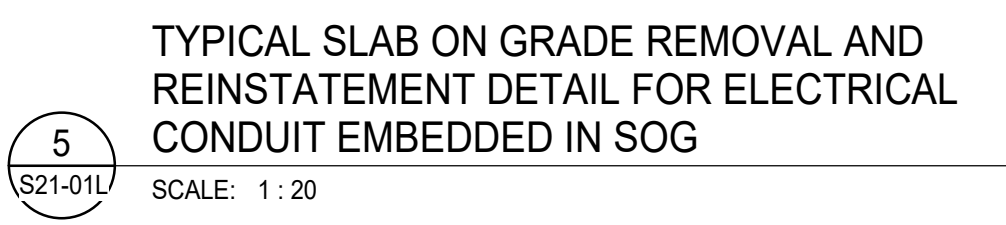
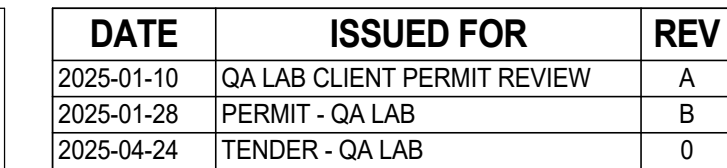
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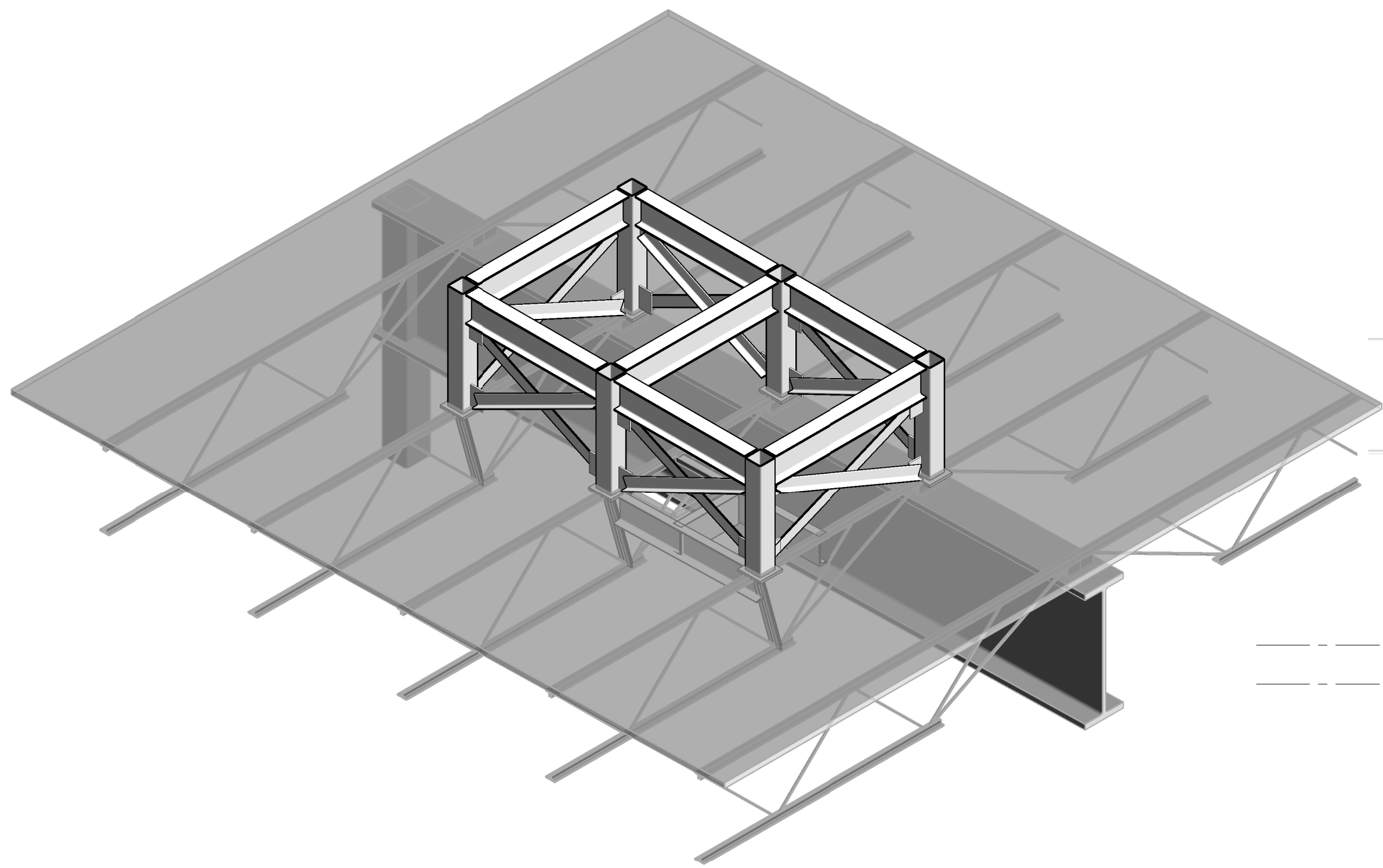
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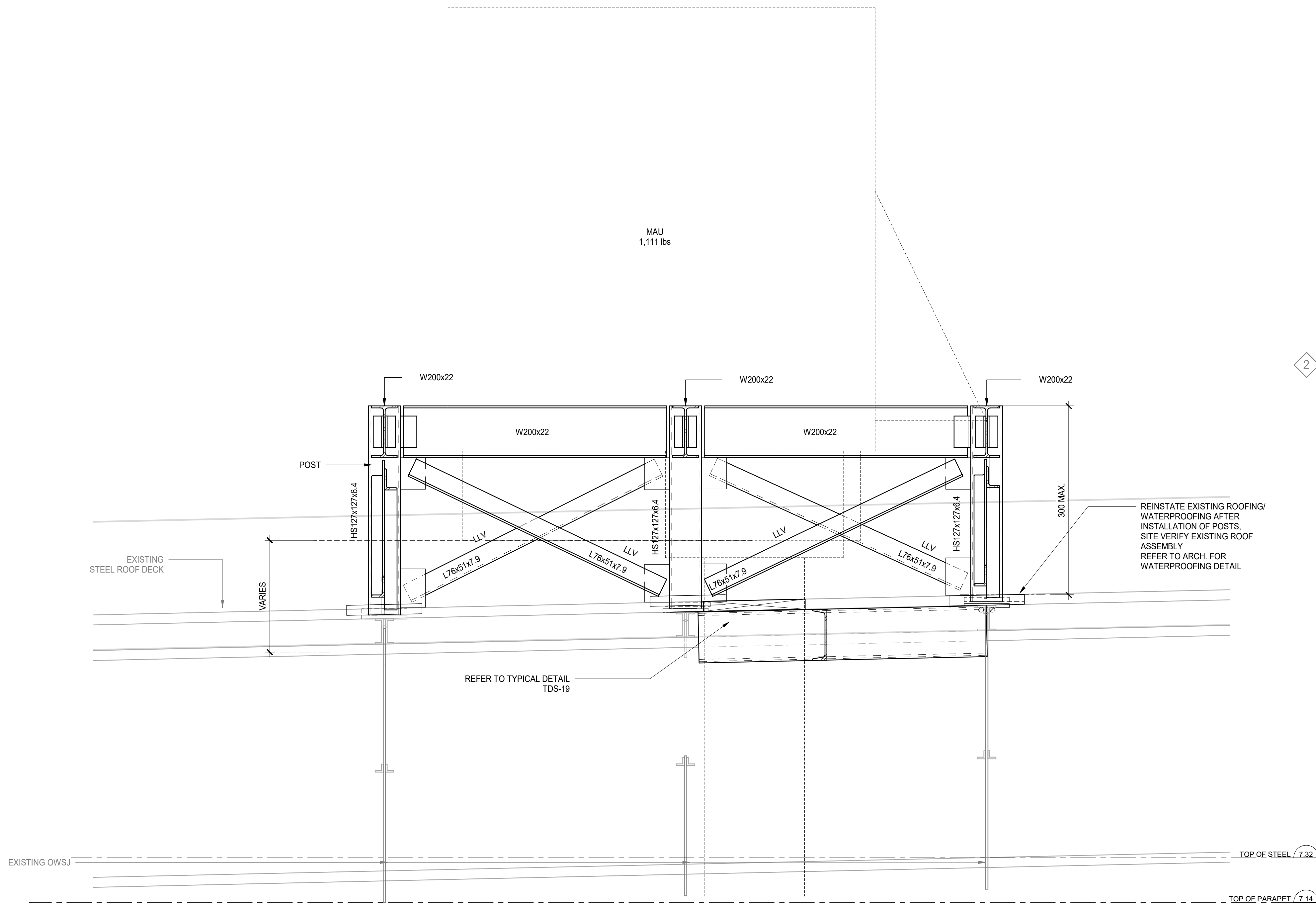
S10-011



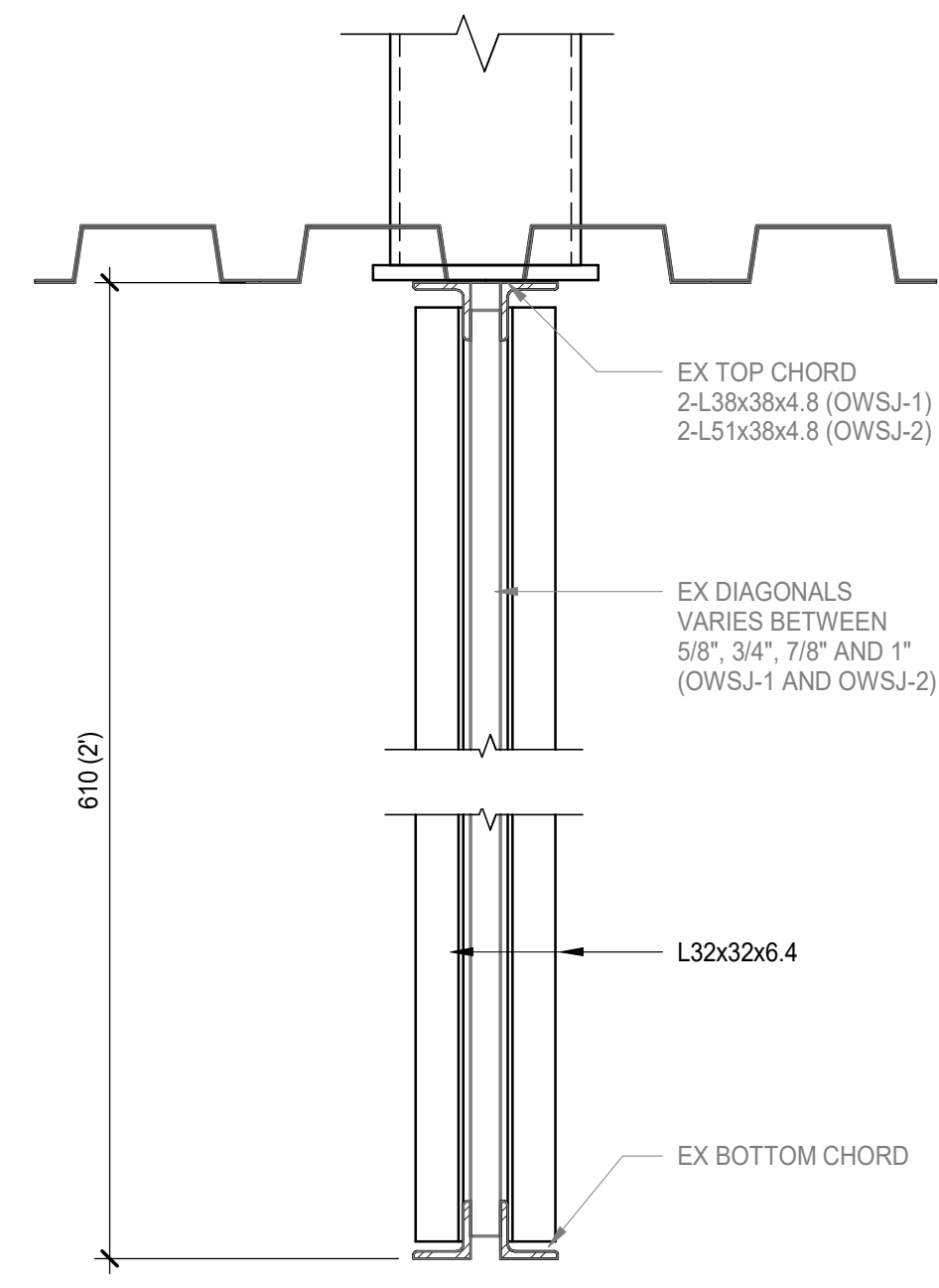
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Project No.	IN1024-0349
Drawing No.	S21-01L



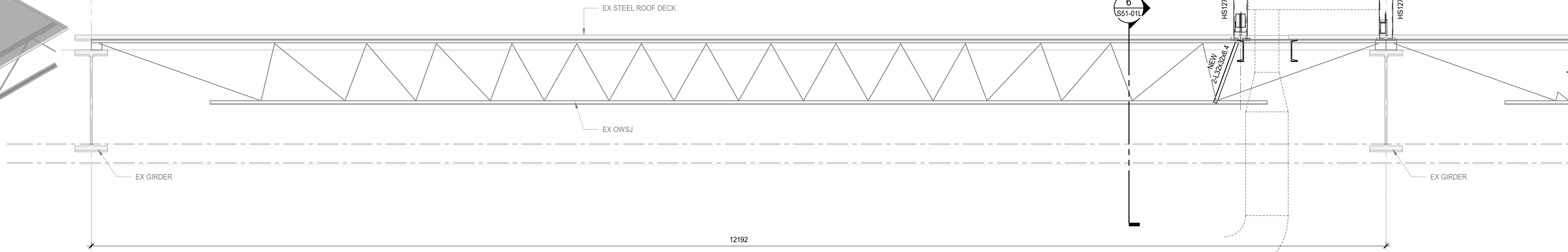
7 MUA PLATFORM 3D VIEW
SCALE:



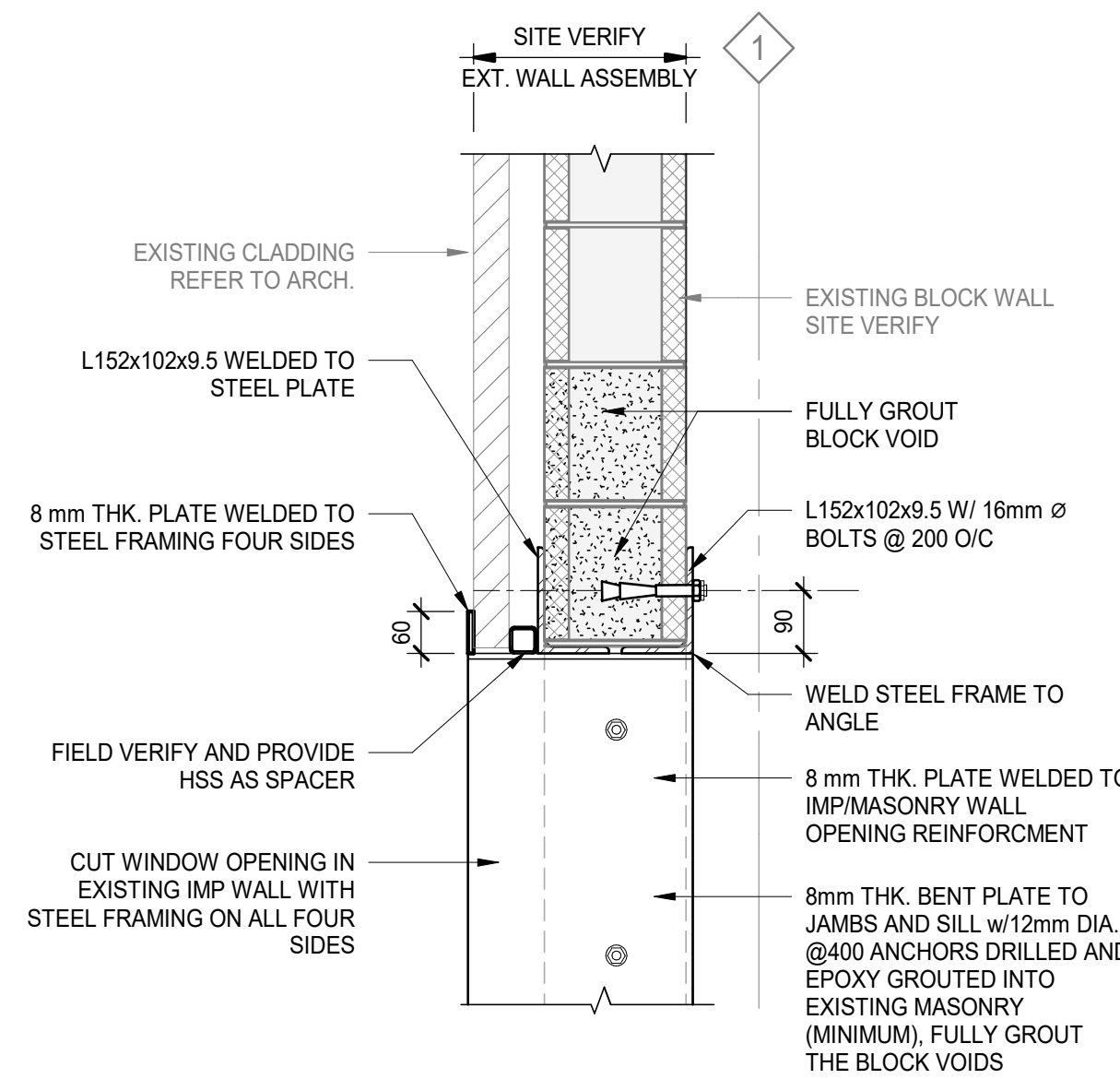
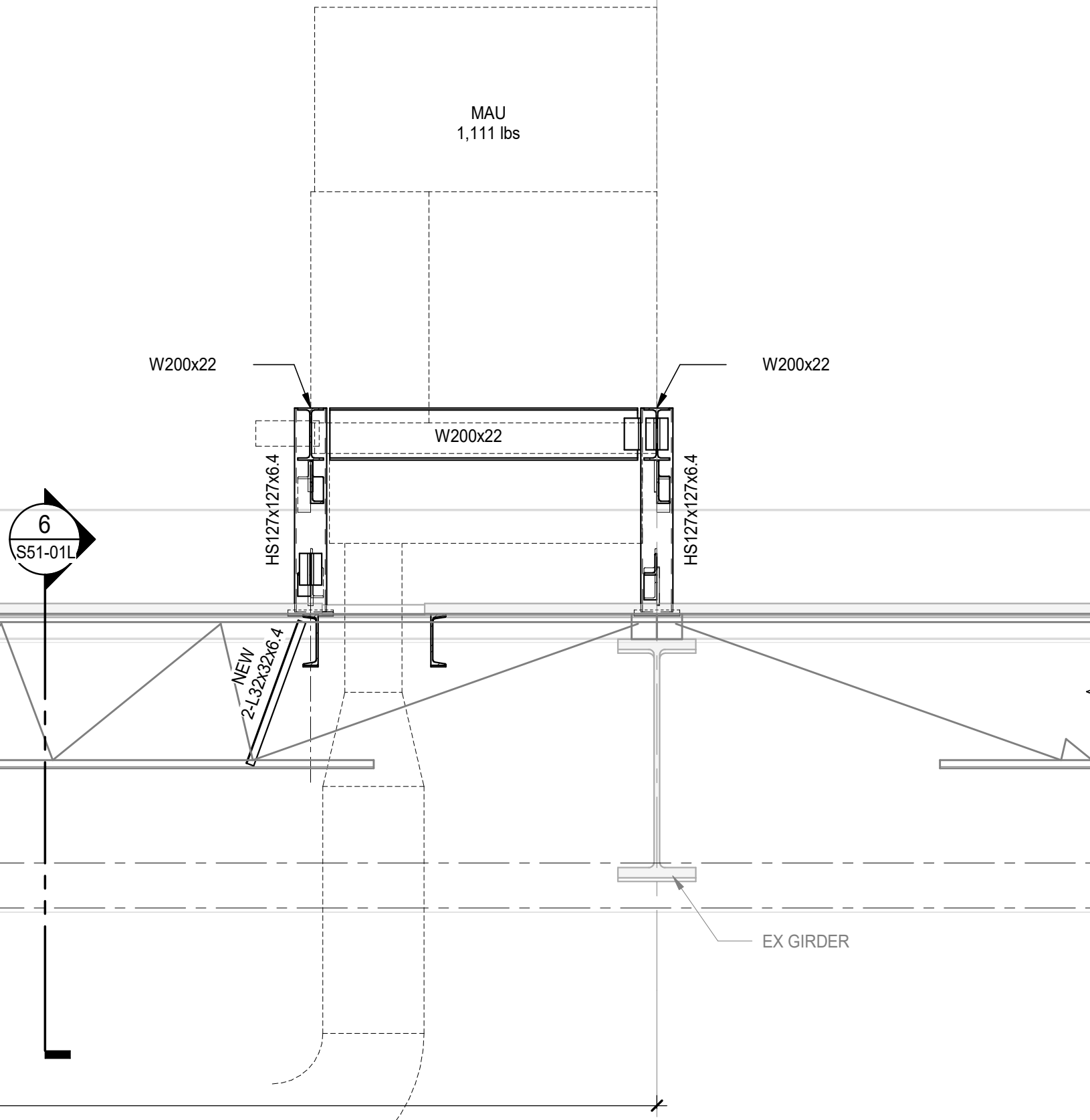
4 MUA PLATFORM DETAIL SECTION
SCALE: 1:10



6 OWSJ DETAIL SECTION
SCALE: 1:5



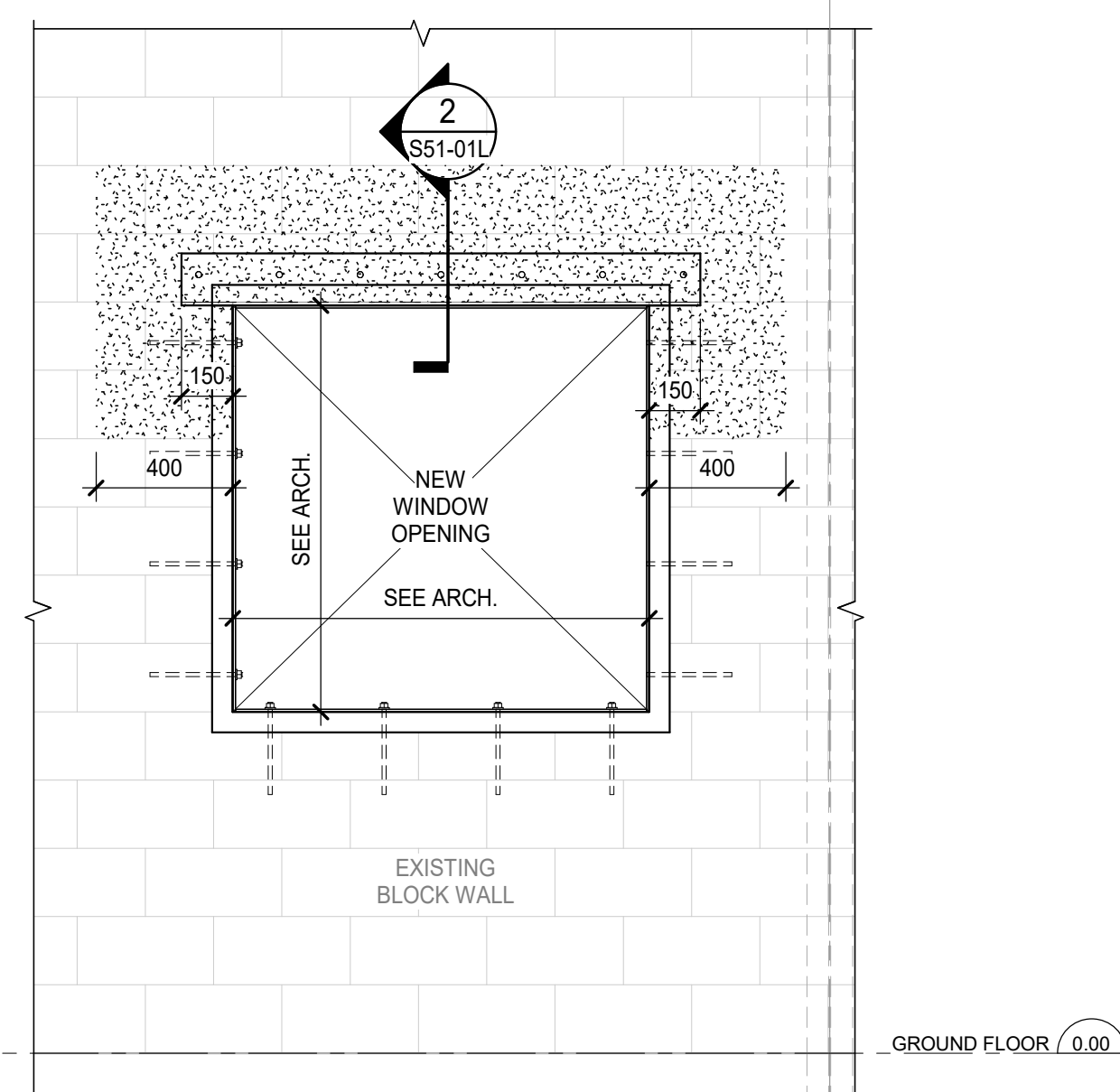
5 OWSJ REINFORCEMENT - ELEVATION
SCALE: 1:20



2 NEW WINDOW OPENING SUPPORT DETAIL
SCALE: 1:10

SEQUENCE OF CONSTRUCTION

- SET OUT LOCATION OF HORIZONTAL LEG OF LINTEL ANGLE WITH CMU HORIZONTAL JOINT WITH THE PROPOSED WINDOW WALL OPENING.
- RAKE AND FORM GROOVE IN THE HORIZONTAL MORTAR JOINT.
- INSTALL THE LINTEL ANGLE IN THE FORMED GROOVE BETWEEN THE TWO ROWS OF BLOCK.
- FULLY GROUT THE PROPOSED LINTEL BLOCK VOIDS.
- DRILL HOLES IN THE VERTICAL LEG OF LINTEL ANGLE AND FULLY GROUTED BLOCK (ALLOW THE GROUT HAS ACHIEVED SPECIFIED COMPRESSIVE STRENGTH) AND INSTALL ANCHORS.
- SAWLINE CUT THE BLOCK WALL TO FORM THE NEW WINDOW FOR WALL OPENING.
- WELD THE STEEL FRAMING PLATE (WITH SPACER HSS, ANGLE) TO LINTEL ANGLE.
- INSTALL THE STEEL FRAMING TO THE OPENING.



1 TYPICAL NEW WINDOW OPENING DETAIL
ELEVATION
SCALE: 1:20

- NOTE:
- POST HEIGHT VARIES TO ACCOMMODATE THE ROOF SLOPE.
 - POST SHALL BE PLANTED ON THE TOP CHORD OF OWSJ.
 - REINSTATE ROOFING AND WATERPROOFING AFTER THE INSTALLATION OF THE POSTS FOR THE MAU-1 FRAMING SUPPORT.

3 MUA PLATFORM FRAMING PLAN
SCALE: 1:25

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Project

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CENTER - Q/A LAB

650 Cataragui Woods Dr., Kingston, ON, K7P 2Y4, Canada

Drawing Title

DETAILS 01 - Q/A LAB

Scale

As indicated

Project No.

IN1024-0349

Drawing No.

S51-01L

Drawing No. **S51-02L**

