

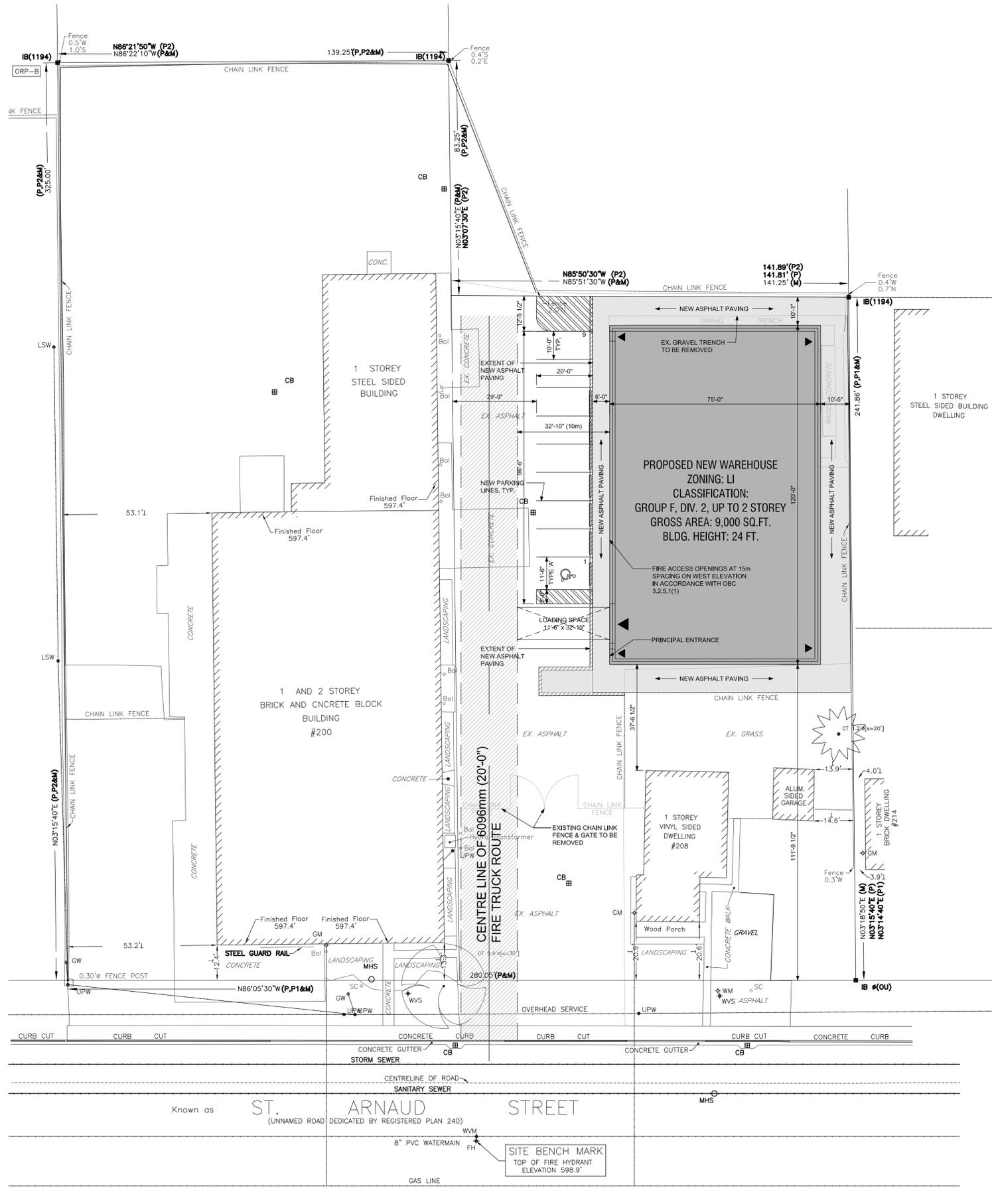
PROPOSED BUILDING ADDITION – SITE DATA

SITE ZONING:	LIGHT INDUSTRIAL (LI)	
LOT AREA =	34,151 SQ.FT.	(0.78 ACRES)
EXISTING HOUSE	1,461 SQ. FT.	
NEW WAREHOUSE ADDITION	9,000 SQ. FT.	
TOTAL BUILDING AREA	10,461 SQ. FT.	
BUILDING FOOTPRINT (LOT COVERAGE) =	10,724 SQ. FT. (30.63%)	
LANDSCAPE AREA REQUIRED 10% =	3,415 SQ. FT.	
LANDSCAPE AREA PROVIDED =	8,589 SQ. FT. = 25.15%	
MINIMUM FRONT YARD DEPTH =	29.50 FT.	
MINIMUM REAR YARD DEPTH =	26.20 FT.	
MINIMUM SIDE YARD WIDTH =	10.00 FT.	
PROPOSED BUILDING HEIGHT =	24.00 FT.	

TOWN OF AMHERSTBURG PARKING REQUIREMENTS

WAREHOUSE =	1 SPACE PER 2,153 SQ.FT.	
PARKING BREAKDOWN		
EX. HOUSE =	1,610 SQ.FT. = 2 SPACES	
NEW WAREHOUSE =	9,000 SQ.FT. = 5 SPACES	
TOTAL PARKING REQUIRED =	7 SPACES	
EXISTING PARKING SPACES =	2 SPACES	
TOTAL PARKING PROVIDED =	9 SPACES (INCLUDING 1 ACCESSIBLE)	

PROJECT: PROPOSED AUXILIARY STORAGE BUILDING		PROJECT NO: 8650	
ITEM	ONTARIO BUILDING CODE MATRIX	OBC REFERENCE	
1	Project Description: INDUSTRIAL BUILDING <input checked="" type="checkbox"/> New <input type="checkbox"/> Addition <input type="checkbox"/> Change of Use <input type="checkbox"/> Alteration	<input checked="" type="checkbox"/> Part 3 2.1.1.	<input type="checkbox"/> Part 9 1.1.2 (A) & 9.10.1.3
2	Major Occupancy(s) PROPOSED STORAGE BUILDING	3.1.2.1.(1)	9.10.2
3	Building Area (ft ²) 836.12 m ²	Total 836.12 m ²	1.1.3.2. (A) 1.4.1.2
4	Gross Area (ft ²) 836.12 m ²	Total 836.12 m ²	1.1.3.2. (A) 1.4.1.2
5	Number of Storeys Above Grade 1 Below Grade NONE	3.2.1.1. & 1.1.3.2.	(A) 1.4.1.2 & 9.10.4
6	Number of Streets Facing/Fire Fighter Access 1 STREET – UNSPRINKLERED	3.2.2.10 & 3.2.5	9.10.20
7	Building Classification GROUP F, DIV. 2, UP TO 2 STOREY	3.2.2.10 & 3.2.2.83	9.10.2
8	Sprinkler System Proposed – NO <input type="checkbox"/> Entire Building <input type="checkbox"/> Basement <input type="checkbox"/> In Lieu of Roof Rating <input type="checkbox"/> Not Required	3.2.2.10 & 3.2.2.83 3.2.1.5 3.2.2.17	9.10.8.2.4
9	Standpipe Required <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Existing	3.2.9.1	
10	Fire Alarm Required <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.4.	9.10.18
11	Water Service/Supply is Adequate <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> TBD	3.2.5.7	
12	High Building <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.6	
13	Permitted Construction <input type="checkbox"/> Combustible <input checked="" type="checkbox"/> Non-Combustible <input type="checkbox"/> Both Actual Construction <input type="checkbox"/> Combustible <input checked="" type="checkbox"/> Non-Combustible <input type="checkbox"/> Both	3.2.2.10 – 3.2.2.83	9.10.6
14	Mezzanine Area – N/A Occupant load based on <input type="checkbox"/> m ² /person <input checked="" type="checkbox"/> design of building	3.2.2.1.(3) – (8) 3.1.17	
15	Load 8 persons – Storage only	3.1.17.1 (2)	
16	Barrier-free Design <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain)	3.8	9.5.2
17	Hazardous Substances <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.3.1.2 & 3.3.1.19	9.10.1.3
18	Horizontal Assemblies – Fire Separations and Fire Resistance Ratings Fire Separation Floors <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Req'd n/g hrs <input checked="" type="checkbox"/> Noncombustible construction Mezz. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Req'd n/g hrs <input checked="" type="checkbox"/> Noncombustible construction Roof <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not Req'd n/g hrs <input checked="" type="checkbox"/> Noncombustible construction Supporting Assemblies – Fire Separations and Fire Resistance Ratings Fire Resistance Rating Where Required Above Floors n/g hrs <input checked="" type="checkbox"/> Noncombustible construction Mezz. n/g hrs <input checked="" type="checkbox"/> Noncombustible construction Roof n/g hrs <input checked="" type="checkbox"/> Noncombustible construction	3.2.2.10 – 83 & 3.2.1.4.	9.10.8
19	Spatial Separation – Construction of Exterior Walls Location North wall 165 s.m. 3.07m. – 6% 0% 1 HR – – – Y South wall 165 s.m. 11.5m. – 36% 0% n/o – – – Y East wall 257.1 s.m. 3.17m. – 100% 100% 1 HR – – – Y West wall 274.6 s.m. 16.96m. – 51% 7% 1 HR – – – Y	3.2.3. & 3.2.3.1.0	9.10.14. & 9.10.15.
20	Plumbing Fixture Requirements Male Female	Occupant Load 4 EC Table Number 3,7,4,9 Fixtures Required 1 Fixtures Provided 2	
21	Travel Distance 60 meters Sentence 2	3.4.2.5	
22	Interconnected Floor Spaces <input checked="" type="checkbox"/> No <input type="checkbox"/> 1st & 2nd Floors Only	3.2.8.2.(6)	



PROPOSED SITE PLAN
SCALE: 1" = 20'-0"

MBSI
METAL BUILDING SOLUTIONS INC.

ALEO ASSOCIATES INC.
CONSULTING ENGINEERS

LICENSED PROFESSIONAL ENGINEER
SEP. 23, 2024
P.L. NO. 100104366
PROVINCE OF ONTARIO

Issues
 Preliminary
 Bids
 Permits
 Construction
 SPA
 JULY 29, 2024
 PERMIT
 SEPT. 09, 2024

Project/Client
 PROPOSED NEW WAREHOUSE BUILDING
 208 ST. ARNAUD STREET
 TOWN OF AMHERSTBURG, ONTARIO

Sheet Title
 PROPOSED OVERALL SITE PLAN, SITE DATA
 AND OBC MATRIX

Drawn By
 OA

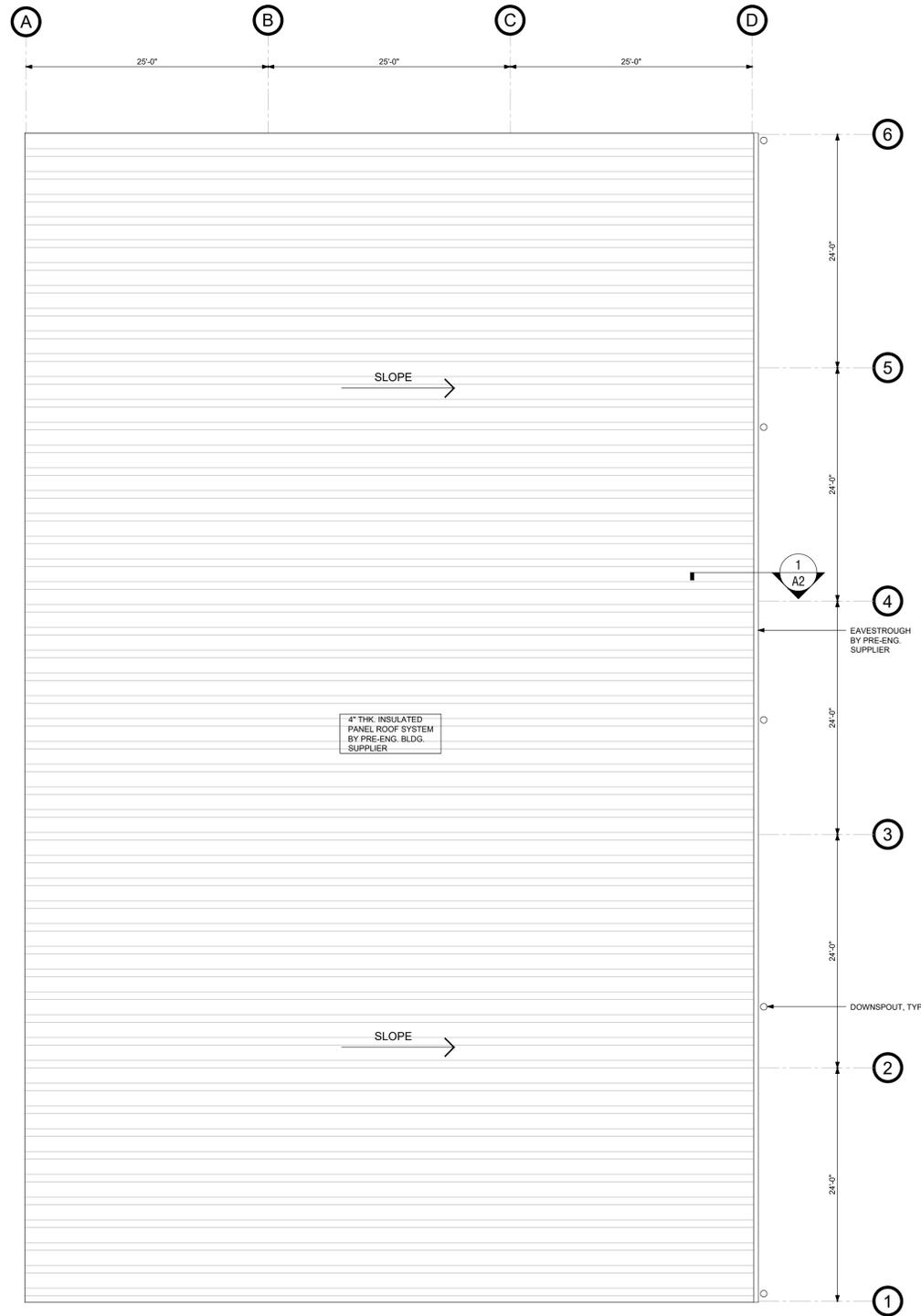
Checked By
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Date
 MAY, 2024

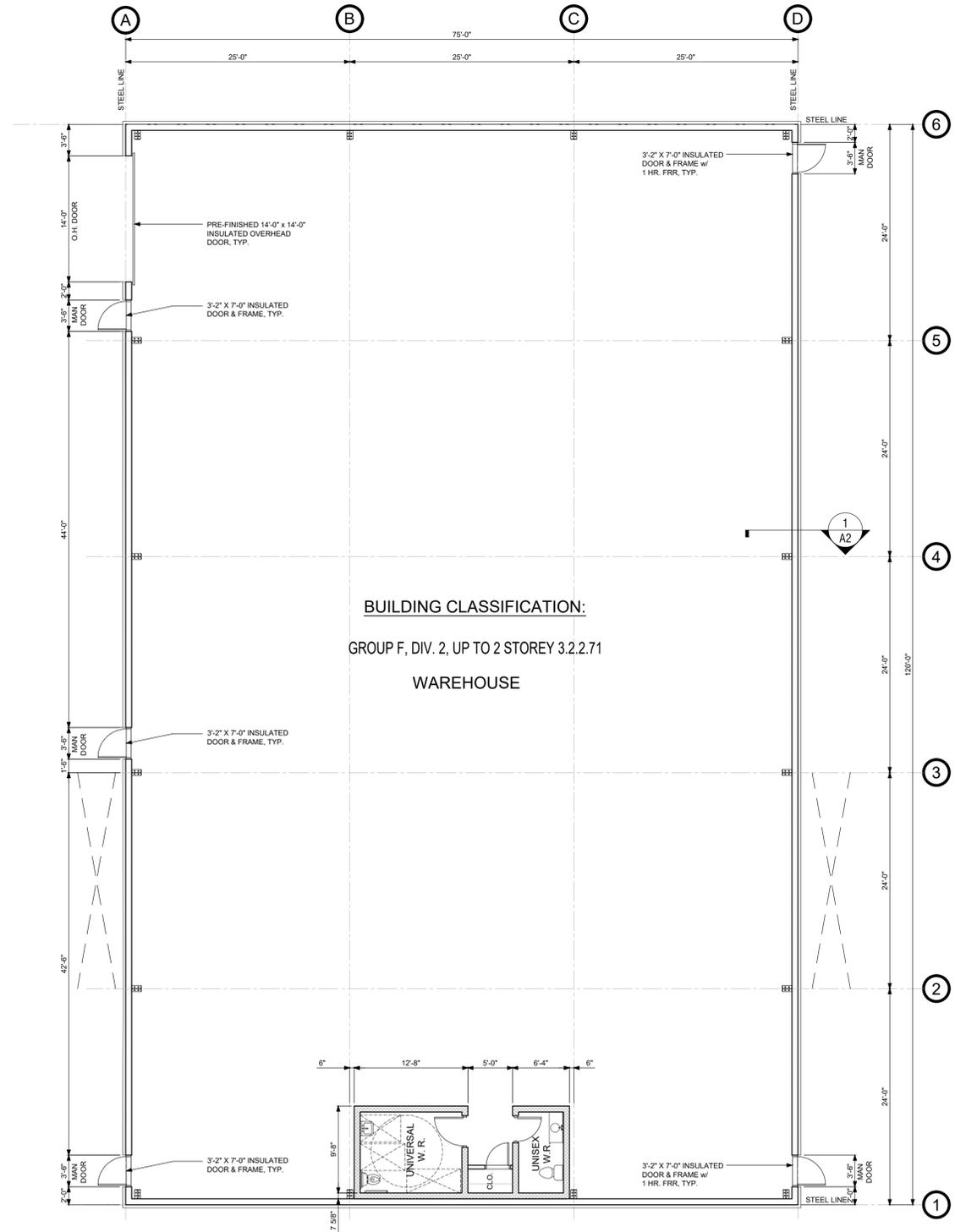
Project No.
 8650

Drawing No.
 A0

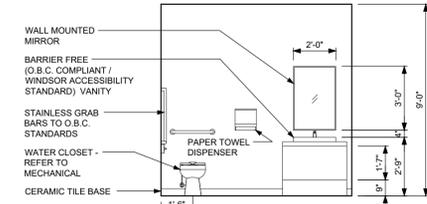
ALEO ASSOCIATES INC. – CONSULTING ENGINEERS



ROOF PLAN
SCALE: 1/8" = 1'-0"



FLOOR PLAN
SCALE: 1/8" = 1'-0"



1 UNIVERSAL WASHROOM ELEV.
SCALE: 1/4" = 1'-0"



Issuances	
<input type="checkbox"/>	Preliminary
<input type="checkbox"/>	Bids
<input checked="" type="checkbox"/>	Permits
<input type="checkbox"/>	Construction

SPA
JULY 29, 2024
PERMIT
SEPT. 07, 2024

Sheet Title
PROPOSED FLOOR PLAN & ROOF PLAN

Project/ Client
PROPOSED NEW WAREHOUSE BUILDING
208 ST. ARNAUD STREET
TOWN OF AMHERSTBURG, ONTARIO

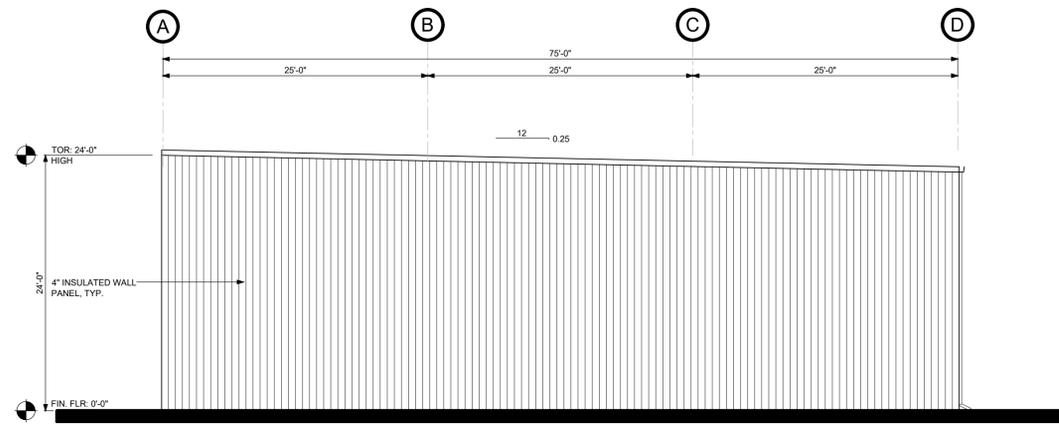
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OA

Checked By
PA

Date
MAY, 2024

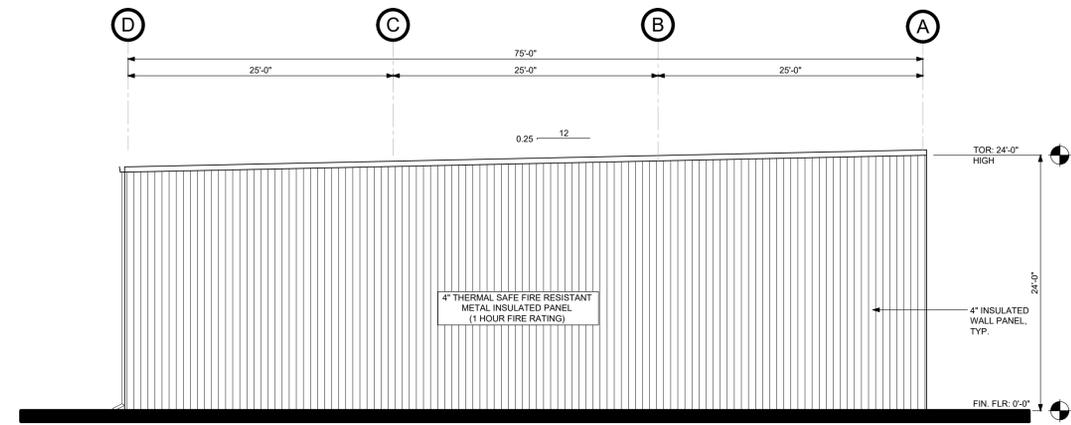
Project No.
8650

Drawing No.
A1



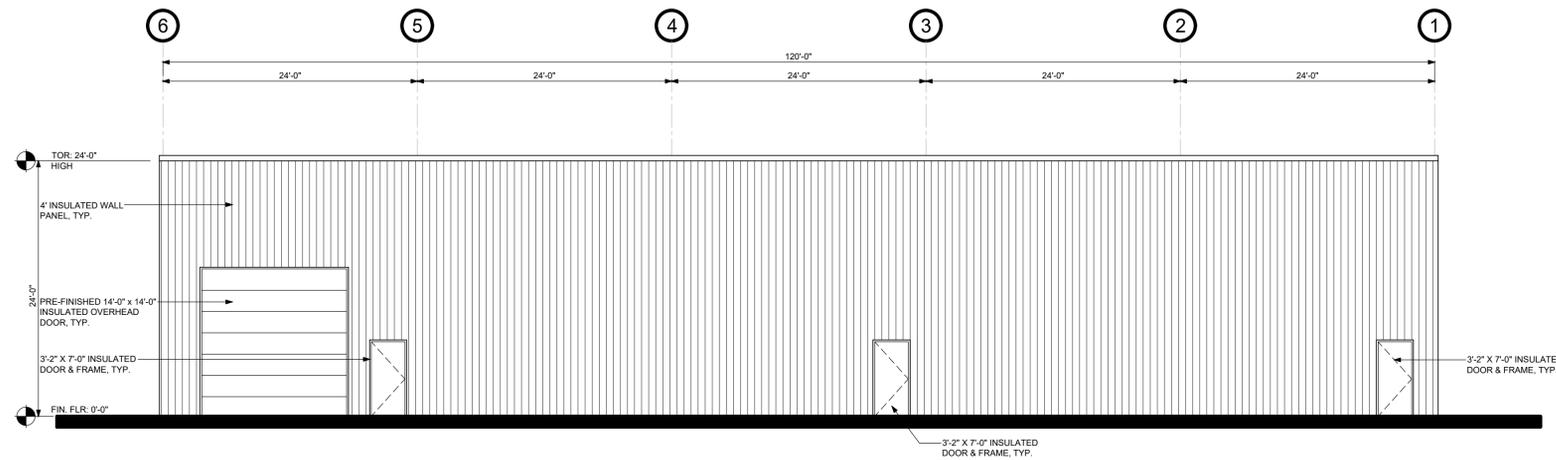
SOUTH ELEVATION

SCALE : 1/8" = 1'-0"
0 2 4 8 12 24 FEET



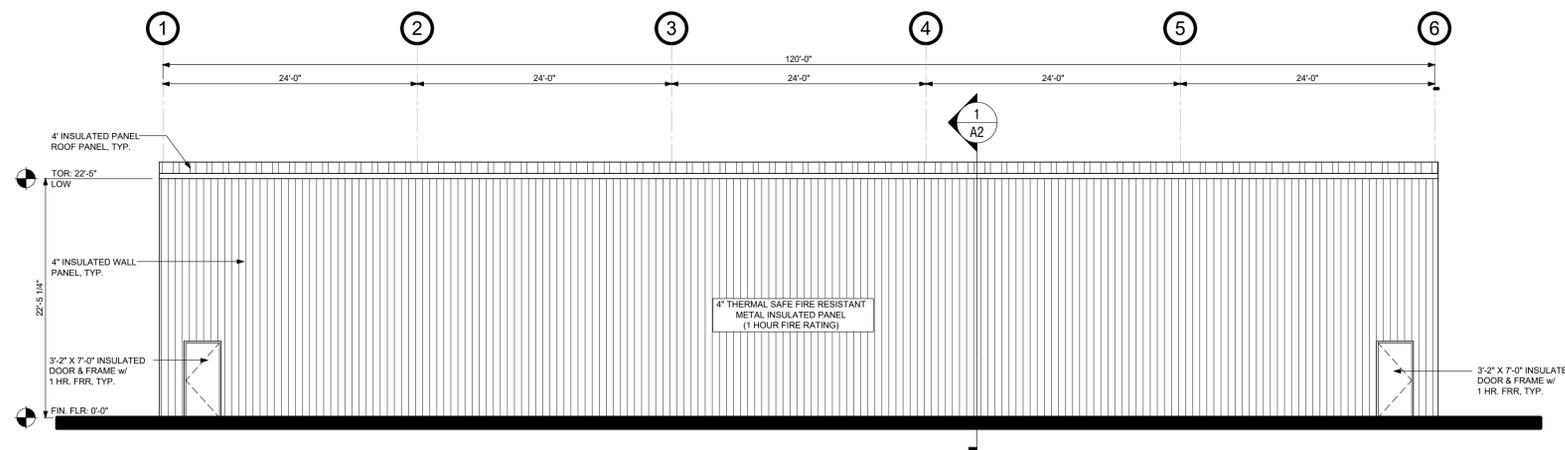
NORTH ELEVATION

SCALE : 1/8" = 1'-0"
0 2 4 8 12 24 FEET



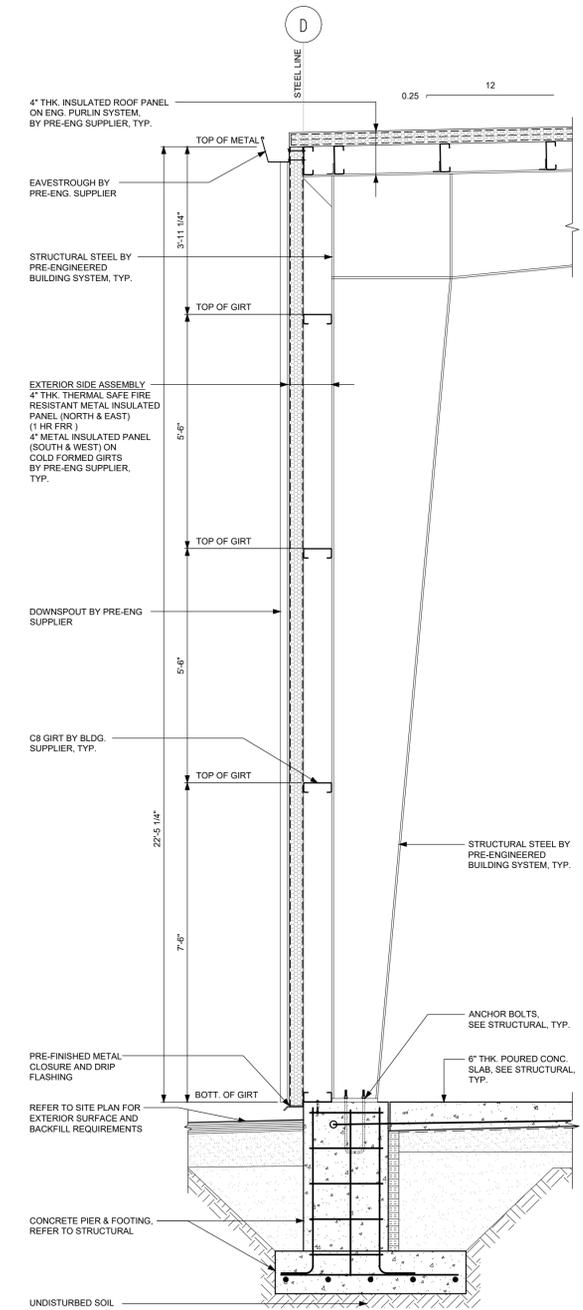
WEST ELEVATION

SCALE : 1/8" = 1'-0"
0 2 4 8 12 24 FEET



EAST ELEVATION

SCALE : 1/8" = 1'-0"
0 2 4 8 12 24 FEET



WALL SECTION

SCALE 1/2" = 1'-0"

GENERAL NOTES

1. GENERAL
 - a) THE ONTARIO BUILDING CODE, 2012, SHALL BE THE BASIS FOR THE DESIGN AND CONSTRUCTION.
 - b) ALL DIMENSIONS ON THE STRUCTURAL AND ARCHITECTURAL DRAWINGS MUST BE CHECKED AGAINST EACH OTHER AND EXISTING CONDITIONS. ANY INCONSISTENCIES MUST BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
 - c) SHOULD ANY OF THE DETAILED INSTRUCTIONS SHOWN ON THESE PLANS CONFLICT WITH THESE GENERAL NOTES, THE SPECIFICATIONS, OR WITH EACH OTHER, THE STRICTEST PROVISION SHALL GOVERN.
 - d) IT IS SOLELY THE RESPONSIBILITY OF EACH CONTRACTOR TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE ENGINEER IS NOT ENGAGED IN, AND DOES NOT SUPERVISE CONSTRUCTION.
 - e) THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS FULLY COMPLETED. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE, AND TO ENSURE THE STABILITY OF THE BUILDING AND ITS COMPONENTS, AND THE ADEQUACY OF TEMPORARY OR INCOMPLETE CONNECTIONS, DURING ERECTION. THIS INCLUDES THE ADDITION OF ANY SHORING, SHEETING, TEMPORARY GUYS, BRACING OR TIEDOWNS THAT MIGHT BE NECESSARY. IF APPLIED, THEY SHALL BE REMOVED AS CONDITIONS PERMIT, AND SHALL REMAIN THE CONTRACTOR'S PROPERTY. THE ENGINEER TAKES NO RESPONSIBILITY FOR CONSTRUCTION MEANS AND METHODS OR JOB SITE SAFETY DURING CONSTRUCTION. PROCESSING AND/OR REVIEWING SUBMITTALS MADE BY THE CONTRACTOR WHICH MAY CONTAIN INFORMATION RELATED TO CONSTRUCTION METHODS OR SAFETY ISSUES, OR PARTICIPATION IN MEETINGS WHERE SUCH ISSUES MAY BE DISCUSSED, SHALL NOT BE CONSTRUED AS VOLUNTARY ASSUMPTION BY THE ENGINEER OF ANY RESPONSIBILITY FOR SAFETY PROCEDURES.
 - f) EQUIPMENT LOADS, OPENINGS AND STRUCTURE IN ANY WAY RELATED TO MECHANICAL AND ELECTRICAL REQUIREMENTS ARE SHOWN FOR BIDDING PURPOSES ONLY. THE CONTRACTOR SHALL COORDINATE THIS INFORMATION WITH THE INVOLVED TRADES BEFORE PROCEEDING WITH SUCH PORTION OF THE WORK. EXTRA COSTS RELATED TO VARIATION IN THESE REQUIREMENTS TO BE BORNE BY THE APPROPRIATE CONTRACTOR.
2. REVIEW OF CONSTRUCTION

THE GENERAL CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR FULL SUPERVISION OF CONSTRUCTION WORK. SITE VISITS AND REVIEW BY ALEO ASSOCIATES INC. ARE INTENDED FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH GENERAL DESIGN CONCEPT AND THE GENERAL REVIEW AS REQUIRED BY THE ONTARIO BUILDING CODE. REVIEW BY ALEO ASSOCIATES INC. SHALL NOT BE CONSTRUED AS THE CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS, AND FOR MEETING ALL THE REQUIREMENTS OF THE CONSTRUCTION AND CONTRACT DOCUMENTS.
3. DESIGN LOADS AND DATA:
 - a) GRAVITY LOAD SHALL BE AS NOTED ON FLOOR & ROOF FRAMING PLANS.
 - b) GROUND SNOW LOAD:
 - $S = I_s [S_0(Cb/CwCsc) + S_f]$
 - $I_s = 1.0$ (SLS - NORMAL-IMPORTANCE CATEGORY)
 - $I_s = 0.90$ (SLS - NORMAL-IMPORTANCE CATEGORY)
 - $S_0 = 0.90$ kPa (GROUND SNOW LOAD)
 - $C_b = 0.80$ (BASIC ROOF SNOW LOAD)
 - $C_w = 1.0$ (WIND EXPOSURE FACTOR)
 - $C_s = 1.0$ (SLOPE FACTOR)
 - $C_a = 1.0$ (SHAPE FACTOR)
 - $S_f = 0.4$ kPa (ASSOCIATED RAIN LOAD)
 - c) WIND LOAD (BUILDING AS A WHOLE):
 - $p = I_w q C_e C_g C_p$
 - $I_w = 1.0$ (SLS - NORMAL-IMPORTANCE CATEGORY)
 - $I_w = 0.75$ (SLS - NORMAL-IMPORTANCE CATEGORY)
 - $q = 0.47$ (REFERENCE VELOCITY PRESURE (1100))
 - EXPOSURE CATEGORY 'B'
 - $C_e = (h/10)^{0.20}$, NOT LESS THAN 0.90
 - $C_g = 0.9$ (SEE NBC)
 - $C_p = 0.9$ (SEE NBC)
 - d) WIND LOAD (EXTERNAL PRESSURE FOR DESIGN OF COMPONENTS):
 - $p = I_w q C_e C_g C_p$
 - $I_w = 1.0$ (SLS - NORMAL-IMPORTANCE CATEGORY)
 - $I_w = 0.75$ (SLS - NORMAL-IMPORTANCE CATEGORY)
 - $q = 0.47$ (REFERENCE VELOCITY PRESURE (1100))
 - EXPOSURE CATEGORY 'B'
 - $C_e = (h/10)^{0.20}$, NOT LESS THAN 0.90
 - $C_g = 2.5$
 - $C_p = 0.9$ (SEE NBC 2005)
 - e) WIND LOAD (INTERNAL PRESSURE FOR DESIGN OF COMPONENTS):
 - $p = I_w q C_e C_g C_p$
 - $I_w = 1.0$ (SLS - NORMAL-IMPORTANCE CATEGORY)
 - $I_w = 0.75$ (SLS - NORMAL-IMPORTANCE CATEGORY)
 - $q = 0.47$ (REFERENCE VELOCITY PRESURE (1100))
 - EXPOSURE CATEGORY 'B'
 - $C_e = (h/10)^{0.20}$, NOT LESS THAN 0.90
 - $C_g = 2.0$
 - $C_p = -0.15$ to 0 (CATEGORY 3)
4. FOUNDATIONS
 - a) FOOTINGS SHALL BE PLACED ON NATURAL UNDISTURBED SOIL CAPABLE OF SUSTAINING AN ALLOWABLE NET BEARING CAPACITY OF 3000 PSF.
 - b) ALL FOOTING EXCAVATIONS SHALL BE REVIEWED AND APPROVED BY ENGINEER PRIOR TO PLACING CONCRETE.
 - c) PROVIDE 10 MPa LEAN CONCRETE UNDER FOUNDATIONS FOR ACCIDENTAL OVER-EXCAVATIONS AND SOFT SPOTS.
 - d) ALL EXCAVATION AND BACKFILLING SHALL BE IN ACCORDANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT, LATEST EDITION.
 - e) BACKFILL AGAINST BOTH SIDES OF WALLS EQUALLY UNTIL THE LOWER ELEVATION IS ATTAINED.
 - f) PROVIDE A MIN. 2" THICK LAYER OF GRANULAR BACKFILL TO THE FULL HEIGHT OF ALL BASEMENT AND RETAINING WALLS.
 - g) ALL FILL MATERIAL SHALL BE AS SPECIFIED ON THE DRAWINGS.
 - h) UNIFORMLY COMPACTED GRANULAR 'A' IN MAXIMUM 10" LOOSE LIFTS TO 100% OF STANDARD PROCTOR MAXIMUM DRY DENSITY.
 - i) UNIFORMLY COMPACTED GRANULAR 'B' TYPE 1 IN MAXIMUM 10" THICK LOOSE LIFTS TO 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY.
 - j) UNIFORMLY COMPACT NATIVE MATERIAL TO 95% OF STANDARD PROCTOR MAXIMUM DRY DENSITY BY APPROVED METHOD.
 - k) KEEP FOUNDATION EXCAVATIONS FREE OF WATER AT ALL TIMES.
5. CONCRETE
 - a) COMPLY TO THE FOLLOWING: CSA A23.1, A23.2, AND A23.3, LATEST EDITIONS.
 - b) CONCRETE ULTIMATE COMPRESSION STRENGTH AT 28 DAYS SHALL BE 20 MPa FOR FOOTINGS; 25 MPa FOR FOUNDATION WALLS, PIERS, SUSPENDED SLABS AND FLOOR SLABS ON GRADE; 32 MPa FOR ALL OUTSIDE CONCRETE.
 - c) THE MAXIMUM WATER/CEMENT RATIO SHALL BE 0.50 FOR FLOOR SLABS ON-GRADE AND 0.55 FOR ALL OTHER CONCRETE.
 - d) USE A MID-RANGE WATER REDUCING ADMIXTURE IN THE SLAB-ON-GRADE CONCRETE AS REQUIRED TO ACHIEVE THE SPECIFIED WATER/CEMENT RATIO.
 - e) CONCRETE COVER FOR REINFORCING STEEL SHALL BE 3" FOR CONCRETE CAST AGAINST EARTH; 2" FOR WALLS; AND 1 1/2" FOR PIERS.
 - f) ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE BETWEEN 5% AND 7% AIR ENTRAINMENT.
 - g) MAXIMUM SLUMP: 3" FOR FLOOR SLABS, & 3 1/2" FOR ALL OTHER CONCRETE.
 - h) MECHANICALLY VIBRATE ALL CONCRETE.
 - i) CEMENT TYPE: PORTLAND CEMENT TYPE 10.
6. REINFORCING STEEL
 - a) REINFORCING STEEL SHALL COMPLY TO CSA G30 18M LATEST EDITION.
 - b) REINFORCING STEEL SHALL BE DEFORMED, HARD GRADE AND HAVING A MINIMUM YIELD STRENGTH OF 400 MPa (60 KSI).
 - c) ALL BAR SPLICES AND DEVELOPMENT LENGTHS SHALL COMPLY TO CSA STANDARD.
 - d) ALL BARS MARKED CONTINUOUS SHALL BE TERMINATED IN HOOKS AND DEVELOPED BY CLASS B LAP WHERE SPLICED.
 - e) W/M SHALL BE FLAT SHEETS (NOT ROLLS).

7. STRUCTURAL STEEL

- a) ALL STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH S16.1, LATEST EDITIONS.
- b) MATERIALS: ROLLED SHAPES TO G40 21-350W; HOLLOW STRUCTURAL STEEL TO G40 21 350W CLASS C, ROLLED STEEL PLATES TO ASTM A36; COLD FORMED SHAPES TO S136 Fy=350W; ELECTRODES TO CSA W48.1 E70-XX; BOLTS TO ASTM A325; AND ANCHOR BOLTS Fy = 300W.
- c) ALL CONNECTION LOADS INDICATED ON THE DRAWINGS ARE FACTORED LOADS UNO. CONNECTIONS FOR COMPOSITE BEAMS OR GIRDERS SHALL BE DOUBLE ANGLE CONNECTIONS AND EACH CONNECTION SHALL BE DESIGNED TO RESIST 100% OF THE MAXIMUM TOTAL FACTORED UNIFORM LOAD OF THE MEMBER. EACH CONNECTION FOR NON-COMPOSITE BEAMS OR GIRDERS SHALL BE DESIGNED TO RESIST 60% OF THE MAXIMUM TOTAL FACTORED UNIFORM LOAD OF THE MEMBER. NON-COMPOSITE GIRDER TO COLUMN CONNECTIONS SHALL BE DOUBLE ANGLE CONNECTIONS. MOMENT CONNECTIONS SHALL BE DESIGNED TO RESIST 100% OF THE BEAM BENDING MOMENT UNO. FOR ALL OTHER MEMBERS, WELDING AND BOLTING SHALL DEVELOP THE MAXIMUM TOTAL FACTORED UNIFORM LOAD CAPACITY OF THE MEMBERS WHERE THE LOADS ARE NOT SHOWN.
- d) ALL FIELD CONNECTIONS SHALL BE BOLTED WITH 3/4" Ø BOLTS UNLESS WELDING IS SPECIFIED ON THE DRAWINGS.
- e) EXPANSION ANCHORS: MILT "KWIK BOLT 3" OR APPROVED EQUAL U.N.O. EMBEDMENT LENGTH FOR EXPANSION ANCHORS IN SOLID CONCRETE OR CONC. FILLED MASONRY SHALL BE:
 - 1/2" DIAMETER = 3 1/2"
 - 5/8" DIAMETER = 4"
 - 3/4" DIAMETER = 5"
- f) SLEEVE ANCHORS: MILT "HLC SLEEVE ANCHOR" OR APPROVED EQUAL U.N.O. EMBEDMENT LENGTH FOR SLEEVE ANCHORS IN HOLLOW CONCRETE BLOCK SHALL BE: 1/2" DIAMETER = 2 1/2" U.N.O.
- g) ALL STRUCTURAL STEEL SHALL BE CLEAN OF RUST OR ANY OTHER FOREIGN MATERIAL AND SHALL RECEIVE ONE PRIME COAT OF RUST INHIBITIVE METAL PRIMER COLOURED GREY CONFORMING TO C.G.S.B. (C-404-1079). DO NOT PAINT SURFACES AT AREAS OF CONNECTION UNTIL AFTER THE CONNECTION IS MADE.
- h) DO NOT PAINT STEEL IN CONTACT WITH CONCRETE. STEEL THAT IS TO BE GALVANIZED OR STEEL THAT IS TO RECEIVE SPRAYED FIRE-PROOFING.
- i) STRUCTURAL STEEL ERECTOR SHALL PROVIDE ALL NECESSARY TEMPLATES AND TEMPORARY BRACING.
- j) ALL COLUMN ENDS ARE TO BE MILLED AND WELDED TO BASE PLATES.
- k) ALIGN STRUCTURE BEFORE PERMANENT WELDING OR BOLTING IS BEGUN. PROVIDE SHOP WELDED ANCHORS FOR THE ATTACHMENT OF MASONRY TO STRUCTURAL STEEL COLUMNS AT 2"Ø C. VERT. AT ALL LOCATIONS IN WHICH THE COLUMN FACE IS ADJACENT TO CONCRETE BLOCK UNO. ANCHORS SHALL BE GALV. ADJUSTABLE FLEX-O-LOK W/MODEL BL9 TIES BY BLOK-LOK OR EQUIVALENT.
- m) PROVIDE HOLES AS REQUIRED FOR OTHERS. REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS. IF OPENING IS NOT SHOWN ON THE STRUCTURAL DRAWINGS, OBTAIN PRIOR APPROVAL.
- n) REFER TO ARCHITECTURAL DRAWINGS FOR ALL MISCELLANEOUS STRUCTURAL STEEL THAT IS NOT SHOWN OR LABELLED ON THE STRUCTURAL DRAWINGS.
- o) WELDING SHALL COMPLY TO THE LATEST ISSUE OF CSA STANDARD W59.03.
- p) STRUCTURAL STEEL CONTRACTOR SHALL BE CERTIFIED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA STANDARD W47.03 FOR DIVISION 1 OR 2 CERTIFICATION.
- q) STRUCTURAL SHOP DRAWINGS SHALL BE STAMPED AND SIGNED BY A LICENSED ENGINEER FOR THE CERTIFICATION OF THE DESIGN OF THE CONNECTIONS.

8. CHANGES

- a) NO CHANGES SHALL BE MADE TO THE DESIGN WITHOUT ENGINEERS PERMISSION.

9. NOTIFICATIONS

- a) CONTRACTOR SHALL NOTIFY ENGINEER OF SIGNS OF DISTRESS OR ANY OTHER INDICATIONS OF ACTUAL OR POTENTIAL DAMAGE TO THE BUILDING.

PRE-ENGINEERED BLDG. NOTES:

1. PRE-ENGINEERED STRUCTURE REFER TO PRE-ENGINEERED BUILDING DRAWINGS PREPARED BY MANUFACTURER FOR ADDITIONAL INFORMATION AND FOR LAYOUT PURPOSES.
2. SHOP DRAWINGS FOR THE PRE-ENGINEERED BUILDING SHALL BE STAMPED AND SIGNED BY A LICENSED PROFESSIONAL ENGINEER AND MUST BE SUBMITTED PRIOR TO CONSTRUCTION. DRAWINGS SHALL CLEARLY SHOW DESIGN LOADS, DEFLECTION CRITERIA & INDICATE COLUMN REACTIONS AT THE FOUNDATION.
3. BUILDING FRAME DRIFT (SWAY) TO BE LIMITED TO L/240 OR 1 1/4" (MAX) AT THE EAVE FOR FOR THE WORST CASE TOTAL LOADING CONDITION.

TESTING AND FIELD REVIEWS

- a) THE FOLLOWING ITEMS REQUIRE TESTING OR INSPECTION BY A CERTIFIED INDEPENDENT TESTING OR INSPECTION AGENCY UNLESS NOTED OTHERWISE. THE AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS TO THE STRUCTURAL ENGINEER OF RECORD, ARCHITECT AND GENERAL CONTRACTOR.
- b) THE GENERAL CONTRACTOR SHALL NOTIFY THE INSPECTION AND TESTING AGENCY IN AMPLE TIME OF HIS WORK SCHEDULE AND ALL CHANGES THERETO, ALSO CO-OPERATE FULLY WITH THE TESTING AND INSPECTION AGENCY ON THE PROJECT.
- c) THE TESTING AND INSPECTION AGENCY SHALL BE PAID FROM THE TESTING ALLOWANCE SPECIFIED IN THE CONTRACT DOCUMENTS.
- d) THE FOLLOWING TESTING SCHEDULE IS RECOMMENDED. THE CONTRACTOR SHALL OBTAIN PROPOSALS FROM TESTING AND INSPECTION AGENCIES TO CARRY OUT TESTING IN ACCORDANCE WITH THE TABLE BELOW AND SUBMIT TO THE ARCHITECT FOR REVIEW AND SELECTION.

ITEM	FREQUENCY	COMMENTS
PROCTOR TEST FOR COMPACTION OF GRANULAR BASE AND SUB-BASE FILL MATERIALS	BUILDING/TERRACE ONE TEST / 1000 sq.ft.	BOTH BASE AND SUB-BASE SHALL BE TESTED AT THE SPECIFIED FREQUENCY. AREAS THAT FAIL SHALL BE RE-COMPACTED AND RE-TESTED UNTIL A SUCCESSFUL TEST IS ACHIEVED
SIEVE ANALYSIS	ONE TEST FOR GRANULAR 'A' & GRANULAR 'B' MATERIAL USED	
CONCRETE COMPRESSIVE STRENGTH TESTS	ONE TEST	CONCRETE TESTS SHALL CONSIST OF (4) CYLINDERS PROPERLY LABELED SHOWING LOCATION AND DATE OF POURING. TEST (1) CYLINDER AT 7 DAYS AND (2) CYLINDERS AT 28 DAYS. SHOULD THE 7 & 28 DAY STRENGTH TEST FAIL TO MEET THE DESIGN STRENGTH, THE 4TH CYLINDER SHALL BE TESTED AT 90 DAYS
CONCRETE SLUMP TEST	EACH TIME CYLINDERS ARE CAST FOR COMPRESSIVE STRENGTH TESTS	

- e) THE FOLLOWING FIELD REVIEWS ARE REQUIRED. THE CONTRACTOR SHALL OBTAIN PROPOSALS FROM TESTING AND INSPECTION AGENCIES TO CARRY OUT FIELD REVIEWS IN ACCORDANCE WITH THE TABLE BELOW AND SUBMIT TO THE ARCHITECT FOR REVIEW AND SELECTION.

ITEM	FREQUENCY	INSPECTION BY	COMMENTS
FOOTING EXCAVATIONS/ BEARING SOIL	PRIOR TO PLACING CONCRETE AT THE COMMENCEMENT OF WORK AND PART-TIME HEREAFTER IF CONDITIONS CHANGE OR WHEN SPECIAL ATTENTION IS REQ'D, THE APPROPRIATE CONSULTANTS SHALL BE NOTIFIED	TESTING & INSPECTION AGENCY AND STRUCTURAL ENGINEER	- BEARING CAPACITY - REMOVAL OF DELETERIOUS MATERIAL - ELIMINATION OF GROUNDWATER - SPECIAL CONDITIONS REQUIRING ATTENTION
PROOF ROLLING OF SUB-GRADE SOIL	FULL TIME INSPECTION	TESTING & INSPECTION AGENCY	- BUILDING INTERIOR - EXTERIOR PAVED AREAS
REINFORCING STEEL	PRIOR TO PLACING CONCRETE AT THE COMMENCEMENT OF WORK AND PART-TIME THEREAFTER	TESTING & INSPECTION AGENCY	FINAL PLACEMENT OF REBAR. SPECIAL CONDITIONS THAT REQUIRE INSPECTION WILL BE SPECIFIED BY THE ENGINEER ON SITE
FLOOR SLAB-ON-GRADE	PRIOR TO PLACING CONCRETE	STRUCTURAL ENGINEER	NOTIFY STRUCTURAL ENGINEER PRIOR TO POURING CONCRETE
STRUCTURAL STEEL	RANDOMLY THROUGHOUT ERECTION	STRUCTURAL ENGINEER	NOTIFY STRUCTURAL ENGINEER PRIOR TO COMMENCEMENT OF WORK.

SHOP DRAWINGS AND SUBMITTALS

- a) SUBMIT 5 (FIVE) COPIES OF ALL SHOP DRAWINGS AND SUBMITTALS.
- b) SHOP DRAWINGS AND/OR SUBMITTALS THAT REQUIRE CERTIFICATION BY QUALIFIED PROFESSIONAL ENGINEER SHALL HAVE ORIGINAL SIGNATURE OF AN ENGINEER LICENSED IN THE PROVINCE OF ONTARIO REJECTED WITHOUT REVIEW.
- c) SHOP DRAWINGS THAT REQUIRE CERTIFICATION BY A PROFESSIONAL ENGINEER MUST BE STAMPED AT THE TIME REQUIRING ENGINEERS CERTIFICATION ARE NOT STAMPED AS REQUIRED, THEY WILL BE REJECTED WITHOUT REVIEW.
- d) THE CONTRACTOR SHALL ALLOW THE CONSULTANT A MINIMUM OF 10 WORKING DAYS TO REVIEW SHOP DRAWINGS IS REQUIRED. ANOTHER 10 WORKING DAYS SHALL BE ALLOWED.
- e) NO WORK SHALL BE COMMENCED OR MATERIAL ORDERED FOR WORK REQUIRING SHOP DRAWING SUBMISSION UNTIL THE SUBMISSION HAS BEEN RETURNED TO THE CONTRACTOR BEARING THE STAMP OF THE CONSULTANT.
- f) THE FOLLOWING ITEMS REQUIRE SHOP DRAWING AND/OR SUBMISSION.

ITEM	ENGINEERS STAMP REQ'D	COMMENTS
REINFORCING STEEL	NO	SUBMIT ERECTION PLANS AND MATERIAL LISTS FOR ALL REBAR SPECIFIED IN CONSTRUCTION DRAWINGS
CONCRETE MIX DESIGNS	NO	SUBMIT ALL CONCRETE MIX DESIGNS TO BE USED
PRE-ENGINEERED BLDG. SHOP DRAWINGS	YES	SUBMIT ERECTION PLANS AND PIECE DETAIL DWGS. FOR ALL STRUCTURAL STEEL SPECIFIED IN CONSTRUCTION DRAWINGS

DRAWING LEGEND AND ABBREVIATIONS

UNLESS OTHERWISE NOTED, DESIGN LOADS SHOWN ARE SPECIFIED (UNFACTORED) LOADS. TO BE USED FOR ULS DESIGN. FOR POINT LOADS, IF ONLY ONE LOAD IS GIVEN, CONSIDER IT LIVE LOAD. FOR WIND AND SNOW LOADS TO BE USED FOR SLS DESIGN, SEE PLANS.

AB	ANCHOR BOLT	MAX	MAXIMUM
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL	ME	MARKED END
Af	FACTORED AXIAL LOAD IN kIps	MF	FACTORED MOMENT IN k.Ik
	(+ INDICATES TENSION, - INDICATES COMPRESSION)	MJ	MOVEMENT JOINT
		MIN	MINIMUM
		MTT	FACTORED TORSION IN k.Ik
ALT	ALTERNATE	NTS	NOT TO SCALE
ARCH	ARCHITECTURAL	NBC	NATIONAL BUILDING CODE
BOTT	BOTTOM	ONC	ONTARIO BUILDING CODE
BEW	BOTTOM EACH WAY	OC	ON CENTRE
BM	BEAM	O/O	OUT TO OUT
BOF	ELEV BOTTOM OF FOOTING	OPEN, OPNG	OPENING
BP	BEARING/BASE PLATE		
BSMT	BASEMENT	P	POINT LOAD IN kIps
CA	COLUMN ABOVE ONLY (NO COLUMN BELOW)	P.C.	PRECAST CONTRACTOR FACTORED POINT LOAD IN kIps
CAMBER	CAMBER	PL	PLATE
CANT	CANTILEVER	PL	PLATE
CB	COLUMN BELOW	RA	ROOF ANCHOR
C/C	CENTRE TO CENTRE	RJ	ROOF DRAIN
C/J	CONSTRUCTION JOINT	RENF	REINFORCEMENT
CL	CLEAR	RF	RIGID FRAME
CLS	CLADDING TO HAVE LATERAL SUPPORT AT THIS LEVEL	RH	FACTORED REACTION IN kIps
COMP	COMPOSITE	RH	FACTORED HORZ. REACTION IN kIps
C	COLUMN	SDF	STEP DOWN FOOTING
CONC	CONCRETE	SDI	SUPERIMPOSED DL
CONT	CONTINUOUS	SECT	SECTION
CWS	CLADDING SELF WEIGHT & LATERAL AT THIS LEVEL	SIM	SIMILAR
DET	DETAIL	SJ	STEEL JOIST
DIA	DIAMETER	SL	SERVICEABILITY LIMIT STATE
DM	DIMENSION	SL	SLAB
DL	DEAD LOAD IN psf	SL1, SL2	SHELF ANGLE 1, ETC
DN	DOWN	SOG	SLAB ON GRADE
DP	DEEP	STR	STIRRUP
DWG	DRAWING	STIFF	STIFFENER
DWL	DOWEL	T	TOTAL THICKNESS
EA	EACH	TEW	TOP EACH WAY
ECR	EPOXY COATED REINFORCEMENT	TH	THICK
EE	EACH END	TJ	TIE JOIST
EF	EACH FACE	TOP	TOP OF FOOTING
EJ	ELEVATION	TOP	TOP OF PIER
EL	EXPANSION JOINT	TYP	TYPICAL
ELEV	ELEVATION	UE	UNMARKED END
EMBED	EMBEDMENT	ULS	ULTIMATE LIMIT STATE
EQUAL	EQUAL	UNO	UNLESS NOTED OTHERWISE
EW	EACH WAY	UPT	UPTURNED
EX, EXIST	EXISTING	VB	VERTICAL BRACING
FIN	FINISHED	V, VEF	VERTICAL, VERTICAL EACH FACE
FL	FLOOR	VIC	VERTICAL IN CENTRE
FMC	FULL MOMENT CONNECTION	VF	FACTORED SHEAR IN kIps
FTG	FOOTING	V, VERT.	VERTICAL, VERTICALS
EW	EACH WAY	VERTS	VERTICALS
fy	YIELD STRENGTH	VSC	VERTICALLY SLOTTED CONNECTION TO ALLOW FOR DEFLECTION
GALV	GALVANIZED STEEL	VXB	VERTICAL 'X' BRACING
GB	GRADE BEAM	WC	WIND COLUMN
GL	GRIDLINE	WP	WALL PLATE
H, HOR	HORIZONTAL	WWM	WELDED WIRE MESH
HDF	HOT DIPPED GALVANIZED	X	SECTION NUMBER
HEF	HORIZONTAL EACH FACE	Y	SECTION DRAWING
HH	HOOK-HOOK (HOOK EACH END)	Z	REFERENCE
HIC	HORIZONTAL IN CENTRE		
HK	HOOK		
HP	HIGH POINT		
HSC	HORIZONTAL SLOTTED CONNECTION		
JG	JOIST GIRDER		
JD	DEVELOPMENT LENGTH OF REBAR		
L	SINGLE ANGLE		
L, L	DOUBLE ANGLES		
L, LV	LONG DIM. VERT.		
LG	LONGLENGTH		
LL	UPPER LEVEL BM/JOIST		
LL	LOWER LEVEL BM/JOIST		
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		
LSV	LONG SIDE VERTICAL		
LSH	LONG SIDE HORIZONTAL		
LP	LOW POINT		



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- Issues:
- Preliminary
 - Bids
 - Permits
 - Construction
- SPA
JULY 29, 2024
PERMIT
SEPT. 07, 2024

Sheet Title
GENERAL NOTES

Project/ Client
PROPOSED NEW WAREHOUSE BUILDING
208 ST. ARNAUD STREET
TOWN OF AMHERSTBURG, ONTARIO

Drawn By
OA

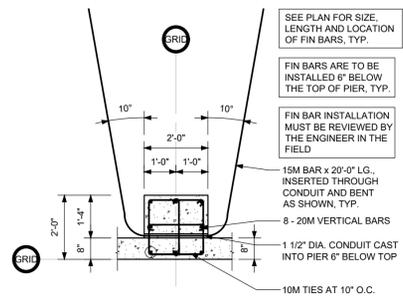
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Date
AUG, 2024

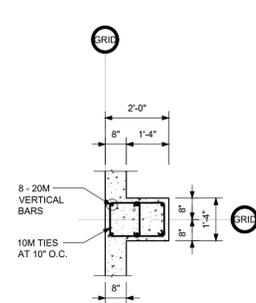
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Drawing No.
SO

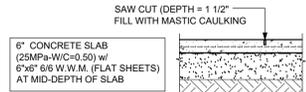
ALEO ASSOCIATES INC. - CONSULTING ENGINEERS



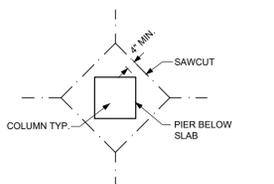
A PIER DETAIL 'P1'
S1 SCALE: 3/8" = 1'-0"



B PIER DETAIL 'P2'
S1 SCALE: 3/8" = 1'-0"



C TYPICAL SAWCUT
S1 SCALE: 3/8" = 1'-0"



D TYP. SAWCUT AROUND COLUMN
S1 SCALE: 3/8" = 1'-0"

FLOOR SLAB-ON-GRADE NOTES:

- SLAB-ON-GRADE CONSTRUCTION:
6" POURED CONC. SLAB w/
6"x6"-6/8 W.W.M. ON
18" MIN. GRANULAR 'A' BASE ON
PROOF ROLLED SUBGRADE, TYP.
- PROVIDE 1/2" THICK PREMOULDED JOINT FILLER AGAINST
INTERIOR FOUNDATION WALLS AND ALL OTHER VERTICAL
SURFACES.
- SAW-CUTTING SHALL BE COMPLETED WITHIN 8 TO 16
HOURS OF PLACING THE CONCRETE.
- PROVIDE SAWCUTS AS PER DETAIL D/S1 AT THE
LOCATIONS SHOWN ON PLAN.

PIER SCHEDULE

PIER MARK	PIER SIZE			PIER REINFORCEMENT		REMARKS
	LENGTH	WIDTH	DEPTH	VERTICAL	HORIZONTAL	
P1	2'-0"	2'-0"	-	8-20M	10M MAX AT 10" (MAX.)	SEE NOTES 1 & 2
P2	2'-0"	1'-4"	-	6-20M	10M MAX AT 10" (MAX.)	SEE NOTES 1 & 2

- NOTES:
1. SEE PIER DETAILS ON S0 FOR DIMENSIONAL INFORMATION.
2. SEE OTHER SCHEDULE(S) FOR FURTHER INFORMATION.

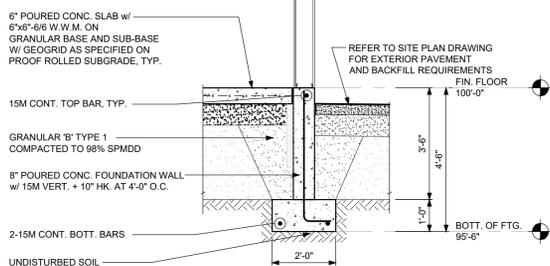
FOOTING SCHEDULE

FOOTING MARK	SIZE			FOOTING REINFORCEMENT		REMARKS
	LENGTH	WIDTH	DEPTH	BOTTOM OF STEEL	TOP STEEL	
F1	4'-6"	4'-6"	1'-0"	5-15M E.W.	-	
F2	3'-6"	3'-6"	1'-0"	4-15M E.W.	-	

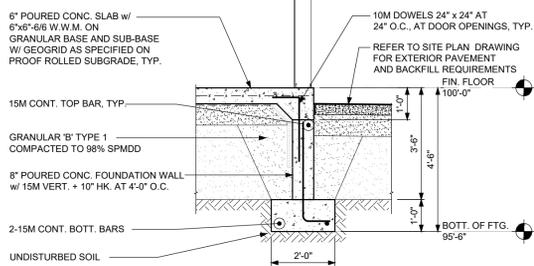
- NOTES:
1. SEE OTHER SCHEDULE(S) FOR ADDITIONAL INFORMATION.
2. * * INDICATES TOP STEEL FOOTING REINFORCEMENT, SEE SCHEDULE

FOUNDATION NOTES:

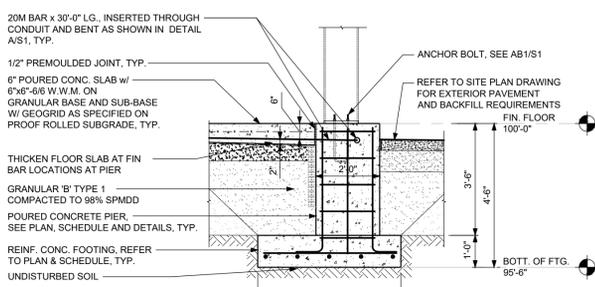
- REFER TO FOUNDATION NOTES ON S0 FOR ADDITIONAL INFO.
- FOOTINGS SHALL BE PLACED ON NATURAL UNDISTURBED SOIL CAPABLE OF SUSTAINING AN ALLOWABLE NET BEARING CAPACITY OF 3,000 PSF.
- CENTRE FOOTINGS UNDER CENTROID OF COLUMNS ABOVE UNO.
- ELEVATIONS ARE BASED ON THE ARCHITECTURAL DATUM WHICH SETS THE FINISHED FLOOR ELEV. AT 100.00' (GEODETIC ELEV. 99.50').
- FOOTING BEARING ELEVATION (U/S OF FOOTING) IS 95.50' U.N.O.
- ALL EXTERIOR FOOTINGS ARE TO BEAR 4'-0" MIN. BELOW ADJACENT FINISHED GRADE AT A MINIMUM. ADJUST U/S OF FOOTING ELEVATION AS REQUIRED.
- PROTECT FOOTINGS, WALLS AND ADJACENT SOIL AGAINST FREEZING AND FROST ACTION AS REQUIRED AT ALL TIMES DURING CONSTRUCTION.
- TOP OF FOUNDATION WALLS AT ALL DOORS AND OTHER WALL OPENINGS THAT EXTEND TO THE FLOOR SHALL BE 8" BELOW FINISHED FLOOR U.N.O.
- ALL FOUNDATION WALLS SHALL HAVE 1-15M CONT. TOP BARS AS INDICATED IN SECTION. ALL FOUNDATION WALLS SHALL HAVE 15M VERTICAL DOWELS TO FOOTING AT 4'-0" O.C. U.N.O.
- FOUNDATION CONTRACTOR TO COORDINATE WITH ALL TRADES. THE LOCATION OF ALL PIPE SLEEVES PASSING THROUGH FOUNDATION WALLS. PIPING IS NOT TO RUN THROUGH FOOTINGS. FOOTINGS TO BE STEPPED DOWN TO SUIT.
- LEGEND:
F_ FOOTING MARK, SEE SCHEDULE
P_ PIER MARK, SEE SCHEDULE
TOP_ TOP OF PIER, SEE PLAN
SHADED AREA DENOTES TOP OF PIER OR WALL LOCATIONS THAT ARE 8" BELOW THE FINISHED FIRST FLOOR. SEE PLAN AND NOTES FOR ELEVATION.



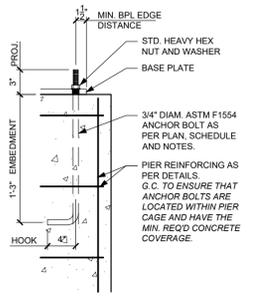
1 FOUNDATION SECTION
S1 SCALE: 3/8" = 1'-0"



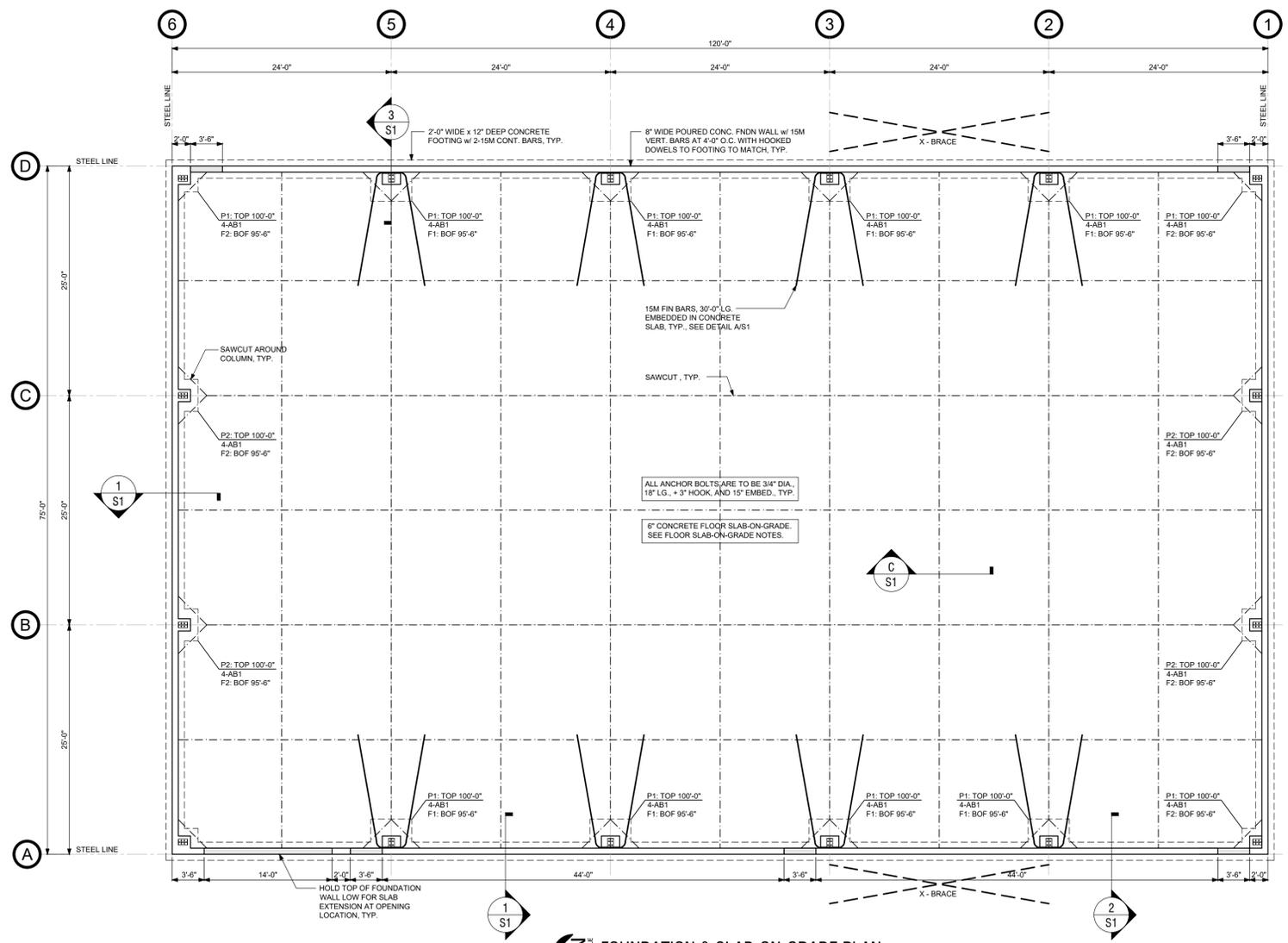
2 FOUNDATION SECTION
S1 SCALE: 3/8" = 1'-0"



3 FOUNDATION SECTION
S1 SCALE: 3/8" = 1'-0"



AB1 ANCHOR BOLT 'AB1'
S1 SCALE: 1" = 1'-0"



FOUNDATION & SLAB-ON-GRADE PLAN
SCALE: 1/8" = 1'-0"

MBSI
METAL BUILDING SOLUTIONS INC.

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LICENSED PROFESSIONAL ENGINEER
Sept. 7, 2024
P.A. #ED
100104366
PROVINCE OF ONTARIO

Issues/ances
 Preliminary
 Bids
 Permits
 Construction

SPA
JULY 29, 2024
PERMIT
SEPT. 07, 2024

Sheet Title
FOUNDATION PLAN, SLAB PLAN, SCHEDULES,
SECTION & DETAILS

Project/ Client
PROPOSED NEW WAREHOUSE BUILDING
208 ST. ARNAUD STREET
TOWN OF AMHERSTBURG, ONTARIO

Drawn By
OA

Checked By
PA

Date
AUG, 2024

Project No.
8650

Drawing No.
S1

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