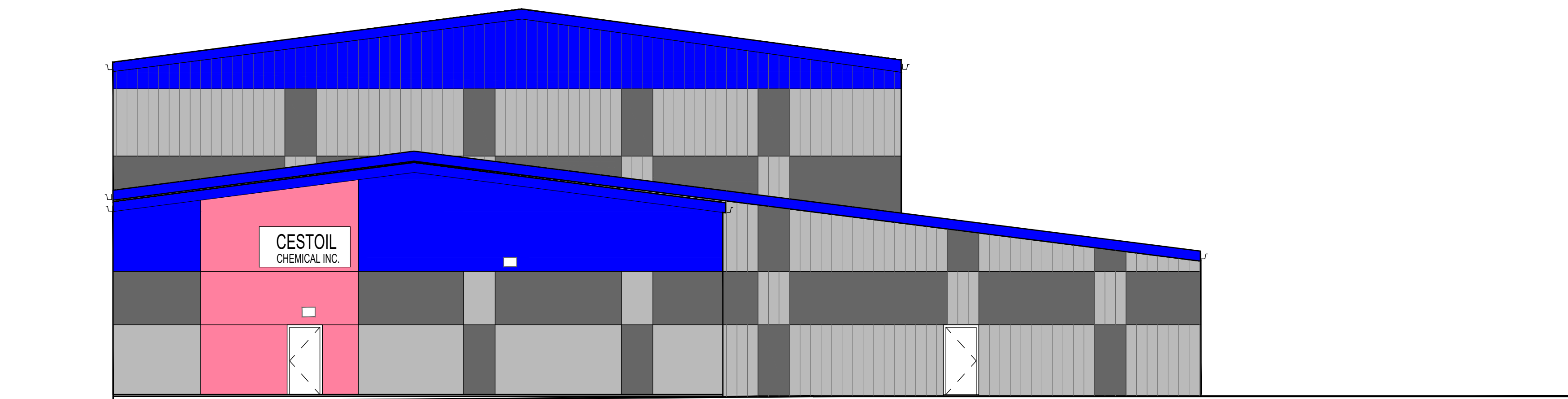


# PROPOSED INDUSTRIAL ADDITION 1726 BASELINE ROAD CLARINGTON (COURTICE), ONTARIO



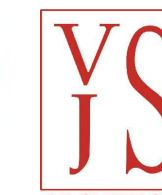
## CESTOIL INC.



TRANPLAN ASSOCIATES

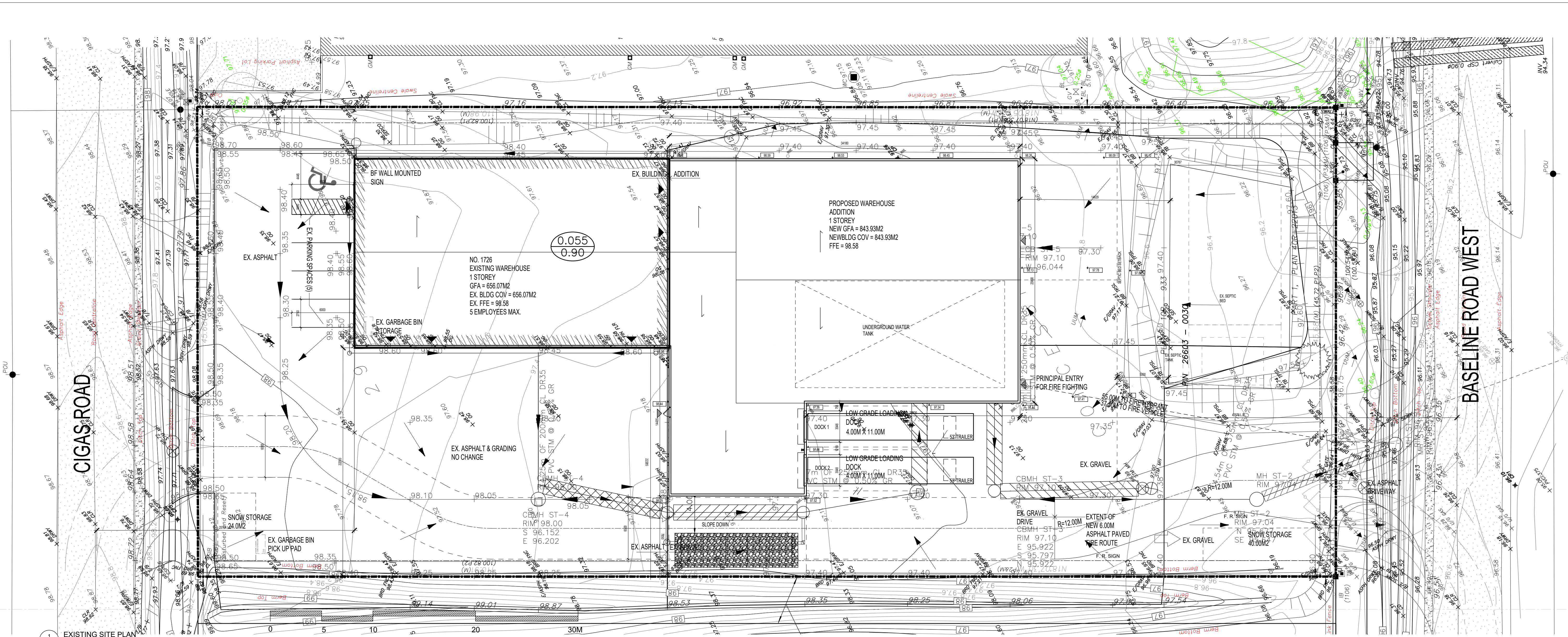


GAY GROUP OF COMPANIES  
GAY COMPANY LIMITED  
GAY CONTRACTING LIMITED



VINCENT J. SANTAMAURA,  
ARCHITECT INC.

ISSUED: BUILDING PERMIT - 30 APRIL 2026



EXISTING SITE PLAN  
SCALE: 1:200

**SITE STATS (PRELIMINARY):**

ZONING BY-LAW = 84-63  
 ZONE = M2

	REQ'D	EXISTING	PROPOSED
LOT AREA (GROSS)	= 4000M2	5073.40 M2	NO CHANGE
LOT FRONTAGE	= 30M	45.68M	NO CHANGE
INDUSTRIAL WAREHOUSE	= N/A	565.07 M2	1500.00 M2
FSI	= N/A	11.13%	30.00%
BUILDING COVERAGE	= 60% (2903 M2)	11.13%	30.00%
FRONT YARD SETBACK	= 7.50M	15.39M	NO CHANGE
EXTERIOR SIDE YARD	= 7.50M	N/A	N/A
INTERIOR SIDE YARD	= 5.00M	5.04M/22.03M	5.04M/7.85M
REAR YARD	= 7.50M	64.95M	24.69 M2
LOS	= 10%	TDB	30% (1550m2)
INCL 1.50 BUFFER STRIP			
BUILDING HEIGHT	= 12.00M	7.55M	12.00 M2
PARKING:	= WAREHOUSE		
PER EMPLOYEE (5)	= 5 SPACES	5 SPACES	NO CHANGE
SNOW STORAGE			
ASPHALT = 1195M2 @2% = 23.90M2		24.00M2	64.00M2

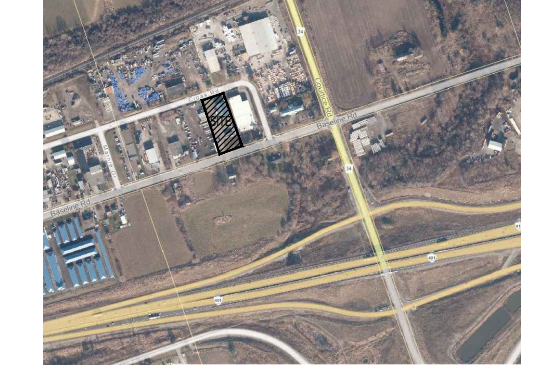
**2 SITE STATISTICS**  
SCALE: NTS

**WASTE MANAGEMENT PLAN:**  
 EX. INTERNAL GARBAGE STORAGE TO REMAIN - 1@2CU. YRD BIN  
 EX. WEEKLY WASTE PICK-UP BY PRIVATE CONTRACTOR  
 SAME TO REMAIN UNCHANGED FOR PROPERTY

**6 WASTE MANAGEMENT PLAN**  
SCALE: NTS

COPYRIGHT © VINCENT J. SANTAMAURA ARCHITECT INC. 2024  
 PLAN OF SURVEY SHOWING TOPOGRAPHIC DETAIL OF PART OF LOT 23, CONCESSION 1 MUNICIPALITY OF CLARINGTON

**3 LEGAL DESCRIPTION**  
SCALE: NTS



**4 KEY PLAN**  
SCALE: NTS

- DRAWING LIST:**
- ARCHITECTURAL
  - SP-1 SITE PLAN/GRADING PLAN
  - A1 CONSTRUCTION NOTES AND SCHEDULES
  - EX-1 EXISTING FLOOR PLANS AND ELEVATIONS
  - A2 FOUNDATION & GROUND FLOOR PLANS
  - A3 ROOF PLAN
  - A4 BUILDING ELEVATIONS
  - A5 BUILDING SECTIONS
  - A6 WALL SECTIONS

**8 DRAWING LIST**  
SCALE: NTS



**7 FIRE ROUTE SIGN**  
SCALE: NTS

ITEM	ONTARIO BUILDING CODE 2024 DATA MATRIX PART 3	IBC REFERENCE	ITEM	ONTARIO'S 2024 BUILDING CODE DATA MATRIX PART 11	IBC REFERENCE
1	PROJECT DESCRIPTION: <input type="checkbox"/> NEW <input type="checkbox"/> ADDITION <input type="checkbox"/> ALTERATION <input type="checkbox"/> CHANGE OF USE	3.1.2.1 (1)	11.1	EXISTING BUILDING CLASSIFICATION: GROUP D AND E UP TO 2 STOREYS	11.2.1.1 / T 11.2.1.1A / T 11.2.1.1B
2	MAJOR OCCUPANCY(S): GROUP F, DIVISION 2 - MEDIUM HAZARD INDUSTRIAL WAREHOUSE	14.1.2 (A)	11.2	CHANGE OF MAJOR OCCUPANCY: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	11.3.3.1 TO 11.3.3.2
3	BUILDING AREA (SQ.M): EXISTING 565.07 M2 NEW 843.93 M2 TOTAL 1408.00 M2	14.1.2 (A)	11.3	ALTERNATION TO EXISTING BUILDING: NONE <input type="checkbox"/> BASIC <input type="checkbox"/> EXTENSIVE <input type="checkbox"/>	11.4.2
4	GROSS AREA (SQ.M): EXISTING 565.07 M2 NEW 843.93 M2 TOTAL 1408.00 M2	14.1.2 (A) & 3.2.1.1	11.4	REDUCTION IN PERFORMANCE LEVEL: STRUCTURAL <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	11.4.2.1
5	NUMBER OF STOREYS ABOVE GRADE: 1 BELOW GRADE: 0	3.2.2.10 & 3.2.2.5		BY INCREASE IN OCCUPANT LOAD: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	11.4.2.2
6	NUMBER OF STREETS/FIRE FIGHTER ACCESS: 2	3.2.2.7b		BY CHANGE OF MAJOR OCCUPANCY: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	11.4.2.3
7	BUILDING CLASSIFICATION: GROUP F, DIVISION 2 UP TO 2 STOREYS, NON-SPRINKLERED	3.2.2.7c		PLUMBING: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	11.4.2.4
8	SPRINKLER SYSTEM PROPOSED: <input type="checkbox"/> ENTIRE BUILDING <input type="checkbox"/> SELECTED COMPARTMENTS <input type="checkbox"/> SELECTED FLOOR AREAS <input type="checkbox"/> BASEMENT <input type="checkbox"/> IN LIEU OF ROOF RATING <input checked="" type="checkbox"/> NOT REQUIRED	3.2.2.7c		SEWAGE - SYSTEM: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	11.4.2.5
9	STANDPIPE REQUIRED: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3.2.8	11.5	COMPENSATING CONSTRUCTION: STRUCTURAL <input type="checkbox"/> YES (EXPLAIN) <input checked="" type="checkbox"/> NO	11.4.3
10	FIRE ALARM REQUIRED: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> PROVIDED	3.2.4		BY INCREASE IN OCCUPANT LOAD: <input type="checkbox"/> YES (EXPLAIN) <input checked="" type="checkbox"/> NO	11.4.3.2
11	WATER SERVICES/SUPPLY IS ADEQUATE: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3.2.5.7		BY CHANGE OF MAJOR OCCUPANCY: <input type="checkbox"/> YES (EXPLAIN) <input checked="" type="checkbox"/> NO	11.4.3.3
12	HIGH BUILDING: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3.2.6		PLUMBING: <input type="checkbox"/> YES (EXPLAIN) <input checked="" type="checkbox"/> NO	11.4.3.5
13	CONSTRUCTION RESTRICTIONS: <input type="checkbox"/> COMBUSTIBLE PERMITTED <input checked="" type="checkbox"/> NON-COMBUSTIBLE REQUIRED <input type="checkbox"/> BOTH	3.2.2.x		SEWAGE - SYSTEM: <input type="checkbox"/> YES (EXPLAIN) <input checked="" type="checkbox"/> NO	11.4.3.6
14	MEZZANINE(S) AREA SQ.M:	3.2.1.1 (b) TO 3.2.1.1 (f)	11.6	COMPLIANCE ALTERNATIVE PURPOSE: <input type="checkbox"/> YES (GIVE NUMBER(S)) <input checked="" type="checkbox"/> NO	11.5.1
15	OCCUPANT LOAD BASED ON: OCCUPANCY 5 LOAD NA PERSONS = 5 PERSONS	3.1.1.7	11.6	ALTERNATIVE MEASURE PROPOSED: <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES (GIVE NUMBER(S)) <input type="checkbox"/> YES (GIVE DESCRIPTION)	11.5.1
16	BARRIER FREE DESIGN: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (EXPLAIN)	3.8			
17	HAZARDOUS SUBSTANCES: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	3.3.1.2 & 3.3.1.19			
18	REQUIRED FIRE RESISTANCE RATING (FRR): HORIZONTAL ASSEMBLIES LISTED DESIGN NO. OR DESCRIPTION (SG-2) FLOORS NOT LESS THAN X.HR. ROOF NOT LESS THAN X.HR. MEZZANINE NOT LESS THAN X.HR. FRR OF SUPPORTING MEMBERS LISTED DESIGN NO. OR DESCRIPTION (SG-2) FLOORS NOT LESS THAN X.HR. ROOF NOT LESS THAN X.HR. MEZZANINE NOT LESS THAN X.HR.	3.2.2.x & 3.2.1.4			
19	SPATIAL SEPARATION - CONSTRUCTION OF EXTERIOR WALLS: WALL AREA OF EBF (SQ.M) L.D. (M) LH OR HL PERMITTED MAX % OF OPENINGS PROPOSED % OF OPENINGS FRR (HRS) LISTED DESIGN OR DESCRIPTION COMB. CONST. COMB. CONST. NON-COMB. CONST.	3.2.3			
	NORTH 325.88 25.20 3.1 90 1.38% 1HR W605 YES YES YES				
	SOUTH 348.00 42.55 3.1 100 8.30% 1HR W605 YES YES YES				
	EAST 524.50 5.00 6.1 6 0.00% 2HR W606 NO NO YES				
	WEST 523.00 7.85 6.1 43 6.84% 1HR W605 NO NO YES				

**5 OBC DATA MATRIX**  
SCALE: NTS

THESE DRAWINGS ARE NOT TO BE SCALED. ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES MUST BE REPORTED DIRECTLY TO VINCENT J. SANTAMAURA ARCHITECT INC.

NO.	DATE:	ISSUED FOR:
8	12JAN2026	SPA-3RD SUB
9	11MAR2026	CO-ORD
10	13APR2026	CO-ORD
11	30APR2026	BUILDING PERMIT

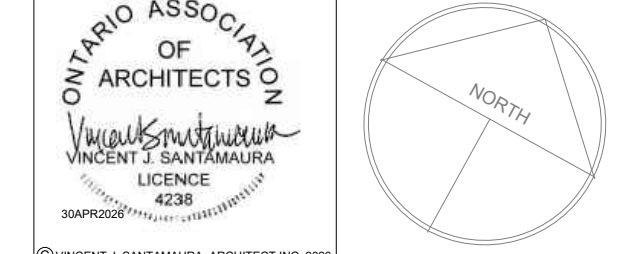
ADDITIONAL NOTES:  
**PRELIMINARY**  
 NOT FOR CONSTRUCTION

REFER TO STRUCTURAL, MECHANICAL & ELECTRICAL DRAWINGS PREPARED BY D.G. BIDDLE & ASSOCIATES CONSULTING ENGINEERS.  
 REFER TO PRE-ENGINEERED BUILDING DRAWINGS PREPARED BY NORSTEEL.

TOWN FILE NOS.: PC2024-0038  
 SPA2025-0012

NO.	DATE:	REVISION COMMENT:
NEW	DD/MO/YR	REVISION NOTICE

**VINCENT J. SANTAMAURA ARCHITECT**  
 23 PARNELL CRESCENT  
 WHITBY, ONTARIO L1R 2L4  
 PHONE/FAX: (905) 868-8007  
 email: admin@vsarch.com



CLIENT:  
**CESTOIL CHEMICAL INC.**  
 1726 BASELINE ROAD  
 COURTRICE, ONTARIO L1E 2S8  
 TEL.: 289-807-5007

PROJECT:  
**WAREHOUSE ADDITION**  
 1726 BASELINE ROAD WEST  
 COURTRICE, ONTARIO.

DRAWING TITLE:  
**STATISTICS & OBC DATA MATRIX**

DATE: 30APR2026 SCALE: 1:200  
 DRAWN BY: SN CHECKED BY: VJS

PROJECT NUMBER: DRAWING NUMBER:  
**2024-11 SP-1**





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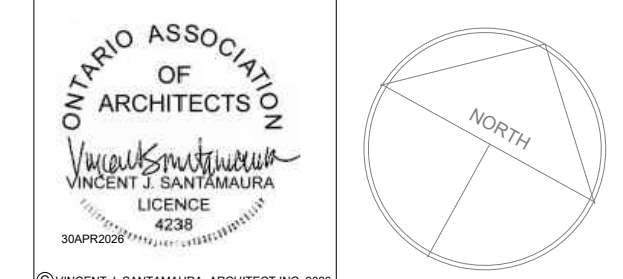
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23 PARNELL CRESCENT  
WHITBY, ONTARIO L1R 2L4  
PHONE: (905) 868-8207  
email: admin@vjsarch.ca

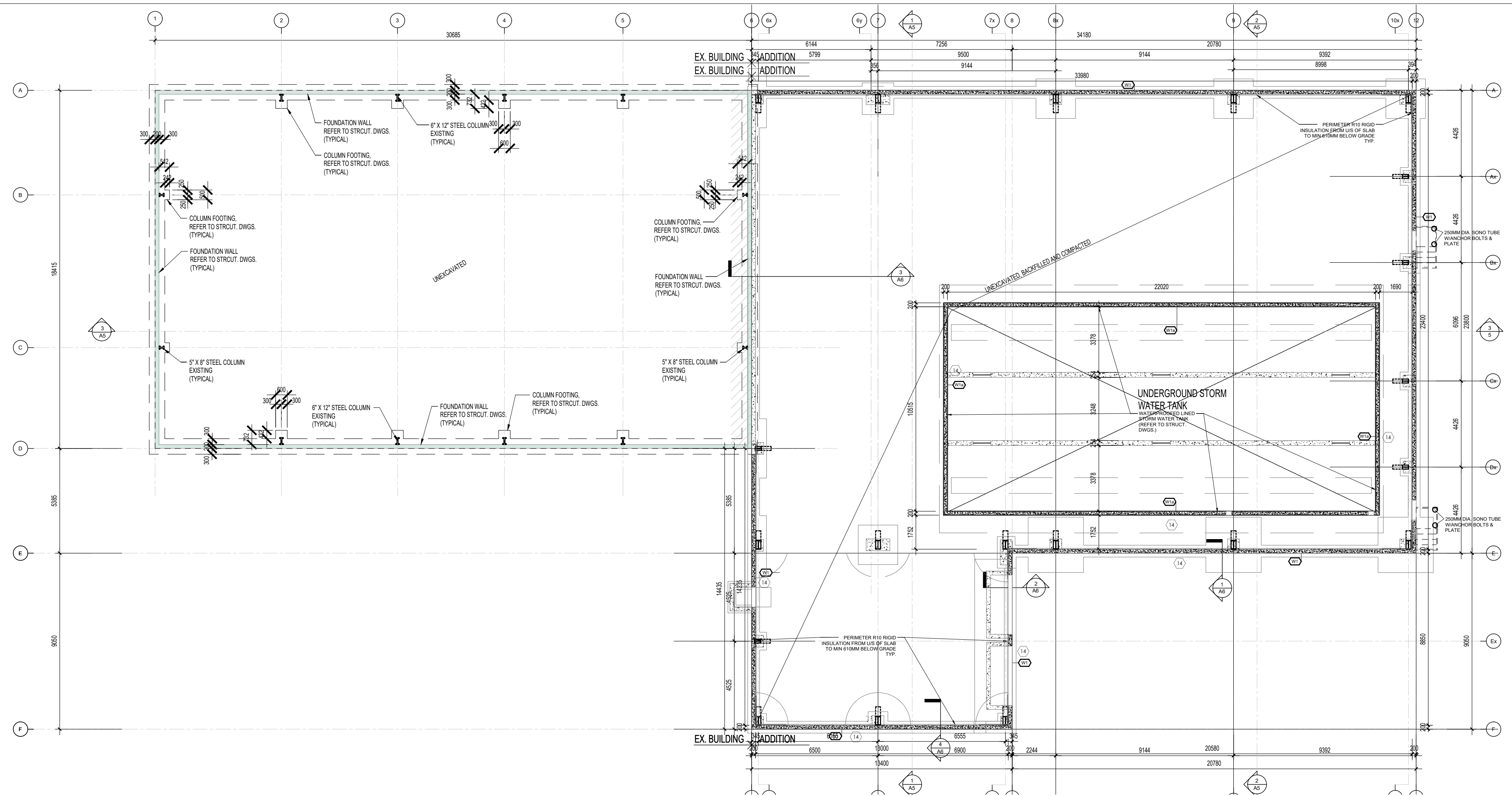


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TEL.: 289-807-5007

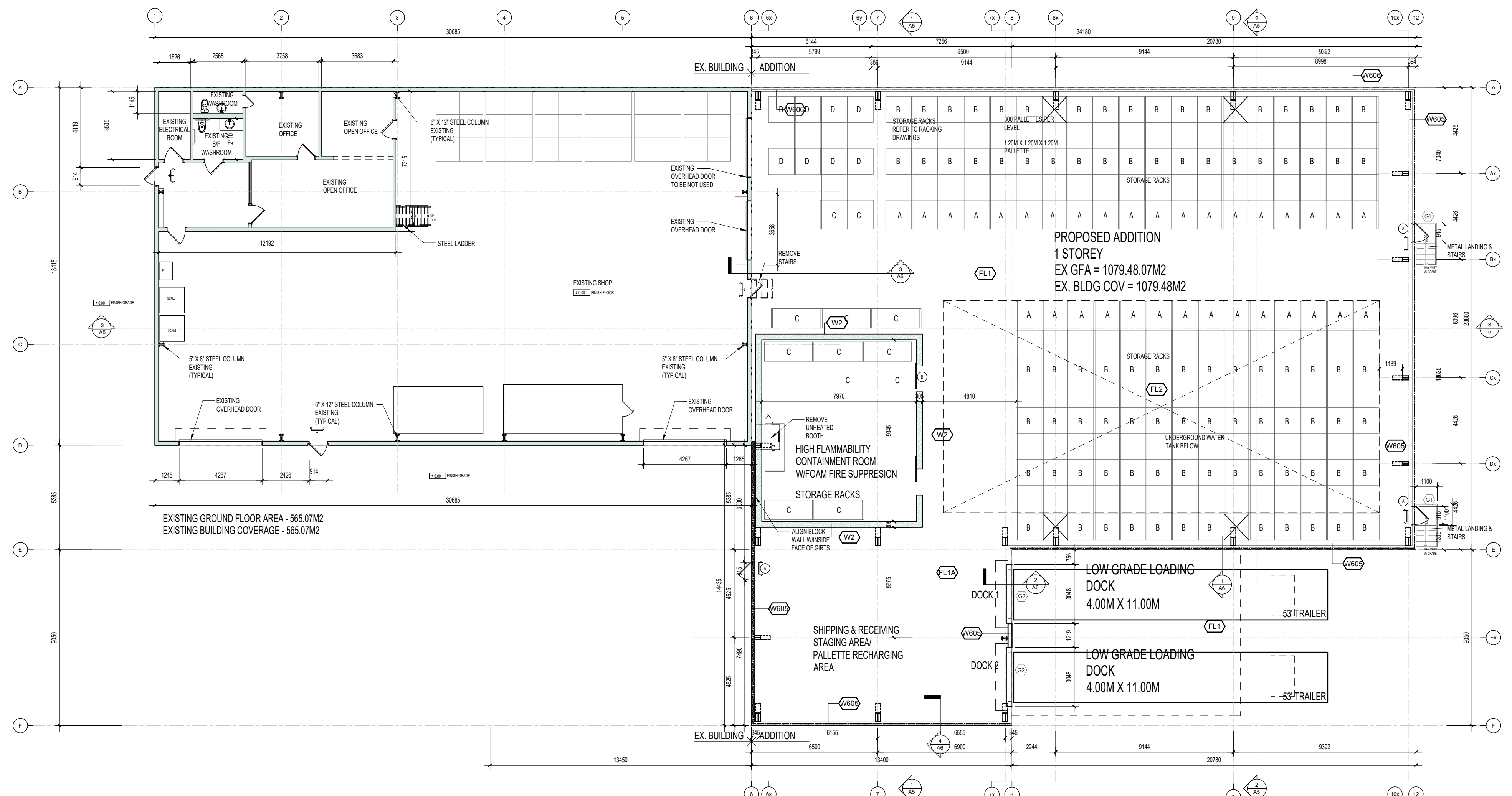
PROJECT:  
**WAREHOUSE ADDITION**  
1726 BASELINE ROAD WEST  
COURTICE, ONTARIO.

DRAWING TITLE:  
**FOUNDATION PLAN  
GROUND FLOOR PLAN**

DATE: 30APR2026	SCALE: 1 : 150
DRAWN BY: SN	CHECKED BY: VJS
PROJECT NUMBER:	DRAWING NUMBER:
<b>2024-11</b>	<b>A2</b>



1 FOUNDATION PLAN  
SCALE: 1 : 150



2 GROUND FLOOR PLAN  
SCALE: 1 : 150





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ARCHITECT INC.

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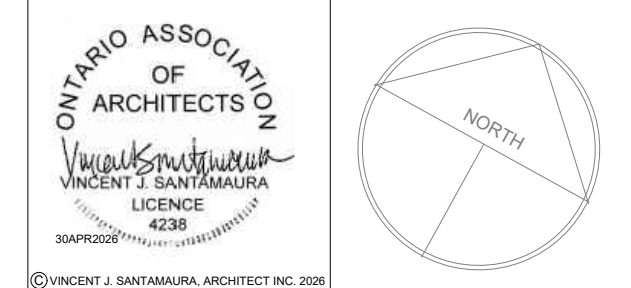
ADDITIONAL NOTES:  
**PRELIMINARY**  
NOT FOR CONSTRUCTION

REFER TO STRUCTURAL,  
MECHANICAL & ELECTRICAL  
DRAWINGS PREPARED BY  
D.G. BIDDLE & ASSOCIATES  
CONSULTING ENGINEERS.  
REFER TO PRE-ENGINEERED  
BUILDING DRAWINGS PREPARED  
BY NORSTEEL.

TOWN FILE NOS.: PC2024-0038  
SPA2025-0012

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NEW	DD/MO/YR	REVISION NOTICE

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email: admin@vjsarch.ca



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TEL.: 289-807-5007

PROJECT:  
**WAREHOUSE ADDITION**  
1726 BASELINE ROAD WEST  
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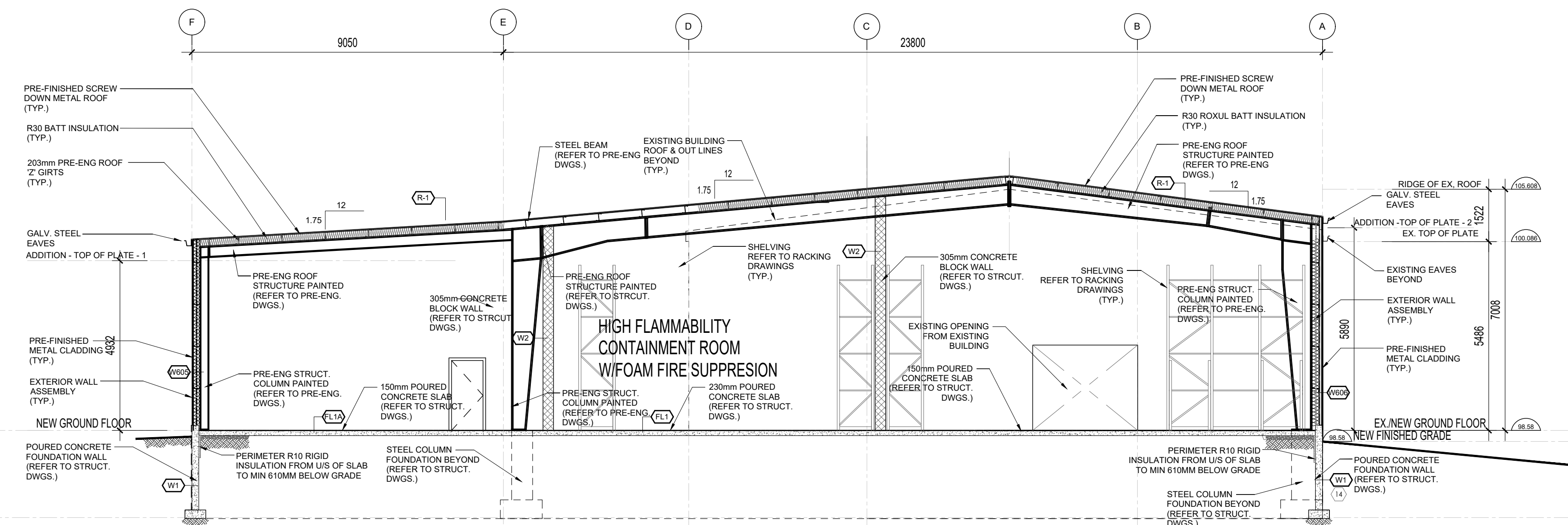
DRAWING TITLE:  
**BUILDING SECTIONS**

DATE: 30APR2026 SCALE: AS NOTED

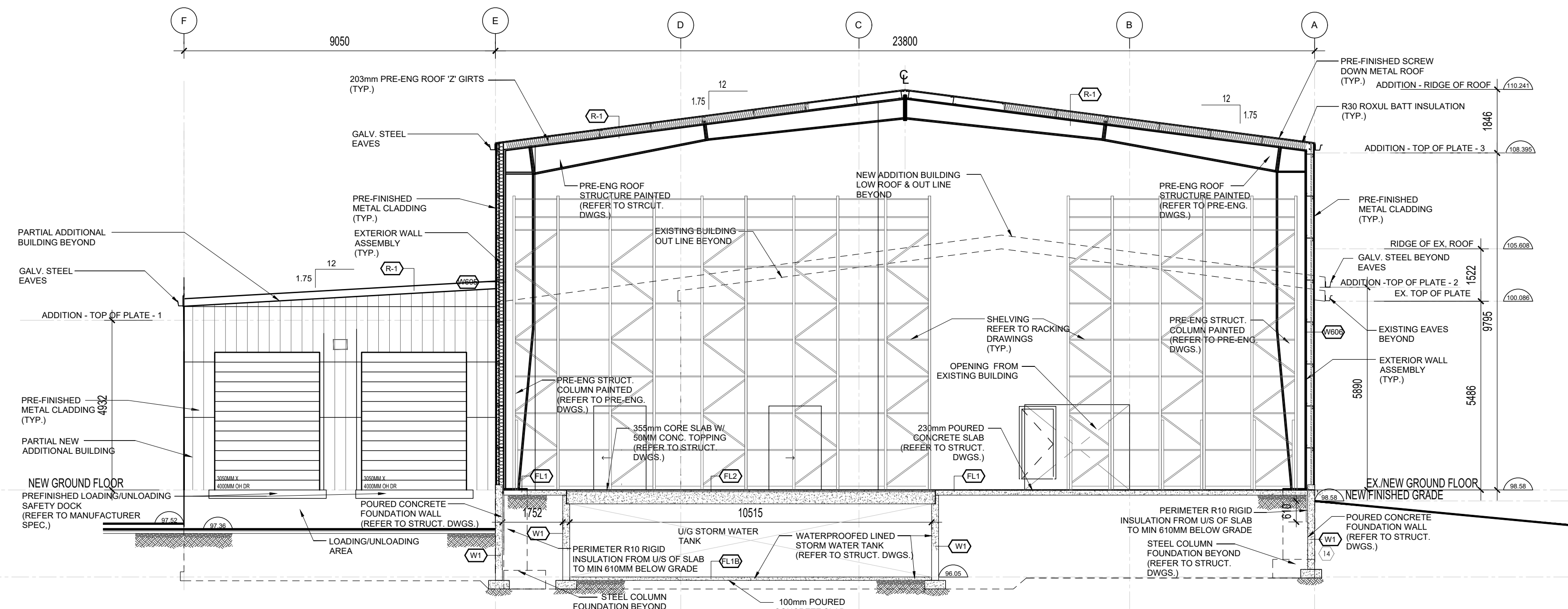
DRAWN BY: SN CHECKED BY: VJS

PROJECT NUMBER: DRAWING NUMBER:

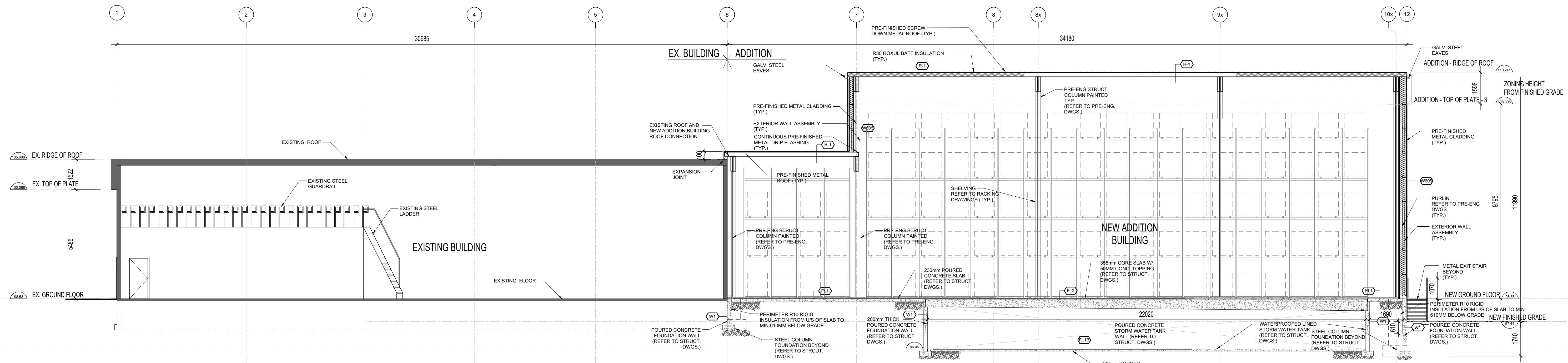
**2024-11 A5**



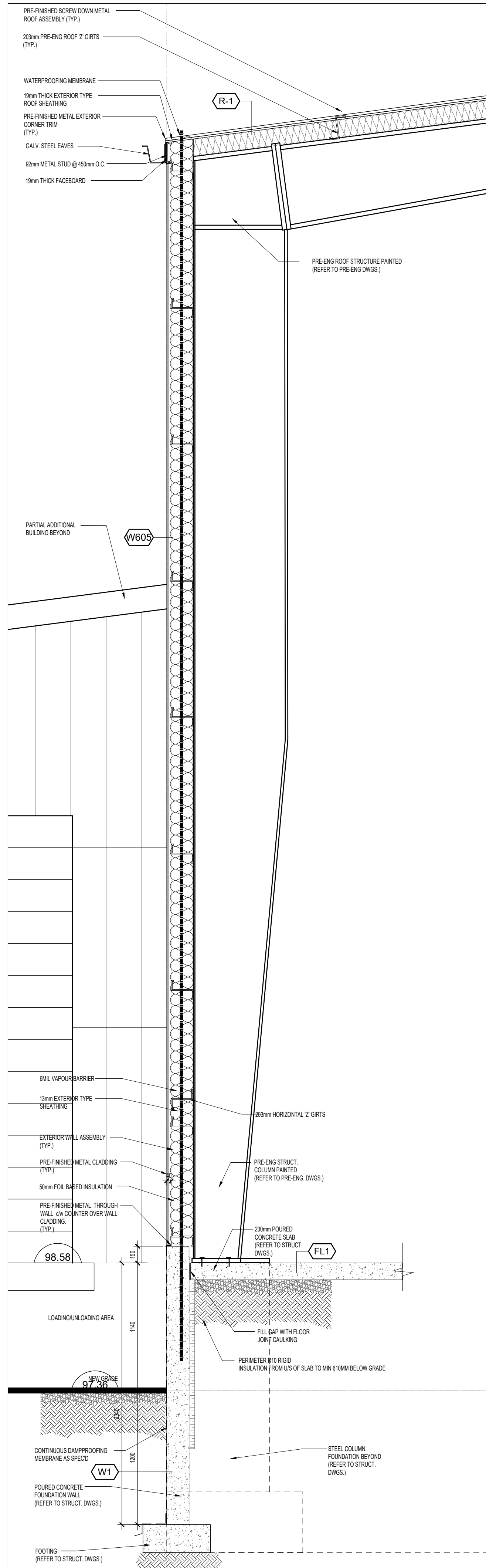
1 CROSS SECTION - 1  
SCALE: 1:100



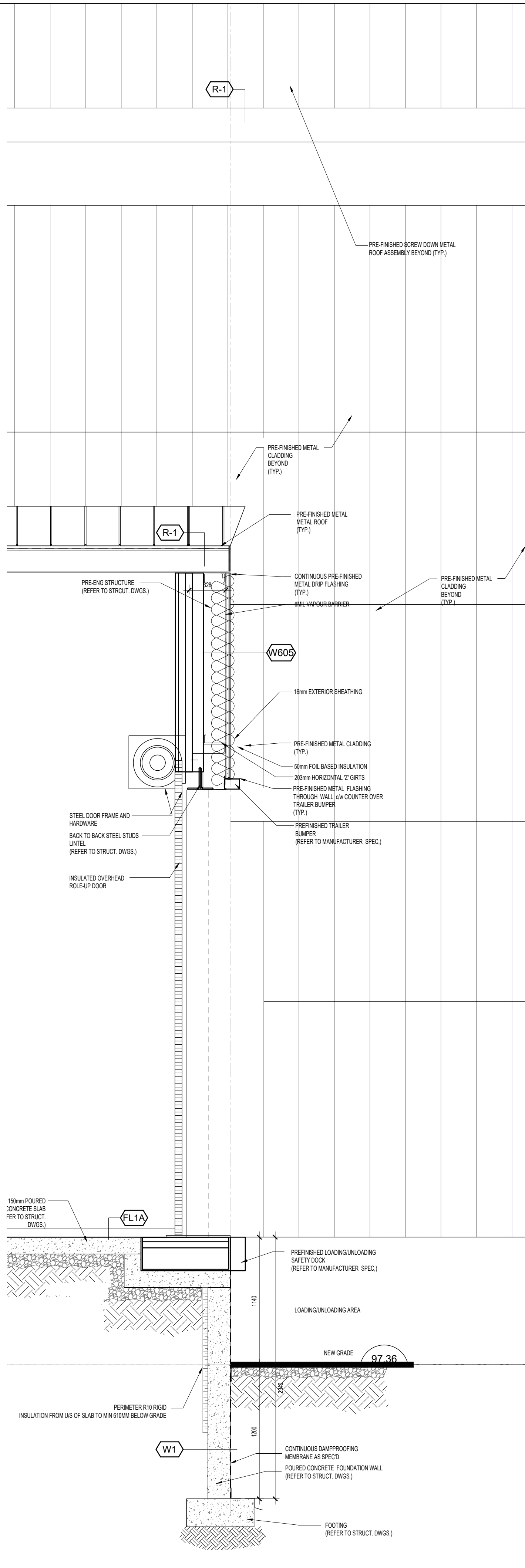
2 CROSS SECTION - 2  
SCALE: 1:100



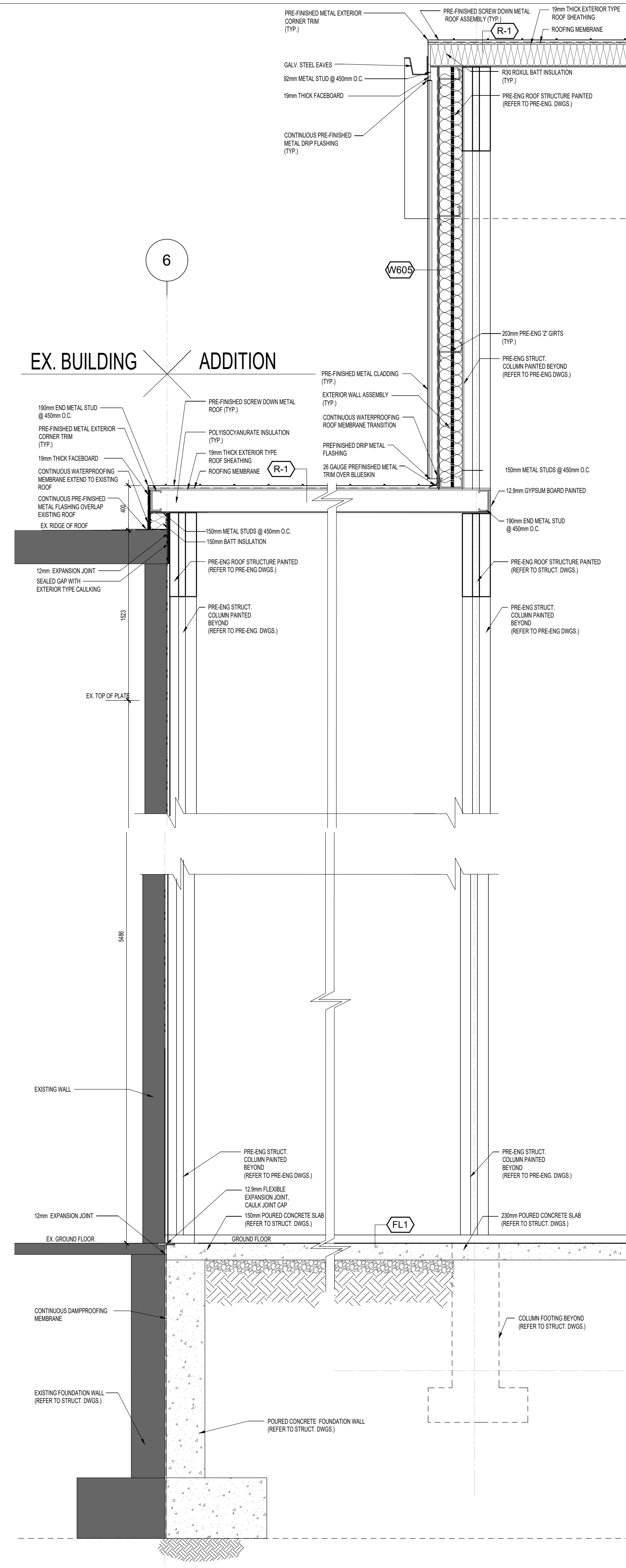
3 LONGITUDINAL SECTION  
SCALE: 1:100



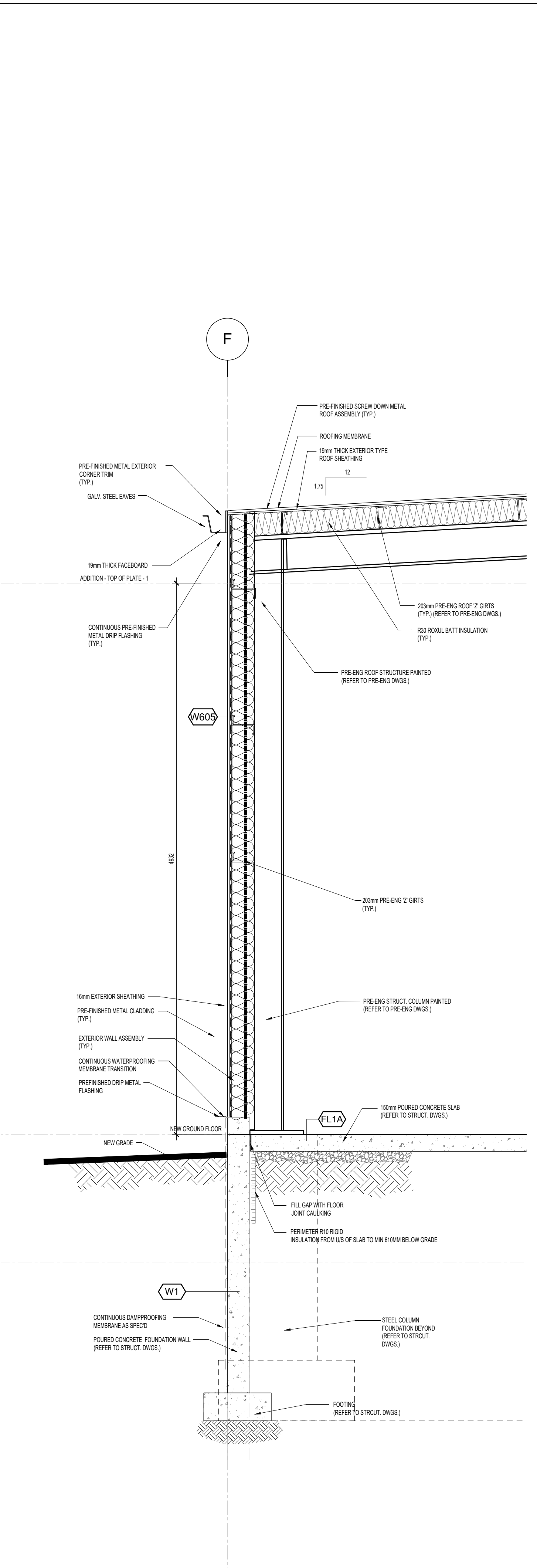
1 WALL SECTION - 1  
SCALE: 1 : 25



2 WALL SECTION - 2  
SCALE: 1 : 25



3 WALL SECTION - 3  
SCALE: 1 : 25



4 WALL SECTION - 4  
SCALE: 1 : 25

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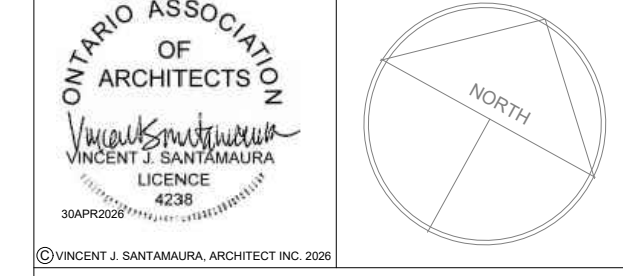
ADDITIONAL NOTES:  
**PRELIMINARY**  
NOT FOR CONSTRUCTION

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REFER TO PRE-ENGINEERED BUILDING DRAWINGS PREPARED BY NORSTEEL.

TOWN FILE NOS.: PC2024-0038  
SPA2025-0012

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TEL.: 289-807-5007

PROJECT:  
**WAREHOUSE ADDITION**  
1726 BASELINE ROAD WEST  
COURTICE, ONTARIO.

DRAWING TITLE:  
**WALL SECTIONS**

DATE: 30APR2026	SCALE: 1 : 25
DRAWN BY: SN	CHECKED BY: VJS
PROJECT NUMBER:	DRAWING NUMBER:

**2024-11 A6**

DESIGN LOADS:

ALL LOADS ARE UNFACTORED

ROOF LOADS: LIVE LOAD= 1.52 kPa (Ss=1.4 kPa, Sr= 0.4 kPa)  
DEAD LOAD= 0.431 kPa

EARTHQUAKE S<sub>o</sub>(0.2) = 0.36  
S<sub>o</sub>(0.5) = 0.323  
S<sub>o</sub>(1.0) = 0.189  
S<sub>o</sub>(2.0) = 0.0893  
S<sub>o</sub>(5.0) = 0.0236  
S<sub>o</sub>(10.0) = 0.00733  
PGA = 0.22  
PGV = 0.21

SEISMIC SOIL SITE CLASSIFICATION: D

WIND LOADS: q<sub>1</sub>/50 = 0.48 kPa

MAXIMUM RACKING LOADS:

PALLET LOAD= 15.57 kN  
LIVE LOAD= 93.42 kN  
DEAD LOAD= 1.12 kN  
SEISMIC LOAD - CROSS AISLE= 167.35 kN  
SEISMIC LOAD - DOWN AISLE= 114.05 kN

GENERAL:

- ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE ONTARIO BUILDING CODE 2024.
- WHERE STANDARDS PUBLISHED BY VARIOUS ORGANIZATIONS ARE REFERRED, CONFORM TO LATEST EDITION OF STANDARDS AS AMENDED AND REVISED TO DATE OF CONTRACT.
- ALL DIMENSIONS, ELEVATIONS, OPENINGS FOR PIPES, SLEEVES, EQUIPMENT LOCATIONS AND THE LIKE SHALL BE CHECKED WITH THE ARCHITECTURAL AND THE APPROPRIATE STRUCTURAL, MECHANICAL OR ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
- DO NOT SCALE THE DRAWINGS.
- THE CONTRACTOR SHALL EXAMINE THE SITE AND SATISFY HIMSELF OF THE ACTUAL CONDITIONS AND REQUIREMENTS OF THE WORK.
- CHECK UNDERGROUND UTILITIES AND ASSUME RESPONSIBILITY FOR SAME DURING CONSTRUCTION.
- SET ALL ANCHORS, INSERTS, ETC. AS REQUIRED BY OTHER TRADES.
- THE CONTRACTOR SHALL CAULK AND SEAL ALL JOINTS, SPACES, ETC. TO PROVIDE A WEATHER-TIGHT BUILDING.
- THE CONTRACTOR SHALL MAKE ANY NECESSARY ALLOWANCES FOR ANY VARIATIONS AND/OR ANY REVISIONS MADE ON ACCOUNT OF SUB-TRADESAND PRODUCT SELECTION FOR THE COMPLETION OF THE PROJECT.
- FEATURES OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME CHARACTER AS SHOWN FOR SIMILAR CONDITIONS.
- CONFIRM ALL MEASUREMENTS THAT GOVERN THE SCOPE OF WORK BUILT INTO EXISTING BUILDING.

EXCAVATION, GRADING & BACKFILLING:

- REFER TO SOIL TEST REPORT, IF THERE IS ANY, FOR THE BOREHOLE DATA AND SITE CONDITIONS.
- THE ACCURACY OF THE SOIL TEST REPORT IS NOT GUARANTEED. SOIL DATA APPLIES FOR ACTUAL TEST PIT LOCATION AND CONDITIONS MAY DIFFER AT OTHER PARTS OF THE SITE.
- ALL SPREAD FOOTINGS SHALL BE PLACED ON ENGINEERED FILL MATERIAL, UNLESS OTHERWISE STATED IN GEOTECHNICAL REPORT HAVE BASE INSPECTED BY ENGINEER BEFORE PLACING FOOTING.
- DESIGN BEARING PRESSURE TO BE 150 KPA (SLS) AND 225KPA (ULS) AS PER GEOTECHNICAL REPORT BY PINCHIN DATED OCT. 30, 2025 (PINCHIN REFERENCE #361920.000).
- EXCAVATE AND REMOVE ALL FILLS, SURFACE FEATURES AND TOPSOIL FROM BUILDING AREA BEFORE STARTING THE WORK.
- PROTECT FOUNDATIONS, SLABS ON GRADE, FOOTINGS, AND ADJACENT SOIL AGAINST FREEZING AND FROST ACTION AT ALL TIMES DURING CONSTRUCTION.
- BACKFILL FOOTINGS USING APPROVED FREE DRAINING MATERIALS.
- PLACE BACKFILL SIMULTANEOUSLY ON BOTH SIDES OF WALLS BELOW GRADE.
- SLAB ON GRADE SHALL BE PLACED ON ENGINEERED FILL CAPABLE OF SAFELY SUSTAINING 150 KPA WITHOUT SETTLEMENT RELATED TO BUILDING FOOTINGS.
- SLAB ON GRADE SHALL BE, UNLESS OTHERWISE STATED, 100MM THICK POURED CONCRETE REINFORCED WITH 152X152 MW18.7/MW18.7 WWF, ON 200MM OF OPSS 1010 GRANULAR A COMPACTED TO AT LEAST 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- RESTORE EXTERIOR SURFACES TO CONDITION EQUAL TO THAT EXISTING PRIOR TO EXCAVATION UNLESS OTHERWISE NOTED.
- EXCAVATION SHALL BE BRACED AND SHORED. SLOPES AND BANKS SHOULD BE PROTECTED AND ALL WORKS SHALL BE DONE IN ACCORDANCE TO PROVINCIAL AND MUNICIPAL REGULATIONS.
- EXCAVATION SHALL BE KEPT CLEAN, FREE FORM STANDING WATER AND LOOSED SOIL. EXCAVATION SHALL BE PROTECTED FROM FREEZING.
- AS PER GEOTECHNICAL REPORT, BASE OF EXCAVATION MUST BE COVERED WITH MINIMUM 50MM THICK MUD MAT (I.E. SKIM COAT OR LEAN CONCRETE AT LEAST 5MPA COMPRESSIVE STRENGTH AT 28 DAYS).

CONCRETE & REINFORCING STEEL:

- CONCRETE CONSTRUCTION SHALL CONFORM TO CAN/C.S.A. A23.3-19.
- CONCRETE COMPRESSIVE STRENGTH TO BE 25MPA AT 28 DAYS, MAXIMUM AGGREGATE SIZE TO BE 20MM, SLUMP TO BE 75MM MAXIMUM, UNLESS OTHERWISE STATED.
- CONCRETE COVER FOR REINFORCEMENTS SHALL BE IN ACCORDANCE WITH ONTARIO BUILDING CODE AND C.S.A. A23.1-19.
- EXPOSED CONCRETE SHALL HAVE AIR ENTRAINMENT OF 6-7%.
- FORM ALL VERTICAL SURFACES OF CONCRETE WORK, WHERE NEAT EXCAVATION IN NATIVE SOIL ARE POSSIBLE. CONCRETE FOR FOOTINGS NEED NOT BE FORMED.
- ALL FLOOR SURFACES SHALL BE LEVEL TO A TOLERANCE OF 10MM AND NOT OUT OF PLANE BY MORE THAN 3MM ON 3000MM TEMPLATE. STEEL TROWEL FINISH ALL FLOORS.
- REINFORCING STEEL SHALL BE IN ACCORDANCE WITH C.S.A. G30.18-M92, GRADE 400.
- WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH C.S.A. G30.15-M83.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT SIX (6) COPIES OF SHOP DRAWINGS INDICATING MATERIAL, SIZE, SPACING, AND LOCATION OF REINFORCING STEEL, ANCHORS, AND DETAILS.
- REINFORCING BARS SHALL BE CONTINUOUS ACROSS CONSTRUCTION JOINTS AND ELEVATION VARIATIONS UNLESS NOTED. CONTINUOUS BARS SHALL BE FULLY DEVELOPED BY LAPPING WHERE SPLICED.
- DO NOT USE CALCIUM CHLORIDE OR OTHER CALCIUM PRODUCTS IN CONCRETE MIX.
- CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS FOR THE EXPOSURE CLASS AS STATED IN CAN/CSA A23.1-19 CLAUSE 7.4.1.7, TABLE 2 AND TABLE 20.

STEEL - INSPECTION AND TESTING:

- THE UNDERTAKING TO INSPECT WELDING SHALL BE QUALIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA W178.1, "CERTIFICATION OF WELDING INSPECTION ORGANIZATIONS", AND CERTIFIED BY THE CANADIAN WELDING BUREAU.
- THE INSPECTION SHALL COVER ALL MOMENT CONNECTIONS TO REVIEW FOR COMPLIANCE WITH THE CSA S16-19.
- THE INSPECTION AGENCY SHALL SUBMIT REPORTS TO THE CONSULTANT COVERING THE WORK INSPECTED AND PROVIDE DETAILS OF NONCONFORMITIES OR DEFICIENCIES OBSERVED.

STRUCTURAL STEEL:

- ROLLED SHAPES AND PLATES SHALL CONFORM TO CAN/C.S.A. G40.20-13/G40.21-19 (R.2018), GRADE 350W.
- BOLTS TO BE A325 HIGH STRENGTH STEEL BOLTS FOR FRICTION TYPE CONNECTIONS, AND A307 FOR ANCHOR BOLTS.
- FABRICATION, ERECTION AND WORKMANSHIP SHALL BE PERFORMED BY A WELDER QUALIFIED UNDER C.S.A. W47.
- SURFACES TO BE WELDED SHALL BE THOROUGHLY CLEANED OF ALL FOREIGN MATTER INCLUDING PAINT FILM.
- ALL WELDED JOINTS SHALL USE E49XX ELECTRODES. CONNECTIONS THAT ARE FRICTION TYPE SHALL USE 20MM DIAMETER ASTM A325-19 HIGH STRENGTH BOLTS UNLESS OTHERWISE NOTED.
- SHOP PRIME ALL STRUCTURAL STEEL WITH PRIMER. DO NOT PAINT CONTACT SURFACES OF JOINTS OR SURFACES TO RECEIVE FIELD WELDS.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE CONSULTANT FOR REVIEW SIX (6) COPIES OF ERECTION DIAGRAM AND SHOP DRAWINGS INDICATING MATERIAL, SIZE, SPACING AND LOCATION OF STRUCTURAL STEEL MEMBERS, CONNECTION, BRIDGING, REINFORCING, BEARING SHOES, ANCHORS, ELEVATIONS AND DETAILS.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE CONSULTANT SIX (6) CATALOGUES OR TABLES OF JOISTS AND STEEL DECK CHECKED AND APPROVED BY A PROFESSIONAL ENGINEER OF ONTARIO.
- ALL LOADS SPECIFIED ARE UNFACTORED IN ACCORDANCE WITH C.S.A. S16-19.
- TOUCH UP FIELD WELD WITH ZINC PAINT.

FOUNDATION PAD SCHEDULE			
FOOTING	SIZE	REINFORCING	REMARKS
F1	36"x36"x12"	W/3-15M REINF. O/C E/W T&B	3" MIN. COVER
F2	36"x36"x12"	W/3-15M REINF. O/C E/W T&B BOTTOM OF FOOTING @-8'-0"	3" MIN. COVER
F3	40"x40"x12"	W/3-15M REINF. O/C E/W T&B	3" MIN. COVER
F4	64"x64"x12"	W/4-15M REINF. O/C E/W T&B	3" MIN. COVER
F5	80"x80"x12"	W/6-15M REINF. O/C E/W T&B	3" MIN. COVER
F6	96"x96"x12"	W/8-15M REINF. O/C E/W T&B BOTTOM OF FOOTING @-9'-7 5/8"	3" MIN. COVER
F7	120"x36"x12"	W/4-15M LONG. REINF. O/C T&B W/8-15M TRANS. REINF. O/C T&B	3" MIN. COVER
F8	64"x36"x12"	W/3-15M REINF. O/C E/W T&B	3" MIN. COVER

PIER SCHEDULE				
FOOTING	SIZE	VERT. REINF.	HORIZ. REINF.	REINFORCING
P1	24"x24"	8-20M	10M @ 12" O/C	W/HOOKED DOWEL TO MATCH VERT. REINF. 36" 16"
P2	24"x24"	8-20M	10M @ 4" O/C	W/HOOKED DOWEL TO MATCH VERT. REINF. 36" 16"
P3	40"x40"	12-20M	10M @ 4" O/C	W/HOOKED DOWEL TO MATCH VERT. REINF. 36" 16"
P4	12" SONOTUBE			

FOUNDATION WALL SCHEDULE			
WALL	SIZE	STRIP FOOTING	
FW1	8" POURED CONCRETE WALL W/15M @16" O/C E/W	24"x8" CONCRETE STRIP FOOTING W/2-15M CONT. REINF. W/15M HOOKED DOWEL TO MATCH VERT. WALL REINF.	24" 12"
FW2	8" POURED CONCRETE WALL W/15M @16" O/C E/W	80"x16" CONCRETE STRIP FOOTING W/6-15M CONT. LONG. REINF. W/15M TRANS. REINF. @9" O/C W/HOOKED DOWEL TO MATCH VERT. WALL REINF.	36" 16"
FW3	10" POURED CONCRETE WALL W/15M @16" O/C E/W	140"x21" CONCRETE STRIP FOOTING W/9-15M CONT. LONG. REINF. W/25M TRANS. REINF. @10" O/C W/HOOKED DOWEL TO MATCH VERT. WALL REINF.	42" 16"
FW4	8" POURED CONCRETE WALL W/2-15M CONT. REINF. TOP & BOTTOM OF WALL	16"x8" CONCRETE STRIP FOOTING W/2-15M CONT. REINF. O/C W/ CONT. SHEAR KEY	

BASE PLATE SCHEDULE			
BASE PLATE	MEMBER	ANCHORS	
B <sub>P</sub> B	12 1/2"x8" STEEL PLATE	4-5/8" HOOKED ANCHORS	12" 2"
B <sub>P</sub> C	14"x8" STEEL PLATE	4-5/8" HOOKED ANCHORS	12" 2"
B <sub>P</sub> D	17"x10" STEEL PLATE	6-1" HOOKED ANCHORS	20" 6"
B <sub>P</sub> E	16 1/2"x8" STEEL PLATE	6-1" HOOKED ANCHORS	20" 6"
B <sub>P</sub> F	16 3/4"x8" STEEL PLATE	6-1" HOOKED ANCHORS	20" 6"
B <sub>P</sub> G	16 3/4"x10" STEEL PLATE	6-1" HOOKED ANCHORS	20" 6"
B <sub>P</sub> H	8"x8" STEEL PLATE	4-5/8" HOOKED ANCHORS	12" 2"
B <sub>P</sub> L	14 3/4"x8" STEEL PLATE	4-1" HOOKED ANCHORS	20" 6"
B <sub>P</sub> M	14 1/2"x8" STEEL PLATE	4-1" HOOKED ANCHORS	20" 6"
B <sub>P</sub> N	10 1/2"x8" STEEL PLATE	4-3/4" HOOKED ANCHORS	16" 3"
B <sub>P</sub> O	10 1/2"x8" STEEL PLATE	4-3/4" HOOKED ANCHORS	16" 3"
B <sub>P</sub> P	10 1/4"x8" STEEL PLATE	4-3/4" HOOKED ANCHORS	16" 3"
B <sub>P</sub> Q	8"x3 1/2" STEEL PLATE	2-1/2" HOOKED ANCHORS	12" 3"

NOTE:  
REFER TO NORSTEEL BUILDING DRAWINGS (JOB NUMBER N26-001) FOR BASE PLATE SPECIFICATIONS AND LOCATION.

LINTEL SCHEDULE		
LINTEL	SIZE	REMARKS
LC01	20"x10" CONCRETE LINTEL	W/2-15M TOP REINF. W/3-20M BOTTOM REINF. W/10M STIRRUP @10" O/C

STRUCTURAL ROOF SCHEDULE	
R1	REFER TO PRE-ENG SHOP DRAWING FOR ROOF AND BEAM STRUCTURE

CONCRETE MIX SCHEDULE				
STRENGTH	CLASS	AIR	SLUMP	LOCATION
30MPa	F-1	6-7%	75	BUILDING FOUNDATION WALLS AND PIERS
25MPa	N	N/A	75	SLAB ON GRADE
25MPa	N	6-7%	75	STRIP FOOTINGS AND PAD FOOTINGS
25MPa	C1	6-7%	75	UNDERGROUND TANK FOUNDATION WALLS

LEGEND

- F FOOTING
- SF STRIP FOOTING
- P PIER
- FW FOUNDATION WALL
- B<sub>P</sub> BASE PLATE
- C COLUMN
- SW STRUCTURAL WALL
- SHW STRUCTURAL SHEAR WALL
- BM BEAM
- LWD WOOD LINTEL
- LCF COLD FORM STEEL LINTEL
- LST STEEL LINTEL
- LCO CONCRETE LINTEL
- LBB BOND BEAM LINTEL
- FL FLOOR
- R ROOF
- BOT BOTTOM
- EXT EXTERIOR
- INT INTERIOR
- E/W EACH WAY
- E/F EACH FACE
- T/B TOP & BOTTOM
- O/C ON CENTER
- U/S UNDER SIDE
- B/O BOTTOM OF
- T/O TOP OF
- T/S TOP OF STEEL
- TYP TYPICAL
- WWM WELDED WIRE MESH
- MW METAL WIRE
- FF FINISHED FLOOR
- FFE FINISHED FLOOR ELEVATION
- AFF ABOVE FINISHED FLOOR
- W/ WITH
- TJ TIE JOIST
- PL POINT LOAD
- (HIGH) BEAM AT UPPER LEVEL
- (LOW) BEAM AT LOWER LEVEL
- CANT. CANTILEVERED
- DJ DOUBLE JOIST
- DT DOUBLE TRUSS
- FG FIXED GLASS
- FA FLAT ARCH
- GT GIRDER TRUSS
- LVL LAMINATED VENEER LUMBER
- PT PRESURE TREATED LUMBER
- TJ TRIPLE JOIST
- MC MOMENT CONNECTION
- MF MOMENT FRAME
- LLV LONG LEG VERTICAL
- LLH LONG LEG HORIZONTAL
- LSH LONG SIDE HORIZONTAL
- D.O. DITTO
- ZN ZONE
- CE CEILING
- BUL BOTTOM UPPER LAYER
- BLL BOTTOM LOWER LAYER
- RA ROOF ANCHORS
- RD ROOF DRAIN
- NTS NOT TO SCALE
- CMU CONCRETE MASONRY UNIT
- T&G TONGUE AND GROOVE
- WC WATER CLOSET
- GWB GYPSUM WALLBOARD
- ACT ACOUSTIC CEILING TILE
- HM HOLLOW METAL (DOORS & FRAMES)
- SCQ SOLID CORE WOOD (DOORS & FRAMES)
- PS PRESSED STEEL (DOORS & FRAMES)
- PT PRESSURE TREATED (WOOD)
- PLAM PLASTIC LAMINATE
- FND FOUNDATION

NOTE:

REFER TO NORSTEEL BUILDING DRAWINGS (JOB NUMBER N26-001, DATED: APRIL 20, 2026) FOR BUILDING DESIGN LOADS.

REFER TO NORTH AMERICAN STEEL SHOP DRAWING "CESTOIL04-23-24-Q-R2" FOR RACKING SYSTEM LAYOUT.

2	ISSUED FOR PERMIT	2026/05/01
1	PRELIMINARY STRUCTURAL SET	2026/03/31
NO.	SUBMISSION	DATE

CESTOIL CHEMICAL INC.  
1726 BASELINE ROAD WEST, COURTYCE, ON.

## STRUCTURAL NOTES & SCHEDULES

**D.G. BIDDLE & ASSOCIATES**  
CONSULTING ENGINEERS & PLANNERS

481 Taunton Rd W, Oshawa ON  
150 King St, Peterborough ON  
Phone: 905-576-8500  
info@dgbiddle.com  
dgbiddle.com

SCALE: AS SHOWN

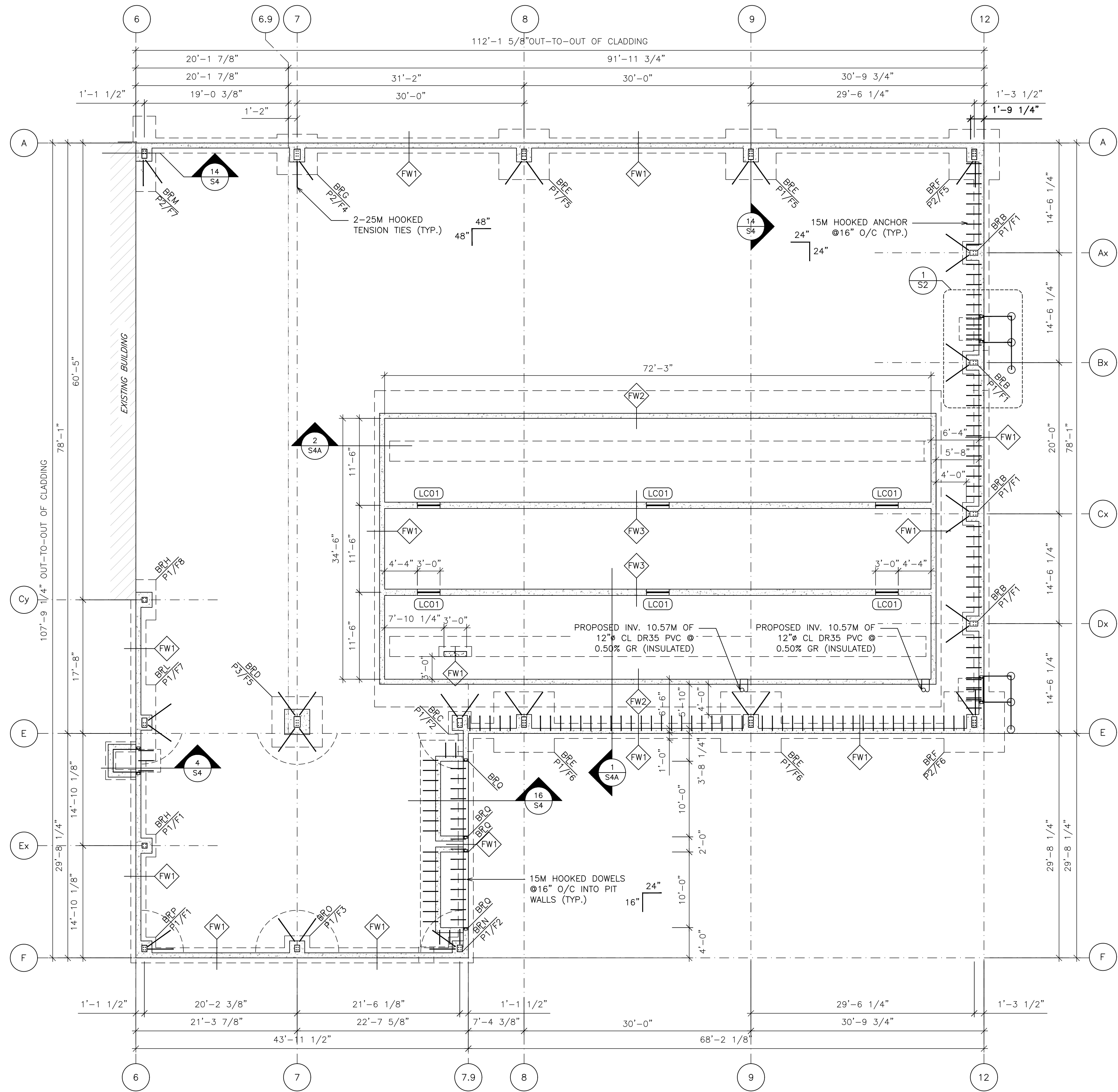
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CHECKED BY: T.L.R.

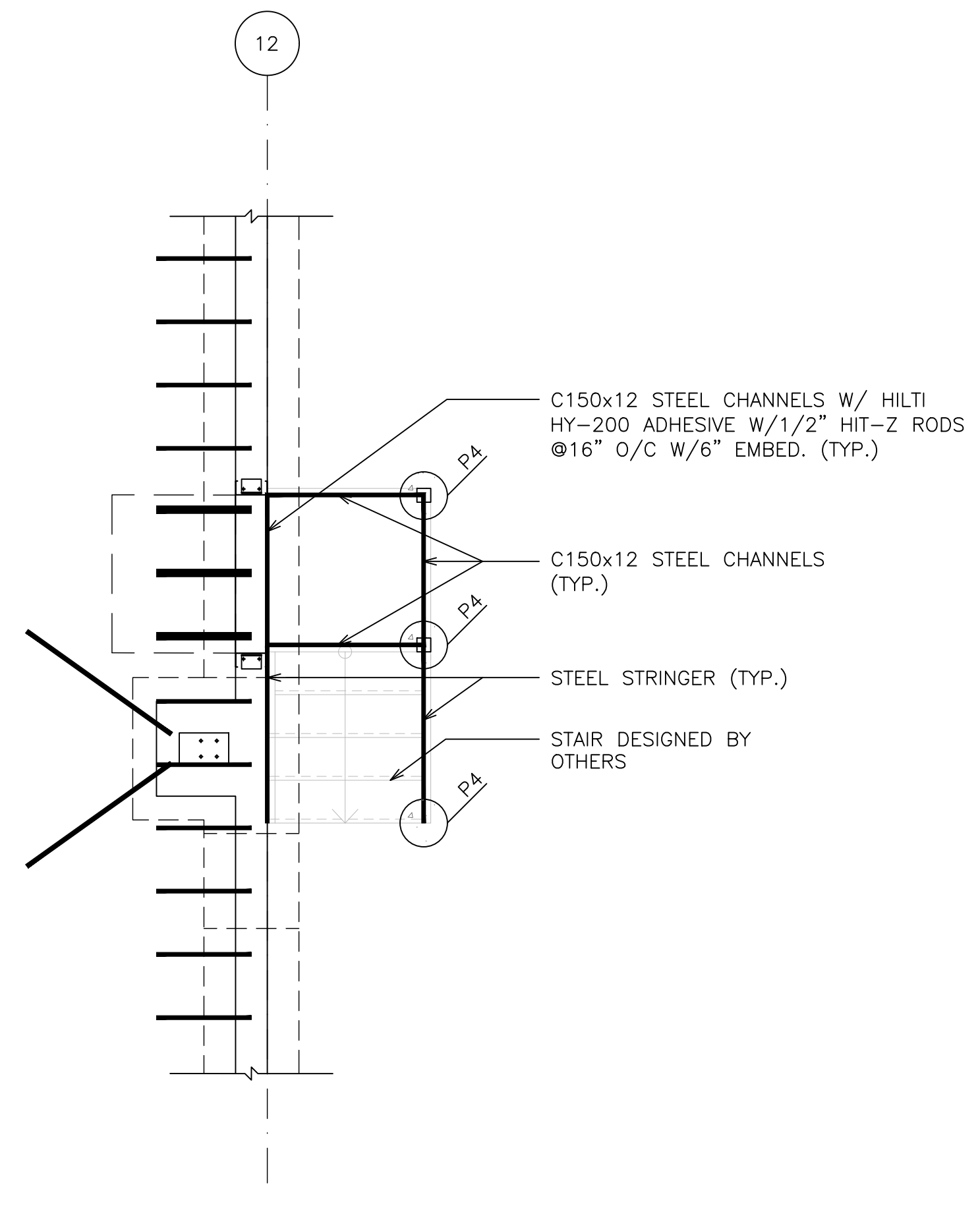
PROJECT NO.: 115160

DRAWING NO.: S1

**LICENCED PROFESSIONAL ENGINEER**  
T.L. RUPERT  
109600340  
May 1/2026  
PROVINCE OF ONTARIO



**1**  
S2 FOUNDATION PLAN  
SCALE: 1/18" = 1'-0"



**2**  
S2 STAIR LANDING STRUCTURAL PLAN  
SCALE: 3/8" = 1'-0"

NOTE:  
ALL CUTTING OF CONCRETE SLAB ON GRADE IN PRE-ENGINEERED BUILDING TO BE REVIEW BY PROFESSIONAL ENGINEER TO ENSURE THE SLAB EMBEDDED HAIRPINS ARE NOT ACCIDENTAL CUT OR DAMAGED.  
SAWCUTS TO BE AT 120"x120" MAX. FOR CRACK CONTROL OF SLAB AND AT COLUMN LOCATIONS.

2	ISSUED FOR PERMIT	2026/05/01
1	PRELIMINARY STRUCTURAL SET	2026/03/31
NO.	SUBMISSION	DATE

CESTOIL CHEMICAL INC.  
1726 BASELINE ROAD WEST, COURTICE, ON.

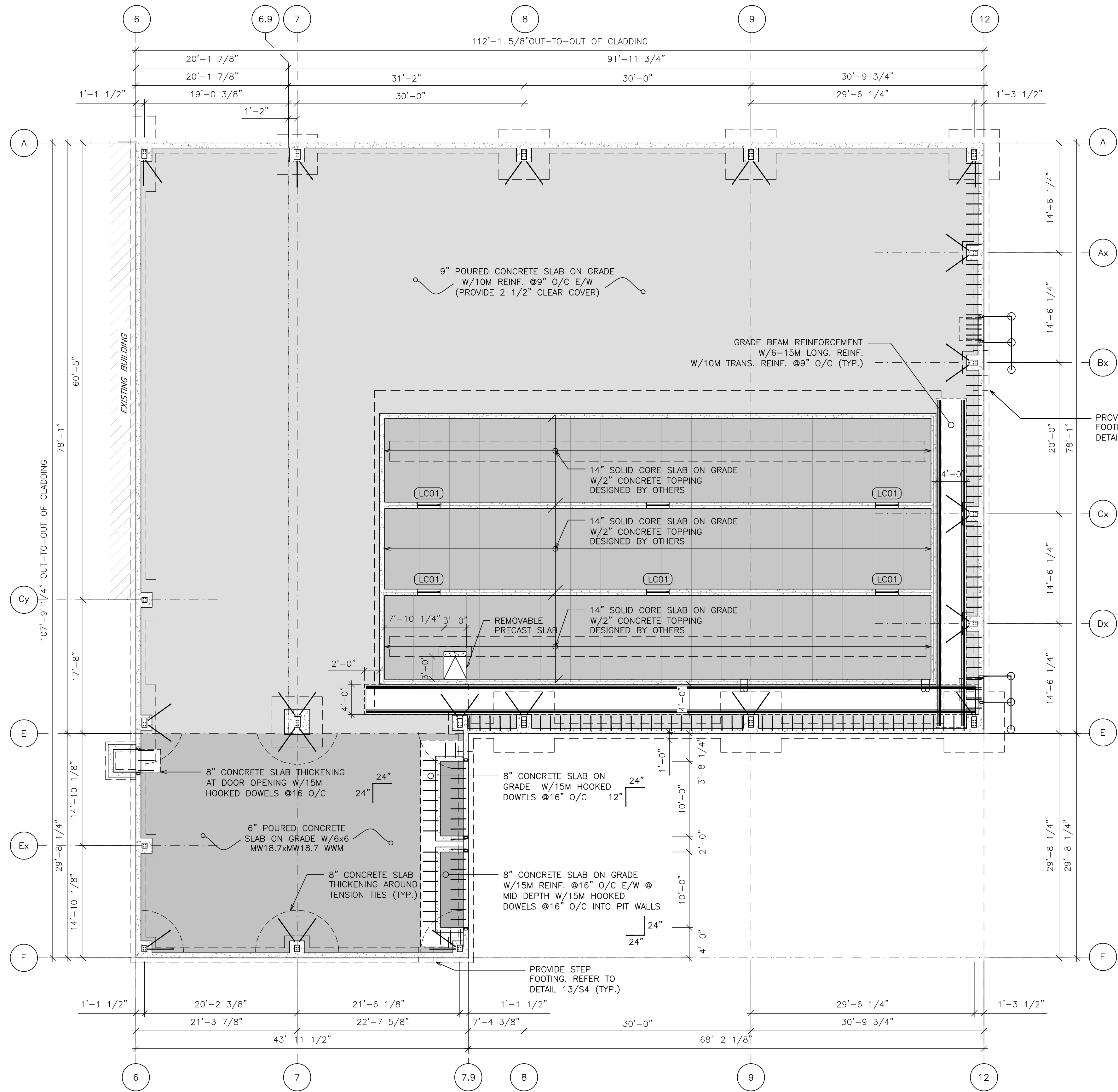
## FOUNDATION PLAN

**D.G. BIDDLE & ASSOCIATES**  
CONSULTING ENGINEERS & PLANNERS  
481 Taunton Rd W, Oshawa ON  
150 King St, Peterborough ON  
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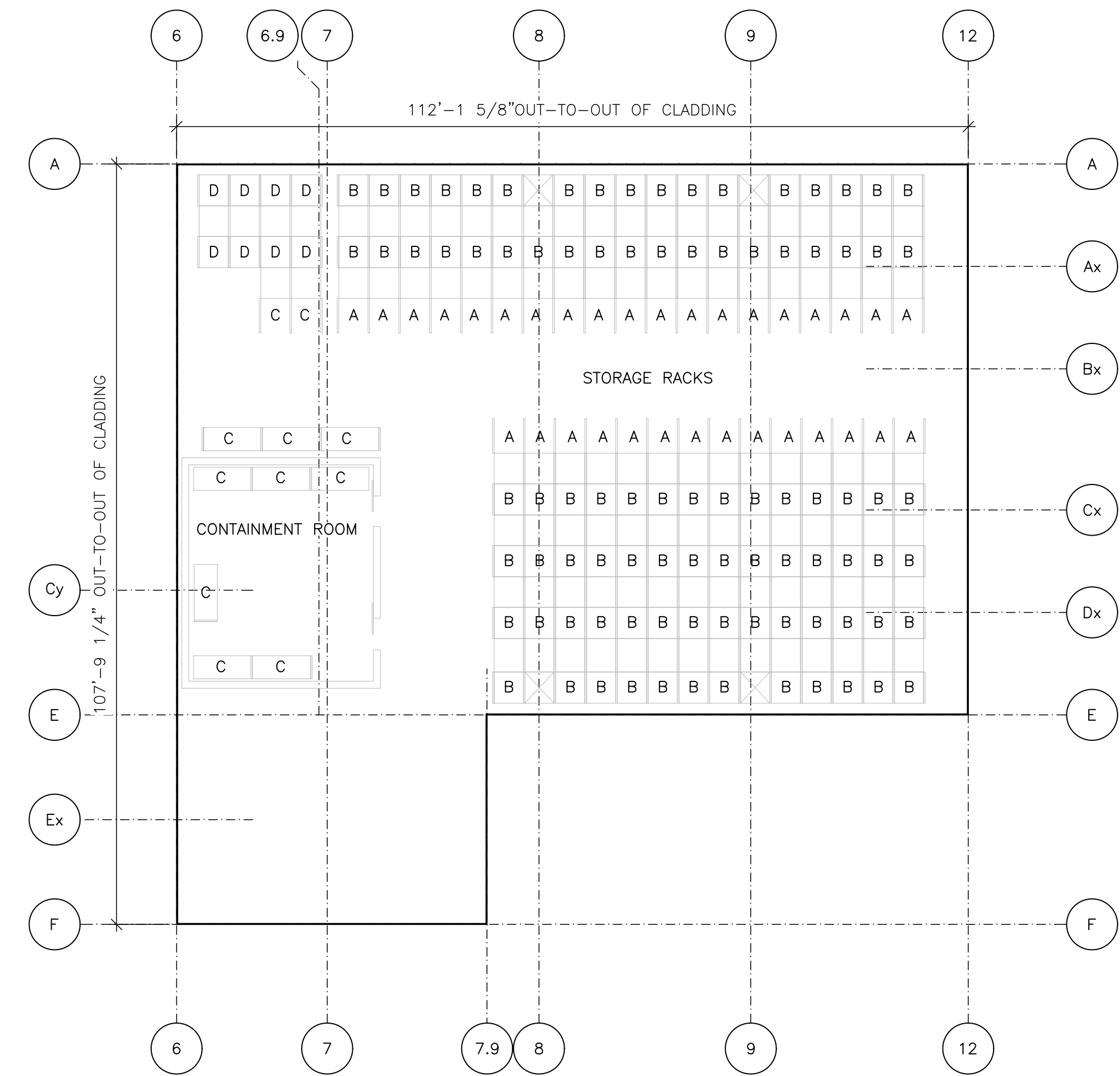
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DESIGNED BY:	S.A.
CHECKED BY:	T.L.R.
PROJECT NO.:	115160
DRAWING NO.:	S2



01/05/2026  
 C:\STAFF\JOB FILES\115000\115160\_1726 BASELINE ROAD W\115160 DRAWINGS\115160 STRUCTURAL\115160 STRUCTURAL - FOUNDATION PLAN



**1**  
**S3** STRUCTURAL FOUNDATION STEP FOOTING & SLAB ON GRADE  
SCALE: 1/18" = 1'-0"



**2**  
**S3** KEY PLAN - STORAGE RACK LOCATION  
SCALE: 1/16" = 1'-0"

NOTE:  
SAWCUTS TO BE AT 120"x120" MAX. FOR CRACK CONTROL OF SLAB AND AT COLUMN LOCATIONS.

2	ISSUED FOR PERMIT	2026/05/01
1	PRELIMINARY STRUCTURAL SET	2026/03/31
NO.	SUBMISSION	DATE

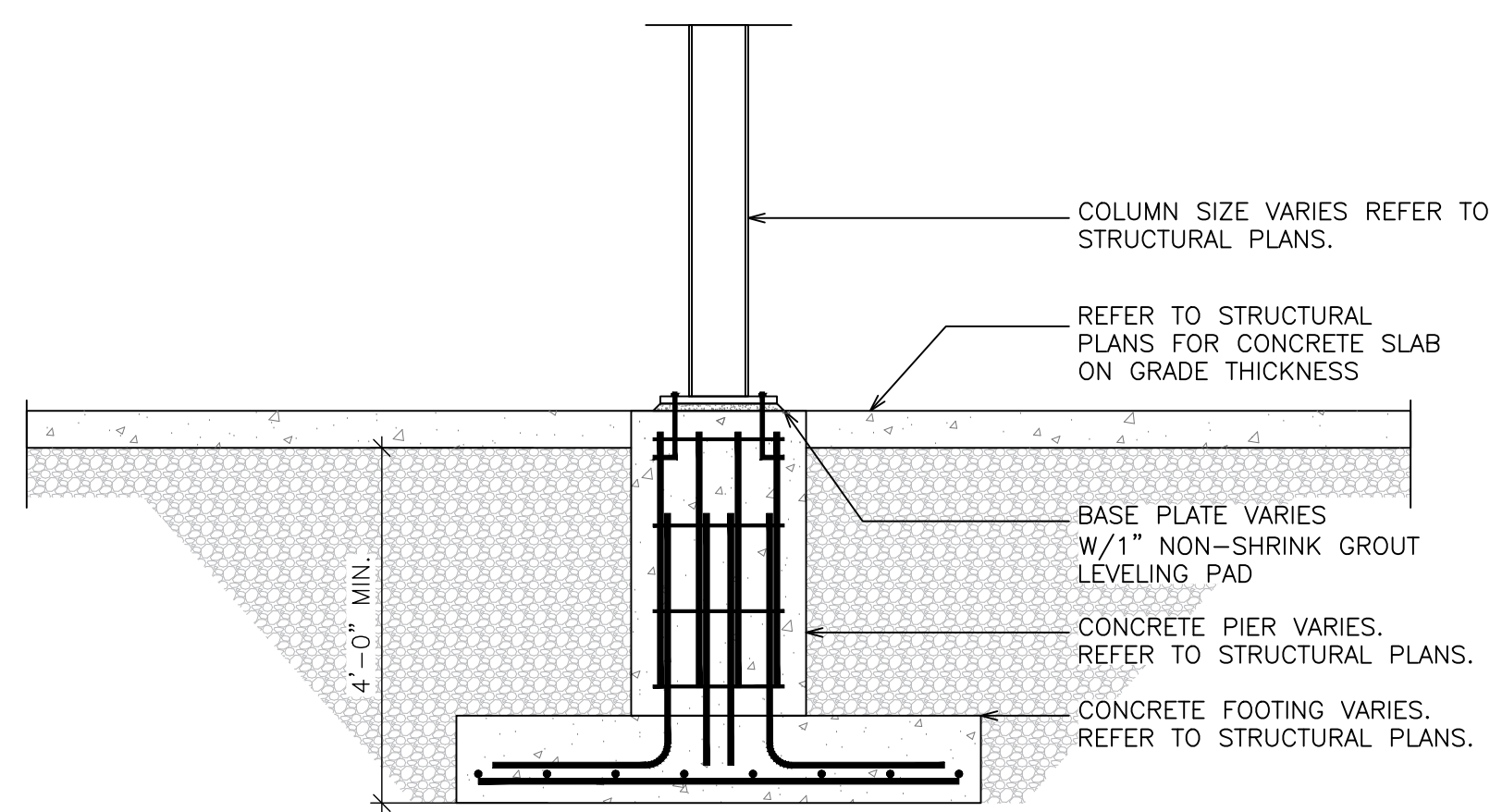
CESTOIL CHEMICAL INC.  
1726 BASELINE ROAD WEST, COURTICE, ON.  
**STRUC. STEP FOOTINGS  
& SLAB ON GRADE**

**D.G. BIDDLE & ASSOCIATES**  
CONSULTING ENGINEERS & PLANNERS  
481 Taunton Rd W, Oshawa ON  
150 King St, Peterborough ON  
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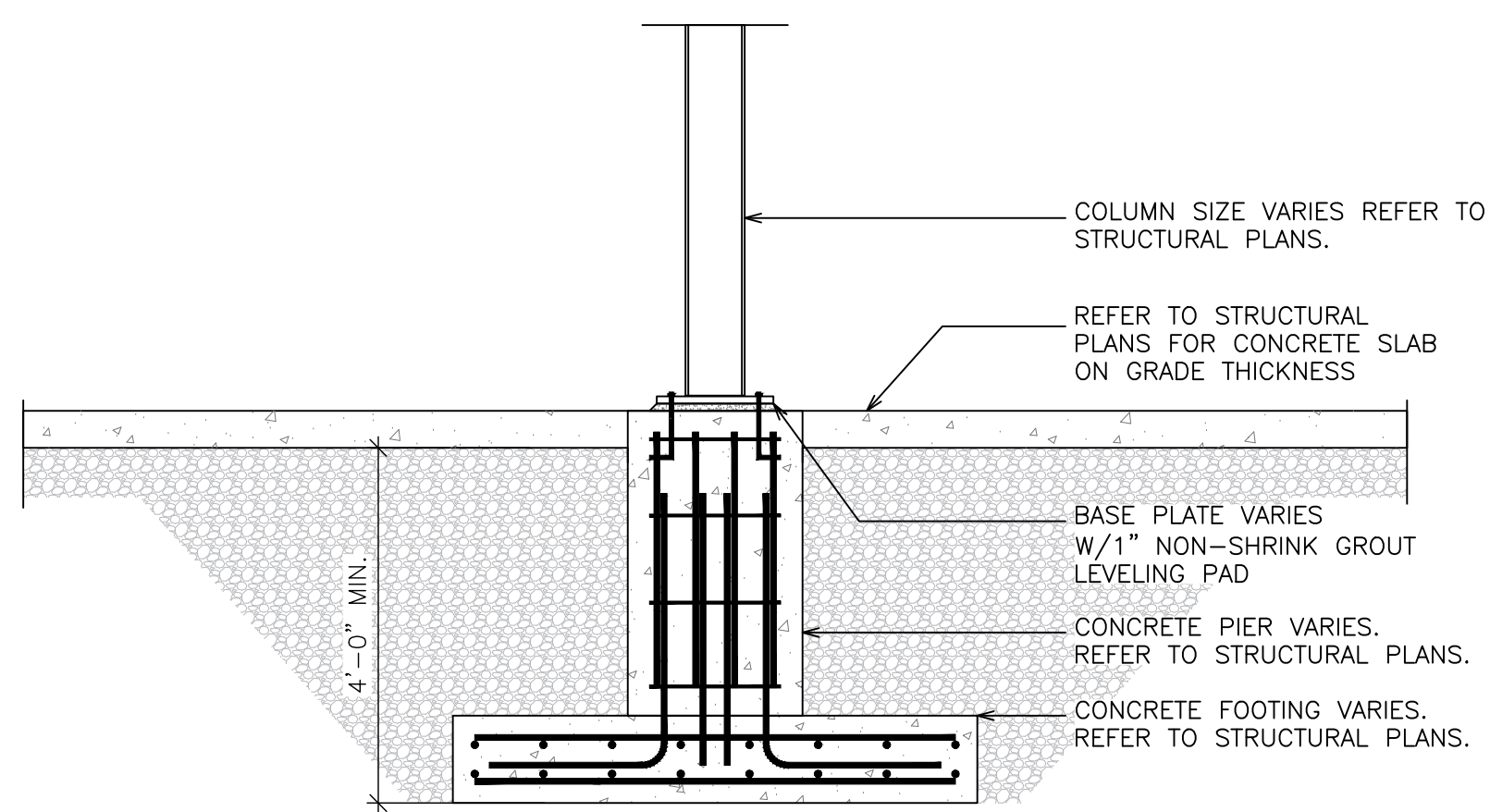
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DESIGNED BY:	S.A.
CHECKED BY:	T.L.R.
PROJECT NO.:	115160
DRAWING NO.:	S3



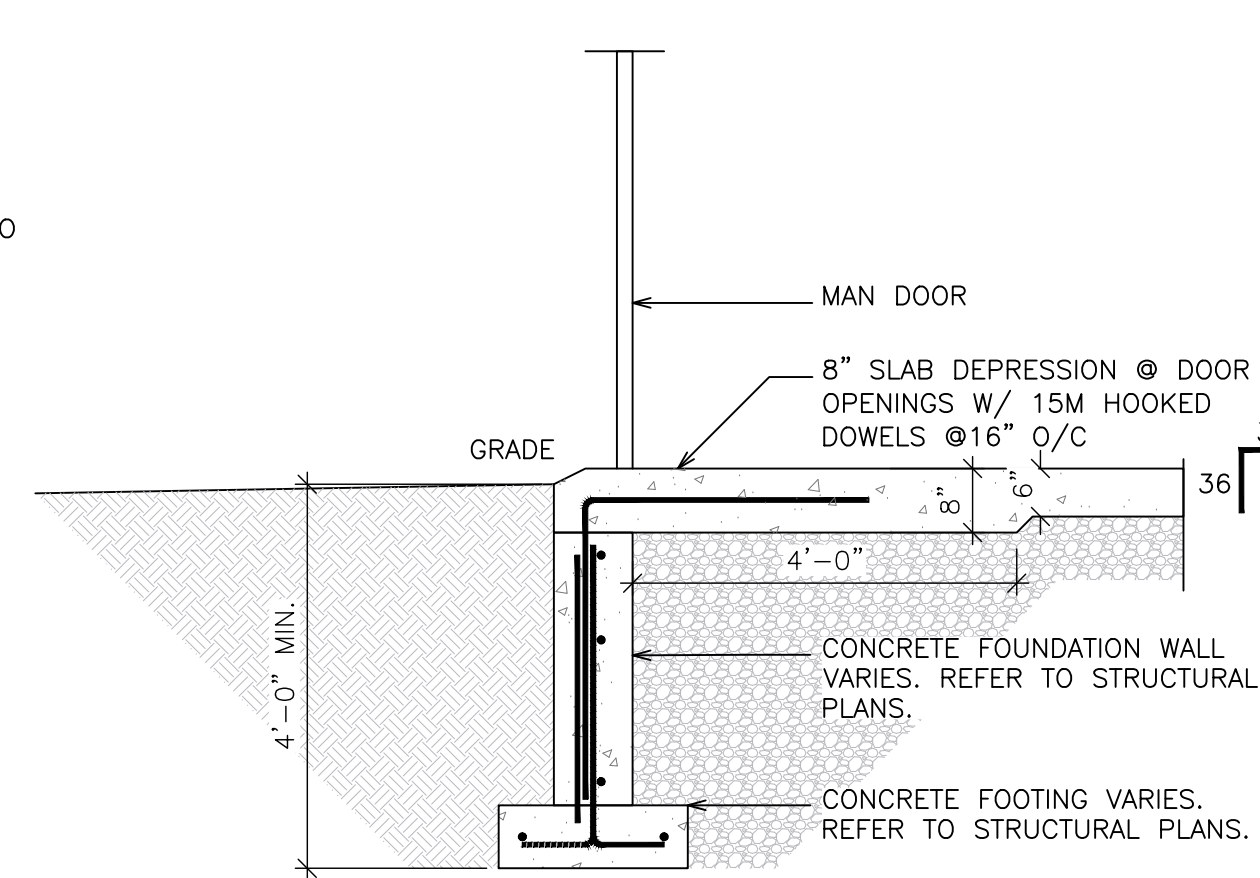
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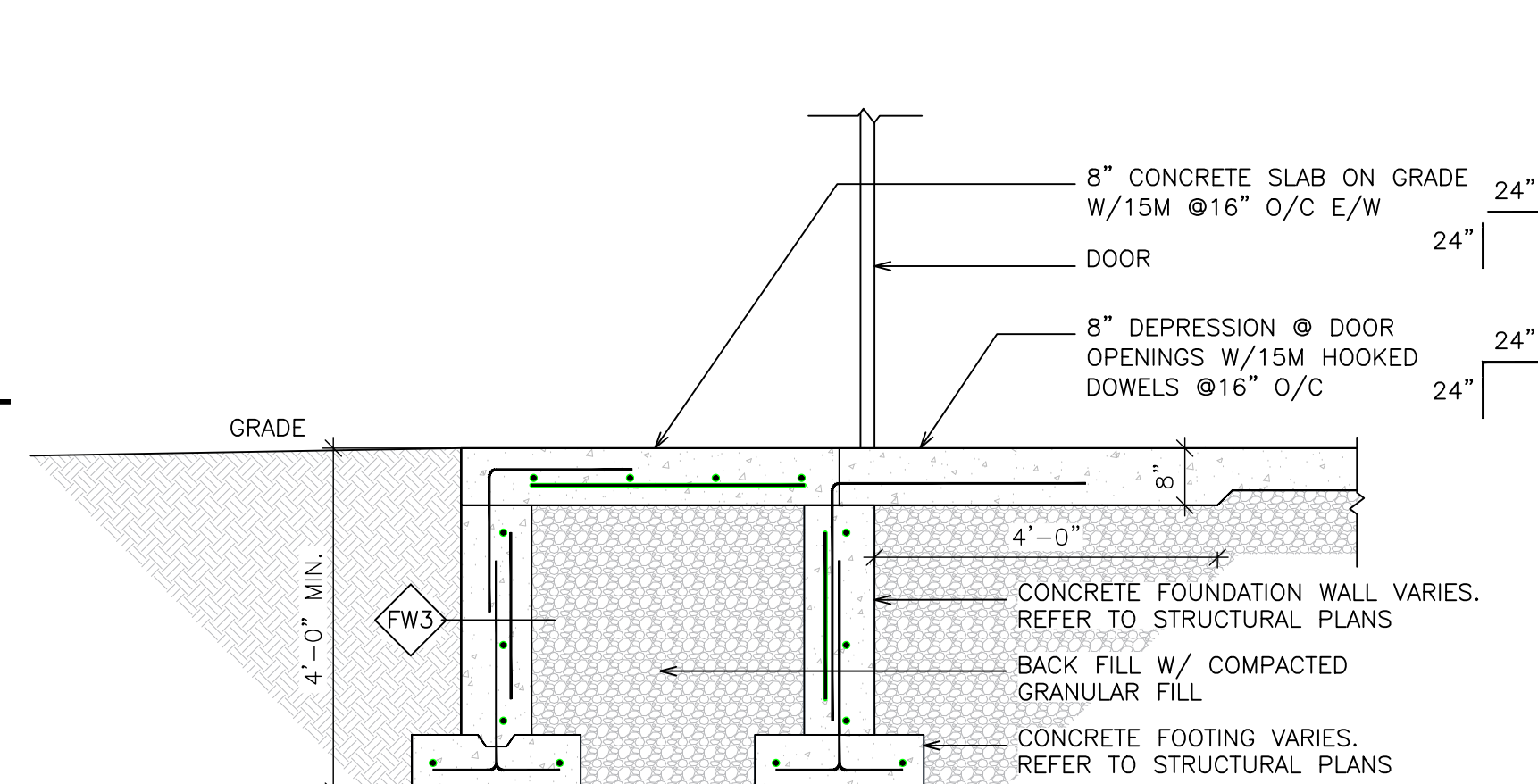
1 TYPICAL PIER AND PAD FOOTING DETAIL  
S4 SCALE: 1/2" = 1'-0"



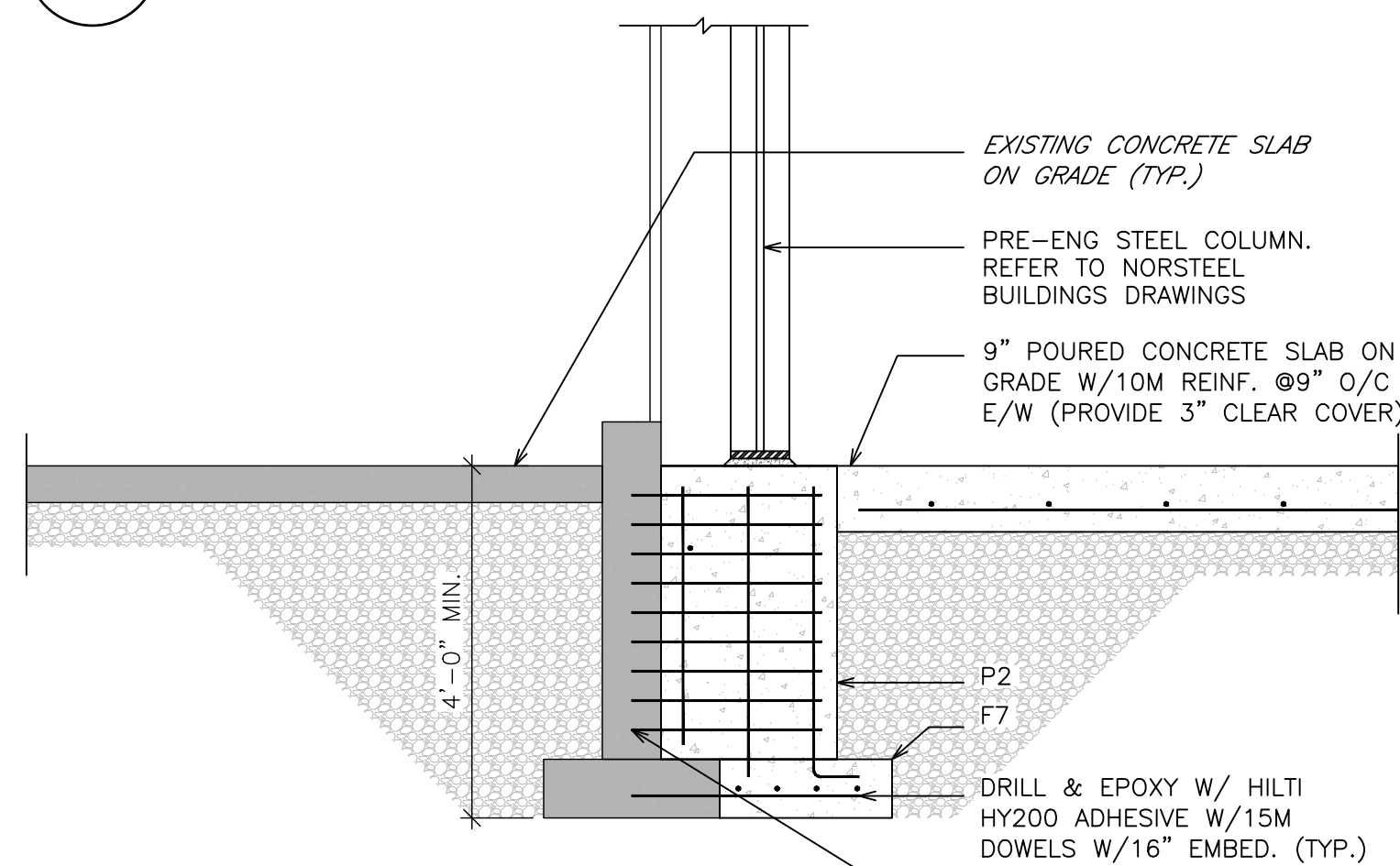
2 TYPICAL INTERIOR PIER AND DOUBLE MATTED FOOTING  
S4 SCALE: 1/2" = 1'-0"



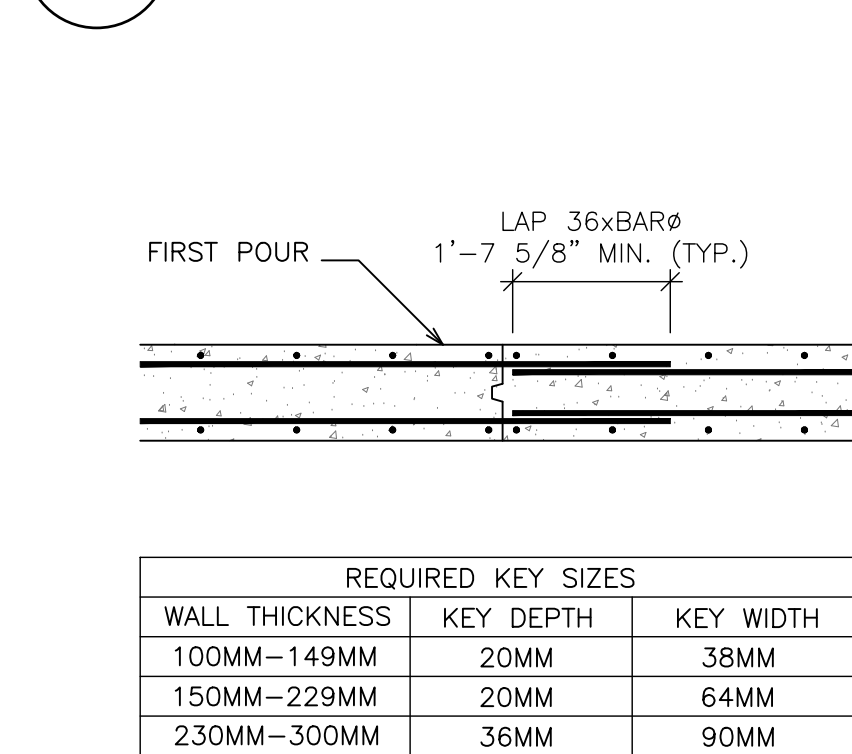
3 TYPICAL FOUNDATION WALL AT DOOR DEPRESSION DETAIL  
S4 SCALE: 1/2" = 1'-0"



4 TYPICAL FROST WALL AT DOOR DEPRESSION DETAIL  
S4 SCALE: 1/2" = 1'-0"

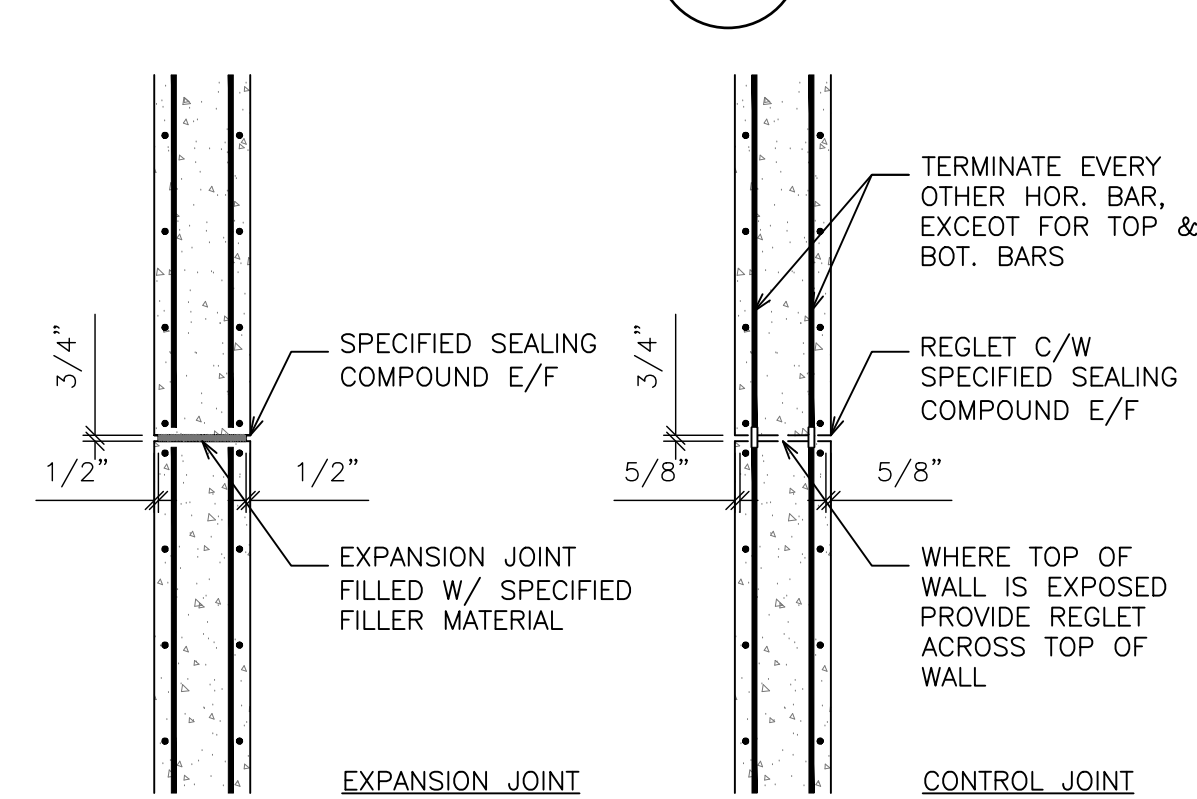


5 TYPICAL PIER AND PAD FOOTING DETAIL W/ EXISTING FOUNDATION WALL  
S4 SCALE: 1/2" = 1'-0"

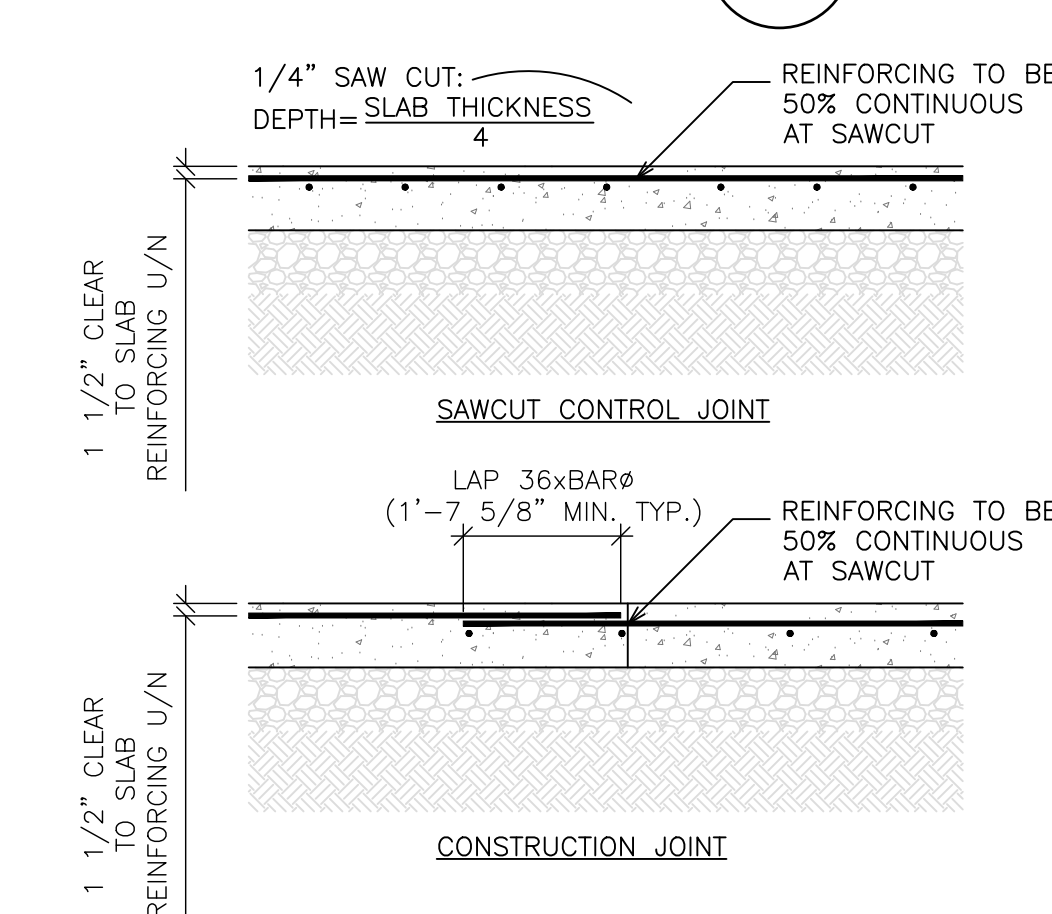


REQUIRED KEY SIZES		
WALL THICKNESS	KEY DEPTH	KEY WIDTH
100MM-149MM	20MM	38MM
150MM-229MM	20MM	64MM
230MM-300MM	36MM	90MM

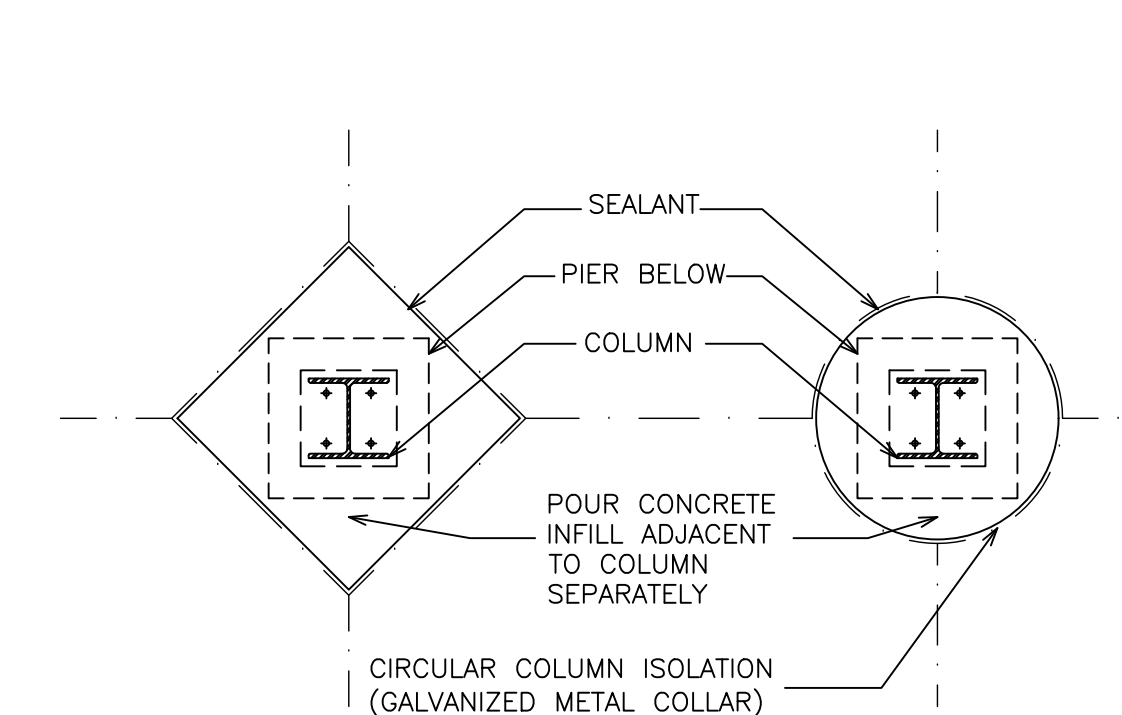
NOTE: VERTICAL CONSTRUCTION JOINTS TO BE PROVIDED AT APPROVED LOCATIONS ONLY



NOTE: PROVIDE VERTICAL EXPANSION/CONTROL JOINTS AT MASONRY JOINT LOCATIONS UNLESS SPECIFICALLY NOTED ON DRAWINGS

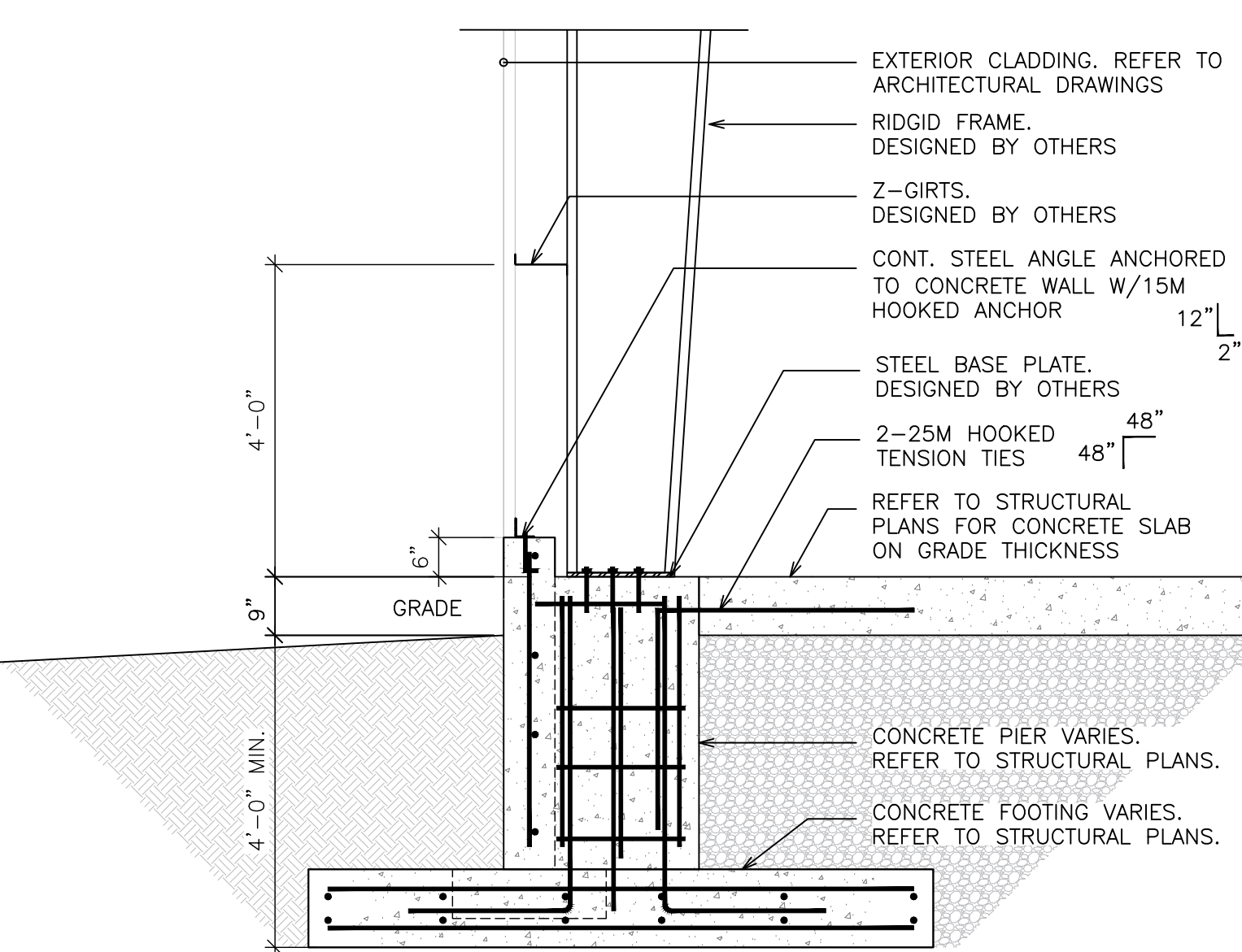


8 TYPICAL FLOOR JOINTS  
S4 SCALE: 1/2" = 1'-0"

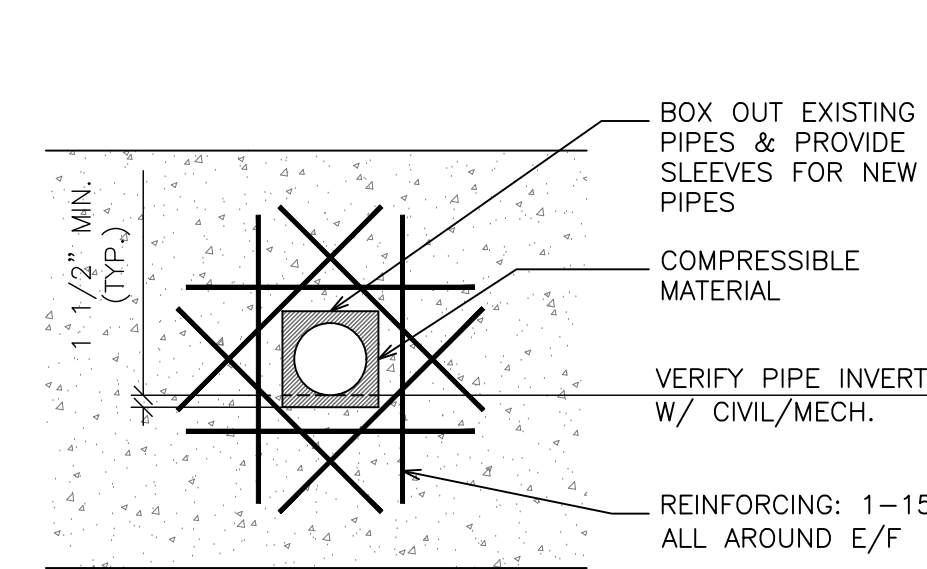


NOTE: 1. MAXIMUM SPACING OF SAWCUTS TO BE 177 O/C UNLESS NOTED OR SHOWN ON PLANS.  
2. PROVIDE SAWCUTS TO MATCH CONTROL JOINTS IN TILED FLOORS.

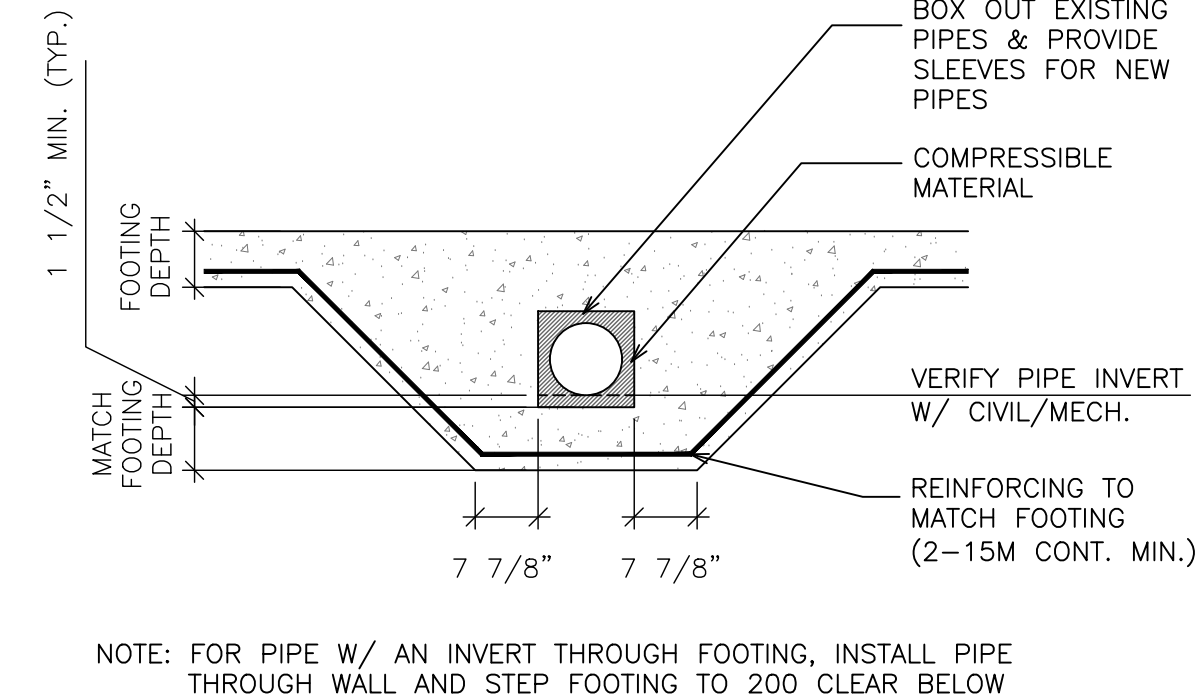
9 COLUMN ISOLATION  
S4 SCALE: 1/2" = 1'-0"



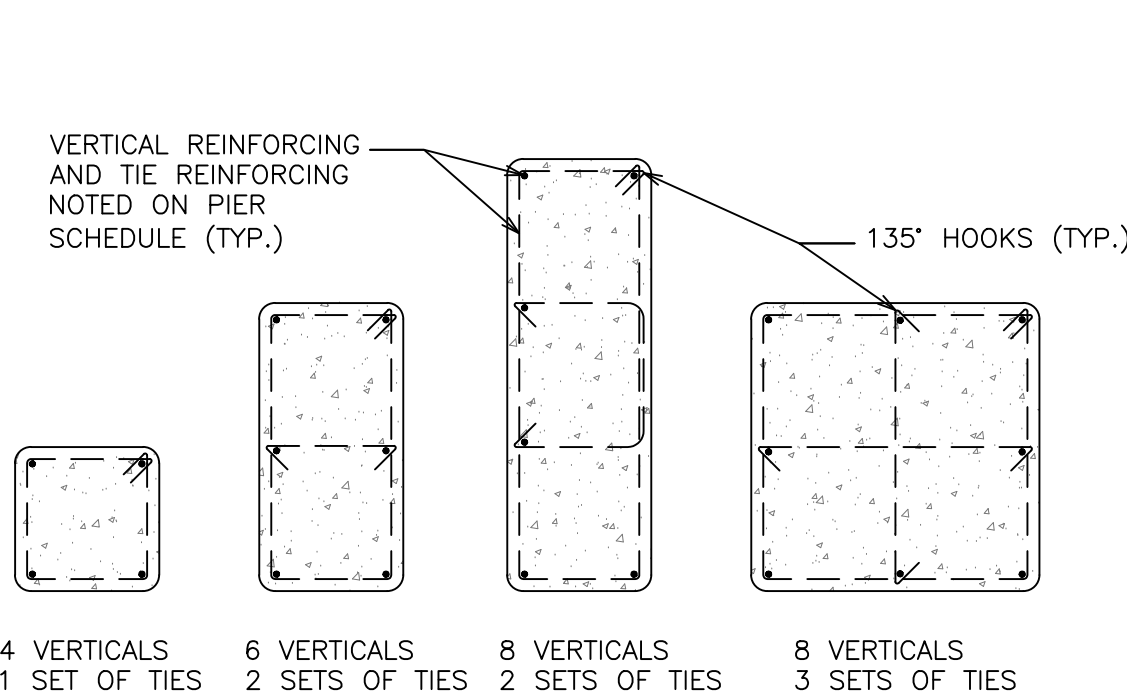
14 TYPICAL PIER AND PAD FOOTING DETAIL  
S4 SCALE: 1/2" = 1'-0"



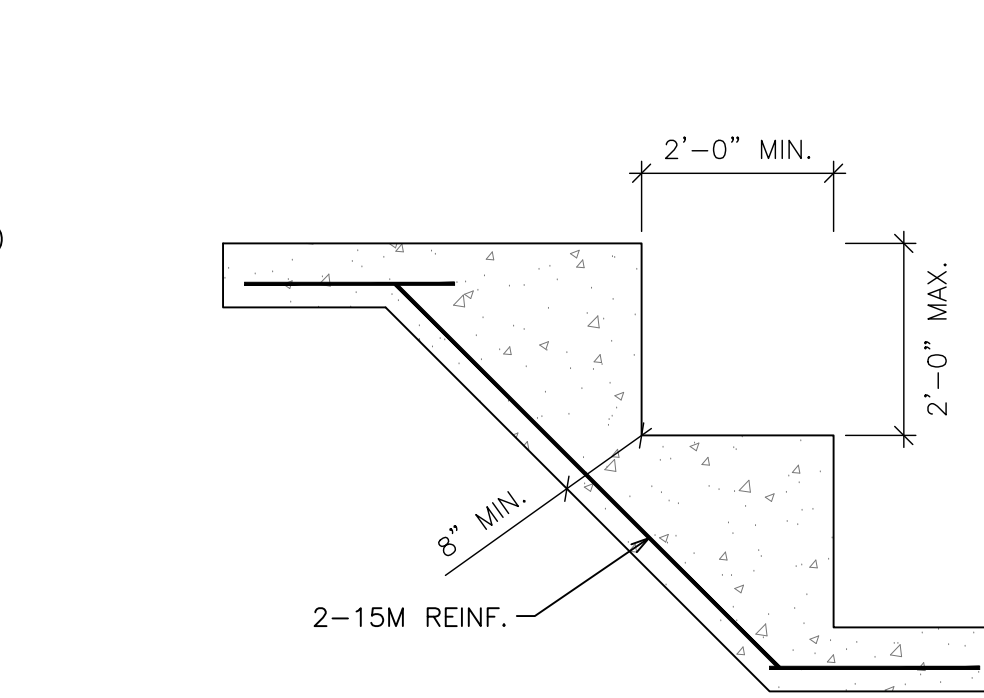
10 SERVICE PIPING THROUGH WALL  
S4 SCALE: 1/2" = 1'-0"



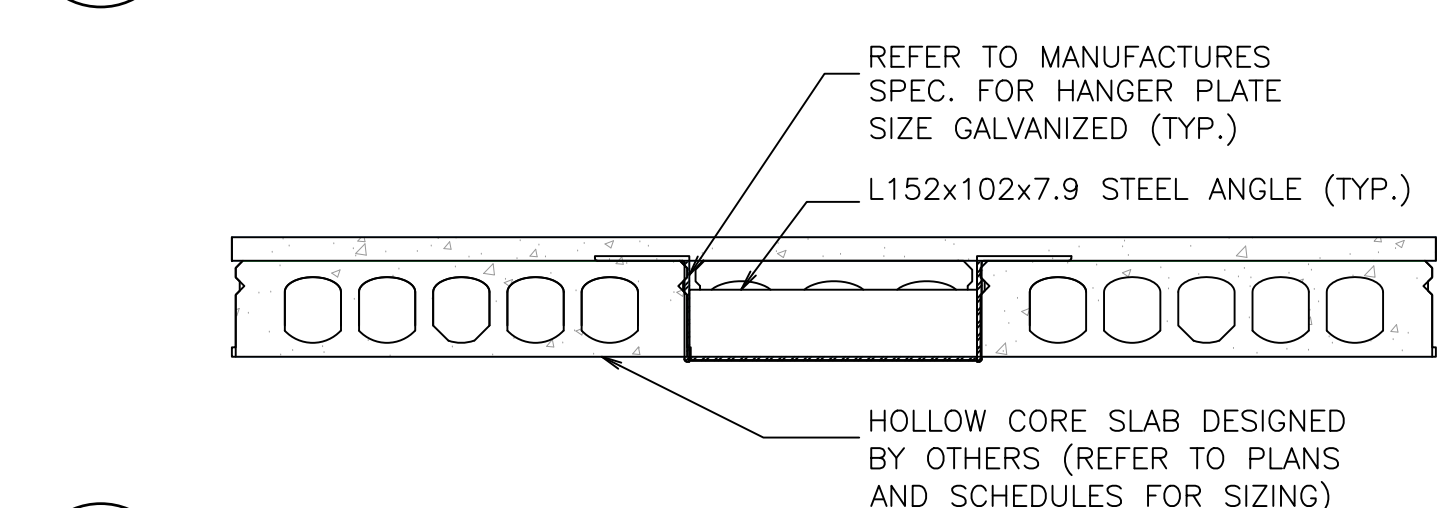
11 SERVICE PIPING BELOW FOOTING  
S4 SCALE: 1/2" = 1'-0"



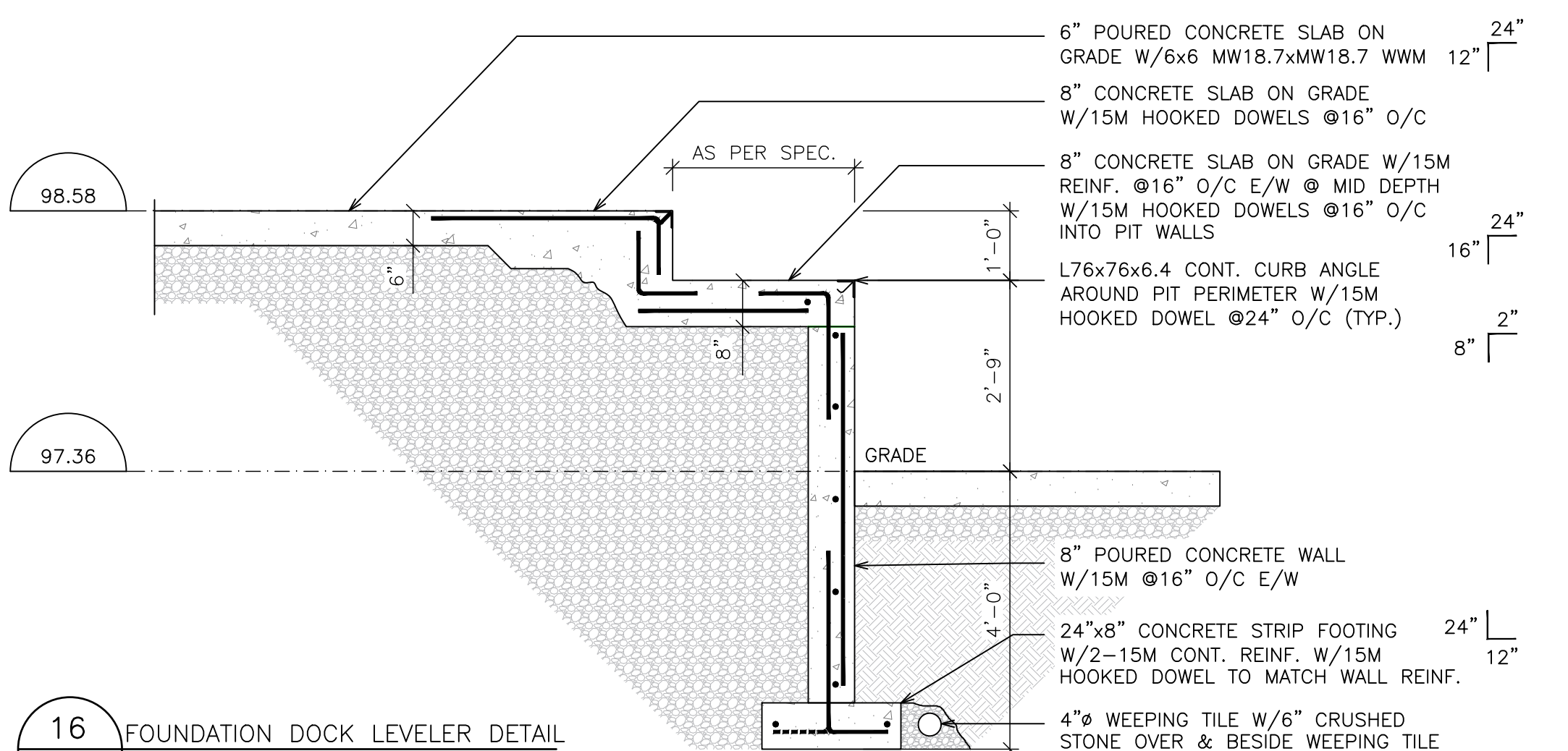
12 TYPICAL PIER REINFORCING  
S4 SCALE: 1/2" = 1'-0"



13 TYPICAL STEP FOOTING  
S4 SCALE: 1/2" = 1'-0"



15 OPENING IN HOLLOWCORE DETAIL  
S4 SCALE: 3/4" = 1'-0"



16 FOUNDATION DOCK LEVELER DETAIL  
S4 SCALE: 1/2" = 1'-0"

01/05/2026  
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2	ISSUED FOR PERMIT	2026/05/01
1	PRELIMINARY STRUCTURAL SET	2026/03/31
NO.	SUBMISSION	DATE

**CESTOIL CHEMICAL INC.**  
1726 BASELINE ROAD WEST, COURTICE, ON.

## STRUCTURAL DETAILS

**D.G. BIDDLE & ASSOCIATES**  
CONSULTING ENGINEERS & PLANNERS

481 Taunton Rd W, Oshawa ON  
150 King St, Peterborough ON  
Phone: 905-576-8500  
info@dgbiddle.com  
dgbiddle.com

SCALE: AS SHOWN

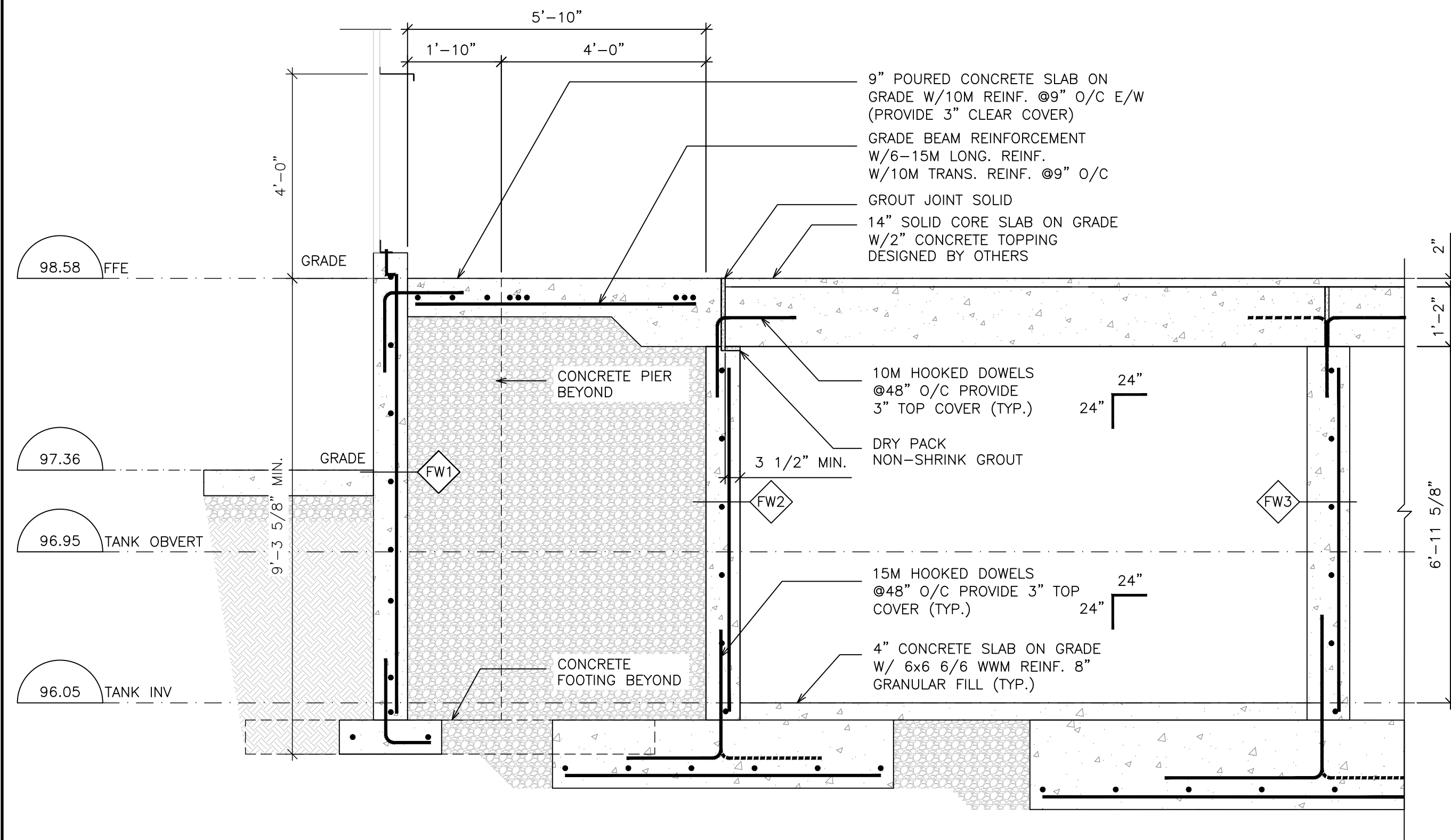
DESIGNED BY: S.A.

CHECKED BY: T.L.R.

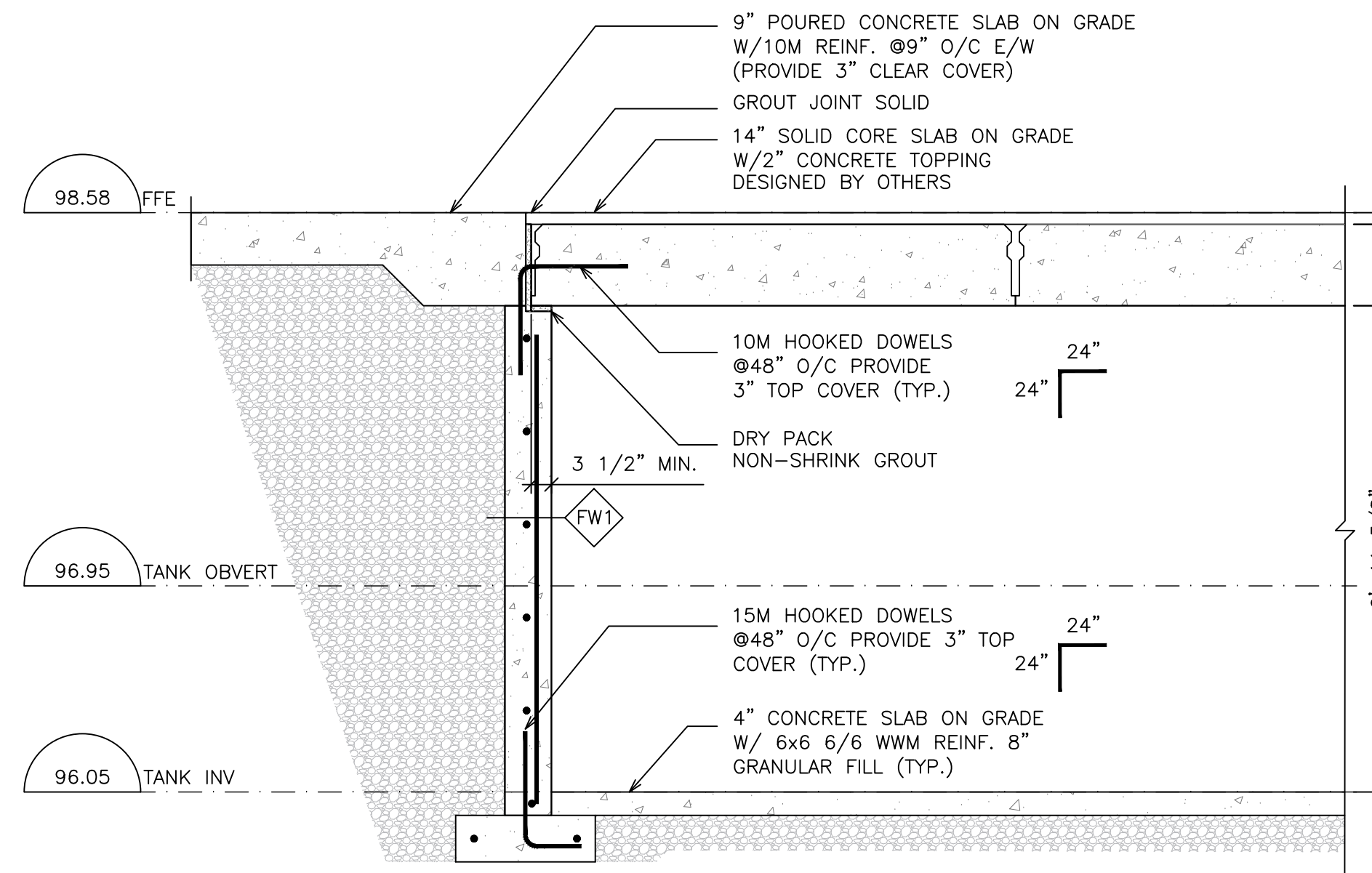
PROJECT NO.: 115160

DRAWING NO.: S4

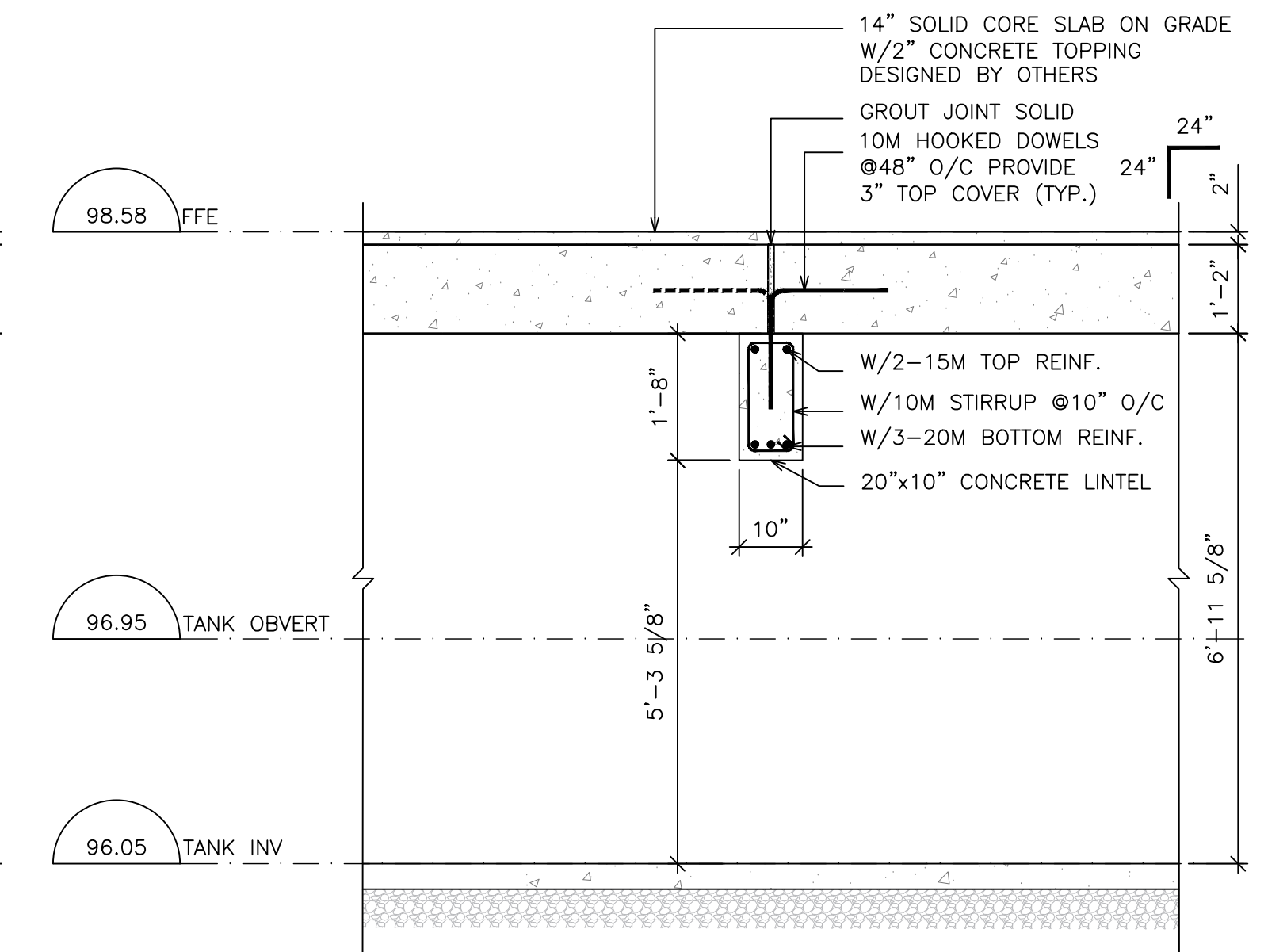
**LICENSÉD PROFESSIONAL ENGINEER**  
T. L. RUPERT  
10980340  
May 1/2026  
PROVINCE OF ONTARIO



1 TRANSVERSAL TANK SECTION DETAIL  
S4A SCALE: 1/2" = 1'-0"



2 LONGITUDINAL TANK SECTION DETAIL  
S4A SCALE: 1/2" = 1'-0"



3 TYPICAL OPENING LINEL AT TANK  
S4A SCALE: 1/2" = 1'-0"

01/05/2026  
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2	ISSUED FOR PERMIT	2026/05/01
1	PRELIMINARY STRUCTURAL SET	2026/03/31
NO.	SUBMISSION	DATE

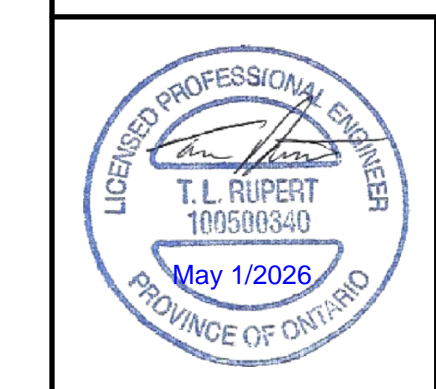
CESTOIL CHEMICAL INC.  
1726 BASELINE ROAD WEST, COURTCICE, ON.

## STRUCTURAL TANK SECTION DETAILS

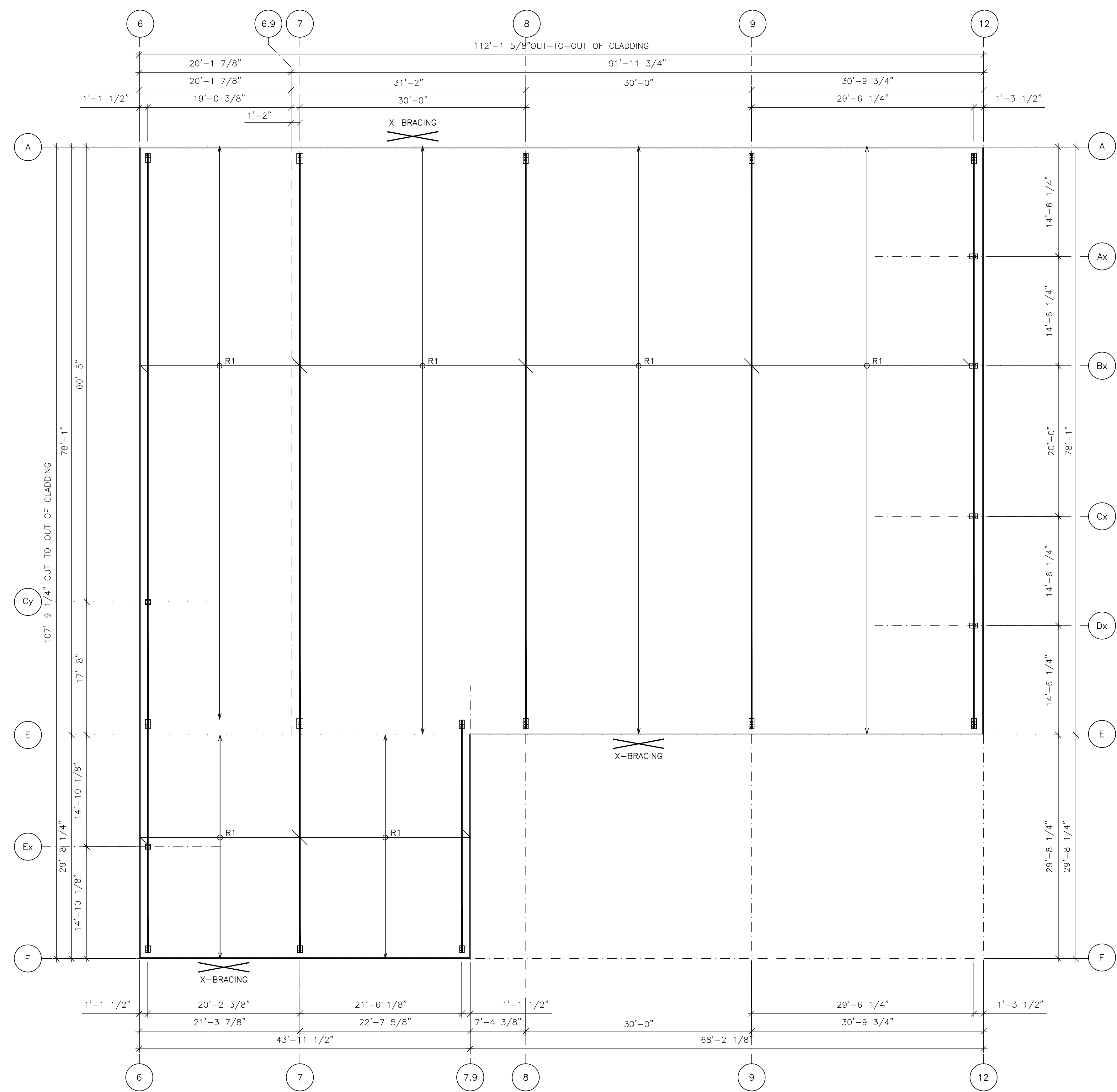
**D.G. BIDDLE & ASSOCIATES**  
CONSULTING ENGINEERS & PLANNERS

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150 King St, Peterborough ON  
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SCALE:	AS SHOWN
DESIGNED BY:	S.A.
CHECKED BY:	T.L.R.
PROJECT NO.:	115160
DRAWING NO.:	S4A



01/05/2026  
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**1**  
**S5** STRUCTURAL ROOF PLAN  
 SCALE: 1/18" = 1'-0"

2	ISSUED FOR PERMIT	2026/05/01
1	PRELIMINARY STRUCTURAL SET	2026/03/31
NO.	SUBMISSION	DATE

CESTOIL CHEMICAL INC.  
 1726 BASELINE ROAD WEST, COURTCICE, ON.

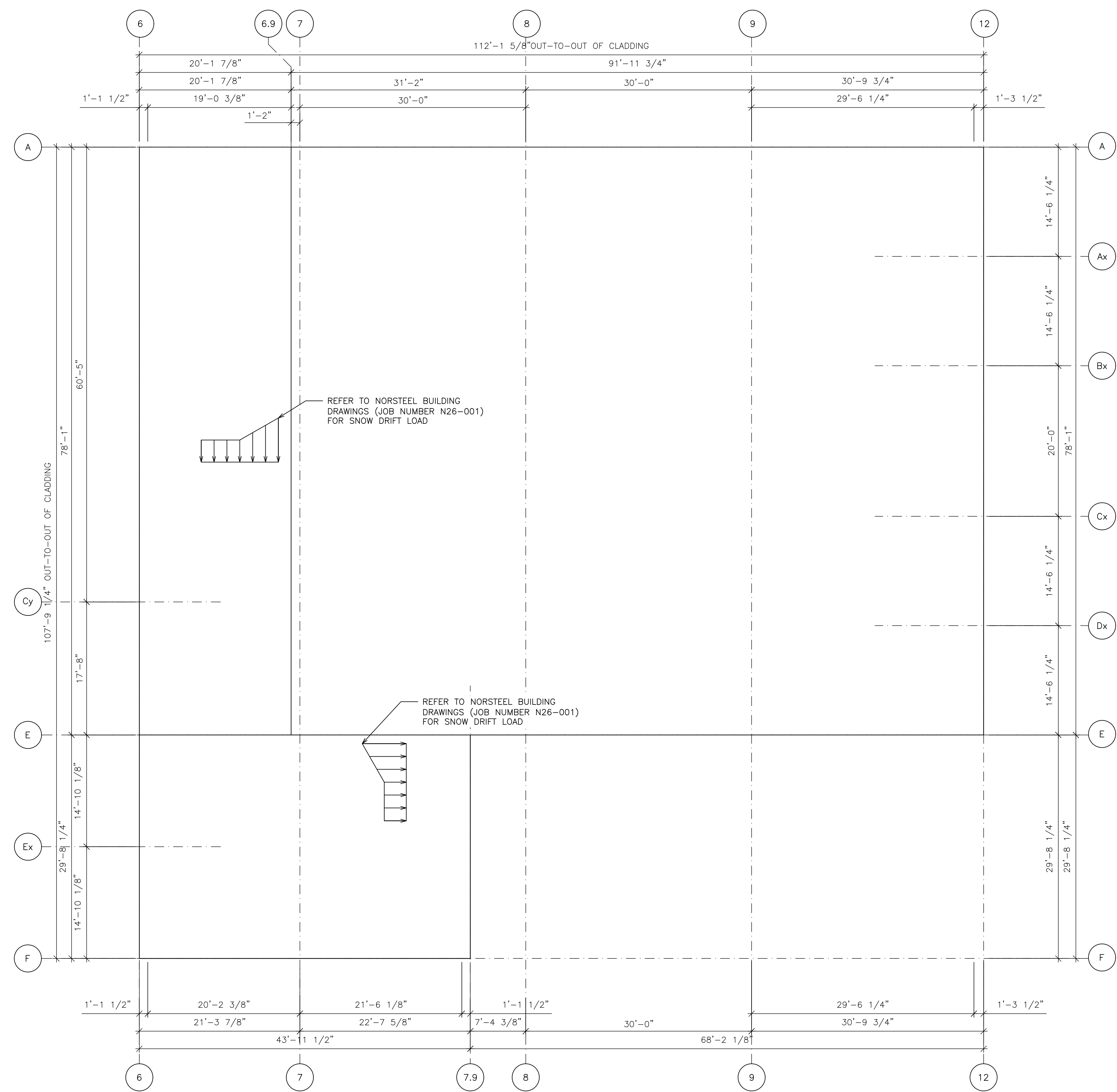
## STRUCTURAL ROOF PLAN

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DESIGNED BY:	S.A.
CHECKED BY:	T.L.R.
PROJECT NO.:	115160
DRAWING NO.:	S5



01/05/2026  
 C:\STAFF\JOB FILES\115000\115166 1726 BASELINE ROAD W\115166 STRUCTURAL\115166 20260501 STRUCTURAL WORK



**1**  
**S6** STRUCTURAL ROOF LOAD PLAN  
 SCALE: 1/18" = 1'-0"

2	ISSUED FOR PERMIT	DATE
1	PRELIMINARY STRUCTURAL SET	2026/03/31
NO.	SUBMISSION	2026/05/01

**CESTOIL CHEMICAL INC.**  
 1726 BASELINE ROAD WEST, COURTICE, ON.

## STRUCTURAL ROOF LOAD PLAN

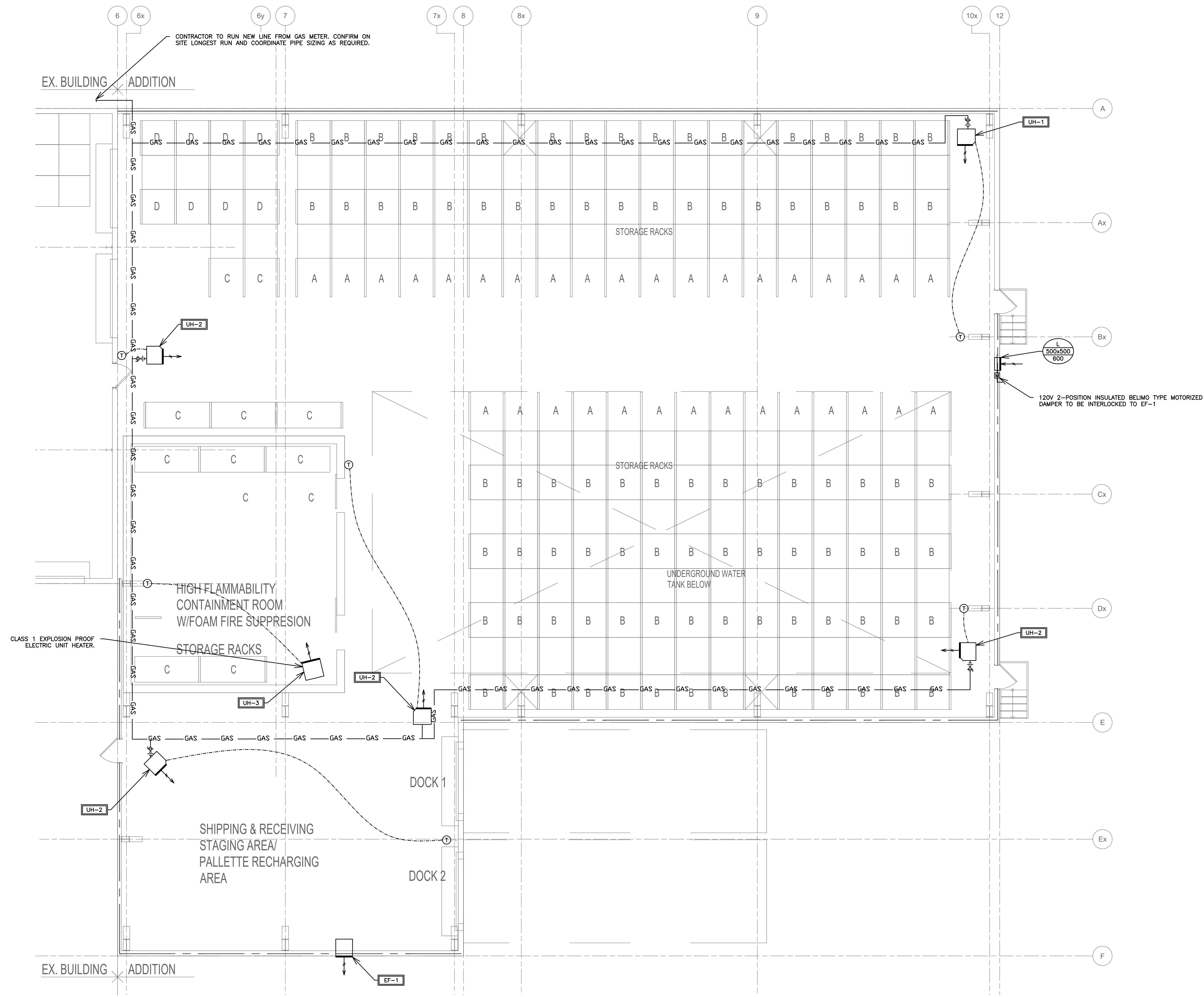
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SCALE:	AS SHOWN
DESIGNED BY:	S.A.
CHECKED BY:	T.L.R.
PROJECT NO.:	115160
DRAWING NO.:	S6

LICENSED PROFESSIONAL ENGINEER  
 T. L. RUPERT  
 100600340  
 May 1/2026  
 PROVINCE OF ONTARIO

NOTES:

- TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.
- ALL DETAILS SHOWN ARE SCHEMATIC BY NATURE AND ARE TO BE USED FOR SCOPE OF WORK PURPOSES ONLY. COORDINATE WITH ALL TRADES AND MANUFACTURERS BEST PRACTICES AND DIRECTIONS.
- COORDINATE ALL ADDITIONAL PROVISIONS INCLUDING, BUT NOT LIMITED TO; COMBUSTION AIR AND VENTILATION AIR WITH GENERAL CONTRACTOR DURING TENDER PERIOD.



HVAC LEGEND	
	SIDE WALL GRILLE
	A- GRILLE/DIFFUSER TYPE
	B- DIFFUSER NECK SIZE/GRILLE SIZE
	C- AIR QUANTITY (CFM)
	SENSOR AND ASSOCIATED CONTROL WIRING
	EQUIPMENT/FIXTURE TAG
	BALANCE DAMPER
	DIRECTION OF AIR FLOW
	THERMOSTAT EQUAL TO HONEYWELL TB8220U; 7-DAY PROGRAMMABLE C/W AUTO CHANGEOVER
	GAS LINE
	GAS METER
	PIPE UP, PIPE DOWN
	SHUTOFF VALVE
	UNION
	PIPE BREAK/CONTINUATION

2	ISSUED FOR PERMIT	MAY 2026
1	ISSUED FOR COORDINATION	APRIL 2026
NO.	SUBMISSION	DATE

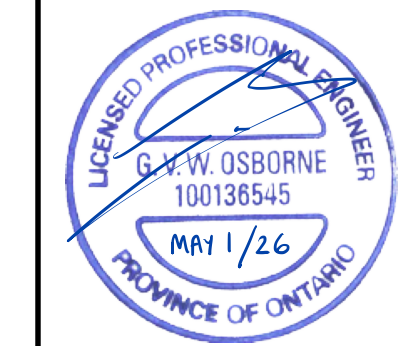
CESTOIL BUILDING EXPANSION  
1726 BASELINE ROAD W, BOWMANVILLE, ON

## MECHANICAL HVAC LAYOUT

**D.G. BIDDLE & ASSOCIATES**  
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DESIGNED BY:	J.T.C./J.E.C
CHECKED BY:	G.V.W.O
PROJECT NO.:	15160
DRAWING NO.:	M2.1



01/05/2026  
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**HVAC NOTES**

1. GENERAL
  - 1.1. COORDINATE EXACT LOCATION OF GRILLES AND DIFFUSERS WITH REFLECTED CEILING PLAN OR LIGHTING PLAN IF AVAILABLE. LIGHTING LOCATIONS TAKE PRIORITY.
  - 1.2. CONFIRM EXACT LOCATION OF THERMOSTATS/SENSORS WITH OWNER. MOUNT THERMOSTATS/SENSORS AT 4' ABOVE FINISHED FLOOR. ENSURE THERMOSTAT/SENSOR LOCATIONS WILL NOT BE AFFECTED BY DIRECT SUNLIGHT, COLD WALLS OR MILLWORK.
  - 1.3. PROVIDE 4" FLEXIBLE CONNECTIONS AT ALL DUCT CONNECTIONS TO AIR HANDLING UNITS.
  - 1.4. PROVIDE ACOUSTIC INSULATION IN FIRST 5' OF SUPPLY AND RETURN AIR DUCTS OFF AIR HANDLING UNITS AND AS INDICATED ON DRAWINGS.
  - 1.5. PROVIDE EXTERNAL INSULATION ON ALL SUPPLY AIR DUCTS AND ON ALL EXHAUST DUCTS WITHIN 10' OF OUTSIDE WALLS AND ROOF.
  - 1.6. BRANCH DUCTWORK TO DIFFUSERS TO BE SAME SIZE AS DIFFUSER NECK.
  - 1.7. PROVIDE TURNING VANES IN ALL SQUARE ELBOWS FOR SUPPLY AIR DUCTS.
  - 1.8. FLEXIBLE DUCT SHALL BE MAXIMUM 10' IN LENGTH AND SHALL BE SECURELY FASTENED TO DUCTS AND DIFFUSERS. PROVIDE HANGERS AND FLEXIBLE DUCTWORK WITHOUT SHARP 90'S, SAGGING, OR CRUSHING OF DUCT.
  - 1.9. PROVIDE TRAP AT OUTLET OF DRAIN FOR ROOFTOP HVAC EQUIPMENT
  - 1.10. PROVIDE FIRE STOPPING AROUND OPENINGS THROUGH FIRE SEPARATIONS.
2. FIRE DAMPERS
  - 2.0. PROVIDE FIRE DAMPERS AT ALL FIRE SEPARATIONS. FIRE DAMPERS SHALL BE C/W LINKAGE OUT OF THE AIR STREAM. FIRE DAMPER RATING TO MATCH THE RATING OF THE SEPARATION CROSSED. INSTALLATION MUST CONFORM TO LATEST NFPA/CSA 90A SPECIFICATIONS. ONLY USE UL APPROVED EQUIPMENT. PROVIDE DUCT ACCESS DOORS AND BREAK AWAY FLANGES FOR ALL FIRE DAMPERS IN CONFORMANCE WITH CODE AND INSTALLATION INSTRUCTIONS.
3. TESTS AND BALANCING
  - 3.1. BALANCING DAMPERS SHALL BE INSTALLED AT ALL TAKE-OFFS FROM BRANCH DUCTS, AND ALL BRANCH DUCT CONNECTIONS TO MAIN DUCTS. BALANCING DAMPERS SHALL BE MANUALLY OPERATED OPPOSED BLADE TYPE, SPLITTER TYPE OR BUTTERFLY TYPE, COMPLETE WITH LOCKING QUADRANT OPERATOR.
  - 3.2. AIR TEST AND BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AIR BALANCING COMPANY. THE AIR BALANCING COMPANY SHALL BE APPROVED BY THE ENGINEER.
  - 3.3. SCOPE OF BALANCING WORK:
    - 3.3.1. ALL LISTED AIR HANDLING SYSTEMS SHALL BE BALANCED TO WITHIN 5% OF THE NOTED DESIGN AIR VOLUMES AS PER PLANS AND SPECIFICATIONS.
    - 3.3.2. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE HVAC SYSTEM FULLY OPERATIONAL TWO WEEKS BEFORE TURNOVER TO THE OWNER. THIS WILL INCLUDE THE REQUIREMENT TO INSTALL CLEAN FILTERS IN ALL RELATED HVAC EQUIPMENT BEFORE TIME OF AIR TESTING AND TO MAKE ALL AIR SYSTEMS FULLY OPERATIONAL.
4. MATERIALS
  - 4.1. DUCTWORK
    - 4.1.1. IN CONFORMANCE WITH SMACNA, ASHRAE, OBC, NFPA 90A
    - 4.1.2. SHEET METAL SHALL BE BEST QUALITY LOCK FORMING GALVANIZED SHEET METAL. GALVANIZING SHALL BE TO ASTM A525 (G90), HAVING A THICKNESS OF 0.054mm AND WEIGHING NOT LESS THAN 0.31kg/m<sup>2</sup> ON EACH SURFACE.
    - 4.1.3. PROVIDE INSTRUMENTATION TEST PORTS IN DUCTS FOR PILOT TUBE INSERTION WITH CAM-ACTION HANDLE, MOULDED NEOPRENE GASKET AND EXPANSION PLUG, ZINC COATED STEEL CONSTRUCTION.
  - 4.2. FLEXIBLE CONNECTIONS
    - 4.2.1. PROVIDE FLEXIBLE CONNECTIONS AT AIR HANDLING UNITS WITH UL APPROVED FABRIC OF 6" MINIMUM WIDTH AND WEIGHING NOT LESS THAN 0.8136kg/m<sup>2</sup>.
  - 4.3. INSULATION
    - 4.3.1. PROVIDE 1" INTERNAL ACOUSTIC INSULATION ON:
      - 4.3.1.1. THE FIRST 5' OFF SUPPLY AND RETURN DUCTS OFF ALL AIR HANDLING UNITS.
    - 4.3.2. PROVIDE 1" EXTERNAL INSULATION ON:
      - 4.3.2.1. ALL INDOOR & OUTDOOR REFRIGERATION PIPING
      - 4.3.2.2. ALL SUPPLY AIR DUCTS WHICH ARE NOT LOCATED IN A RETURN AIR PLENUM.
      - 4.3.2.3. EXHAUST DUCTS THROUGH ATTICS AND 10' BACK FROM WALL
    - 4.3.3. PROVIDE 2" EXTERNAL INSULATION ON:
      - 4.3.3.1. ALL SUPPLY AND RETURN AIR DUCTS THROUGH ATTICS OR UN-INSULATED AREAS
5. CONTROL WIRING
  - 5.1. ALL CONTROL WIRING SHALL BE RUN PARALLEL TO BUILDING LINES AND TIGHT TO ROOF DECK OR WALLS.
  - 5.2. ALL CONCEALED INDOOR CONTROL WIRING SHALL BE RUN IN LVT.
  - 5.3. ALL EXPOSED INDOOR CONTROL WIRING IN UNFINISHED AREAS, T-BAR CEILING SPACES, ATTICS AND CRAWL SPACES SHALL BE RUN IN EMT CONDUIT WITH FINAL CONNECTION IN BX TO EQUIPMENT/COMPONENTS.
  - 5.4. ALL OUTDOOR CONTROL WIRING SHALL BE RUN IN LIQUIDTIGHT.
  - 5.5. FLEXIBLE CABLE MUST BE STRAPPED TO SUPPORT WITHIN 12" OF TERMINATION BOX OR EQUIPMENT.

FRESH AIR $V_{bz} = R_p * P_z + R_a * A_z$						
ROOM NUMBER & NAME	ROOM TYPE	PEOPLE OUTDOOR AIR RATE (Rp)	AREA OUTDOOR AIR RATE (Ra)	VOLUME BREATHING ZONE (Vbz)	ZONE FLOOR AREA (Az)	ZONE POPULATION (Pz)
WAREHOUSE	WAREHOUSE	10	0.06	591 CFM	9850 SQ FT.	0 PEOPLE

REGISTER, DIFFUSER AND GRILLE SCHEDULE					
TAG	MANUFACTURER	MODEL	DESCRIPTION	FINISH/COLOUR	NOTES
L	VENTEX	2420	STORMPROOF LOUVER	TO BE DETERMINED BY ARCHITECT	SHOWN ON DRAWINGS

EXHAUST FAN SCHEDULE							
TAG	MANUFACTURER	MODEL	AIR FLOW	MOUNTING	VOLTAGE	CONTROLS	ACCESSORIES
EF-1	GREENHECK	SBE-1H20	600 CFM	WALL	575V	SWITCH	BACKDRAFT DAMPER, WEATHERHOOD
NOTES: ADDITIONAL COSTS INCURRED AS A RESULT OF ANY ALTERNATIVE MODELS ARE AT THE EXPENSE OF THE CONTRACTOR							


UNIT HEATER SCHEDULE					
TAG	MANUFACTURER	MODEL	MOUNTING	HEATING OUTPUT	VOLTAGE
UH-1	REZNOR	UDAP 75	SUSPENDED	64 MBH	600V
UH-2	REZNOR	UDAP 45	SUSPENDED	37 MBH	600V
UH-3	REZNOR	EXUP-TSL-05	SUSPENDED	5 KW	600V

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**CESTOIL BUILDING EXPANSION**  
 1726 BASELINE ROAD W, BOWMANVILLE, ON

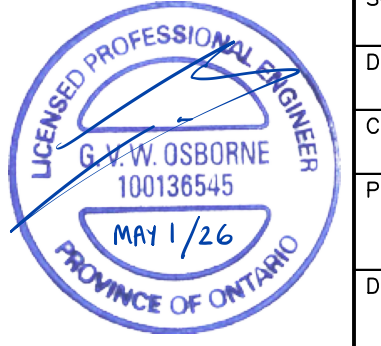
## MECHANICAL HVAC NOTES & DETAILS



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CHECKED BY:	G.V.W.O
PROJECT NO.:	15160
DRAWING NO.:	M2.2





**GENERAL REQUIREMENTS FOR MECHANICAL WORK**

1. SCOPE OF WORK
  - 1.1. CONFORM TO THE APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS OF THE CONTRACT.
  - 1.2. THE GENERAL MECHANICAL SPECIFICATIONS SHALL APPLY TO AND BE PART OF EACH OF THE SECTIONS COVERING THE MECHANICAL TRADES WORK.
  - 1.3. COMPLY WITH THE REGULATIONS OF THE CURRENT EDITION OF THE O.B.C., ALL OTHER APPLICABLE CODES, REGULATIONS, BY-LAWS AND OFFICIAL STANDARDS ACCORDING TO THE REQUIREMENTS AND INTERPRETATIONS OF THE AUTHORITIES HAVING JURISDICTION. THESE CODES AND STANDARDS CONSTITUTE AN INTEGRAL PART OF THESE SPECIFICATIONS. IN CASE OF CONFLICT, THE CODES TAKE PRECEDENCE OVER THE CONTRACT DOCUMENTS.
2. EXAMINATION OF SITE AND INFORMATION
  - 2.1. EACH SUBCONTRACTOR, BEFORE PRICING, SHALL EXAMINE THE SITE, THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND THEY SHALL FAMILIARIZE THEMSELVES WITH THE BUILDING CONSTRUCTION AND FINISH IN ORDER THAT THEIR TENDER MAY INCLUDE EVERYTHING NECESSARY FOR THE PROPER COMPLETION OF THE WORK.
3. RELATIONSHIP TO OTHER TRADES
  - 3.1. THIS SUBCONTRACTOR SHALL CONFER WITH ALL OTHER CONTRACTORS INSTALLING EQUIPMENT, PIPING, OTHER WORK, FOUNDATIONS, ETC., WHICH MAY AFFECT THEIR INSTALLATION, AND THEY SHALL ARRANGE THEIR EQUIPMENT, PIPING, ETC., IN PROPER RELATION WITH OTHER APPARATUS, AND WITH THE BUILDING CONSTRUCTION. THIS SUBCONTRACTOR SHALL ALSO CONFIRM THE ELECTRICAL CHARACTERISTICS OF THE PROJECT AND ORDER EQUIPMENT ACCORDINGLY.
  - 3.2. SPECIAL CARE SHALL BE TAKEN IN THE INSTALLATION OF ALL WORK, TO SEE THAT THEY ALL COME WITHIN THE LIMITS ESTABLISHED BY THE FINISH LINES OF ALL WALLS, FLOORS, CEILINGS, ETC.
  - 3.3. THIS SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR AND OTHER SUBCONTRACTORS WHO ARE CONCERNED, OF ALL OPENINGS, FOUNDATION WORK, HANGERS, INSERTS, ANCHORS, OR OTHER PROVISIONS NECESSARY IN THEIR WORK FOR THE INSTALLATION OF THE SUBCONTRACTORS WORK, AND THEY SHALL FURNISH ALL INFORMATION AND NECESSARY MATERIALS IN AMPLE TIME SO THAT PROPER PROVISIONS CAN BE MADE FOR SAME, AND SHALL SUPPLY AND CORRECTLY AND ACCURATELY PLACE ALL INSERTS, SLEEVES, ANCHORS, ETC.
  - 3.4. FAILURE TO COMPLY WITH THESE REQUIREMENTS ON THE PART OF THIS SUBCONTRACTOR WILL RENDER THEM RESPONSIBLE FOR THE COST OF CUTTING OPENINGS, INSTALLING HANGERS AND OTHER PROVISIONS AT A LATER DATE, AND THE SUBSEQUENT PATCHING, ETC., THEREBY REQUIRED.
  - 3.5. NO CUTTING SHALL BE DONE WITHOUT PERMISSION. ALL SUCH WORK SHALL BE DONE BY TRADES-PERSONS SKILLED IN AND CERTIFIED FOR THIS PARTICULAR TRADE.
  - 3.6. EACH SUBCONTRACTOR IS TO BE AN EXPERT IN THEIR TRADE.
4. REQUIREMENTS OF INSPECTION DEPARTMENTS
  - 4.1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION IN EACH CASE, PARTICULARLY ALL AFFECTED DEPARTMENTS OF THE MUNICIPALITY AND PROVINCE. ELECTRICAL EQUIPMENT SUPPLIED MUST CONFORM TO THE REGULATIONS OF CSA AND THE LOCAL UTILITY. ANYTHING NECESSARY TO MAKE THE WORK COMPLY WITH THESE REQUIREMENTS SHALL BE PROVIDED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNERS IF IT REASONABLY COULD HAVE BEEN FORESEEN WHEN TENDERING.
  - 4.2. EACH SUBCONTRACTOR SHALL PREPARE DRAWINGS IN ADDITION TO ENGINEER'S DRAWINGS AS MAY BE REQUIRED BY VARIOUS INSPECTION DEPARTMENTS HAVING JURISDICTION, AND OBTAIN THEIR APPROVAL BEFORE PROCEEDING WITH THE WORK.
  - 4.3. IN THE EVENT THAT THE INSPECTION DEPARTMENT'S REQUEST DEVIATES FROM THE ENGINEER'S LAYOUT, THE SUBCONTRACTOR SHALL CONSULT ENGINEER BEFORE PROCEEDING WITH THE SAME. IT SHALL BE NOTED THAT ENGINEER'S DRAWINGS ARE GENERALLY ACCEPTABLE TO INSPECTION DEPARTMENTS AND MINOR SUPPLEMENTS NEED ONLY BE MADE BY SUBCONTRACTORS.
5. CERTIFICATES, PERMITS, FEES
  - 5.1. SUBCONTRACTORS SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES INCLUDING PAYMENT FOR STREET CONNECTIONS TO STORM, SANITARY WATER AND GAS IN ORDER THAT THE WORK HEREIN SPECIFIED MAY BE CARRIED OUT AND THEY SHALL FURNISH ANY CERTIFICATES NEEDED AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF THE MUNICIPALITY AND PROVINCE.
6. GUARANTEE
  - 6.1. THIS SUBCONTRACTOR SHALL GUARANTEE ALL MATERIAL AND WORKMANSHIP USED IN THE WORK TO BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS, OF BEST QUALITY AND TYPE OBTAINABLE TO GIVE FIRST-CLASS CONSTRUCTION AND PROPER EFFICIENT OPERATION, AND FREE FROM ANY DEFECTS. ANY SUCH DEFECTS WHICH MAY APPEAR IN ANY OF THE WORK WITHIN ONE YEAR AFTER WRITTEN ACCEPTANCE OF THEIR WORK, SHALL BE REPAIRED AND REPLACED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER, WHERE SUCH DEFECTS OCCUR, THIS SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED IN MAKING THE DEFECTIVE WORK GOOD. THIS SHALL NOT OBSOLETE ANY LONGER WARRANTIES ON SPECIFIC ITEMS OF EQUIPMENT.
  - 6.2. ALL INJURIES TO ADJACENT WORK, PARTICULARLY PLASTER, WOOD FINISHES OR OTHER MATERIALS, OR DAMAGE TO OTHER EQUIPMENT, CAUSED BY SUCH DEFECTS OF THIS SUBCONTRACTOR'S WORK OR BY SUBSEQUENT REPLACEMENT AND REPAIR, SHALL BE MADE GOOD AT THE EXPENSE OF THIS SUBCONTRACTOR. ALL REPAIR WORK SHALL BE DONE BY TRADES RESPONSIBLE FOR THE ORIGINAL WORK.
7. DRAWINGS
  - 7.1. THE DRAWINGS SHOW THE APPROXIMATE LOCATION FOR SPECIAL APPARATUS AND THE MATERIALS THROUGHOUT THE BUILDING. THE ARRANGEMENT SHOWN ON THE DRAWING IS MORE OR LESS DIAGRAMMATIC AND AS SUCH APPROXIMATE ONLY, AND MAY BE ALTERED, AS APPROVED BY THE ENGINEER, TO MEET REQUIREMENTS OF THE APPARATUS, ETC., AND OF THE BUILDING. EACH SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL MEASUREMENTS FOR THEIR WORK THROUGHOUT, AND THEY SHALL ARRANGE THEIR PIPING, WIRING AND APPARATUS TO CONFORM TO THE ARCHITECTURAL AND STRUCTURAL DETAILS IN A SATISFACTORY MANNER AND SHALL CO-OPERATE WITH OTHER CONTRACTORS TO ENSURE THAT WORK SHALL MEET ALL REQUIREMENTS OF DIVERSE CONTRACTS.
  - 7.2. ITEMS SHOWN ON THE DRAWINGS BUT NOT SPECIFIED OR SPECIFIED BUT NOT SHOWN SHALL BE INCLUDED.
  - 7.3. ITEMS OBVIOUSLY REQUIRED TO PROVIDE A COMPLETE WORKING SYSTEM BUT NOT SPECIFIED NOR SHOWN SHALL BE INCLUDED.
8. RESPONSIBILITY AND LIABILITY
  - 8.1. EACH SUBCONTRACTOR SHALL SUPERVISE THE LAYING OUT OF THEIR WORK AND SHALL ARRANGE IT IN CO-OPERATION WITH OTHER WHO MAY BE WORKING ON THE PREMISES WHILE THE WORK OF THIS CONTRACT IS IN PROGRESS. THEY SHALL PROTECT FINISHED AND UNFINISHED WORK OF THIS CONTRACT AND/OR WORK OF OTHERS ON THE PREMISES UNTIL THE COMPLETED WORK HAS BEEN ACCEPTED.
  - 8.2. THE SUBCONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES FOUND IN THE DRAWINGS OR SPECIFICATIONS BEFORE SUBMITTING THEIR TENDER. THEY SHALL ABIDE BY DECISIONS GIVEN TO THEM IN WRITING WITH REGARD TO SAME. EACH SUBCONTRACTOR IS CAUTIONED THAT THE WORK AS SHOWN IS INTENDED TO BE COMPLETE IN ALL RESPECTS AND THAT FAILURE ON THEIR PART TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES WILL NOT RELIEVE THEM OF THE RESPONSIBILITY OF COMPLETING THE WORK AS INTENDED AT THE CONTRACT PRICE.
9. CLEAN-UP
  - 9.1. DURING THE COURSE OF CONSTRUCTION, EACH SUBCONTRACTOR SHALL KEEP THEIR WORK TIDY AND NOT ALLOW AN ACCUMULATION OF DEBRIS RESULTING FROM THEIR WORK.
  - 9.2. UPON COMPLETION OF THEIR WORK THEY SHALL LEAVE THE PREMISES IN A BROOM-CLEAN CONDITION.
10. PROTECTION
  - 10.1. SUBCONTRACTORS ARE TO PROTECT THEIR WORK FROM CONSTRUCTION DIRT OR DAMAGE FROM ANY CAUSE. SECURELY PLUG AND CAP ALL OPENINGS IN PIPE, EQUIPMENT AND FIXTURES TO PREVENT OBSTRUCTIONS.
11. ELECTRICAL WIRING AND CONTROLS
  - 11.1. ALL POWER WIRING FOR MECHANICAL EQUIPMENT SHALL BE DONE BY THE ELECTRICAL DIVISION. THE MECHANICAL TRADE INVOLVED SHALL PROVIDE STARTERS, THERMOSTATS, VALVES, CONTROL TRANSFORMERS, RELAYS, ETC. ALL CONTROL WIRING SHALL BE DONE BY THE MECHANICAL CONTRACTOR, UNLESS OTHERWISE NOTED ELSEWHERE IN THIS SPECIFICATION.

**PLUMBING NOTES**

1. GENERAL
  - 1.1. FOR CONTINUATION OF SITE SERVICES REFER TO SITE SERVICE DRAWING BY OTHERS. CO-ORDINATE EXACT LOCATION AND INVERTS OF SERVICES.
  - 1.2. PROVIDE CLEANOUTS AND TRAP PRIMING FOR SANITARY AS REQUIRED BY O.B.C. AND LOCAL AUTHORITIES. CLEANOUTS SIZE TO BE SAME AS SANITARY LINES.
  - 1.3. PROVIDE COMPLETE PLUMBING VENT SYSTEM AS REQUIRED BY O.B.C. AND LOCAL AUTHORITIES, INCLUDING MIN. 3" VENT AT UPSTREAM END(S) OF SANITARY BUILDING DRAIN.
  - 1.4. ISOLATION VALVES TO BE PROVIDED AT ALL FIXTURES AND HOT WATER TANK.
  - 1.5. PIPE INSULATION TO BE 25mm FOR ALL NEW AND/OR EFFECTED DOMESTIC PIPING. IN EXPOSED AREAS PROVIDE CANVAS WRAP OVER INSULATION.
2. MATERIALS
  - 2.1. ALL PVC OR ABS TYPE PIPING TO BE USED ABOVE GROUND SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS AND SHALL BE CONFIRMED TO BE ACCEPTABLE BY THE AUTHORITY HAVING JURISDICTION. IF ACCEPTABLE AND USED, IT SHALL BE PROVIDED WITH U.L.C. LISTED AND APPROVED FIRE STOP DEVICE AT ALL PENETRATIONS OF ANY FIRE SEPARATION.
  - 2.2. ALL ABOVE GROUND DOMESTIC PIPING SHALL BE TYPE 'L' COPPER.
  - 2.3. ALL BURIED DOMESTIC PIPING SHALL BE TYPE 'K' COPPER.
  - 2.4. ALL ABOVE GROUND DRAINAGE PIPING SHALL BE CAST IRON 'M' PIPE.
  - 2.5. ALL BURIED DRAINAGE PIPING SHALL BE DR26 PVC WITH CLASS P BEDDING.

**MINIMUM PIPE INSULATION THICKNESS - HEATING AND HOT WATER SYSTEMS BASED ON ASHRAE 90.1 TABLE 6.8.3A**

FLUID OPERATING TEMPERATURE RANGE (°F) AND USAGE	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (in)				
	CONDUCTIVITY Btu·in./(h·ft²·°F)	MEAN RATING TEMPERATURE, °F	<1	1 TO <1-1/2	1-1/2 TO <4	4 TO <8	≥8
105°F-140°F	0.22-0.28	100	1.0	1.0	1.5	1.5	1.5

**PLUMBING SPECIFICATIONS**

**HR-1 - HYDRANT - NON-FREEZE WALL HYDRANT WITH NB BOX, INTEGRAL VACUUM BREAKER**  
 WATTS #HY-725 HYDRANT NON-FREEZE HYDRANT, ALL BRONZE HEAD, SEAT CASTING AND INTERNAL WORKING PARTS, WALL MOUNT HYDRANT, CONCEALED, BRONZE WALL CASING, CHROME PLATED FACE, INTEGRAL VACUUM BREAKER, NICKEL BRONZE BOX AND DOOR, LOOSE KEY, 3/4"Ø (19 MM) HOSE CONNECTION, 3/4"Ø (19 MM) FEMALE X 1"Ø (25 MM) MALE PIPE CONNECTION.

**FD - FLOOR DRAIN - FINISHED AREA**  
 WATTS #FD-100-C-7-6-A5-1 FLOOR DRAIN - EPOXY COATED, CAST IRON BODY, REVERSIBLE FLASHING CLAMP WITH PRIMARY AND SECONDARY WEEPHOLES, TRAP PRIMER CONNECTION WITH PLUG/VANDAL PROOF, NO HUB OUTLET. WATTS -A5-1 5" (127 MM) DIAMETER, NICKEL BRONZE, ADJUSTABLE ROUND STRAINER.

**TRAP SEAL PRIMER**  
 P.P.P. #PRO1-500 TRAP SEAL PRIMER - LEAD-FREE BRASS BODY FLOW SENSING ACTIVATION WITH MINIMUM FLOW RATE OF 0.5 GPM AT 20 PSIG, 1/2" (13 MM) DIAMETER CONNECTION EQUIPPED WITH VACUUM BREAKER PORTS AND INTERNAL BACKFLOW PROTECTION.

**CLEANOUT - FLOOR CLEANOUT**  
 WATTS #CO-200-R-1-6-34G CLEANOUT - EPOXY COATED, CAST IRON BODY, ABS PLUG WITH NEOPRENE GASKET, VANDAL PROOF, NO HUB OUTLET.

**TYPICAL PIPE SIZES (MILLIMETERS)**

	DCW	DHW	SANITARY	VENT
2" FD	-	-	50ø	-
4" FD	-	-	100ø	-

01/05/2026  
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2	ISSUED FOR PERMIT	MAY 2026
1	ISSUED FOR COORDINATION	APRIL 2026
NO.	SUBMISSION	DATE

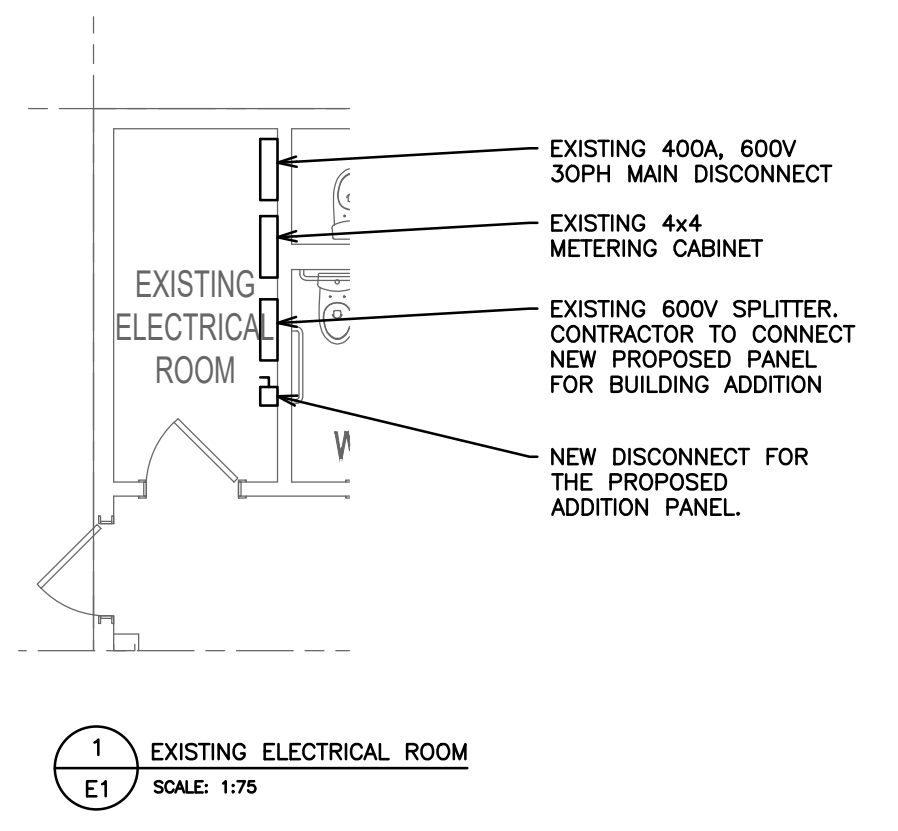
**CESTOIL BUILDING EXPANSION**  
 1726 BASELINE ROAD W, BOWMANVILLE, ON

**MECHANICAL PLUMBING**  
**NOTES & DETAILS**

**D.G. BIDDLE & ASSOCIATES**  
 CONSULTING ENGINEERS & PLANNERS

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 Phone: 905-576-8500  
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SCALE:	1:75
DESIGNED BY:	J.T.C./J.E.C
CHECKED BY:	G.V.W.O
PROJECT NO.:	15160
DRAWING NO.:	M1.2



POWER LEGEND	
	120V POWER SUPPLY
	208V POWER SUPPLY
	ELECTRICAL DISCONNECT
	ELECTRICAL PANEL
	WEATHERPROOF
	WIRING
	EQUIPMENT/FIXTURE TAG

LIGHTING LEGEND	
	EXTERIOR WALL PACK
	SWITCHWIRING
	EXIT SIGN WITH EMERGENCY LIGHTING EQUAL TO LUMACELL LAC WITH BACK-UP BATTERY PACK
	DOUBLE HEAD EMERGENCY LIGHT EQUAL TO LUMACELL MQM2LD10
	SINGLE HEAD EMERGENCY LIGHT EQUAL TO LUMACELL MQM2LD10
	BACK UP BATTERY PACK

2	ISSUED FOR PERMIT	MAY 2026
1	ISSUED FOR COORDINATION	APRIL 2026
NO.	SUBMISSION	DATE

CESTOIL BUILDING EXPANSION  
1726 BASELINE ROAD W, BOWMANVILLE, ON

## ELECTRICAL POWER & LIGHTING LAYOUT

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DESIGNED BY:	J.T.C./J.E.C
CHECKED BY:	G.V.W.O
PROJECT NO.:	15160
DRAWING NO.:	E1

LIGHTING FIXTURE SCHEDULE					
TAG	SYMBOL	MANUFACTURER	DESCRIPTION	CCT	MODEL
A		LITHONIA LIGHTING	4' WRAP AROUND LED FIXTURE	4,000K	BLWP4 20L AD5M 120 EZ1 LP840
B		HOLOPHANE	EXPLOSION PROOF 4' WRAP AROUND LED FIXTURE	4,000K	HXPL L48 5L 120 NDM 40K

2 PROPOSED LAYOUT  
E1  
SCALE: 1/75

01/05/2026  
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**GENERAL REQUIREMENTS FOR ELECTRICAL WORK**

1. SCOPE OF WORK
  - 1.1. CONFORM TO ALL DRAWINGS RELATED TO THIS PROJECT.
  - 1.2. COMPLY WITH THE REQUIREMENTS OF THE CURRENT EDITION OF THE O.B.C., ALL OTHER APPLICABLE CODES, REGULATIONS, BY-LAWS AND OFFICIAL STANDARDS ACCORDING TO THE REQUIREMENTS AND INTERPRETATIONS OF THE AUTHORITIES HAVING JURISDICTION. THESE CODES AND STANDARDS CONSTITUTE AN INTEGRAL PART OF THESE SPECIFICATIONS. IN CASE OF CONFLICT, THE CODES TAKE PRECEDENCE OVER THE CONTRACT DOCUMENTS.
2. EXAMINATION OF SITE AND INFORMATION
  - 2.1. EACH SUBCONTRACTOR, BEFORE TENDERING, SHALL EXAMINE THE SITE, THE ARCHITECTURAL, STRUCTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS AND THEY SHALL FAMILIARIZE THEMSELVES WITH THE BUILDING CONSTRUCTION AND FINISH IN ORDER THAT THEIR TENDER MAY INCLUDE EVERYTHING NECESSARY FOR THE PROPER COMPLETION OF THE WORK.
  - 2.2. IT SHALL BE THIS SUBCONTRACTOR'S RESPONSIBILITY THAT MATERIAL AND EQUIPMENT BE BROUGHT INTO THE BUILDING IN SUCH ASSEMBLIES AND SIZES AS TO ENTER INTO THE SPACE WHERE THEY ARE TO BE LOCATED AND TO BE SMALL ENOUGH TO BE HOISTED INTO THE BUILDING WITHOUT DIFFICULTY. ANY CUTTING, PATCHING, ETC., INVOLVED IN GETTING LARGE ASSEMBLIES INTO PLACE, SHALL BE THE RESPONSIBILITY OF THE SUBCONTRACTOR.
3. RELATIONSHIP TO OTHER TRADES
  - 3.1. THIS SUBCONTRACTOR SHALL CONFER WITH ALL OTHER CONTRACTORS INSTALLING EQUIPMENT, PIPING, OTHER WORK, FOUNDATIONS, ETC., WHICH MAY AFFECT THEIR INSTALLATION, AND THEY SHALL ARRANGE THEIR EQUIPMENT, PIPING, ETC., IN PROPER RELATION WITH OTHER APPARATUS, AND WITH THE BUILDING CONSTRUCTION. THIS SUBCONTRACTOR SHALL ALSO CONFIRM THE ELECTRICAL CHARACTERISTICS OF THE PROJECT AND ORDER EQUIPMENT ACCORDINGLY.
  - 3.2. SPECIAL CARE SHALL BE TAKEN IN THE INSTALLATION OF ALL WORK, TO SEE THAT THEY ALL COME WITHIN THE LIMITS ESTABLISHED BY THE FINISH LINES OF ALL WALLS, FLOORS, CEILING, ETC.
  - 3.3. THIS SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR AND OTHER SUBCONTRACTORS WHO ARE CONCERNED, OF ALL OPENINGS, FOUNDATION WORK, HANGERS, INSERTS, ANCHORS, OR OTHER PROVISIONS NECESSARY IN THEIR WORK FOR THE INSTALLATION OF THE SUBCONTRACTORS WORK, AND THEY SHALL FURNISH ALL INFORMATION AND NECESSARY MATERIALS IN AMPLE TIME SO THAT PROPER PROVISIONS CAN BE MADE FOR SAME, AND SHALL SUPPLY AND CORRECTLY AND ACCURATELY PLACE ALL INSERTS, SLEETS, ANCHORS, ETC.
  - 3.4. FAILURE TO COMPLY WITH THESE REQUIREMENTS ON THE PART OF THIS SUBCONTRACTOR WILL RENDER THEM RESPONSIBLE FOR THE COST OF CUTTING OPENINGS, INSTALLING HANGERS AND OTHER PROVISIONS AT A LATER DATE, AND THE SUBSEQUENT PATCHING, ETC., THEREBY REQUIRED.
  - 3.5. NO CUTTING SHALL BE DONE WITHOUT PERMISSION. ALL SUCH WORK SHALL BE DONE BY TRADES-PERSONS SKILLED IN AND CERTIFIED FOR THIS PARTICULAR TRADE.
  - 3.6. EACH SUBCONTRACTOR IS TO BE AN EXPERT IN THEIR TRADE.
4. SHOP DRAWINGS
  - 4.1. EACH SUBCONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW OF MATERIAL, EQUIPMENT, AND APPARATUS BEING PROVIDED BY THEM. THESE SHALL SHOW IN DETAIL THE DESIGN AND CONSTRUCTION AND PERFORMANCE OF ALL APPARATUS, ETC.
  - 4.2. THE ENGINEER'S REVIEW OF SHOP DRAWINGS AND MANUFACTURER'S SPECIFICATIONS OF ANY EQUIPMENT IS GENERAL AND IS NOT INTENDED TO SERVE AS A FINAL CHECK AND IT SHALL NOT RELIEVE THE SUBCONTRACTOR OF THE RESPONSIBILITY FOR ERRORS OR OF THE NECESSITY OF CHECKING THE DRAWINGS THEMSELVES, OR OF FURNISHING ANY OF THE MATERIALS AND PERFORMANCE OF THE WORK REQUIRED BY THE DRAWINGS AND SPECIFICATIONS TO THE FULL INTENT OF THIS SPECIFICATION.
  - 4.3. BEFORE SUBMISSION, THIS SUBCONTRACTOR SHALL CHECK ALL SHOP DRAWINGS FOR ACCURACY OF DETAILS, DIMENSIONS, ETC. AND SHALL BE SATISFIED THAT THE DRAWINGS ARE CORRECT AND THAT THE EQUIPMENT WILL FIT PROPERLY IN THE ALLOTTED SPACE. THE SHOP DRAWINGS SHALL BE STAMPED BY THIS SUBCONTRACTOR WITH THE WORD "REVIEWED", THE DATE OF APPROVAL, AND THE FIRM'S NAME, PRIOR TO SUBMISSION.
5. REQUIREMENTS OF INSPECTION DEPARTMENTS
  - 5.1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION IN EACH CASE, PARTICULARLY ALL AFFECTED DEPARTMENTS OF THE MUNICIPALITY AND PROVINCE. ELECTRICAL EQUIPMENT MUST CONFORM TO THE REGULATIONS OF CSA AND THE LOCAL UTILITY. ANYTHING NECESSARY TO MAKE THE WORK COMPLY WITH THESE REQUIREMENTS SHALL BE PROVIDED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL COST TO THE OWNERS IF IT REASONABLY COULD HAVE BEEN FORESEEN WHEN TENDERING.
  - 5.2. EACH SUBCONTRACTOR SHALL PREPARE DRAWINGS IN ADDITION TO ENGINEER'S DRAWINGS AS MAY BE REQUIRED BY VARIOUS INSPECTION DEPARTMENTS HAVING JURISDICTION, AND OBTAIN THEIR APPROVAL BEFORE PROCEEDING WITH THE WORK.
  - 5.3. IN THE EVENT THAT THE INSPECTION DEPARTMENT'S REQUEST DEVIATES FROM THE ENGINEER'S LAYOUT, THE SUBCONTRACTOR SHALL CONSULT ENGINEER BEFORE PROCEEDING WITH THE SAME. IT SHALL BE NOTED THAT ENGINEER'S DRAWINGS ARE GENERALLY ACCEPTABLE TO INSPECTION DEPARTMENTS AND MINOR SUPPLEMENTS NEED ONLY BE MADE BY SUBCONTRACTORS.
6. CERTIFICATES, PERMITS, FEES
  - 6.1. SUBCONTRACTORS SHALL OBTAIN ALL NECESSARY NOTICES, OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES INCLUDING PAYMENT FOR STREET CONNECTIONS TO STORM, SANITARY, WATER AND GAS IN ORDER THAT THE WORK HEREIN SPECIFIED MAY BE CARRIED OUT AND THEY SHALL FURNISH ANY CERTIFICATES NEEDED AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF THE MUNICIPALITY AND PROVINCE.
7. GUARANTEE
  - 7.1. THIS SUBCONTRACTOR SHALL GUARANTEE ALL MATERIAL AND WORKMANSHIP USED IN THE WORK TO BE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS, OF BEST QUALITY AND TYPE OBTAINABLE TO GIVE FIRST-CLASS CONSTRUCTION AND PROPER EFFICIENT OPERATION, AND FREE FROM ANY DEFECTS. ANY SUCH DEFECTS WHICH MAY APPEAR IN ANY OF THE WORK WITHIN ONE YEAR AFTER WRITTEN ACCEPTANCE OF THEIR WORK, SHALL BE REPAIRED AND REPLACED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL EXPENSE TO THE OWNER, WHERE SUCH DEFECTS OCCUR. THIS SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED IN MAKING THE DEFECTIVE WORK GOOD. THIS SHALL NOT OBSOLETE ANY LONGER WARRANTIES ON SPECIFIC ITEMS OF EQUIPMENT.
  - 7.2. ALL INJURIES TO ADJACENT WORK, PARTICULARLY PLASTER, WOOD FINISHES OR OTHER MATERIALS, OR DAMAGE TO OTHER EQUIPMENT CAUSED BY EQUIPMENT OR BY THIS SUBCONTRACTOR'S WORK OR BY SUBSEQUENT REPLACEMENT AND REPAIR, SHALL BE MADE GOOD AT THE EXPENSE OF THIS SUBCONTRACTOR. ALL REPAIR WORK SHALL BE DONE BY TRADES RESPONSIBLE FOR THE ORIGINAL WORK.
8. DRAWINGS
  - 8.1. THE DRAWINGS SHOW THE APPROXIMATE LOCATION FOR SPECIAL APPARATUS AND THE MATERIALS THROUGHOUT THE BUILDING. THE ARRANGEMENT SHOWN ON THE DRAWING IS MORE OR LESS DIAGRAMMATIC AND AS SUCH APPROXIMATE ONLY, AND MAY BE ALTERED, AS APPROVED BY THE ENGINEER, TO MEET REQUIREMENTS OF THE APPARATUS, ETC., AND OF THE BUILDING. EACH SUBCONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL MEASUREMENTS FOR THEIR WORK THROUGHOUT, AND THEY SHALL ARRANGE THEIR PIPING, WIRING AND APPARATUS TO CONFORM TO THE ARCHITECTURAL AND STRUCTURAL DETAILS IN A SATISFACTORY MANNER AND SHALL CO-OPERATE WITH OTHER CONTRACTORS TO ENSURE THAT WORK SHALL MEET ALL REQUIREMENTS OF DIVERSE CONTRACTS.
  - 8.2. THE SUBCONTRACTOR IS PARTICULARLY CAUTIONED THAT SMALL SCALE ENGINEER'S PLANS MUST BE SUPPLEMENTED BY THEIR OWN DETAIL DRAWINGS WHERE NECESSARY FOR PROPER CO-ORDINATION OF THE WORK.
  - 8.3. ITEMS SHOWN ON THE DRAWINGS BUT NOT SPECIFIED OR SPECIFIED BUT NOT SHOWN SHALL BE INCLUDED.
  - 8.4. ITEMS OBVIOUSLY REQUIRED TO PROVIDE A COMPLETE WORKING SYSTEM BUT NOT SPECIFIED NOR SHOWN SHALL BE INCLUDED.
9. RESPONSIBILITY AND LIABILITY
  - 9.1. EACH SUBCONTRACTOR SHALL SUPERVISE THE LAYING OUT OF THEIR WORK AND SHALL ARRANGE IT IN CO-OPERATION WITH OTHER WHO MAY BE WORKING ON THE PREMISES WHILE THE WORK OF THIS CONTRACT IS IN PROGRESS. THEY SHALL PROTECT FINISHED AND UNFINISHED WORK OF THIS CONTRACT AND/OR WORK OF OTHERS ON THE PREMISES UNTIL THE COMPLETED WORK HAS BEEN ACCEPTED.
  - 9.2. THE SUBCONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES FOUND IN THE DRAWINGS OR SPECIFICATIONS BEFORE SUBMITTING THEIR TENDER. THEY SHALL ABIDE BY DECISIONS GIVEN TO THEM IN WRITING WITH REGARD TO SAME. EACH SUBCONTRACTOR IS CAUTIONED THAT THE WORK AS SHOWN IS INTENDED TO BE COMPLETE IN ALL RESPECTS AND THAT FAILURE ON THEIR PART TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES WILL NOT RELIEVE THEM OF THE RESPONSIBILITY OF COMPLETING THE WORK AS INTENDED AT THE CONTRACT PRICE.
10. CLEAN-UP
  - 10.1. DURING THE COURSE OF CONSTRUCTION, EACH SUBCONTRACTOR SHALL KEEP THEIR WORK TIDY AND NOT ALLOW AN ACCUMULATION OF DEBRIS RESULTING FROM THEIR WORK.
  - 10.2. UPON COMPLETION OF THEIR WORK THEY SHALL LEAVE THE PREMISES IN A BROOM-CLEAN CONDITION.
11. PROTECTION
  - 11.1. SUBCONTRACTORS ARE TO PROTECT THEIR WORK FROM CONSTRUCTION DIRT OR DAMAGE FROM ANY CAUSE. SECURELY PLUG AND CAP ALL OPENINGS IN PIPE, EQUIPMENT AND FIXTURES TO PREVENT OBSTRUCTIONS.
12. ELECTRICAL WIRING AND CONTROLS
  - 12.1. ALL POWER WIRING FOR MECHANICAL EQUIPMENT SHALL BE DONE BY THE ELECTRICAL DIVISION. THE MECHANICAL TRADE INVOLVED SHALL PROVIDE STARTERS, THERMOSTATS, VALVES, CONTROL TRANSFORMERS, RELAYS, ETC. ALL CONTROL WIRING SHALL BE DONE BY THE MECHANICAL CONTRACTOR, UNLESS OTHERWISE NOTED ELSEWHERE IN THIS SPECIFICATION.

**GENERAL ELECTRICAL NOTES**

1. GENERAL:
  - 1.1. ARRANGE FOR ESA INSTALLATION PERMIT AND INSPECTION AND FORWARD A COPY OF THE ESA CERTIFICATE TO THE ENGINEER UPON ACCEPTANCE.
  - 1.2. ENSURE THAT ALL ELECTRICAL EQUIPMENT SUPPLIED BY OTHER TRADES IS SUITABLE FOR THE RESPECTIVE VOLTAGE. CONFIRM POWER REQUIREMENTS OF ALL OWNER SUPPLIED EQUIPMENT.
  - 1.3. ALL CUTTING AND PATCHING REQUIRED FOR THE WORK OF THIS DIVISION SHALL BE CARRIED OUT BY THIS DIVISION, NO CHASING BLOCKWORK WILL BE ALLOWED. BE RESPONSIBLE AND PAY FOR ANY DAMAGE TO THE BUILDING INCURRED BY WORK OF THIS DIVISION.
  - 1.4. SUBMIT 4 COPIES OF SHOP DRAWINGS FOR REVIEW AND RECORDS.
  - 1.5. ALL MATERIALS USED THROUGHOUT SHALL BE NEW, OF BEST QUALITY C.S.A. APPROVED AND OF ONE MANUFACTURE, WHEREVER TRADE NAMES ARE NOT USED TO DESCRIBE MATERIALS, THESE MATERIALS SHALL BE OF BEST AVAILABLE QUALITY AND MANUFACTURE. OBTAIN AND PAY FOR SPECIAL HYDRO INSPECTION OF SPECIFIED NON-C.S.A. ELECTRICAL EQUIPMENT.
  - 1.6. REPLACE ALL HANGERS, INSERTS AND SUPPORTS OF APPROVED TYPES REQUIRED FOR THE WORK OF THIS DIVISION. PROVIDE CONDUIT FOR ALL SERVICES PENETRATING THE FLOOR SLAB. SEAL ALL PENETRATIONS THROUGH FLOOR SLABS WITH AN APPROVED NON-SHRINK, WATERPROOF AND FIREPROOF SEALANT APPROVED BY ARCHITECT. NO CONDUITS OR EQUIPMENT SHALL BE MOUNTED DIRECTLY FROM ROOF DECK. PROVIDE ALL NECESSARY UNISTRUT OR OTHER MOUNTING DETAILS TO ENABLE SUPPORT FROM TOP CHORD OF JOISTS.
  - 1.8. ALL CONDUIT SHALL BE RIGID STEEL THICK WALLED OR EMT FINISHED WITH STEEL SET SCREW COUPLINGS AND CONNECTORS WITH INSULATED GRABBERS UNLESS OTHERWISE NOTED. EXPOSED CONDUITS AND WIREMOLD CHANNELS SHALL BE NEAT IN APPEARANCE, RUN PARALLEL TO BUILDING LINES AND CONCENTRIC RIGHT ANGLE BENDS ONLY SHALL BE USED.
  - 1.9. ALL EMPTY CONDUITS SHALL BE COMPLETE WITH NYLON FISH WIRE.
  - 1.10. ALL WIRING SHALL BE MINIMUM #12 GAUGE COPPER, EXCEPT AS OTHERWISE NOTED. ALL WIRING SHALL BE 600 VOLT TYPE RW90. BX CABLE MAY BE USED WHERE PERMITTED BY CODE IN CEILING SPACE FOR FINAL CONNECTION TO LIGHT FIXTURE AND FROM CEILING DISTRIBUTION BOXES DOWN PARTITIONS TO RECEPTACLES ONLY. MINIMUM SIZE WIRING FOR DC WIRING SHALL BE #10 GAUGE. MAXIMUM VOLTAGE DROP SHALL NOT EXCEED 2 PERCENT.
  - 1.11. PROVIDE GROUND WIRES WITH ALL FEEDERS AND CIRCUITS IN ACCORDANCE WITH APPLICABLE CODES AND HYDRO REQUIREMENTS. PROVIDE MAIN GROUND TO HYDRO APPROVAL.
  - 1.12. CO-ORDINATE WITH OTHER TRADES IN LAYING OUT OF THE WORK SO AS NOT TO CONFLICT WITH THE WORK OF OTHER TRADES. CARRY OUT WORK PROMPTLY WHICH MAY INTERFERE WITH THE WORK SCHEDULE OF OTHER TRADES.
  - 1.13. MECHANICAL TRADES WIRING: PROVIDE ALL CONDUIT, WIRING, SPLITTERS, OUTLET BOXES AND DISCONNECT SWITCHES AS SHOWN. ALL MOTORS, STARTERS AND CONTROL WIRING PROVIDED UNDER DIVISION 15. INSTALL ALL STARTERS AND WIRE COUPLERS.
  - 1.14. CLEARLY MARK ALL EXPOSED CONDUIT, PULL BOXES, JUNCTION BOXES, ETC., TO INDICATE THE NATURE OF THE SERVICE.
  - 1.15. INSTALL ALL LIGHTING AND POWER CIRCUITS TO MEET CODES.
  - 1.16. PROVIDE LAMARCO NAMEPLATES AND TYPEWRITTEN DIRECTORIES FOR ALL PANELS.
  - 1.17. CLEAN AND TEST ALL EQUIPMENT BEFORE FINAL ACCEPTANCE IS GIVEN FOR THE WORK.
  - 1.18. AFTER THE WORK IS COMPLETED, GIVE A WRITTEN GUARANTEE FOR ONE YEAR COVERING WORKMANSHIP AND MATERIALS. REPAIR OR REPLACE WORK BEFORE PROCEEDING WITH THE WORK. THIS SHALL NOT RELIEVE THE SUBCONTRACTOR OF THE RESPONSIBILITY OF COMPLETING THE WORK AS INTENDED AT THE CONTRACT PRICE.
2. MATERIALS
  - 2.1. COVER PLATES:
    - 2.1.1. COVER PLATES FOR RECEPTACLES, SWITCHES, PILOT LIGHTS, TELEPHONE S, AND OUTLETS AND OTHER DEVICES TO BE COVERED BY PLATES FOR FLUSH MOUNTED BOXES SHALL BE METAL STAINLESS STEEL #18-8, TYPE 302, UNLESS OTHERWISE NOTED.
    - 2.1.2. WEATHERPROOF COVER PLATES SHALL BE DECAST CORROSION RESISTANT ALUMINUM TYPE WITH TWO SEPARATE LIDS FOR DUPLEX RECEPTACLES SUITABLE FOR MOUNTING ON F.S. TYPE BOXES. ALL WEATHERPROOF COVER PLATES SHALL HAVE RUBBER OR NEOPRENE GASKETS.
    - 2.1.3. PLATES FOR SURFACE MOUNTED CAST BOXES SHALL BE GALVANIZED FORMED STEEL TYPE COVER PLATES FOR FLUSH MOUNTED EQUIPMENT SHALL BE SUPPLIED OF QUALITY AND PERFORMANCE SPECIFIED BY THE MANUFACTURER OF THE EQUIPMENT.
    - 2.1.4. COVER PLATES SHALL NOT CARRY MANUFACTURER'S NAME.
    - 2.1.5. COVER PLATES OF QUALITY SPECIFIED SHALL BE PASS & SEYMOUR, BRYANT LEVITON, SMITH & STONE OR HARVEY HUBBELL.
  - 2.2. LIGHT SWITCHES:
    - 2.2.1. SWITCHES SHALL BE, UNLESS OTHERWISE INDICATED, BRYANT QUIET TYPE WITH WHITE SPECIFICATION GRADE FOR 120V AND HEAVY DUTY GRADE FOR 247V. LIGHT SWITCHES OF QUALITY AS MANUFACTURED BY BRYANT, P & S, ARROW HART, LEVITON AND HUBBELL SHALL BE CONSIDERED AS ACCEPTABLE AS SPECIFIED ALTERNATES.
    - 2.3. RECEPTACLES:
      - 2.3.1. RECEPTACLES SHALL BE, UNLESS OTHERWISE INDICATED, U GROUND TYPE, WHITE SCREW TERMINAL TYPE.
      - 2.3.2. RECEPTACLES SHALL BE SPECIFICATION GRADE.
      - 2.3.3. CONFIRM ALL LOCATIONS AND OUTLETS PRIOR TO INSTALLATION. ALLOW TO RELOCATE ANY OUTLET WITHIN 10'-0" OF SPECIFIED LOCATION, PRIOR TO INSTALLATION.
      - 2.3.4. PROVIDE ALL CONCRETE WORK REQUIRED FOR ELECTRICAL WORK IN ACCORDANCE WITH ARCHITECTURAL DIVISION OF SPECIFICATION.
    - 2.4. DISCONNECTS:
      - 2.4.1. DISCONNECT SWITCHES FOR HVAC EQUIPMENT MUST BE INSTALLED WITHIN 10'.
      - 2.4.2. MOTORS OTHER THAN AIR CONDITIONERS MUST HAVE DISCONNECT WITHIN SIGHT AND 30' OF THE MOTOR AND/OR STARTER.
    - 2.5. CONDUITS:
      - 2.5.1. EMT (ELECTRICAL METALLIC TUBING) MUST BE USED IN THE FOLLOWING INDOOR APPLICATIONS:
        - 2.5.1.1. ALL EXPOSED AREAS (USE WIREMOLD ON EXPOSED WALLS IN FINISHED AREAS WHERE EXPOSED WIRING HAS BEEN APPROVED).
        - 2.5.1.2. T-BAR CEILING SPACES
        - 2.5.1.3. ATTIC SPACES
        - 2.5.1.4. CRAWL SPACES
      - 2.5.2. LIQUIDTIGHT MUST BE USED IN THE FOLLOWING INDOOR AND OUTDOOR APPLICATIONS:
        - 2.5.2.1. LAST 5' FOR FINAL CONNECTION TO INDOOR MECHANICAL EQUIPMENT
        - 2.5.2.2. ALL OUTDOOR WIRING
        - 2.5.2.3. FLEXIBLE CABLE IS ONLY ACCEPTABLE IN THE FOLLOWING INDOOR APPLICATIONS:
          - 2.5.3.1. LAST 5' FOR FINAL CONNECTION TO LIGHTING AND SMALL EQUIPMENT/COMPONENTS IN CEILING SPACES
          - 2.5.3.2. CONCEALED IN DRYWALL WALLS AND DRYWALL CEILINGS
          - 2.5.3.3. THROUGH HOLES IN CONCRETE OR STEEL STUDS PROVIDED IT IS NOT SUBJECT TO MECHANICAL DAMAGE.
      - 2.5.4. ROMEX IS AN ACCEPTABLE ALTERNATE FOR ALL INDOOR WIRING IN WOOD CONSTRUCTION BUILDINGS.
      - 2.5.5. WHERE CEILING SPACE IS USED AS A RETURN AIR PLENUM, ALL WIRING SHALL CONFORM TO CODES FOR THIS APPLICATION.

**LIFE SAFETY NOTES:**

1. ELECTRICAL CONDUCTORS ASSOCIATED WITH FIRE ALARM SYSTEM AND EMERGENCY EQUIPMENT SHALL CONFORM TO O.B.C. 3.2.7.10.
2. SMOKE AND HEAT DETECTOR VERIFICATION SHALL INCLUDE AUDIBILITY LEVELS THROUGHOUT THE BUILDING.
3. EMERGENCY LIGHTING SHALL BE INCLUDED IN CONFORMANCE WITH O.B.C. DIVISION B 3.2.7.3.
4. THE REQUIRED EMERGENCY LIGHTING SHALL HAVE AN AVERAGE LEVEL NOT LESS THAN 10lx (0.9 ft-candle) AT FLOOR OR TREAD LEVEL. REFER TO O.B.C. 2012 3.2.7.3. FOR AREAS.
5. REFER TO FLOOR PLANS FOR EXACT LOCATION AND QUANTITIES OF FIRE DETECTION DEVICES.
6. THIS CONTRACTOR SHALL PROVIDE ALL NECESSARY WIRING, CONDUITS AND RELAYS TO SHUT DOWN ALL FANS UPON ACTIVATION OF FIRE ALARM SYSTEM INCLUDING PRESSURIZATION FANS.

**ELECTRICAL POWER & LIGHTING NOTES:**

1. CABLE, VOICE AND DATA OUTLETS ARE SHOWN FOR SCOPE OF WORK PURPOSES ONLY. CONTRACTOR TO COORDINATE EXACT LOCATIONS WITH OWNER PRIOR TO ORDERING AND INSTALLATION OF EQUIPMENT.
2. REFER TO ARCHITECTURAL DOOR SCHEDULE FOR ALL DOOR POWER REQUIREMENTS. PROVIDE ANY POWER REQUIRED AND BREAKERS TO NEAREST AVAILABLE PANEL.
3. LIGHTING SHOWN IS FOR SCHEMATIC AND SCOPE OF WORK PURPOSES ONLY. CONTRACTOR TO COORDINATE MOUNTING ON SITE.
4. ALL SWITCHES AND CONTROLS WITH BARRIER-FREE AREAS TO BE MOUNTED AS PER O.B.C. 3.8.1.5.(1)(C). ALL SWITCHES IN BARRIER FREE AREA SHALL BE MOUNTED NO LESS THAN 900MM AND NOT MORE THAN 1100MM ABOVE FINISHED FLOOR. SWITCHES FOR ALL OTHER AREAS SHALL BE MOUNTED AT 1100MM ABOVE FINISHED FLOOR.
5. ALL RECEPTACLES SHALL BE MOUNTED AT 450MM ABOVE FINISHED FLOOR TO THE TOP OF THE FACEPLATE.
6. CONTRACTOR TO COORDINATE ANY ADDITIONAL LIGHTING, RECEPTACLE AND COMMUNICATION OUTLET REQUIREMENTS WITH CLIENT PRIOR TO COMMENCEMENT OF WORK.
7. CONTRACTOR TO PROVIDE ALL DISCONNECTS, STARTERS, AND ANY OTHER DEVICES NECESSARY FOR COMPLETE AND WORKING SYSTEM. NOT ALL MOTOR DISCONNECTS ARE SHOWN.
8. PROVIDE ENOUGH RELAYS FOR ALL EXPECTED DEVICES PLUS THREE (3) ADDITIONAL RELAYS.
9. CONTRACTOR TO CONFIRM ALL DEVICE QUANTITIES PRIOR TO ORDERING.
10. ELECTRICAL SCOPE OF WORK: THE CONTRACTOR IS ASSUMED TO BE OF MASTER ELECTRICIAN EXPERIENCE AND SHALL PROVIDE ANY APPLICABLE SINGLE LINE DIAGRAMS, PANEL SCHEDULES AND CIRCUIT PLAN DESIGNS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. THIS PRICE SHALL BE INCLUDED IN THE CONTRACTORS BASE BID PRICE. NO CLAIM FOR EXTRA PAYMENT WILL BE ALLOWED FOR FAILURE TO INCLUDE THIS COST INTO THE BASE BID. BIDDERS SHALL ACCEPT SOLE RESPONSIBILITY FOR ANY ERROR OR NEGLECT IN PRICING THE ABOVE ITEMS IN THERE BID.
11. ALL DETAILS SHOWN ARE SCHEMATIC BY NATURE AND ARE TO BE USED FOR SCOPE OF WORK PURPOSES ONLY. COORDINATE WITH ALL TRADES AND MANUFACTURERS BEST PRACTICES AND DIRECTIONS.
12. TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.
13. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND EXISTING BUILDING AND SERVICES AFFECTING THE PROPER EXECUTION OF THE WORK, AND OBTAIN FOR EXTRA PAYMENT WILL BE ALLOWED FOR WORK OF DIFFICULTIES ENCOUNTERED INFERABLE, PRIOR TO THE DATE OF SUBMISSION OF BID. BIDDERS SHALL ACCEPT SOLE RESPONSIBILITY FOR ANY ERROR OR NEGLECT ON THEIR PART IN THIS RESPECT. THE DRAWINGS AND SPECIFICATIONS ARE BASED ON INFORMATION OR ASSUMPTIONS PROVIDED AT TIME OF DESIGN, PRIOR TO CONSTRUCTION ALL ELEMENTS ARE TO BE CONFIRMED WITH ENGINEER FOR APPROVAL.
14. THE DRAWINGS AND SPECIFICATIONS ARE BASED ON INFORMATION OR ASSUMPTIONS PROVIDED AT TIME OF DESIGN, PRIOR TO CONSTRUCTION ALL ELEMENTS ARE TO BE CONFIRMED WITH ENGINEER FOR APPROVAL.
15. FINAL COORDINATION OF EQUIPMENT, DISCONNECTS, STARTERS, PANELS, AND ASSOCIATED SPLITTERS IS THE RESPONSIBILITY OF THE MASTER ELECTRICIAN AND THE INSTALLER.
16. ALL ITEMS ASSOCIATED WITH AN ESA SUBMISSION BY MASTER ELECTRICIAN.

**FIRE ALARM DEVICE SCHEDULE**

DEVICE	MANUFACTURER	MODEL
SMOKE ALARM (LOCAL AUDIBLE)	MIRCOM	MIX-2351APA
HEAT ALARM (LOCAL AUDIBLE)	MIRCOM	MIX-5351HAPA

**EMERGENCY LIGHT BACK-UP UNIT SCHEDULE**

TAG	MANUFACTURER	MODEL
(BU-1)	LUMACELL	RG12S-72-2-LD10-AT

**ELECTRICAL DEMOLITION NOTES:**

1. PRIOR TO DEMOLITION AND REMOVAL OF OLD ELECTRICAL EQUIPMENT, ALL ELECTRICAL DEVICES ARE TO BE DISCONNECTED AND MADE SAFE.
2. CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED TEMPORARY LIGHTING DURING DEMOLITION.
3. CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY POWER DURING DEMOLITION.
4. CONTRACTOR IS RESPONSIBLE TO VISIT THE SITE PRIOR TO TENDERING TO REVIEW ALL NECESSARY WORK WHETHER SHOWN OR IMPLIED TO COMPLETE DEMOLITION AND GAIN A FULL UNDERSTANDING OF THE EXISTING CONDITIONS.
5. CONTRACTOR TO REMOVE AND TURN OVER TO CLIENT ALL ELECTRICAL SYSTEMS. IF THE CLIENT DEEMS FIT, CONTRACTOR TO PROPERLY DISPOSE OF ANY ELECTRICAL SYSTEMS THAT ARE TO BE DEMOLISHED OFF SITE.
6. EXISTING CIRCUITING NOT DEEMED FOR REMOVAL TO REMAIN AND SHALL BE RE-ROUTED OR RECONNECTED, AS REQUIRED, WHERE THE CIRCUITRY MAY BE AFFECTED BY NEW WORK, MAINTAIN CONTINUITY OF THE CIRCUIT.
7. EXISTING CIRCUITRY SERVING LIGHTING FIXTURES AND RECEPTACLES SHALL BE REUSED IF THEY CONVENIENTLY SERVE THE NEW LAYOUT. IF THE CONTRACTOR DEEMS THESE CIRCUITS REUSABLE, CONTRACTOR TO CONFIRM WITH ENGINEER AND CLIENT PRIOR TO COMMENCEMENT OF WORK.
8. ALL WORK AND ALL POWER OUTAGES IN THE EXISTING BUILDING TO BE SCHEDULED AT TIMES CONVENIENT TO THE CLIENT.

**ABBREVIATIONS**

SYMBOL	DESCRIPTION	JB	JUNCTION BOX
A	AMPERES	KVA	KILOVOLT AMPERE
A/C	AIR CONDITIONING	KW	KILOWATTS
AF	ABOVE FINISHED FLOOR	LA	LIGHTING ARRESTER
AFG	ABOVE FINISHED GRADE	LP	LIGHTING PANEL
AL	ALUMINUM	MCB	MAIN CIRCUIT BREAKER
ARCH	ARCHITECT	MCC	MOTOR CONTROL CENTER
AWG	AUTOMATIC TRANSFER SWITCH	MECH.	MECHANICAL
BLDG	AMERICAN WIRE GAUGE	MIN.	MINIMUM
CD	CONDUIT	MLO	MAIN LUGS ONLY
CAP.	CAPACITOR	MTD	MOUNTED
CAT.NO.	CATALOGUE NUMBER	NC	NORMALLY CLOSED
CB	CIRCUIT BREAKER	NL	NOT IN CONTRACT
CCT	CIRCUIT	NTS	NIGHT LIGHT ON CONTINUOUSLY
CLG	CEILING	O/H	OVER HEAD
COL	COLUMN	PB	PUSH BUTTON
CONT.	CONTINUED	PF	POWER FACTOR
C/T	CURRENT TRANSFORMER	PH	PHASE
CU	COPPER	PND	PANEL NUMBER
C/W	COMPLETE WITH	PP	POWER PANEL
DIA.	DIAMETER	P/T	POTENTIAL TRANSFORMER
DISC.	DISCONNECT	PVC	POLYVINYL CHLORIDE
DP	DISTRIBUTION PANEL	QTY	QUANTITY
DT	DUST TIGHT	REC.	RECEPTACLE
DWG	DRAWING	RG	RIGID GALVANIZED CONDUIT
ELECT.	ELECTRICAL	RT	RECEPTACLE PANEL
EM	EMERGENCY	RN	RAIN TIGHT
EMS	ENERGY MANAGEMENT SYSTEM	SC	SEPARATE CIRCUIT
EMT	THIN WALL CONDUIT	S/D	SCHEMATIC DIAGRAM
EP	ELECTRICALLY OPERATED	STRD	STRANDED
EQ	ELECTRICALLY OPERATED	SURF.	SURFACE
EWC	ELECTRIC WATER COOLER	SWB	SWITCHBOARD
FIXT.	FIXTURE	SWGR	SWITCHGEAR
FLA	FULL LOAD AMPERAGE	TEL	TELEPHONE
FT	FOOT	T'STAT	THERMOSTAT
GR	GROUND	XFMR	TRANSFORMER
GFI	GROUND FAULT INTERRUPTER	U/G	UNDERGROUND
HP	HORSEPOWER	V	VOLTS
HTR	HEATER	W	WATTS OR WIRE
IG	ISOLATED GROUND	WD	WIRING DIAGRAM
IN	INCH OR INCHES	WE	WEATHER PROOF
		Y	WYE
		Δ	DELTA

**NOTES:**

1. ALL DETAILS SHOWN ARE SCHEMATIC BY NATURE AND ARE TO BE USED FOR SCOPE OF WORK PURPOSES ONLY. COORDINATE WITH ALL TRADES AND MANUFACTURERS BEST PRACTICES AND DIRECTIONS.
2. LIGHTING SHOWN IS FOR SCHEMATIC AND SCOPE OF WORK PURPOSES ONLY. CONTRACTOR TO COORDINATE EXACT LOCATION AND ORIENTATION ON SITE.
3. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE SITE AND EXISTING BUILDING AND SERVICES AFFECTING THE PROPER EXECUTION OF THE WORK, AND OBTAIN FOR EXTRA PAYMENT WILL BE ALLOWED FOR WORK OF DIFFICULTIES ENCOUNTERED INFERABLE, PRIOR TO THE DATE OF SUBMISSION OF BID. BIDDERS SHALL ACCEPT SOLE RESPONSIBILITY FOR ANY ERROR OR NEGLECT ON THEIR PART IN THIS RESPECT. THE DRAWINGS AND SPECIFICATIONS ARE BASED ON INFORMATION OR ASSUMPTIONS PROVIDED AT TIME OF DESIGN, PRIOR TO CONSTRUCTION ALL ELEMENTS ARE TO BE CONFIRMED WITH ENGINEER FOR APPROVAL.
4. THE DRAWINGS AND SPECIFICATIONS ARE BASED ON INFORMATION OR ASSUMPTIONS PROVIDED AT TIME OF DESIGN, PRIOR TO CONSTRUCTION ALL ELEMENTS ARE TO BE CONFIRMED WITH ENGINEER FOR APPROVAL.
5. ALL NEW OUTSIDE LIGHTS TO BE CONTROLLED BY BUILDING PHOTOCELL AT HIGH LEVEL AND TIME SWITCH. COORDINATE CONTROLS AND POWER REQUIREMENTS WITH BUILDING DISTRIBUTION DRAWINGS.
6. TENDERING OF THESE DOCUMENTS IS DONE UNDER THE MUTUAL UNDERSTANDING THAT ALL CONTRACTORS ARE EXPERIENCED AND LICENSED IN THE WORKS BEING PROVIDED AND THAT ALL COMPONENTS OF A FULLY FUNCTIONING SYSTEM WILL BE INCLUDED WHETHER SHOWN OR NOT SHOWN BUT IMPLIED FOR A COMPLETE SYSTEM.
7. ELECTRICAL SCOPE OF WORK: THE CONTRACTOR IS ASSUMED TO BE OF MASTER ELECTRICIAN EXPERIENCE AND SHALL PROVIDE ANY APPLICABLE SINGLE LINE DIAGRAMS, PANEL SCHEDULES, AND CIRCUIT PLAN DESIGNS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. THIS PRICE SHALL BE INCLUDED IN THE CONTRACTORS BASE BID PRICE. NO CLAIM FOR EXTRA PAYMENT WILL BE ALLOWED FOR FAILURE TO INCLUDE THIS COST INTO THE BASE BID. BIDDERS SHALL ACCEPT SOLE RESPONSIBILITY FOR ANY ERROR OR NEGLECT IN PRICING THE ABOVE ITEMS IN THEIR BID.
8. FINAL COORDINATION OF EQUIPMENT, DISCONNECTS, STARTERS, PANELS, AND ASSOCIATED SPLITTERS IS THE RESPONSIBILITY OF THE MASTER ELECTRICIAN AND THE INSTALLER.
9. ALL ITEMS ASSOCIATED WITH AN ESA SUBMISSION BY MASTER ELECTRICIAN.

2	ISSUED FOR PERMIT	MAY 2026
1	ISSUED FOR COORDINATION	APRIL 2026
NO.	SUBMISSION	DATE

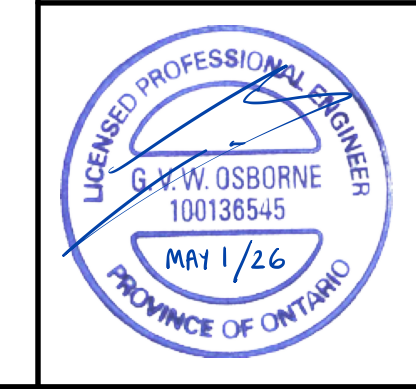
CESTOIL BUILDING EXPANSION  
1726 BASELINE ROAD W, BOWMANVILLE, ON

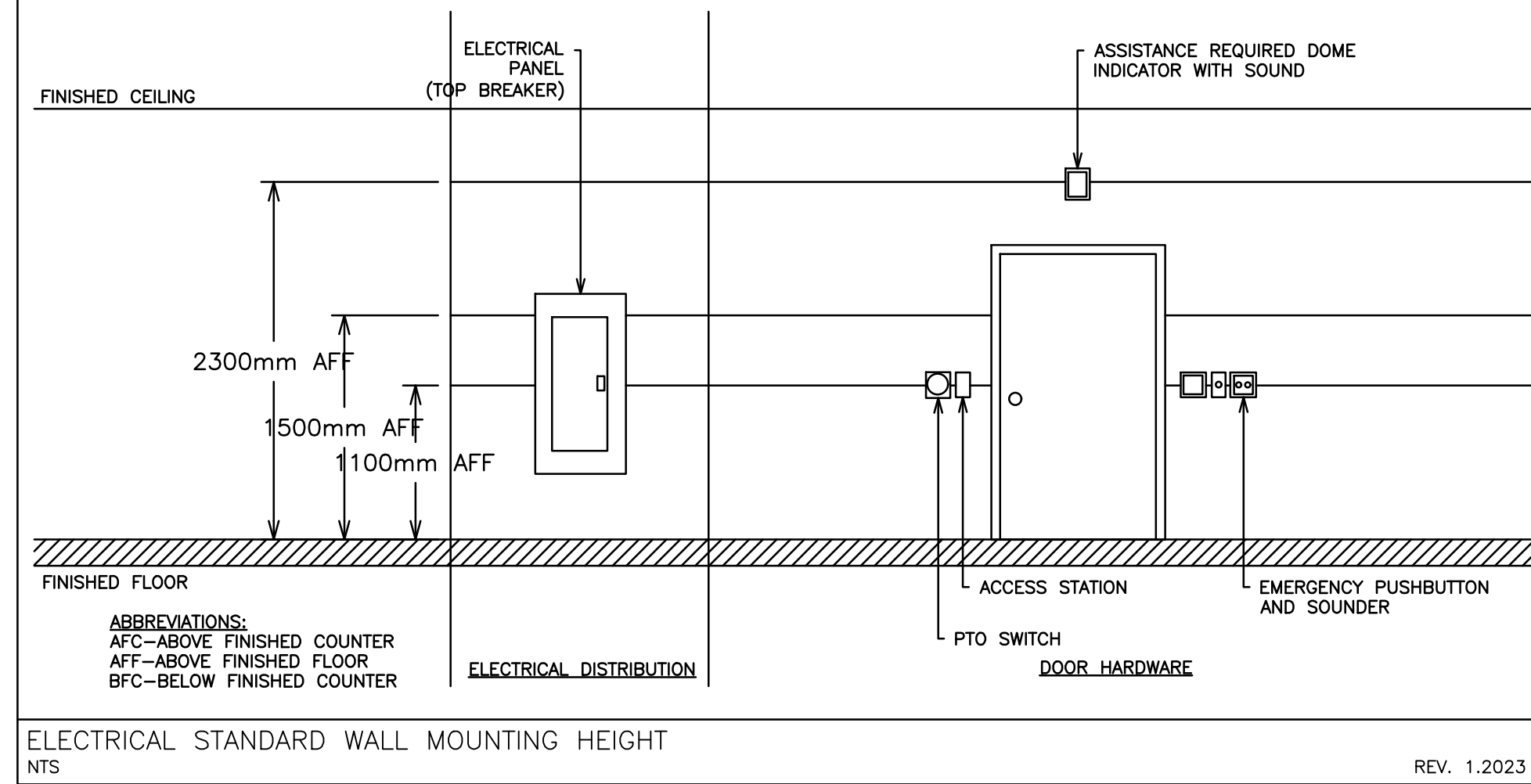
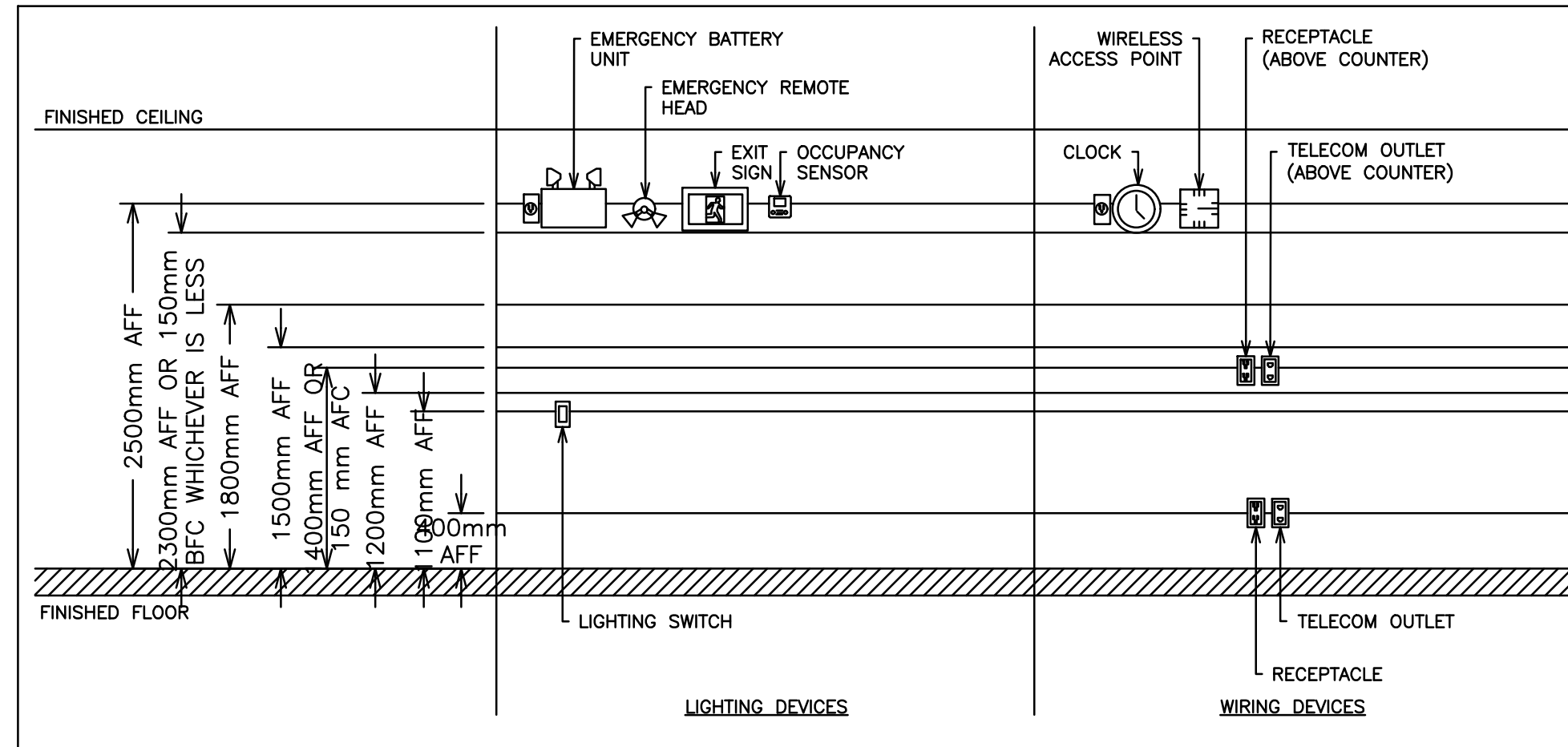
**ELECTRICAL POWER & LIGHTING NOTES**

**D.G. BIDDLE & ASSOCIATES**  
CONSULTING ENGINEERS & PLANNERS

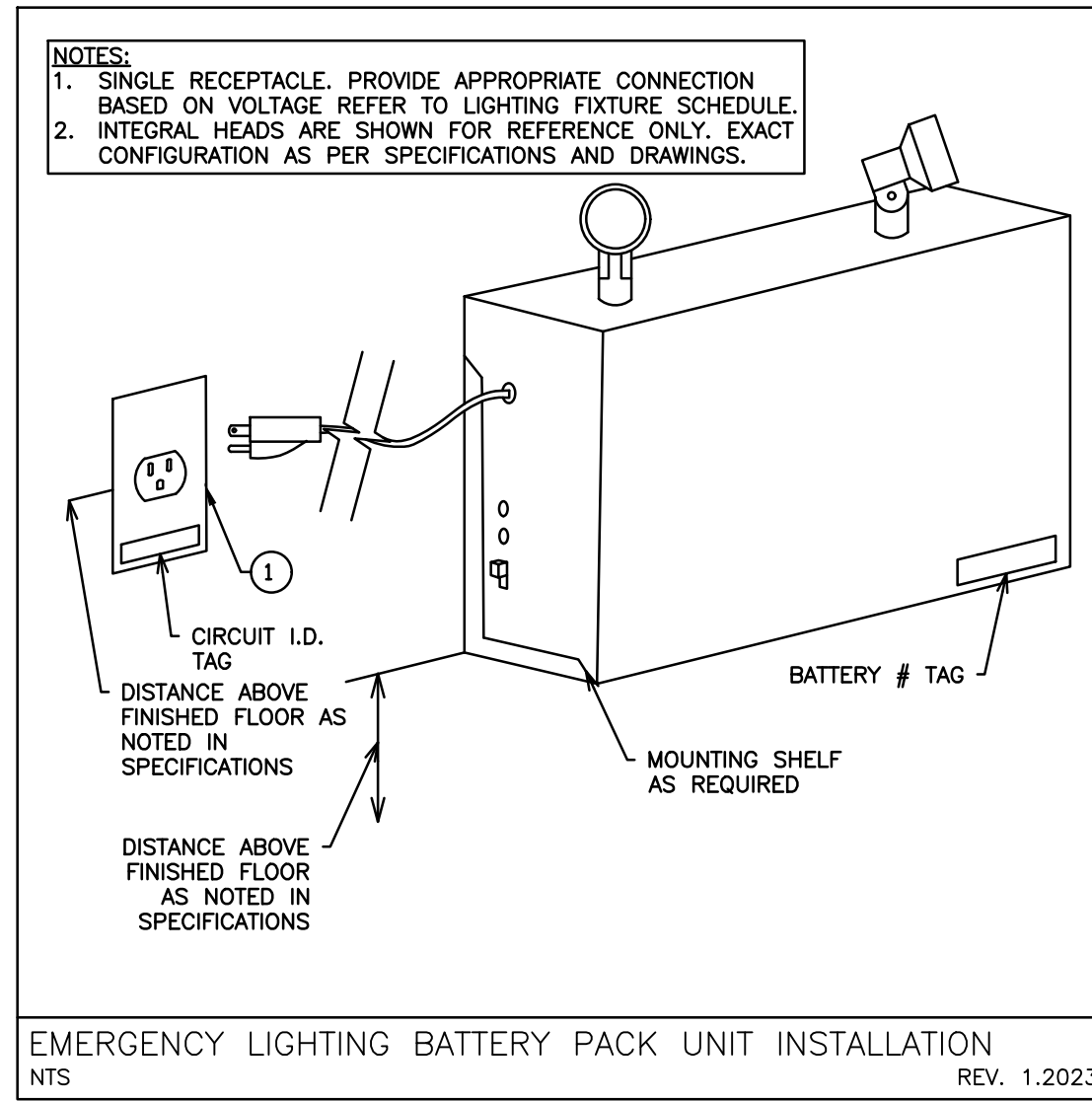
96 King Street East  
Oshawa, Ontario, L1H 1B6  
Phone: 905-576-8500  
info@dgbiddle.com  
dgbiddle.com

SCALE:	1:75
DESIGNED BY:	J.T.C./J.E.C.
CHECKED BY:	G.V.W.O.
PROJECT NO.:	15160
DRAWING NO.:	E2

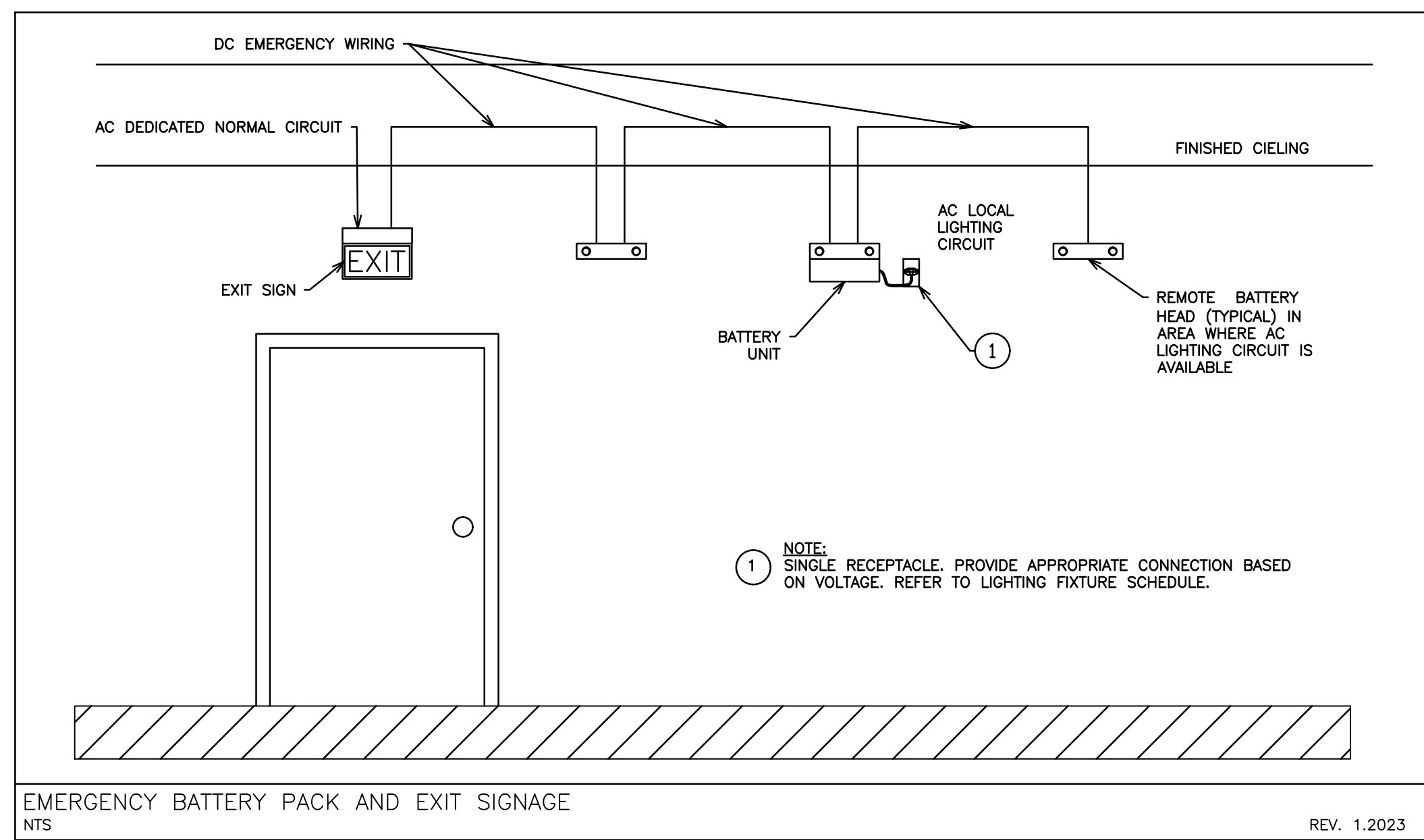




ELECTRICAL STANDARD WALL MOUNTING HEIGHT  
 NTS  
 REV. 1.2023



EMERGENCY LIGHTING BATTERY PACK UNIT INSTALLATION  
 NTS  
 REV. 1.2023



EMERGENCY BATTERY PACK AND EXIT SIGNAGE  
 NTS  
 REV. 1.2023

NO.	SUBMISSION	DATE
2	ISSUED FOR PERMIT	MAY 2026
1	ISSUED FOR COORDINATION	APRIL 2026

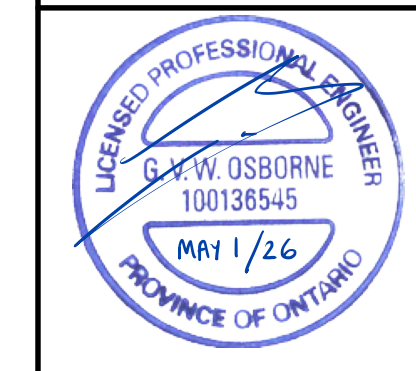
CESTOIL BUILDING EXPANSION  
 1726 BASELINE ROAD W, BOWMANVILLE, ON

## ELECTRICAL POWER & LIGHTING NOTES

**D.G. BIDDLE & ASSOCIATES**  
 CONSULTING ENGINEERS & PLANNERS

96 King Street East  
 Oshawa, Ontario, L1H 1B6  
 Phone: 905-576-8500  
 info@dgbiddle.com  
 dgbiddle.com

SCALE:	1:100
DESIGNED BY:	J.T.C./J.E.C
CHECKED BY:	G.V.W.O
PROJECT NO.:	15160
DRAWING NO.:	E3



01/05/2026  
 C:\STAFF\JOB FILES\15000\15160\_1726 BASELINE ROAD W\15160\_DRAWINGS\15160\_MECHANICAL\_DRAWINGS\15160\_ME

**GENERAL DRAWING NOTES**

- Drawing is in metric scale. All dimensions are in millimeters. Do not scale drawings.
- Plus/Minus (+/-) dimensions are for general verification purposes only and are NOT to be used to establish layout of any feature(s), ever.
- The Contractor shall verify all field dimensions onsite during the quotation period. No extras will be allowed for discrepancies between the drawings and the actual site conditions unless reported in writing during the quotation period.
- It is the Contractor's responsibility to locate and have staked the exact utility location with all companies involved before starting any work. Hand dig within two (2) meters of all electrical lines.
- Keep the area outside the immediate construction zone clean, safe and usable by the public at all times. Contractor to coordinate all deliveries of materials to ensure minimal construction delays to the approval of the Landscape Architect and/or Owner's representative.
- Obtain approval of layout from the Landscape Architect and/or Owner's representative prior to commencement.
- All work to be guaranteed for a period of One (1) Year from the documented date of substantial performance. The Contractor shall notify the Landscape Architect in writing upon completion of work.
- Make good all damage resulting from work carried out under the contract, at no extra cost. This includes restoration of any/all construction access routes - to as new condition, to the satisfaction of the Landscape Architect and/or Owner's representative.
- The Landscape Architect is not responsible for the accuracy of survey, engineering or architectural drawings. Contractor to verify existing grading/topographic information prior to installing granular bases.
- Construction must conform to all applicable codes and regulations of all authorities having jurisdiction.
- Ensure positive drainage for finished surfaces leaving no pockets or low points for standing water.
- Wherever any material is specified by name and/or number thereof, such specifications shall be deemed to be used for the purpose of facilitating a description of the materials and establishing quality, and shall be deemed and construed to be followed by the words 'or approved equal'.
- No substitutions will be permitted which have not been submitted for prior approval by the Landscape Architect or Owner's representative. All materials shall be new and without flaws or defects and shall be the best of their class and kind. Sufficient descriptive literature and/or samples must be submitted as 'Equal' substitutes.
- All materials and other debris resulting from work shall be removed and disposed of off-site. Efforts shall be made to re-use and recycle excess materials where possible.
- These notes apply to all parts of this contract.

We agree to implement the approved landscape plans within 18 months after the execution of Site Plan Agreement and will retain a landscape architect to make periodic site inspections and on completion of the landscape works, we will forward to you a copy of the Landscape Completion Notification Certificate from the landscape architect.

Any revision to the landscape plans will be submitted to the Department of Planning and Development of the Municipality of Clarington and before commencement of the works, for review and approval.

We hereby authorize the Municipality, its authorized agents, servants or employees to enter upon our land to which these drawings apply, to carry out inspections from time to time and agree to indemnify the Municipality and its authorized agents and save them harmless from any and all actions arising out of the exercise by the Municipality, its authorized agents, servants or employees of the rights hereby given to them. And we further undertake to notify the Municipality forthwith of any change of ownership of the said lands.

Signature of Owner: \_\_\_\_\_  
 Name of Owner: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Date: \_\_\_\_\_

I hereby certify that these Landscape Plans conform to the Site Grading and Drainage Plan for this project, as submitted by the project's Consulting Engineer.

Signature of Landscape Architect: *Gina Brouwer*  
 Name of Landscape Architect: Gina Brouwer  
 Date: 26.01.28

Respecting all work in the municipal right of way, the contractor is to provide at least 48 hours prior notice to Development Engineering and Traffic staff at 905-623-3379.

A Road Occupancy Permit will be required for any work done in the municipal road allowance. Excavation of the road surface is not permitted between December 1st and April 30.

All restoration or work done in the road allowance must be completed as per municipal field staff direction.

The performance guarantee will not be refunded by the Municipality of Clarington unless the works have been inspected by municipal forces and deemed to be complete and satisfactory.

**Protection and Preservation of Existing Vegetation**

\* Tree Inventory and assessment completed by Gina Brouwer, ISA Certified Arborist ON-0937A on November 25, 2022.

All existing trees and other plants which are to remain shall be fully protected with hoarding (i.e. snow fencing) erected beyond their 'drip line' prior to the issuance of the Building Permit, to the satisfaction of the Planning and Development Department. Areas within the fencing shall remain undisturbed and shall not be used for the storage of building materials or equipment.

No rigging cables shall be wrapped around or installed in trees and surplus soil, equipment debris or materials shall not be placed over root systems of the trees within the protective fencing. No contaminants will be dumped or flushed where feeder roots of trees exist.

The developer or his/her agents shall take every precaution necessary to prevent damage to trees or shrubs to be retained.

Where limbs or portions of trees are removed to accommodate construction work, they will be removed carefully and in accordance with accepted arboricultural practices.

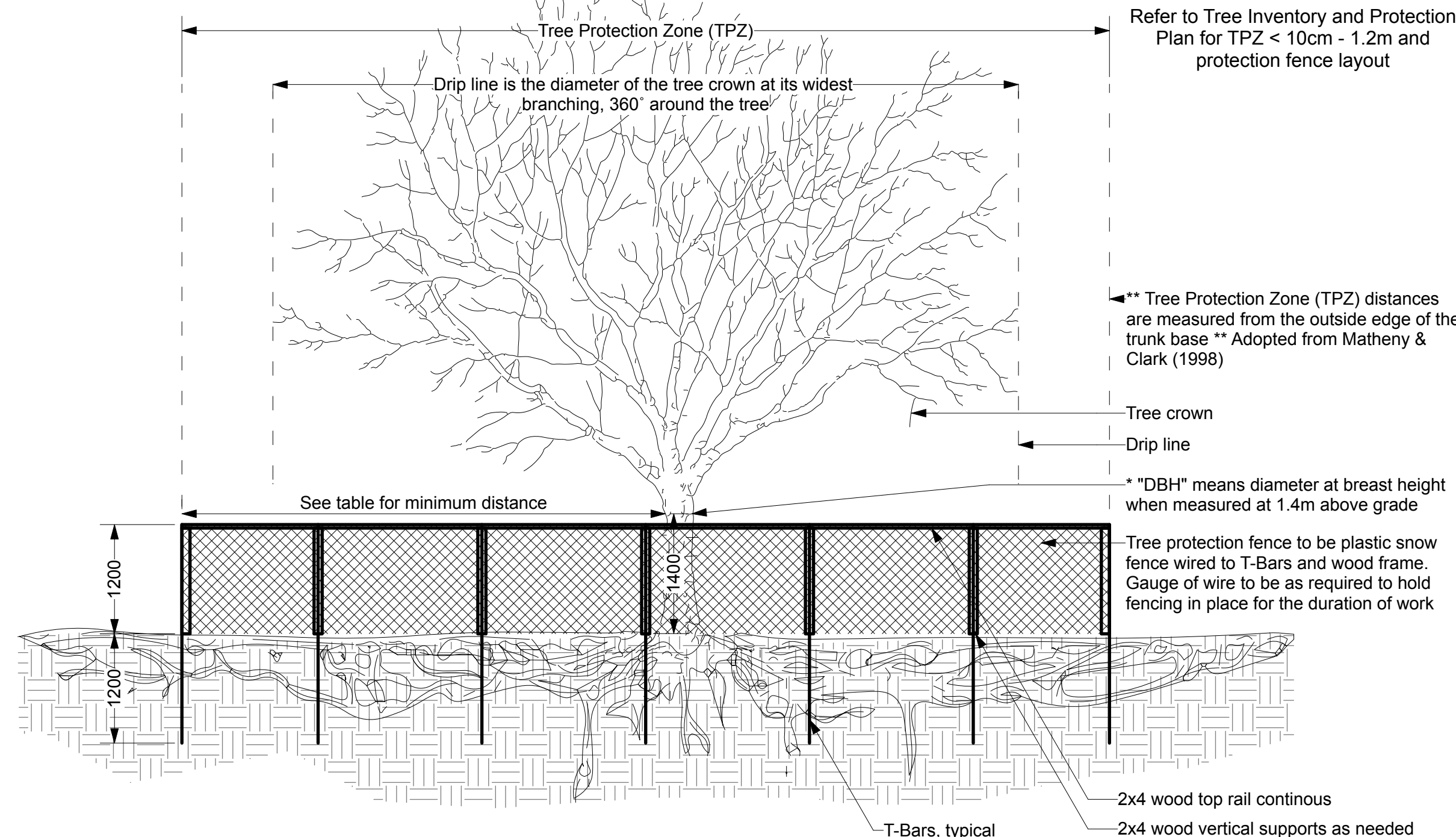
Where root systems of protected trees are exposed directly adjacent to construction work or damaged by said work, they shall be trimmed neatly and the area backfilled with appropriate material to prevent desiccation.

Where necessary, the trees will be given an overall pruning to restore the balance between roots and top growth or to restore the appearance of the trees.

Trees that have died or have been damaged beyond repair, shall be removed and replaced by the owner at his own expense with trees of a similar size, species and of equal value as approved by the Director of Planning and Development. Failure to replace damaged trees to a condition satisfactory to the Municipality shall result in the Municipality exercising its right to draw on the Letter of Credit.

If grades around trees to be protected are likely to change, the owner shall be required to take such precautions as dry welling, retaining walls and root feeding to the satisfaction of the Director of Planning and Development.

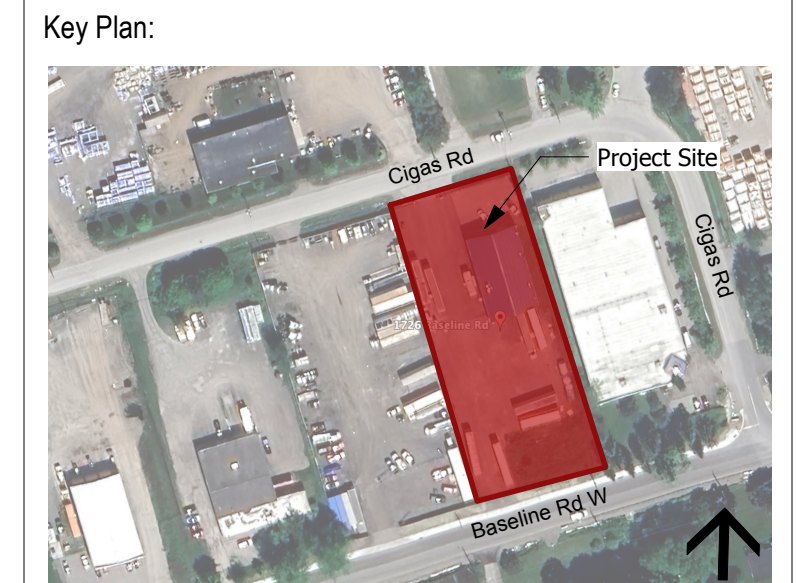
All excavation within the Tree Protection Zone (TPZ) around existing trees to be retained shall be hand dug.



2 Tree Preservation Detail  
 Scale: 1:50

**General Tree Protection Notes**

- All dimensions shown in millimetres.
- This detail does not represent any particular tree species.
- The Owner and/or Contractor shall take every precaution necessary to prevent damage to existing trees and vegetation to be retained.
- Tree protection measure layout and installation shall be reviewed and approved in writing by Consulting Arborist and Landscape Architect prior to commencement of any site activity.
- Tree protection to remain until all site activities, including landscaping, are complete.
- No construction activity, grade changes, surface treatment, compaction, excavation or stockpiling of any kind is permitted within the protected area unless noted otherwise on the drawings and confirmed during pre-construction meeting.
- No contaminants will be dumped or flushed where feeder roots of protected trees exist.
- No rigging cables will be wrapped around or installed in trees and/or protected areas.
- Maintain (Mow as required and when directed by contract administrator) existing vegetative cover within fenced area during construction.
- Tree protection to be adjusted only when needed to complete approved activities within TPZ. Upon completion tree protection shall be reinstated in consultation with the project arborist.
- Construction activities shown within the TPZ shall be conducted under the guidance and in consultation with an approved ISA Certified Arborist.

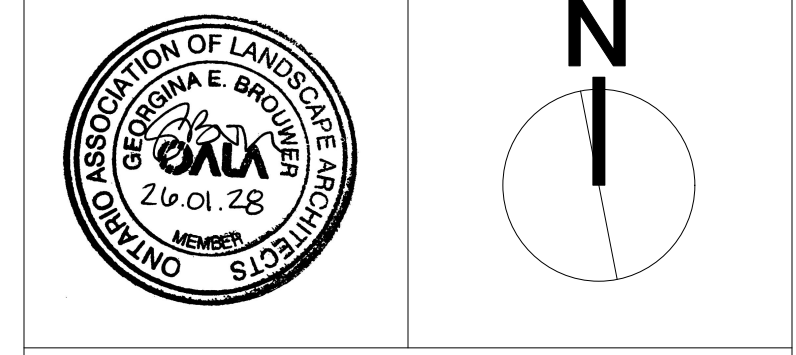


Legend:

Symbol	Property Line	Quantity	Notes
TPZ	Existing Trees to be Retained	2	Refer to Tree Inventory Table on L2.1.
TPZ	Proposed Deciduous Trees - See plant list for additional details	1	L2.1
TPZ	Proposed Coniferous Trees - See plant list for additional details	2	L2.1
TPZ	Proposed Shrub/Perennial/Vine- See plant list for additional details	3	L2.1
TPZ	Tree Protection Zone Fencing		
TPZ	Proposed Sod		
Xx	Tree Inventory No. - See Tree Inventory Chart and Arborist Report for additional details		

No.	Description	Date	By
5			
4			
3			
2	Issued for SPA Resubmission	26.01.28	GB
1	Issued for SPA	25.04.16	GB

Issue / Revision Schedule



Disclaimer:  
 All drawing information shall be checked and verified and any discrepancies reported in writing to the Designer before commencing any affected work. This drawing shall be used only for the project named on this drawing and for reference purposes only. This drawing shall not be scaled. This drawing is not for construction unless signed by the Designer. This drawing and all aspects of its content are the copyright property of Tropic Design. Reproduction in whole or in part, by any means whatsoever, without the express written permission of Tropic Design, is prohibited.

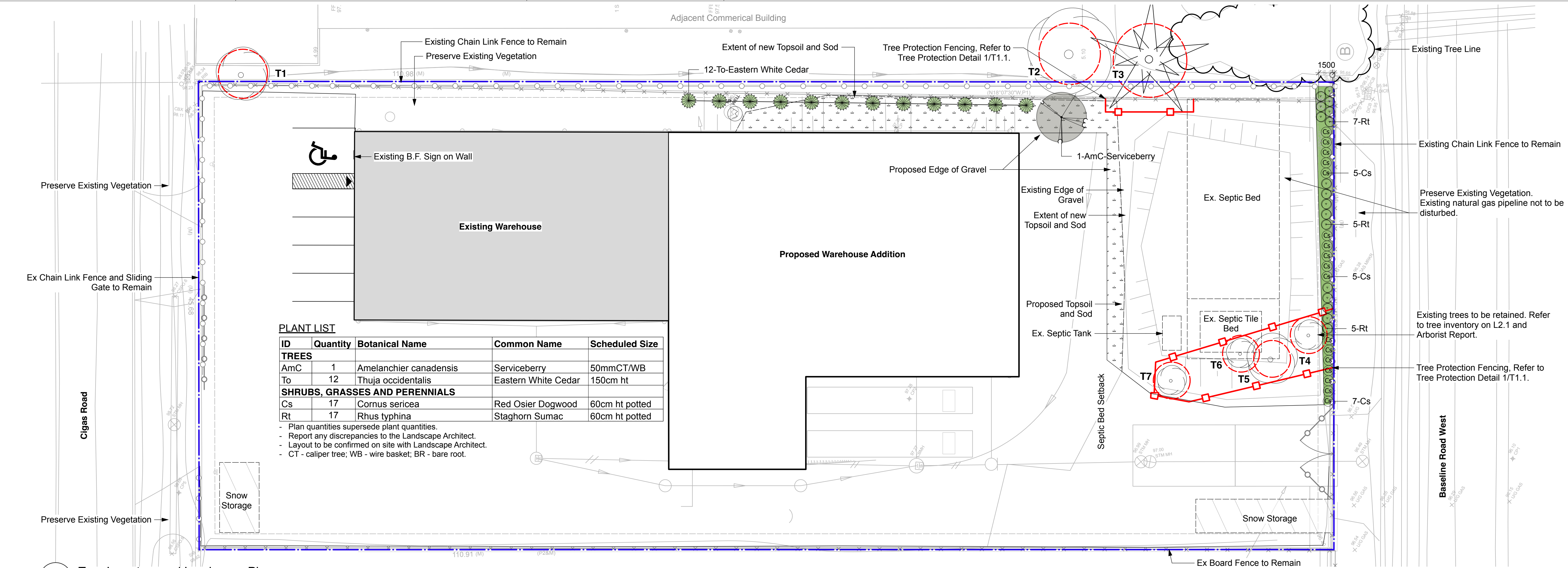
**NOT FOR CONSTRUCTION**

Client:  
**Cestoil Chemical Inc.**

Project:  
**Warehouse Addition**  
 1726 Baseline Rd, Courtice, ON

Drawing Title:  
**Tree Inventory and Landscape Plan**

Designed By: HC	Project #: 24.38
Drawn By: HC	Drawing #: <b>L1.1</b>
Approved By: GB	
Date: 25.02.18	



**PLANT LIST**

ID	Quantity	Botanical Name	Common Name	Scheduled Size
<b>TREES</b>				
AmC	1	Amelanchier canadensis	Serviceberry	50mmCT/WB
To	12	Thuja occidentalis	Eastern White Cedar	150cm ht
<b>SHRUBS, GRASSES AND PERENNIALS</b>				
Cs	17	Cornus sericea	Red Osier Dogwood	60cm ht potted
Rt	17	Rhus typhina	Staghorn Sumac	60cm ht potted

- Plan quantities supersede plant quantities.
- Report any discrepancies to the Landscape Architect.
- Layout to be confirmed on site with Landscape Architect.
- CT - caliper tree; WB - wire basket; BR - bare root.

1 Tree Inventory and Landscape Plan  
 Scale: 1:200

**TREE INVENTORY**

Tree #	Scientific Name	Common Name	DBH (cm)	Tree Protection Measures		TPZ (m)	Comments
				Remove	Preserve		
T1	<i>Tilia americana</i>	Basswood	~35		X	2.4	Adjacent Property, suckering at base
T2	<i>Robinia pseudoacacia</i>	Black Locust	~45		X	3	Adjacent Property
T3	<i>Picea pungens</i>	Blue Spruce	~50		X	3.6	Adjacent Property
T4	<i>Populus sp.</i>	Poplar	10		X	1.2	close to chain link fence
T5	<i>Robinia pseudoacacia</i>	Black Locust	15		X	1.8	
T6	<i>Robinia pseudoacacia</i>	Black Locust	7		X	1.2	
T7	<i>Robinia pseudoacacia</i>	Black Locust	5		X	1.2	Suckering at base

Date of Inspection: March 14, 2025. Arborist and Tree Assessment by ISA Certified Arborist Gina Brouwer (ON-0937A). Refer to Arborist Report.

**GENERAL LANDSCAPE NOTES**

- All planting and associated landscape work shall comply with the *Canadian Society of Landscape Architects - Canadian Landscape Standard*, latest edition.
- All nursery stock shall comply with the Canadian Nursery Landscape Association — *Canadian Nursery Landscape Association - Canadian Nursery Standard*, latest edition.
- Landscape work shall be carried out by experienced professionals with a minimum 5 years proven experience.
- The Contractor shall notify the Landscape Architect for review and approval of layout. Work that has been installed without layout approval that requires adjustment will be corrected at the Contractor's expense. The Landscape Architect reserves the right to adjust layout based on site conditions. Layout shall adhere to all authority clearances and setbacks. Trees shall not be directly over or under utilities.
- The Landscape Architect may reject any work, whether installed or not, that does not conform to specifications.
- The Contractor shall notify the Landscape Architect upon completion of work to arrange for substantial performance inspection and approval. Inspection shall be carried out during the leaf-on growing season.
- Plant material shall have nursery labels intact and trunk wrap and ties removed for substantial performance review. The Contractor shall remove all labels, tags and ties following substantial performance review.
- Corrective pruning shall be completed by the Contractor in accordance with *ISA Best Management Practice Pruning Standard* prior to inspection and include the removal of dead or broken branches, suckers and co-dominant leaders.
- Any leaning plant material shall be corrected by the Contractor prior to inspections.
- The Contractor shall carry out maintenance of all work immediately following installation until the end of the warranty period. Maintenance shall include all measures necessary to establish and maintain all plants and associated landscape work in an acceptable, vigorous and healthy condition including rodent protection, cultivating, weeding, watering, pruning and maintenance of all accessories.
- The Contractor shall notify the Landscape Architect at the end of the warranty period to arrange for final completion inspection. Inspection shall be carried out during the leaf-on growing season. The Contractor shall remove all staking prior to inspection for final completion if plant material is stable. Staking shall be left in place for removal by the Owner if plant material is not stable. At the time of final inspection all planting beds and tree pits shall be freshly cultivated, free of weeds, leaves, broken branches or debris.
- Any work that is not in satisfactory condition or does not meet the specifications shall be replaced within two (2) weeks of notification at the Contractor's expense. Replacement work shall include warranty equal to the original installation.

**GROWING MEDIA**

- All subsoil shall be scarified to be the specified depth prior to the installation of growing media. Growing media shall be mixed in to the scarified subsoil interface.
- On-site (preserved) soil to be used as growing media should be tested by the Owner's consultant for recommendations to be included in the Contractor's scope of work.
- The Contractor shall provide origin documentation for approval for all imported growing media. Imported growing media shall be tested by a reputable laboratory at the expense of the Contractor or Owner. The results of the soil test and recommendations are to be provided to the Landscape Architect for approval one week prior to work commencing. If necessary, recommendations from the laboratory are to be implemented at the Contractor's expense.
- Growing media shall not contain any extraneous physical or chemical properties that may detract from supporting plant growth, no subsoil contamination, roots or stones over 50mm diameter.
- Growing media depths shall be noted on the drawings and details. Growing media shall be installed in lifts and compacted to be firm under foot.
- Growing media shall meet Canadian Landscape Standard nutrient levels identified in Section 5.2.7 and properties for Level 3 Moderate
- Growing media properties shall be adjusted to meet requirements for L - low traffic lawn areas, trees and large shrubs; H - high traffic lawn areas; and P - planting areas.

**PLANT MATERIAL**

- Contractor shall verify all plant material on drawing(s) and plant material list(s) and report any discrepancies during the bidding process.
- All plants shall be healthy, vigorous, and free of disease, insect pests, and invasive or noxious plant species. All plant parts shall be free from defects, decay, disfigurements and injury.
- There shall be no substitutions of plants without prior written approval from the Landscape Architect.
- The Landscape Architect reserves the right to reject plant material after installation and throughout the warranty period.

**PLANTING**

- Planting shall only be carried out during periods that are normal for such work as determined by local weather conditions, when seasonal conditions are likely to provide successful adaptation of plants in their new environment.
- Plants shall be well watered prior to being planted.
- Where poor drainage or percolation is suspected or observed, the Contractor shall report it to the Landscape Architect and rectify the condition prior to planting.
- Plants shall be stabilized using methods such that the crown of each tree is permitted free movement but normal forces will not shift the rootball in the growing medium. All tree stabilization methods shall be such that they do not damage the plants.

**MULCH**

- Mulch shall be commercially prepared four-season aged pine bark. The Contractor shall submit a sample of mulch and source for approval prior to delivery.
- Mulch shall be free of debris, construction waste and hardwood chips.
- Mulch shall not be placed against trunks or on top of branches and foliage.

**WATERING**

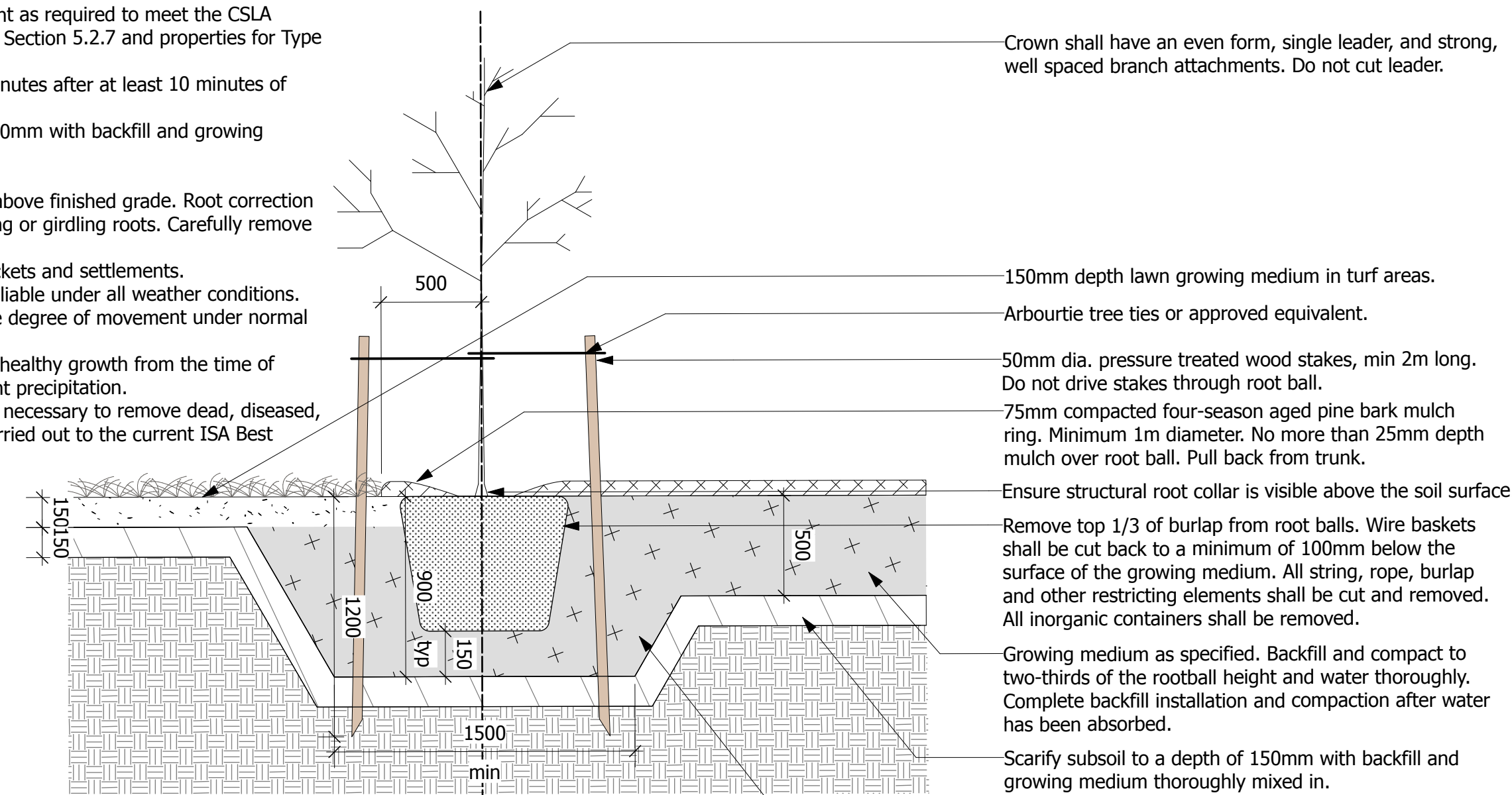
- The Contractor shall water all plants and turf areas immediately after planting to the depth of their root systems.
- The Contractor shall carry out supplemental watering of all new plants for the first full growing season under warranty.
- Watering shall supplement natural precipitation to ensure soil moisture content is maintained at 50 percent to 100 percent field capacity.
- A minimum frequency of once per month throughout the growing season is required. Apply water to the root area, around the trunk/stem and within the dripline to saturate the soil to a minimum of 500mm.
- The Contractor shall water all coniferous trees in late fall, prior to freeze-up.
- Watering bags may be used for trees. 20 gallon drip watering bags shall be installed at the base of each tree with no mulch between the bag and the trunk. The Contractor shall monitor bags and tree trunks for damage and repair/replace as required. Watering bags shall be removed during winter and at the end of the warranty period.
- If no automated irrigation system or on-site hose bib has been provided for watering operations, the Contractor shall provide water to the site.
- Watering operations shall not disturb or wash away mulch, soil or turf.
- The Contractor shall monitor new plantings for signs of drought.

**SOD**

- Sod all be designated and disturbed areas.
- Sod shall be certified Number One Grade Natural Grass Nursery Sod — "Kentucky Bluegrass/Fine Fescue Mix", grown and sold in accordance with the Nurse Sod Growers Association of Ontario.
- Approval of site preparation shall be obtained prior to commencement of sod placement.
- Fertilizer shall be applied as identified by growing medium test results.
- Sodding shall be carried out during periods when seasonal conditions provide successful rooting and continued growth. All sodding shall be conducted when growing media is free of frost, snow and standing water.
- Sod shall be pegged where required to provide secure anchorage. Pegs shall be removed before pedestrian traffic is permitted and after turf is well rooted.
- The Contractor shall install temporary barricades and signage to protect newly sodded areas from damage from pedestrian and vehicular traffic.
- Upon installation the Contractor shall water the sod to saturate the sod and upper 100mm of topsoil. After the sod and soil have dried sufficiently to prevent damage, it shall be rolled.
- The Contractor shall water sodded areas in sufficient quantities and at frequency required to maintain optimum soil moisture to a depth of 100mm until rooted and at weekly intervals during warranty growing season.
- The Contractor shall be responsible for mowing the sod areas at least once to a height of 50mm when or before it reaches a height of 75mm. The last mowing shall be within 48 hours of field review for acceptance.
- Sod shall be sufficiently established so that its roots are growing into the underlying growing medium with no visible seams and free of weeds for acceptance.

**General Notes**

- All proposed tree planting areas shall be tested for percolation, soil quality and pH that is capable of supporting healthy tree growth.
- Native backfill shall be used with soil amendment or replacement as required to meet the CSLA Canadian Landscape Standard for Growing Medium nutrients in Section 5.2.7 and properties for Type 3L in table T-5.3.5.1.
- Percolation shall be such that no standing water is visible 60 minutes after at least 10 minutes of moderate irrigation.
- Planting pit sides and bottom shall be scarified to a depth of 150mm with backfill and growing medium thoroughly mixed in.
- Trees shall be set plumb in the centre of planting pits.
- Trees shall be planted with the structural root collar 25-50mm above finished grade. Root correction may be required to remove excess soil or defects such as circling or girdling roots. Carefully remove any excess soil around trunk.
- Backfill, compact and water growing medium to prevent air pockets and settlements.
- Tree ties shall not damage the bark and shall remain soft and pliable under all weather conditions. Ties shall be installed so that the tree is permitted a reasonable degree of movement under normal forces.
- Water thoroughly during growing season to maintain vigorous, healthy growth from the time of delivery/installation to the end of warranty period to supplement precipitation.
- Pruning at the time of planting shall be limited to the minimum necessary to remove dead, diseased, damaged, crossing and defective branches. Pruning shall be carried out to the current ISA Best Management Practices Pruning Standard.
- All removed and excess material shall be disposed off site.



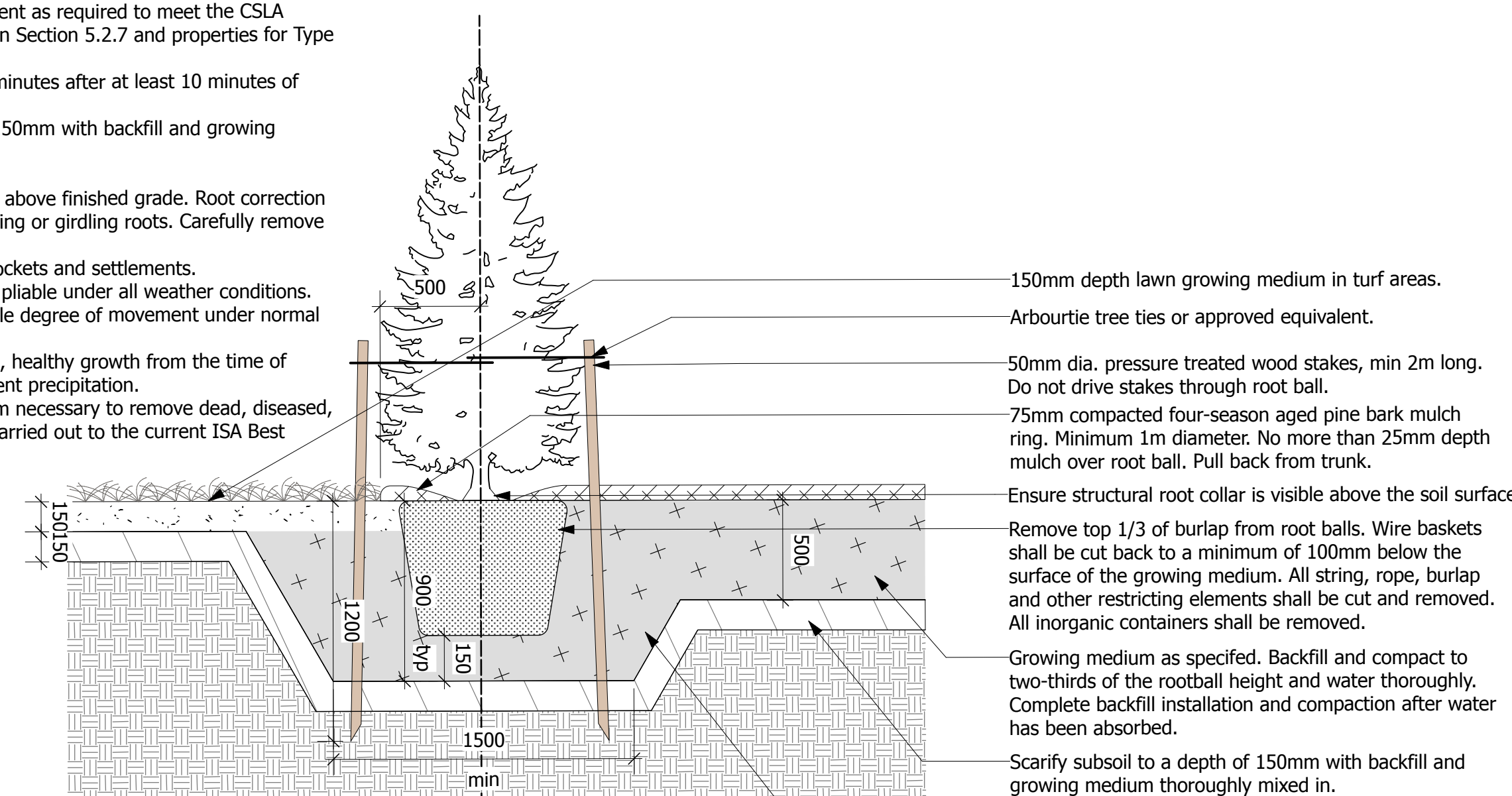
TYPE 1: Tree located in Lawn Area

TYPE 2: Tree located in Planting Area

**1 Deciduous Tree Planting**  
Scale: 1:25

**General Notes**

- All proposed tree planting areas shall be tested for percolation, soil quality and pH that is capable of supporting healthy tree growth.
- Native backfill shall be used with soil amendment or replacement as required to meet the CSLA Canadian Landscape Standard for Growing Medium nutrients in Section 5.2.7 and properties for Type 3L in table T-5.3.5.1.
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- Trees shall be set plumb in the centre of planting pits.
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- All removed and excess material shall be disposed off site.



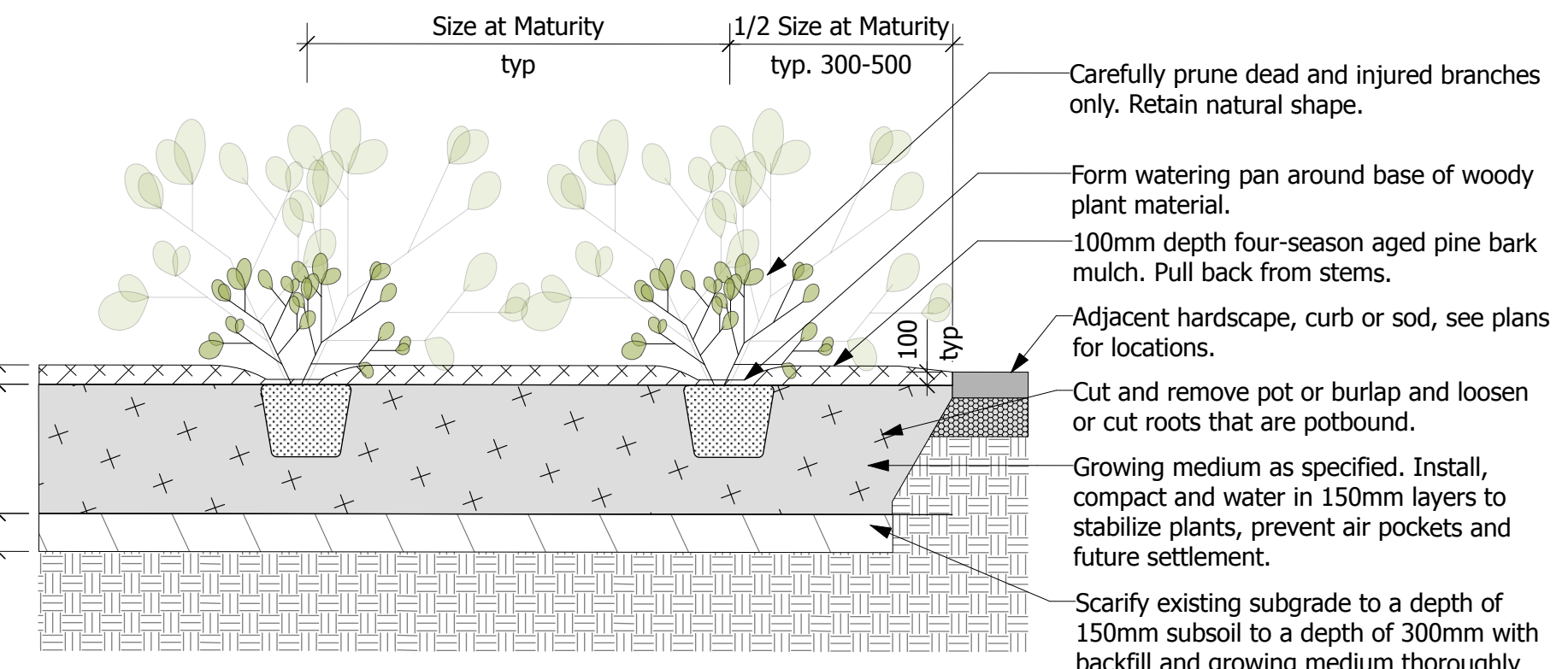
TYPE 1: Tree located in Lawn Area

TYPE 2: Tree located in Planting Area

**2 Coniferous Tree Detail**  
Scale: 1:25

**General Notes**

- Excavate continuous planting bed where woody shrubs and perennials are mass planted as shown on plans.
- All perennials and shrubs are to be planted in continuous planting beds unless otherwise noted.
- Planting pit sides and bottom shall be scarified to a depth of 150mm with backfill and growing medium thoroughly mixed in.
- Native backfill shall be used with soil amendment or replacement as required to meet the CSLA Canadian Landscape Standard for Growing Medium nutrients in Section 5.2.7 and properties for Type 2P in table T-5.3.5.3.
- Plants shall be set plumb in the planting beds.
- Continuously mulch planting beds with 100mm compacted depth four-season aged pine bark mulch.
- Water thoroughly during growing season to maintain vigorous, healthy growth from the time of delivery/installation to the end of warranty period to supplement precipitation.

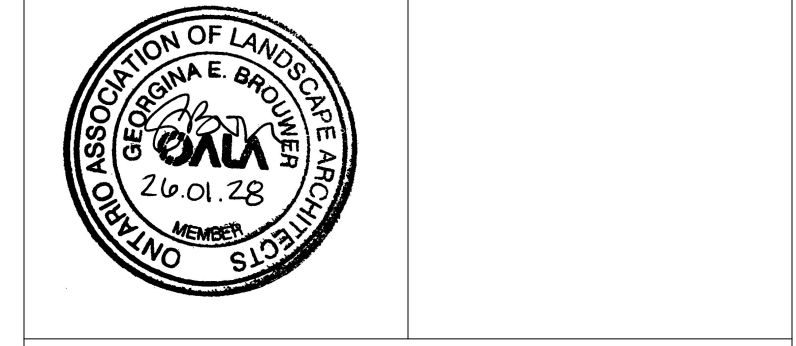


**3 Shrub Planting**  
Scale: 1:25

Key Plan:

Legend:

5			
4			
3			
2	Issued for SPA Resubmission	26.01.28	GB
1	Issued for SPA	25.04.16	GB
No.	Description	Date	By
Issue / Revision Schedule			



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**NOT FOR CONSTRUCTION**

Client:  
**Cestoil Chemical Inc.**

Project:  
**Warehouse Addition**  
1726 Baseline Rd, Courice, ON

Drawing Title:  
**Landscape Details  
Landscape Plan**

Designed By: HC	Project #: 24.38
Drawn By: HC	Drawing #: <b>L 2.1</b>
Approved By: GB	
Date: 25.02.18	