A/ TERMS AND CONDITIONS TO USE

GENERAL

THESE DRAWINGS HAVE BEEN PRODUCED FOR THE SOLE USE OF THE PROJECT CLIENT, THEIR APPOINTED AGENTS, ARCHITECTS, CONSULTANTS AND CONTRACTORS . BY THE USE OF THESE DRAWINGS AND SPECIFICATION BY THE AFOREMENTIONED FIRMS AND INDIVIDUALS, THEY ACKNOWLEDGE AND AGREE TO THE TERMS AND CONDITIONS OF USE AS NOTED BELOW.
THESE STRUCTURAL DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED TO ILLUSTRATE THE STRUCTURAL DESIGN PHILOSOPHY AND INTENT. AS SUCH, THESE DRAWINGS PERTAIN SOLELY TO THE "BUILDING STRUCTURE" AND DO NOT ATTEMPT TO DEPICT, DETAIL OR DESIGN ELEMENTS OF THE FINISHED BUILDING DESIGN WHICH ARE THE RESPONSIBILITY OF OTHER DESIGN DISCIPLINES.

STRUCTURAL BUILDING FRAMEWORK

THESE STRUCTURAL DRAWINGS DESCRIBE THE STRUCTURAL BUILDING FRAMEWORK ONLY. THE STRUCTURAL FRAMEWORK IS DEFINED AS THE PRIMARY GRAVITY AND LATERAL LOAD RESISTING ELEMENTS OF THE BUILDING AND INCLUDES THE FOLLOWING ITEMS WHICH MAY OR MAY NOT PERTAIN TO THIS SPECIFIC PROJECT.

- REINFORCED CONCRETE ELEMENTS WHICH COMPRISE THE PRIMARY LOAD CARRYING FRAMEWORK FOR THE BUILDING
- COMPOSITE OR NON-COMPOSITE ROOF OR FLOOR METAL DECKING.
- STRUCTURAL STEEL ELEMENTS AS DEFINED BY THE CISC CODE OF STANDARD PRACTICE
- STEEL JOISTS: PRE-CAST CONCRETE SLABS , BEAMS COLUMNS OR WALL ELEMENTS

PROVISION HAS BEEN MADE WITHIN THE DESIGN OF THE STRUCTURAL BUILDING FRAMEWORK TO SUPPORT THE LOADS ARISING FROM NON-STRUCTURAL ELEMENTS. SUCH NON-STRUCTURAL ELEMENTS MAY RELY UPON THE STRUCTURAL BUILDING FRAMEWORK FOR THEIR ULTIMATE SUPPORT. HOWEVER, THE DESIGN, SUPPLY AND INSTALLATION OF SAID SUPPORT MECHANISMS ARE THE RESPONSIBILITY OF THE SPECIFIC ARCHITECTURAL OR SERVICE TRADE AND/OR OTHER ENGINEERING DISCIPLINE.

SPECIFIC ARCHITECTURAL AND SERVICE ELEMENTS MAY RELY UPON THE STRUCTURAL BUILDING FRAMEWORK FOR ULTIMATE SUPPORT YET WHOSE DESIGN AND CONTRACTUAL RESPONSIBILITY DOES NOT LIE WITH THE STRUCTURAL DESIGNER. THE DESIGNER AND/OR PROVIDERS OF THE FOLLOWING ELEMENTS, ARE WHOLLY RESPONSIBLE FOR DELIVERING THEIR LOADS TO THE STRUCTURE AS DEFINED BY THESE DRAWINGS:

- EXTERIOR BUILDING CLADDING SYSTEM, INCLUDING WIND RESISTING LIGHTWEIGHT METAL STUD SYSTEMS AND CONCRETE MASONRY WALLS
- NON-LOAD BEARING PARTITIONS
- ANY AND ALL SLABS, TOPPINGS AND FINISHES (WHETHER OR NOT THEY CONTAIN REINFORCING MATERIALS) NOT ATTACHED TO THE STRUCTURAL BUILDING FRAMEWORK NOR DEFINED ON THE STRUCTURAL DRAWINGS
- BUILDING SERVICES AND EQUIPMENT INCLUDING ANY AND ALL ELEMENTS AND THEIR SUPPORTING ACCESSORIES
- ELEVATING AND CONVEYING SYSTEMS
- ALL EMBEDDED OR SURFACE APPLIED CONNECTION MEANS NOT INTENDED TO SUPPORT A PORTION OF THE STRUCTURAL BUILDING FRAMEWORK

WHERE APPROPRIATE, THE DESIGN AND INSTALLATION OF SUCH ELEMENTS SHALL BE PROVIDED BY A PROFESSIONAL ENGINEER, LICENSED WITHIN THE RELEVANT JURISDICTION. AS THE STRUCTURAL DESIGNER, QUINN DRESSEL ASSOCIATES IS NOT RESPONSIBLE FOR THE DESIGN OF SUCH ELEMENTS, NOR THE METHOD OR MEANS OF CONNECTING SUCH ELEMENTS TO THE BUILDING STRUCTURE.

NOTWITHSTANDING THE ABOVE, QUINN DRESSEL ASSOCIATES SHALL HAVE SOLE DISCRETION TO REJECT ANY CONNECTION METHOD OR EMBEDDED ITEM WHICH WE JUDGE TO BE DETRIMENTAL TO THE PERFORMANCE OF THE STRUCTURAL BUILDING FRAMEWORK.

SHOP DRAWINGS

IT IS UNDERSTOOD AND ACKNOWLEDGED BY ALL THAT THE CO-ORDINATION AND PREPARATION OF THE SHOP DRAWINGS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR, CONSTRUCTION MANAGER OR PROJECT MANAGER.

QUINN DRESSEL ASSOCIATES WILL RECEIVE AND REVIEW, SHOP DRAWINGS PREPARED BY THE STRUCTURAL TRADES. SUCH REVIEW, IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT, CRITERIA AND INTENT. TYPICALLY THIS WILL INCLUDE THE FOLLOWING:

- TEMPORARY EXCAVATION SHORING PLANS AND DETAILS
- CONCRETE FALSEWORK DRAWINGS
- REINFORCING STEEL SHOP DRAWINGS
- POST-TENSION PLANS AND DETAILS
- STRUCTURAL STEEL SHOP DRAWINGS
- METAL DECK SHOP DRAWINGS
- STEEL JOIST SHOP DRAWINGS
- STRUCTURAL PRE-CAST SHOP DRAWINGS

WHERE SO DIRECTED BY THE CONTRACT DOCUMENTS, THE ABOVE SUBMISSION MAY REQUIRE THE SEAL AND SIGNATURE OF A PROFESSIONAL ENGINEER, SO REGISTERED IN THE GOVERNING JURISDICTION. IN SUCH INSTANCES, THE SOLE RESPONSIBILITY FOR THE DESIGN OF SUCH ELEMENTS LIES WITH THAT DESIGNER AND IS OUTSIDE OF THE SCOPE OF SERVICES PROVIDED BY QUINN DRESSEL ASSOCIATES. QUINN DRESSEL ASSOCIATES WILL ALSO RECEIVE AND PROVIDE A LIMITED REVIEW OF SHOP DRAWINGS PREPARED BY TRADES OTHER THAN STRUCTURAL. SUCH REVIEW IS UNDERTAKEN SOLELY TO ASCERTAIN THE EFFECTS OF THE WORK OF OTHER TRADES UPON THE STRUCTURAL BUILDING FRAMEWORK, AND IS LIMITED TO A REVIEW OF THE LOADS AND MANNER IN WHICH THE LOADS ARE DELIVERED TO THE STRUCTURAL BUILDING FRAMEWORK. TYPICALLY, DRAWINGS PREPARED BY TRADES OTHER THAN STRUCTURAL WOULD INCLUDE:

- EXTERIOR BUILDING CLADDING SYSTEM, INDICATING LOADS AND ATTACHMENT METHODOLOGY
- SLEEVING DRAWINGS PREPARED BY THE MECHANICAL OR ELECTRICAL TRADES
- CORE REQUESTS BY THE MECHANICAL OR ELECTRICAL TRADES
- EQUIPMENT AND/OR PIPING LOADS AND ATTACHMENT METHODOLOGY
- WINDOW WASHING EQUIPMENT AND ANCHOR ATTACHMENTS

DRAWINGS RECEIVED WHICH DO NOT CONTAIN ADEQUATE LOADING INFORMATION WILL BE RETURNED AS "REJECTED". DRAWINGS WHICH ARE OF NO RELEVANCE TO A STRUCTURAL REVIEW WILL BE RETURNED AS "NO STRUCTURAL RELEVANCE - NOT REVIEWED".

RESPONSIBILITY FOR THE ADEQUACY AND SAFE OPERATION OF SUCH EQUIPMENT, ITS APPENDAGES, ANCHORAGES AND VARIOUS SUPPORTS MECHANISMS WHETHER APPLIED TO OR EMBEDDED WITHIN THE STRUCTURAL BUILDING FRAMEWORK IS THE SOLE RESPONSIBILITY OF ITS DESIGNER OR RELATED CONTRACTOR, AND IS NOT THE RESPONSIBILITY OF QUINN DRESSEL ASSOCIATES.

B/ GENERAL

1. THE FOLLOWING GENERAL NOTES AND TYPICAL DETAILS SHOWN ON THE DRAWINGS ARE APPLICABLE TO ALL STRUCTURAL CONDITIONS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS.
2. THE STRUCTURAL DRAWINGS SHALL BE READ WITH THE SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS. REFER TO THE ARCHITECTURAL DRAWINGS FOR FIRE SEPARATION REQUIREMENTS.
3. ONLY DIMENSIONS RELEVANT TO STRUCTURAL ELEMENTS ARE SHOWN ON THE STRUCTURAL DRAWINGS. FOR OTHER DIMENSIONS, AND LOCATIONS, SIZES OF SLEEVES OR FORMED OPENINGS NOT SHOWN, REFER TO OTHER CONTRACT DRAWINGS AND DOCUMENTS. OBTAIN THE ARCHITECT'S PRIOR APPROVAL BEFORE INSTALLING SUCH OPENINGS, SLEEVES ETC.
4. SEE OTHER CONTRACT DRAWINGS FOR LOCATIONS AND DIMENSIONS OF PITS, BASES, SUMPS, TRENCHES, DEPRESSIONS, GROOVES, AND CHAMFERS NOT SHOWN ON STRUCTURAL DRAWINGS.
5. THE DESIGN LIVE LOAD SHOWN ON THE DRAWINGS SHALL NOT BE EXCEEDED DURING CONSTRUCTION. THE CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS FOR CONSTRUCTION LOADS AND FOR ADEQUATE TEMPORARY BRACING TO KEEP ALL STRUCTURAL AND NON-STRUCTURAL ELEMENTS PLUMB AND IN TRUE ALIGNMENT AT ALL PHASES OF CONSTRUCTION.

C/ STANDARDS AND DESIGN CRITERIA

GENERAL

THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES AND STANDARDS
OBC REG. 332/12
NBC 2015
CSA A23 SERIES

IMPORTANCE CATEGORY

THIS BUILDING HAS BEEN DESIGNED FOR AN IMPORTANCE CATEGORY OF NORMAL

DEAD LOADS
THE BUILDING HAS BEEN DESIGNED TO RESIST THE FOLLOWING DEAD LOADS. SPECIFIC DESIGN VALUES ARE REFERENCED ON INDIVIDUAL FRAMING PLANS.
- BUILDING SELF-WEIGHT
- WEIGHT OF ALL MATERIAL OF CONSTRUCTION INCORPORATED INTO THE BUILDING AND PERMANENTLY SUPPORTED THEREON.
- WEIGHT OF PARTITIONS, WHERE APPLICABLE.
- VERTICAL GRAVITY LOADS DUE TO SOIL, PLANTING MATERIAL AND TREES.

LIVE LOADS
THE BUILDING HAS BEEN DESIGNED TO RESIST LIVE LOADS DUE TO USE AND OCCUPANCY. SPECIFIC DESIGN VALUES ARE REFERENCED ON INDIVIDUAL FRAMING PLANS. LIVE LOAD REDUCTIONS AS PERMITTED UNDER THE APPLICABLE GOVERNING CODE HAVE BEEN INCORPORATED INTO THE ELEMENT DESIGNS WHERE APPROPRIATE.

SNOW & RAIN

THE BUILDING'S ROOFS HAVE BEEN DESIGNED TO RESIST LOADS DUE TO SNOW AND RAIN AS DEFINED BY THE APPLICABLE CODE. THE FOLLOWING FACTORS ARE UNIQUE TO THIS BUILDING.

Is (IMPORTANCE FACTOR)	=	1.00 (ULS) 0.90 (SLS)
Ss (1 IN 50 YEAR GROUND SNOW LOAD)	=	1.1 kN/m2
Sr (1 IN 50 YEAR ASSOCIATED RAIN LOAD)	=	0.4 kN/m2

WIND

THE BUILDING HAS BEEN DESIGNED TO RESIST WIND FORCES AS CALCULATED IN ACCORDANCE WITH THE FOLLOWING FORMULA:

P = IwqCeCgCp

WHERE Iw (IMPORTANCE FACTOR)	=	1.0 (ULS) (TABLE 4.1.7.1) 0.75 (SLS) (TABLE 4.1.7.1)
q (1 IN 50 YEAR REFERENCE VELOCITY PRESSURE)	=	0.44 kPa
Ce (BASED UPON (open /rough) TERRAIN)	=	$(h/12)^{0.5}$ BUT NOT LESS THAN 0.7
Cg (GUST EFFECT FACTOR) Cp (EXTERNAL PRESSURE COEFFICIENT)	=	1.95 OR 1.3
Ct (TOPOGRAPHIC FACTOR)	=	1.0

RESULTING OVERALL WIND DESIGN FORCES (FACTORED)

EAST-WEST		NORTH-SOUTH	
BASE SHEAR	80	BASE SHEAR	140
OVERTURNING MOMENT	540	OVERTURNING MOMENT	430

EXTERIOR ENVELOPE WIND LOADS

THE BUILDING'S EXTERIOR ENVELOPE SHALL BE DESIGNED TO RESIST WIND PRESSURES IN ACCORDANCE WITH THE ONTARIO BUILDING CODE. THE FOLLOWING DESIGN CRITERIA SHALL BE FOLLOWED BY THE ENVELOPE DESIGNER(S).

q	REFERENCE VELOCITY PRESSURE	=	0.44 kPa
Iw	IMPORTANCE FACTOR	=	1.0 (STRENGTH COMPLIANCE) 0.75 (DEFLECTION COMPLIANCE)
Ce	EXPOSURE FACTOR	=	$(h/12)^{0.5}$ BUT NOT LESS THAN 0.7
FOR EXTERNAL PRESSURES	C_pC_g		DETERMINED IN ACCORDANCE WITH FIGURE 4.1.7.6.B OBC 2012 (FOR VERTICAL CLADDING) DETERMINED IN ACCORDANCE WITH FIGURE 4.1.7.6.C OBC 2012 (FOR HORIZONTAL ROOFING)
FOR INTERNAL PRESSURES	C_g		INTERNAL GUST FACTOR 2.0
	C_p		CATEGORY 2 -0.45 to -0.3 (APPLIED TO FULL WALL AREAS) WALLS IN THE VICINITY OF MAJOR EXTERIOR OPENINGS MAY REQUIRE HIGHER VALUES.

EARTHQUAKE

SITE PROPERTIES:

SITE CLASS D (AS INDICATED IN GEOTECHNICAL REPORT NO. 22-094 R01 DATED MARCH 17, 2022 AND PREPARED BY CMT ENGINEERING INC. AND E-MAIL DATED MAY 31, 2022.

PGA_{REF}	= 0.0992		
PGA	= 0.124	F(PGA)	= 1.29 (Table 4.1.8.4.H.)
Sa(0.2)	= 0.193	F(0.2)	= 1.24 (Table 4.1.8.4.B.)
Sa(0.5)	= 0.106	F(0.5)	= 1.47 (Table 4.1.8.4.C.)
Sa(1.0)	= 0.056	F(1.0)	= 1.55 (Table 4.1.8.4.D.)
Sa(2.0)	= 0.027	F(2.0)	= 1.57 (Table 4.1.8.4.E.)
Sa(5.0)	= 0.0067	F(5.0)	= 1.58 (Table 4.1.8.4.F.)
Sa(10.0)	= 0.0027	F(10.0)	= 1.49 (Table 4.1.8.4.G.)

IMPORTANCE CATEGORY:

NORMAL IE = 1.0 (ULS)
INTERSTOREY DRIFT RATIO LIMITED TO 0.025hs

STRUCTURAL CONFIGURATION:

IN ACCORDANCE WITH TABLE 4.1.8.6, THE BUILDING'S STRUCTURAL CONFIGURATION IS JUDGED TO BE "REGULAR" IN THE FOLLOWING CATEGORY(IES) TYPE

IEFaSa(0.2)	= 0.239 < 0.35
BUILDING HEIGHT	= 9.4 m (30'-10")
$Ta_{EAST-WEST\ DIRECTION}$	= 0.25 s
$Ta_{NORTH-SOUTH\ DIRECTION}$	= 0.25 s

ACCORDINGLY, THE EARTHQUAKE ANALYSIS HAS BEEN CARRIED OUT IN ACCORDANCE WITH THE "STATIC ANALYSIS PROCEDURE" AS DESCRIBED IN ARTICLE 4.1.8.7.

SEISMIC FORCE RESISTING SYSTEM (SFRS): CONVENTIONAL CONSTRUCTION - MASONRY SHEAR WALL AND TENSION-ONLY STEEL BRACING.

DESIGN FACTORS
Rd (DUCTILITY RELATED FORCE MODIFICATION FACTOR): = 1.5
Ro (OVER-STRENGTH RELATED FORCE MODIFICATION FACTOR): = 1.3

STATIC ANALYSIS PROCEDURE

MINIMUM LATERAL EARTHQUAKE FORCE V = S(Ta)MvIEW/(RdRo) = 240 kN

WHERE	TA	=	0.25 s	(ARTICLE 4.1.8.11.(3))
	S(Ta)	=	0.225	(Article 4.1.8.4.(9))
	Mv	=	1.0	(TABLE 4.1.8.11)
	J	=	1.0	(TABLE 4.1.8.11)
	W	=	2900 kN	(DEAD LOAD+SUPERIMPOSED DEAD LOAD+0.25 SNOW LOAD AS DEFINED IN ARTICLE 4.1.8.2)

EAST-WEST		NORTH-SOUTH	
T_{RSA}	0.25	T_{RSA}	0.25
BASE SHEAR	240	BASE SHEAR	240
OVERTURNING MOMENT	1150	OVERTURNING MOMENT	1150

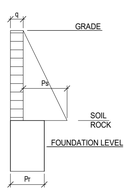

DIAGRAM OF LATERAL FORCES ON BASEMENT WALL

LATERAL FORCES ON BASEMENT WALLS:

a. DESIGN OF THE BASEMENT WALLS RETAINING EARTH AND WATER HAS BEEN BASED ON THE LATERAL EARTH PRESSURE "p_s "GIVEN BY THE EXPRESSION:
$p_s = k (w_1 h+q)$ MULTIPLIED BY THE LOAD FACTOR 1.5
WHERE:
k = 0.50
w_1 = 22 kN/m³ - UNIT WEIGHT OF EARTH
q = SURCHARGE OR ADJACENT FOOTING PRESSURE (kN/m²)
h = DEPTH OF SOIL FROM GRADE TO ROCK (m)

b. IT IS ASSUMED THAT A FREE DRAINING SYSTEM SHALL BE INSTALLED, THEREFORE THE BASEMENT WALLS HAVE NOT BEEN DESIGNED TO RESIST ANY HYDROSTATIC PRESSURE.

D/ LATERAL LOAD RESISTING SYSTEM

THE LATERAL LOAD RESISTING SYSTEM FOR THE PROJECT IS CONVENTIONAL CONSTRUCTION MASONRY SHEAR WALL AND TENSION-ONLY STEEL BRACING.

E/ MATERIALS

1. CONCRETE

ELEMENT		EXPOSURE CLASS	MAX w/c RATIO	COMPRESSIVE STRENGTH	AIR ENTRAINMENT CATEGORY	CURING TYPE	CHLORIDE ION PENETRABILITY
..	..	A-XL	0.40	..	1 OR 2	3	< 1000 COULOMBS
..	..	A-1	0.40	..	1 OR 2	2	< 1500 COULOMBS
..	..	A-2	0.45	..	1	2	
..	..	A-3	0.50	..	2	1	
..	..	A-4	0.55	..	2	1	
..	..	C-XL	0.40	..	1 OR 2	3	< 1000 COULOMBS
..	..	C-1	0.40	..	1 OR 2	2	< 1500 COULOMBS
..	..	C-2	0.45	..	1	2	
..	..	C-3	0.50	..	2	1	
..	..	C-4	0.55	..	2	1	
..	..	F-1	0.50	..	1	2	
..	..	F-2	0.50	..	2	1	
..	FOOTING AND PIER	N	0.55	30		1	
..	..	N-CF	0.55	..		1	
..	..	R-1	0.55	..	2	1	
..	..	R-2	0.55	..	2	1	
..	..	R-3	0.55	..		1	
..	..	S-1	0.40	..	1 OR 2	2	
..	..	S-2	0.45	..	1 OR 2	2	
..	..	S-3	0.45	..	1 OR 2	1	

COMPRESSIVE STRENGTH f'c IS THE ULTIMATE COMPRESSIVE STRENGTH AT :
28 DAYS FOR COMPRESSIVE STRENGTHS < 40 MPA
56 DAYS FOR COMPRESSIVE STRENGTHS > 40 MPA & < 55 MPA
90 DAYS FOR COMPRESSIVE STRENGTHS > 55 MPA

OTHER REQUIREMENTS
REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. EMBEDDED ITEMS WITHIN THE CONCRETE ELEMENTS SHALL ADHERE TO THE REQUIREMENTS OF CSA 413-21 AND EITHER BE NON-METALLIC, HIGH SILICON CAST IRON, STAINLESS STEEL OR SUITABLY PROTECTED /COATED AGAINST CORROSIVE EFFECTS. EXPOSED ITEMS WITHIN THE CHLORIDE PROTECTION ZONE (CPZ) SHALL BE EITHER STAINLESS STEEL OR SUITABLY PROTECTED BY GALVANISING OR OTHER DURABLE COATING.

2. REINFORCING STEEL

TYPE	fy - MIN. YIELD STRENGTH (MPa)	REMARKS
WELDED WIRE FABRIC	400	
DEFORMED REINFORCING STEEL	400	

ALL REINFORCING STEEL TO CONFORM TO CSA G30.18 - 21

3. STRUCTURAL STEEL

DESIGNATION	TYPE	YIELD STRENGTH (MPa)	MIN. TENSILE STRENGTH (MPa)
G40.21	350W	350	450

HSS MEMBER CONFORMING TO CSA G40.20 CLASS C. FOR OTHER MATERIALS, SEE SPECIFICATIONS.

F/ FOUNDATION

1. THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR EXCAVATIONS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10.
FOR FOUNDATION DESIGN PARAMETERS REFER TO GEOTECHNICAL REPORT #22-094 R01 PREPARED BY CMT ENGINEERING Inc. DATED MAR. 17, 2022, FOR BEARING CAPACITIES = 150 kPa (SLS).
2. PREVENT SOIL ADJACENT TO AND BENEATH ALL FOOTINGS FROM FREEZING. PLACE ALL EXTERIOR FOOTINGS A MINIMUM OF 1200mm BELOW FINISHED GRADE
3. FOOTING EXCAVATIONS AND CAISSON BASES SHALL BE INSPECTED AND CERTIFIED IN WRITING BY A QUALIFIED GEOTECHNICAL ENGINEER BEFORE ANY CONCRETE IS PLACED.
4. DO NOT PLACE BACKFILL AGAINST WALLS RETAINING EARTH, OTHER THAN CANTILEVERED WALLS, UNTIL THE FLOOR SLABS AT TOP AND BOTTOM OF THE WALLS ARE POURED AND CURED.
5. CARRY OUT BACKFILLING AGAINST FOUNDATION WALLS WHICH HAVE EARTH ON BOTH SIDES IN SUCH A MANNER THAT THE LEVEL OF BACKFILLING ON ONE SIDE OF THE WALL IS NEVER MORE THAN 450mm DIFFERENT FROM THE LEVEL ON THE OTHER SIDE OF THE WALL.
6. IF SPECIFIED CONCRETE STRENGTH FOR COLUMNS AND WALL IS DIFFERENT AND THEY ARE POURED MONOLITHICALLY, THEN THEY SHALL HAVE THE GREATER CONCRETE STRENGTH OF EITHER STRUCTURAL MEMBER.

G/ SLAB ON GRADE

1. PLACE SLAB ON GRADE ON MATERIAL CAPABLE OF SUSTAINING 24 kN/m2 WITHOUT SETTLEMENT RELATIVE TO THE BUILDING FOUNDATIONS.
2. FOR THICKNESS OF SLAB ON GRADE SEE FOUNDATION PLAN. MAINTAIN SLAB THICKNESS AT ALL DEPRESSIONS. SEE ARCHITECTURAL DRAWINGS FOR LOCATION AND EXTENT OF FINISHES AND DEPRESSIONS.
3. UNLESS NOTED ON PLAN OTHERWISE, PROVIDE A MINIMUM OF WELDED WIRE FABRIC REINFORCING 152x152 X MW18.7xMW18.7.
4. REFER TO C/ STANDARDS & DESIGN CRITERIA FOR PROTECTION SYSTEM DESIGNATION.

REVISIONS / ISSUE

NO.	DATE	
1	2025-05-21	ISSUED FOR PERMIT
2	2025-07-16	ISSUED FOR UPDATES

DISCLAIMER:

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NOTIFY ARCHITECT OF ANY DISCREPANCIES AND WAIT FOR INSTRUCTION PRIOR TO PROCEEDING WITH WORK.

Quinn Dressel ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

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STAMP:

LICENSED PROFESSIONAL ENGINEER
X. YE
PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD.
BUILDING RENOVATION

78 ADVANCE RD,
ETOBICOKE, ON, M8Z 2T7

DRAWING TITLE:

GENERAL NOTES

DRAWN BY: MH	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: N.T.S.
	DATE: 2025-07-16
	DRAWING NO.: S101

2025-11-03 1:51:50 PM
© Quinn Dressel Associates, Project Drafting\24-327\QDA\Drafting 24-327 Works for Structure #78 Adv Rd, Toronto\Working Files\24-327 78 Advance Road Drawings 2025-10-30.DWG\S101 - 78 Advance Road Drawings - S101 - GENERAL NOTES

H/ CONCRETE AND REINFORCING

1. CLEAR CONCRETE COVER TO REINFORCING

CLEAR COVER IS THE DISTANCE MEASURED FROM THE CONCRETE SURFACE TO THE NEAREST BAR DEFORMATION. MINIMUM COVER DIMENSION IS DEPENDANT UPON THE EXPOSURE CLASS OF CONCRETE AS INDICATED IN THE TABLE BELOW

CLEAR CONCRETE COVER TO BARS																			
EXPOSURE CONDITION	N, N-CF, R-3						F1, F-2, S-1, S-2, S-3, R-1, R-2						C-XL, A-XL, C-1, C-3, A-1, A-2, A-3						
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	75mm						75mm						75mm						
BEAMS, GIRDERS	30mm						40mm						60mm						
TIED REINFORCEMENT WITHIN WALLS AND COLUMNS	40mm						40mm						60mm						
SLAB, WALLS, JOISTS, SHELLS AND FOLDED PLATES	25mm						40mm						60mm						
NOMINAL RATIO OF COVER TO NOMINAL BAR DIAMETER (mm)	10	15	20	25	30	35	10	15	20	25	30	35	10	15	20	25	30	35	
	10	15	20	25	30	35	15	23	30	38	45	53	20	35	40	50	60	75	
NOMINAL RATIO OF COVER TO NOMINAL AGGREGATE SIZE (ASSUMES 19mm AGGREGATE)	19mm						29mm						38mm						

FOR COVER REQUIREMENTS IN AREAS OF THE BUILDING THAT ARE PART OF A CHLORIDE PROTECTION ZONE (CPZ) REFER TO TABLE BELOW.

IN ACCORDANCE WITH OBC-MMAH SUPPLEMENTARY STANDARDS SB-2, THE ABOVE VALUES WILL PROVIDE SUFFICIENT COVER TO PROVIDE MINIMUM 2 HOUR FIRE PROTECTION TO THESE ELEMENTS. WHERE SO INDICATED ON THE ARCHITECTURAL DRAWINGS, IN AREAS WHERE FIRE SEPARATION REQUIREMENTS EXCEED 2 HOURS, INCREASED VALUES OF COVER MAY APPLY.

	TOP COVER			BOTTOM COVER
	DEFORMED BARS & WWF		POST TENSION SHEATH/DUCT	
CHLORIDE PROTECTION SYSTEM DESIGNATION	EXPOSURE CONDITION			
	NORMAL EXPOSURE	SEVERE EXPOSURE		
MI	40	40	60	30
MX	40	40	60	30
M	40	45	60	30
IX	40	45	60	30
IS	45	50	60	30
I	50	55	60	30
XS	55	60	60	30
X	60	65	60	30

2. MINIMUM CLEAR DISTANCE BETWEEN PARALLEL BARS SHALL BE THE GREATEST OF THE FOLLOWING:
   a) 1.4 BAR DIAMETER
   b) 1.4 TIMES MAXIMUM SIZE OF AGGREGATE
   c) 30mm MINIMUM
   WHERE PARALLEL REINFORCEMENT IS TO BE PLACED IN MULTIPLE LEVELS, THE BARS SHALL BE PLACED DIRECTLY ABOVE EACH OTHER TO FACILITATE THE FLOW OF CONCRETE AROUND THE BARS.
3. MINIMUM LAPS OF CONTINUOUS DEFORMED BARS SHALL BE 24 Ø OR 450mm WHICHEVER IS GREATER. LAPS OF WELDED WIRE FABRIC SHALL BE 150mm AT ENDS AND EDGES. INCREASE LAPS BY 20% FOR EPOXY COATED BARS.
4. ALL DOWELS SHALL HAVE A MINIMUM EMBEDMENT OF 24 Ø OR 450mm MINIMUM, EXCEPT THAT DOWELS TO SLAB SHALL HAVE A MINIMUM EMBEDMENT OF 600mm. INCREASE LAP LENGTHS BY 20% FOR EPOXY COATED BARS.

REFER TO THE FOLLOWING TABLES FOR DEVELOPMENT & SPLICE LENGTHS AND MINIMUM BAR EMBEDMENTS.

WHERE PARALLEL REINFORCEMENT IS TO BE PLACED IN MULTIPLE LEVELS, THE BARS SHALL BE PLACED DIRECTLY ABOVE EACH OTHER TO FACILITATE THE FLOW OF CONCRETE AROUND THE BARS.

DEVELOPMENT OF STRAIGHT DEFORMED BARS IN COMPRESSION

CONCRETE STRENGTH	BAR LOCATION	BAR SIZE					
		10M	15M	20M	25M	30M	35M
20 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	350	420	550	650	770
25 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	310	380	490	580	690
30 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	360	450	530	630
35 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	350	450	530	630
40 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	350	450	530	630
45 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	350	450	530	630
50 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	350	450	530	630
55 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	350	450	530	630
60 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	350	450	530	630
65 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	350	450	530	630
70 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	350	450	530	630
75 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	350	450	530	630
80 MPa	CONFINED ZONES WITHIN TIES OR SPIRALS	200	290	350	450	530	630
	OTHER	200	290	350	450	530	630

USE OF THE ABOVE TABLE ASSUMES THE FOLLOWING:

REINFORCING STEEL GRADE 400 MPa

A. COMPRESSION MEMBER WITH 10M TIES SPACED 100mm OR LESS, OR
B. COMPRESSION MEMBER WITH 6M SPIRALS SPACED 100mm OR LESS

DEVELOPMENT OF STRAIGHT DEFORMED BARS IN TENSION

CONCRETE STRENGTH	BAR LOCATION	BAR SIZE					
		10M	15M	20M	25M	30M	35M
20 MPa	> 300mm CONC BELOW HORIZ BAR	480	670	820	1330	1570	1870
	OTHER	370	520	630	1020	1210	1440
25 MPa	> 300mm CONC BELOW HORIZ BAR	430	600	740	1190	1400	1670
	OTHER	330	460	570	910	1080	1290
30 MPa	> 300mm CONC BELOW HORIZ BAR	390	550	670	1080	1280	1530
	OTHER	300	420	520	830	990	1180
35 MPa	> 300mm CONC BELOW HORIZ BAR	360	510	620	1000	1190	1420
	OTHER	300	390	480	770	910	1090
40 MPa	> 300mm CONC BELOW HORIZ BAR	340	480	580	940	1110	1330
	OTHER	300	370	450	720	850	1020
45 MPa	> 300mm CONC BELOW HORIZ BAR	320	450	550	890	1050	1250
	OTHER	300	350	420	680	810	960

USE OF THE ABOVE TABLE ASSUMES THE FOLLOWING:

REINFORCING STEEL GRADE 400 MPa
NORMAL DENSITY CONCRETE
UNCOATED BARS
BARS ARE WITHIN A

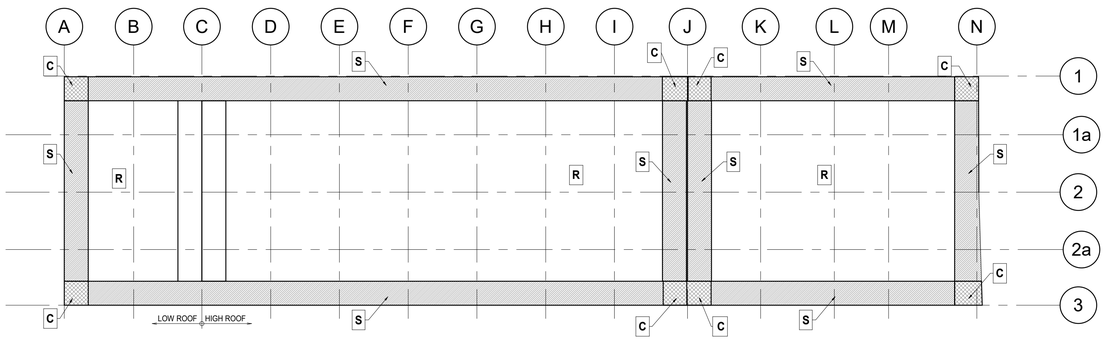
A. COMPRESSION MEMBER WITH TIES
B. BEAMS WITH STIRRUPS, OR
C. SLABS OR WALLS WITH CLEAR SPACING AT LEAST TWO BAR DIAMETERS WITH COVER GREATER THAN OR EQUAL TO ONE BAR DIAMETER

DEVELOPMENT OF HOOKED DEFORMED BARS IN TENSION ldh

CONCRETE STRENGTH	BAR LOCATION	BAR SIZE/OUTER BEND RADIUS					
		10M	15M	20M	25M	30M	35M
		45mm	65mm	80mm	100mm	155mm	185mm
20 MPa	CONFINED ZONES WITHIN TIES	150	200	250	320	380	450
	OTHER	180	250	310	400	470	560
25 MPa	CONFINED ZONES WITHIN TIES	150	180	220	290	340	400
	OTHER	160	230	280	360	420	500
30 MPa	CONFINED ZONES WITHIN TIES	150	170	200	260	310	370
	OTHER	150	210	250	330	390	460
35 MPa	CONFINED ZONES WITHIN TIES	150	160	190	240	290	340
	OTHER	150	190	240	300	360	430
40 MPa	CONFINED ZONES WITHIN TIES	150	150	180	230	270	320
	OTHER	150	180	220	280	340	400
45 MPa	CONFINED ZONES WITHIN TIES	150	150	170	220	250	300
	OTHER	150	170	210	270	320	380

USE OF THE ABOVE TABLE ASSUMES THE FOLLOWING:

REINFORCING STEEL GRADE 400 MPa
NORMAL DENSITY CONCRETE
UNCOATED BARS
BARS PLACED WITHIN MINIMUM 60mm SIDE COVER AND 50mm END COVER



ROOF UPLIFT DIAGRAM

NOTES:

1. UNFACTORED WING UPLIFT FORCE (1m² TRIBUTARY AREA; EXTERIOR PLUS INTERIOR FORCE)

- ZONE C = 1.85 kPa ↑
- ZONE S = 0.96 kPa ↑
- ZONE R = 0.74 kPa ↑

REVISIONS / ISSUE

NO.	DATE	
1	2025-05-21	ISSUED FOR PERMIT
2	2025-07-16	ISSUED FOR UPDATES

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Quinn Dressel ASSOCIATES
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STAMP:

LICENSED PROFESSIONAL ENGINEER
R. YE
PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD. BUILDING RENOVATION

78 ADVANCE RD, ETOBICOKE, ON, M6Z 2T7

DRAWING TITLE:

GENERAL NOTES

DRAWN BY: TP	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: N.T.S.
	DATE: 2025-07-16
	DRAWING NO.: S102

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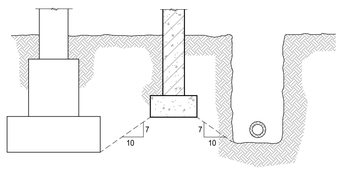
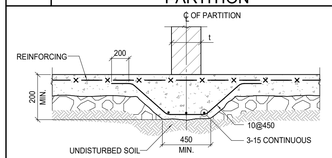
files\24-327 78 Advance Road Massing r22.rvt\24-327 ODA 24-327 78 Advance Road Massing r22 - Revision Set\Revision 1\

TD101 ELEVATION OF ADJACENT FOOTING AND EXCAVATION



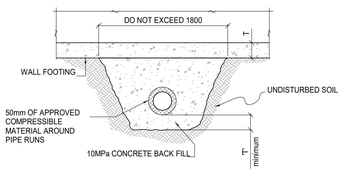
ADJUST FOOTING ELEVATIONS SHOWN ON DRAWINGS IF NECESSARY TO MAINTAIN THE MAXIMUM OF 7 IN 10 SLOPE BETWEEN ADJACENT FOOTINGS AND BETWEEN FOOTINGS AND ADJACENT EXCAVATIONS FOR DRAINS OR OTHER ITEMS.

TD108 SLAB DETAIL AT MASONRY PARTITION



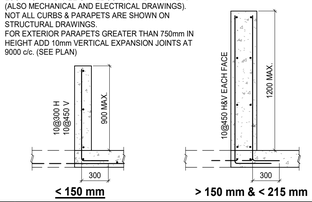
NOTES:
1. USE OF DETAIL LIMITED TO NON-LOADBEARING INTERIOR HOLLOW BLOCK PARTITIONS OF MAXIMUM HEIGHT LESS THAN 36t.
2. COORDINATE LOCATION OF THICKENED SLAB WITH ARCHITECTURAL DRAWINGS.
3. THICKENING NOT REQUIRED FOR 100 THK. WALLS OF ANY HEIGHT.

TD105 PIPE CROSSING BELOW FOOTING



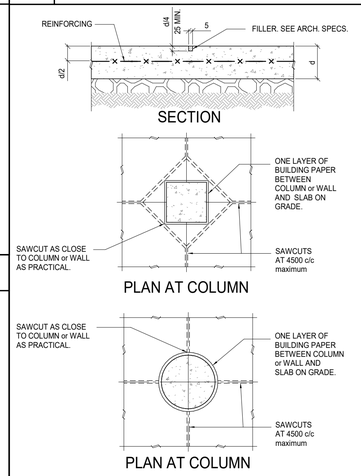
TD222 CURBS AND PARAPETS

1. THE FOLLOWING REINFORCEMENT SHALL BE PLACED IN CONCRETE CURBS & PARAPETS UNLESS SHOWN OTHERWISE.
2. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND SIZE OF ALL CURBS AND PARAPETS (ALSO MECHANICAL AND ELECTRICAL DRAWINGS). NOT ALL CURBS & PARAPETS ARE SHOWN ON STRUCTURAL DRAWINGS. FOR EXTERIOR PARAPETS GREATER THAN 750mm IN HEIGHT ADD 10mm VERTICAL EXPANSION JOINTS AT 9000 c/c. (SEE PLAN)
3.



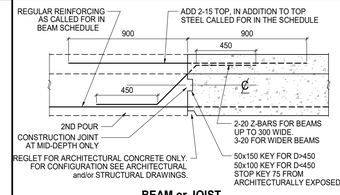
< 150 mm **> 150 mm & < 215 mm**

TD107 SAWCUTS IN SLAB ON GRADE

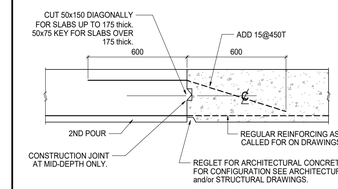


NOTES:
1. PROVIDE LAYOUT OF SAWCUTS IN SLAB ON GRADE TO THE ENGINEER WELL IN ADVANCE OF SLAB CONSTRUCTION.
2. COORDINATE SAWCUT LAYOUT WITH ARCHITECTURAL FLOOR FINISHES.

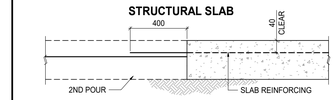
TD217 CONSTRUCTION JOINTS



BEAM or JOIST



STRUCTURAL SLAB



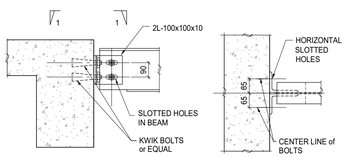
SLAB ON GRADE

NOTE
WHERE BARS ARE EPOXY COATED INCREASE BAR LENGTHS BY 20%

TD801 ABBREVIATIONS

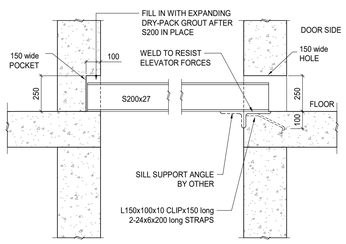
A. BOLT	=	ANCHOR BOLT	FDN	=	FOUNDATION	Pa	=	PASCALS
ADJ	=	ADJUSTABLE	FF	=	FAR FACE	PART.	=	PARTITION
AIFB	=	ASPHALT IMPREGNATED FIBREBOARDS	FIN	=	FINISHED	PL ℄	=	PLATE
ALT	=	ALTERNATE	FL	=	FLOOR	P.C.	=	PRECAST
ARCH	=	ARCHITECTURAL	FTG	=	FOOTING	PROJ.	=	PROJECTION
ASL	=	ADDITIONAL SNOW LOAD						
@	=	AT	GA.	=	GAUGE	R	=	REACTION
			GALV.	=	GALVANIZED	RAD	=	RADIUS
B or BOT	=	BOTTOM	GEN.	=	GENERAL	REBAR	=	REINFORCEMENT BAR
BLDG	=	BUILDING	G.L	=	GRID LINE	REF	=	REFERENCE
BM	=	BEAM				REINF	=	REINFORCING/ REINFORCEMENT
B. P	=	BASE/BEARING PLATE	H, HORIZ	=	HORIZONTAL	REQ'D.	=	REQUIRED
BSMT	=	BASEMENT	H.H.	=	HOOK EACH END	REV	=	REVISION/ REVISED
BTWN	=	BETWEEN	H.E.F.	=	HORIZONTAL EACH FACE	R/W	=	REINFORCED WITH
BRDG	=	BRIDGING	H.P.	=	HIGH POINT			
BEW	=	BOTTOM EACH WAY	H.L.	=	HIGH LINE	SECT.	=	SECTION
BUL	=	BOTTOM UPPER LAYER				SIDL	=	SUPERIMPOSED DEAD LOAD
BLL	=	BOTTOM LOWER LAYER	INT.	=	INTERIOR	SL.	=	SLAB
			I.F.	=	INSIDE FACE	SPEC'S	=	SPECIFICATIONS
CA	=	CAISSON				STRUCT	=	STRUCTURAL
c/c	=	CENTRE TO CENTRE	kN	=	KILONEWTONS	STD	=	STANDARD
CF	=	CONCRETE FIREPROOFING	kPa	=	KILOPASCAL	S.L.	=	SUPERIMPOSED LOAD
C.J.T	=	CONSTRUCTION JOINT				SDF	=	STEPPED DOWN FOOTING
CL, ℄	=	CENTRE LINE	L	=	STEEL ANGLE	SQ	=	SQUARE
COL	=	COLUMN	LLV	=	LONG LEG VERTICAL			
CONC	=	CONCRETE	LLH	=	LONG LEG HORIZONTAL	T	=	TOP
CONSTR	=	CONSTRUCTION	LLBB	=	LONG LEG BACK TO BACK	T&B	=	TOP & BOTTOM
CANT	=	CANTILEVER	LG	=	LONG	TDL	=	TENSION DEVELOPMENT LENGTH
c/w	=	CONNECT WITH	L.L.	=	LIVE LOAD	TEMP	=	TEMPERATURE
Cf	=	COMPRESSIVE FORCE (FACTORED)	L.P.	=	LOW POINT	TJ	=	TIE JOIST
CONT.	=	CONTINUOUS				TOC	=	TOP OF CONCRETE/CURB
			m	=	METERS	TOS	=	TOP OF STEEL
DET.	=	DETAIL	mm	=	MILLIMETERS	TYP	=	TYPICAL
DIAG.	=	DIAGONAL	M	=	MOMENT, MIDDLE	TUL	=	TOP UPPER LAYER
DIA., Ø	=	DIAMETER	MC	=	MOMENT CONNECTION	TLL	=	TOP LOWER LAYER
DIM.	=	DIMENSION	MAX	=	MAXIMUM	Tf	=	TENSION FORCE (FACTORED)
D. L.	=	DEAD LOAD	MECH	=	MECHANICAL	T.L.S.	=	TENSION LAP SPLICE
DWG	=	DRAWING	MEZZ	=	MEZZANINE			
DWL.	=	DOWEL	MIN	=	MINIMUM	U/S	=	UNDERSIDE
			MISC	=	MISCELLANEOUS	U.N.O.	=	UNLESS NOTED OTHERWISE
EA	=	EACH	ML	=	MIDDLE LAYER			
EE	=	EACH END	MPa	=	MEGAPASCALS	V	=	VERTICAL
EF	=	EACH FACE	Mf	=	BENDING MOMENT (FACTORED)	VEF	=	VERTICAL EACH FACE
ES	=	EACH SIDE				Vf	=	SHEAR FORCE (FACTORED)
EW	=	EACH WAY	N.F.	=	NEAR FACE	VSC	=	VERTICALLY SLOTTED CONNECTION
EQ	=	EQUAL	N-S	=	NORTH-SOUTH			
EL	=	ELEVATION (571.0, ETC)	N.T.S.	=	NOT TO SCALE	WWF	=	WELDED WIDE FLANGE or WELDED WIRE FABRIC
ELEV	=	ELEVATOR	N	=	NEWTONS			
ELECT.	=	ELECTRICAL				WWM	=	WELDED WIRE MESH
E-W	=	EAST-WEST	O.F	=	OUTSIDE FACE			
EXIST	=	EXISTING	OPNG	=	OPENING			
EXP. JT	=	EXPANSION JOINT	OWSJ	=	OPEN WEB STEEL JOIST			
EXT	=	EXTERIOR						

TD402 ELEVATOR DIVIDER BEAM CONNECTION



PLAN 1-1

METHOD "A"

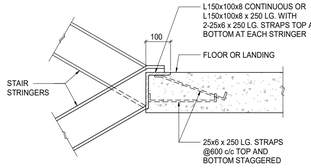


METHOD "B"

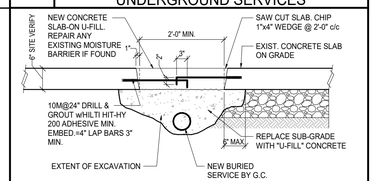
NOTE:

METHOD "B" CAN BE USED ONLY IF CONCRETE WALL ABOVE FLOOR AND IF ELEVATOR MANUFACTURER DOOR DETAILS PERMIT.

TD403 ANCHORAGE FOR STEEL STAIR TO CONCRETE SLAB

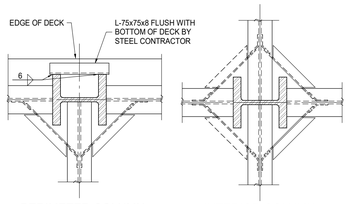


TD01 TYPICAL SLAB REPAIR AT NEW UNDERGROUND SERVICES

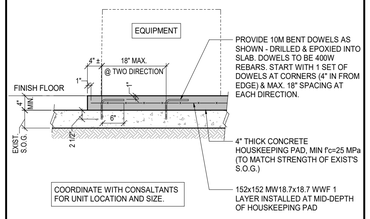


NOTE:
1. COORDINATE WITH ARCH & MECH DWGS FOR THE PIPING ROUTE AND DEPTH.
2. SCAN FOR ANY POSSIBLE EMBEDDED SERVICES WITHIN/BELOW THE EXISTING SLAB ON GRADE PRIOR TO ANY SAW CUTTING.
3. NEW SUBGRADE MATERIAL TO BE "U-FILL" 5MPa CONCRETE.
4. NEW SLAB ON FILL SHALL BE 20MPa CONCRETE, FINISHED TO ACCEPT SEAMLESS FLOOR FINISH.

TD506 DECK SUPPORT AT COLUMNS



TD02 HOUSKEEPING PAD TYPICAL DETAIL



REVISIONS / ISSUE

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1	2025-05-21	ISSUED FOR PERMIT
2	2025-07-16	ISSUED FOR UPDATES

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FLAT IRON BUILDING GROUP

paradigm architecture + design
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[t] 416.686.3624 www.paradigm-ad.com

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LICENSED PROFESSIONAL ENGINEER
X YE
PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD. BUILDING RENOVATION

78 ADVANCE RD, ETOBICOKE, ON, M8Z 2T7

DRAWING TITLE:

TYPICAL DETAILS

DRAWN BY: MH	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: N.T.S.
	DATE: 2025-07-16
	DRAWING NO.: S103

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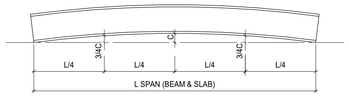
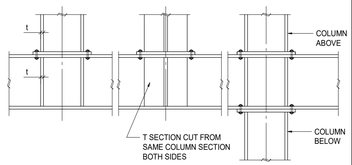
TD509 STEEL BEAM CAMBERS AND STUDS



NOTES:

1. IF THE APPLIED CAMBER DIMENSION AT MID SPAN IS 'C' PROVIDE 3/4C AT 1/4 POINTS OF SPAN AS SHOWN ABOVE.
2. CAMBER STEEL BEAMS WITH CAMBER AT MID SPAN AS STATED ON DRAWINGS. (i.e. CAMBER 'X', X=CAMBER IN mm)
3. PROVIDE STUDS AS STATED ON DRAWINGS. (i.e. N=35, N=NUMBER OF STUDS) AND AS PER TYPICAL DETAIL 502.

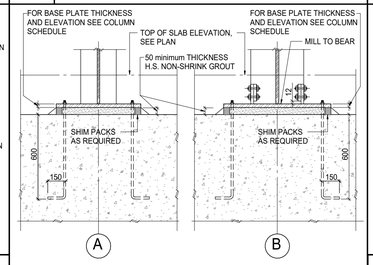
TD516 COLUMNS ON BEAMS



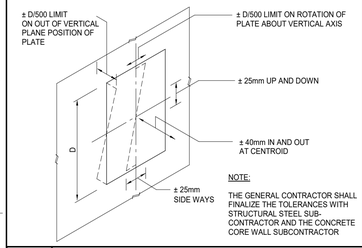
NOTES:

1. PROVIDE STIFFENERS AT BOTH SIDES OF BEAM EQUAL TO THE THICKNESS OF COLUMN FLANGE/WEB OR 10mm minimum WHICHEVER IS GREATER. DESIGN FOR MOMENT CONNECTION AS SPECIFIED, PROVIDE 20mm THICK BASE PLATE WITH 4-20Ø BOLTS minimum.
3. WHERE BEAMS ARE CAPPED ON COLUMNS, PROVIDE SIMILAR DETAIL.

TD521 BASE PLATE DETAILS



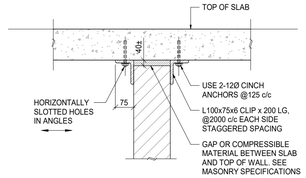
TD526 TOLERANCE OF EMBEDDED PLATES IN CORE WALL



NOTE:

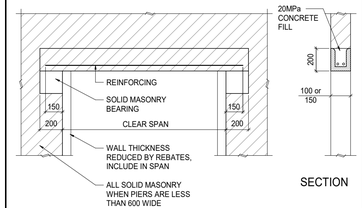
THE GENERAL CONTRACTOR SHALL FINALIZE THE TOLERANCES WITH STRUCTURAL STEEL SUB-CONTRACTOR AND THE CONCRETE CORE WALL SUBCONTRACTOR

TD601 PARTITION WALL BRACING TO SLAB



TD602 CONCRETE BLOCK LINTELS

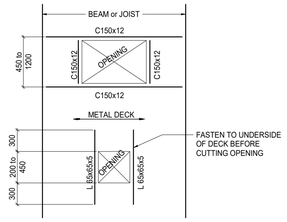
LINTELS IN 100 AND 150 BLOCK WALLS



ELEVATION

SECTION

TD514 FRAMING AROUND OPENING THROUGH METAL DECK

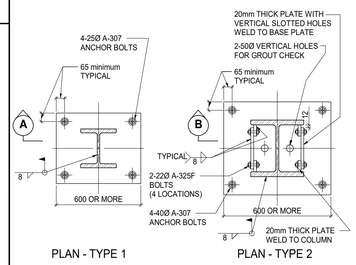


TD519 SCHEDULE FOR MINIMUM FILLET WELD SIZE FOR BUILT-UP COLUMNS & BEAMS

MATERIAL THICKNESS OF THICKER PART JOINT (mm)	MINIMUM FILLET WELD SIZE ON EACH SIDE
OVER 6 to 12	5
OVER 12 to 20	6
OVER 20 to 40	8
OVER 40 to 60	10
OVER 60 to 150	12
OVER 150	16

NOTE:

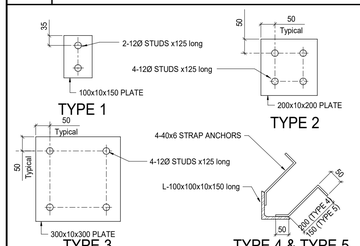
WELD SIZES AT THE VICINITY OF CONNECTIONS MUST BE DESIGNED TO TRANSFER LOCALLY APPLIED FORCES INTO COMPOSITE MEMBER.



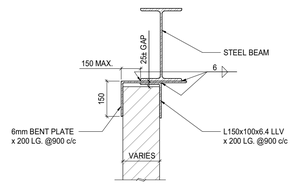
PLAN - TYPE 1

PLAN - TYPE 2

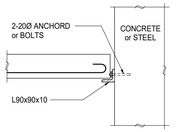
TD528 STEEL ANCHOR PLATE DETAILS



TD610 PARTITION WALL BRACING TO STEEL BEAM



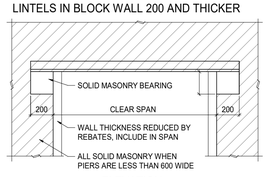
TD602 LINTEL BEARING ON COLUMN



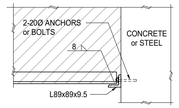
	CLEAR SPAN	REINFORCEMENT
100 WALLS	UP TO 1800	1 - 15
150 WALLS	UP TO 1800	2 - 10
	1800 TO 2150	2 - 15

TD603 STEEL LINTELS

LINTELS IN BLOCK WALL 200 AND THICKER



ELEVATION



LINTEL BEARING ON COLUMN

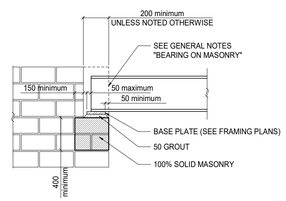
CLEAR SPAN	200 WALL		250 WALL		300 WALL	
	TYPE	MATERIAL	TYPE	MATERIAL	TYPE	MATERIAL
UP TO 1200		89x89x6.4		102x102x7.9		89x89x6.4
1200 TO 1800		127x89x7.9		152x102x7.9		127x89x9.5
1800 TO 2100		152x89x9.5		152x102x9.5 or 178x102x9.5		152x89x9.5

90 AND 100 LEGS ARE HORIZONTAL

NOTES:

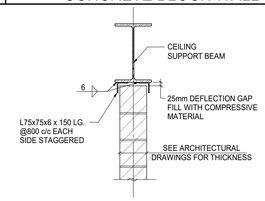
1. DOUBLE ANGLES SHALL BE STITCH WELDED BACK TO BACK, 1-5 WELD 25 LONG PER 600 LENGTH TOP & BOTTOM.
2. WHERE ANGLES DO NOT BEAR AT THE SAME ELEVATION, USE STEEL PACKING TO ENSURE EVEN REARING.
3. FOR WALLS THICKER THAN 300 ADD ONE ANGLE OF SIZE SPECIFIED FOR 300 WALLS PER ADDITIONAL 100 THICKNESS OF WALL.

TD604 STEEL BEAM BEARING ON MASONRY WALL



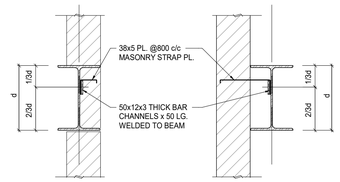
(BEAM PARALLEL TO THE WALL)

TD607 PERIMETER BEAMS AT CONCRETE BLOCK WALL



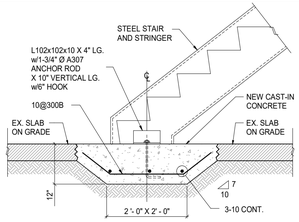
TYPICAL DETAILS AT PERIMETER BEAMS AND CONCRETE BLOCK WALL

TD608 MASONRY ANCHORAGE TO STEEL COLUMNS AND BEAMS

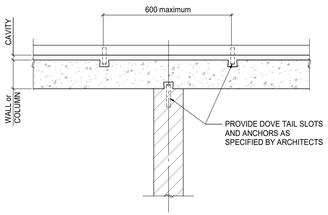


SECTION THROUGH STEEL BEAM

TDG STEEL STAIR SUPPORT AT SLAB ON GRADE (INTERIOR)

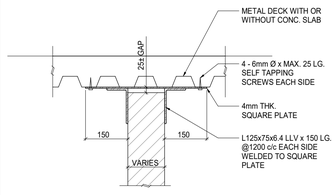


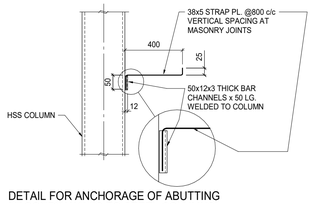
TD605 MASONRY ANCHORAGE TO CONCRETE



PLAN

TD609 PARTITION WALL BRACING TO METAL DECK





DETAIL FOR ANCHORAGE OF ABUTTING MASONRY WALLS TO STEEL COLUMNS

REVISIONS / ISSUE

NO.	DATE	
1	2025-05-21	ISSUED FOR PERMIT
2	2025-07-16	ISSUED FOR UPDATES

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Quinn Dressel ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

FLAT IRON BUILDING GROUP

paradigm architecture + design
2198 Gerrard St E Toronto ON M4E 2C7
[t] 416.686.3624 www.paradigm-ad.com

STAMP:

LICENSED PROFESSIONAL ENGINEER X. YE PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD. BUILDING RENOVATION

78 ADVANCE RD, ETOBICOKE, ON, M8Z 2T7

DRAWING TITLE:

TYPICAL DETAILS

DRAWN BY: TP	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: N.T.S.
	DATE: 2025-07-16
	DRAWING NO.: S104

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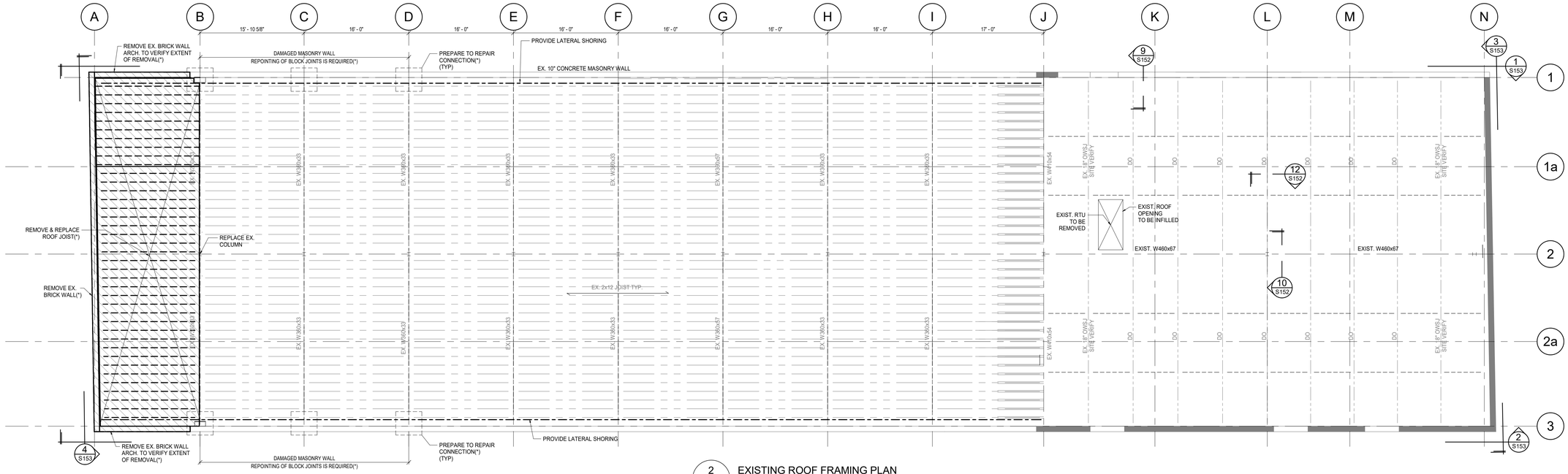
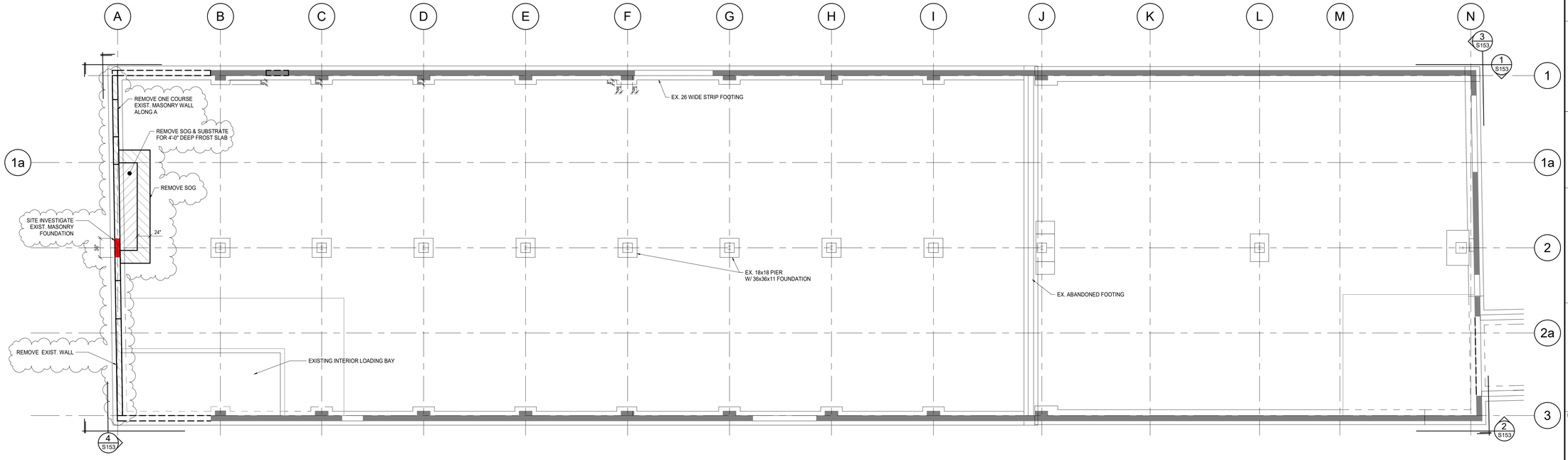


2 S151 EXISTING ROOF FRAMING PLAN

1/8" = 1'-0"

*** DENOTES: PROVIDE SEPARATE PRICE



1 S151 EXISTING FOUNDATION PLAN

1/8" = 1'-0"

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3	2025-10-22	ISSUED FOR UPDATES

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STAMP:

LICENSED PROFESSIONAL ENGINEER
X. YE
PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD. BUILDING RENOVATION

78 ADVANCE RD, ETOBICOKE, ON, M8Z 2T7

DRAWING TITLE:

EXISITING FOUNDATION AND ROOF FRAMING PLANS

DRAWN BY: MH	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: As indicated
	DATE: 2025-07-16
	DRAWING NO.: S151

2025-11-03 1:53:03 PM

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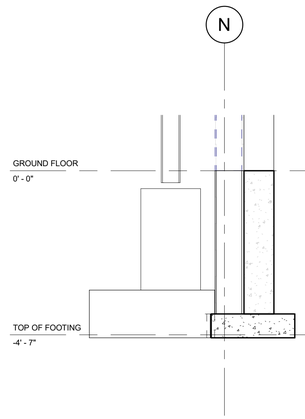

6 S152 SECTION
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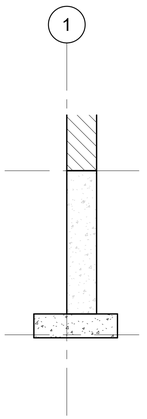

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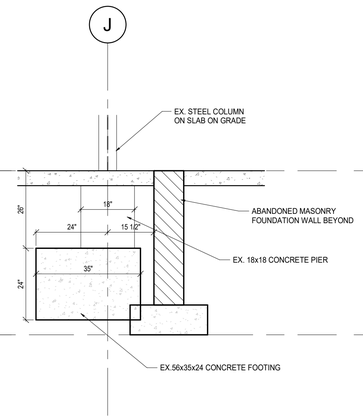

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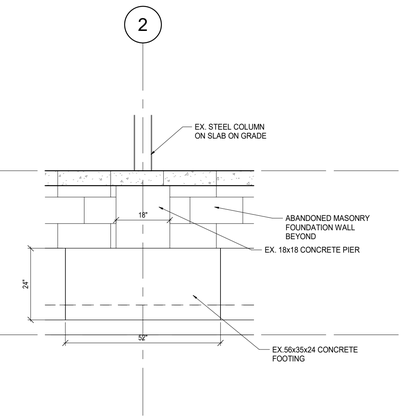

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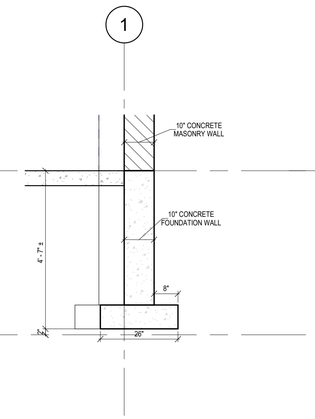

2 S152 SECTION
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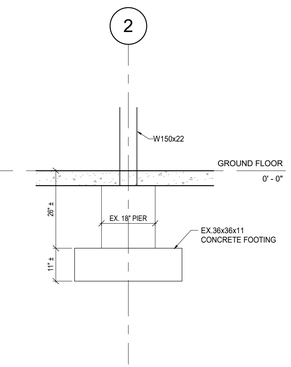

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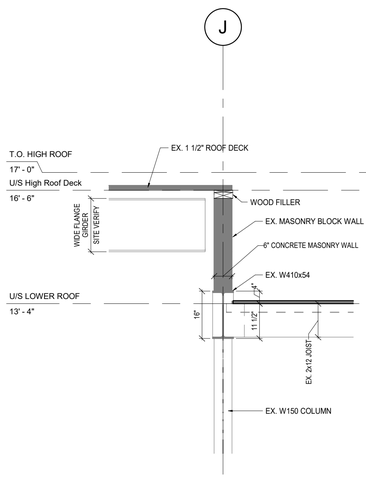

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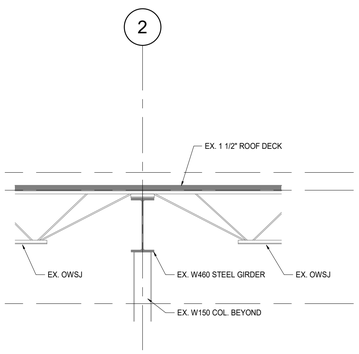

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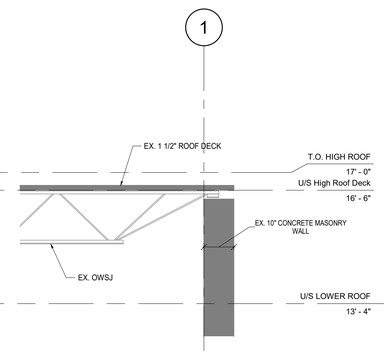

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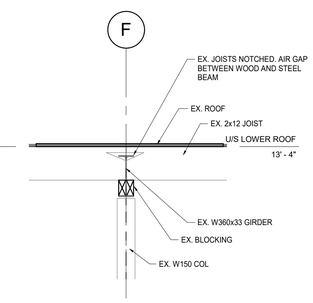

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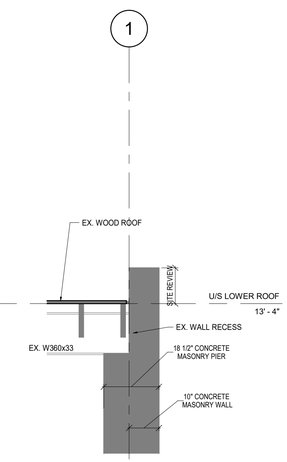
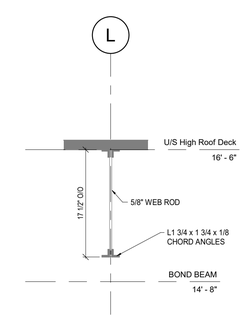


NOTE: SAME DETAIL TO APPLY TO GRID LINE H & 1; I & 1; J & 1; G & 3; H & 3; I & 3; J & 3.

7 S152 SECTION
1/2" = 1'-0"



12 S152 SECTION
1" = 1'-0"

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1	2025-05-21	ISSUED FOR PERMIT
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CONSULTING STRUCTURAL ENGINEERS

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PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD. BUILDING RENOVATION

78 ADVANCE RD, ETOBICOKE, ON, M8Z 2T7

DRAWING TITLE:

EXISTING BUILDING SECTIONS

DRAWN BY: MH	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: As indicated
	DATE: 2025-07-16
	DRAWING NO.: S152

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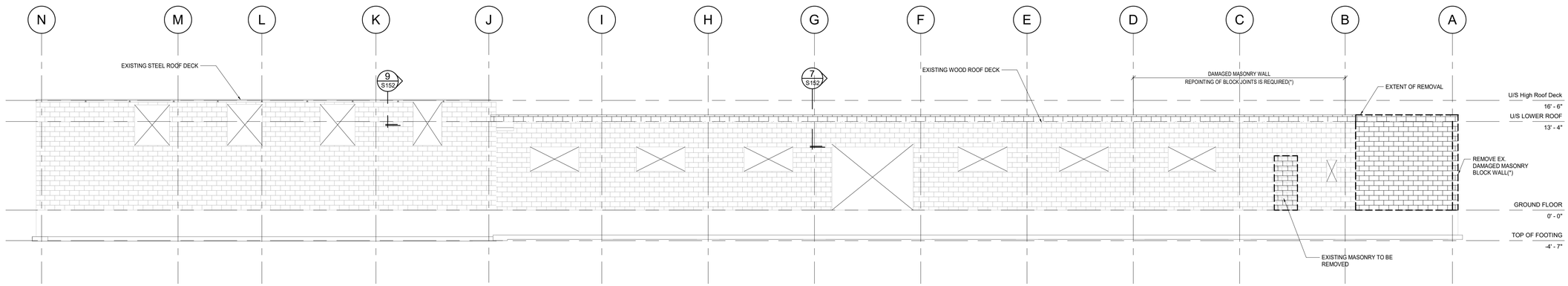
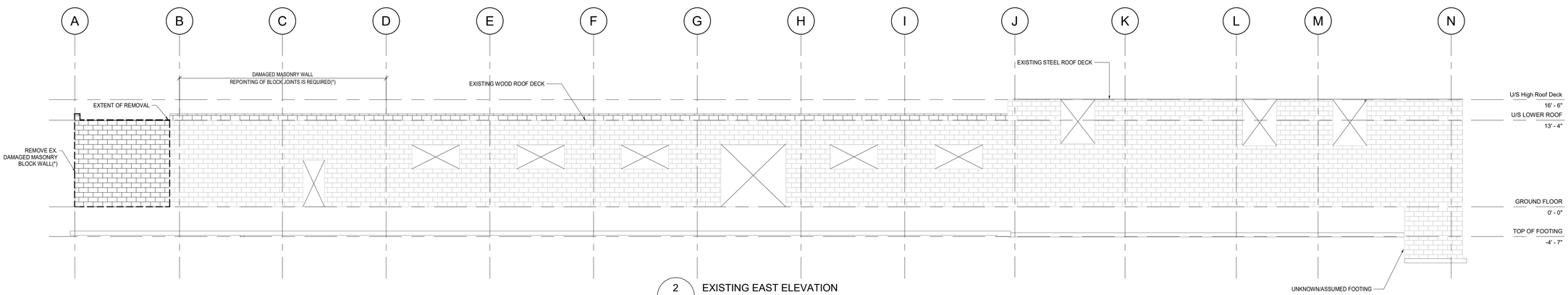


1 / S153 EXISTING WEST ELEVATION

1/8" = 1'-0"

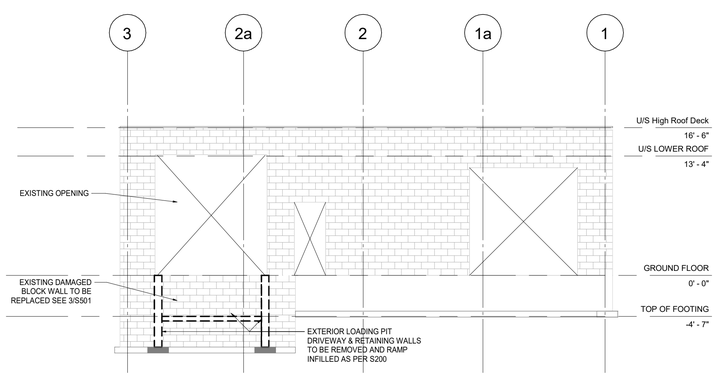
*** DENOTES: PROVIDE SEPARATE PRICE



2 / S153 EXISTING EAST ELEVATION

1/8" = 1'-0"

*** DENOTES: PROVIDE SEPARATE PRICE



3 / S153 EXISTING NORTH ELEVATION

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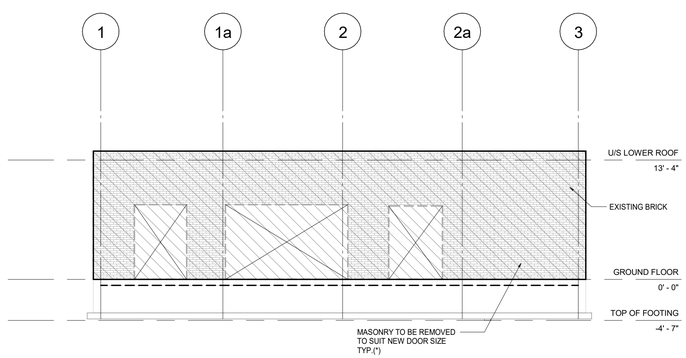

4 / S153 EXISTING SOUTH ELEVATION

1/8" = 1'-0"

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1	2025-05-21	ISSUED FOR PERMIT
2	2025-07-16	ISSUED FOR UPDATES

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STAMP:

LICENSED PROFESSIONAL ENGINEER
X. YE
PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD. BUILDING RENOVATION

78 ADVANCE RD, ETOBICOKE, ON, M8Z 2T7

DRAWING TITLE:

EXISTING ELEVATIONS

DRAWN BY: MH	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: As indicated
	DATE: 2025-07-16
	DRAWING NO.: S153

2025-11-03 1:32:07 PM
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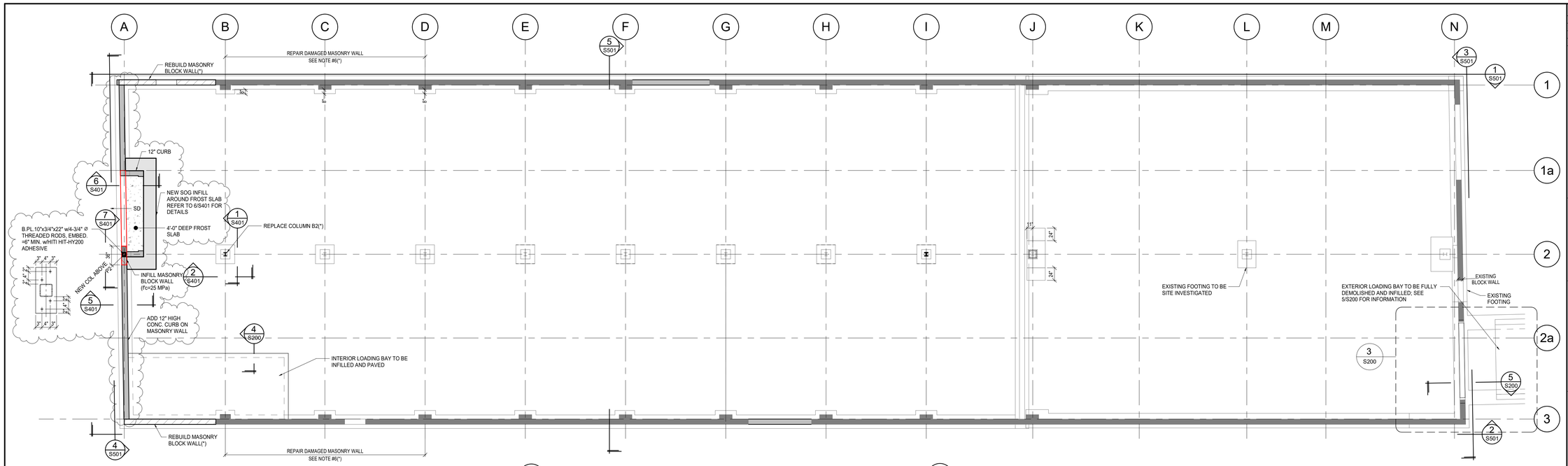
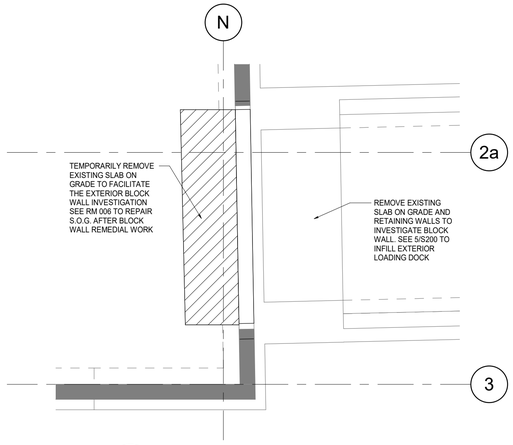


1 / S200 FOUNDATION PLAN

1/8" = 1'-0"

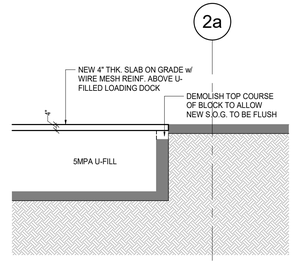
*** DENOTES: PROVIDE SEPARATE PRICE

1. REFER TO ARCHITECTURAL DRAWINGS FOR THE FOLLOWING INFORMATION:
   a) ALL FINISHED FLOOR ELEVATIONS
   b) LOCATION AND POSITION IN PLAN OF ALL
      i) CHANGES IN ELEVATION
      ii) SLAB OPENING'S SIZE AND LOCATION
      iii) WALL LOCATIONS
2. INSERTS FOR THE ATTACHMENT OF NON-STRUCTURAL ITEMS ARE TO BE SUPPLIED BY THE NON-STRUCTURAL TRADE INVOLVED. LOCATION AND PLACEMENT WITHIN THE CONCRETE STRUCTURE SHALL NOT DISPLACE REINFORCEMENT STEEL. ALL INSERTS NOT SATISFACTORY TO QUINN DRESSEL ASSOCIATES WILL BE REMOVED AT NO COST.
3. SHOP DRAWINGS, SLEEVING DRAWINGS, CONDUIT LAYOUT DRAWINGS AND THE LIKE SHALL ACCURATELY INDICATE THE SIZE LOCATION AND EXTENT OF SUCH ITEMS. ALL SUCH DRAWINGS SHALL BE SUBMITTED TO THE CONSULTANTS MINIMUM 4 WEEKS PRIOR TO CONCRETE SLAB POURS.
4. REFER TO THE FOLLOWING DRAWING SERIES FOR RELATED INFORMATION:
   S100 SERIES - GENERAL NOTES AND TYPICAL DETAILS
   S300 SERIES - COLUMN & FOOTING SCHEDULES
   S400 SERIES - FOUNDATION SECTIONS & DETAILS
   S500 SERIES - WALL ELEVATIONS
5. ALL EXTERIOR STRUCTURAL STEEL SHALL BE HOT GALVANIZED.
6. REPAIR AND REPOINT ALL DAMAGED MASONRY GROUT. REMOVE OLD CRUMBLING MORTAR FROM THE JOINTS BETWEEN MASONRY BLOCKS AND REPLACE WITH FRESH MORTAR (MORTAR TYPE S) (TYPICAL FOR ALL CRACK REPAIR).



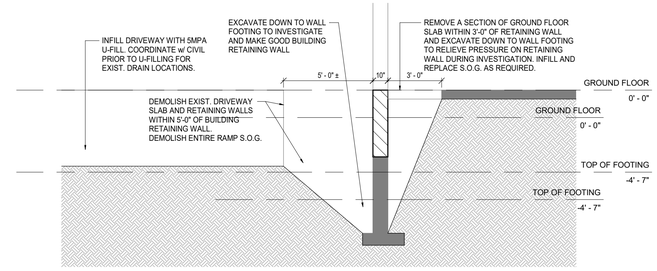
3 / S200 EXTERIOR LOADING PIT - PLAN

1/4" = 1'-0"



4 / S200 INTERIOR LOADING PIT - SECTION

1/4" = 1'-0"



5 / S200 EXTERIOR LOADING PIT - SECTION

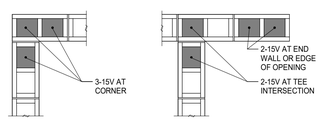
1/4" = 1'-0"

MASONRY BLOCK WALL SCHEDULE		
NON-LOAD BEARING		
WALL THICKNESS	VERTICAL REINFORCING	HORIZONTAL DUR-O-WAL LADUR TYPE
90	10@1200V	2-#9 SIDE RODS @400H
140	10@1200V	2-#9 SIDE RODS @400H
190	10@1000V	2-#9 SIDE RODS @400H
240	10@800V	2-#8 SIDE RODS @400H
290	10@400V OR 15@800V	2-#8 SIDE RODS @400H
LOAD BEARING		
WALL THICKNESS	VERTICAL REINFORCING	HORIZONTAL DUR-O-WAL LADUR TYPE
90	10@400V	2-#8 SIDE RODS @200H
140	10@400V	4-#9 SIDE RODS @200H
190	15@400V	4-#8 SIDE RODS @200H
290	15@400V	4-3/16" SIDE RODS @200H

NOTE:
APPLICABLE TO ALL MASONRY BLOCK WALLS FROM GROUND FLOOR AND UP.

6 / S200 MASONRY BLOCK WALL SCHEDULE

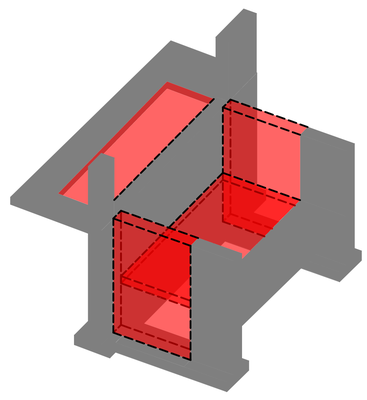
1 : 20



NOTES:
1. AT INTERSECTIONS, BOND WALLS TOGETHER BY INTERLOCKING ALTERNATE COURSES (RUNNING BOND), UNLESS NOTED OTHERWISE.
2. FOR ADDITIONAL REINFORCEMENT AT OPENINGS, REFER TO TYPICAL DETAIL TD603.
3. WHERE ADDITIONAL HORIZONTAL REINFORCING BARS ARE SPECIFIED, PROVIDE CLASS 'B' TENSION LAP SPLICE AT CORNERS AND WALL INTERSECTIONS.

7 / S200 VERTICAL WALL REINF. LAYOUT

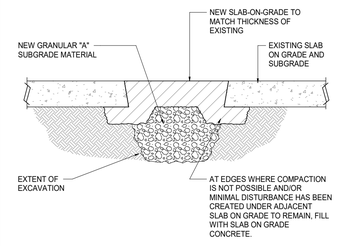
1 : 20



A / S200 EXTERIOR LOADING PIT DEMOLITION - 3D

RM006 TYPICAL RESTORATION DETAILS

REINSTATEMENT OF SUBGRADE MATERIAL AND SLAB ON GRADE



NOTES:
1. EXISTING AND NEW SUBGRADE MATERIAL TO BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DRY DENSITY.
2. SLOPE SURFACE OF NEW CONCRETE TO MATCH SURROUNDING SLAB.
3. NEW CONCRETE PROPERTIES AS SPECIFIED BY CONSULTANT.

ALL EXISTING INFORMATION SHOWN ON DRAWINGS IS TRANSFERRED FROM EXISTING BASE BUILDING DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE TO SITE VERIFY THE ACCURACY OF THESE DOCUMENTS WITH AS-BUILT CONDITIONS. ALL DETERMINATION OF EXISTING CONDITIONS MUST BE MADE PRIOR TO ANY STRUCTURAL DEMOLITION. ALL DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECTS OR ENGINEERS.

REVISIONS / ISSUE

NO.	DATE	
1	2025-05-21	ISSUED FOR PERMIT
2	2025-07-16	ISSUED FOR UPDATES
3	2025-10-22	ISSUED FOR UPDATES

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LICENSED PROFESSIONAL ENGINEER
R. YE
PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD. BUILDING RENOVATION

78 ADVANCE RD, ETOBICOKE, ON, M8Z 2T7

DRAWING TITLE:

FOUNDATION PLAN

DRAWN BY: MH	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: As indicated
	DATE: 2025-07-16
	DRAWING NO.: S200

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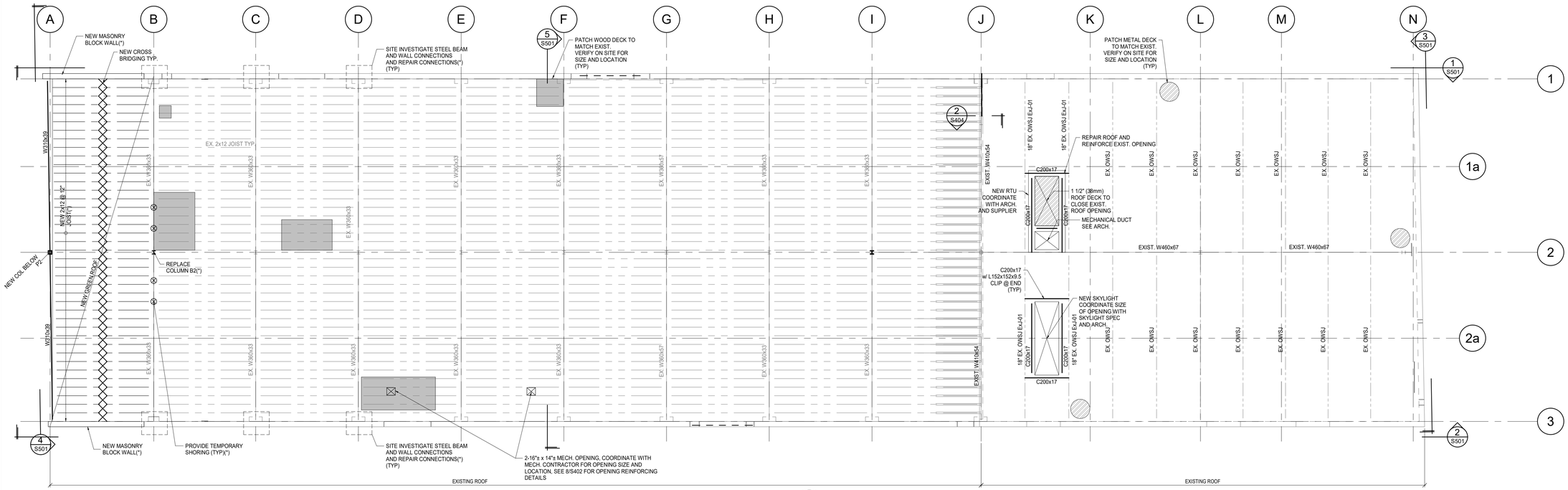

1 / S201 ROOF FRAMING PLAN

1/8" = 1'-0"

*** DENOTES: PROVIDE SEPARATE PRICE

NOTES:

1. TOP OF EX. JOIST AT EL. 13'-4". TOP OF STEEL AT EL. 13'-1".
2. EXTERIOR GREEN ROOF ON EXISTING WOOD ROOF LOADS:
   SUPERIMPOSED DEAD LOAD
   - SLAB SELF WEIGHT = 0.5 kPa
   - CEILING AND MECHANICAL = 0.3 kPa
   - SUPERIMPOSED LIVE LOAD = 1.6 kPa
   - SNOW LOAD+ACCUMULATION(SEE PLAN) = 1.28 kPa

   NEW INTERIOR RECREATION AREA ON EXISTING WOOD ROOF LOADS:
   SUPERIMPOSED DEAD LOAD
   - SLAB SELF WEIGHT = 0.2 kPa
   - CEILING AND MECHANICAL = 0.3 kPa
   - PARTITION = 0.7 kPa
   - SUPERIMPOSED LIVE LOAD = 2.4 kPa
3. REFER TO ARCHITECTURAL DRAWINGS FOR THE FOLLOWING INFORMATION:
   a) ALL FINISHED FLOOR ELEVATIONS
   b) LOCATION AND POSITION IN PLAN OF ALL
      i) CHANGES IN ELEVATION
      ii) SLAB OPENING'S SIZE AND LOCATION
      iii) WALL LOCATIONS
   c) BUILT UP FLOOR ASSEMBLY
4. INSERTS FOR THE ATTACHMENT OF NON-STRUCTURAL ITEMS ARE TO BE SUPPLIED BY THE NON-STRUCTURAL TRADE INVOLVED. LOCATION AND PLACEMENT WITHIN THE CONCRETE STRUCTURE SHALL NOT DISPLACE REINFORCEMENT STEEL. ALL INSERTS NOT SATISFACTORY TO QUINN DRESSEL ASSOCIATES WILL BE REMOVED AT NO COST.
5. SHOP DRAWINGS, SLEEVING DRAWINGS, CONDUIT LAYOUT DRAWINGS AND THE LIKE SHALL ACCURATELY INDICATE THE SIZE LOCATION AND EXTENT OF SUCH ITEMS. ALL SUCH DRAWINGS SHALL BE SUBMITTED TO THE CONSULTANTS MINIMUM 4 WEEKS PRIOR TO CONCRETE SLAB POURS.
6. REFER TO THE FOLLOWING DRAWING SERIES FOR RELATED INFORMATION:
   - S100 SERIES - GENERAL NOTES AND TYPICAL DETAILS
   - S300 SERIES - COLUMN & FOOTING SCHEDULES
   - S400 SERIES - FOUNDATION SECTIONS & DETAILS
   - S500 SERIES - WALL ELEVATIONS
7. ALL EXTERIOR STRUCTURAL STEEL SHALL BE HOT GALVANIZED.
8. ADD 1/4" BENT CLOSURE PLATES TYPICAL WHERE NECESSARY.
9. REFER TO ARCH FOR BUILT UP FLOOR ASSEMBLY. BUILT UP FLOOR EXTENTS SHOWN ON PLAN AS SHADED GRAY.

ALL EXISTING INFORMATION SHOWN ON DRAWINGS IS TRANSFERRED FROM EXISTING BASE BUILDING DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE TO SITE VERIFY THE ACCURACY OF THESE DOCUMENTS WITH AS-BUILT CONDITIONS. ALL DETERMINATION OF EXISTING CONDITIONS MUST BE MADE PRIOR TO ANY STRUCTURAL DEMOLITION. ALL DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECTS OR ENGINEERS.

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LICENSED PROFESSIONAL ENGINEER — X YE — PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD. BUILDING RENOVATION

78 ADVANCE RD, ETOBICOKE, ON, M8Z 2T7

DRAWING TITLE:

SECOND FLOOR FRAMING PLAN

DRAWN BY: MH	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: As indicated
	DATE: 2025-07-16
22"	DRAWING NO.: S201

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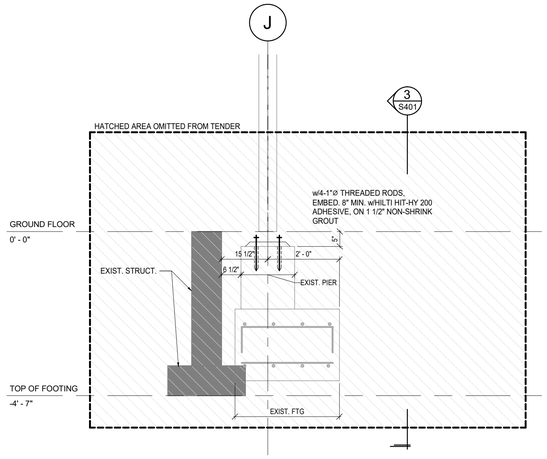
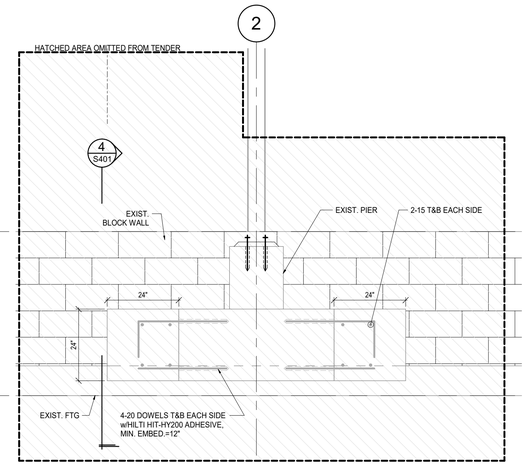
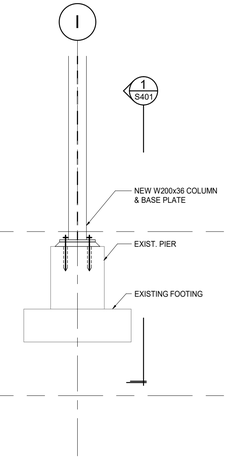


4 S401 SECTION
1/2" = 1'-0"



3 S401 SECTION
1/2" = 1'-0"



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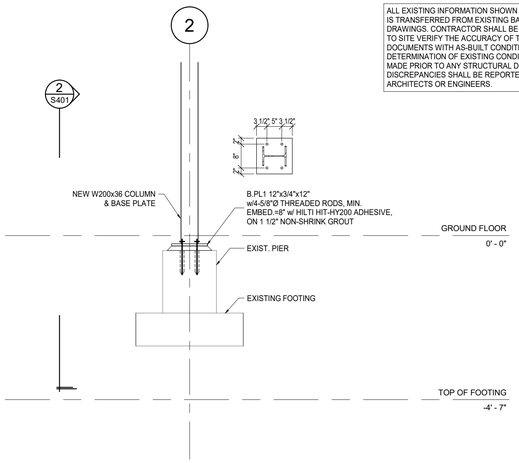

1 S401 SECTION
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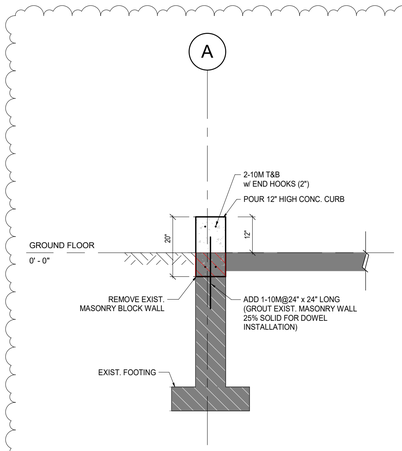

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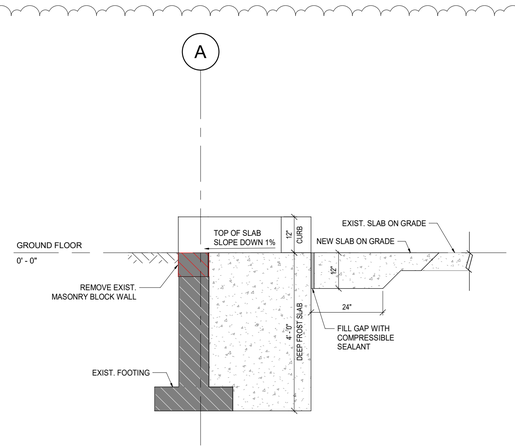
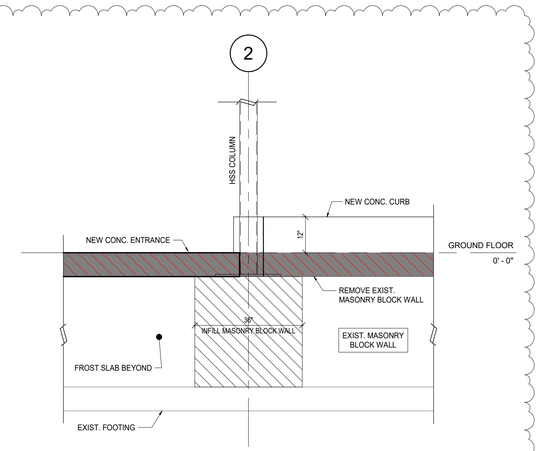
1/2" = 1'-0"



6 S401 SECTION
1/2" = 1'-0"



7 S401 SECTION
1/2" = 1'-0"

REVISIONS / ISSUE

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STAMP:

LICENSED PROFESSIONAL ENGINEER
R. YE
PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD. BUILDING RENOVATION

78 ADVANCE RD, ETOBICOKE, ON, M8Z 2T7

DRAWING TITLE:

SECTIONS

DRAWN BY: MH / TP	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: As indicated
	DATE: 2025-07-16
	DRAWING NO.: S401

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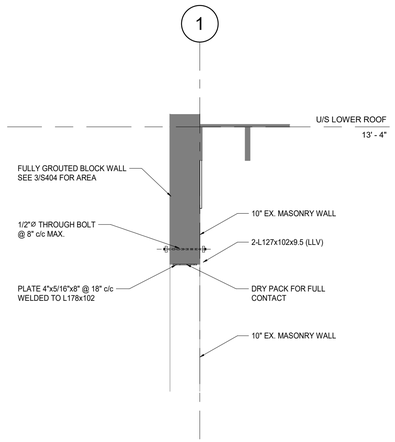

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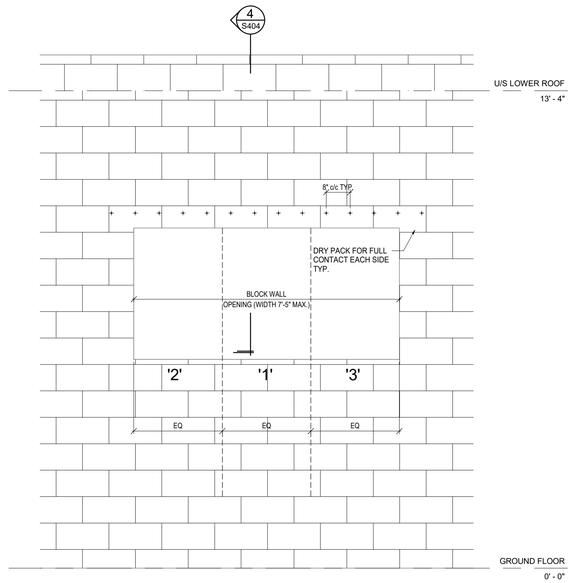
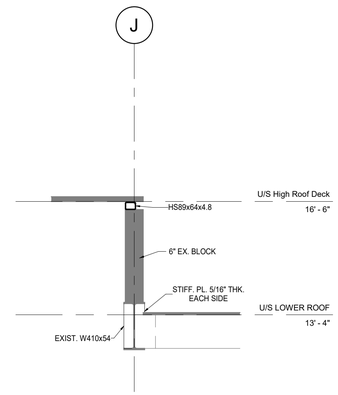
1/2" = 1'-0"



3 S404 SECTION
1/2" = 1'-0"

NOTE:
1. SHORING REQUIRED AS PER CONSTRUCTION PROCEDURE FOR LINTEL CONSTRUCTION(NEW AND EXISTING OPENING SHOULD APPLY). SEE LINTEL CONSTRUCTION PROCEDURE IN 5/S404.



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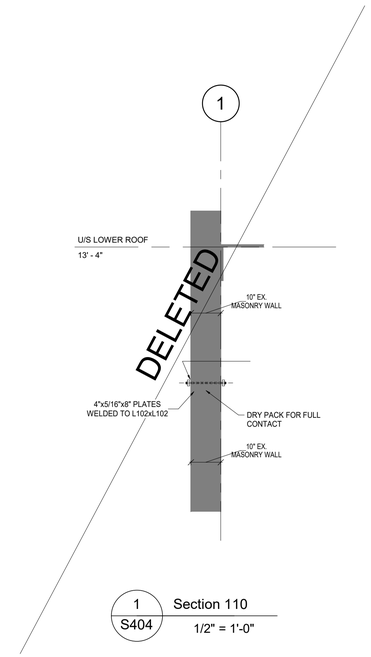

1 S404 Section 110
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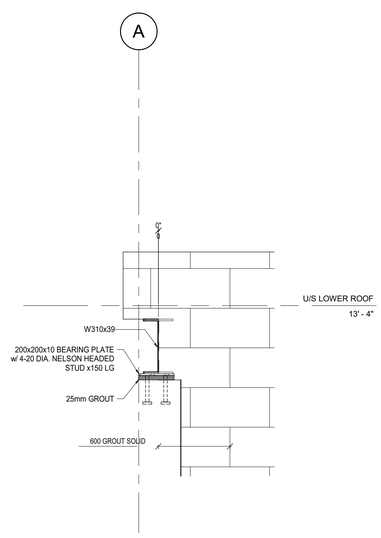
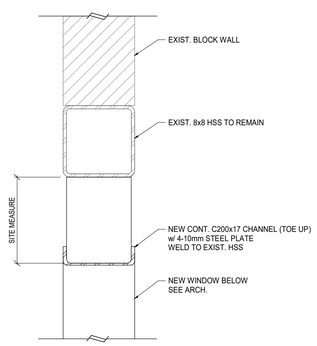


7 S404 SECTION
3/4" = 1'-0"



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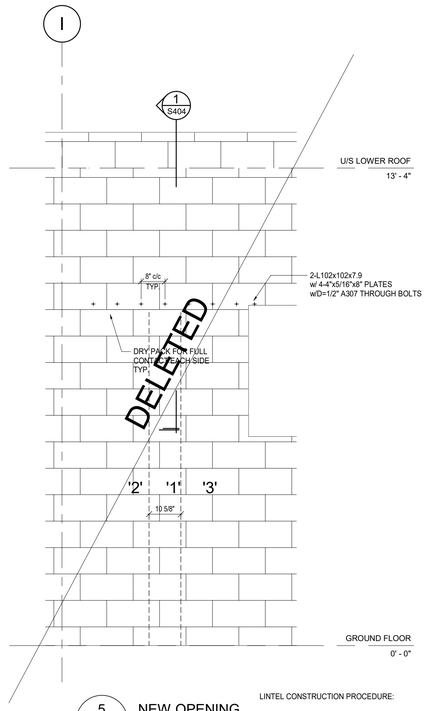
1 1/2" = 1'-0"



5 S404 NEW OPENING
1/2" = 1'-0"

LINTEL CONSTRUCTION PROCEDURE:
1. INSTALL NEW DOUBLE ANGLE LINTEL WITH FULL CONTACT BEARING SUPPORT EACH SIDE.
2. INSTALL STEEL PLATES AT ZONE '1' BELOW DOUBLE ANGLE; AND REMOVE EXISTING BLOCK WALL '1'.
3. INSTALL ALL OTHER STEEL PLATES BELOW DOUBLE ANGLES, THEN REMOVE EXISTING BLOCK WALL '2' AND '3'.

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REVISIONS / ISSUE

NO.	DATE	
1	2024-06-11	ISSUED FOR CLIENT'S REVIEW
2	2024-07-24	ISSUED FOR PERMIT
3	2024-08-24	ISSUED FOR TENDER
4	2025-07-16	ISSUED FOR UPDATES

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Quinn Dressel ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS

FLAT IRON BUILDING GROUP

paradigm
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2198 Gerrard St E Toronto ON M4E 2C7
[t] 416.686.3624 www.paradigm-ad.com

STAMP:
LICENSED PROFESSIONAL ENGINEER
X. YE
PROVINCE OF ONTARIO

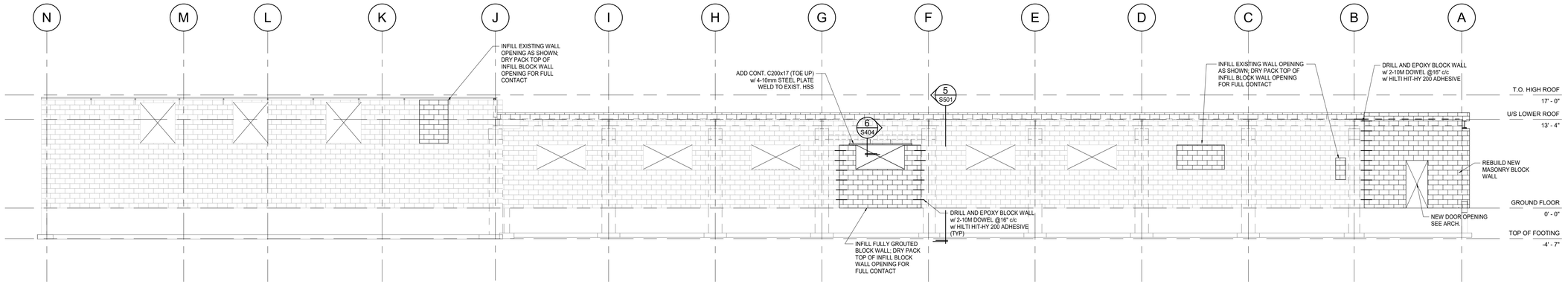
PROJECT NAME / LOCATION:
100071257 ONTARIO LTD.
BUILDING RENOVATION

78 ADVANCE RD,
ETOBICOKE, ON, M8Z 2T7

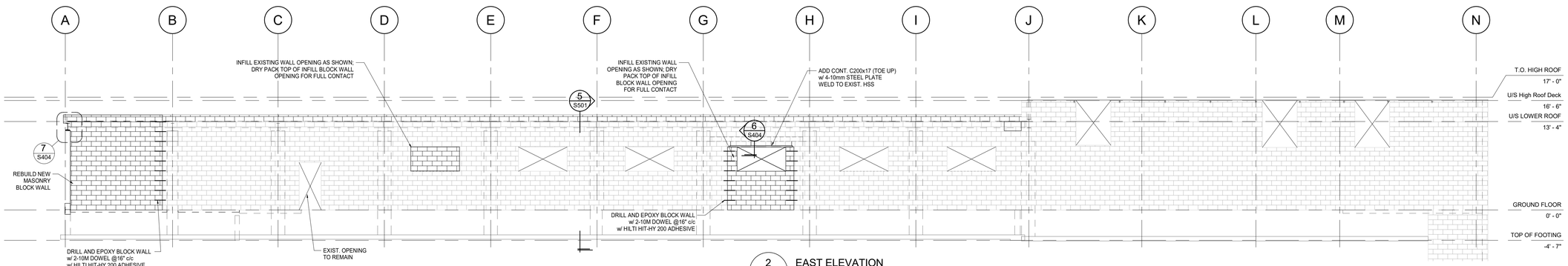
DRAWING TITLE:
SECOND FLOOR / LOWER ROOF SECTIONS III

DRAWN BY: DP	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: As indicated
	DATE: 2025-07-16
	DRAWING NO.: S404

2025-11-03 1:32:15 PM
G:\Shared drives_Project Drafting\24-327\7 DGA\7 Drafting 24-327 Works for Structure #78 Adv Rd, Toronto\Working
files\24-327_78 Advance Road Renovation v22025-10-31.v22025-27_RY.dwg\S404\S404, RY, quinndressel



1 / S501 WEST ELEVATION
1/8" = 1'-0"



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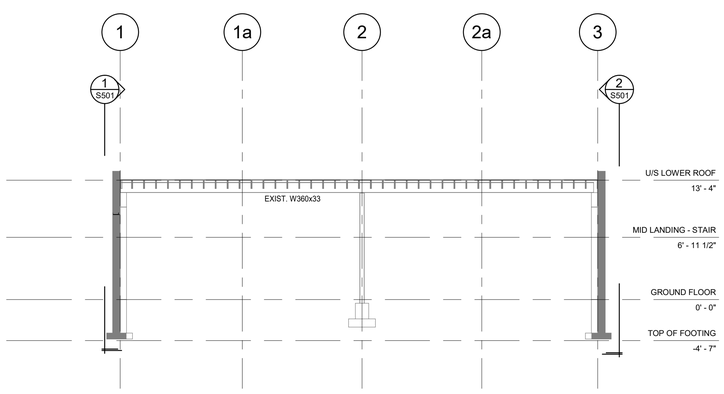

5 / S501 SECTION ALONG GRID F
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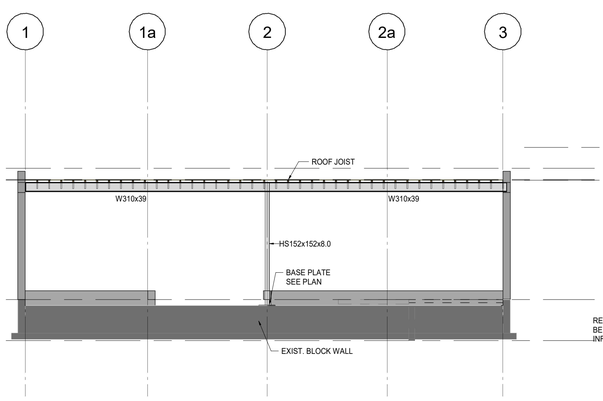
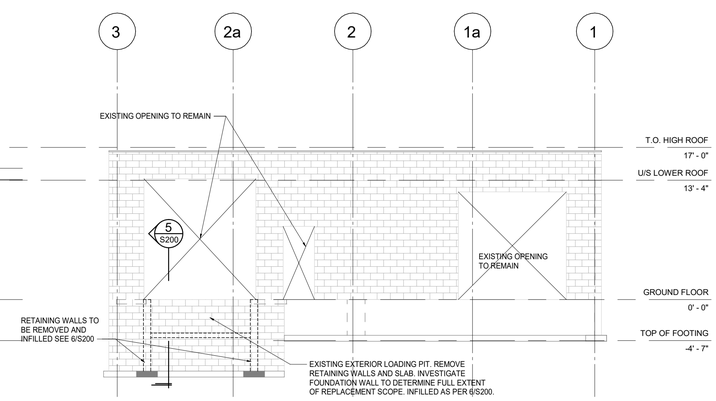


4 / S501 SOUTH ELEVATION
1/8" = 1'-0"



3 / S501 NORTH ELEVATION
1/8" = 1'-0"

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REVISIONS / ISSUE

NO.	DATE	
1	2025-05-21	ISSUED FOR PERMIT
2	2025-07-16	ISSUED FOR UPDATES

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PROVINCE OF ONTARIO

PROJECT NAME / LOCATION:

100071257 ONTARIO LTD. BUILDING RENOVATION

78 ADVANCE RD, ETOBICOKE, ON, M6Z 2T7

DRAWING TITLE:

BUILDING ELEVATIONS

DRAWN BY: DP / TP	PROJECT NO.: 24-327
CHECKED BY: RY	SCALE: As indicated
	DATE: 2025-07-16
	DRAWING NO.: S501

2025-11-03 1:32:20 PM
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