MISSISSAUGA

NEW COMFORT STATION
Huron Park Recreation Centre

830 PAISLEY BOULEVARD WEST, MISSISSUAGA, ON. L5C 4P1

ARCHITECTURAL

Cellucci+Pace
ARCHITECTURE I PLANNING I PROJECT MANAGEMENT

510 Rowntree Dairy Rd., Unit 3C
Woodbridge, ON Canada L4L 8H2
Tel. 416 855 2260
www.cplusp.ca

Architectural Drawing List	
Sheet Number	Sheet Name
A002	GENERAL NOTES, OBC MATRIX & LEGENDS
A101	FLOOR PLAN, ROOF PLAN & RCP
A201	BUILDING ELEVATIONS & SECTIONS
A301	ENLARGED PLAN & INTERIOR ELEVATIONS
A401	WALL SECTIONS
A402	PLAN DETAILS

ELECTRICAL

JK Foroud Rasti B., B.Eng, P.Eng
Professional Engineering Design Services
26 Cobblestone Crt
Brampton, Ontario
L6R 2S1
justin@jkengineering.ca
jkengineering.ca
416.455.5254

Electrical Demolition Drawing List	
Sheet Number	Sheet Name
E100	ELECTRICAL LEGEND, NOTES, DETAILS AND SPECIFICATIONS
E101	NEW ELECTRICAL LAYOUT AND DETAILS
E102	ELECTRICAL SPECIFICATIONS

CIVIL

BaseTech Consulting Inc.
309 Ryewood Crescent
Newmarket, Ontario
L3Y 1A8
Phone : (905)-251-7720
e-mail : basetechconsulting@rogers.com

Civil Drawing List	
Sheet Number	Sheet Name
GR-1	GRADING PLAN
SS-1	SITE SERVICING PLAN
SS-2	SITE SERVICING PLAN

MECHANICAL

T. Smith Engineering Inc.
T. Smith Engineering
707 Kipling Ave. Toronto, ON. M8Z 5G4
Tel: (416) 635 9970
www.tSmithEngineering.com

Mechanical Drawing List	
Sheet Number	Sheet Name
M001	MECHANICAL LEGEND, DRAWING LIST AND SPECIFICATIONS
M003	PLUMBING FIXTURES
M100	MECHANICAL NEW

STRUCTURAL

stephenson ENGINEERING
2550 Victoria Park Ave. Suite 602
Toronto ON M2J 5A9 I Tel: (416) 635 9970
www.stephenson-eng.com I info@stephenson-eng.com

Structural Drawing List	
Sheet Number	Sheet Name
S1-01	PLANS
S2-01	SECTIONS
S3-01	GENERAL NOTES AND TYPICAL DETAILS
S3-02	GENERAL NOTES AND TYPICAL DETAILS
S3-03	TYPICAL DETAILS
S3-04	TYPICAL DETAILS
S3-05	TYPICAL DETAILS
S3-06	TYPICAL DETAILS

LANDSCAPE

HENRY KORTEKAAS & ASSOCIATES INC.
LANDSCAPE ARCHITECTS, ARBORISTS, ENVIRONMENTAL & RECREATIONAL PLANNERS
1504 LAKESHORE ROAD TEL 905-828-9900
PICKERING, ON L1W 3H1 EMAIL INFO@HKA.CA

Landscape Drawing List	
Sheet Number	Sheet Name
L-SP	SITE PLAN
L-L1	LANDSCAPE PLAN
L-D1	DETAIL SHEET

PROJ. No: 24 - 053

ISSUED FOR TENDER

OCT. 09, 2025

NEW COMFORT STATION
830 PAISLEY BOULEVARD WEST, MISSISSAUGA, ON. L5C 4P1

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ARCHITECTURE I PLANNING I PROJECT MANAGEMENT
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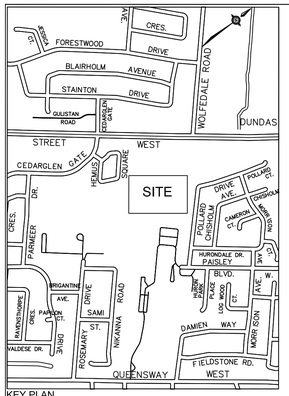
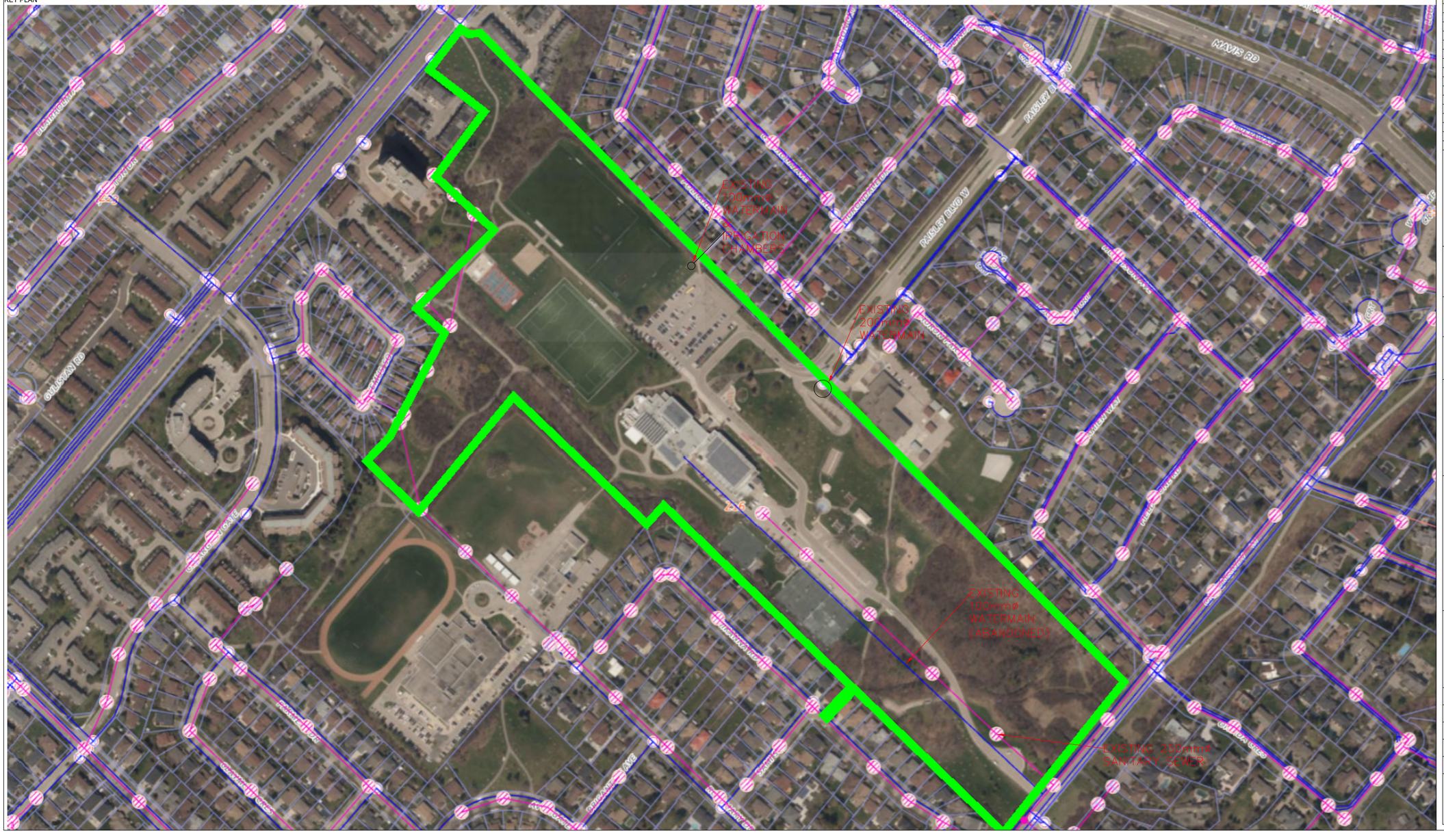


KEY PLAN



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REVISIONS/SUBMISSIONS

No.	DATE	DESCRIPTION
1.	Sept.15,2025	Issued for Site Servicing Permit
2.	Oct.03,2025	Issued for Building Permit
3.	Oct.03,2025	Issued for Tender
4.	Oct.07,2025	Re-Issued for Tender

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LICENSED PROFESSIONAL ENGINEER
W.M.P. FEHERTY
Oct 7,2025
PROVINCE OF ONTARIO

Project Title

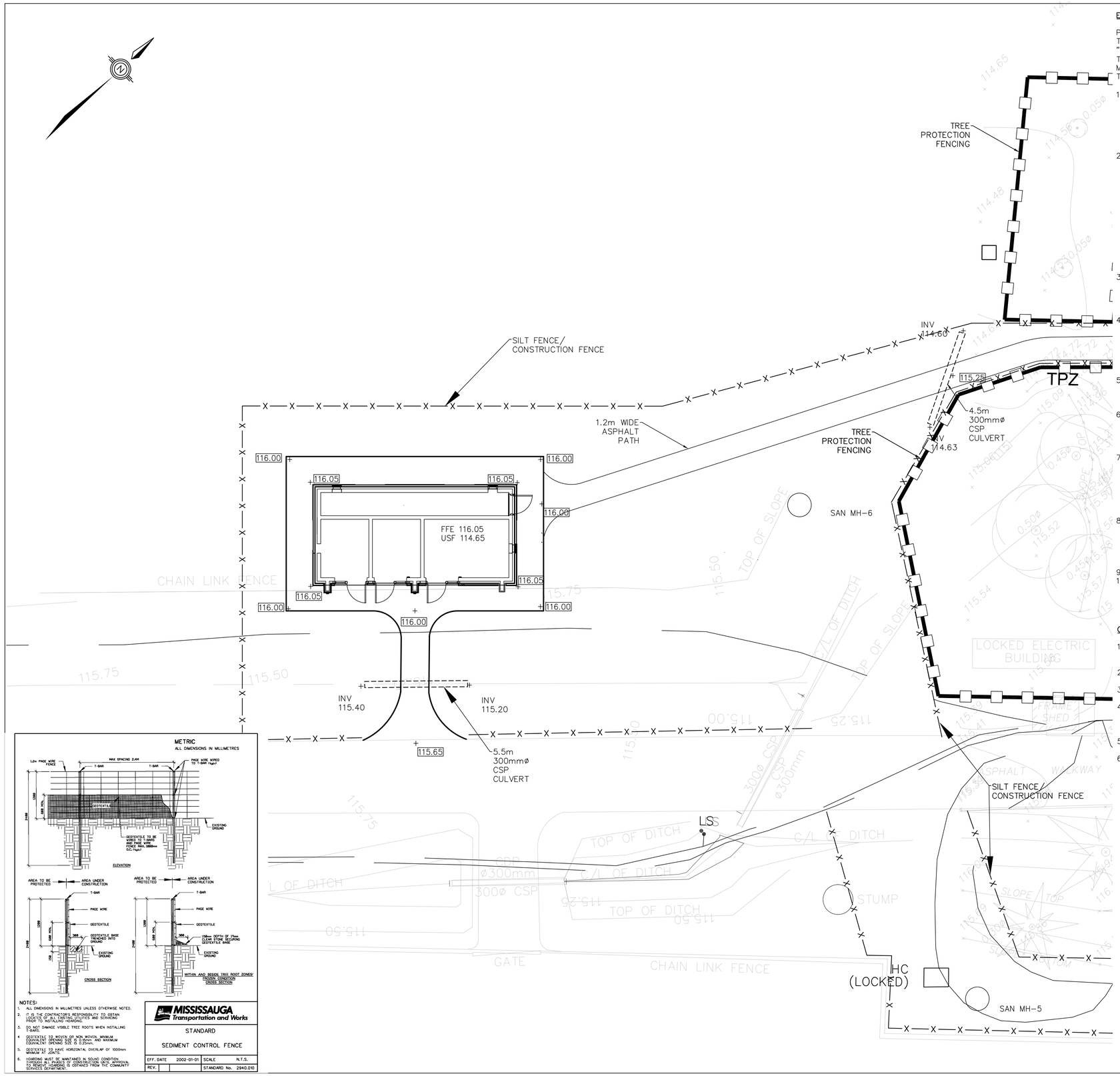
HURON PARK
COMFORT STATION

Sheet Title

EXISTING SERVICES

Project Number	24-37
Date	OCTOBER 2024
Drawn	DT
Checked	
Scale	1:2000
Drawing Number	ES-1

LAST REVISED OCTOBER 7-2025



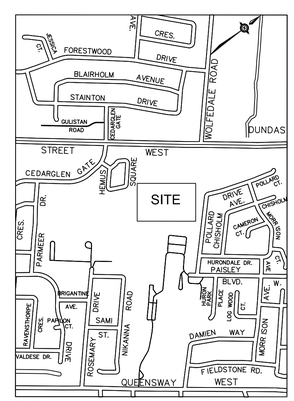
EROSION AND SEDIMENTATION CONTROL NOTES

PRIOR TO CONSTRUCTION OR STRIPPING OF TOPSOIL, THE CONTRACTOR SHALL MAKE PROVISIONS TO PROVIDE "GOOD HOUSEKEEPING" MEASURES TO MITIGATE THE TRANSPORTATION OF SILT FROM THE SITE. THESE MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

1. EROSION AND SEDIMENT (ESC) CONTROL MEASURES WILL BE IMPLEMENTED PRIOR TO, AND MAINTAINED DURING THE CONSTRUCTION PHASES, TO PREVENT ENTRY OF SEDIMENT INTO THE WATER. ALL DAMAGED EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE REPAIRED AND/OR REPLACED WITHIN 48 HOURS OF THE INSPECTION.
2. THE EROSION AND SEDIMENT CONTROL STRATEGIES OUTLINED ON THE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO MINIMIZE SEDIMENT LADEN RUNOFF FROM LEAVING THE WORK AREAS. IF THE PRESCRIBED MEASURES ON THE PLANS ARE NOT EFFECTIVE IN PREVENTING THE RELEASE OF DELETERIOUS SUBSTANCE, INCLUDING SEDIMENT, THEN ALTERNATIVE MEASURES MUST BE IMPLEMENTED IMMEDIATELY TO MINIMIZE THE POTENTIAL ECOLOGICAL IMPACTS. TRCA ENFORCEMENT OFFICER SHOULD BE IMMEDIATELY CONTACTED. ADDITIONAL ESC MEASURES TO BE KEPT ON SITE AND USED AS NECESSARY.
3. ALL SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE INSPECTED WEEKLY, AFTER EVERY RAINFALL AND SIGNIFICANT SNOW MELT EVENT, AND DAILY DURING PERIODS OF EXTENDED RAIN OR SNOW MELT.
4. ALL ACTIVITIES, INCLUDING MAINTENANCE PROCEDURES, WILL BE CONTROLLED TO PREVENT THE ENTRY OF PETROLEUM PRODUCTS, DEBRIS, RUBBLE, CONCRETE OR OTHER DELETERIOUS SUBSTANCES INTO THE WATER. VEHICULAR TRAFFIC REFUELING AND MAINTENANCE WILL BE CONDUCTED 30 METERS FROM THE WATER.
5. ALL DISTURBED AREAS WILL BE MINIMIZED TO THE EXTENT POSSIBLE, AND TEMPORARILY OR PERMANENTLY STABILIZED OR RESTORED AS THE WORK PROGRESSES.
6. THE CONTRACTOR SHALL MONITOR THE WEATHER SEVERAL DAYS IN ADVANCE OF THE ONSET OF THE PROJECT TO ENSURE THAT THE WORKS WILL BE CONDUCTED DURING FAVOURABLE WEATHER CONDITIONS.
7. STABILIZE SITE AS SOON AS POSSIBLE BY REOEXTABLISHING VEGETATIVE GROUND COVER AND AVOIDING BARE SOIL AREAS. ALL AREAS (INCLUDING STOCKPILES) WHERE SITE IMPROVEMENTS ARE NIT EXPECTED TO OCCUR IMMEDIATELY SHALL BE RE-VEGETATED WITH 100mm OF TOPSOIL AND SEEDED.
8. ALL DRAINAGE WORKS REQUIRE EROSION/SEDIMENT CONTROL SATISFACTORY TO THE APPROVAL AGENCIES DURING CONSTRUCTION PERIOD AND MUST BE MONITORED AND MAINTAINED ON A REGULAR BASIS TO ENSURE MAXIMUM BENEFIT AND MINIMUM SILT MIGRATION OFF-SITE.
9. ALL EXCESS MATERIALS TO BE REMOVED OFF-SITE.
10. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO REMAIN IN PLACE UNTIL COMPLETION OF THE WORK AND ESTABLISHMENT OF ALL LANDSCAPED AREAS.

GRADING NOTES

1. ALL SURFACE DRAINAGE WILL BE SELF-CONTAINED, COLLECTED AND DISCHARGED AT A LOCATION TO BE APPROVED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
2. ALL EXCESS EXCAVATED MATERIAL WILL BE REMOVED FROM THE SITE.
3. THE EXISTING DRAINAGE PATTERN WILL BE MAINTAINED EXCEPT WHERE NOTED.
4. THE APPLICANT WILL BE REQUIRED TO CONTACT ALL UTILITY COMPANIES TO OBTAIN ALL REQUIRED LOCATES PRIOR TO THE INSTALLATION OF HOARDING WITHIN THE MUNICIPAL RIGHT-OF-WAY.
5. THE APPLICANT WILL BE RESPONSIBLE FOR THE COST OF ANY UTILITY RELOCATIONS NECESSITATED BY THE SITE PLAN.
6. PRIOR TO COMMENCING CONSTRUCTION, ALL REQUIRED HOARDING, IN ACCORDANCE WITH ONTARIO OCCUPATIONAL HEALTH & SAFETY ACT IN REGULATIONS FOR CONSTRUCTION PROJECTS, MUST BE ERECTED AND THEN MAINTAINED THROUGHOUT ALL PHASES OF CONSTRUCTION.



KEY PLAN

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1.	Nov.13, 2024	Issued for 60%Costing
2.	Dec.20, 2024	Issued for CVCA review
3.	Dec.20, 2024	Issued for Building Permit
4.	Jan.03,2025	Issued for Site Servicing Permit
5.	Jan.30,2025	Issued for Client Review-Pre-tender
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W.M.P. FEHERTY
Oct 7,2025
PROVINCE OF ONTARIO

Project Title

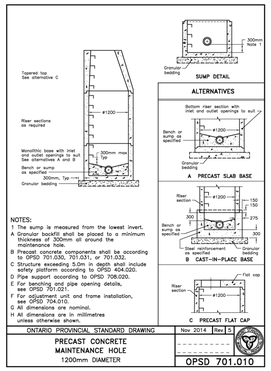
HURON PARK
COMFORT STATION

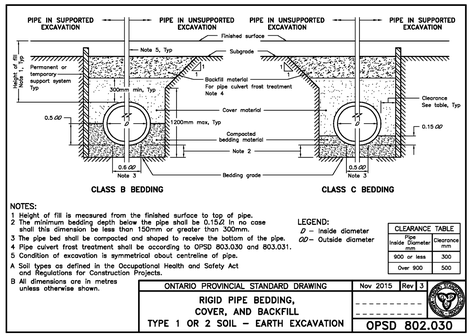
Sheet Title

GRADING PLAN

Project Number	24-37
Date	OCTOBER 2024
Drawn	NP
Checked	
Scale	1:100
Drawing Number	GR-1

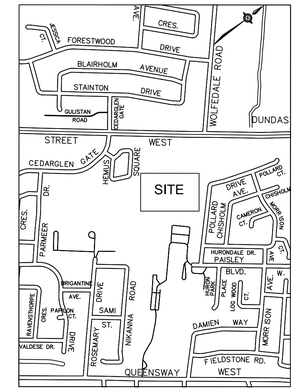
LAST REVISED OCTOBER 7-2025





Region of Peel Notes:

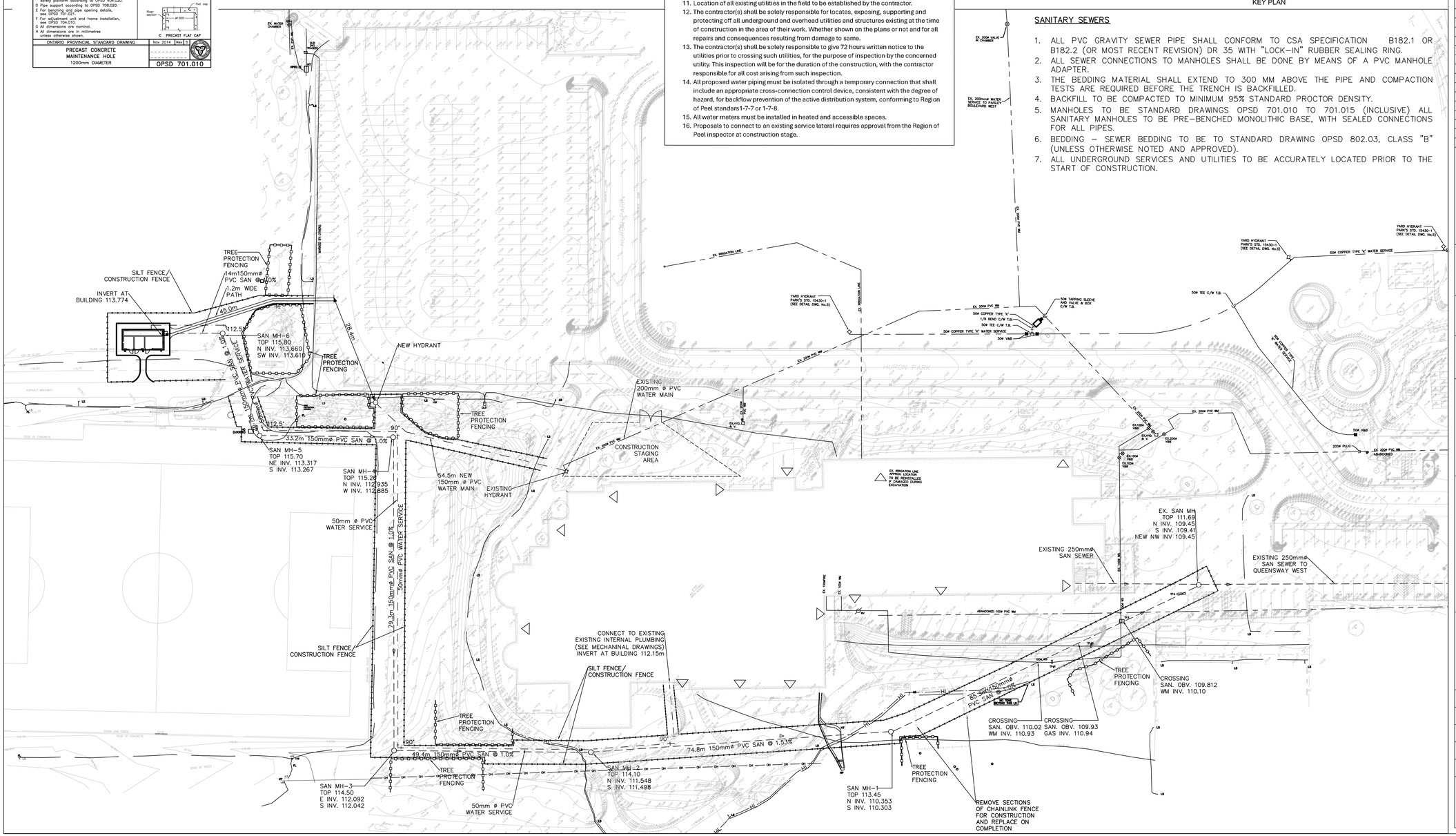
1. Public and private services, appurtenances, materials and construction methods must comply with the most current Region of Peel standards and specifications, the Local Municipality's requirements for the Ontario Building Code and Ontario Provincial Standards. All work shall adhere to all applicable legislation, including Regional by-laws.
2. Watermain and/or water service materials 100 mm (4") and larger must be **PVC DR18** constructed as per **AWWA C900-16**. Size 50 mm (2") and smaller must be **Polyethylene** constructed as per **AWWA C901** and **CSA B.137.10**.
3. Watermains and/or water services are to have a minimum cover of 1.7 m (5'6') with a minimum horizontal spacing of 1.2 m (4') from themselves and all other utilities.
4. Provisions for flushing water line prior to testing, etc, must be provided with at least a 50 mm (2") outlet on 100 mm (4') and larger lines. Copper lines are to have flushing points at the end, the same size as the line. They must also be hosed or piped to allow the water to drain onto a parking lot or down a drain. On fire lines, flushing outlet to be 100 mm (4") diameter minimum on a hydrant.
5. All curb stops to be 3.0 m (10') off the face of the building unless otherwise noted.
6. Hydrant and valve set to Region standard 1 – 6 - 1 Dimension A and B, 0.7 m (2') and 0.9 m (3') and to have pumper nozzle.
7. Watermains to be installed to grades as shown on approved site plan. Copy of grade sheet must be supplied to inspector prior to commencement of work, where requested by inspector.
8. Watermains must have a minimum vertical clearance of 0.3 m (12") over/0.5 m (20") under sewers and all other utilities when crossing.
9. All proposed water piping must be isolated from existing lines in order to allow independent pressure testing and chlorinating from existing systems.
10. All live tapping and operation of Region water valves shall be arranged through the Regional Inspector assigned or by contacting the Operations and Maintenance Division.
11. Location of all existing utilities in the field to be established by the contractor.
12. The contractor(s) shall be solely responsible for locates, exposing, supporting and protecting off all underground and overhead utilities and structures existing at the time of construction in the area of their work. Whether shown on the plans or not and for all repairs and consequences resulting from damage to same.
13. The contractor(s) shall be solely responsible to give 72 hours written notice to the utilities prior to crossing such utilities, for the purpose of inspection by the concerned utility. This inspection will be for the duration of the construction, with the contractor responsible for all cost arising from such inspection.
14. All proposed water piping must be isolated through a temporary connection that shall include an appropriate cross-connection control device, consistent with the degree of hazard, for backflow prevention of the active distribution system, conforming to Region of Peel standars1-7-7 or 1-7-8.
15. All water meters must be installed in heated and accessible spaces.
16. Proposals to connect to an existing service lateral requires approval from the Region of Peel inspector at construction stage.



KEY PLAN

SANITARY SEWERS

1. ALL PVC GRAVITY SEWER PIPE SHALL CONFORM TO CSA SPECIFICATION B182.1 OR B182.2 (OR MOST RECENT REVISION) DR 35 WITH "LOCK–IN" RUBBER SEALING RING.
2. ALL SEWER CONNECTIONS TO MANHOLES SHALL BE DONE BY MEANS OF A PVC MANHOLE ADAPTER.
3. THE BEDDING MATERIAL SHALL EXTEND TO 300 MM ABOVE THE PIPE AND COMPACTION TESTS ARE REQUIRED BEFORE THE TRENCH IS BACKFILLED.
4. BACKFILL TO BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR DENSITY.
5. MANHOLES TO BE STANDARD DRAWINGS OPSD 701.010 TO 701.015 (INCLUSIVE) ALL SANITARY MANHOLES TO BE PRE–BENCHED MONOLITHIC BASE, WITH SEALED CONNECTIONS FOR ALL PIPES.
6. BEDDING – SEWER BEDDING TO BE TO STANDARD DRAWING OPSD 802.03, CLASS "B" (UNLESS OTHERWISE NOTED AND APPROVED).
7. ALL UNDERGROUND SERVICES AND UTILITIES TO BE ACCURATELY LOCATED PRIOR TO THE START OF CONSTRUCTION.



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1.	Dec.20, 2024	Issued for CVCA review
2.	Dec.20, 2024	Issued for Building Permit
3.	Jan.03,2025	Issued for Site Servicing Permit
4.	Jan.30,2025	Issued for Client Review-Pre-tender
5.	Mar.25,2025	Water service connection revised
6.	July 2,2025	Comfort Station location revised
7.	Sept.15,2025	Re-issued for Site Servicing Permit
7.	Oct.03,2025	Issued for Building Permit
8.	Oct.03,2025	Issued for Tender
9.	Oct.07,2025	Re-Issued for Tender

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LICENSED PROFESSIONAL ENGINEER
W.M.P. FEHERTY
Oct 7,2025
PROVINCE OF ONTARIO

Project Title

HURON PARK
COMFORT STATION

Sheet Title

SITE SERVICING
DRAWING

Project Number	24-37
Date	OCTOBER 2024
Drawn	NP
Checked	
Scale	1:500
Drawing Number	SS-1

LAST REVISED OCTOBER 7 –2025

SANITARY SEWERS

1. ALL PVC GRAVITY SEWER PIPE SHALL CONFORM TO CSA SPECIFICATION B182.1 OR B182.2 (OR MOST RECENT REVISION) DR 35 WITH "LOCK-IN" RUBBER SEALING RING.
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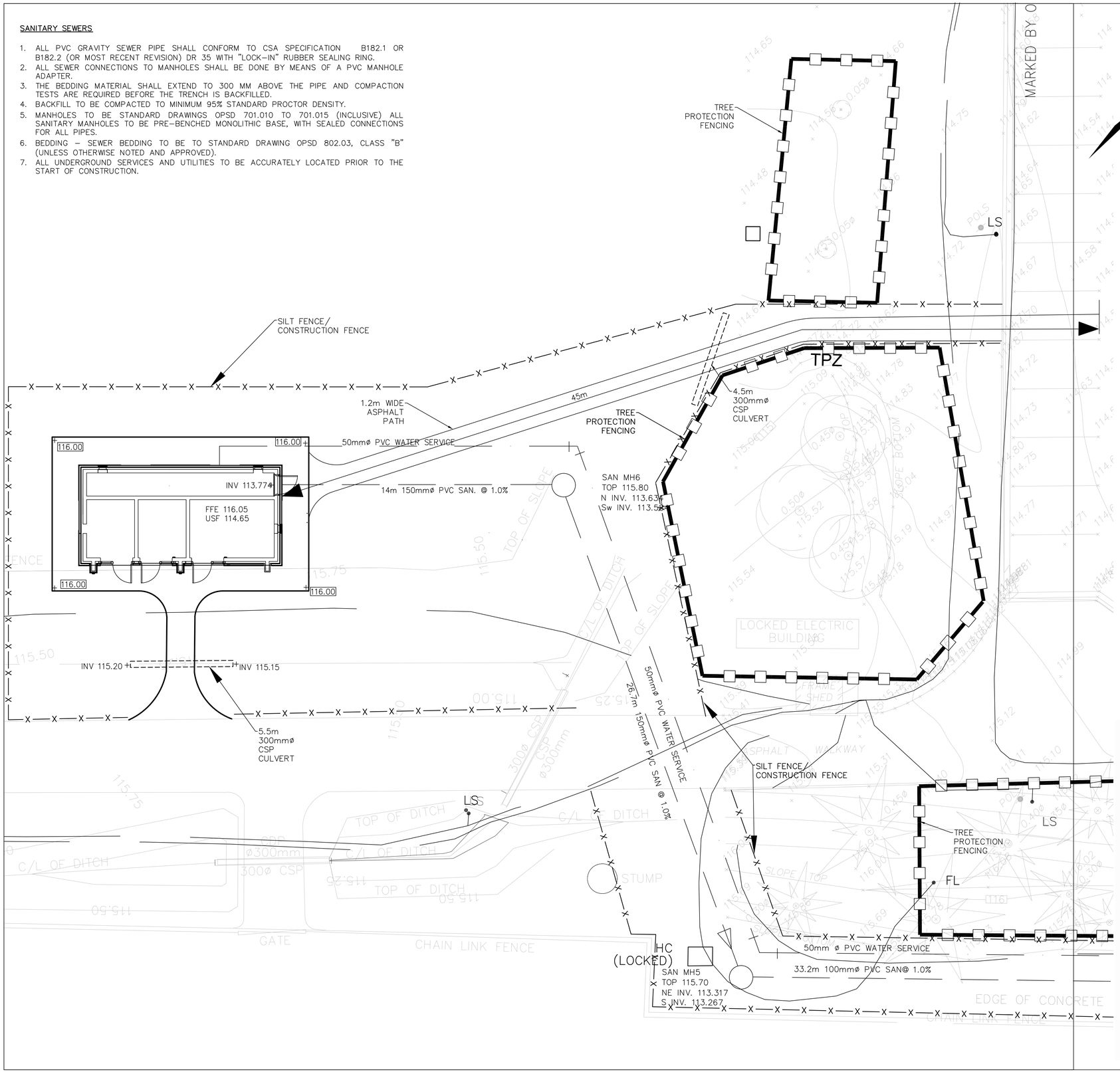
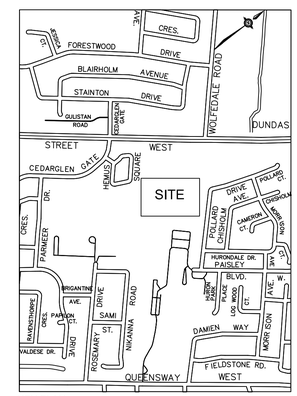


LEGEND

263.70	PROPOSED ELEVATION
248.30	EXISTING ELEVATION
	MINOR FLOW ROUTE
	DOWN SPOUT
	SWALE
2.0%	GROUND SLOPE
	MAJOR FLOW ROUTE



KEY PLAN

PEEL REGION SITE SERVICING NOTES

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o All water meters must be installed in heated and accessible space.

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Oct 7/2025
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Project Title

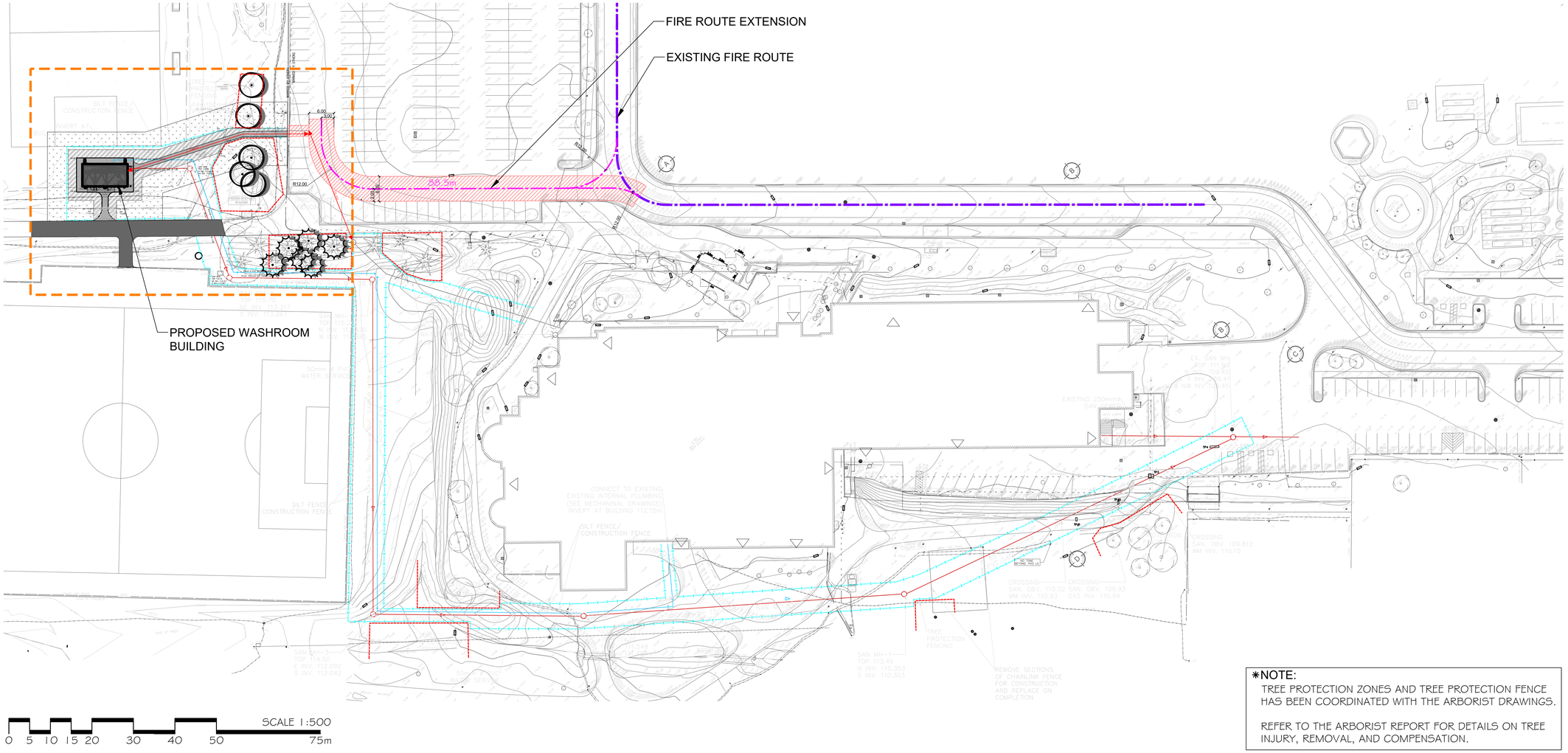
HURON PARK
COMFORT STATION

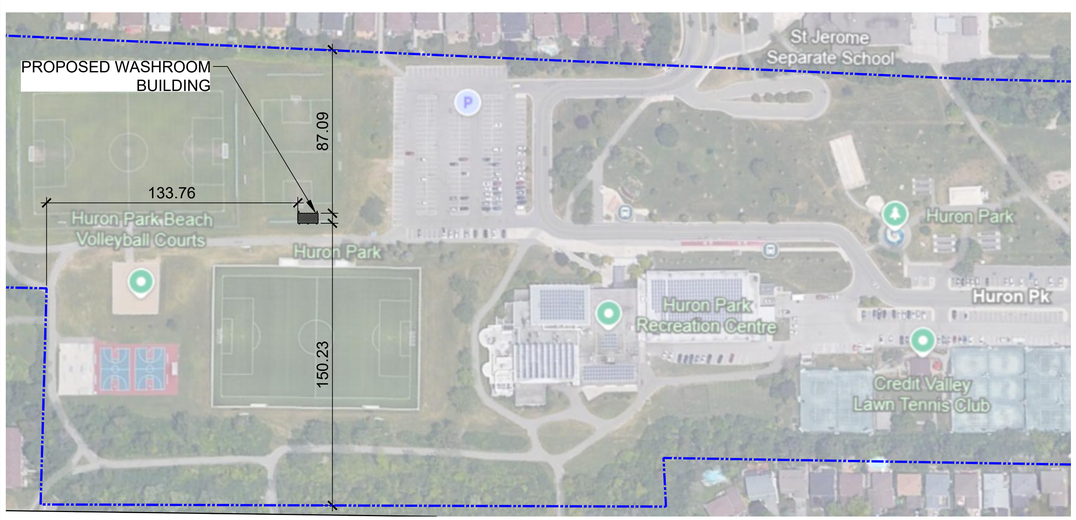
Sheet Title

SITE SERVICING
DRAWING

Project Number	24-37
Date	OCTOBER 2024
Drawn	NP
Checked	
Scale	1:100
Drawing Number	SS-2

LAST REVISED OCTOBER 7-2025





✳NOTE:
TREE PROTECTION ZONES AND TREE PROTECTION FENCE HAS BEEN COORDINATED WITH THE ARBORIST DRAWINGS.

REFER TO THE ARBORIST REPORT FOR DETAILS ON TREE INJURY, REMOVAL, AND COMPENSATION.

✳LEGEND:

- EXITING TREES
- PROPOSED SHRUBS
- EXISTING PAVED WALKWAY
- PROPOSED CONCRETE APRON/ ASPHALT PAVING
- EXISTING LANDSCAPE AREA
- PROPOSED LANDSCAPE AREA
- PROPERTY LINE
- SILT FENCE
- TREE PROTECTION FENCE
- EXISTING FIRE ROUTE
- FIRE ROUTE EXTENSION (88.5M)

SITE STATISTICS

ADDRESS: 830 Paisley Blvd W, Mississauga, ON L5C 3P5

PROPOSED USE: Comfort Station at Huron Park

	EXISTING		REQUIREMENT	REQUIRED	PROPOSED	
TOTAL SITE AREA (sq.m.)	196152.9 m²	48.47 Ac.			387.5 m²	0.10 Ac.
BUILDING (N.F.A. = NET FLOOR AREA)						
PROPOSED					59.7 m²	
FOOTPRINT (G.F.A.)	m²	0.0 Ft²			59.7 m²	0.01 Ac.
COVERAGE					15.4%	
BUILDING SETBACKS						
FRONT LOT LINE					133.8 m	
NORTH SIDE LOT LINE					87.1 m	
SOUTH SIDE LOT LINE					150.2 m	
REAR LOT LINE						
PARKING						
STANDARD SPACES						
ACCESSIBLE						
CHILDCARE STANDARD SPACES						
CHILDCARE ACCESSIBLE SPACES						
TOTAL SPACES						
LANDSCAPE						
AREA	m²	Ac.			211.8 m²	0.05 Ac.
COVERAGE					54.7%	
HARDSCAPE						
AREA	m²	0.0 Ac.			116.0 m²	0.03 Ac.
COVERAGE					29.9%	
SURFACE PARKING , DRIVEWAY, AND						
AREA	m²	0.0 Ac.			m²	0.00 Ac.
COVERAGE					0.0%	

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ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS
KYLE FOCH
OALA
MEMBER

Project Title

MISSISSAUGA

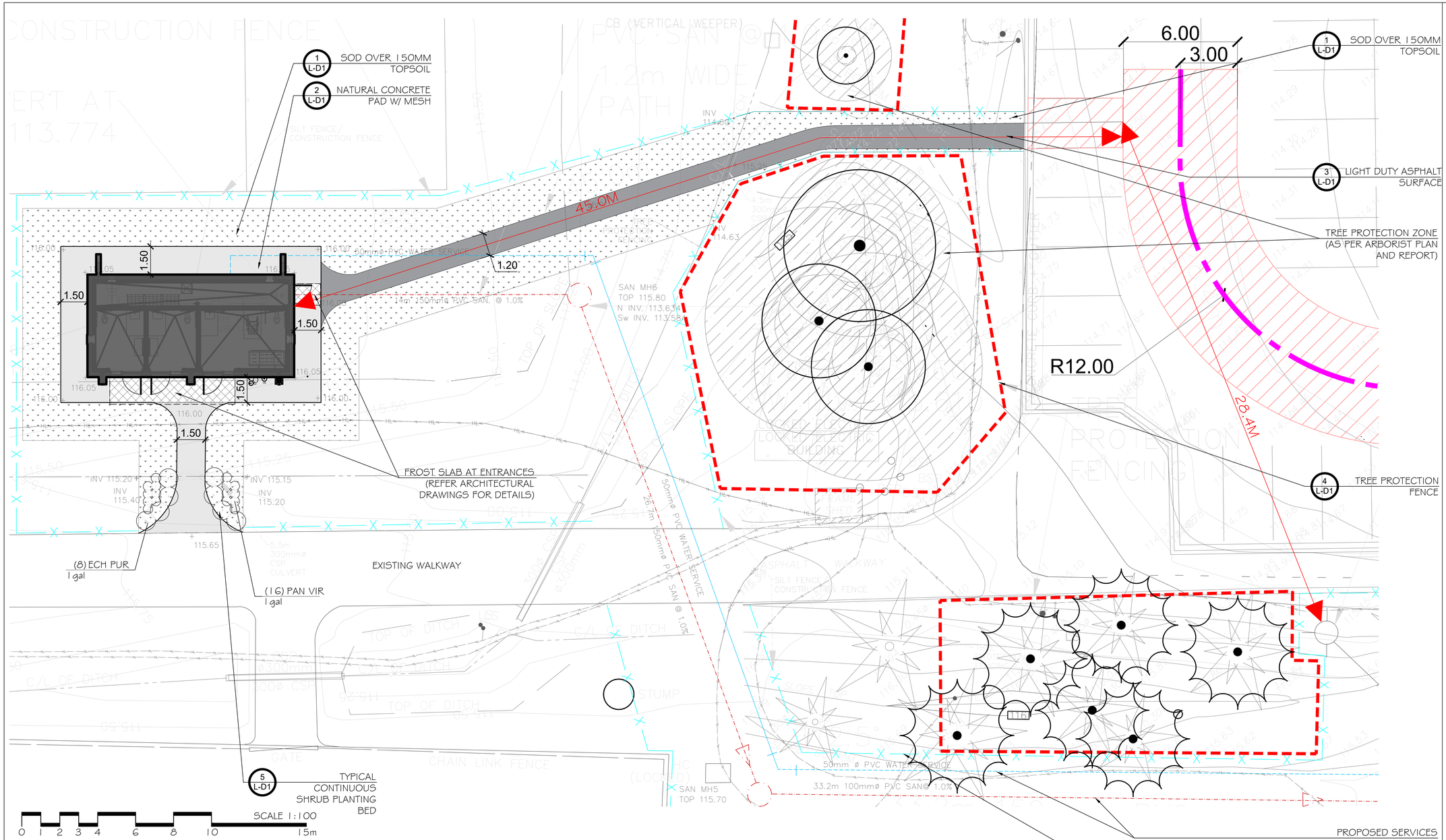
COMFORT STATION HURON PARK

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

Sheet Title

SITE PLAN

Project Number	24-053
Date	Oct. 2024
Drawn	RN
Checked	KF
Scale	1:400
Drawing Number	L-SP



PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT	REMARKS
SHRUBS						
ECH PUR	8	Echinacea purpurea	Coneflower	1 gal	Potted	
PAN VIR	16	Panicum virgatum	Switch Grass	1 gal	Potted	N/DT

REFERENCE NOTES SCHEDULE NEW LOCATION

SYMBOL	DESCRIPTION	QTY	DETAIL
Asphalt Paving			
	Light Duty Asphalt	48.6 m²	3/L-D1
Concrete Paving			
	Concrete Paving with 150mm depth of 19mm Crusher Run Limestone	57.2 m²	2/L-D1
Fences and Gates			
	Tree Preservation Fence with Silt Cloth	327.3 m	4/L-D1
Turf & Grasses			
	Sod over 150mm Topsoil	211.8 m²	1/L-D1

*NOTE:
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Sheet Title

LANDSCAPE PLAN

Project Number	24-053
Date	Oct. 2024
Drawn	RN
Checked	KF
Scale	1:75
Drawing Number	L-L1

SECTION

PLAN VIEW

SOD: SOD SHALL BE CERTIFIED No.1 CULTIVATED SOD AS SCHEDULED, GROWN AND SOLD IN ACCORDANCE WITH CLASSIFICATION OF THE NURSERY SOD GROWERS' ASSOCIATION OF ONTARIO. IT MUST BE FIBROUS AND WELL ROOTED; FREE FROM STONES, MATTED OR DEAD GRASS AND PERENNIAL WEEDS AND SHALL HAVE BEEN SUBJECT TO REGULAR MOWING AND TREATMENT WITH SELECTIVE WEED KILLER AND INSECTICIDES DURING THE PREVIOUS GROWING SEASON. THE SOD MUST BE ROLLED IN SUCH A MANNER AS TO PREVENT TEARING DURING HANDLING. THE SOD MUST BE TRANSPORTED AND LAID WITHIN FOUR (4) DAYS OF LIFTING AND SHALL BE PROTECTED DURING TRANSPORTATION TO PREVENT DRYING OUT. DRIED OUT UNHEALTHY SOD WILL NOT BE ACCEPTED ON SITE. SHOULD THERE BE AN UNAVOIDABLE DELAY IN INSTALLATION THE SOD MUST BE KEPT COOL AND MOIST UNTIL IT IS LAID.

FERTILIZER: SPREAD PRE-SODDING FERTILIZER (10:10:10) AT THE RATE OF 75 GRAMS PER SQ.M. AT LEAST ONE (1) WEEK BEFORE THE SOD IS LAID USING AN APPROVED BROAD CAST DISTRIBUTOR; WORKING IT INTO THE TOP 75mm OF SOIL BY CROSS-HARROWING OR RAKING.

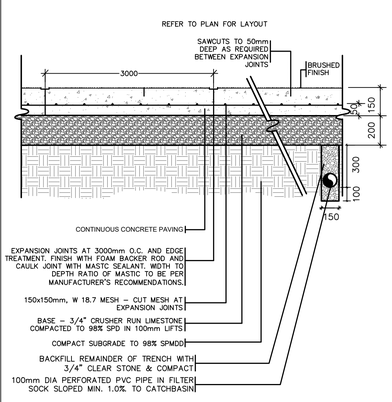
LAYING SOD: THE SURFACE OF THE SOIL MUST BE RAKED LEVEL OR TO FORM EVEN-FLOWING CONTOURS, AND WELL FIRMED BUT LEAVING A FINE LOOSE TEXTURE BEFORE THE SOD IS LAID. THE SOD SHALL BE LAID IN ROWS COMMENCING AT A POINT CLOSE SOIL ACCESS SO THAT WORK PROCEEDS OVER THE SOD ALREADY LAID USING ADEQUATE TIMBER PLANKS TO SUPPORT WORKMEN AND WHEELBARROWS. SOD SHALL BE LAID IN STRETCHER BOND PATTERN (AS IN BRICK WALLS) WITH BROKEN CROSS JOINTS. THEY SHALL BE CLOSELY BUTTED TOGETHER LEAVING NO GAP AFTER THE SOD IS PROPERLY PLACED THE SOD IS TO BE ROLLED TO INSURE GOOD CONTACT BETWEEN SOD AND UNDERLYING SOIL. ROLLING IS TO BE PERPENDICULAR TO THE DIRECTION IN WHICH THE SOD WAS LAID. ANY IRREGULARITIES SHALL BE ADJUSTED BY LIFTING AND RAKING OUT OR INFILLING WITH FINE SOIL. EDGES WILL ALWAYS BE LAID WITH WHOLE TURFS. THE FINISHED LEVEL OF THE TURF SHALL CONFORM TO THE LEVELS SHOWN ON THE DRAWINGS AND SHALL BE 25mm ABOVE PREVIOUS SOIL LEVEL ADJOINING EXISTING TREES OR SHRUBS. SOD MUST NOT BE LAID DURING SNOW OR FROSTY WEATHER OR ON EXCEPTIONALLY DRY OR WATERLOGGED GROUND. IMMEDIATELY AFTER INSTALLATION, THE CONTRACTOR MUST WATER THE SOD AND UPPER 150mm OF SOIL.

MOWING AND TRIMMING: DURING THE GROWING SEASON THE GRASS WILL BE CUT WITH AN APPROVED MACHINE AT REGULAR INTERVALS TO ENSURE THAT THE GRASS DOES NOT EXCEED 50mm HIGH. THE EDGES OF THE SODDED AREAS SHALL BE NEATLY TRIMMED BY HAND CLIPPING AT THE TIME OF EACH MOWING. HEAVY GRASS MOWINGS MUST BE REMOVED OR SPREAD ABOUT EVENLY IMMEDIATELY AFTER TRIMMING AND MOWING.

HANDOVER: AREAS WILL NOT BE ACCEPTED FOR HANDOVER ON THE SPECIFIED DATES IF FOR ANY OF THE FOLLOWING REASONS THE WORK IS NOT UP TO STANDARD: (A) IF THE SWARD HAS FAILED TO ESTABLISH ITSELF TO THE SATISFACTION OF THE OWNER; (B) IF THE GRASS IS DAMAGED BY FAILURE TO CARRY OUT MAINTENANCE OPTIONS; (C) IF PARTS OF GRASS ARE ONLY HALF-COMPLETED; (D) IF SINKAGE BELOW FINISHED LEVEL HAS OCCURRED; (E) THE GRASS AREAS AND SITE HAVE NOT BEEN CLEARED OF STONE, WEEDS AND OTHER RUBBISH; (F) IF RESODDED PATCHES HAVE NOT BECOME ESTABLISHED. THE CONTRACTOR IS TO CONTINUE TO MAINTENANCE OF THE GRASS UNTIL ACCEPTANCE AND IS RESPONSIBLE FOR A MINIMUM OF ONE CUT.

1 SOD OVER 150MM TOPSOIL

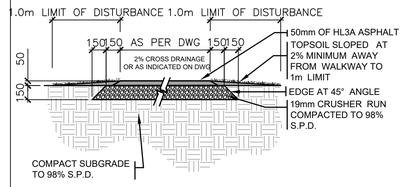
N.T.S. 329223-01



NOTE:
– ALL DIMENSIONS ARE IN MILLIMETERS
– PROVIDE EXPANSION JOINTS AS PER SITE DIRECTION BY LANDSCAPE ARCHITECT
– PLACE DRAINS AS PER SITE SERVICING DRAWINGS
– BRUSHED FINISH AS PER SITE DIRECTION BY LANDSCAPE ARCHITECT

2 NATURAL CONCRETE PAD W/ MESH WITH OPTIONAL DRAIN

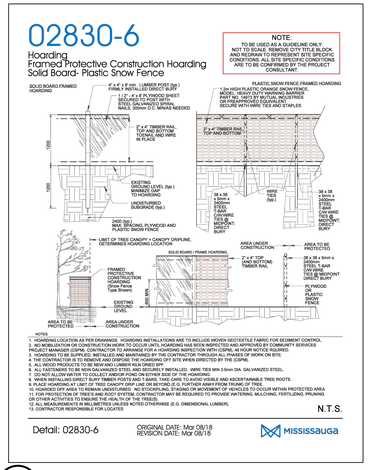
N.T.S 321313.13-105



1. EXCAVATION: EXCAVATE TO THE MINIMUM DEPTH AS REQUIRED. REMOVE ALL EXCAVATED MATERIAL OFF SITE UNLESS OTHERWISE DIRECTED, SUBGRADE SHALL BE COMPACTED TO 98% S.P.D.
2. GRANULAR BASE: 150mm LAYER OF 19mm CRUSHER RUN COMPACTED TO 98% S.P.D.
3. ASPHALT: 50mm LAYER (AFTER COMPACTION) OF HOT MIX HL3A IN ACCORDANCE WITH OPSD STANDARDS.
4. EDGE TREATMENT: ASPHALT EDGE TO BE 45 DEGREE WELL TAMPED TO FORM UNIFORMLY, SMOOTH, CLEAN EDGES WITHOUT LATERAL DEVIATIONS. SOD TO FEATHER IN WITH EXISTING SOD AND GRADES AT A MAXIMUM SLOPE OF 3:1. ALL SEEDED OR SODDED AREAS MUST MEET FLUSH WITH THE ASPHALT SURFACE. REPLACE ALL TOPSOIL AND SOD AS DIRECTED IN CUT AND FILL SITUATIONS.
5. DRAINAGE: SLOPE TO BE A MINIMUM OF 2% ON CROWNED OR CROSS-SLOPED PATHS AS DIRECTED ON SITE OR AS SHOWN ON THE DRAWINGS.
6. ALL GIVEN DIMENSIONS IN MILLIMETERS
7. PLACE DRAINS AS PER SITE SERVICING DRAWINGS

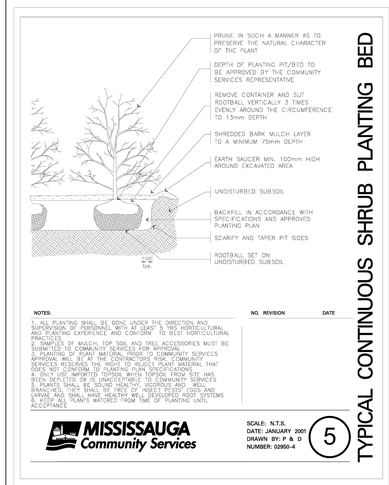
3 LIGHT DUTY ASPHALT SURFACE

1:30 321216-506



4 TREE PROTECTION FENCE

NTS 323133.01-02



329301.49-12

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HURON PARK

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

Sheet Title

DETAIL SHEET

Project Number	24-053
Date	Oct. 2024
Drawn	RN
Checked	KF
Scale	N.T.S

Drawing Number

L-D1

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Woodbridge, ON Canada L4L 8H2
Tel. 416 855 2260
www.cplusp.ca

Name of Project:
Huron Park - New Comfort Station

Location:
830 Paisley Boulevard, Mississauga, ON. L5C 3P5

Ontario Building Code Data Matrix Parts 3 or 9

Item		Building Code Reference (References are to Division B unless noted [A] for Division A or [C] for Division C.)	
1	Project Description: ☑ New ☑ Part 11 ☑ Part 3 ☐ Part 9; ☐ Addition 11.1 to 11.4; ☐ Alterations; ☐ Change of Use	1.1.2. [A]	1.1.2. [A] & 9.10.1.3.
2	Major Occupancy(s) Group A Division 2	3.1.2.1.(1)	9.10.2.
3	Building Area (m²) Existing N/A New 54.6 Total 54.6	1.4.1.2. [A]	1.4.1.2. [A]
4	Gross Area Existing N/A New 54.6 Total 54.6	1.4.1.2. [A]	1.4.1.2. [A]
5	Number of Storeys Above grade 1 Below grade 0	1.4.1.2. [A]&3.2.1.1.	1.4.1.2[A] & 9.10.4
6	Number of Streets/Fire Fighter Access 1	3.2.2.10. & 3.2.5.	9.10.20.
7	Building Classification 3.2.2.28 Group A Division 2, 1 Storey	3.2.2.20.-.83	9.10.2.
8	Sprinkler System Proposed: ☐ entire building; ☐ selected compartments; ☐ selected floor areas; ☐ basement ☐ in lieu of roof rating; ☑ not required	3.2.2.20.-.83; 3.2.1.5.; 3.2.2.17. INDEX	9.10.8.2. INDEX
9	Standpipe required ☐ Yes ☑ No	3.2.9.	N/A
10	Fire Alarm required ☐ Yes ☑ No	3.2.4.	9.10.18.
11	Water Service/Supply is Adequate ☑ Yes ☐ No	3.2.5.7.	N/A
12	High Building ☐ Yes ☑ No	3.2.6.	N/A
13	Construction Restrictions ☐ Combustible permitted ☑ Non-combustible required ☐ Both; Actual Construction ☐ Combustible ☑ Non-combustible ☐ Both	3.2.2.20.-.83	9.10.6.
14	Mezzanine(s) Area m²	3.2.1.1.(3)-(8)	9.10.4.1.
15	Occupant load based on ☑ m²/person ☐ design of building. Basement: Occupancy N/A Load ____ persons; 1st Floor: Occupancy 5 Load ____ persons; 2nd Floor: Occupancy N/A Load ____ persons; 3rd Floor: Occupancy N/A Load ____ persons. (Additional floor areas continued on last page)	3.1.17.	9.9.1.3.
16	Barrier-free Design ☑ Yes ☐ No (Explain)	3.8.	9.5.2.
17	Hazardous Substances ☐ Yes ☑ No	3.3.1.2. & 3.3.1.19.	9.10.1.3.(4)
18	Required Fire Resistance Rating (FRR) — Horizontal Assemblies FRR (Hours): Floors N/A Hours; Roof N/A Hours; Mezzanine N/A Hours — Listed Design No. or Description (SG"Z"): N/A; N/A; N/A	3.2.2.20.-.83 & 3.2.1.4.	9.10.8. 9.10.9.
	FRR of Supporting Members — Listed Design No. Or Description (SG"Z"): Floors N/A Hours N/A; Roof N/A Hours N/A; Mezzanine N/A Hours N/A		
19	Spatial Separation - Construction of Exterior Walls	3.2.3.	9.10.14.

Wall	Area of EBF (m²)	L.D. (m)	L/H or H/L	Permitted Max. % of Openings	Proposed % of Openings	FRR (Hours)	Listed Design or Description	Comb Const	Comb. Constr. Nonc. Cladding	Non comb. Constr.
North	N/A									
South	N/A									
East	N/A									
West	N/A									

20 Plumbing Fixture Requirements

Building Code Reference: ☐ Part 3 ? Part 9

Male/Female Count @ ____% / ____%
except as noted otherwise

		Occupant Load	BC Table Number	Fixtures Required	Fixtures Provided	Part 3	Part 9
Base mark:	Occupancy						
	Occupancy						
1st Floor:	Occupancy						
	Occupancy						
2nd Floor:	Occupancy						
	Occupancy						
3rd Floor:	Occupancy						
	Occupancy						
(Adjust as Required for Additional Floors or Occupancies)							

21 Other (describe) ____

15 (Occupant Load ~Continued)

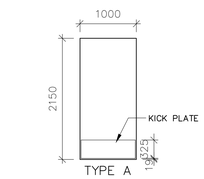
____Floor	Occupancy ____	Load____	persons
____Floor	Occupancy ____	Load____	persons
____Floor	Occupancy ____	Load____	persons
____Floor	Occupancy ____	Load____	persons
____Floor	Occupancy ____	Load____	persons
____Floor	Occupancy ____	Load____	persons
____Floor	Occupancy ____	Load____	persons
____Floor	Occupancy ____	Load____	persons
____Floor	Occupancy ____	Load____	persons
____Floor	Occupancy ____	Load____	persons

Door and Frame Schedule

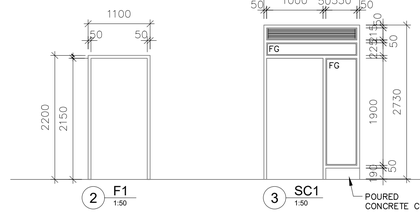
Door Number	Door Type	Door Width	Door Height	Door Material Type	Door Finish Type	Glass Type (Door)	Frame Elevation Type	Fire Rating	Frame Width	Frame Height	Frame Depth	Frame Material Type	Frame Finish Type	Glass Type (Screen)	Jamb	Head	Comments
T/O FIN. GROUND FLOOR SLAB																	
100	1A	1000	2150	HM	PT	-	F1		1100	2200	146	HM	PT				FILL FRAMES SOLID W/ MORTAR, WEATHERSTRIPPING, THRESHOLD
101	1A	1000	2150	HM	PT	-	SC1		1700	2730	146	HM	PT	FG			HTD, FILL FRAMES SOLID W/ MORTAR, WEATHERSTRIPPING, THRESHOLD, BARRIER FREE DOOR OPERATOR
102	1A	1000	2150	HM	PT	-	SC1		1700	2730	146	HM	PT	FG			HTD, FILL FRAMES SOLID W/ MORTAR, WEATHERSTRIPPING, THRESHOLD, BARRIER FREE DOOR OPERATOR
103	1A	1000	2150	HM	PT	-	SC1		1700	2730	146	HM	PT	FG			HTD, FILL FRAMES SOLID W/ MORTAR, WEATHERSTRIPPING, THRESHOLD, BARRIER FREE DOOR OPERATOR

Room Finish Schedule

Number	Name	Floor Finish	Wall Base	Wall Material	Wall Finish	Ceiling Height	Ceiling Type	Ceiling Finish	Comments
T/O FIN. GROUND FLOOR SLAB									
101	ALL GENDER WASHROOM	SEALED	R	CB	PT	2550	EXP	-	
102	ALL GENDER WASHROOM	SEALED	R	CB	PT	2550	EXP	-	
103	UNIVERSAL WASHROOM	SEALED	R	CB	PT	2550	EXP	-	
104	UTILITIES	SEALED	R	CB	PT	2550	EXP	-	

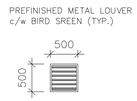


1 DOOR TYPE ELEVATION 1:50

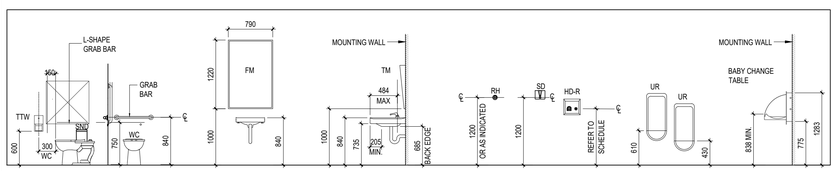


2 F1 1:50

3 SC1 1:50

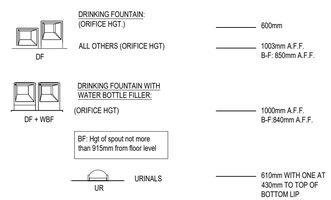


4 L1 1:50



NOTE:
ALL MOUNTING HEIGHTS ARE FROM FIN. FLR TO DISPENSING HEIGHT OF ACCESSORY.
(REFER TO SPECIFICATIONS AND INTERIOR ELEVATIONS).

ITEM	WASHROOM ACCESSORIES	MOUNTING HEIGHT (ABOVE FIN. FLR.)
TTD	TOILET PAPER DISPENSER	600mm A.F.F.
SND	SANITARY NAPKIN DISPOSAL	600mm A.F.F.
SNV	SANITARY NAPKIN VENDOR	900-1200mm A.F.F.
	WALL MOUNTED SINKS	600mm A.F.F.
RH	ROBE HOOK	1200mm A.F.F.
MR1	MIRROR TYPE 1 (790X1220)	1000mm A.F.F.
GB	GRAB BAR	1050mm B.F. STANDARD (OBC)
RSD	RECESSED SOAP DISH (IN SHOWERS)	600mm A.F.F.
	FOLDING SHOWER SEAT	460mm A.F.F.
	SHOWER CURTAIN & ROD	1800mm A.F.F.
HR-R	HAIR DRYER (RECESSED)	1000mm TO PUSH BUTTON
SD	SOAP DISPENSER	1200mm TO PUSH BUTTON
SH	STEEL SHELF	1100mm A.F.F.



OBC NOTES:

1. THIS OBC PART 3 CODE MATRIX APPLIES TO NEW CONSTRUCTION

GENERAL NOTES:

1. FOR ALL

LIST OF ABBREVIATIONS

AA	ANODIZED ALUMINUM
AB	ARCHITECTURAL BLOCK
ACB	ACOUSTIC CONCRETE BLOCK
ACP	ALUMINUM COMPOSITE PANELS
AFC	ARCHITECTURALLY FINISHED POURED CONCRETE WALL
ALUM	ALUMINUM
ANOD	ANODIZED
BFDO	BARRIER-FREE DOOR OPERATOR
BR	BRICK
CONC	CONCRETE
CB	CONCRETE BLOCK
CJ	MASONRY CONTROL JOINT
CP	CONTROL PANEL
CT	CERAMIC TILE
DF+WBF	DRINKING FOUNTAIN+BOTTLE FILLER
EF	EPOXY FLOORING
EP	ELECTRICAL POWER PANEL
EXP	EXPOSED STRUCTURE
EXT	EXTERIOR
GB	GYPSUM BOARD
GL	GLASS / GLAZING
HD	HAND DRYER
HD-R	HAND DRYER - RECESSED
HM	HOLLOW METAL
HTD	HIGH TRAFFIC DOOR
INSUL	INSULATION
LF	EXTERIOR LIGHT FIXTURE
LSD	LIQUID SOAP DISPENSER
MTL	METAL
MIP	METAL INSULATED PANEL
MP	METAL PANEL
MR1	MIRROR
PCS	PRECAST CONCRETE SILL
PLAM	PLASTIC LAMINATE
PMC	PREFINISHED METAL CLADDING
PMF	PREFINISHED METAL FLASHING
PSS	PAINTED STRUCTURAL STEEL
PT	PAINT
R	RESILIENT BASE
RTU	ROOF TOP UNIT
S	STAIN
SCF	SEALED CONCRETE FLOOR
SB	STRUCTURAL BRICK
SD	SCUPPER DRAIN
SL	SIDE LITE
SND	SANITARY NAPKIN DISPENSER
STV	STAIN AND VARNISH
TG	TEMPERED GLAZING
TTD	TOILET TISSUE DISPENSER
UR	URINAL
VP	VISION GLAZING (INSULATED ON EXTERIOR)
WC	WATER CLOSET (TOILET FIXTURE)
WMS	WALL MOUNTED SINK
WPF	WATER-PROOFING FLOORING

FIRE SEPARATION LEGEND

GENERAL NOTE:
ALL COLUMNS SUPPORTING A FLOOR OR FUTURE FLOOR ASSEMBLY TO HAVE A FIRE RESISTANCE RATING OF 1 HOUR. RATING PROVIDED BY LIGHTWEIGHT CONCRETE BLOCK, POURED CONCRETE, OR FIRERATED GYPSUM BOARD FROM SLAB ON GRADE TO DECK ABOVE. FLUTES OF DECK AT FIRE SEPARATIONS TO BE PROTECTED AS PER ULC DESIGN # HW21. (IF APPLICABLE) PRECAST CONCRETE SLABS AND POURED CONCRETE TOPPING STUCTURE OF 2ND FLOOR ASSEMBLY TO HAVE A 1 HOUR FIRE RESISTANCE RATING WITH 1 HR SPRAY FIRE PROOFING ON ALL SUPPORTING STEEL BEAMS

- XX — XX — THE CORRIDOR WALLS ARE FIRE SEPARATIONS HOWEVER THE FIRE RESISTANCE RATING IS WAIVED SINCE IT IS A SPRINKLERED BUILDING. THEY WILL BE A SMOKE BARRIERS.
- 0 HR — INDICATES 0HR. FIRE SEPARATION
- INDICATES MIN. 30 MIN. FIRE SEPARATION
- INDICATES MIN. 1HR. CONCRETE BLOCK FIRE SEPARATION UNLESS NOTED OTHERWISE
- TD — TRAVEL DISTANCE
- 25 — OCCUPANT LOAD
- EXIT CAPACITY = 280 — SUM OF THE TOTAL ALLOWABLE EXIT CAPACITY BASED ON THE EXIT WIDTH
- PATH OF TRAVEL TO DETERMINE EXIT CAPACITY.

GENERAL NOTE (INTUMESCENT PAINT ON LINTELS):
3.2.2.3. EXCEPTIONS TO STRUCTURAL FIRE PROTECTION
RE: INTUMESCENT PAINT ON LINTELS
(1) FIRE PROTECTION IS NOT REQUIRED FOR,

(a) STEEL LINTELS ABOVE OPENING NOT MORE THAN 2m WIDE IN LOADBEARING WALLS AND NOT MORE THAN 3m WIDE IN NON-LOADBEARING WALLS,

(b) STEEL LINTELS ABOVE OPENINGS MORE THAN 2m WIDE AND MORE THAN 3m WIDE IN NON-LOADBEARING WALLS PROVIDED THE LINTELS ARE SUPPORTED AT INTERVALS OF NOT MORE THAN 2m BY STRUCTURAL MEMBERS WITH THE REQUIRED FIRE RESISTANCE RATING.

(c) THE BOTTOM FLANGES OF SHELF ANGLES AND PLATES THAT ARE NOT PART OF THE STRUCTURAL FRAME,

(d) STEEL MEMBERS FOR FRAMEWORK AROUND ELEVATOR HOISTWAY DOORWAYS, STEEL FOR THE SUPPORT OF ELEVATOR AND DUMBWAITER GUIDES, COUNTERWEIGHTS AND OTHER SIMILAR EQUIPMENT, THAT ARE ENTIRELY ENCLOSED IN A HOISTWAY AND ARE NOT PART OF THE STRUCTURAL FRAME OF THE BUILDING, AND

(e) STEEL MEMBERS OF STAIRWAYS AND ESCALATORS THAT ARE NOT PART OF THE STRUCTURAL FRAME OF A BUILDING.

SYMBOL LEGEND

- B1 — DOOR NUMBER AND FRAME ELEVATION TYPE (SEE DOOR SCHEDULE)
- C1 — DOTTED LINES INDICATES DOOR TO HAVE BARRIER FREE DOOR OPERATOR
- CW001 — EXTERIOR WINDOW REFERENCE
- M1 — MILLWORK REFERENCE
- INTERIOR ELEVATION REFERENCE: 13 / 12 A6102 14 / 15 — REFERENCE NUMBER; SHEET NUMBER

MATERIALS LEGEND

AB	ARCHITECTURAL BLOCK
CFI	CONCRETE FACED INSULATED WALL PANEL STYROFOAM W/ CONCRETE FACING)
MCP	METAL COMPOSITE PANEL - ALPOLIC
PMS-1	PREFINISHED METAL SIDING AD300-SR HORIZONTAL WALL CLADDING WEATHER XL FINISH COLOR GREY BERRY 55090 BY VICWEST
PMS-2	PREFINISHED METAL SIDING BELLARA MOUNTAIN CEDAR 18-2772 BY VICWEST
RG	RATED GLAZING
SP-1	SPANDREL PANEL 1 BACKPAINTED GLASS #2-4150 TRANQUILITY
SP-2	SPANDREL PANEL 2 BACKPAINTED GLASS #0-2008 CRYSTALLINE
SP-3	SPANDREL PANEL 3 BACKPAINTED GLASS #0-2007 REFINED
VP	VISION PANEL (CLEAR GLAZING)

EXTERIOR WALL TYPES

W1 — EXTERIOR WALL CONSTRUCTION: (405mm)
- SPLIT FACE ARCHITECTURAL BLOCK VENEER BY SHOULDICE
  SIZE: 90mm THICK x 190mm HIGH x 390mm LONG, (STACKED BOND) ALTERNATE COURSING
  COLOUR: ROCKSTONE GREY
- 25mm AIR SPACE CAVITY
- 100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- SELF-ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

W2 — EXTERIOR WALL CONSTRUCTION: (405mm)
- CLAY BRICK VENEER BY MERIDIAN
  SIZE: 90mm THICK x 57mm HIGH x 290mm LONG
  SOLDIER COURSING
  COLOUR: IRONSPOT
- 25mm AIR SPACE CAVITY
- 100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- LOW PERMEANCE, SELF ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

W3 — EXTERIOR PANELIZED WALL SYSTEM:
- PREFINISHED METAL COMPOSITE CLADDING PANELS - ALPOLIC
- 100mm Z-GIRTS INSTALLED HORIZONTALLY
- 100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- SELF ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

W3a — EXTERIOR PANELIZED WALL SYSTEM:
- PREFINISHED METAL COMPOSITE PANELS ALPOLIC
- 12mm EXTERIOR GRADE PLYWOOD BASE
- 92mm METAL STUD FRAMING SYSTEM
- 100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- SELF ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

WALL TYPE TYPICAL NOTES:
1. REFER TO PLANS AND ELEVATIONS
2. ALL VOIDS AND CAVITIES

INTERIOR WALL TYPES

P1 — P1 - INTERIOR CONCRETE BLOCK PARTITION:
190mm CONCRETE BLOCK

CEILING TYPES

C1 / 1000 — INTERIOR CEILING
PREFINISHED METAL CLADDING, BELLARA MOUNTAIN CEDAR BY VICWEST
METAL FURRING CHANNELS @ 600 O/C
92mm METAL STUD FRAMING SYSTEM @ 1200mm (MAX.) O/C BRACED TO UNDERSIDE OF STRUCTURE

C2 / 1000 — EXTERIOR METAL SOFFIT (PMS-1)
PREFINISHED METAL CLADDING, BELLARA MOUNTAIN CEDAR BY VICWEST
METAL FURRING CHANNELS @ 600 O/C
12.7mm CEMENT BOARD BRACED TO UNDERSIDE OF STEEL ROOF STRUCTURE

FLOOR FINISH TYPES

FL1 — TROWEL EPOXY FLOOR (TEF)
REFER TO SPECS.

FL2 — SEALED CONCRETE FLOOR (SCF)
REFER TO SPECS.

ROOF TYPES

R1 — ROOF TYPE - R1
FROM TOP TO BOTTOM:
- PREFINISHED STANDING SEAM STEEL ROOFING, BY VICWEST
- 16mm EXTERIOR PLYWOOD SHEATHING
- 2 LAYERS - 50mm RIGID POLYISO ROOF INSULATION
- SELF ADHESIVE AIR/VAPOUR BARRIER (REFER TO SPECS)
- 16mm EXTERIOR PLYWOOD SHEATHING
- 38mm STRUCTURAL STEEL DECK ON
- STEEL ROOF STRUCTURE (REFER TO STRUCT. DWGS.)

EXTERIOR FINISHES

B1	CLAY BRICK 90D x 57H X 290L CLAY BRICK BY MERDIAN COLOUR: DUNKERRON IRONSPOT
AB1	ARCHITECTURAL BLOCK 90 THICK x 190 HIGH x 390mm SPLIT FACE ARCHITECTURAL BLOCK BY SHOULDICE COLOUR: ROCKSTONE GREY, FINISH: TAPESTRY
PMS-1	PREFINISHED METAL SIDING HORIZONTAL METAL SIDING BELLARA BY VICWEST COLOUR: MOUNTAIN CEDAR FINISH: WOODGRAIN
PMC	PREFINISHED EXTERIOR METAL CLADDING PREFINISHED ALPOLIC METAL COMPOSITE PANELS COLOUR: MATCH EXISTING ON THE RECREATION BUILDING
PMF	PREFINISHED METAL FLASHING COLOUR: DARK BROWN
PMS-1	EXTERIOR METAL SOFFIT & FASCIA PREFINISHED METAL SOFFIT BELLARA BY VICWEST COLOUR: MOUNTAIN CEDAR FINISH: WOODGRAIN
VP-1	VISION PANEL 1 CLEAR GLAZING
P1	PAINT 1 ORANGE COLOUR PAINT
P2	PAINT 2 DARK BLUE COLOUR PAINT
P3	PAINT 3 YELLOW COLOUR PAINT
P4	PAINT 4 LIGHT BLUE COLOUR PAINT
P5	PAINT 5 DARK BROWN COLOUR PAINT
PCC	PRECAST CONCRETE CAP
PCS-1	PRECAST CONCRETE SILL BELOW WINDOWS
PCS-2	PRECAST CONCRETE SURROUND

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REVISIONS/SUBMISSIONS

No.	DATE	DESCRIPTION
1	2024-11-11	ISSUED FOR 60% REVIEW
2	2024-12-23	ISSUED FOR BUILDING PERMIT
3	2025-01-30	ISSUED FOR CLIENT TENDER REVIEW
4	2025-10-03	RE-ISSUED FOR BUILDING PERMIT
5	2025-10-09	ISSUED FOR TENDER

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Project Title
MISSISSAUGA

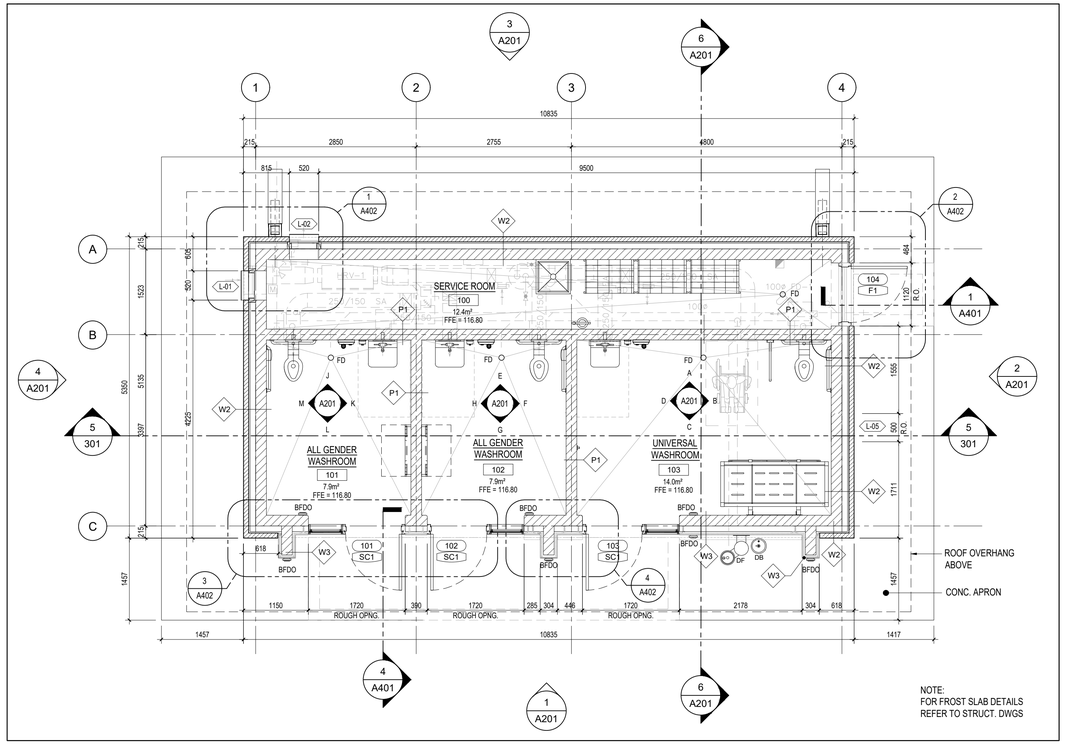
NEW COMFORT STATION HURON PARK RECREATION CENTRE

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

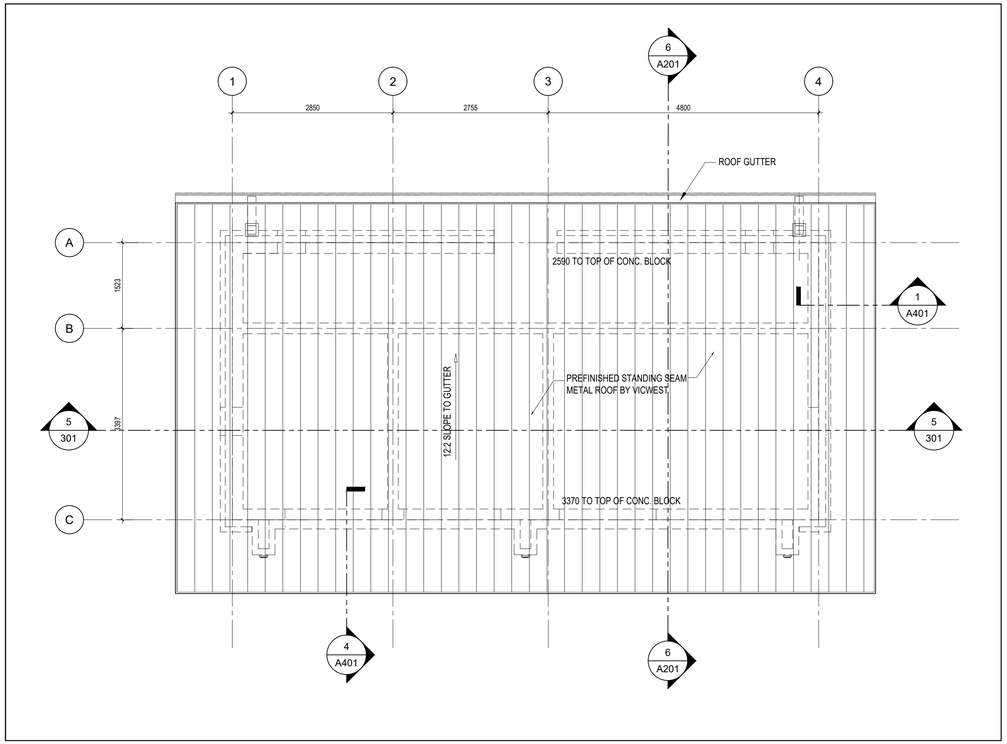
Sheet Title

OBC MATRIX, LEGENDS ABBREVIATIONS & DOOR AND FRAME SCHEDULE

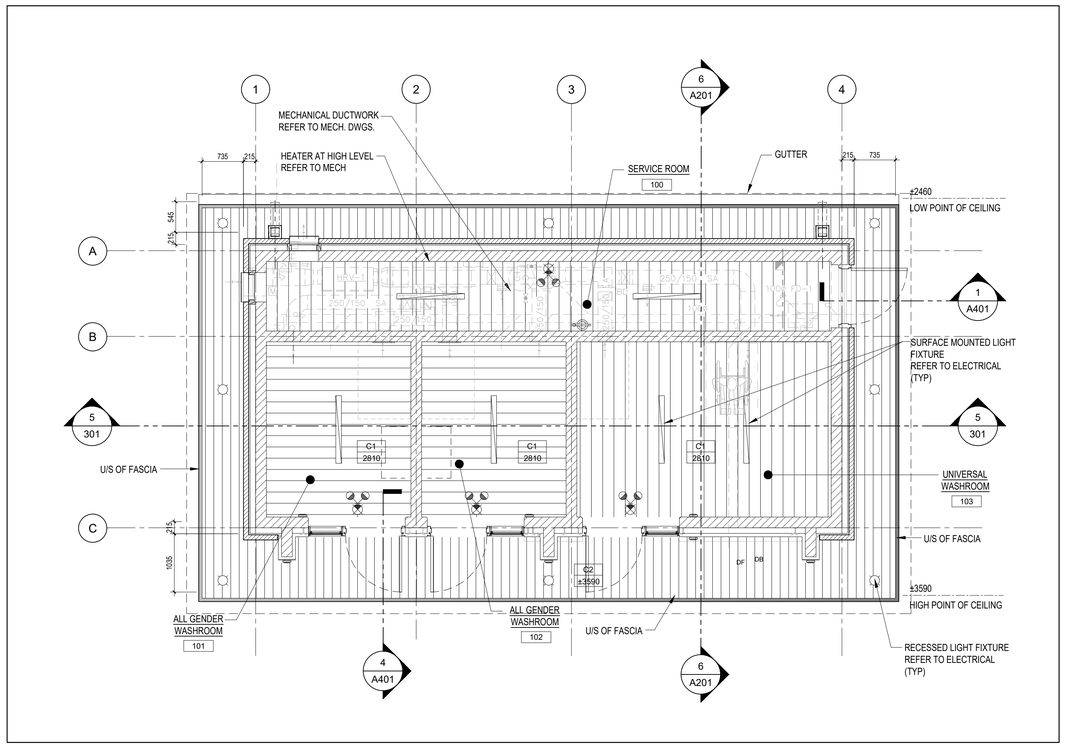
Project Number	24-053
Date	Oct. 2024
Drawn	RS / MP
Checked	CC
Scale	AS SHOWN
Drawing Number	A002



1 FLOOR PLAN
SCALE 1:50



2 ROOF PLAN
SCALE 1:50



3 REFLECTED CEILING PLAN
SCALE 1:50

CEILING TYPES

C1 1000 — INTERIOR CEILING
PREFINISHED METAL CLADDING, BELLARA MOUNTAIN CEDAR BY VICWEST
METAL FURRING CHANNELS @ 600 O/C
92mm METAL STUD FRAMING SYSTEM @ 1200mm (MAX.) O/C BRACED TO UNDERSIDE OF STRUCTURE

C2 1000 — EXTERIOR METAL SOFFIT (PMS-1)
PREFINISHED METAL CLADDING, BELLARA MOUNTAIN CEDAR BY VICWEST
METAL FURRING CHANNELS @ 600 O/C
12.7mm CEMENT BOARD BRACED TO UNDERSIDE OF STEEL ROOF STRUCTURE

FLOOR FINISH TYPES

FL1 — TROWEL EPOXY FLOOR (TEF)
REFER TO SPECS.

FL2 — SEALED CONCRETE FLOOR (SCF)
REFER TO SPECS.

ROOF TYPES

R1 — ROOF TYPE - R1
FROM TOP TO BOTTOM:
- PREFINISHED STANDING SEAM STEEL ROOFING, BY VICWEST
- 16mm EXTERIOR PLYWOOD SHEATHING
- 2 LAYERS - 50mm RIGID POLYISO ROOF INSULATION
- SELF ADHESIVE AIR/VAPOUR BARRIER (REFER TO SPECS)
- 16mm EXTERIOR PLYWOOD SHEATHING
- 38mm STRUCTURAL STEEL DECK ON
- STEEL ROOF STRUCTURE (REFER TO STRUCT. DWGS.)

NOTE:
FOR EXACT QUANTITIES AND LOCATIONS OF ELECTRICAL AND MECHANICAL ITEMS REFER TO ELECTRICAL AND MECHANICAL DRAWINGS

FOR ALL ELECT. EQUIPMENT IN THE CEILING REFER TO THE ELECT. DWGS.

EXTERIOR WALL TYPES

W1 — EXTERIOR WALL CONSTRUCTION: (405mm)
- SPLIT FACE ARCHITECTURAL BLOCK VENEER BY SHOULDICE
  SIZE: 90mm THICK x 190mm HIGH x 390mm LONG, (STACKED BOND) ALTERNATE COURSING
  COLOUR: ROCKSTONE GREY
- 25mm AIR SPACE CAVITY
- 100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- SELF-ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

W2 — EXTERIOR WALL CONSTRUCTION: (405mm)
- CLAY BRICK VENEER BY MERIDIAN
  SIZE: 90mm THICK x 57mm HIGH x 290mm LONG
  SOLDIER COURSING
  COLOUR: IRONSPOT
- 25mm AIR SPACE CAVITY
- 100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- LOW PERMEANCE, SELF ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

W3 — EXTERIOR PANELIZED WALL SYSTEM:
- PREFINISHED METAL COMPOSITE CLADDING PANELS - ALPOLIC
- 100mm Z-GIRTS INSTALLED HORIZONTALLY
  100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- SELF ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

W3a — EXTERIOR PANELIZED WALL SYSTEM:
- PREFINISHED METAL COMPOSITE PANELS ALPOLIC
- 12mm EXTERIOR GRADE PLYWOOD BASE
- 92mm METAL STUD FRAMING SYSTEM
- 100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- SELF ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

WALL TYPE TYPICAL NOTES:
1. REFER TO PLANS AND ELEVATIONS
2. ALL VOIDS AND CAVITIES

INTERIOR WALL TYPES

P1 — P1 - INTERIOR CONCRETE BLOCK PARTITION:
190mm CONCRETE BLOCK

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REVISIONS/SUBMISSIONS

No.	DATE	DESCRIPTION
1	2024-10-24	ISSUED FOR CLIENT APPROVAL
2	2025-01-06	ISSUED FOR BUILDING PERMIT
3	2025-01-30	ISSUED FOR CLIENT TENDER REVIEW
4	2025-10-03	RE-ISSUED FOR BUILDING PERMIT
5	2025-10-09	ISSUED FOR TENDER

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Project Title

MISSISSAUGA

NEW COMFORT STATION
HURON PARK
RECREATION CENTRE

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

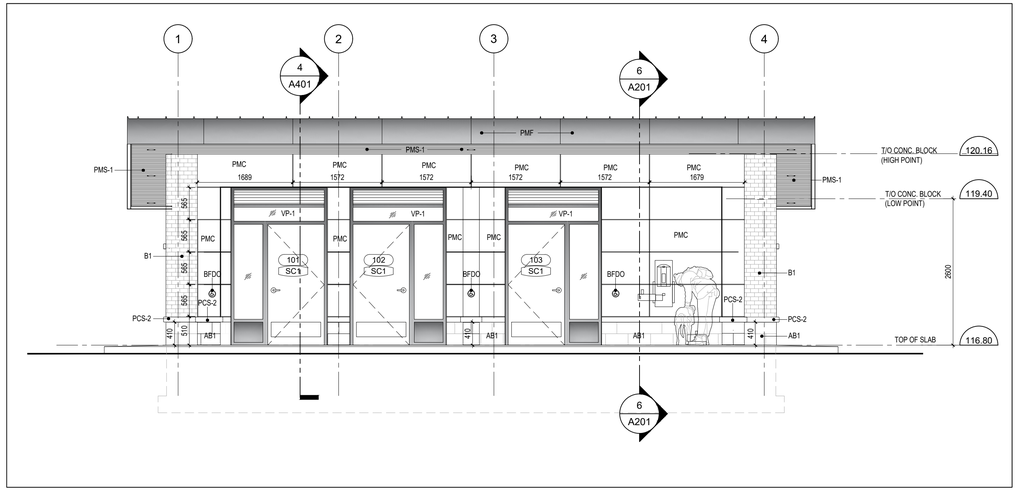
Sheet Title

FLOOR PLAN
ROOF PLAN AND
REFLECTED CEILING PLAN

Project Number	24-053
Date	Oct. 2024
Drawn	RS
Checked	CC
Scale	1:50

Drawing Number

A101



1 EAST ELEVATION
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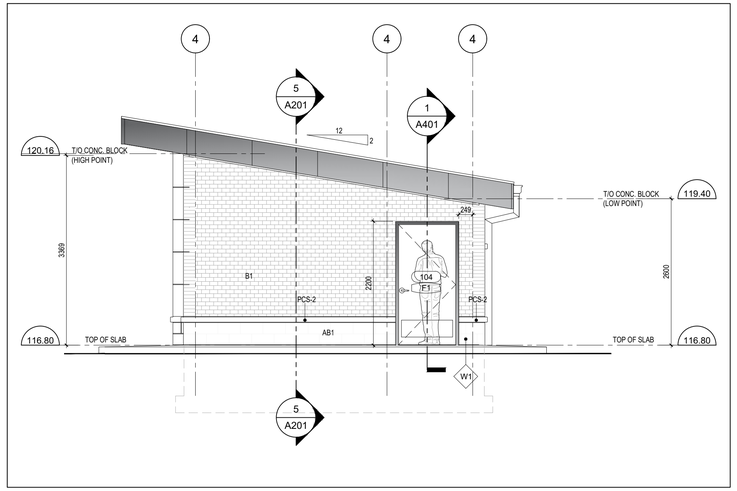
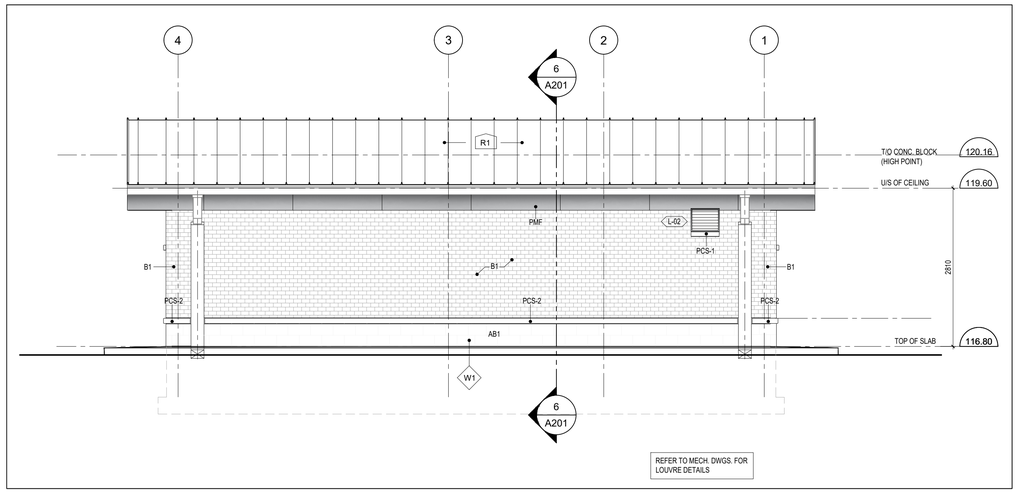
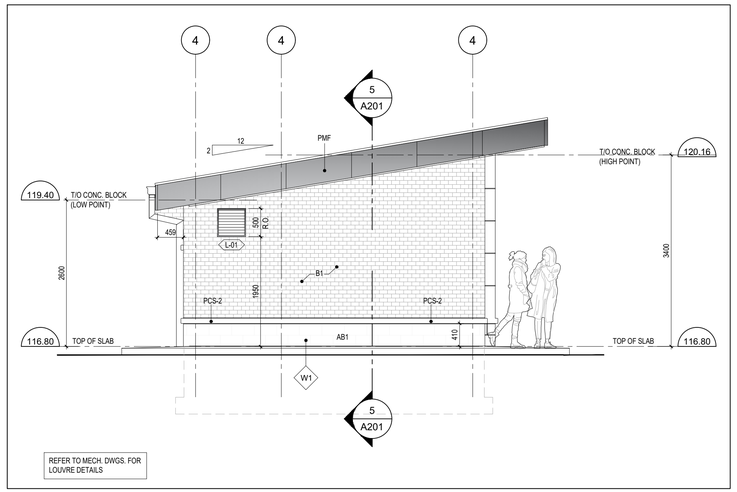


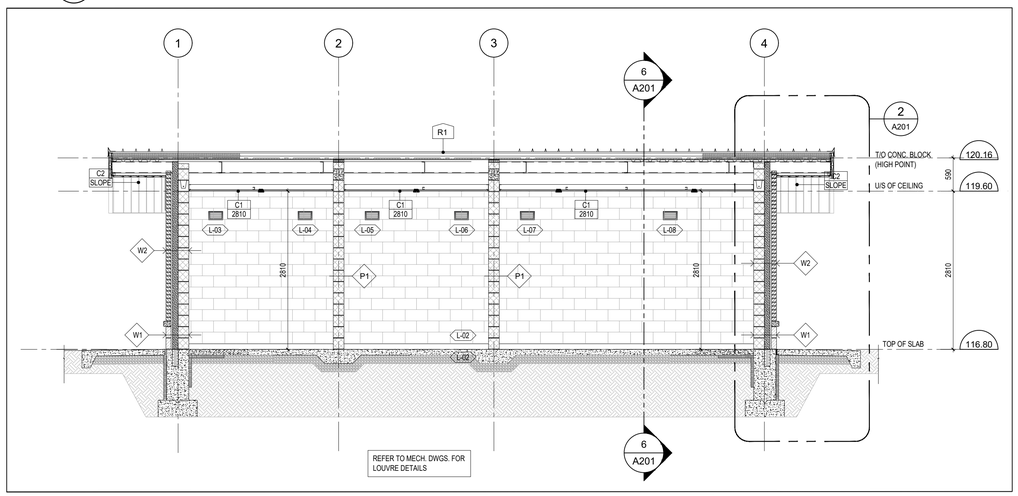
2 SOUTH ELEVATION
SCALE 1:50



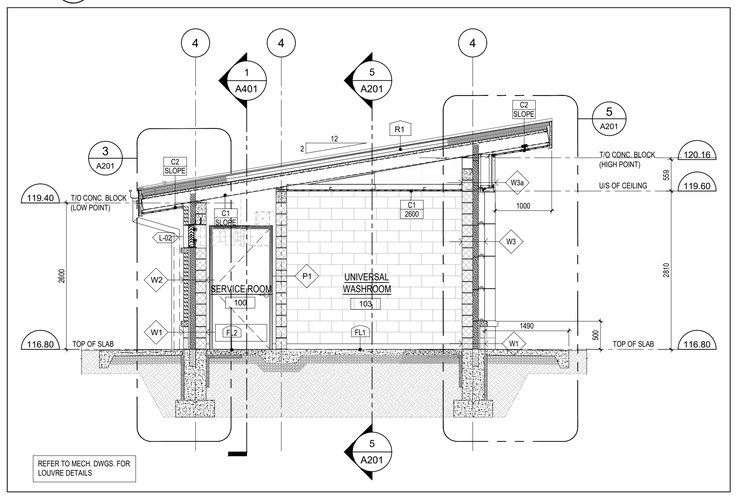
3 WEST ELEVATION
SCALE 1:50



4 NORTH ELEVATION
SCALE 1:50



5 BUILDING SECTION
SCALE 1:50



6 BUILDING SECTION
SCALE 1:50

EXTERIOR WALL TYPES

W1 EXTERIOR WALL CONSTRUCTION: (405mm)
- SPLIT FACE ARCHITECTURAL BLOCK VENEER BY SHOULDICE
  SIZE: 90mm THICK x 190mm HIGH x 390mm LONG, (STACKED BOND) ALTERNATE COURSING
  COLOUR: ROCKSTONE GREY
- 25mm AIR SPACE CAVITY
- 100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- SELF-ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

W2 EXTERIOR WALL CONSTRUCTION: (405mm)
- CLAY BRICK VENEER BY MERIDIAN
  SIZE: 90mm THICK x 57mm HIGH x 290mm LONG
  SOLDIER COURSING
  COLOUR: IRONSPOT
- 25mm AIR SPACE CAVITY
- 100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- LOW PERMEANCE, SELF ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

W3 EXTERIOR PANELIZED WALL SYSTEM:
- PREFINISHED METAL COMPOSITE CLADDING PANELS - ALPOLIC
- 100mm Z-GIRTS INSTALLED HORIZONTALLY
  100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- SELF ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

W3a EXTERIOR PANELIZED WALL SYSTEM:
- PREFINISHED METAL COMPOSITE PANELS ALPOLIC
- 12mm EXTERIOR GRADE PLYWOOD BASE
- 92mm METAL STUD FRAMING SYSTEM
- 100mm SPRAY FOAM INSULATION (SEE NOTE 2)
- SELF ADHESIVE SHEET MEMBRANE AIR/VAPOUR BARRIER AT TRANSITIONS AND BETWEEN ALL DISSIMILAR MATERIALS
- 190mm CONCRETE BLOCK BACK-UP

WALL TYPE TYPICAL NOTES:
1. REFER TO PLANS AND ELEVATIONS
2. ALL VOIDS AND CAVITIES

INTERIOR WALL TYPES

P1 P1 - INTERIOR CONCRETE BLOCK PARTITION:
190mm CONCRETE BLOCK

CEILING TYPES

C1 / 1000 INTERIOR CEILING
PREFINISHED METAL CLADDING, BELLARA MOUNTAIN CEDAR BY VICWEST
METAL FURRING CHANNELS @ 600 O/C
92mm METAL STUD FRAMING SYSTEM @ 1200mm (MAX.) O/C BRACED TO UNDERSIDE OF STRUCTURE

C2 / 1000 EXTERIOR METAL SOFFIT (PMS-1)
PREFINISHED METAL CLADDING, BELLARA MOUNTAIN CEDAR BY VICWEST
METAL FURRING CHANNELS @ 600 O/C
12.7mm CEMENT BOARD BRACED TO UNDERSIDE OF STEEL ROOF STRUCTURE

FLOOR FINISH TYPES

FL1 TROWEL EPOXY FLOOR (TEF)
REFER TO SPECS.

FL2 SEALED CONCRETE FLOOR (SCF)
REFER TO SPECS.

ROOF TYPES

R1 ROOF TYPE - R1
FROM TOP TO BOTTOM:
- PREFINISHED STANDING SEAM STEEL ROOFING, BY VICWEST
- 16mm EXTERIOR PLYWOOD SHEATHING
- 2 LAYERS - 50mm RIGID POLYISO ROOF INSULATION
- SELF ADHESIVE AIR/VAPOUR BARRIER (REFER TO SPECS)
- 16mm EXTERIOR PLYWOOD SHEATHING
- 38mm STRUCTURAL STEEL DECK ON
- STEEL ROOF STRUCTURE (REFER TO STRUCT. DWGS.)

EXTERIOR FINISHES

B1	CLAY BRICK 90D x 57H X 290L CLAY BRICK BY MERDIAN COLOUR: DUNKERRON IRONSPOT
AB1	ARCHITECTURAL BLOCK 90 THICK x 190 HIGH x 390mm SPLIT FACE ARCHITECTURAL BLOCK BY SHOULDICE COLOUR: ROCKSTONE GREY, FINISH: TAPESTRY
PMS-1	PREFINISHED METAL SIDING HORIZONTAL METAL SIDING BELLARA BY VICWEST COLOUR: MOUNTAIN CEDAR FINISH: WOODGRAIN
PMC	PREFINISHED EXTERIOR METAL CLADDING PREFINISHED ALPOLIC METAL COMPOSITE PANELS COLOUR: MATCH EXISTING ON THE RECREATION BUILDING
PMF	PREFINISHED METAL FLASHING COLOUR: DARK BROWN
PMS-1	EXTERIOR METAL SOFFIT & FASCIA PREFINISHED METAL SOFFIT BELLARA BY VICWEST COLOUR: MOUNTAIN CEDAR FINISH: WOODGRAIN

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REVISIONS/SUBMISSIONS

No.	DATE	DESCRIPTION
1	2024-10-24	ISSUED FOR CLIENT APPROVAL
2	2025-01-06	ISSUED FOR BUILDING PERMIT
3	2025-01-30	ISSUED FOR CLIENT TENDER REVIEW
4	2025-10-03	RE-ISSUED FOR BUILDING PERMIT
5	2025-10-09	ISSUED FOR TENDER

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Project Title
MISSISSAUGA

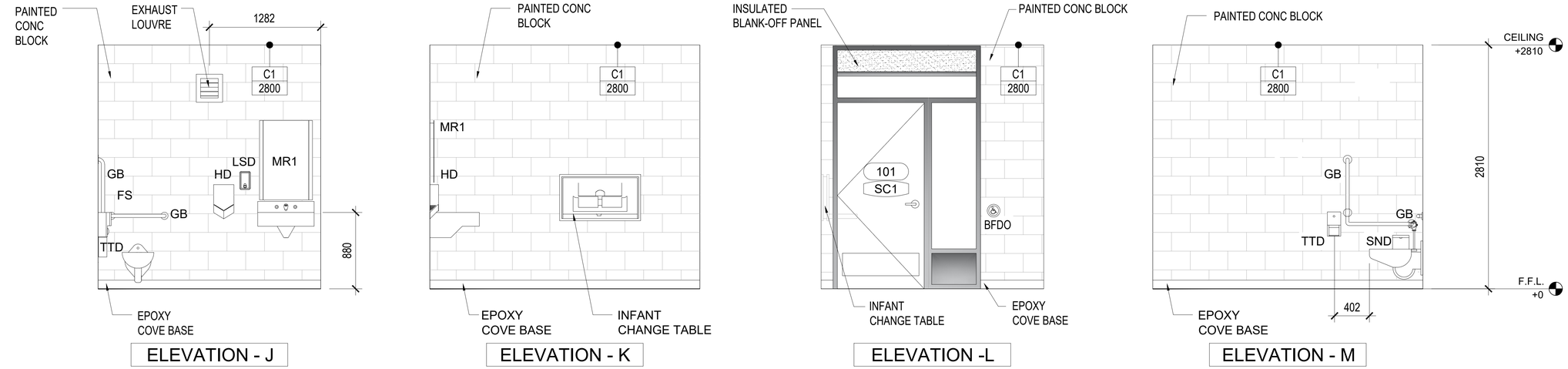
NEW COMFORT STATION HURON PARK RECREATION CENTRE

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

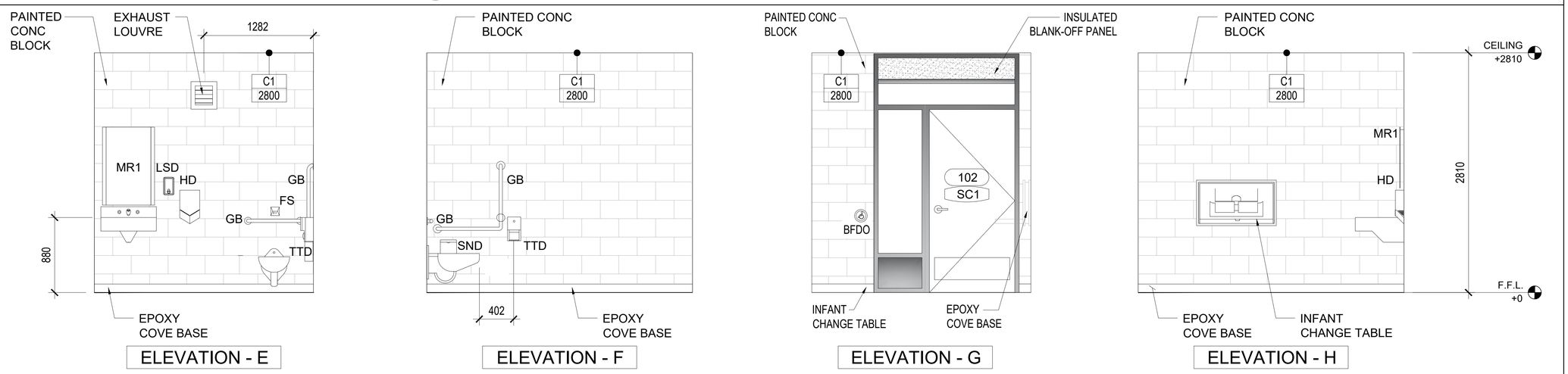
Sheet Title

ELEVATIONS & SECTIONS

Project Number	24-053
Date	Oct. 2024
Drawn	RS
Checked	CC
Scale	1:50
Drawing Number	A201



3 INTERIOR ELEVATIONS - ALL GENDER WASHROOM 1 - #101
1:25



2 INTERIOR ELEVATIONS - ALL GENDER WASHROOM 2 - #102
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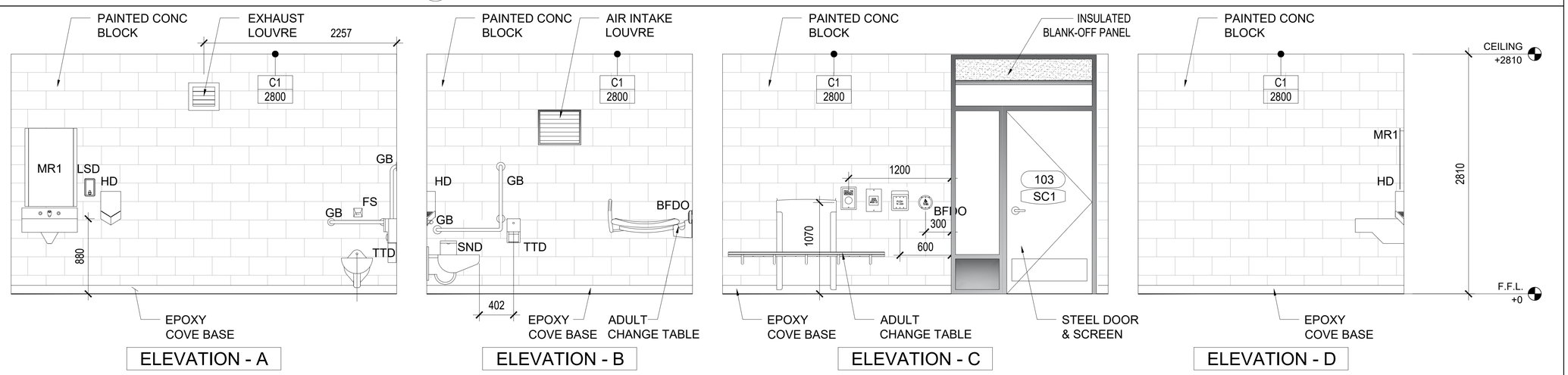

1 INTERIOR ELEVATIONS - UNIVERSAL WASHROOM - #103
1:25

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No.	DATE	DESCRIPTION
1	2024-12-23	ISSUED FOR BUILDING PERMIT
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3	2025-10-03	RE-ISSUED FOR BUILDING PERMIT
4	2025-10-09	ISSUED FOR TENDER

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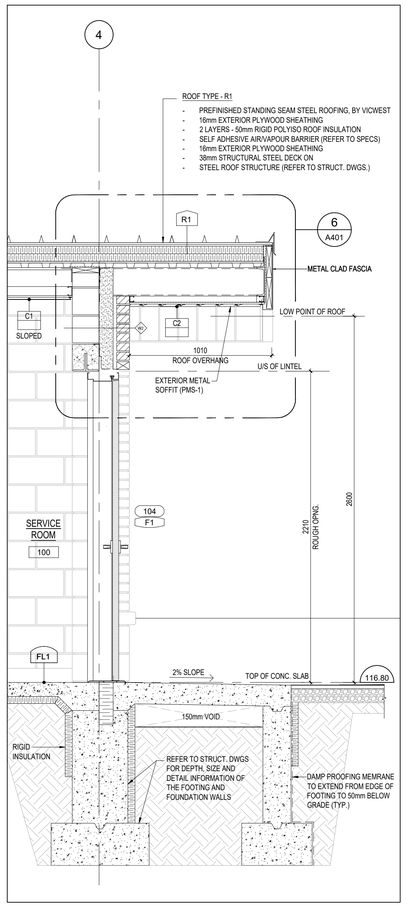
HURON PARK
RECREATION CENTRE
830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

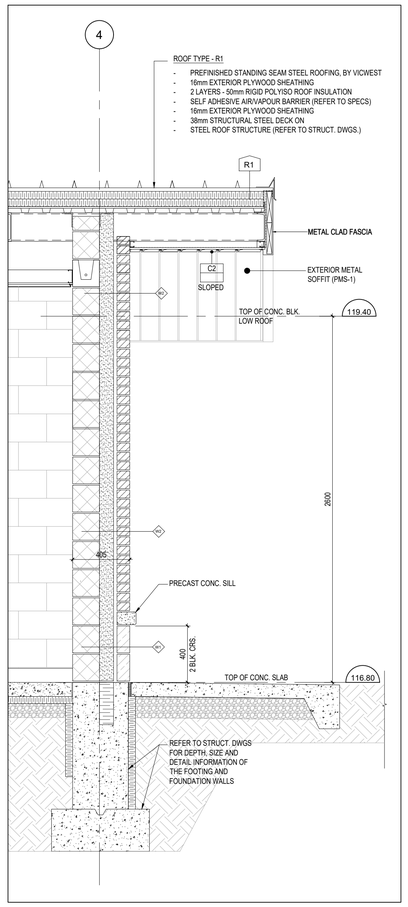
Sheet Title
INTERIOR ELEVATIONS

Project Number	24-053
Date	Oct. 2024
Drawn	RSe
Checked	CC
Scale	1:25

Drawing Number
A301



1 WALL SECTION
SCALE 1:20



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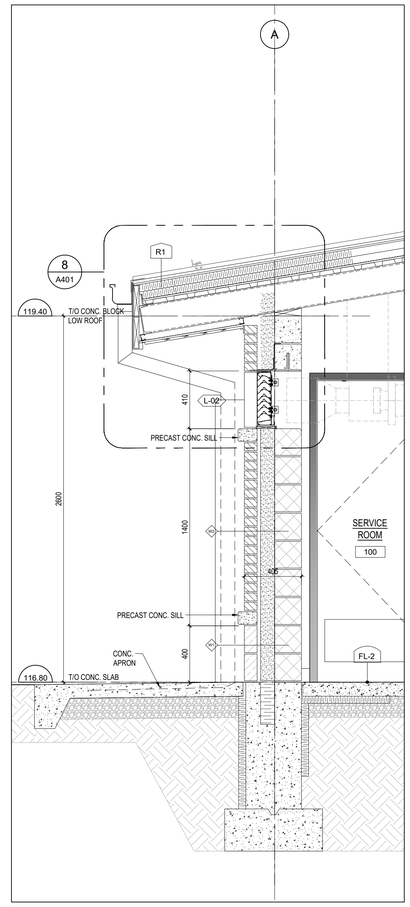

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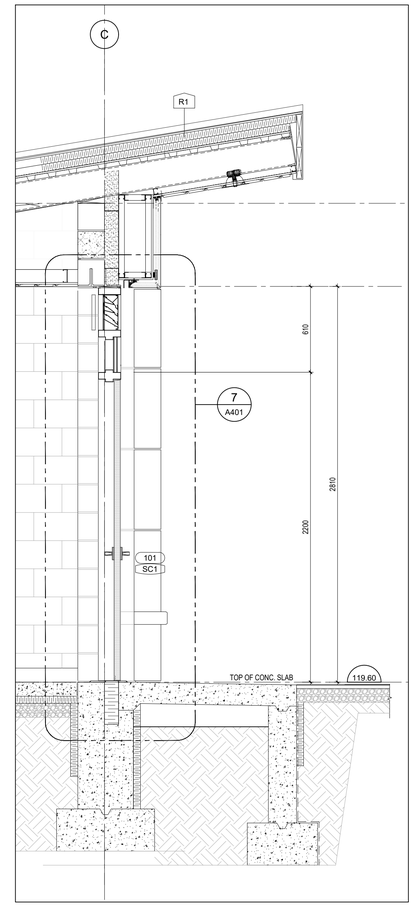

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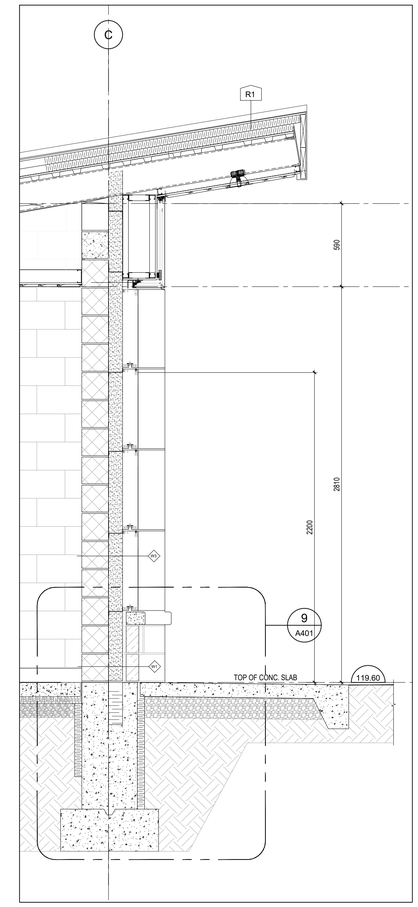

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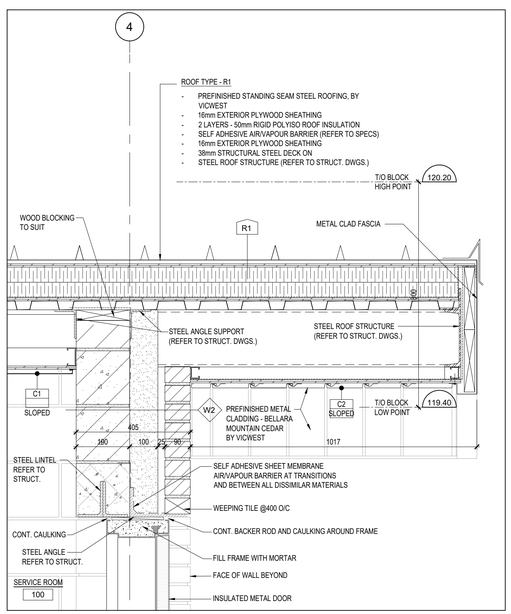
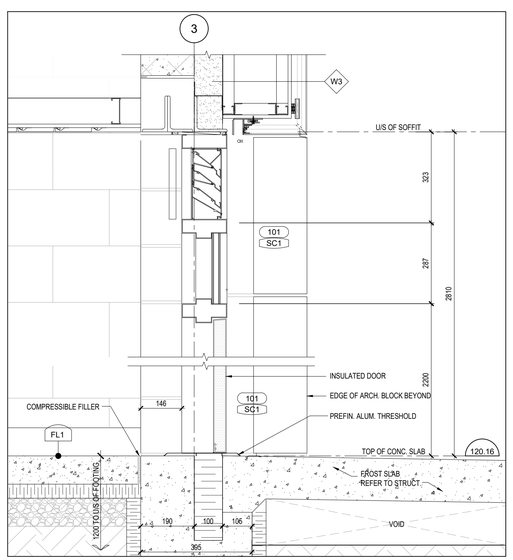
SCALE 1:20



6 SECTION DETAIL
SCALE 1:10



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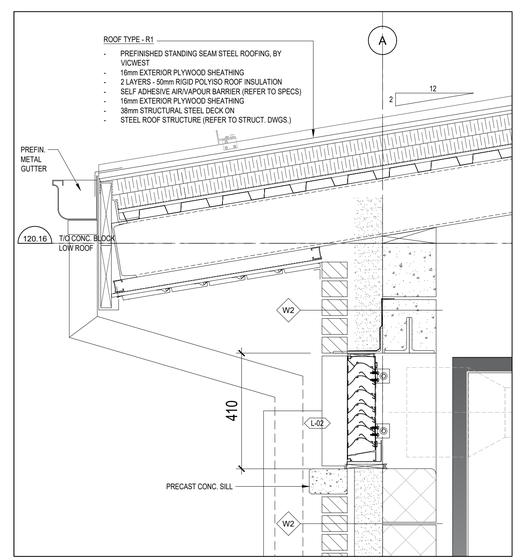
SCALE 1:10



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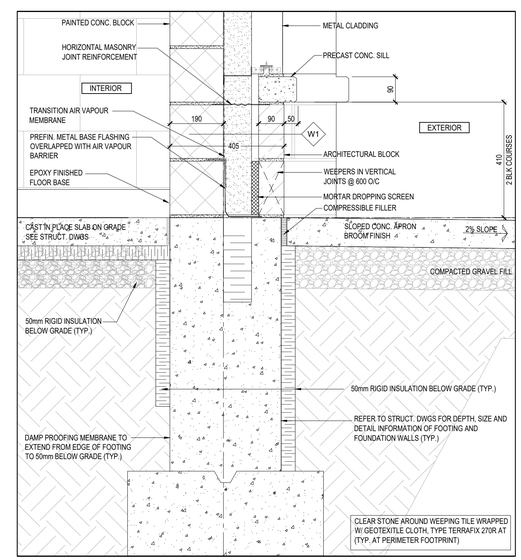
SCALE 1:10



9 SECTION DETAIL
SCALE 1:10

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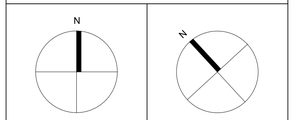
2	2025-10-03	RE-ISSUED FOR BUILDING PERMIT
3	2025-10-09	ISSUED FOR TENDER



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Project Title

MISSISSAUGA

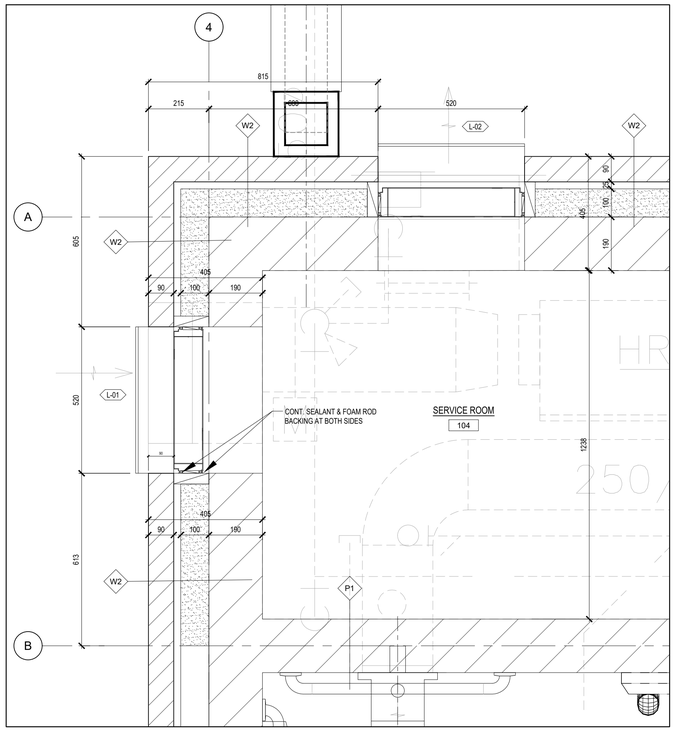
NEW COMFORT STATION
HURON PARK
RECREATION CENTRE

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

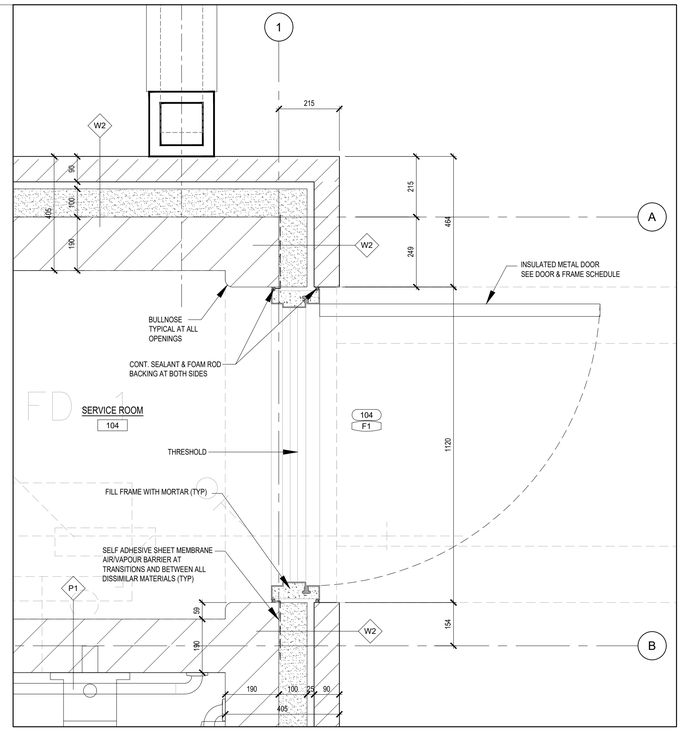
Sheet Title

WALL SECTIONS
AND
SECTION DETAILS

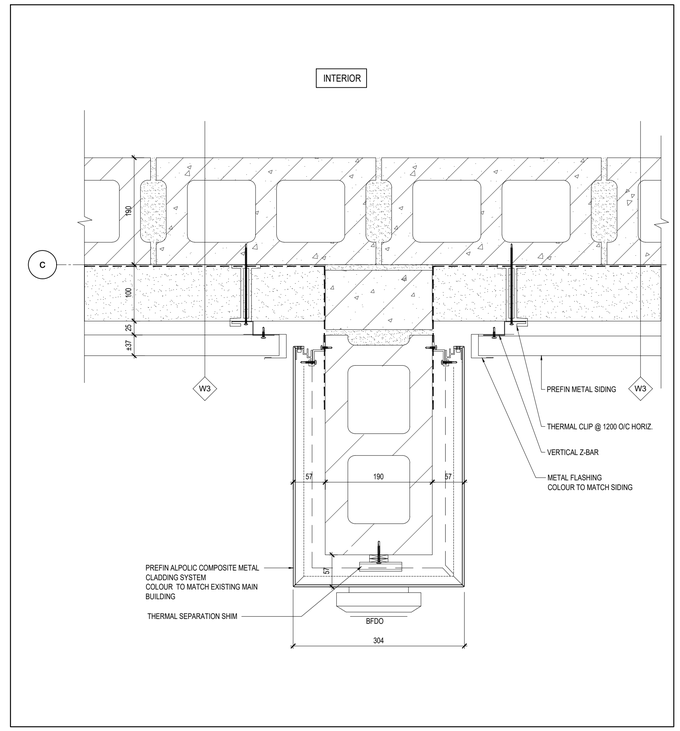
Project Number	24-053
Date	Oct. 2024
Drawn	RS
Checked	CC
Scale	AS SHOWN
Drawing Number	A401



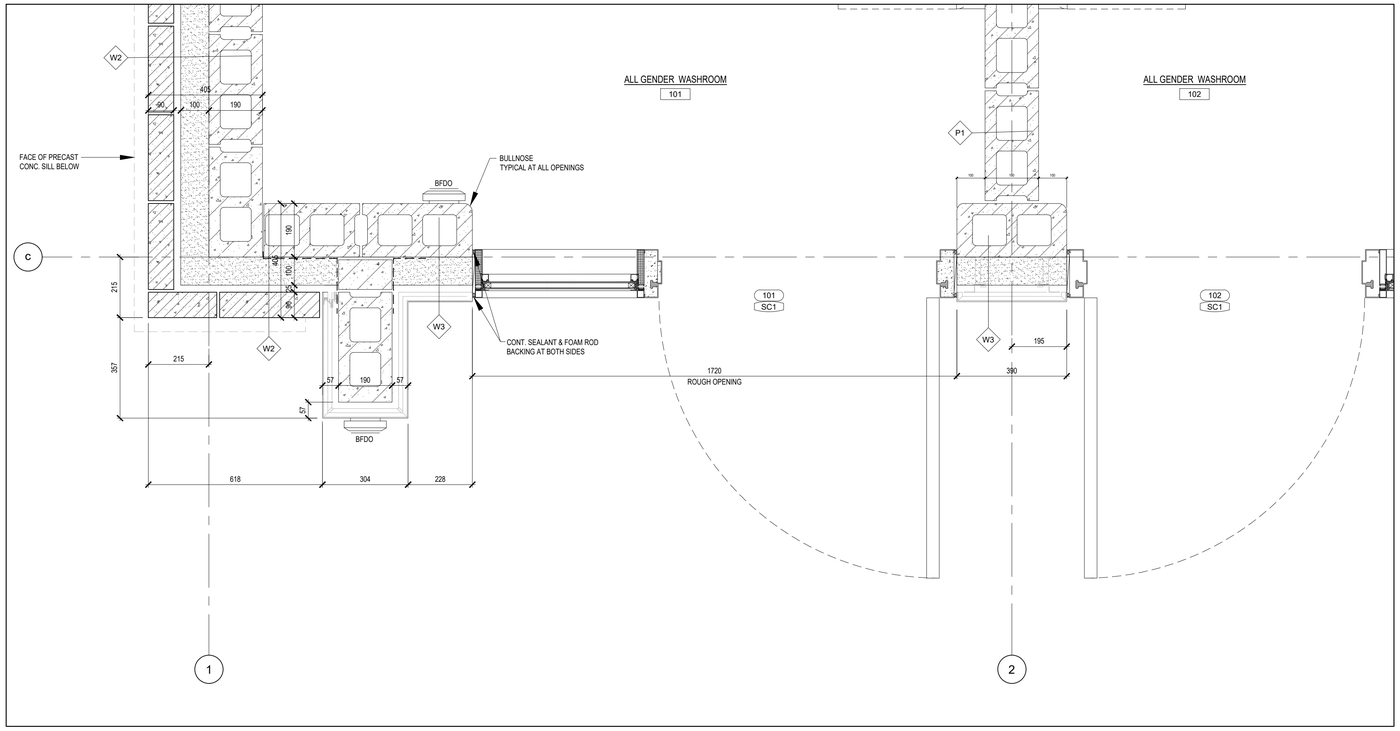
1 PLAN DETAIL AT LOUVRE
SCALE 1:10



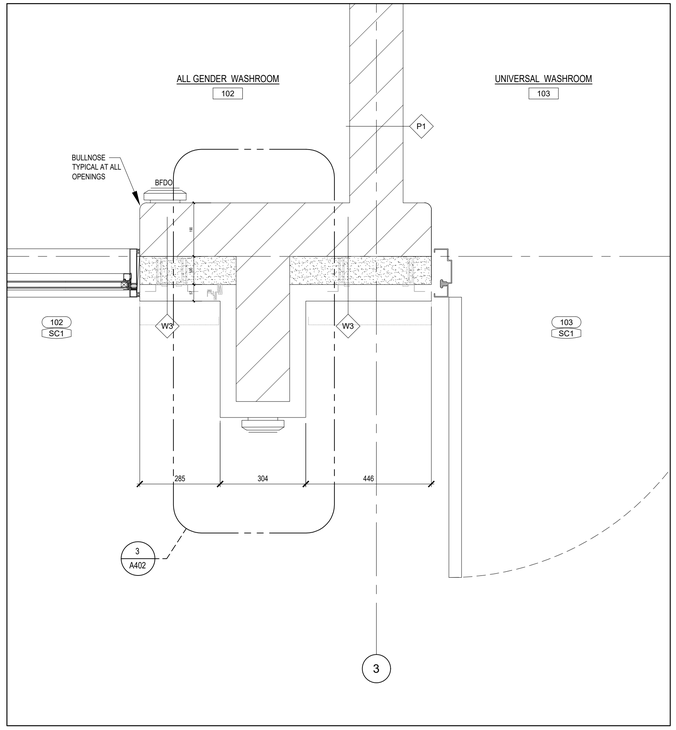
2 PLAN DETAIL AT ERVICE ROOM DOOR
SCALE 1:10



3 PLAN DETAIL AT COLUMN
SCALE 1:5



3 PLAN DETAIL AT ALL-GENDER WASHROOM 101
SCALE 1:10



4 PLAN DETAIL
SCALE 1:10

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1	2025-10-09	ISSUED FOR TENDER

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Project Title

MISSISSAUGA

NEW COMFORT STATION
HURON PARK
RECREATION CENTRE

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

Sheet Title

PLAN DETAILS

Project Number	24-053
Date	Oct. 2024
Drawn	RS
Checked	CC
Scale	AS SHOWN

Drawing Number

A402

DESIGN CRITERIA NOTES

1. **GENERAL**
   1.1. THE PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2012 OBC (O. REG. 332/12 AS AMENDED) INCLUDING CLAUSES 4.1.6.1(1), 4.1.6.4(3), 4.1.7 AND 4.1.8.
   1.2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR WHO IS SUPPLYING AND INSTALLING EQUIPMENT, THAT ALL ELEMENTS OF STRUCTURES LISTED IN TABLE 4.1.8.18 OF THE OBC 2012 ARE DESIGNED IN ACCORDANCE WITH CLAUSE 4.1.8.18.
   1.3. BUILDING IMPORTANCE CATEGORY (SNOW, WIND, AND EARTHQUAKE) IS NORMAL
   1.4. STIFF ELEMENTS NOT PART OF SFRS SHALL BE SEPARATED FROM THE STRUCTURE AS PER OBC CLAUSE 4.1.8.3 (6a). EXAMPLES INCLUDE, BUT NOT LIMITED TO MASONRY PARTITIONS, BRICK VENEER, PRECAST CLADDING ETC. IT IS THE RESPONSIBILITY OF THE SUBCONTRACTOR TO PROVIDE SHOP DRAWINGS, STAMPED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER DEMONSTRATING COMPLIANCE. PROVIDE MINIMUM 25mm SEPARATION UNLESS NOTED OTHERWISE.
   1.5. MISCELLANEOUS METAL, PRECAST AND STAIR FABRICATORS SHALL:
      1.5.1. PROVIDE SHOP DRAWINGS TO THE ARCHITECT PRIOR TO FABRICATION; STAMPED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER.
      1.5.2. DESIGN ALL GUARDS TO MEET LATERAL LOADS DESCRIBED IN OBC 4.1.5.14.
      1.5.3. DESIGN ALL HANDRAILS TO MEET LOADS DESCRIBED IN OBC 3.4.6.5(12).
   1.6. ARCHITECTURAL PRECAST FABRICATOR SHALL:
      1.6.1. PROVIDE SHOP DRAWINGS TO THE ARCHITECT PRIOR TO FABRICATION, STAMPED, SIGNED AND DATED BY A PROFESSIONAL ENGINEER.
      1.6.2. WHERE PRECAST IS USED AS A GUARD DESIGN THE PRECAST AND CONNECTIONS TO MEET LATERAL LOADS DESCRIBED IN OBC 4.1.5.14.

2. **GRAVITY AND LATERAL LOADS ON STRUCTURE**
   2.1. WIND
      q(1/50) = 0.44kPa
      Ce = (h/10)^1/5 NOT LESS THAN 0.9.
      Cg = 2.0
      Cp = AS PER FIGURE 4.1.7.6-A OF NBC 2015

   2.2. SNOW
      Is = 1.0
      Ss = 1.1
      Sr = 0.4

   2.3. EARTHQUAKE
      Sa(0.2) = 0.219 PGA = 0.141 Fa = 1.00
      Sa(0.5) = 0.115 SITE CLASS =C Fv = 1.00
      Sa(1.0) = 0.058 Rd = 1.5 Ie = 1.00
      Sa(2.0) = 0.028 Ro = 1.5 IeFaSa(0.2) = 0.219
      SFRS CONSISTS OFCONVENTIONAL MASONRY SHEAR WALLS.
      METHOD OF ANALYSIS :- STATIC

3. **FOUNDATION WALLS**
   3.1. WALLS RETAINING EARTH ARE DESIGNED TO SAFELY WITHSTAND HORIZONTAL EARTH PRESSURE
      (P=K (Wt.h+q)
      K = 0.45
      Wt = 21kN/m^3
      q = 12kPa
      h = DEPTH IN METRES
   3.2. THE WALLS HAVE BEEN DESIGNED ASSUMING FREE DRAINING BACKFILL OR THE USE OF A DRAINAGE CORE TO PREVENT THE BUILD-UP OF HYDROSTATIC PRESSURE.

SITE PREPARATION NOTES FOR SLAB-ON-GRADE (WITHIN BUILDING ENVELOPE)

1. THE AREA WITHIN THE BUILDING SHALL BE STRIPPED OF THE UPPER LAYER SOIL, FILL, ORGANICALLY CONTAMINATED MATERIAL AND RUBBLE AND TO A MINIMUM OF 2300mm BELOW THE UNDERSIDE OF THE EXISTING GRADE.
2. THE EXPOSED SUB-GRADE SHALL BE EXAMINED AND APPROVED BY THE SOIL CONSULTANT.
3. THE ENTIRE AREA SHALL BE PROOF ROLLED WITH A HEAVY COMPACTOR TO A MINIMUM OF **95%** STANDARD PROCTOR MAX. DRY DENSITY AND TO THE APPROVAL OF THE SOIL CONSULTANT.
4. ANY LOOSE OR SOFT SPOTS ENCOUNTERED SHALL BE SUB-EXCAVATED AND BACKFILLED WITH COMPACTED APPROVED MATERIAL.
5. FILL REQUIRED TO RAISE THE GRADES SHALL BE COMPRISED OF APPROVED **GRANULAR 'B' TYPE 1 CONFORMING TO OPSS 1010**. PLACED IN SUCCESSIVE LOOSE 300mm(12") LAYERS EACH COMPACTED TO AT LEAST **98%** OF ITS STANDARD PROCTOR MAXIMUM DRY DENSITY.
6. THE LAYER IMMEDIATELY BELOW THE SLAB-ON-GRADE SHALL BE 200mm (8") OF **19mm CLEAR STONE** COMPACTED TO MIN. **98%** STANDARD PROCTOR MAX. DRY DENSITY.
7. ALL PROCEDURES, EQUIPMENT AND MATERIALS SHALL BE APPROVED BY THE SOIL CONSULTANT WHO SHALL CONDUCT SUFFICIENT TESTS TO ENSURE THAT THE SPECIFIED MATERIALS AND DENSITIES ARE ACHIEVED.
8. THE CONTRACTOR SHALL CO-ORDINATE WITH THE SOIL CONSULTANT AND ARRANGE A SUITABLE PROGRAM FOR SAMPLING AND INSPECTIONS, ETC. AND NOTIFY THE ARCHITECT ACCORDINGLY.
9. EXISTING ON-SITE MATERIAL **SHALL NOT** BE USED WITHIN THE BUILDING AREA FOR BACKFILLING IN TRENCHES AGAINST FOUNDATION WALLS OR UNDER SLABS-ON-GRADE.
10. REFER TO THE SPECIFICATION AND THE SOIL REPORT FOR PREPARATION OF AREAS OUTSIDE THE BUILDING ENVELOPE.

CONCRETE MIX SCHEDULE

EXPOSURE	ELEMENT	MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS (MPa) [1]	EXPOSURE CLASSIFICATION	NOTES
GENERAL NON-EXPOSED CONCRETE (i.e., NOT EXPOSED TO CHLORIDES NOR FREEZE AND THAW)	FOOTINGS	25	N	
	SLAB ON GRADE [2]	25	N	
	LEAN MIX	5	N	
	HOUSEKEEPING PADS	25	N	
	UNSHRINKABLE FILL	0.4 MAX.	N	
EXTERIOR EXPOSED CONCRETE EXCLUDING PARKING (i.e., EXPOSED TO FREEZE AND THAW BUT NOT CHLORIDES)	FOUNDATION/RETAINING WALLS	25	F-2	
	SLAB ON GRADE , SIDEWALKS	32	C-2	
AREAS EXPOSED TO CHLORIDES	FOUNDATION/RETAINING WALLS	25	F-2	
	SLAB ON GRADE - UNREINFORCED OR FIBRE	32	C-2	
	FROST SLABS	35	C-1	
GROUT	MASONRY FILL/BOND BEAMS	15 (FINE GROUT)		CONFORM TO REQUIREMENTS OF CSA A179

1) STRENGTH SPECIFIED AT 28 DAYS U.N.O IN DRAWINGS AND SCHEDULES.
2) REINFORCED WITH SYNTHETIC FIBERS ADDED AT BATCHING PLANT - SEE SPECIFICATIONS

MASONRY CORE FILL SCHEDULE — M20

MASONRY CORE FILL SCHEDULE

TYPE	SIZE	REINF	REMARKS
C1	t x 400	2-15 VERT. CONT.	
C2	t x 600	3-15 VERT. CONT.	
C3	t x 800	4-15 VERT. CONT.	
C4	t x 400 x 400	4-15 VERT. CONT.	

† DENOTES THE WALL THICKNESS

MASONRY CORE FILLS NOTES:
1. PROVIDE CORE FILLS AS NOTED ON PLAN AND PROVIDE REINFORCEMENT AS SHOWN IN SCHEDULE.
2. CORE FILLS EXTEND FULL HEIGHT OF WALL, FLOOR TO ROOF UNLESS NOTED.
3. INSTALL ALL REINFORCEMENT FULL HEIGHT BETWEEN FLOOR AND ROOF AND GROUT CORE SOLID FULL HEIGHT BETWEEN FLOORS UNLESS NOTED
4. PROVIDE 15M DOWELS IN FOUNDATION WALLS FOR ALL WALL REINFORCEMENT UNLESS NOTED OTHERWISE.
5. REFER TO M04 FOR LAP LENGTHS FOR VERTICAL BARS AND DOWELS.
6. REFER TO CORE FILLS SCHEDULE FOR DETAILS AND REINFORCEMENT.
7. PROVIDE CORE FILL C1 AT EACH SIDE OF OPENINGS U/N OTHERWISE NOTED ON PLANS AND/OR SECTIONS.
   a) PROVIDE C1 AT UNSUPPORTED ENDS OF WALLS U/N.
   b) PROVIDE C1 AT EACH SIDE OF CONTROL JOINTS U/N.
8. PROVIDE CORE FILL C4 AT ALL WALL CORNERS U/N OTHERWISE IN PLANS AND/OR SECTIONS.
9. 190mm MASONRY WALL REINFORCING - 15M@800 O/C.
10. REINFORCE ALL MASONRY SILLS, INTERIOR AND EXTERIOR, AS PER THE REINFORCING INDICATED IN THIS SCHEDULE. GROUT TOP TWO COURSES OF ALL SILLS SOLID. FULLY GROUT ALL EXTERIOR SILLS.

MECHANICAL LINTEL SCHEDULE

LINTELS IN LOAD BEARING WALLS OVER MECHANICAL DUCTS ETC.

WALL THICKNESS	CLEAR SPAN	MATERIAL	TYPE	NOTES
190	200-550	175x8 PLATE	——	CAVITY WALLS EXTERIOR ANGLES & PLATES GALVANIZED UNLESS NOTED
190	550-1220	2-L90x90x6	_|L_	
240	200-550	225x8 PLATE	——	
240	550-1220	2-L100x100x8	_|L_	
290	200-550	275x8 PLATE	——	
290	550-1220	3-L90x90x6	_|L_ L	
190 + 90	200-550	175x8 PLATE + 80x8 PLATE	—— —	
190 + 90	550-1220	2-L90x90x6 + 1-L90x90x6	_|L_ L	
240 + 90	200-550	225x8 PLATE + 80x8 PLATE	—— —	
240 + 90	550-1220	2-L100x100x8 + 1-L90x90x6	_|L_ L	
290 + 90	200-550	275x8 PLATE + 80x8 PLATE	—— —	
290 + 90	550-1220	3-L90x90x6 + 1-L90x90x6	_|L_ L	

1 FOR LINTELS MARKED ML ON DRAWINGS.
2 FOR SPANS LESS THAN 200mm - NO LINTEL REQUIRED.
3 FOR SPANS GREATER THAN 1200mm, SEE PLANS AND MAIN LINTEL SCHEDULE.

WHILE EVERY EFFORT HAS BEEN MADE TO SHOW ALL LINTELS WHICH OCCUR IN LOAD BEARING MASONRY WALLS, IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE CORRECT SIZES AND QUANTITY OF LINTELS ARE PROVIDED

LINTELS IN NON-LOAD BEARING WALLS AND PARTITIONS ARE GENERALLY NOT SHOWN ON THE DRAWINGS. ALL SUCH LINTELS SHALL BE PROVIDED AS REQUIRED AND SHALL CONFORM TO THE NOTES & TYPICAL DETAILS ON THE STRUCTURAL DRAWINGS

PROVIDE MECHANICAL LINTELS IN ACCORDANCE WITH TYPICAL DETAILS AND NOTES FOR ALL DUCTS AND PIPES PASSING THROUGH MASONRY WALLS

WALL PLATE SCHEDULE
(LAST DIMENSION PARALLEL TO WEB)

MARK	MATERIAL	REMARKS
WP1	150x8x300	2-13 DIA. x 320 + 50 HOOK

ROOF LINTEL SCHEDULE

REFER TO LINTEL NOTES A07 ON TYPICAL DETAIL DRAWINGS
SEE ALSO SPECIFICATION

MARK	MATERIAL	TYPE	REMARKS
RL1	3-L89x89x6.4	_|L_ L	LENGTHS MAY VARY

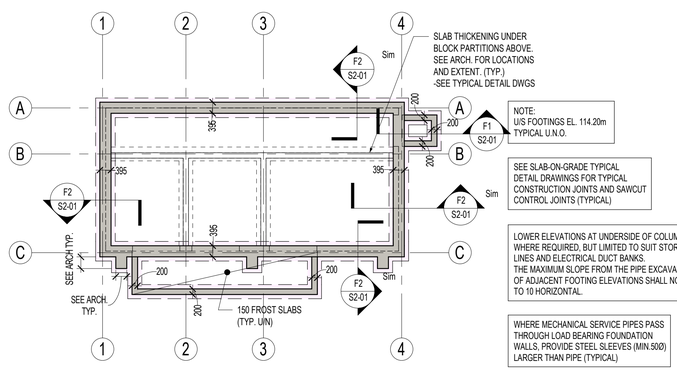
ALL EXTERIOR LINTELS SUPPORTING FACE BRICK TO BE GALVANIZED

** WELDED TO HSS EACH END.

STEEL ROOF LOADING SCHEDULE

ROOF LOAD	DECK kPa	BEAMS & COLS. kPa
ROOFING	0.72	0.72
STEEL DECK	0.15	0.15
BEAMS		0.25
MECH. / ELEC. CEILING		0.19
(TOTAL) kPa	0.87	1.31
SNOW *	1.28	1.28

* STEEL BEAMS SHALL BE DESIGNED TO SUPPORT SNOW LOADS, DEAD LOADS AND WIND.
IN ADDITION STEEL ROOF FRAMING SHALL BE DESIGNED FOR POINT LOADS OF MECHANICAL EQUIPMENT.
ALL LOADS SHOWN ARE UNFACTORED.



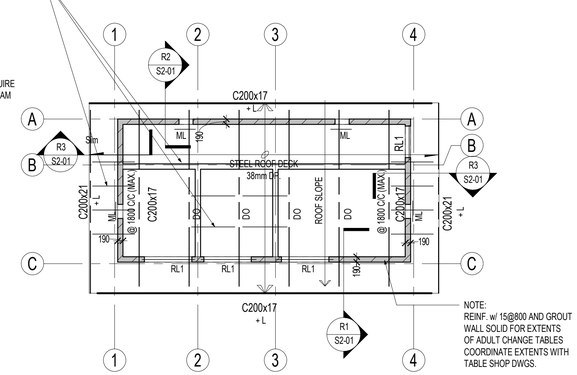
FOUNDATION PLAN
1 : 100

FOUNDATION PLAN NOTES

1. TOP OF SLAB - ON - GRADE TO BE 0.0 BELOW FINISHED FLOOR DATUM ELEVATION 116.80m EXCEPT AS NOTED. TOS = TOP OF SLAB.
2. FOOTINGS SHALL BEAR ON NATIVE CLAYEY SILT TILL CAPABLE OF SUSTAINING A MINIMUM OF 200 kPa(SLS) AND 300kPa (ULS).
3. REFER TO THE SOIL REPORT G749BA DATED SEPTEMBER 18, 2025 PREPARED BY FORWARD ENGINEERING.
4. SOIL AT THE UNDERSIDE OF THE FOOTINGS IS TO BE INSPECTED AND APPROVED BY A REPRESENTATIVE OF A SOILS CONSULTANT BEFORE PLACING CONCRETE.
5. REFER ALSO TO SITE PREPARATION NOTES ON DRAWINGS S1-01
6. CO-ORDINATE ALL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS AND REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO PROCEEDING WITH ANY WORK.
7. UNDERSIDE OF WALL FOOTINGS TO BE AT ELEVATIONS AS NOTED ON PLAN.
8. SDF = STEP DOWN FOOTING.
9. UNLESS OTHERWISE SHOWN, ALL WALL FOOTINGS TO BE 300mm DEEP WITH 150 mm PROJECTIONS EACH SIDE.
10. FILL REQUIRED ON BOTH SIDES OF FOUNDATION WALLS SHALL BE PLACED AND COMPACTED SIMULTANEOUSLY ON EACH SIDE TO EQUALIZE SOIL PRESSURE.
11. PROVIDE SLAB DEPRESSIONS AND SLOPES, OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS, AS REQUIRED BY THE ARCHITECTURAL AND MECHANICAL DRAWINGS AND SPECIFICATIONS.
12. THE PROJECT SUPERINTENDENT MUST CONTACT THIS OFFICE 24 HOURS PRIOR TO PLACING STRUCTURAL CONCRETE INCLUDING STRIP FOOTINGS.
13. GENERAL SLAB - ON - GRADE IS 100mm THICK REINFORCED WITH SYNTHETIC FIBRES (REFER TO CONCRETE SPECIFICATION). EXCEPT AS NOTED.
14. CONCRETE STRENGTHS - SEE CONCRETE SCHEDULE.
15. SEE TYPICAL NOTES, TYPICAL DETAILS, AND ALL OTHER DRAWINGS.

PROVIDE LATERAL SUPPORT AT TOP OF MASONRY PARTITION WALLS. REFER TO TYPICAL DETAIL DWGS FOR SIZE AND SPACING. (TYP.)
NOTE:
GENERAL CONTRACTOR TO COORDINATE LOCATIONS WITH ARCHITECTURAL DWGS.

= WALLS SHADED AS THUS REQUIRE CONT. LINTEL BLOCK BOND BEAM (SEE SECTIONS)



ROOF FRAMING PLAN
1 : 100

ROOF PLAN NOTES

1. UNDERSIDE OF ROOF DECK AT HIGH POINTS TO BE 0.0mm BELOW ROOF DATUM ELEVATION +3400mm. EXCEPT AS NOTED ON PLAN U.O.D = UNDERSIDE OF DECK.
2. ROOF DECK TO SLOPE AS SHOWN ON THIS DRAWING.
3. TOP OF STEEL BEAMS SUPPORTING STEEL DECK ARE 0.0mm BELOW U.O.D.
4. FOR LOADING SEE ROOF LOADING SCHEDULE ON S1-01.
5. BEARING ANCHORAGES SHALL BE DESIGNED TO RESIST UPLIFT DUE TO WIND AS REQUIRED BY THE ONTARIO BUILDING CODE AND IN NO CASE LESS THAN THE GREATER OF THOSE INDICATED ON THE WIND UPLIFT KEY PLAN.
6. STEEL ROOF DECK SHALL BE DESIGNED TO SUPPORT SPECIFIED TOTAL DEAD AND LIVE LOADS. MINIMUM BASE NOMINAL THICKNESS(BNT) OF STEEL DECK SHALL BE 0.76mm.
7. NO HANGERS OR BRACKETS SUPPORTING MECHANICAL EQUIPMENT OR PIPING SHALL BE HUNG FROM ROOF DECK.
8. STEEL ROOF DECK SHALL BE INSTALLED FOR DIAPHRAGM ACTION IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE CANADIAN SHEET BUILDING INSTITUTE AND TYPICAL NOTES.
9. LOCATION OF MECHANICAL EQUIPMENT AND MECHANICAL EQUIPMENT LOADS ARE TO BE CONFIRMED BY MECHANICAL CONTRACTOR BEFORE STRUCTURE STEEL ID FABRICATED. REFER TO MECHANICAL DRAWINGS .UNLESS OTHERWISE APPROVED, MECHANICAL EQUIPMENT AND PIPING MUST BE HUNG FROM ROOF FRAMING AND HANGER SPACING SHALL NOT EXCEED 3.0 M.
10. SUBMIT DETAILS TO STRUCTURAL CONSULTANT FOR REVIEW FOR ALL OPENINGS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS.
11. "M" DENOTES MOMENT CONNECTION. FACTORED MOMENT AS SPECIFIED ON DRAWINGS IS IN kN METERS.
12. MOMENT CONNECTIONS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER. SHOP DRAWINGS AND CALCULATIONS BEARING THE STAMP AND SIGNATURE OF THE LICENSED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION AND ERECTION.
13. AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO INSPECT STRUCTURAL STEEL AND STEEL DECK IN THE SHOP AND IN THE FIELD FOR WELDING, CONNECTIONS, BOLT TORQUES AND GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND THE SPECIFICATIONS.
14. NON-LOAD BEARING PARTITIONS SHALL BE A MINIMUM OF 25mm CLEAR OF STRUCTURE.
15. WALL PLATES (WP) SHALL HAVE LAST DIMENSION PARALLEL TO BEAM WEB. SEE SCHEDULE ON DRAWING S1-01.
16. SEE ROOF LINTEL SCHEDULE ON DRAWING S1-01.
17. REFER TO GENERAL NOTES AND SPECIFICATION FOR GRADES OF STRUCTURAL STEEL AND STEEL DECK.
18. SEE TYPICAL NOTES, TYPICAL DETAILS AND ALL OTHER DRAWINGS.

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

No.	DATE	DESCRIPTION
1	Nov. 11, 2024	Issued for Progress
2	Nov. 29, 2024	Issued for Progress
3	Dec. 20, 2024	Issued for Permit
4	Jan 30, 2025	Issued for Client Review - Pre Tender
5	Sept. 19, 2025	Issued for Building Permit
6	Oct. 08, 2025	Issued for Tender

PROJECT NORTH — TRUE NORTH

Salas O'Brien
2235 Sheppard Ave. E.
Suite No. 1100
Toronto, ON M2J 5B5
Stephenson Engineering, a company of Salas O'Brien

LICENSED PROFESSIONAL ENGINEER 25-10-08 J. C. GASDIA 100169574 PROVINCE OF ONTARIO

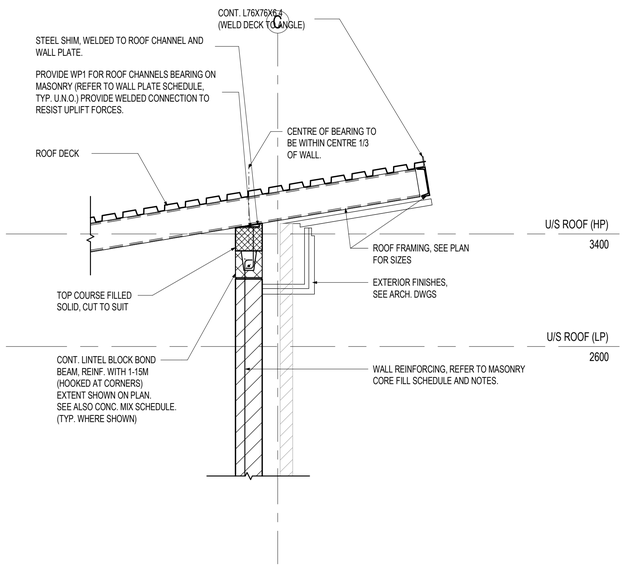
PROJECT
MISSISSAUGA

NEW COMFORT STATION
HURON PARK
RECREATION CENTRE

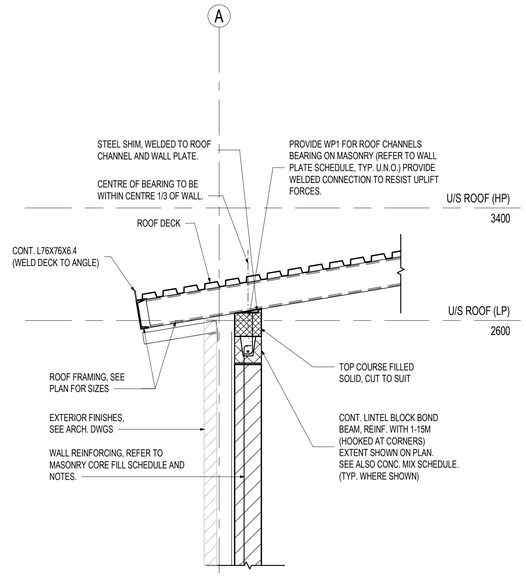
830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

DRAWING
PLANS

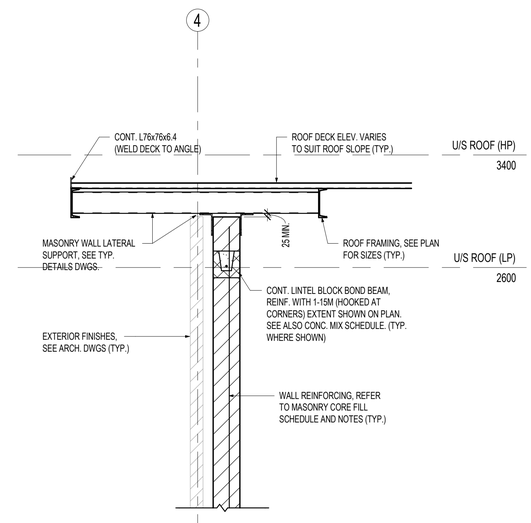
PROJECT NO.	20240909
PROJECT DATE	Issue Date
DRAWN BY	RP
CHECKED BY	CG/JG
SCALE	As indicated
DRAWING NO.	S1-01



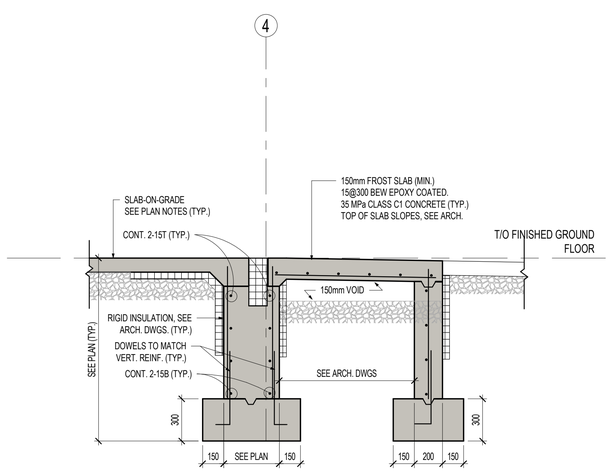
R1 S2-01 SECTION 1 : 20



R2 S2-01 SECTION 1 : 20



R3 S2-01 SECTION 1 : 20



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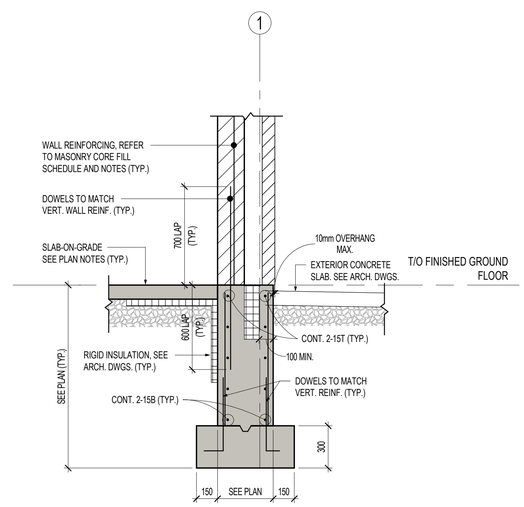

F2 S2-01 SECTION 1 : 20

TABLE 1: FOUNDATION WALL REINFORCING (UNO)

WALL THICKNESS (mm)	NOMINAL WALL REINFORCEMENT	
	HORIZONTAL	VERTICAL
=< 190/200	10@320H (CENTERED)	10@440V (CENTERED)
=< 250	10@400 HEF	10@460 VEF
=< 300	10@320 HEF	10@440 VEF
=< 350	10@280 HEF	10@380 VEF
=< 400	10@240 HEF	10@320 VEF

WALL THICKNESS (mm)	NOMINAL WALL REINFORCEMENT	
	HORIZONTAL	VERTICAL
=< 450	15@440 HEF	10@280 VEF
=< 500	15@400 HEF	15@460 VEF
=< 600	15@320 HEF	15@440 VEF

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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Stephenson Engineering, a company of Salas O'Brien

LICENSED PROFESSIONAL ENGINEER
25-10-08
J. C. GASDIA
100169574
PROVINCE OF ONTARIO

PROJECT

MISSISSAUGA

NEW COMFORT STATION
HURON PARK
RECREATION CENTRE

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

DRAWING

SECTIONS

PROJECT NO.	20240909
PROJECT DATE	Issue Date
DRAWN BY	RP
CHECKED BY	CG/JG
SCALE	As indicated
DRAWING NO.	S2-01

STANDARD ABBREVIATIONS — A01

@	-At
ADJ	-Adjustable
AIFB	-Asphalt Impregnated Fibre Board
ALT	-Alternate
ARCH	-Architectural
A. ROD(A.R.)	-Anchor Rod
ASL	-Accumulated Snow Loading
B (BOT)	-Bottom
BEW	-Bottom Each Way
BLDG	-Building
BLL	-Bottom Lower Layer
BM	-Beam
BML	-Bottom Middle Layer
BNT	-Base Nominal Thickness
B.O.F.	-Bottom of Footing
BP	-Baseplate
BSMT	-Basement
BUL	-Bottom Upper Layer
C	-Standard Channel
CA	-Column Above
CANT	-Cantilever
C/C (o/c)	-Centre to Centre
CJ	-Control Joint
CL	-Centreline
COL	-Column
COMP	-Compressible
CONC	-Concrete
CONST	-Construction
CONST JT (CJT)	-Construction Joint
CONT (CONTIN)	-Continuous
C/W	-Complete With
D.FIR	-Douglas Fir
DET	-Detail
DIAG	-Diagonal
Ø (DIA)	-Diameter
DIM	-Dimension
DJ	-Double Joist
DL	-Dead Load
DO	-Ditto
DWG	-Drawing
DWL	-Dowel
DT	-Double Tee
E-W	-East-West
EA	-Each
EE	-Each End
EF	-Each Face
ELECT	-Electrical
ELEV (EL)	-Elevation / Elevator
EQ	-Equal
ES	-Each Side
EW	-Each Way
EXIST	-Existing
EXP. JT.	-Expansion Joint
EXT	-Exterior
FDN	-Foundation
FF	-Far Face
FIN	-Finished
FL	-Floor
FMC	-Full Moment Connection
FT	-Foot / Feet
FTG	-Footing
GA	-Gauge
GALV	-Galvanized
GEN	-General

H (HOR)	-Horizontal
HEF	-Horizontal Each Face
HIF	-Horizontal Inside Face
HOF	-Horizontal Outside Face
HSC	-Horizontally Slotted Connection
HSS	-Hollow Structural Section
IF	-Inside Face
INT	-Interior
INV	-Invert
JT	-Joint
kg	-Kilogram
kN.m	-Kilo Newton Metres
kN/m²	-Kilo Newton per Square Metre
kN/m	-Kilo Newton per Metre
kPa	-Kilo Pascals
L	-Angle
LB.	-Pounds
LG	-Long
LL	-Live Load / Lower Layer
LLH	-Long Leg Horizontal
LLV	-Long Leg Vertical
LSSJ	-Long Span Steel Joists
LVL	-Laminated Veneer Lumber
m	-Metre
MAX	-Maximum
MECH	-Mechanical
MEZZ	-Mezzanine
MIN	-Minimum
MISC	-Miscellaneous
ML	-Middle Layer
MLL	-Middle Lower Layer
mm	-Millimetre
MOM, (M)	-Moment
MPa	-Mega Pascals
MUL	-Middle Upper Layer
N	-Newton
N-S	-North-South
NF	-Near Face
NIC	-Not in Contract
No.(#)	-Number
NTS	-Not to Scale
OWSJ	-Open Web Steel Joist
Pa	-Pascal
PC	-Precast
PL	-Plate
PLF	-Pounds per Lineal Foot
PREL	-Preliminary
PROJ	-Projection
PSF	-Pounds per Square Foot
PSI	-Pounds per Square Inch
PSL	-Parallel Strand Lumber
PT	-Pressure Treated
R	-Reaction
RAD	-Radius
REF	-Reference
REINF	-Reinforcing
REQ'D	-Required
REV	-Revision/Revised
Rf	-Factored Vertical Reaction
R/W	-Reinforced With

S	-Standard Beam
SDF	-Step Down Footing
SDL	-Superimposed Dead Load
SECT	-Section
SL	-Slab
SQ	-Square
SOG	-Slab on Grade
S.P.F.	-Spruce/Pine/Fir
SPEC	-Specifications
ST	-Steel
STD	-Standard
STR	-Straight
STRUCT	-Structural
T	-Top
TEMP	-Temperature
Tf	-Factored Tension Force
TJ	-Tie Joist
TLL	-Top Lower Layer
TMf	-Factored Torsional Moment
TML	-Top Middle Layer
TOD, T/D	-Top of Deck
T.O.F.	-Top of Footing
TOS, T/S	-Top of Slab
TOST	-Top of Steel
TSF	-Tons per Square Foot
TUL	-Top Upper Layer
TYP	-Typical
UL	-Upper Layer
U/N	-Unless Noted
U.N.O.	-Unless Noted Otherwise
U/S	-Underside
USD	-Underside of Deck
V (VERT)	-Vertical
VBF	-Vertically Braced Framing
VEF	-Vertical Each Face
VIF	-Vertical Inside Face
VOF	-Vertical Outside Face
VSC	-Vertically Slotted Connection
W	-Wide Flange Beam
WP	-Wall Plate
WWF	-Welded WideFlange Beam
WWF (WWM)	-Welded Wire Fabric/ Mesh

STANDARD LAP ABBREVIATIONS

CLS	-Compression Lap Splice
CDL	-Compression Development Length
HEL	-Hook Embedment Length
TLS	-Tension Lap Splice
TDL	-Tension Development Length

CAST-IN-PLACE CONCRETE NOTES — A03.1

1. **GENERAL**
   1.1. PROVIDE ALL LABOUR, MATERIALS, TOOLS AND EQUIPMENT REQUIRED TO CARRY OUT THE WORK.
   1.2. REFER ALSO TO GENERAL NOTES, NOTES UNDER PLANS AND SCHEDULES, TYPICAL DETAILS AND SPECIFICATION.
2. **PRODUCTS**
   2.1. PORTLAND CEMENT, WATER AND AGGREGATES SHALL CONFORM TO CSA STANDARD A23.1.
   2.2. PROVIDE AN APPROVED WATER REDUCING ADDITIVE IN ALL CONCRETE. PROVIDE AN APPROVED AIR ENTRAINING ADDITIVE IN ALL CONCRETE WHICH WILL BE EXPOSED TO A FREEZE/THAW CYCLE AND/OR THE ACTION OF DE-ICING SALT. ADMIXTURES SHALL CONFORM TO CSA STANDARD A23.1.
   2.3. FORMWORK SHALL CONFORM TO CSA STANDARD A23.1 AND CSA STANDARD S269.1 AND FALSEWORK SHALL CONFORM TO CSA S269.1.
   2.4. IF SO INSTRUCTED, THE DESIGNS FOR THE FORMWORK SHALL BE SUBMITTED FOR REVIEW BEFORE CONSTRUCTION. FORMWORK DRAWINGS AND DESIGN SHALL BEAR THE STAMP OF A LICENSED PROFESSIONAL ENGINEER.
   2.5. PROVIDE SLAB AND BEAM FORMS WITH AN UPWARD CAMBER AS INDICATED ON PLANS THUS ⊕__mm. WHERE CAMBERS ARE NOT NOTED ON PLANS, CAMBER SLABS AND BEAMS FOR SPAN/500 AT INTERIOR BAYS, AND CANTILEVER LENGTH/250 AT CANTILEVER. CAMBER BOTH THE UNDERSIDE AND TOP OF CONCRETE IN A PARABOLIC PROFILE, WHILE MAINTAINING THE INDICATED STRUCTURAL THICKNESS OF MEMBERS.
   2.6. PROVIDE STANDARD ADJUSTABLE MASONRY ANCHOR SLOTS FOR ALL MASONRY FACING OR ABUTTING CONCRETE FACES.
   2.7. PROVIDE AND/OR INSTALL STANDARD ADJUSTABLE INSERTS AND ALL OTHER CAST-IN INSERTS AS REQUIRED BY THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATION.
   2.8. REINFORCING STEEL UNLESS SPECIFICALLY NOTED, SHALL BE DEFORMED BARS CONFORMING TO CAN/CSA -G30.18-M GRADE 400 (58000 PSI).
   2.9. WELDED WIRE FABRIC TO BE SUPPLIED IN FLAT SHEETS ONLY, UNLESS APPROVED OTHERWISE.
   2.10. REINFORCING SHALL BE DETAILED, BENT, PLACED AND SUPPORTED TO CONFORM TO ACI DETAILING MANUAL AND THE MANUAL OF STANDARD PRACTICE PUBLISHED BY THE REINFORCING STEEL INSTITUTE OF CANADA.
   2.11. DRY-PACK GROUT TO BE 1 PART PORTLAND CEMENT TO 1 1/2 PARTS SAND TO 2 PARTS OF 8 mm PEA GRAVEL WITH ONLY SUFFICIENT WATER TO DAMPEN MIXTURE. COMPRESSIVE STRENGTH 50MPa AT 28 DAYS.
   2.12. NON-SHRINK GROUT TO BE AN APPROVED PRE-MIXED PROPRIETARY PRODUCT.
   2.13. PROVIDE APPROVED EXTRUDED PVC WATERSTOPS OF SIZE AND STYLE INDICATED, WITH PRE-WELDED CORNERS AND INTERSECTIONS. SEE ALSO TYPICAL DETAILS.
   2.14. CURING AND SEALING COMPOUNDS WHERE APPROVED FOR USE TO CONFORM TO ASTM STANDARD C309. GENERALLY ALL CONCRETE SURFACES ARE TO BE SEALED UNLESS NOTED OTHERWISE. COMPOUNDS ARE TO BE COMPATIBLE WITH APPLIED FINISHES.
   2.15. SHEAR REINFORCEMENT AT SLAB CONNECTION AS SHOWN ON DRAWINGS AND DETAILS, SHALL BE STUDRAILS® AS MANUFACTURED BY DECON®. THE COMPLETE AND FINISHED STUDRAILI® SHALL BE ICC ES EVALUATED AND WELDING SHALL TAKE PLACE IN A ICC ES APPROVED AND AUDITED FACILITY. STUDRAILS® SHALL CONFORM TO THE LATEST UPDATE OF ASTM A1044.
3. **EXECUTION**
   3.1. MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE @ 28 DAYS SHALL BE AS NOTED ON THE DRAWINGS (20MPa MINIMUM).
   3.2. SLUMP AT THE POINT OF DISCHARGE SHALL BE CONSISTENT AT 80 mm ±30mm (3" ±1 1/8") UNLESS NOTED OTHERWISE. GREATER SLUMPS ARE NOT ACCEPTABLE.
   3.3. CONCRETE MIXING, TRANSPORTATION, HANDLING AND PLACING SHALL CONFORM TO CSA STANDARD A23.1.
   3.4. CONSTRUCTION JOINTS FOR WALLS ARE BASED UPON VERTICAL JOINTS AT A MAXIMUM SPACING OF 9000mm (30'-0"). UNLESS CONTROL JOINTS ARE PROVIDED AS PER DETAIL CFW02. TOTAL LENGTH OF POUR TO BE DISCUSSED WITH ENGINEER PRIOR TO PROCEEDING.
   3.5. CONSTRUCTION JOINTS FOR WALLS, SLABS, AND BEAMS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE CONSTRUCTION. GENERALLY JOINTS IN SLABS SHALL BE AT RIGHT ANGLES TO THE SPANS, AT MID-SPAN IF POSSIBLE AND CLEAR OF SUPPORTS AND POINT LOADS.
   3.6. INSERTS, FRAME-OUTS, SLEEVES, BRACKETS, CONDUITS AND FASTENING DEVICES, SHALL BE INSTALLED AS REQUIRED BY THE DRAWINGS AND SPECIFICATIONS IN A MANNER THAT SHALL NOT IMPAIR THE STRUCTURAL STRENGTH OF THE SYSTEM, BE SO INSTALLED THAT THEY SHALL NOT REQUIRE THE CUTTING, BENDING, OR DISPLACEMENT OF THE REINFORCING OTHER THAN AS SHOWN ON THE TYPICAL DETAILS.
   3.7. ELECTRICAL CONDUIT SHALL NOT PASS THROUGH A COLUMN, SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN 1/3 SLAB THICKNESS OR WALL OR BEAM IN WHICH IT IS EMBEDDED, SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS ON CENTRE UNLESS APPROVED AND HAVE A MINIMUM CONCRETE COVER OF 25 mm (1") AND UNLESS SPECIFICALLY PERMITTED OTHERWISE, SHALL NOT RUN HORIZONTALLY IN A CONCRETE WALL.
   3.8. OPENINGS AND DRIVEN FASTENERS REQUIRED IN THE CONCRETE AFTER THE CONCRETE IS PLACED SHALL BE APPROVED BY THE STRUCTURAL CONSULTANT BEFORE PROCEEDING.
   3.9. FINISHING, REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR REQUIRED FINISH TO EXPOSED CONCRETE. ALL HONEYCOMBING SHALL BE CUT OUT AND FILLED. FLOOR FINISHES SHALL BE AS REQUIRED BY THE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AND SHALL CONFORM TO CSA STANDARD A23.1.
   3.10. TOLERANCES FOR PLACING STRUCTURAL CONCRETE, REINFORCING STEEL, CAST-IN HARDWARE AND FOR FLOOR AND ROOF FINISHES SHALL BE AS SPECIFIED IN CSA STANDARD A23.1.
   3.11. MINIMUM REINFORCING FOR ANY CONCRETE WALL TO BE AS SHOWN ON TYPICAL DETAIL FOR CONCRETE WALLS.
   3.12. MINIMUM REINFORCING FOR ANY SUSPENDED SLAB SHALL BE TEMPERATURE BARS BOTTOM EACH WAY PLUS 10M @ 400 (16") DOWELS 600x600 (2'-0" x 2'-0") TOP AROUND PERIMETER. REFER TO TYPICAL DETAIL OF ONE WAY SLABS.
   3.13. PERFORM SURVEYS OF SLABS AS INDICATED IN SPECIFICATIONS.

CAST-IN-PLACE CONCRETE NOTES — A03.2

3.14. GENERAL REQUIREMENTS FOR CUTTING AND DRILLING INTO CONCRETE
   (A) DO NOT DRILL INTO, CORE THROUGH, SAW-CUT OR CHIP THE CONCRETE STRUCTURE WITHOUT WRITTEN AUTHORIZATION BY THE STRUCTURAL CONSULTANT.
   (B) UNLESS NOTED OTHERWISE, PRIOR TO CUTTING, CORING OR DRILLING INTO THE CONCRETE STRUCTURE, LOCATE EXISTING CONCRETE REINFORCEMENT AND EMBEDDED SERVICES AT THAT LOCATION USING SUITABLE SCANNING DEVICE (I.E. X-RAYS, GROUND PENETRATION RADAR (GPR), LOCAL CHIPPING OF SLAB - ONLY WHERE APPROVED BY THE STRUCTURAL CONSULTANT, ETC), AS AUTHORIZED BY PROPERTY MANAGER IF APPLICABLE
   (C) GPR SCANNING MUST BE DONE BY TRAINED TECHNICIANS WITH AT LEAST 5 YEARS OF EXPERIENCE AS SUCH.
   (D) GPR SCANNING DEVICES MUST BE CAPABLE OF ACCURATELY LOCATING REBAR IN A CONCRETE SLAB TO A MINIMUM DEPTH OF 300 mm, THIN A HORIZONTAL TOLERANCE OF +- 25 mm AND A VERTICAL (DEPTH) TOLERANCE OF THE LARGER OF +-25 mm OR +- 15% OF THE REBAR DEPTH.
   (E) AFTER ALL THE EXISTING REINFORCEMENT AND SERVICES HAVE BEEN LOCATED, NOTIFY THE STRUCTURAL CONSULTANT, WHO WILL REVIEW AND APPROVE THE PROPOSED LOCATION OF OPENINGS, CORES OR DRILLED HOLES. MAKE ANY NECESSARY ADJUSTMENTS TO THE HOLE LOCATIONS AS DIRECTED BY THE STRUCTURAL CONSULTANT.
   (F) THE REVIEW BY THE STRUCTURAL CONSULTANT IS LIMITED ONLY TO THE LOCATION OF THE PROPOSED CORES OR DRILLED HOLES THROUGH THE EXISTING STRUCTURE AND IT IS BASED ON THE ASSUMPTION THAT THE X-RAY OR SCAN RESULTS LOCATING SLAB REINFORCEMENT AND EMBEDDED SERVICES ARE COMPLETE AND ACCURATE. STEPHENSON ENGINEERING LTD. TAKES NO RESPONSIBILITY FOR THE ACCURACY OF THE X-RAY OR SCAN RESULTS.
   (G) CORE DRILL NEW HOLES FOR PIPES TO A DIAMETER NOT LARGER THAN THE OUTSIDE PIPE DIAMETER PLUS 25MM. DO NOT CUT EXISTING REINFORCEMENT OR SERVICES WITHOUT PRIOR APPROVAL OF THE CONSULTANT.
   (H) WHERE RECTANGULAR OPENINGS ARE TO BE CUT, PRE-DRILL THE CORNERS USING A 100 MM DIAMETER CORE DRILL OR DRILL A SERIES OF HOLES TO PREVENT OVER CUTTING OF THE CORNERS.

4. QUALITY CONTROL
   4.1 FOR INSPECTION AND TESTING, SEE GENERAL NOTES AND/OR SPECIFICATION.

GENERAL NOTES — A02

1. **GENERAL**
   1.1. DESIGN AND CONSTRUCTION IS TO CONFORM TO THE REQUIREMENTS OF THE 2012 ONTARIO BUILDING CODE, AND ANY APPLICABLE REQUIREMENTS OR BY-LAW OF THE AUTHORITY HAVING JURISDICTION. REFER ALSO TO TYPICAL DETAILS, NOTES UNDER PLANS AND SCHEDULES ON THE STRUCTURAL DRAWINGS, AND TO THE SPECIFICATION. ALL CODES, MANUALS, STANDARDS AND SPECIFICATIONS REFERRED TO SHALL BE THE SPECIFIC EDITION REFERENCED IN APPLICABLE BUILDING CODE INCLUDING ALL REVISIONS AND ADDENDA.
   ALL DIMENSIONS, OTHER THAN PURELY STRUCTURAL DIMENSIONS SHOWN ON THE STRUCTURAL DRAWINGS MUST BE CHECKED AGAINST THE ARCHITECTURAL DRAWINGS AND ANY INCONSISTENCIES REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK. STRUCTURAL DRAWINGS MUST NOT BE SCALED.
   1.2. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND SIZES OF OPENINGS, TRENCHES, PITS, SUMPS, EQUIPMENT, SLEEVES, DEPRESSIONS, GROOVES AND CHAMFERS NOT INDICATED ON THE STRUCTURAL DRAWINGS. UNLESS SPECIFICALLY NOTED OTHERWISE, THE ABOVE ITEMS WHERE SHOWN ON THE STRUCTURAL DRAWINGS ARE INDICATED ONLY APPROXIMATELY AS TO SIZE AND LOCATION.
   1.3. UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS, NO PROVISION HAS BEEN MADE IN THE DESIGN FOR CONDITIONS OCCURRING DURING CONSTRUCTION. THE CONTRACTOR IS TO PROVIDE ALL NECESSARY BRACING AND SHORING REQUIRED FOR STRESSES AND INSTABILITY OCCURRING FROM ANY CAUSE DURING CONSTRUCTION. THE CONTRACTOR SHALL ACCEPT FULL RESPONSIBILTY FOR ALL SUCH MEASURES. IT SHALL ALSO BE THE RESPONSIBLITY OF THE CONTRACTOR TO PROVIDE ALL NECESSARY BRACING, SHORING, SHEET PILING OR OTHER TEMPORARY SUPPORTS OF SAFEGUARD ALL EXISTING OR ADJACENT STRUCTURES AFFECTED BY THIS WORK. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR CONSULTANTS REVIEW.
2. **SHOP DRAWINGS, PLACING DRAWINGS AND BAR LISTS**
   2.1. FOR ALL STRUCTURAL COMPONENTS SHOWN ON THE STRUCTURAL DRAWINGS, SUBMIT COPIES OF SHOP DRAWINGS AS DIRECTED FOR REVIEW BY THE STRUCTURAL CONSULTANT. SHOP DRAWINGS TO SHOW COMPLETE INFORMATION FOR THE FABRICATION AND ERECTION OF THE STRUCTURAL COMPONENTS.
   2.2. REVIEW OF SHOP DRAWINGS BY THE STRUCTURAL CONSULTANT IS ONLY TO ASSESS THAT THE SUBMITTED SHOP DRAWINGS REFLECT THE INTENT OF THE STRUCTURAL DESIGN.
   2.3. REVIEW BY THE STRUCTURAL CONSULTANT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR SEEING THAT THE WORK IS COMPLETE, ACCURATE AND IN CONFORMITY WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS.
3. **INSPECTION AND TESTING**
   3.1. A SOILS CONSULTANT AND AN INDEPENDENT INSPECTION AND TESTING COMPANY ARE TO BE ENGAGED TO CARRY OUT THE FOLLOWING SERVICES
      3.1.1. BEARING SOIL - REFER TO NOTES ON STRUCTURAL DRAWINGS AND ALSO TO THE SOIL REPORT.
      3.1.2. FILL UNDER SLAB-ON-GRADE - CONFORM THAT FILL MATERIAL USED IS SATISFACTORY AND THAT THE REQUIRED DEGREE OF COMPACTION HAS BEEN ATTAINED.
      3.1.3. CAST-IN-PLACE AND PRECAST CONCRETE - ROUTINE INSPECTION OF MATERIALS, INCLUDING SLUMP, CYLINDER AND AIR ENTRAINMENT TESTS AND REINFORCING ROD TESTS WHEN REQUIRED OR DIRECTED IN ACCORDANCE WITH CSA STANDARD A23.2.
      3.1.4. THE PROJECT SUPERINTENDENT IS TO ADVISE THE STRUCTURAL CONSULTANT A MINIMUM OF 24 HOURS IN ADVANCE OF A CONCRETE POUR FOR A REVIEW OF PREPARATIONS.
      3.1.5. STRUCTURAL STEEL AND OWSJ - ROUTINE SHOP AND FIELD INSPECTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS CSA S16.
      3.1.6. STEEL DECK - SEE STEEL DECK NOTES.
      3.1.7. MASONRY - WHEN REQUIRED OR DIRECTED, CONCRETE BLOCKS SHALL BE TESTED IN ACCORDANCE WITH ASTM C140 BRICKS IN ACCORDANCE WITH CAN/CSA A82; AND MORTAR AND/OR GROUT IN ACCORDANCE WITH CSA A179.
   3.2. ALL INSPECTION AND TESTING SERVICES ARE TO BE PERFORMED BY COMPANIES CERTIFIED BY THE CANADIAN STANDARDS ASSOCIATION AND FOR WELDING, INSPECTORS ARE TO BE CERTIFIED BY THE CANADIAN WELDING BUREAU.
4. **FOUNDATIONS**
   4.1. REFER TO NOTES UNDER FOUNDATION PLANS. ALL EXTERIOR FOOTINGS OR OTHER FOOTINGS EXPOSED TO FREEZING IN THE FINISHED BUILDING SHALL BE FOUNDED AT A MINIMUM OF 1200mm (4'-0") BELOW FINISHED GRADE, UNLESS OTHERWISE NOTED. FOOTINGS EXPOSED TO FROST ACTION DURING CONSTRUCTION SHALL BE PROTECTED BY A MINIMUM OF 1200mm (4'-0") OF EARTH OR ITS EQUIVALENT SUFFICIENT TO PREVENT FREEZING.
   4.2. THE LINE OF SLOPE BETWEEN ADJACENT EXCAVATIONS FOR FOOTINGS OR ALONG STEPPED FOOTINGS SHALL NOT EXCEED A RISE OF 7 IN A RUN OF 10, MAXIMUM STEP APPROX. 600mm (2'-0").
   4.3. PIER DEPTHS AND FOOTING ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE BASED UPON INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THE STRUCTURAL DRAWINGS.
   4.4. IF ACTUAL JOB SITE OR SOIL CONDITIONS VARY FROM THOSE ASSUMED, THEN WRITTEN DIRECTIONS MUST BE OBTAINED FROM THE STRUCTURAL CONSULTANT BEFORE PROCEEDING WITH THE WORK.
   4.5. KEEP EXCAVATIONS CONTINUOUSLY DRY BEFORE CONCRETE IS PLACED. IF THE SOIL IS SOFTENED BY WATER, THE EXCAVATION SHALL BE EXTENDED BELOW THE SOFTENED MATERIAL AND THE BOTTOM OF THE FOOTINGS LOWERED TO SUIT.
5. **BACKFILLING AND COMPACTION**
   5.1. SLABS-ON-GRADE AND ALL STRUCTURAL ELEMENTS FRAMING INTO WALLS WHICH RETAIN EARTH MUST BE IN PLACE BEFORE BACKFILLING.
   5.2. AT FOUNDATION WALLS WITH GRADE BOTH SIDES, UNLESS ADEQUATELY SHORED, BACKFILL AND COMPACT EACH SIDE OF WALL SIMULTANEOUSLY.
   5.3. UNDER SLAB-ON-GRADE, REMOVE SOFT SPOTS, ORGANIC AND FOREIGN MATTER IN THE SUB-GRADE. (WHERE SUB-GRADE CONSISTS OF COMPACTED FILL, REFER TO SPECIFIC NOTES ON THE DRAWINGS).
   5.4. BACKFILL UNDER SLAB-ON-GRADE, IN FOOTING EXCAVATIONS AND IN TRENCHES ONLY WITH APPROVED MATERIAL. UNLESS SPECIFICALLY NOTED OTHERWISE, BACKFILLING SHALL BE CARRIED OUT IN MAXIMUM OF 200mm (8")THICK LIFTS OF LOOSE FILL EACH COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.
   5.5. UNLESS OTHERWISE NOTED IN GEOTECHNICAL REPORT, PROVIDE IMMEDIATELY UNDER SLABS-ON-GRADE A MINIMUM OF 200mm (8") OF COMPACTED (MTC) GRANULAR 'B' MATERIAL. COMPACTION TO ACHIEVE A MINIMUM OF 98% STANDARD PROCTOR MAXIMUM DRY DENSITY.

LOAD BEARING MASONRY NOTES — A06

1. **GENERAL**
   1.1. UNLESS OTHERWISE NOTED OR SHOWN ON THE DRAWINGS, THE FOLLOWING INDICATES THE MINIMUM REQUIREMENTS APPLICABLE TO STRUCTURAL LOAD BEARING MASONRY.
   1.2. REFER ALSO TO ARCHITECTURAL DRAWINGS AND / OR THE SPECIFICATION FOR REQUIREMENTS OTHER THAN STRUCTURAL, AND FOR NON-LOAD BEARING WALLS AND PARTITIONS.
   1.3. MASONRY CONSTRUCTION TO CONFORM TO CSA STANDARD S304.1.
2. **PRODUCTS**
   2.1. CONCRETE BLOCKS TO BE MODULAR UNITS AS SHOWN ON THE ARCHITECTURAL DRAWINGS AND /OR SPECIFICATION, AND UNLESS ` OTHERWISE NOTED SHALL BE:
      2.1.1. FOR BELOW GRADE AND EXTERIOR EXPOSED WALLS USE NORMAL WEIGHT LOAD BEARING UNITS:
         STANDARD HOLLOW: ....TYPE H / 15 / A / M.
         75% SOLID: ....TYPE S / 15 / A / M.
         100% SOLID: ....TYPE S / 15 / A / M.
      2.1.2. FOR INTERIOR ABOVE GRADE WALLS USE EITHER:
         2.1.2.1. LIGHTWEIGHT LOAD BEARING BLOCKS:
            STANDARD HOLLOW: ......TYPE H / 15 / C / M.
            75% AND 100% SOLID: ......TYPE S / 15 / C / M.
         2.1.2.2. ULTRA LIGHT (OR EQUIVELANT) BLOCKS:
            STANDARD HOLLOW: ....TYPE H / 15 / D / M.
            (REFER TO ARCHITECTURAL DRAWINGS AND SCHEDULES FOR LOCATIONS AND TYPES).
   2.2. CLAY BRICKS:
      TO CONFORM TO ONE OR MORE OF CSA STANDARDS A82.(SERIES) SEE ARCHITECTURAL DRAWINGS AND / OR SPECIFICATIONS FOR TYPES AND STYLES OF BRICKS REQUIRED. UNLESS OTHERWISE NOTED, THE MINIMUM COMPRESSIVE STRENGTH (BRICK FLATWISE) GROSS AREA SHALL BE 20 MPa.
   2.3. MORTAR:
      TO CONFORM TO CSA A179
      FOR LAYING ALL LOAD BEARING CONCRETE BLOCKS ....USE TYPE "S" MORTAR UNLESS NOTED.
      FOR LAYING ALL CLAY BRICKS ....USE TYPE "N" MORTAR UNLESS NOTED.
   2.4. MASONRY GROUT:
      TO CONFORM TO CSA A179. THE SLUMP SHALL BE 200mm TO 250mm (8"TO10") AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH FOR "FINE" GROUT SHALL BE 15MPa.
   2.5. MASONRY CONNECTORS (ANCHORS, FASTENERS AND TIES):
      SHALL CONFORM TO CSA A370, AND BE INSTALLED TO COMPLY WITH CSA A371.
      SPACING, STRENGTH AND GALVANIZING OF STRIP TIES, DOVETAIL ANCHORS, BAR ANCHORS, ROD ANCHORS, STRAP ANCHORS, WALL AND PARTITION ANCHORS SHALL COMPLY WITH CSA A370.
   2.6. HORIZONTAL JOINT REINFORCEMENT FOR ALL MASONRY WALLS:
      THE FOLLOWING ARE MINIMUM REQUIREMENTS:
      2.6.1. CONFORM TO CSA STANDARDS A370 AND A371.
      2.6.2. REINFORCEMENT SHALL BE AN APPROVED CONTINUOUS "LADDER" TYPE, PREFABRICATED WITH 3.66mm DIAMETER (9 GAUGE) LONGITUDINAL AND CROSS WIRES.
      2.6.3. SPACING:- PROVIDE REINFORCING IN THE TOP COURSE IMMEDIATELY BELOW FLOOR AND ROOF BEARING LEVELS AND THE FIRST TWO COURSES ABOVE AND BELOW EVERY WALL OPENING.THE REINFORCING SHALL EXTEND 600mm (24") BEYOND SUCH OPENINGS. FOR THE REMAINDER OF WALLS, THE VERTICAL SPACING SHALL NOT EXCEED 400mm (16").
      2.6.4. OVERLAP SPLICES:
         SHALL BE A MIN. OF 150mm (6") FOR KNURLED WIRE AND 300mm (12") FOR PLAIN WIRE.
         LAPS SHALL BE STAGGERED A MINIMUM OF 750mm (30") FROM COURSE TO COURSE.
         REINFORCING SHALL NOT PASS THROUGH A VERTICAL CONTROL JOINT UNLESS OTHERWISE SHOWN.
      2.6.5. CORROSION RESISTANCE:
         JOINT REINFORCING FOR ALL WALLS IN CONTACT WITH SOIL, EXTERIOR WALLS AND WALLS IN A MOIST ENVIRONMENT SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION TO ASTM A153,458 gm/sq.meter (1.5 oz. / sq. foot).
      2.6.6. COMPOSITE AND CAVITY WALLS:
         WHERE COURSING OF WYTHES DO NOT ALIGN OF WHERE IT IS DESIRABLE AND PERMITTED TO BUILD ONE WYTHE BEFORE THE OTHER, REINFORCING SHALL BE AN APPROVED ADJUSTABLE TYPE WITH A BOX OR EYE SECTION WHICH EXTENDS INTO THE COLLAR JOINT OR CAVITY AND RESTRAINS THE TRANSVERSE MOVEMENT OF THE TWO WYTHES. FOR CAVITY WALLS WITH RIGID INSULATION, EXTENSION SHALL BE DESIGNED TO HOLD THE INSULATION IN PLACE BY USE OF PLASTIC WEDGES OR APPROVED EQUAL. GALVANIZED HOOK STYLE "BOX TIES" OR "PIN-TIES" SHALL EXTEND INTO THE FACE WYTHE TO COMPLETE THE ASSEMBLY.
      2.6.7. PROVIDE ALL PREFABRICATED CORNER AND TEE SECTIONS.
   2.7. COMPOSITE WALLS:- SHALL HAVE THE VERTICAL COLLAR JOINTS BETWEEN WYTHES COMPLETELY FILLED WITH MORTAR OR GROUT.
   2.8. BOND BEAMS:- MADE FROM LINTEL BLOCKS, OR HALF WEB BLOCKS, WHERE SHOWN ON STRUCTURAL DRAWING SHALL CONFORM TO CSA A371.
   2.9. GROUTING:- BY FILLING VOIDS OF HOLLOW UNITS AND REINFORCED HOLLOW UNITS SHALL CONFORM TO CSA A179 (MORTAR IS NOT ACCEPTABLE).
   2.10. EXPANSION AND CONTROL JOINTS:
      SHALL BE PROVIDED. SEE ARCHITECTURAL DRAWINGS AND/ OR SPECIFICATION FOR DETAILS.

LOAD BEARING MASONRY NOTES — A06

3. **EXECUTION**
   3.1. BEARING ON MASONRY:
      3.1.1. MINIMUM BEARING ON MASONRY UNLESS OTHERWISE NOTED:-
         BEAMS (STEEL, CONC., WOOD)...................... 200mm (8") NOMINAL
         LINTELS (STEEL, CONC., WOOD) .... 150mm (6") NOMINAL
         SLABS (CAST-IN-PLACE, PRECAST) .... 100mm (4") NOMINAL
         STEEL DECKING (ON WELD PLATE) .... 100mm (4") NOMINAL
      3.1.2. MASONRY BEARINGS SHALL BE OF SOLID BLOCKS (OR GROUTED SOLID) OR BRICKS LAID IN MORTAR. ALL JOINTS ARE TO BE FULLY FILLED WITH TYPE 'S' MORTAR.
      3.1.3. MIN. SIZE OF SOLID BEARINGS AT BEAMS AND LINTELS UNLESS NOTED SHALL BE EQUAL TO TWICE THE BEARING / WALL PLATE (WP) LENGTH AND FOR A DEPTH EQUAL TO THE BEARING / WALL PLATE (WP) LENGTH, AND IN NO CASE LESS THAN 400 LONG x 200 DEEP (16" x 8"), SYMMETRICAL UNDER BEARING POINT.
      3.1.4. PROVIDE A MINIMUM OF ONE CONTINUOUS COURSE 200mm (8") OF SOLID OR GROUTED VOID BLOCKS OR BRICKS LAID IN MORTAR AT THE TOP COURSE IMMEDIATELY BELOW ALL ROOF BEARING LEVELS.
   3.2. TOLERANCES:
      UNLESS OTHERWISE NOTED ON THE ARCHITECTURAL DRAWINGS AND / OR SPECIFICATION, SHALL CONFORM TO CSA A371.
   3.3. COLD WEATHER CONSTRUCTION:- REQUIREMENTS AND PROTECTION SHALL CONFORM TO CSA A371 AND UNDER NO CIRCUMSTANCES SHALL MASONRY CONSTRUCTION BE PERMITTED WHEN THE AIR TEMPERATURE FALLS BELOW -12°C.
4. **QUALITY CONTROL**
   4.1. WHEN REQUESTED SAMPLING AND TESTING SHALL CONFORM TO CSA STANDARDS S304.1 AND ASTM C140. REFER ALSO TO GENERAL NOTES.

LINTEL NOTES — A07

UNLESS OTHERWISE SHOWN OR NOTED ON THE STRUCTURAL DRAWINGS, PROVIDE LINTELS OVER ALL OPENINGS IN MASONRY WALLS, AS FOLLOWS:
1. FOR OPENINGS UP TO 1200 mm (4'-0") CLEAR;
   1.1. ONE ANGLE 90 x 90 x 6 (3 1/2" x 3 1/2" x 1/4") FOR EACH 100mm (4") OF WALL THICKNESS OR PORTION THEREOF.
   OR
   1.2. 200mm (8") DEEP MASONRY LINTEL BLOCK REINFORCED WITH 1-10M BOTTOM FOR EACH 100mm (4") OF WALL THICKNESS OR PORTION THEREOF.
2. FOR OPENINGS FROM 1200mm (4'-0") CLEAR TO 1800mm (6'-0") CLEAR;
   2.1. ONE ANGLE 125 x 90 x 8 LONG LEG VERTICAL (5"x 3 1/2" x 5/16") FOR EACH 100mm (4") OF WALL THICKNESS OR PORTION THEREOF.
   OR
   2.2. 200mm (8") DEEP MASONRY LINTEL BLOCK REINFORCED WITH 1-15M BOTTOM FOR EACH 100mm (4") OF WALL THICKNESS OR PORTION THEREOF.
3. ALL LINTELS TO BEAR 150mm (6") MINIMUM AT EACH END ON SOLID MASONRY, UNLESS SHOWN OTHERWISE.
4. PAIRS OF LINTEL ANGLES ARE TO BE BOLTED OR WELDED TOGETHER, PRIOR TO SHIPMENT, AT MAXIMUM 450mm (18") CENTRES.
5. MASONRY LINTEL BLOCKS MAY ONLY BE USED IN LOAD-BEARING WALLS WITH PERMISSION AND MUST BE FILLED WITH 20 MPa CONCRETE. MORTAR IS NOT ACCEPTABLE AND WILL BE REJECTED.
6. STEEL LINTELS ARE TO BE SUPPLIED BY STEEL CONTRACTOR BUT PLACED BY GENERAL CONTRACTOR OR MASONRY SUB- CONTRACTOR.
7. STEEL CONTRACTOR TO SUPPLY ALL NECESSARY DIRECTIONS REQUIRED FOR PLACING STEEL LINTELS.
8. WHILE EVERY EFFORT HAS BEEN MADE TO SHOW ON THE STRUCTURAL DRAWINGS EACH AND EVERY LINTEL OVER DOORS, MECHANICAL AND ELECTRICAL SERVICES, RECESSES AND POCKETS ETC., THROUGH LOAD-BEARING MASONRY WALLS, IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO CO-ORDINATE AND SUPPLY ALL LINTELS REQUIRED THROUGH ALL WALLS (INCLUDING NON-LOAD BEARING WALLS) THROUGHOUT THE PROJECT. UNLESS OTHERWISE DIRECTED, LINTELS SHALL CONFORM TO THE ABOVE REQUIREMENTS.
9. REFER ALSO TO TYPICAL DETAILS.

STEEL DECK NOTES — A05

1. GENERAL
   1.1. DESIGN, FABRICATION, HANDLING AND ERECTION SHALL CONFORM TO THE FOLLOWING STANDARDS:
      1.1.a. CSA-S136
      1.1.b. CSSBI 10M .... STANDARD FOR STEEL ROOF DECK.
      1.1.c. CSSBI 12M .... STANDARD FOR COMPOSITE STEEL DECK.
      1.1.d. ASTM A653 .... SPECIFICATIONS FOR STEEL SHEET, ZINC COATED (GALVANIZED) OR ZINC-IRON ALLOY COATED (GALVANNEALED) BY THE HOT DIP PROCESS.
      1.1.e. WELDING SHALL CONFORM TO CSA STANDARD W59 AND BE PERFORMED BY A FABRICATOR CERTIFIED TO CSA STANDARD W47.1.
   1.2. THE STEEL DECK SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER. SHOP DRAWINGS AND CALCULATIONS BEARING THE STAMP AND SIGNATURE OF THE PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION AND ERECTION.
   1.3. NO HANGERS OR BRACKETS SHALL BE HUNG DIRECTLY FROM THE FLOOR OR ROOF DECK. ALL POINT LOADS MUST BE APPLIED DIRECTLY TO STRUCTURAL STEEL FRAMING UNLESS OTHERWISE SHOWN OR APPROVED BY THE STRUCTURAL CONSULTANT.
   1.4 WHEREVER STRUCTURAL FRAMING PERMITS, STEEL DECK SHALL BE DESIGNED AND FABRICATED TO SPAN CONTINUOUSLY OVER AT LEAST 4 SUPPORTS (3 SPANS). PROVIDE AN ADEQUATE INCREASE IN THICKNESS OF METAL TO COMPENSATE FOR CONTINUITY WHEREVER FEWER SUPPORTS MAY OCCUR. END LAPS TO BE 50mm (2") MIN. AND BE LOCATED OVER SUPPORTS.
   1.5. ROOF DECK SHALL BE FORMED WITH INTEGRAL RIBS IN ORDER TO SAFELY SUPPORT THE LOADS GIVEN ON THE DRAWINGS OVER THE SPANS REQUIRED. DECK THICKNESS GIVEN ON DRAWINGS IS MINIMUM ASSUMED ALLOWABLE THICKNESS AND MUST BE DESIGNED BY THE DECK SUPPLIER.
      1.5.a. DEFLECTION OF ROOF DECK UNDER LIVE OR SNOW LOAD ONLY SHALL NOT EXCEED 1/300TH OF SPAN.
   1.6. DESIGN AND DETAIL ON SHOP DRAWINGS ALL CONNECTIONS TO SUPPORTING MEMBERS FOR ALL COMBINATIONS OF DIAPHRAGM SHEAR AND UPLIFT FORCES ACTING ON THE ROOF DECK.
2. PRODUCTS
   2.1. UNLESS OTHERWISE NOTED ROOF DECK SHALL BE FORMED OF METALLIC COATED SHEET STEEL CONFORMING TO ASTM A653/ A653M, STRUCTURAL QUALITY GRADE ' 275' WITH A ZF75 ZINC COATING, (GALVANNEAL).
   2.2. UNLESS OTHERWISE NOTED DECK SHALL BE SINGLE FLUTED ELEMENT WITH INTEGRAL RIBS OF DEPTH AND MIN. BASE NOMINAL THICKNESS (BNT) AS NOTED ON THE DRAWINGS. DECK SHALL HAVE INTERLOCKING SIDE JOINTS BETWEEN PANELS. (MIN.. BNT. 0.76mm (0.30")).
   2.3. COVER PLATES, CELL CLOSURES, FLASHINGS AND REINFORCING STIFFENERS FOR UNSUPPORTED EDGES TO BE SUPPLIED OF SIMILAR MATERIAL AND ZINC COATING TO THAT FOR DECK, UNLESS NOTED.
   2.4. PRIMER PAINT TO BE ZINC RICH, READY MIX TO CAN/ CGSB-1.181 FOR FIELD "TOUCH-UP" OF WELD BURNS AFTER DECK IS INSTALLED.
   2.5. UNLESS OTHERWISE SHOWN FOR OPENINGS THROUGH ROOF DECK FROM 150mm TO 450mm (6" TO 18") ACROSS THE FLUTES THE DECK SUPPLIER SHALL PROVIDE NOT LESS THAN A 51x51X6.4 ANGLE (2"x2"x 1/4 L). REINFORCEMENT TO FRAME ACROSS EACH SIDE OF THE OPENING PERPENDICULAR TO THE FLUTES, WELDED TO AT LEAST TWO FLUTES EACH SIDE OF THE OPENING.
   2.6. FOR ROOF OPENINGS OVER 450mm (18") ACROSS THE FLUTES AND FOR AREAS OF CONCENTRATED LOAD, REINFORCE IN ACCORDANCE WITH STRUCTURAL FRAMING DETAILS SHOWN ON PLANS OR TYPICAL DETAILS.
3. EXECUTION
   3.1. SUPPLY AND PLACE STEEL PACKING AS REQUIRED TO PRODUCE AN EVEN BEARING PRESSURE AT SUPPORTS.
   3.2. FOR STEEL ROOF DECK, UNLESS OTHERWISE DETERMINED DURING THE DIAPHRAGM AND UPLIFT CONNECTION DESIGN OR SPECIFIED OTHERWISE IN THE SPECIFICATIONS OR ENGINEERING DRAWINGS, THE MINIMUM ATTACHMENT OF THE DECK TO THE BEARING SURFACES AND THE MINIMUM SIDE LAP CONNECTIONS BETWEEN DECK UNITS SHALL BE:
      3.2.A. FOR 38mm DEEP DECK PROFILES, CONNECT THE FIRST, THIRD, FIFTH AND SEVENTH LOW CORRUGATIONS (36/4 CONFIGURATION), AND EACH SUPPORT PARALLEL TO FLUTE DIRECTION AT 300mm [12"] MAXIMUM CENTERS. CONNECTIONS SHALL BE MADE USING EITHER AN ARC SPOT WELD WITH 20mm [3/4"] NOMINAL TOP DIAMETER, OR MECHANICALLY FASTENED USING HILTI POWDER ACTUATED FASTENERS (X-HSN24, HILTI X-ENP19, OR EQUIVALENT).
      3.2.B. FOR 76mm DEEP DECK PROFILES, CONNECT THE FIRST, THIRD AND FIFTH LOW CORRUGATIONS (24/3 CONFIGURATION), AND EACH SUPPORT PARALLEL TO FLUTE DIRECTION AT 300mm [12"] MAXIMUM CENTERS. CONNECTIONS SHALL BE MADE USING EITHER AN ARC SPOT WELD WITH 20mm [3/4"] NOMINAL TOP DIAMETER, OR MECHANICALLY FASTENED USING HILTI POWDER ACTUATED FASTENERS (X-HSN24, HILTI X-ENP19, OR EQUIVALENT).
      3.2.C. FOR ROOF DECKS, SIDE LAPS OF ADJACENT NESTABLE UNITS SHALL BE CRIMPED TOGETHER AT 900mm [36"] CENTRES, OR FASTENED WITH HILTI M HWH SCREWS (SLC01, SLC02, OR EQUIVALENT).
   3.3. INSTALL ALL POWDER ACTUATED AND SCREW FASTENERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
   3.4. WELD STUD SHEAR CONNECTORS THROUGH DECK WHERE REQUIRED BY DRAWINGS.
   3.5. "TOUCH-UP" GALVANIZED OR GALVANNEALED SURFACES WITH SPECIFIED PRIMER AT WELDS AND SCRAPES, ETC., BOTH UPPER AND LOWER SURFACES.
   3.6. DO NOT SUSPEND CEILING OR MECHANICAL/ELECTRICAL SERVICES FROM U/S OF STEEL DECK.
4. QUALITY CONTROL
   4.1. AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO BE ENGAGED TO CARRY OUT AND REPORT ON THE FOLLOWING INSPECTION SERVICES:
      4.1.a. SECTION PROFILE, GAUGE AND STEEL GRADE.
      4.1.b. ZINC COATING.
      4.1.c. WELDED JOINTS.
      4.1.d. BEARINGS.
      4.1.e. SIDE LAP CONNECTIONS.
      4.1.f. TOUCH-UP PRIMER.
      4.1.g. FIELD CUTTING AND/OR ALTERATIONS.
   4.2. REFER ALSO TO THE GENERAL NOTES, SPECIFICATIONS, AND TERMS OF REFERENCE FOR ADDITIONAL INFORMATION.

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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LICENSED PROFESSIONAL ENGINEER
25-10-08
J. C. GASDIA
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PROVINCE OF ONTARIO

PROJECT
MISSISSAUGA

NEW COMFORT STATION
HURON PARK
RECREATION CENTRE

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

DRAWING
GENERAL NOTES AND TYPICAL DETAILS

PROJECT NO.	20240909
PROJECT DATE	Issue Date
DRAWN BY	RP
CHECKED BY	CG/JG
SCALE	1 : 1
DRAWING NO.	S3-01

STRUCTURAL STEEL NOTES — A04A

1. GENERAL
   - 1.1. STRUCTURAL STEEL DESIGN DETAILS AND CONNECTIONS SHALL CONFORM TO CSA STANDARD S16 AND SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER EXPERIENCED IN THIS TYPE OF WORK.
   - 1.2. REFER ALSO TO GENERAL NOTES, NOTES UNDER PLANS AND TO THE SPECIFICATION.
   - 1.3. WELDING SHALL CONFORM TO CSA STANDARD W59 AND BE PERFORMED BY A FABRICATOR CERTIFIED TO CSA W47.1.
   - 1.4. BEAM CONNECTIONS SHALL BE DESIGNED FOR A MINIMUM OF FACTORED VERTICAL SHEAR FORCE OF 50% OF THE BEAM SHEAR CAPACITY. UNLESS OTHERWISE NOTED, AND IN NO CASE BE LESS THAN THE LOADS SHOWN ON OR IMPLIED BY THE DRAWINGS. WHERE BOLTED CONNECTIONS ARE UTILIZED, A MINIMUM OF TWO BOLTS PER CONNECTION SHALL BE USED.
   - 1.5 MEMBER CONNECTIONS SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER FOR FORCES AND MOMENTS INDICATED. SHOP DRAWINGS [AND CALCULATIONS] BEARING THE STAMP AND SIGNATURE OF THE REGISTERED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE DESIGN SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION AND ERECTION.
2. PRODUCTS
   - 2.1. STRUCTURAL STEEL SECTIONS SHALL CONFORM TO CSA-G40.20/G40.21
     - 2.1.1. S SHAPES, PLATES AND RODS: - GRADE 300 W
     - 2.1.2. HSS SECTIONS: - GRADE 350W (CLASS C LIN)
     - 2.1.3. WWF SHAPES, WT SHAPES AND W SHAPES, CHANNELS, ANGLES,: - GRADE 350W
   - 2.2. BOLTS FOR CONNECTIONS TO CONFORM TO ASTM F3125/3125M, GRADE A325, UNLESS NOTED.
   - 2.3. ANCHOR RODS FOR BASE PLATES, BEARING PLATES AND WELD PLATES TO CONFORM TO ASTM F1554, GRADE 36, UNLESS NOTED.
   - 2.4. NUTS AND WASHERS TO CONFORM TO ASTM A563 AND ASTM F436.
   - 2.5. SHEAR STUDS WHERE REQUIRED TO CONFORM TO ASTM A108, WELDING TO CONFORM TO CSA W59.
   - 2.6. WELDING MATERIALS TO CONFORM TO CSA W48.
   - 2.7. SURFACE PREPARATION AND PRIMER PAINT FOR STRUCTURAL STEEL MEMBERS INSIDE VAPOUR BARRIER TO CONFORM TO CISC/CPMA 1.73a OR CISC/CPMA 2.75 (IF EXPOSED TO VIEW), UNLESS NOTED ON DRAWINGS OR SPECIFICATIONS.
   - 2.8. HOT DIP GALVANIZING WITH A MINIMUM ZINC COATING OF 600g/sq.m UNLESS OTHERWISE SPECIFIED.
3. EXECUTION
   - 3.1. FABRICATION, HANDLING AND ERECTION TO CONFORM TO CAN/ CSA - S16.
   - 3.2. PROVIDE A MINIMUM OF 2-12 mm (1/2") DIAMETER BY 250 (10") LONG WALL ANCHORS FOR ALL BEAM WALL PLATES ON MASONRY, OR AN APPROVED EQUAL, UNLESS OTHERWISE NOTED. BEAMS TO BE WELDED TO BEARING PLATES.
   - 3.3. PROVIDE ADJUSTABLE ANCHORS TO ALL STEEL TO BE BUILT INTO, ABUTTED BY, OR FACED WITH MASONRY (REFER ALSO TO TYPICAL DETAILS IF SHOWN). SPACING OF ANCHORS TO BE:
     - FOR VERTICAL SPACING ..... 600 (24") MAX. CENTRES.
     - FOR HORIZONTAL SPACING ..... 10 TIMES WALL THICKNESS* (MAX. 2000 (6'-8") CENTRES)
     - (* NOTE: USE BACK-UP WYTHE THICKNESS ONLY, FOR CAVITY WALLS.)
   - 3.4. WHERE STEEL PROVIDES LATERAL BRACING ONLY TO MASONRY (I.E. DOES NOT SUPPORT MASONRY) ANCHORS SHALL PERMIT DIFFERENTIAL VERTICAL MOVEMENT BETWEEN STRUCTURAL MEMBERS AND MASONRY.
   - 3.5. PROVIDE L76X76X6.4(MIN) ANGLE SEATS FOR ALL STEEL DECK AT LOCATIONS WHERE THE CONNECTION TO SUPPORTING FRAMING IS INTERRUPTED. (EG. AT COLUMNS)
   - 3.6. CLEAN, PREPARE SURFACES AND SHOP PRIME STRUCTURAL STEEL WITH ONE COAT OF SPECIFIED PRIMER PAINT IN ACCORDANCE WITH CAN/CSA - S16, EXCEPT WHERE MEMBERS ARE TO BE ENCASED IN CONCRETE. OR TO RECEIVE SPRAY APPLIED FIRE PROOFING. FIELD " TOUCH-UP" BOLTS, WELDS, BURNED OR SCRAPED SURFACES AFTER ERECTION.
   - 3.7. PROVIDE ALL NECESSARY TEMPORARY BRACING TO KEEP STRUCTURE SAFE AND PLUMB. BRACING SHOWN ON STRUCTURAL DRAWINGS IS PERMANENT FOR FINISHED BUILDING ONLY.
   - 3.8. CO-ORDINATE WITH MECHANICAL AND ELECTRICAL CONSULTANTS AND SUB-TRADES WHOSE WORK MAY AFFECT DETAILING, FABRICATION AND ERECTION OF THE STEEL STRUCTURE.
   - 3.9. TOLERANCES:
     - VARIATION FROM PLUMB AND LEVEL EXTERIOR COLUMNS, COLUMNS AT ELEVATOR SHAFTS, AND SPANDREL BEAMS INCLUDING ANGLES .....1:1000 MAX. 25 mm (1/8" IN 10'-0" MAX. 1")
     - OTHER PIECES .....1:500 (1/4" IN 10'-0")
   - 3.10. NO HOLES OTHER THAN THOSE SHOWN ON REVIEWED SHOP DRAWINGS SHALL BE MADE IN ANY STEEL MEMBER WITHOUT WRITTEN PERMISSION OF THE STRUCTURAL CONSULTANT.
4. QUALITY CONTROL
   - 4.1. AN INDEPENDENT INSPECTION AND TESTING COMPANY IS TO INSPECT STRUCTURAL STEEL AND STEEL DECK IN THE SHOP AND IN THE FIELD FOR WELDING, CONNECTIONS, BOLT TORQUES, AND GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS.
   - 4.2 SEE SPECIFICATIONS FOR ADDITIONAL INSPECTION AND TESTING REQUIREMENTS.

COMPRESSION-TENSION DEVELOPMENT AND LAP LENGTHS Fy = 400 MPa — C02A

NOTES
1. STANDARD ABBREVIATIONS ON PLANS AND SCHEDULES SHOULD BE AS FOLLOWS
   - **CLS** - COMPRESSION LAP SPLICE
   - **CDL** - COMPRESSION DEVELOPMENT LENGTH
   - **HEL** - HOOK EMBEDMENT LENGTH

COMPRESSION LAP SPLICE AND DEVELOPMENT LENGTHS (Fy = 400 MPa)

CLS: COMPRESSION LAP SPLICE LENGTH (mm)

UNCOATED BLACK BAR							
10M	15M	20M	25M	30M	35M	45M	55M
300	440	590	730	880	1030	NOT PERMITTED	

CDL: COMPRESSION DEVELOPMENT LENGTH (mm)

f'c	UNCOATED BLACK BAR							
	10M	15M	20M	25M	30M	35M	45M	55M
20MPa	250	340	420	540	640	770	940	1210
25MPa	220	310	370	600	570	690	840	1080
30MPa	200	280	340	440	530	630	770	990
35MPa	200	280	340	440	530	630	770	990
40MPa	200	280	340	440	530	630	770	990
> 40 MPa	SEE MINIMUM VALUES FOR f'c = 40 MPa							

NOTES:
1. IF BUNDLED BARS ARE USED THE VALUES IN THE TABLES MUST BE INCREASED:
   a. MULTIPLY BY 1.1 (TWO BAR BUNDLES) b. MULTIPLY BY 1.2 (THREE BAR BUNDLES) c. MULTIPLY BY 1.33 (FOUR BAR BUNDLES)

2. FOR EMBEDMENTS ENCLOSED IN SPIRALS, MULTIPLY BY 0.75, BUT NOT LESS THAN 200mm.

HEL: MINIMUM TENSION EMBEDMENT LENGTH WITH STANDARD HOOK (mm)

f'c	UNCOATED BLACK BAR							
	10M	15M	20M	25M	30M	35M	45M	55M
20MPa	220	340	450	560	670	780	1010	1230
25MPa	200	300	400	500	600	700	900	1100
30MPa	180	270	370	460	550	640	830	1010
35MPa	170	250	340	420	510	590	770	930
40MPa	160	240	320	400	470	550	720	870
45MPa	150	220	300	370	450	520	680	820
50MPa	150	210	280	350	420	490	640	780
55MPa	150	200	270	340	400	470	610	750

NOTES:
1. VALUES PROVIDED ARE BASED ON NORMAL WEIGHT CONCRETE AND MUST BE INCREASED FOR LIGHTWEIGHT CONCRETES:
   a. MULTIPLY BY 1.2 (FOR SEMI-LOW DENSITY CONCRETE)
   b. MULTIPLY BY 1.3 (FOR LOW-DENSITY CONCRETE)
2. FOR 35M AND SMALLER BARS MULTIPLY THE VALUES IN THE TABLE BY 0.7 (BUT NOT LESS THAN 150mm) WHERE THE SIDE COVER (NORMAL TO THE PLANE OF THE HOOK) IS AT LEAST 60mm, AND FOR 90° HOOKS WHERE COVER ON THE BAR EXTENSION BEYOND THE HOOK IS AT LEAST 50mm.
3. FOR 35M AND SMALLER BARS MULTIPLY THE VALUES IN THE TABLE BY 0.8 (BUT NOT LESS THAN 150mm) WHERE THE HOOK IS ENCLOSED WITHIN AT LEAST THREE(3) TIES OR STIRRUPS SPACED ALONG A LENGTH EQUAL TO THE INSIDE DIAMETER OF THE HOOK AT A SPACING NOT MORE THAN 3 TIMES THE BAR DIAMETER.

TENSION DEVELOPMENT AND LAP SPLICE LENGTHS Fy = 400 MPa — C02B

NOTES
1. STANDARD ABBREVIATIONS ON PLANS AND SCHEDULES SHOULD BE AS FOLLOW
   - **TLS** - TENSION LAP SPLICE
   - **TDL** - TENSION DEVELOPMENT LENGTH

TENSION LAP SPLICE AND DEVELOPMENT LENGTHS (Fy = 400 MPa)

TLS: TENSION LAP SPLICE LENGTH (CLASS B) (mm)

f'c	UNCOATED BLACK BAR											
	10M		15M		20M		25M		30M		35M	
	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
20MPa	550	420	820	630	1090	840	1710	1310	2050	1570	2390	1840
25MPa	490	380	740	570	980	750	1530	1170	1830	1410	2130	1640
30MPa	450	350	670	520	890	690	1390	1070	1670	1290	1950	1500
35MPa	420	320	620	480	830	640	1290	990	1550	1190	1800	1390
40MPa	390	300	580	450	770	600	1210	930	1450	1110	1690	1300
45MPa	370	300	550	420	730	560	1140	880	1370	1050	1590	1230
50MPa	350	300	520	400	690	530	1080	830	1300	1000	1510	1160
55MPa	330	300	500	380	660	510	1030	790	1240	950	1440	1110
60MPa	320	300	480	370	630	490	990	760	1180	910	1380	1060
64MPa	310	300	460	360	610	470	960	740	1150	880	1340	1030

TDL: TENSION DEVELOPMENT LENGTH (mm) CLASS "A" LAP SPLICE

f'c	UNCOATED BLACK BAR											
	10M		15M		20M		25M		30M		35M	
	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
20MPa	420	330	630	490	840	650	1310	1010	1570	1210	1840	1410
25MPa	380	300	570	440	750	580	1170	900	1410	1080	1640	1260
30MPa	350	300	520	400	690	530	1070	830	1290	990	1500	1160
35MPa	320	300	480	370	640	490	990	770	1190	920	1390	1070
40MPa	300	300	450	350	600	460	930	720	1110	860	1300	1000
45MPa	300	300	420	330	560	430	880	680	1050	810	1230	940
50MPa	300	300	400	310	530	410	830	640	1000	770	1160	900
55MPa	300	300	380	300	510	390	790	610	950	730	1110	850
60MPa	300	300	370	300	490	380	760	590	910	700	1060	820
64MPa	300	300	360	300	470	360	740	570	880	680	1030	790

NOTES:
1. VALUES PROVIDED ARE BASED ON NORMAL WEIGHT CONCRETE AND MUST BE INCREASED FOR LIGHTWEIGHT CONCRETES:
   a. MULTIPLY BY 1.2 (FOR SEMI-LOW DENSITY CONCRETE)
   b. MULTIPLY BY 1.3 (FOR LOW-DENSITY CONCRETE)
2. IF BUNDLED BARS ARE USED THE VAULES IN THE TABLES MUST BE INCREASED:
   a. MULTIPLY BY 1.1 (TWO BAR BUNDLES)
   b. MULTIPLY BY 1.2 (THREE BAR BUNDLES)
   c. MULTIPLY BY 1.33 (FOUR BAR BUNDLES)

TYPICAL DETAIL LIST

DETAIL NAME	SHEET NUMBER
A07-LINTEL NOTES	S3-01
A06-LOAD BEARING MASONRY NOTES	S3-01
A02-GENERAL NOTES	S3-01
A03.1-CAST-IN-PLACE CONCRETE NOTES	S3-01
A01-STANDARD ABBREVIATIONS	S3-01
A05-STEEL DECK NOTES	S3-01
A04A-STRUCTURAL STEEL NOTES	S3-02
C02A COMPRESSION-TENSION LAP LENGTHS PART 1 OF 2	S3-02
C02B TENSION LAP LENGTHS PART 2 OF 2	S3-02
C01 TYPICAL CONCRETE COVER TABLE	S3-02
A03.2-CAST-IN-PLACE CONCRETE NOTES	S3-01
CFW02A TYPICAL JOINTS IN EXTERIOR CONCRETE FOUNDATION WALLS	S3-03
CFW02B TYPICAL JOINTS IN EXTERIOR CONCRETE FOUNDATION WALLS	S3-03
CG02 THICKENING OF SLAB ON GRADE	S3-03
CW02 TYPICAL DETAIL OF OPENINGS IN CONCRETE WALL	S3-04
CW01 TYPICAL JOINTS IN CONCRETE SHEAR WALLS	S3-04
CS09 TYPICAL SLAB DEPRESSION REINFORCING DETAILS	S3-04
CG01A SLAB ON GRADE DETAILS	S3-03
CG01B SLAB ON GRADE DETAILS	S3-03
CG01C SLAB ON GRADE DETAILS	S3-03
F09 TYPICAL STEPPED FOOTING DETAILS	S3-04
SB01-STEEL BEAM AND GIRDER DESIGNATIONS	S3-04
SB02A-ERECTION TOLERANCES FOR STRUCTURAL STEEL BEAMS	S3-04
SB02B-ERECTION TOLERANCES FOR STRUCTURAL STEEL BEAMS	S3-04
M04-TYPICAL ELEVATION REINFORCED MASONRY WALLS AND PIERS	S3-05
M03-TYPICAL PLAN DETAIL REINFORCED EXTERIOR MASONRY WALLS AND PIERS PLAN DETAIL	S3-05
M01A-NON-LOAD BEARING BLOCK WALL LINTELS	S3-05
M07-TYPICAL MASONRY WALL REINFORCING SCHEDULE NOTES	S3-05
M08-TYPICAL STEEL BEAM BEARING ON MASONRY WALL (PERPENDICULAR)	S3-06
M09-TYPICAL STEEL BEAM BEARING ON END OR CORNER OF MASONRY WALL (MINIMUM REQUIREMENTS)	S3-06
M10-TYPICAL DETAIL AT CONTROL JOINT IN REINFORCED MASONRY WALL	S3-06
M01B-TYPICAL LINTEL DETAILS	S3-05
M14A-TYPICAL LATERAL SUPPORT AT PARTITIONS	S3-06
M06-TYPICAL DETAIL OF CONSTRUCTED CORNERS IN SINGLE WYTHE MASONRY WALLS (NO CONTROL JOINT)	S3-05
M07A.1 NON LOAD-BEARING MASONRY PARTITION REINFORCING SCHEDULE_2024	S3-05

TYPICAL CONCRETE COVER TABLE — C01

			CONCRETE EXPOSURE (1,2,3)			
			CHLORIDES WITH / WITHOUT FREEZE / THAW		NO CHLORIDES WITH FREEZE / THAW	NO CHLORIDES OR FREEZE / THAW
			PROTECTED AREA	UNPROTECTED AREA	EXTERIOR EXPOSED CONCRETE	GENERAL NON-EXPOSED CONCRETE
ELEMENTS EXPOSED TO EARTH	PROJECT SPECIFIC COMMENTS	BAR SIZE	COVER (mm)			
PERMANENTLY EXPOSED TO SOIL		ALL SIZES	GREATER OF 60mm OR 2.0Ø	GREATER OF 40mm OR 1.5Ø		
CAST AGAINST AND PERMANENTLY EXPOSED TO SOIL (U/S OF FOOTINGS)		ALL SIZES	75			

TABLE NOTES
1. REFER TO CONCRETE MIX DESIGN TABLE FOR EXPOSURE CLASSIFICATION OF STRUCTURAL ELEMENTS.
2. CONCRETE COVER VALUES NOTED IN THE TABLE ARE BASED ON THE GREATER OF CONCRETE EXPOSURE (CSA A23.1-19, CSA S413-21) AND FIRE RATING (NBCC 2020) REQUIREMENTS.
3. CONCRETE COVER SHALL BE MEASURED FOR THE DEEPEST POINT OF TEXTURED CONCRETE SURFACE TO THE NEAREST DEFORMATION OF REINFORCEMENT. REINFORCEMENT INCLUDES TIES, STIRRUPS AND MAIN BARS.
4. THE REQUIRED CONCRETE COVER FOR FIRE RATING OF MAIN BAR IS ACHIEVED BY PROVIDING THE COVER VALUE NOTED FROM THE DEEPEST POINT OF TEXTURED CONCRETE SURFACE TO THE NEAREST DEFORMATION OF 10mm TIE OR STIRRUP REINFORCEMENT.
5. FOR FIRE RATING REFER TO ARCHITECTURAL DRAWINGS. FIRE RATING FOR STRUCTURAL ELEMENTS SHALL BE ASSUMED TO BE 2 HOURS UNLESS NOTED OTHERWISE. NOTIFY STRUCTURAL ENGINEER OF ANY DISCREPANCY IN FIRE RATING BETWEEN STRUCTURAL AND ARCHITECTURAL DRAWINGS.
6. FOR FOUNDATION WALLS CAST AGAINST MIRADRAIN WATERPROOFING, EXPOSURE CATEGORY ON EXTERIOR FACE SHALL BE CONSIDERED AS NO CHLORIDES OR FREEZE / THAW.

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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25-10-08
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PROJECT

MISSISSAUGA

NEW COMFORT STATION
HURON PARK
RECREATION CENTRE

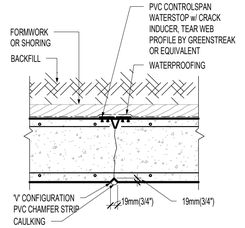
830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

DRAWING

GENERAL NOTES AND TYPICAL DETAILS

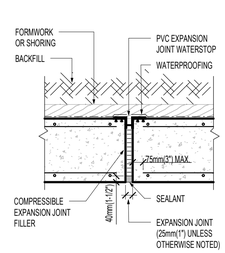
PROJECT NO.	20240909
PROJECT DATE	Issue Date
DRAWN BY	RP
CHECKED BY	CG/JG
SCALE	1 : 1
DRAWING NO.	S3-02

TYPICAL JOINTS IN EXTERIOR CONCRETE FOUNDATION WALLS — CFW02A

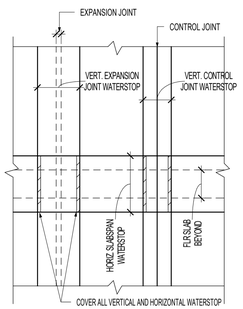


NOTES:
1. EVERY OTHER HORIZONTAL BAR TO BE CUT ACROSS CONTROL JOINT ON BOTH INSIDE AND OUTSIDE FACES.
2. CONTROL JOINTS ARE NOT TO BE PLACED IN AIR SHAFTS.

VERTICAL CONTROL JOINT
AT EXTERIOR CONCRETE WALL
JOINTS @ 4500mm (15'-0") CENTERS MAX.

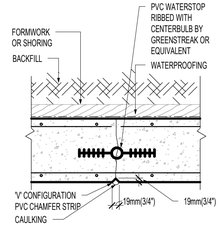


VERTICAL EXPANSION JOINT
AT EXTERIOR CONCRETE WALL
FOR LOCATIONS SEE PLAN



ELEVATION OF EXTERIOR CONCRETE WALL
AT WATERSTOP LAP JOINTS

TYPICAL JOINTS IN EXTERIOR CONCRETE FOUNDATION WALLS — CFW02B



NOTES:
1. EVERY OTHER HORIZONTAL BAR TO BE CUT ACROSS CONTROL JOINT ON BOTH INSIDE AND OUTSIDE FACES.
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AT EXTERIOR CONCRETE WALL
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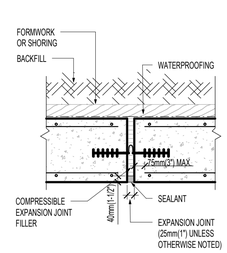
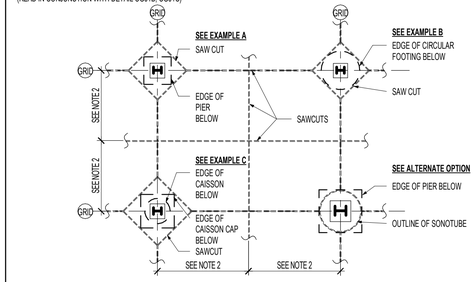
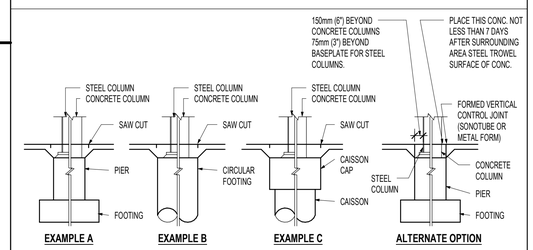


VERTICAL EXPANSION JOINT
AT EXTERIOR CONCRETE WALL
FOR LOCATIONS SEE PLAN

SLAB ON GRADE DETAILS — CG01A

(READ IN CONJUNCTION WITH DETAIL CG01B, CG01C)

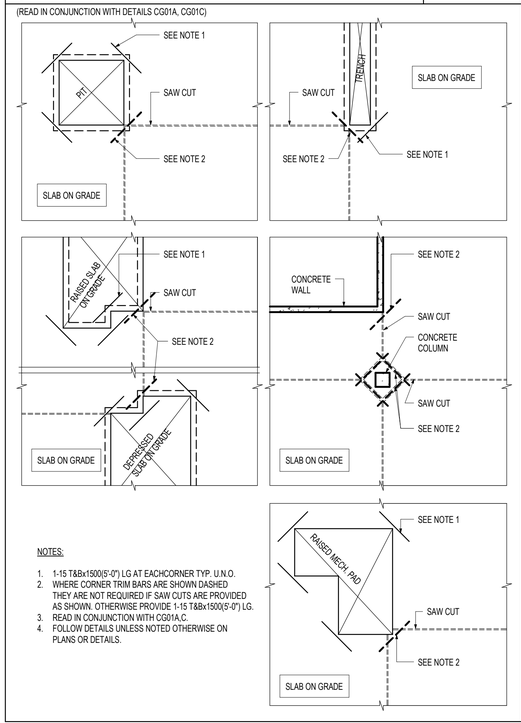




NOTES:
1. SAWCUTTING TO BE DONE AS SOON AS POSSIBLE AFTER SLAB IS PLACED. (MAX. 24 HOURS).
2. JOINTS TO BE AT MAX. 24x SLAB THICKNESS FOR MAXIMUM AGGREGATE SIZE SMALLER THAN 19mm(3/4") AND 30 TIMES SLAB THICKNESS FOR AGGREGATE SIZE LARGER THAN 19mm (3/4"),BUT NOT MORE THAN 4500mm (14'-9")
3. MAXIMUM RATIO BETWEEN LENGTH AND WIDTH OF ANY PANEL (CREATED BY SAWCUT) SHOULD NOT EXCEED 1.5
4. COORDINATE EXACT LOCATIONS OF SAWCUTS IN SLAB ON GRADE WITH ARCHITECTURAL REQUIREMENTS.
5. SAWCUT SLAB ON GRADE AT LOCATIONS SHOWN ON PLAN OR AS NOTED BELOW. ALTERNATE LOCATIONS SHALL BE SUBMITTED TO CONSULTANT FOR REVIEW, WELL IN ADVANCE OF POURING SLAB ON GRADE.
6. AFTER THE SLAB IS A MINIMUM 60 DAYS OLD, REMOVE ALL DEBRIS FROM THE SAW CUTS AND FILL WITH MORTAR CONTAINING CEMENT, SAND AND LATEX BONDING AGENT, OR AS NOTED IN SPECIFICATIONS.
7. PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT ROUT ALL CRACKS IN THE SLAB ON GRADE AND FILL WITH MORTAR CONTAINING CEMENT, SAND AND LATEX BONDING AGENT OR AS NOTED IN SPECIFICATIONS.
8. REFER TO TYPICAL DETAIL CG01B, CG01C FOR SAW CUT DETAILS.

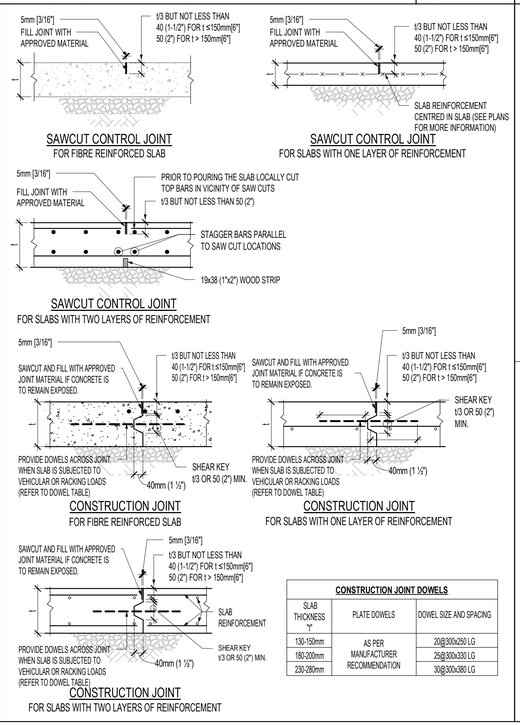
SLAB ON GRADE DETAILS — CG01B

(READ IN CONJUNCTION WITH DETAILS CG01A, CG01C)



NOTES:
1. 1-15 T&Bx1500(5'-0") LG AT EACHCORNER TYP. U.N.O.
2. WHERE CORNER TRIM BARS ARE SHOWN DASHED THEY ARE NOT REQUIRED IF SAW CUTS ARE PROVIDED AS SHOWN. OTHERWISE PROVIDE 1-15 T&Bx1500(5'-0") LG.
3. READ IN CONJUNCTION WITH CG01A,C.
4. FOLLOW DETAILS UNLESS NOTED OTHERWISE ON PLANS OR DETAILS.

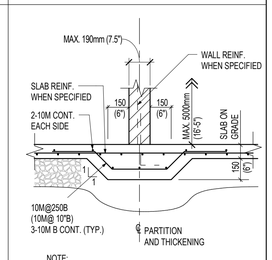
SLAB ON GRADE DETAILS — CG01C



CONSTRUCTION JOINT DOWELS

SLAB THICKNESS 'Y'	PLATE DOWELS	DOWEL SIZE AND SPACING
130-150mm	AS PER MANUFACTURER RECOMMENDATION	20@300x250 LG
180-200mm		25@300x300 LG
230-280mm		30@300x380 LG

THICKENING OF SLAB ON GRADE — CG02



NOTE:
REFER TO CG03 FOR SLAB THICKENING UNDER MASONRY PARTITION SEPARATING HEATED AND UNHEATED AREAS

THICKENING AT
MASONRY PARTITIONS

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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LICENSED PROFESSIONAL ENGINEER
25-10-08
J. C. GASDIA
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PROVINCE OF ONTARIO

PROJECT
MISSISSAUGA

NEW COMFORT STATION
HURON PARK
RECREATION CENTRE

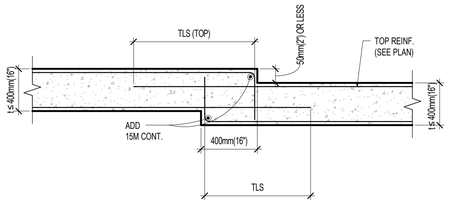
830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

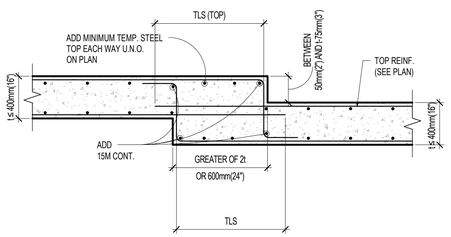
DRAWING
TYPICAL DETAILS

PROJECT NO.	20240909
PROJECT DATE	Issue Date
DRAWN BY	RP
CHECKED BY	CG/JG
SCALE	1 : 1
DRAWING NO.	S3-03

TYPICAL SLAB DEPRESSION REINFORCING DETAILS — CS09

(READ IN CONJUNCTION WITH DETAILS CS02A, CS02B, CS10)



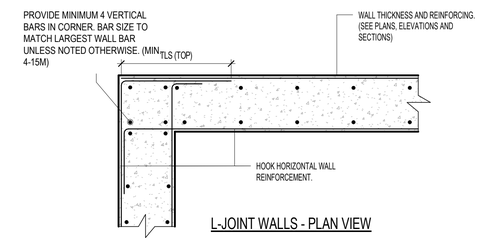


NOTE:
IF THERE IS NO TOP REINFORCEMENT NOTED ON PLANS, ADD 15M @300(12")T, 1200(48") LONG EACH SIDE.

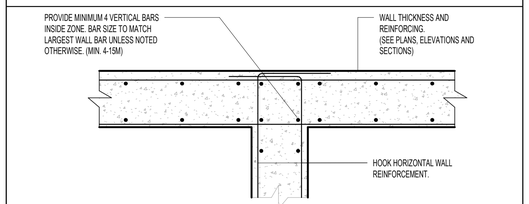
SLAB DEPRESSION REINFORCING DETAILS (UP TO t-75mm(3"))

NOTE: FOR SLAB DEPRESSIONS GREATER THAN "t-75mm(3") SEE CS10.
SEE C02A AND C02B FOR TENSION LAP SPLICE (TLS) LENGTHS

TYPICAL JOINTS IN CONCRETE WALLS (NOT SPECIFIED AS SHEARWALLS) — CW01



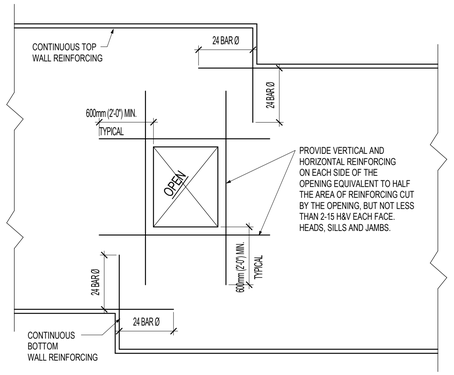
L-JOINT WALLS - PLAN VIEW

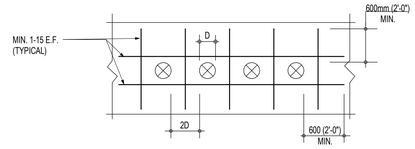


T-JOINT WALLS - PLAN VIEW

TYPICAL DETAIL OF OPENINGS IN CONCRETE WALL — CW02

(NOT SPECIFIED AS SHEARWALLS)



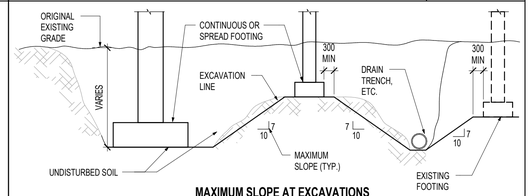


D = DIAMETER OF OPENING

TYPICAL DETAIL OF ADDITIONAL REINFORCEMENT AT WALL OPENINGS

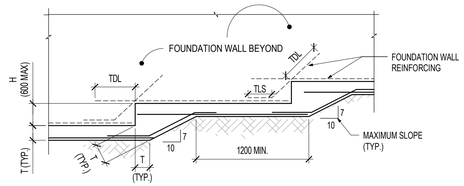
(TYPICAL UNLESS OTHERWISE SHOWN ON DRAWINGS)

STEPPED FOUNDATION AND CONSTRUCTION EXCAVATION — F09



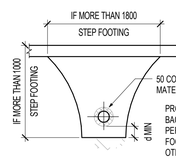
MAXIMUM SLOPE AT EXCAVATIONS

NOTES:
1. WHERE TRENCHING OR EXCAVATING AT ADJACENT FOOTING SATISFY THE MAXIMUM SLOPE REQUIREMENT SHOWN ABOVE.
2. IF EXCAVATION REQUIREMENTS VIOLATE SLOPE REQUIREMENTS PROVIDE PLANS FOR REMEDIAL MEASURES (BRACING OR UNDERPINNING) TO THE CONSULTANT PRIOR TO PROCEEDING



STEPS IN FOUNDATION WALL

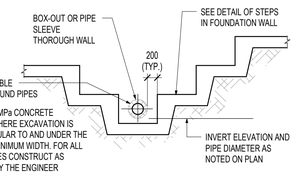
NOTES:
1. STEPS IN FOUNDATION WALLS TO FOLLOW THE GEOMETRY SHOWN ABOVE UNLESS NOTED OTHERWISE ON PLANS



50 COMPRESSIBLE MATERIAL AROUND PIPES

PROVIDE 10MPa CONCRETE BACKFILL WHERE EXCAVATION IS PERPENDICULAR TO AND UNDER THE FOOTING. MINIMUM WIDTH. FOR ALL OTHER CASES CONSTRUCT AS DIRECTED BY THE ENGINEER

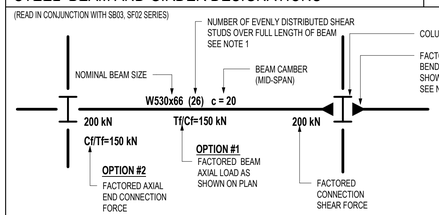
PIPES UNDER CONTINUOUS WALL FOOTINGS



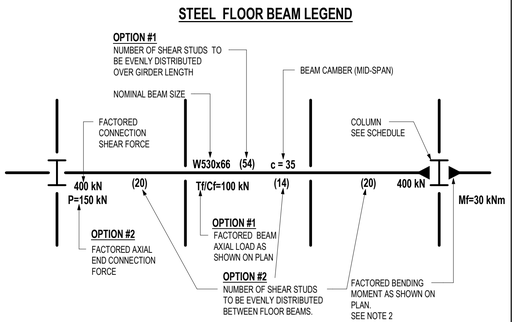
PIPES REQUIRING STEPPED FOOTINGS

STEEL BEAM AND GIRDER DESIGNATIONS — SB01

(READ IN CONJUNCTION WITH SB03, SF02 SERIES)



STEEL FLOOR BEAM LEGEND



STEEL GIRDER BEAM LEGEND

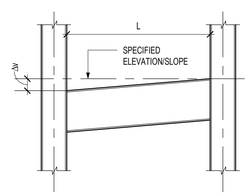
NOTE:
1. REFER TO DETAIL SF02 FOR PLACEMENT OF STUD SHEAR CONNECTORS ON BEAM/GIRDER TOP FLANGES.
2. REFER TO DETAIL SB01 FOR MOMENT CONNECTION REQUIREMENTS.
3. OPTION #2 FOR AXIAL LOAD USED WHERE REACTIONS AT EACH END OF BEAM ARE NOT EQUAL, OPTION #1 USED WHERE AXIAL LOADS ARE EQUAL AT EACH END.

ERECTION TOLERANCES FOR STEEL BEAMS — SB02A

(READ IN CONJUNCTION WITH SB02B)

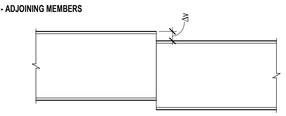
1. VERTICAL DEVIATION FROM SPECIFIED ELEVATION/SLOPE.

FLOOR BEAMS:	Δv = ± 10mm (3/8") OR = L/500
MEMBERS WITH ADJUSTABLE CONNECTIONS:	Δv =± 6mm (1/4") OR = L/1000



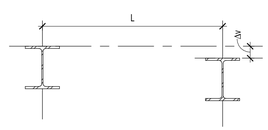
2. VERTICAL DEVIATION FROM SPECIFIED ELEVATION - ADJOINING MEMBERS

FLOOR BEAMS:	Δv = ±6mm (1/4")
MEMBERS WITH ADJUSTABLE CONNECTIONS:	Δv = ±2mm (3/32")



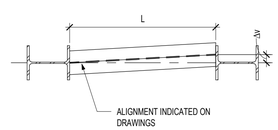
3. VERTICAL DEVIATION FROM ADJACENT BEAMS

FLOOR BEAMS:	Δv = L/1000



4. HORIZONTAL DEVIATION FROM INDICATED POSITION

FLOOR BEAMS:	ΔH = ±12mm (1/2") OR L/500
SPANDREL BEAMS:	ΔH = ±6mm (1/4") OR L/1000



NOTES

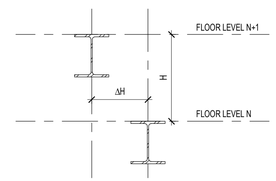
1. TOLERANCES PROVIDED IN THE DETAIL ABOVE SHALL NOT SUPERSEDE THE VALUES INDICATED IN CSA S16 AND REFERENCED DOCUMENTS.

ERECTION TOLERANCES FOR STEEL BEAMS — SB02B

(READ IN CONJUNCTION WITH SBB02A)

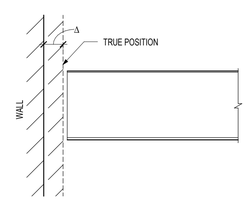
5. HORIZONTAL DEVIATION FROM ADJACENT BEAMS

FOR H < 3000mm (10'-0"):	ΔH = ±5mm (3/16")
FOR H > 3000mm (10'-0"):	ΔH = H/600



6. HORIZONTAL DEVIATION FROM SUPPORT POINT AT VERTICAL WALL

Δ = ±25mm (1")



NOTES

1. TOLERANCES PROVIDED IN THE DETAIL ABOVE SHALL NOT SUPERSEDE THE VALUES INDICATED IN CSA S16 AND REFERENCED DOCUMENTS.
2. FOR ERECTION TOLERANCES OF SPECIAL MEMBERS SUCH AS CRANE GIRDERS, CRANE RAILS AND MONORAIL BEAMS, SEE THE APPROPRIATE CODE RECOMMENDATIONS.
3. DEVIATIONS SHOWN FOR W-SHAPES ALSO APPLY TO BUILT-UP SECTIONS, HOLLOW STRUCTURAL SECTIONS, CHANNEL AND ANGLE SHAPES.
4. ERECTION TOLERANCES ARE TO BE MEASURED IN CALM WEATHER. RECORD AMBIENT TEMPERATURE AT TIME TOLERANCES ARE VERIFIED.

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PROJECT

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NEW COMFORT STATION
HURON PARK
RECREATION CENTRE

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

DRAWING

TYPICAL DETAILS

PROJECT NO.	20240909
PROJECT DATE	Issue Date
DRAWN BY	RP
CHECKED BY	CG/JG
SCALE	1 : 1
DRAWING NO.	S3-04

NON-LOAD BEARING BLOCK WALL LINTELS — M01A

STRUCTURAL STEEL LINTELS

WALL OPENING CLEAR SPAN	MASONRY BLOCK THICKNESS				
	90 (4")	140 (6")	190 (8")	240 (10")	290 (12")
300mm TO 500mm (12" TO 22")	75mm X 8mm PL (3"x5/16" PL)	125mm X 8mm PL (5"x5/16" PL)	175mm X 8mm PL (7"x5/16" PL)	225mm X 8mm PL (9"x5/16" PL)	275mm X 8mm PL (11"x5/16" PL)
550mm TO 1200mm (22" TO 4'-0")	1-L89x89x6.4 OR 2-L44x44x4.8	1-L127x89x6.4 (LLH) OR 2-L64x44x6.4	2-L89x89x6.4	L102x89x6.4 (LLH) + L127x89x6.4 (LLH)	3-L89x89x6.4
1200mm TO 1830mm (4'-0" TO 6'-0")	1-L127x89x7.9 (LLV) OR 2-L51x38x6.4(LLV)	1-L127x127x7.9 OR 2-L89x64x6.4 (LLV)	2-L89x89x6.4	L102x89x6.4 (LLH) + L127x89x6.4 (LLH)	3-L89x89x6.4
1830mm TO 2440mm (6'-0" TO 8'-0")	1-L127x89x7.9 (LLV)	1-L127x127x7.9 OR 2-L89x64x7.9 (LLV)	2-L127x89x6.4 (LLV)	L102x102x7.9 + L127x102x7.9 (LLH)	3-L127x89x6.4 (LLV)
2440mm TO 3080mm (8'-0" TO 10'-0")	1-L127x89x9.5 (LLV)	1-L127x127x7.9	2-L127x89x7.9 (LLV)	L152x102x7.9 (LLV)+ L127x127x7.9	3-L127x89x7.9 (LLV)
3080mm TO 3660mm (10'-0" TO 12'-0")	N/A	N/A	W200x27 + 175x6.4 PL, BOTTOM	W200x27 + 225x6.4 PL, BOTTOM	N/A

STRUCTURAL STEEL LINTEL NOTES:
1. WHEN PROVIDING MULTIPLE ANGLES SEE DIAGRAMS FOR ORIENTATION. BOLT DOUBLE ANGLES BACK TO BACK USING 16mmØ BOLTS OR PROVIDE 6mmX50mm (1/4"x2") LONG WELDS @450mm (18") O/C STARTING AT 100mm (4") MAX FROM THE EACH END OF THE LINTEL.
2. SAWCUT WEBS OF BLOCK IN COURSE OF BLOCK OVER OPENING AS NECESSARY TO INSTALL ANGLES.
3. ALTERNATIVES PROVIDED FOR CASES WHERE EXPOSED FACE OF SINGLE ANGLE IS NOT ACCEPTABLE.

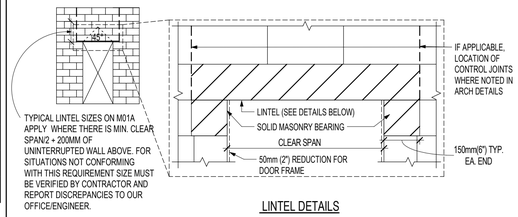
MASONRY BEAM LINTELS

WALL OPENING CLEAR SPAN	MASONRY BLOCK THICKNESS				
		140 (6")	190 (8")	240 (10")	290 (12")
0mm TO 1200mm (0" TO 4'-0")		390 (16") DEEP 1-10M B	390 (16") DEEP 1-10M B	190 (8") DEEP 1-10M B	190 (8") DEEP 1-10M B
1200mm TO 1830mm (4'-0" TO 6'-0")		390 (16") DEEP 1-10M B	390 (16") DEEP 1-10M B	390 (16") DEEP 1-10M B	390 (16") DEEP 1-15M B
1830mm TO 2440mm (6'-0" TO 8'-0")		390 (16") DEEP 1-10M B	390 (16") DEEP 1-15M B	390 (16") DEEP 1-15M B	390 (16") DEEP 1-15M B
2440mm TO 3080mm (8'-0" TO 10'-0")		390 (16") DEEP 1-10M B	390 (16") DEEP 1-15M B	390 (16") DEEP 1-15M B	390 (16") DEEP 3-10M B

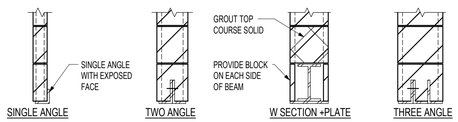
MASONRY BEAM LINTEL NOTES:
1. BEAM MUST BE FILLED WITH MASONRY GROUT (MORTAR IS NOT ACCEPTABLE). REFER TO M03 FOR DETAILS.
2. TEMPORARILY SHORE LINTEL UNTIL GROUT HAS REACHED FULL DESIGN STRENGTH.

GENERAL LINTEL NOTES:
1. REFER TO PLANS AND LINTEL SCHEDULE FOR LOCATION.
2. MINIMUM BEARING AT EACH END OF LINTEL TO BE 200mm (8").
3. REFER TO DETAIL M01B.

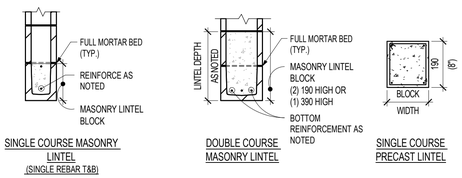
NON-LOAD BEARING BLOCK WALL LINTEL DETAILS — M01B



LINTEL DETAILS

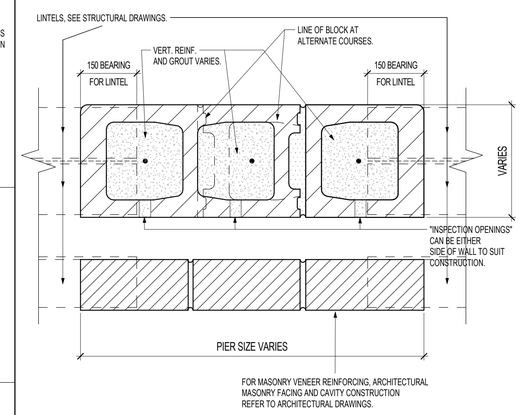


STRUCTURAL STEEL LINTEL DETAILS



MASONRY AND PRECAST BEAM LINTEL DETAILS

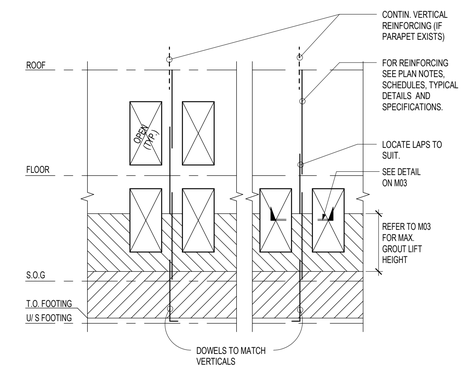
TYPICAL REINFORCED MASONRY WALLS AND PIERS PLAN DETAIL — M03



NOTE:

1. GROUT TO CONFORM TO REQUIREMENTS OF CSA STANDARD A179 CLAUSE 7.2 "FINE GROUT". SLUMP SHALL BE ±225mm AND COMPRESSIVE STRENGTH SHALL BE A MINIMUM OF 15 MPa @ 28 DAYS U.N.O.
2. COMPRESSIVE TESTING OF GROUT SHALL BE CARRIED OUT BY THE APPROVED INSPECTION AND TESTING COMPANY IN ACCORDANCE WITH CSA STANDARD A179. PREPARE A MINIMUM 3 TESTS FOR EACH STOREY OF CONSTRUCTION. 1 TEST SHALL COMPRISE OF 3 CYLINDERS FOR TESTING, 1 AT 7 DAYS AND 2 AT 28 DAYS.
   NOTE: - MORTAR IS NOT ACCEPTABLE FOR USE AS GROUT, AND IF USED PIERS SHALL BE REJECTED AND RE-CONSTRUCTED.
3. ALL CELLS CONTAINING VERTICAL REINFORCING SHALL BE COMPLETELY FILLED WITH GROUT IN LIFTS NOT EXCEEDING 1500mm.GROUT SHALL BE CONSOLIDATED BY PUDDLING OR VIBRATING DURING POURING.
4. AT EACH LIFT "INSPECTION" OPENINGS SHALL BE PROVIDED AT THE BOTTOMS OF CELLS TO BE FILLED. THE CLEANOUTS SHALL BE INSPECTED BY THE ENGINEER BEFORE BEING SEALED.
5. SEE TYPICAL DETAIL ELEVATION M04.

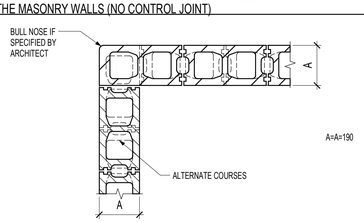
TYPICAL ELEVATION REINFORCED MASONRY WALLS AND PIERS — M04



NOTE:
- PROVIDE MINIMUM CLASS "B" TENSION LAP SPLICES FOR VERTICAL REINFORCING:
  - 10M - 500mm (20")
  - 15M - 700mm (2'-4")
  - 20M - 850mm (2'-9")

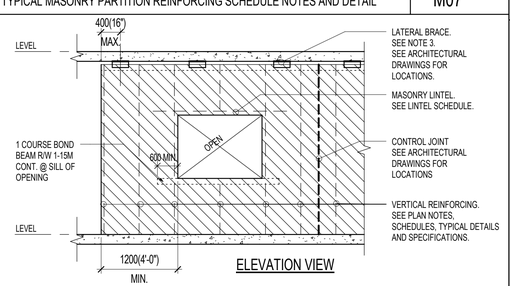
  NOTE: WHERE MORE THAN 1 BAR PER CELL INCREASE LAP LENGTH BY 33%
- LAP ALL HORIZONTAL LADDER TYPE REINFORCING 500mm.
  - ANY CROSSWIRES WITHIN LAP LENGTH SHALL BE REMOVED.
  - LAPS SHALL BE STAGGERED A MINIMUM OF 750mm FROM COURSE TO COURSE.

TYPICAL DETAIL OF CONSTRUCTED CORNERS IN SINGLE WYTHE MASONRY WALLS (NO CONTROL JOINT) — M06

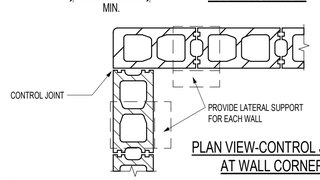


NOTE:
1. PROVIDE PREFABRICATED CORNERS FOR HORIZONTAL JOINT REINFORCING (TYPICAL).
2. REFER TO TYPICAL LOAD BEARING MASONRY NOTES AND TO THE SPECIFICATION FOR MASONRY MATERIALS AND FOR HORIZONTAL JOINT REINFORCING

TYPICAL MASONRY PARTITION REINFORCING SCHEDULE NOTES AND DETAIL — M07



ELEVATION VIEW



PLAN VIEW-CONTROL JOINTS AT WALL CORNERS

NOTES:

1. ADD 390 DEEP HORIZONTAL BOND BEAM R/W 1-15 T&B AT ROOF LEVEL.
2. PROVIDE VERTICAL REINFORCEMENT AS NOTED ABOVE. VERTICAL REINFORCEMENT SHALL BE FULL HEIGHT OF WALL AND ALL CELLS WITH VERTICAL REINFORCEMENT TO BE FILLED SOLID WITH GROUT.
3. LATERAL SUPPORT CLIPS SHALL BE SPACED AT 10t U.N.O.
4. REFER TO M14 FOR TYPICAL LATERAL SUPPORT DETAIL AT PARTITIONS.
5. PROVIDE DOWELS. SIZE AND SPACING TO MATCH VERTICAL WALL REINFORCEMENT. REFER TO M04 FOR REQUIRED LAP LENGTHS.
6. COMPLETELY FILL REINFORCED CELLS WITH GROUT.

NON LOAD-BEARING MASONRY PARTITION REINFORCING SCHEDULE (FOR SC1 & SC2 SEISMIC SITE DESIGNATION) — M07A

INTERIOR PARTITIONS IN BASEMENT (DIFFERENTIAL PRESSURE **0.25kPa**)

BLOCK	MAXIMUM HEIGHT	VERTICAL REINFORCING	HORIZONTAL REINFORCEMENT
140	3000 [10'-0"]	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. "LADDER" TYPE
190	4000 [14'-8"]		
240	5800 [19'-4"]		

INTERIOR PARTITIONS ABOVE GRADE (DIFFERENTIAL PRESSURE **0.5kPa**)

BLOCK	MAXIMUM HEIGHT	VERTICAL REINFORCING	HORIZONTAL REINFORCEMENT
140	N/A	UNREINFORCED	9 GA @ 400mm (1'-4") o/c MAX. "LADDER" TYPE
190	3000 [10'-0"]		
240	3800 [12'-8"]		

INTERIOR PARTITIONS IN BASEMENT (DIFFERENTIAL PRESSURE **0.25kPa**)

BLOCK	MAXIMUM HEIGHT	VERTICAL REINFORCING	HORIZONTAL REINFORCEMENT
140	4200 [13'-9"]	15 @ 1200 [4'-0"] o/c	9 GA @ 400mm (1'-4") o/c MAX. "LADDER" TYPE
190	5600 [18'-8"]		
240	6800 [22'-8"]	20 @ 1200 [4'-0"] o/c	

INTERIOR PARTITIONS ABOVE GRADE (DIFFERENTIAL PRESSURE **0.5kPa**)

BLOCK	MAXIMUM HEIGHT	VERTICAL REINFORCING	HORIZONTAL REINFORCEMENT
140	3400 [11'-4"]	15 @ 1200 [4'-0"] o/c	9 GA @ 400mm (1'-4") o/c MAX. "LADDER" TYPE
190	5200 [17'-4"]		
240	6400 [21'-4"]	20 @ 1200 [4'-0"] o/c	

NOTES:
-MINIMUM 600MM WIDE PIER BETWEEN ADJACENT OPENINGS, PIER MUST BE CONTINUOUS FROM BASE OF PARTITION TO LATERAL SUPPORT POINT AT TOP OF PARTITION.
- AVERAGE OPENING SIZE ON EITHER SIDE OF PIER LIMITED TO 1400mm FOR REINFORCED PARTITIONS
-FOR UNREINFORCED PARTITIONS, MAX. OPENING WIDTH MUST NOT EXCEED PIER LENGTH.
-REINFORCING SCHEDULE APPLIES FOR PARTITIONS WALLS UP TO 100m ABOVE GRADE
-PARTITION WALL REINFORCING DOES NOT APPLY FOR SHAFTS WHERE PRESSURES EXCEED NOTED DIFFERENTIAL PRESSURES NOTED ABOVE.
-IF ANY OF THESE CONDITIONS ARE NOT MET, CONTRACTOR TO PROVIDE ENGINEER STAMPED SHOP DRAWINGS OF REINFORCING FOR CONSULTANT REVIEW
-REFER TO TD M14 FOR LATERAL SUPPORT DETAILS LATERAL SUPPORTS TO BE SPACED AT 10t UNLESS NOTED OTHERWISE ALLOWABLE PARTITION HEIGHTS ARE BASED ON 15MPa NORMAL DENSITY BLOCK w/ TYPE 'S' MORTAR.

THE CONTRACTOR SHALL CHECK ALL DIMENSIONS WITH THE LATEST ISSUE OF ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS. REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH WORK.

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Salas O'Brien
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Suite No. 1100
Toronto, ON M2J 5B5
Stephenson Engineering, a company of Salas O'Brien

LICENSED PROFESSIONAL ENGINEER 25-10-08 J. C. GASDIA 100169574 PROVINCE OF ONTARIO

PROJECT

MISSISSAUGA

NEW COMFORT STATION
HURON PARK
RECREATION CENTRE

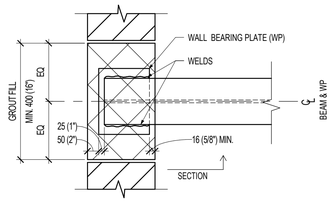
830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

DRAWING

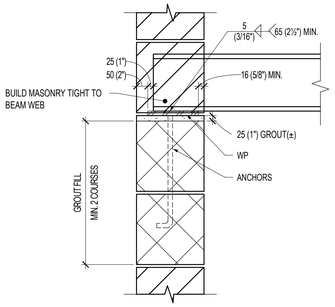
TYPICAL DETAILS

PROJECT NO.	20240909
PROJECT DATE	Issue Date
DRAWN BY	RP
CHECKED BY	CG/JG
SCALE	1 : 1
DRAWING NO.	S3-05

TYPICAL STEEL BEAM BEARING ON MASONRY WALL (PERPENDICULAR) — M08



PLAN VIEW



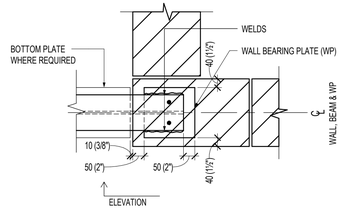
TYPICAL SECTION

NOTE:

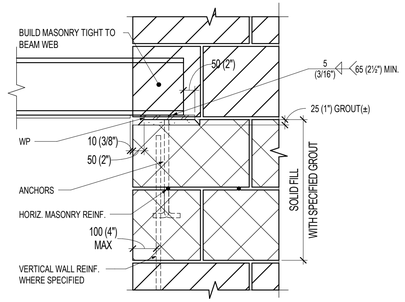
REFER TO TYPICAL DETAILS, TYPICAL NOTES, SPECIFICATION PLANS AND SCHEDULES FOR:

- WP SIZE AND SIZE/NUMBER OF ANCHORS
- VERTICAL WALL REINFORCING
- GROUT MIX AND EXTENT OF GROUT

TYPICAL STEEL BEAM BEARING ON END OR CORNER OF MASONRY WALL (MINIMUM REQUIREMENTS) — M09



PLAN VIEW



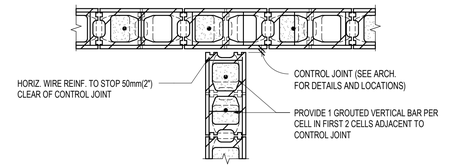
ELEVATION

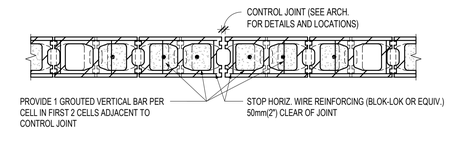
NOTE:

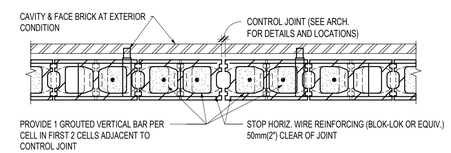
REFER TO TYPICAL DETAILS, TYPICAL NOTES, SPECIFICATION PLANS AND SCHEDULES FOR:

- WP SIZE AND SIZE/NUMBER OF ANCHORS
- VERTICAL WALL REINFORCING
- GROUT MIX AND EXTENT OF GROUT

TYPICAL DETAIL AT CONTROL JOINT IN REINFORCED MASONRY WALL — M10

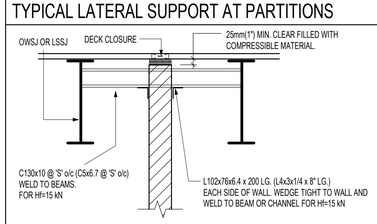


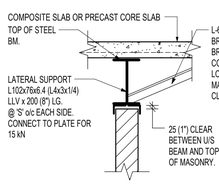




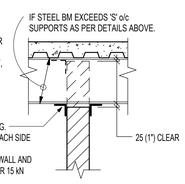
NOTE:
1. AT MASONRY LINTEL BOND BEAM STOP HORIZ. BARS 50mm (2") CLEAR OF CONTROL JOINT. UNLESS OTHERWISE NOTED.
2. SEE PLANS AND TYPICAL NOTES FOR VERTICAL REINFORCING AND GROUT

TYPICAL LATERAL SUPPORT AT PARTITIONS — M14A





WALL PARALLEL TO BEAM



WALL PERPENDICULAR TO BEAM

NOTES:
1. PROVIDE 25mm MIN COMPRESSIBLE MATERIAL TOP OF PARTITION AND UNDERSIDE OF STRUCTURAL. TYPICAL UNLESS NOTED OTHERWISE
2. UNREINFORCED NON-LOAD BEARING MASONRY WALL.
   - 2.1 PROVIDE LATERAL SUPPORTS FOR ALL MASONRY WALLS WHEN SPACING BETWEEN RETURN WALLS EXCEEDS 20t FOR INTERIOR WALLS IN ACCORDANCE WITH THE SPACING NOTED ON M07.
   - 2.2 MINIMUM LENGTH OF RETURN WALL IS 10t. IF RETURN WALL IS SHORTER THAN 10t., PROVIDE LATERAL SUPPORT PER DETAILS SHOWN ABOVE.
   - 2.3 MAXIMUM DISTANCE FROM END OF ANY WALL TO THE CENTERLINE OF THE FIRST LATERAL SUPPORT IS 600mm(2'-0")
3. REINFORCED NON-LOAD BEARING MASONRY WALL.
   - 3.1 PROVIDE LATERAL SUPPORT FOR ALL MASONRY WALLS.
   - 3.2 SPACING OF LATERAL SUPPORTS AS NOTED ON DETAIL M07.

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PROVINCE OF ONTARIO

PROJECT

MISSISSAUGA

NEW COMFORT STATION
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RECREATION CENTRE

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

DRAWING

TYPICAL DETAILS

PROJECT NO.	20240909
PROJECT DATE	Issue Date
DRAWN BY	RP
CHECKED BY	CG/JG
SCALE	1 : 1
DRAWING NO.	S3-06

T SMITH ENGINEERING DRAWING SPECIFICATIONS

1. General Requirements

1.1. Contract Requirements
1.1.1. Perform all mechanical work detailed on these contract documents.
1.1.2. Provide a complete and fully functional mechanical and fire protection systems to the satisfaction of the mechanical consultant.
1.1.3. Work described in these contract documents do not delegate works to any specific subcontractor or identify contractual limits between mechanical or sub- contractors.
1.1.4. Premium time costs shall be included for outside of normal working hours.
1.1.5. Any shutdown of mechanical systems affecting the current occupancy shall be conducted afterhours and on weekends, unless provided with written approval. Mechanical contractor shall allow for all overtime and premium time labour required to perform shut-downs in their cost.
1.1.6. The most rigorous of this specification and base building standards shall for the basis for this contract. Comply with CITY's requirements for system shutdown and connection. Valves identified on drawings are those that are available for Contractor use. Allow for pipe freezing and similar processes to minimize system shutdown and disruptions.
1.1.7. Perform all work in accordance with all applicable municipal, provincial, and national codes and bylaws having jurisdiction, and best industry practices.
1.1.8. Permits and fees required by the Authorities Having Jurisdiction shall be obtained and paid for by the Mechanical Contractor, including all applicable taxes. Submit all documents to the Authority in the format required including paper copies and/or electronic documents.
1.1.9. Existing site conditions affecting the work outlined on these contract documents shall be reviewed on site prior to tender submission. Failing to review does not relieve the contractor of full contract responsibility. No change will be issued or extra cost will be entertained for site conditions that were reasonably visible during the tender walkthrough.
1.1.10. Cutting, patching, and core drilling shall be paid for under this contract by this contractor. X-ray concrete structure in accordance with Owner/CITY Structural Engineer's requirements. Provide details of new openings through structural components for Engineer's approval. Incur all related costs for structural approval.
1.1.11. Fire stop all pipe penetrations through rated assemblies. Repair/provide all fire stopping required to maintain original ratings. Fire stopping shall be ULC listed and installed per the manufacturer's requirements.
1.1.12. Flashing and counter-flashing for exterior penetrations or waterproofed floors shall be provided under this contract. Flash all mechanical parts passing through, or built into a roof, outside wall, or waterproofed floor. Use prefabricated aluminum or PVC flashing for roof and membrane or copper for walls and floors. Ensure all openings are weather, water, and fireproof using approved flexible sealants.
1.1.13. Submit shop drawings electronically to all consultants and allow one (1) week engineer's review.
1.1.14. Provide shop drawings for all scheduled and specified equipment, including:
1.1.14.1. PLUMBING FIXTURES
1.1.14.2. GRILLES, REGISTERS, DIFFUSERS
1.1.14.3. LOUVERS
1.1.14.4. FANS
1.1.14.5. HOT WATER TANK
1.1.14.6. EXPANSION TANK
1.1.15. Shop drawings shall be reviewed by the Contractor for accuracy and complete with Contractor's review stamp prior to submission. Any submitted shop drawing that does not bear the Contractor's review stamp will not be reviewed and will be returned back to the Contractor.
1.1.16. Equipment substitutions after award of contract will not be considered without written explanation and consultant's written authorization. The quality and performance characteristics of a substituted product shall be equivalent to the specified product. All substitute products shall be approved by consultants. Any additional costs incurred by all trades for the substituted equipment installation must be paid for by the Mechanical Contractor under this contract, and at no additional cost to the consultants or the client.
1.2.3.3. This contractor shall provide detailed scaled drawings (1:50 or 1/4"=1'-0") for the alternative equipment/product and associated revisions needed to accommodate said equipment. Submit the same to for engineer's review.
1.2.4. Control wiring and devices shall be provided under this contract. Control work shall be completed by the Owner's/CITY approved contractor and paid for under this contract when connecting to base building controls systems.
1.2.5. Provide a complete and fully functioning system operating in accordance with the sequence of operations. Install all systems to allow for all future maintenance. Align all access doors, unit access locations, and piping/duct connections to ensure future serviceability of all systems.
1.2.6. Load-side wiring and electrical devices shall be provided including wiring, starters, disconnects, VFD's etc. Verify and coordinate voltage and phase with electrical contractor and consultant prior to ordering equipment.
1.2.7. Access doors shall be provided for all inaccessible mechanical equipment and services requiring inspection or maintenance. Finish shall suit Architect/Designers requirements. Access doors shall be recessed as required to suit wall/ceiling finish. Provide fire rated access doors in fire rated partitions.
1.2.8. Architect/Designer approval of air terminal, thermostat, and access door locations must be obtained prior to installation.
1.2.9. Written warranty shall be provided for the complete mechanical installation for one (1) year from the date of substantial completion.
1.2.10. As-built drawings shall be completed utilizing AutoCAD. Record accurately, installed work indicating exact locations, inverts and elevations, and sizes, dimensioned from column/grid lines, on white prints and transfer to AutoCAD. Submit both copies upon completion. Keep one set on site for consultant review. As-built drawings are to solely note "Issued for As-Builts" complete with contractor's title block. All consultant information is to be removed from as-built drawings.
1.2.11. Operation and maintenance manuals containing reviewed shop drawings, balancing reports, startup reports, and manufacturer's operation and maintenance manuals shall be submitted for consultant review. Manuals shall be submitted electronically for consultant review. Make all corrections requested by consultant and resubmit for review. Allow for printing of physical copy upon Owner's/CITY's request.
1.2.12. Change notice quotations shall be submitted complete with cost breakdown of labour and materials. Mechanical changes notices shall be priced in accordance with Mechanical Contractor Association (MCA) labour units. For material cost, use Allpriser less 20%.
1.2.13. Temporary filters 25mm (1") shall be provided at all base building return air openings. Filters to be replaced weekly and removed upon construction completion.
1.2.14. During construction, each contractor shall keep their work tidy. The premises shall be free of garbage and surplus materials. Clean daily.
1.2.15. Contractors are responsible for all damage to property or adjacent property as a result of work under these contract documents.
1.2.16. Contractors are responsible for maintaining safe practices and conditions in accordance with Occupational Health and Safety, security regulations, and fire safety regulations.
1.2.17. Plug all duct open ends, pipe open ends, and drains to prevent the entrance of foreign materials. Additional cleaning/flushing will be completed at no additional cost to the Owner.
1.2.18. Mechanical contractor shall take on the responsibility of coordinating installation of all mechanical systems with other trades. Produce a fully coordinated set of drawings showing all architectural, structural, electrical, fire protection, and mechanical services as a shop drawing for Consultant's review. Do not proceed to fabricate and install mechanical systems until shop drawings have been reviewed.
1.2.18.1. The mechanical contractor shall hold weekly coordination meetings with all trades to ensure coordination drawings are being followed and updated as required.

1.3. Supplementary Definitions
1.3.1. Supply - Furnish to site in location required or directed, complete with all accessories and ancillary equipment.
1.3.2. Install - Secured in placed and all services connected up for operation as noted or directed.
1.3.3. Provide - To supply and install as described above.
1.3.4. Delete or Remove - Disconnect, make safe, and properly dispose off site all obsolete materials and ancillary devices noted on drawings and plans. Patch and repair all finished surfaces to match adjoining finishes in like kind and quality.
1.3.5. Exposed - Within the line of sight of any person standing or sitting in the occupied space.
1.3.6. Concealed - not exposed, hidden from normal sight in furred spaces, shafts, ceiling spaces, walls, floors, and partitions.
1.3.7. Listed - Materials or equipment that are tested in accordance with applicable standards and are approved and listed for their intended use by a testing company approved by the Authorities Having Jurisdiction.

1.4. Materials and Alternatives
1.4.1. Use only new materials, unless otherwise noted.
1.4.2. Materials and equipment shall meet or exceed base building standards and shall have Owner's/Tenant's approval prior to ordering.
1.4.3. Tender price to be per contract documents. Alternative equipment and associated cost savings to be indicated separately in tender submission.

1.5. Identification
1.5.1. Provide lamacoid name plates for all mechanical equipment. Text to be 10mm (3/8") high white lettering on black background. Identify equipment designation, voltage, phasing, unit #, and service.
1.5.2. Identify all valves with tags. Framed list of tagged valves to be provided to Owner/Tenant indicating valve location and use.
1.5.3. Provide labels for all mechanical systems associated with these contract documents. Identify fluid flow direction and system type. Labels to be visible behind each access door. Identify exposed mechanical services along line of site and as the service enters and exits a space. Allow for additional labeling at Consultant's request.
1.5.4. Identify capped future provisions.

1.6. Inspection
1.6.1. Arrange for required inspections with the Authorities Having Jurisdiction. All changes and alterations required as a result of these inspections are to be carried out promptly and without charge.
1.6.2. Mechanical consultant inspection(s) are required for the completion of this contract and the closing of permits obtained for this project.
1.6.3. Prior to complete installation of wall and ceiling finishes, or concealment of any buried services, contact T. Smith Engineering (inspections@tsmithengineering.com) to confirm and coordinate inspections. When ceilings or walls have been installed, it may be necessary for the contractor to remove portions to allow for inspection.

1.7. Structural Consultant Review
1.7.1. Mechanical equipment weights and opening requirements to be reviewed by a structural engineer.
1.7.2. Penetrations through structural slabs and members to be reviewed by Structural Engineer and base building consultant(s) prior to proceeding with work.
1.7.3. Structural Engineer review to be included as part of this contract.

1.8. Inserts and Sleeves
1.8.1. Provide sleeves for piping passing through walls, floors, and ceilings as detailed and as required per firestop listing requirements.
1.8.2. Sleeves are to be schedule 40 black steel and packed tight for water/air seal, sound transmission, fire proofing, and smoke proofing per applicable details and listings.
1.8.3. Provide Link-Seals in all pipe sleeves exposed to unexcavated areas to ensure a complete watertight seal.

1.9. Hangers and Supports
1.9.1. Provide hangers and supports per industry best practices and standards.
1.9.2. Support from building structure. Supporting from equipment, piping, and ductwork will not be accepted.
1.9.3. Provide oversized hangers to maintain vapour barriers as outlined in insulation specification. Coordinate with insulation contractor to ensure hangers and supports do not penetrate vapour barriers.

2. Plumbing and Drainage

2.1. General
2.1.1. Provide all domestic water systems and connections to plumbing fixtures and equipment requiring water connections.
2.1.2. Provide all drainage and vent systems inside the building and up to 1.5m (5ft) past the foundation walls. Venting to conform with applicable codes and the Authorities Having Jurisdiction.
2.1.3. Provide all trenching and backfilling required to achieve the indicated plumbing work.
2.1.4. Existing sanitary and storm drain locations and invert elevations shall be verified on site prior to commencement of work.
2.1.5. Flush and scope existing sanitary and storm drains and perform a full inspection of the existing sanitary system prior to commencement of work.
2.1.6. Provide electronic trap priming devices and prime all traps per code requirements.
2.1.6.1. Electronic trap priming devices shall be an engineered, pre-fabricated, and factory tested assembly, equal to PPP Inc.
2.1.7. Provide all plumbing fixtures including all required trim and supports.
2.1.8. Provide shutoff valves, in accessible locations, on domestic water supplies to plumbing fixtures and equipment.
2.1.9. Verify all existing drainage locations and inverts on site prior to commencing work. Ensure drainage runs can meet site service inverts. Notify consultants when apparent difficulties and discrepancies are encountered. No additional costs will be paid after for rerouting drains because site inverts cannot be met.
2.1.10. Perform all tests required by the Authorities Having Jurisdiction and obtain certification upon completion. Repeat tests as required to obtain certification.
2.1.11. Ball test all drains.
2.1.12. Water test all drainage and vent systems to ensure there is no leakage.
2.1.13. Pressure test all piping systems per applicable code and the requirements of the Authority Having Jurisdiction. Submit report(s) to Owner/CITY and consultants. Include reports in final closeout package.
2.1.14. Test plumbing systems before covering.
2.1.15. Separate dissimilar metals per best industry practices.
2.1.16. Slope all domestic water piping to low points to ensure ease of drainage for maintenance. Provide drain valves at low points.
2.1.17. Provide water hammer arrestors on all piping serving fixtures or equipment with quick closing valves. Arrestors to be manufactured by Zurn or Watts with NSF compliant construction. Size and install arrestors per manufacturer's guidelines. Coordinate locations and access with general trade and architectural consultant.
2.1.18. Exposed piping and fittings in washrooms to be chrome plated. Provide chrome plated escutcheons on all piping passing through finished surfaces or millwork.

2.2. Cleaning, Flushing, and Disinfecting Plumbing Piping
2.2.1. Flush all drains until deposits of earth and foreign materials have been removed.
2.2.2. Flush all systems with clean potable water to remove scale and sediment upon filling.
2.2.3. Ensure operation of isolation and check valves such that disinfecting solution does not flow into adjacent systems.
2.2.4. Sterilize all domestic water piping per local municipal requirements.
2.2.5. Disinfect mains in accordance with AWWA Standard C651-86 upon completion of test and flushing. Repeat process until test results are satisfactory. Include final test report in closeout package.
2.2.6. Water quality tests by a recognized independent testing agency to be arranges and payed for under this project. Obtain certificates confirming safety of potable water supply and include reports in closeout package.

2.3. Materials
2.3.1. Below ground sanitary
2.3.1.1. Less that 75mm (3") to be CAN/CSA approved ABS or PVC sewer pipe with solvent welded joints.
2.3.1.2. 75mm (3") and larger to be CSA Class 4000 cast iron piping and fittings, CSA approved SDR35 PVC with gasketed joints.
2.3.2. Above ground sanitary
2.3.2.1. Less that 75mm (3") to be DWV copper with drainage fittings and 95/5 solder joints, or IPEX System XFR.
2.3.2.2. 75mm (3") and larger to be CSA Class 4000 cast iron piping and fittings.
2.3.3. Below ground storm
2.3.3.1. 75mm (3") and larger to be CSA Class 4000 cast iron piping and fittings or CSA approved SDR35 PVC with gasketed joints.
2.3.4. Above ground storm
2.3.4.1. Less that 75mm (3") to be DWV copper with drainage fittings and 95/5 solder joints, or IPEX System XFR.
2.3.4.2. 75mm (3") and larger to be CSA Class 4000 cast iron piping and fittings.
2.3.3. Below ground vent
2.3.3.1. Less that 75mm (3") to be Type 'L' copper with wrought copper fittings and 95/5 solder joints.
2.3.3.2. 75mm (3") and larger to be CSA Class 4000 cast iron piping and fittings.
2.3.4. Above ground vent
2.3.4.1. Less that 75mm (3") to be DWV copper with drainage fittings and 95/5 solder joints, or IPEX System XFR.
2.3.4.2. 75mm (3") and larger to be CSA Class 4000 cast iron piping and fittings, or IPEX System XFR.
2.3.5. Below ground domestic water
2.3.5.1. Type 'K' or 'L' soft copper tube.
2.3.5.2. No joints to be below ground.
2.3.6. Above ground domestic water
2.3.6.1. Type 'K' or 'L' copper pipe with wrought copper fittings and 95/5 solder joints.
2.3.6.2. Grooved copper piping systems with working pressures up to 2100kPa (300psig) may be used in accessible areas. Use Victaulic couplings with Grade E gaskets.

2.4. Valves
2.4.1. Valves are to be manufactured by Kitz, Jenkins, Apolo
2.4.2. Valves 50mm (2") and smaller to have soldered connections.
2.4.3. Valves 65mm (2-1/2") and large to have flanged connections.

3. HVAC Equipment
3.1. Provide HVAC equipment and accessories as per equipment schedule.
3.2. Submit shop drawing for review prior to purchasing. Shop drawing shall include manufacturer's printed product literature and data sheets, performance data, and all listed options.
3.3. Deliver, store, and handle in accordance with manufacturer's requirements. Protect all products from damages, and replace all damaged products with new.
3.4. Install all equipment in accordance with manufacturer's written recommendations, instructions, all applicable codes, and best industry practices.
3.5. Provide equipment startup and commissioning by a factory trained technician. Submit startup and commissioning report for review.

4. Ductwork
4.1. Ductwork to be fabricated from G-60 galvanized sheet metal.
4.2. Ductwork shall be smooth on the inside, free of obstructions, vibrations, and rattles.
4.3. Construct and seal ductwork per SMACNA standards. (Tables 1-1 and 1-3)
4.4. Ductwork shall be sealed per SMACNA standard and in accordance with the system pressure.
4.4.1. Seal Class A - (4" WC and above) All transverse joints and longitudinal seams and duct wall penetrations shall be sealed. Pressure sensitive tape shall not be used as primary sealant. Max. 2 to 5 percent total system leakage.
4.4.2. Seal Class B - (2" to 4" WC) All transverse joints and longitudinal seams shall be sealed. Pressure sensitive tape shall not be used as primary sealant. Max. 3 to 10 percent total system leakage.
4.4.3. Seal Class C - (up to 2" WC) All transverse joints shall be sealed. Max. 5 to 20 percent total system leakage.
4.5. Acceptable Sealant: oil resistant, polymer type flame resistant duct sealant. Acceptable material Duro Dyne S-2 or equivalent.
4.6. Hangers and reinforcement shall be fabricated and installed per SMACNA standards.
4.7. Round ductwork shall be spiral pipe formed by rolling sheet metal into a rigid steel tube with a 4-ply spiral lockseam.
4.8. Flexible ductwork shall be spiral wound aluminum. Secure to rigid duct with gear clamps. Flexible duct shall be installed as one continuous piece and not exceed 3000mm (10') in length. Bends shall not be less than 1 duct diameter center line radius.
4.9. Flexible duct connections shall be provided between air handling equipment and ductwork. Connections shall be Durodyne Metal Fab Neoprene (MFN) and installed with a continuous 50mm (2") gap between seams. Pinched or stretched connections will not be accepted.
4.10. Transfer air openings without ductwork are to be coordinated with general trades.
4.11. Balancing dampers shall be provided in new and existing ductwork to facilitate a complete and balanced system. Coordinate damper locations and requirements with Balancing Contractor.
4.12. Access doors shall be double wall with 1" thick insulation, 24 gauge, mounting frame with notched knock over tabs, 1/4" thick by 1/2" wide close cell neoprene gasketing between door and frame, and 1/8" thick by 1/2" wide close cell neoprene gasketing between frame and duct. Cam latch shall be self tightening and hand operated.

5. Hangers and Supports
5.1. Inserts
5.1.1. Inserts shall be malleable iron case or [galvanized] steel shell and expander plug for threaded connection with lateral adjustment, top slot for reinforcing rods, lugs for attaching to forms.
5.1.2. Size inserts to suit threaded hanger rods.

5.2. Pipe Hanger and Supports
5.2.1. Hangers: Pipe sizes 15 mm to 40 mm: Adjustable wrought steel ring.
5.2.2. Hangers: Pipe sizes 50 mm to 100 mm and Cold Pipe Sizes 150 mm Over: Adjustable wrought steel clevis.
5.2.3. Hangers: Hot Pipe Sizes 150 mm and Over: Adjustable steel yoke and cast iron roll.
5.2.4. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods, cast iron roll and stand for hot pipe sizes 150 mm and over.
5.2.5. Wall Support: Pipe Sizes to 80 mm: Cast iron hook.
5.2.6. Wall Support: Pipe Sizes 100 mm and Over: Welded steel bracket and wrought steel clamp, adjustable steel yoke and cast iron roll for hot pipe sizes 150 mm and over.
5.2.7. Vertical Support: Steel riser clamp.
5.2.8. Floor Support: Pipe Sizes to 100 mm and All Cold Pipe Sizes: Cast iron adjustable pipe saddle, locknut nipple, floor flange and concrete pier to steel support.
5.2.9. Floor Support: Hot Pipe Sizes 150 mm and over: Adjustable cast iron roll and stand, steel screws and concrete pier or steel support.
5.2.10. Design hangers so they cannot become disengaged by movements of supported pipe.
5.2.11. Provide copper plated hangers and supports for copper piping or provide sheet lead packing between hanger or support and piping.
5.2.12. Insulate aluminum piping from dissimilar metal supports.
5.2.13. Oversize hangers to allow continuous pipe insulation accordingly, including insulation shield.
5.3. Hanger Rods
5.4. Provide steel hanger rods, threaded both ends, threaded one end, or continuous threaded.
5.5. Duct Hangers and Supports
5.5.1. Hangers: To SMACNA standards and configuration.
5.5.1.1. Galvanized steel band iron or rolled angle and 10 mm rods.
5.5.2. Wall Supports: Galvanized steel band iron or fabricated angle bracket.
5.5.3. Vertical Support at Floor: Rolled angle.

6. Insulation
6.1. Provide all thermal insulation as indicated in drawings and as specified in the following.
6.2. Protect insulation work from being defaced or damaged by other trades. Make good any damages and leave in condition ready for paint.
6.3. Insulation to be protected in storage and during installation such that water is not absorbed by the insulation. Insulation found to have absorbed water is to be replaced immediately at no additional cost to the Owner/CITY.
6.4. Surfaces to be dry,clean, and free of rust prior to insulation installation.
6.5. All insulation sections to be firmly butted together.
6.6. Maintain ambient temperatures within manufacturer's specifications to ensure adhesives work as intended.
6.7. Insulation to be manufactured in a registered ISO 9000 facility.
6.8. All insulation pertaining to the work identified in these contract documents is to be carried by a single firm. Similar products from multiple manufacturers are not to be mixed.
6.9. Insulation to be manufactured by Owens Corning, Johns Manville, Manson Insulation, and Knauf Insulation.
6.10. Provide non-combustible insulation materials meeting or exceeding a flame spread/smoke development rating of 25/50 meeting CAN/ULC S-102 requirements.
6.11. Provide a complete and continuous vapour barrier as specified below and on all exterior mechanical services.
6.12. Provide high density insulation insert and support shield for all piping larger than 32mm (1-1/4") specified with vapour barrier such that insulation is not crushed and vapour barrier is not penetrated.
6.13. Provide flexible unicellular tubular elastomer insulation with vapour retarder jacket to CGSB 51-GP-52Ma for refrigerant piping. Certified by the manufacturer to be free of potential stress corrosion cracking corrodents.
6.14. Provide high density insulation insert and sheet metal support shield for all exterior ductwork.
6.15. Provide PVC sanitary protective covering kit on p-traps and water supplies on all barrier free lavatories.
6.16. Insulation over 65mm (1-1/2") thickness in two layers with staggered joints.
6.17. Insulation to have a minimal thermal conductivity of 0.24BTU.in/(hr. sq.ft F) at 100F mean temperature.
6.18. Insulate fittings with fabricated mitered or pre-formed sections.
6.19. Insulate flanges and mechanical couplings with specified insulation thickness. Infill transition with insulation of similar material and performance. Transitions to be made such that the specified insulation thickness is maintained throughout.
6.20. Insulate valves and inline components with flexible insulation. Insulation density to be 3/4 lbs/cu.ft. Insulation must not be compressed more than 50% of the original thickness.
6.21. Terminal unit automatic control valves are not to be insulated when installed in hot piping systems. Terminal unit automatic control valves installed in cold piping systems are not to be insulated when located over condensate drip pans.
6.22. Piping Insulation
6.22.1. Owens Corning 850 Pipe Insulation, Johns Manville Micro-Lok AP-T Plus Pipe Insulation, Manson Pipe Insulation, and Knauf Pipe Insulation.
6.22.2. Domestic Cold Water
6.22.2.1. 15mm (1/2") thick
6.22.2.2. Vapour barrier
6.22.3. Domestic Hot Water
6.22.3.1. 50mm (2") and less
6.22.3.1.1. 25mm (1") thick
6.22.3.2. 65mm (2-1/2") and larger
6.22.3.2.1. 40mm (1-1/2") thick
6.22.4. Horizontal Storm and Sanitary Drainage
6.22.4.1. 25mm (1") thick
6.22.4.2. Vapour barrier
6.22.4.3. Insulate vertical sections of piping when horizontal section is within 600mm (2') of slab or roof.
6.22.5. Horizontal Condensate Drains
6.22.5.1. 5.22.5.2 15mm (1") thick
6.22.5.2. Vapour barrier
6.22.6. Piping Heat Traced for Freeze Protection
6.22.6.1. 75mm (3") and less
6.22.6.1.1. 25mm (1") thick
6.22.6.2. 100mm (4") and larger
6.22.6.2.1. 65mm (1-1/2") thick
6.22.7. Refrigerant Piping
6.22.7.1. 50mm (2") and less
6.22.7.1.1. 25mm (1") thick
6.22.7.1.2. Vapour Barrier
6.22.7.2. 65mm (2.5") and larger
6.22.7.2.1. 38mm (1.5") thick
6.22.7.2.2. Vapour Barrier
6.23. Sheet Metal Insulation
6.23.1. Rigid insulation to be Owens Corning Rigid Vapour Seal Duct Insulation, John Mansville 814 Spin-Glas with FSK Facing, Manson Spin-Glas Rigid Insulating Board with reinforced foil facing, or Knauf Rigid Insulation Board with FSK Facing.
6.23.2. Flexible insulation to be Owens Corning Flexible Duct Insulation, Johns Manville Microlites Type 75 Duct Wrap, Manson Microlite Insulation, or Knauf Duct Wrap with factory applied reinforced foil facing.
6.23.3. Silencers and acoustic plenums do not require external insulation.
6.23.4. Sheet metal with 25mm (1") acoustic insulation or more do not require external insulation.
6.23.5. Supply and Ventilation Ductwork
6.23.5.1. Flexible type 50mm (2") thick
6.23.5.2. Vapour barrier
6.23.6. 10' of ductwork entering and exiting building
6.23.6.1. Rigid type 25mm (1") thick
6.23.6.2. Vapour Barrier
6.23.7. Exposed ductwork
6.23.7.1. In conditioned space as indicated
6.23.7.2. Rigid type 25mm (1") thick
6.23.7.3. Vapour Barrier
6.23.8. Ductwork outside of building or exposed to outdoor conditions
6.23.8.1. Rigid type 25mm (1") thick
6.23.8.2. Vapour Barrier
6.23.8.3. Stainless steel jacket complete with stainless steel bands
6.23.9. Panels behind unused portions of louvres
6.23.9.1. Rigid type 50mm (2") thick
6.23.9.2. Vapour barrier

7. Acoustic Duct Lining
7.1. Provide 25mm (1") acoustic duct lining within 10 feet of air handling equipment and fans, and where indicated.
7.2. Duct lining to have a noise reduction coefficient of 70 or higher.
7.3. Duct lining shall be plenum rated (FSR 24, SDR 50)
7.4. ASTM C 1071, ASTM G 21, ASTM G 22, ASTM C 423, ASTM C 916, ULC-S102
7.5. Unless indicated otherwise, acoustically lined ductwork does not require insulation.
7.6. Provide fiber free duct liner where noted on plans.

8. Electrical and Control
8.1. The mechanical contractor shall provide all necessary hard wiring between controlling devices and associated equipment.
8.2. Low Voltage - Provide transformer and low voltage wiring from transformer to equipment and controlling devices.
8.3. Line Voltage - Where control devices are operating line voltage, the mechanical contractor shall provide all wiring between equipment and controlling devices. Mechanical contractor shall retain a licensed electrician to perform all installation to ESA and all applicable codes and standards.
8.4. Wiring:
8.4.1. All copper conductors with chemically cross-linked thermosetting polyethylene insulation rated RW90 and 600V.
8.4.2. Wire gauge shall match or exceed breaker size. Provide wire gauge in accordance with the Electrical Safety Code (ESC), the Ontario Electrical Safety Code (OESC), and the Canadian Electrical Code (CEC).
8.4.3. Field wiring to digital devices shall be #18 AWG or 20 AWG stranded twisted pair.
8.4.4. Analogue input and output wiring shall be #18 minimum solid copper or #20 minimum stranded twisted pair. Wiring must be continuous without joints.
8.5. Conduits:
8.5.1. In wall - All electrical and control wiring shall be installed in electrical metallic tubing to CAN/CSA C22.2 No. 83.
8.5.2. Exposed Outdoor - Flexible and Liquid Tight Conduit to CAN/CSA C22.2 No. 56.
8.6. Starters, Control Devices
8.6.1. Across-the-line magnetic starter shall be in CSA Type 1 enclosures unless otherwise specified. Size, type, and rating to suit motors.
8.6.2. Starter Diagrams: Provide copy of wiring and schematic diagrams - mount one copy in each starter with additional copies for operation and maintenance manual.
8.6.3. Auxiliary Control Devices:
8.6.3.1. Control transformers: 60 HZ, primary voltage to suit supply, secondary voltage to suit equipment and controls requirements. VA rating to suit load plust 20% margin.
8.6.3.2. Auxiliary Contacts: One "Normally Open" and one "Normally Closed" spare auxiliary contacts in addition to maintained auxiliary contacts as indicated.
8.6.3.3. Hand-Off-Automatic Switch: Heavy duty type, knob lever operator.
8.6.3.4. Double voltage relays: with barrier to separate relay contacts from operating magnet. Operating coil voltage and contact rating as indicated.

9. Testing and Air Balancing
9.1. Perform equipment startup and testing on all mechanical HVAC equipment. Submit startup report to the engineer for review and approval.
9.2. Mechanical contractor shall retain the services of a balancing contractor for air and water systems.
9.3. Air and water balancing shall be conducted and recorded in accordance with ANSI, AABC, and NEBB standards, latest edition.
9.4. Balancing Contractor shall be a member in good standing of AABC or NEBB.
9.5. Balancing Contractor shall be Owner's/CITY's approved contractor and paid for under this contract at the Owner's/CITY's request.
9.6. Submit balancing report to the consultants and owner free of contractor/construction deficiencies.
9.7. Balancing report to indicate terminal design and measured flow rates. Systems to be balanced to +/-5% of design values.
9.8. Provide two (2) additional days of balancing work for comfort balancing within one year of occupancy.
9.9. Provide new sheaves, belts, and all labour required to balance air handling equipment to specified values. For existing equipment, coordinate adjustments and replacements of sheaves, belts, and pulleys with Owner/CITY.
9.10. Coordinate balancing activities with construction schedule. Coordinate with general trades to provide access to balancing dampers prior to or after ceiling/wall closure.

10. Closeout of Project
10.1. Remove waste and surplus materials, rubbish, and construction facilities from the site.
10.2. Prepare operation and maintenance manual in soft and hard copy formats.
10.3. Two weeks prior to substantial performance of work, submit the operation and maintenance manual to the engineer for review.
10.4. Organize data as instructional manual.
10.5. Soft copy of the operation and maintenance manual shall be submitted on a USB key in PDF format.
10.6. Binders: vinyl, hard covered, 3 'D' ring, with spine and face pockets.
10.7. When multiple binders are used correlate data into related consistent groupings. Identify contents of each binder on spine.
10.8. Cover: identify each binder with type or printed project title; list title of project and identify subject matter of contents.
10.9. Arrange content by systems under Section numbers and sequence of Table of Contents.
10.10. Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
10.11. Text: manufacturer's printed data, or typewritten data.
10.12. Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
10.13. Provide as-built drawings in CAD and PDF formats, scale to match engineering drawings. Provide three full size hard copy prints in binder, and one soft copy on USB key.
10.14. Contents
10.14.1. Contractor Contact Information.
10.14.2. Manufacturer and supplier's contact information.
10.14.3. Warranty Detail and Information
10.14.4. Product Data - Approved Shop Drawings.
10.14.5. Operation and Maintenance Manuals of all equipment installed.
10.14.6. Valve chart and flow diagrams.
10.14.7. As-Built drawings

Drainage Specialties

FD - Floor Drain - Finished Area - Heavy Duty - Vandalproof
Watts FD-200-5-3-6, Epoxy coated cast iron, 127mm stainless steel strainer.

CO - Cleanout - Finished Area - Heavy Duty - Vandalproof
Watts CO-1200-R-6, Epoxy coated cast iron, 127mm gasketed stainless steel top

DRAWING LIST

SHEET #	DESCRIPTION	SCALE	ISSUED
M001	LEGEND, DRAWING LIST, AND SPECIFICATIONS	N.T.S.	Y
M002	PLUMBING PLAN AND DETAILS	N.T.S.	Y
M003	PLUMBING FIXTURES	N.T.S.	Y
M100	MECHANICAL NEW	AS SHOWN	Y

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
—SAN—	SANITARY DRAIN		SIDEWALL GRILLE/REGISTER
—SAN—	BURIED SANITARY DRAIN		SUPPLY AIR DIFFUSER
	DRAIN WITH CLEANOUT		RETURN AIR GRILLE
CO	DRAIN WITH CLEANOUT UP TO FLOOR	SIZE TYPE / AIRFLOW	SIZE/TYPE / AIRFLOW/DIRECTION
CO	DRAIN WITH CLEANOUT UP TO FLOOR		
	RUNNING TAP WITH CLEANOUT		
	DOMESTIC COLD WATER		STARTER
	DOMESTIC HOT WATER	BD	MANUAL BALANCING DAMPER
	HOSE BIBB	BDD	BACK DRAFT DAMPER
	NON-FREEZE WALL HYDRANT		SUPPLY OR OUTDOOR AIR DUCT
FD ##Ø	FLOOR DRAIN (## = DRAIN SIZE)		RETURN DUCT
	GATE VALVE		EXHAUST DUCT
	BALL VALVE		SUPPLY DUCT DOWN
	VALVE IN RISER		RETURN DUCT DOWN
	CAPPED PIPE		DOUBLE LINE DUCT
	CONTINOUS PIPE		DUCT WITH ACOUSTIC LINING
	PIPE DOWN		INSULATED DUCT (THERMAL OR FIRE RATED)
	PIPE UP	CTE	CONNECT TO EXISTING

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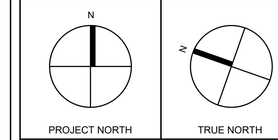
REVISIONS/SUBMISSIONS

No.	DATE	DESCRIPTION
1	2024-11-15	ISSUED FOR 60% DD
2	2024-12-20	ISSUED FOR PERMIT
3	2025-01-30	ISSUED FOR CLIENT'S REVIEW - PRE TENDER
5	2025-09-10	ISSUED FOR CLIENT REVIEW
6	2025-10-03	ISSUED FOR PERMIT
7	2025-10-08	ISSUED FOR TENDER



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2025-10-03

Project Title

MISSISSAUGA

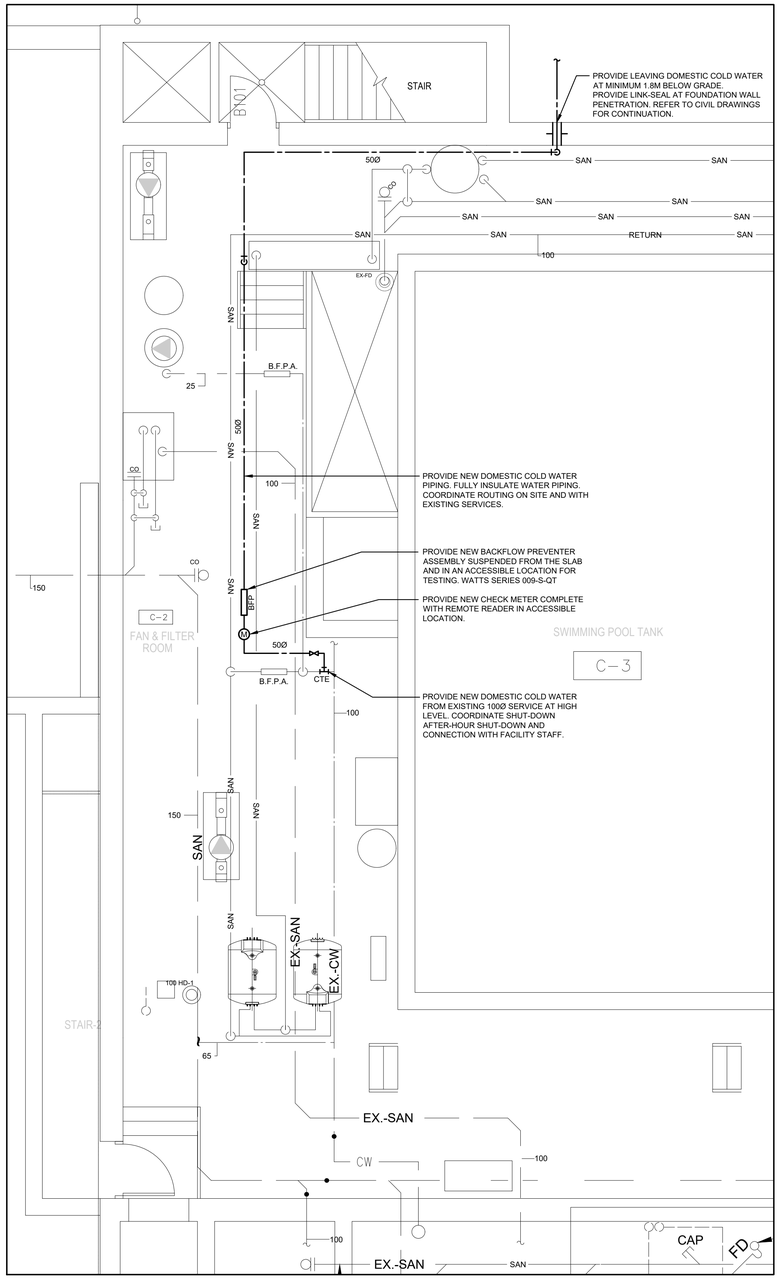
COMFORT STATION HURON PARK

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

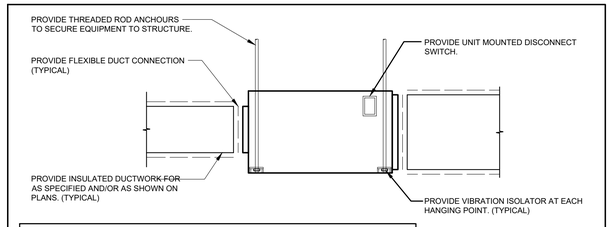
Sheet Title

MECHANICAL LEGEND, DRAWING LIST AND SPECIFICATIONS

Project Number	24-053
Date	Oct. 2024
Drawn	AS
Checked	AS
Scale	AS SHOWN
Drawing Number	M001



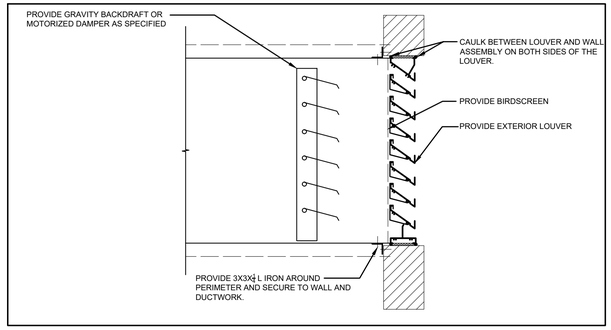
1 / M002 RECREATION CENTRE - POOL CRAWL SPACE - PARTIAL PLUMBING PLAN
SCALE: 1:50



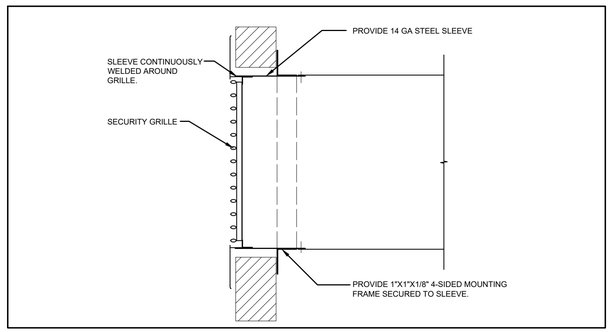
GENERAL NOTES:

1. INSTALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. SUBMIT SHOP DRAWING OF ANCHORING SYSTEM TO MECHANICAL AND STRUCTURAL CONSULTANTS FOR REVIEW.
3. REFER TO PLANS FOR PIPE SIZES.
4. INSTALL UNIT TO MAINTAIN MINIMUM SERVICE AND OPERATING CLEARANCES.

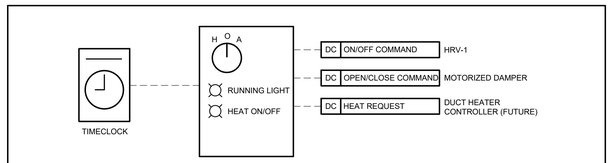
SUSPENDED AIR HANDLING EQUIPMENT DETAIL
SCALE: N.T.S.



LOUVER DETAIL
SCALE: N.T.S.



SECURITY GRILLE DETAIL
SCALE: N.T.S.



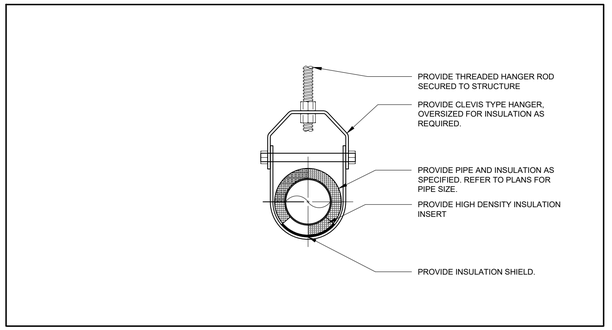
SEQUENCE OF OPERATION

HRV-1 HAND-OFF-AUTO STARTER INTERLOCKED WITH HRV-1, MOTORIZED DAMPER, AND TIMECLOCK. PROVIDE INTERLOCK FOR SIGNAL FROM FUTURE DUCT HEATER.

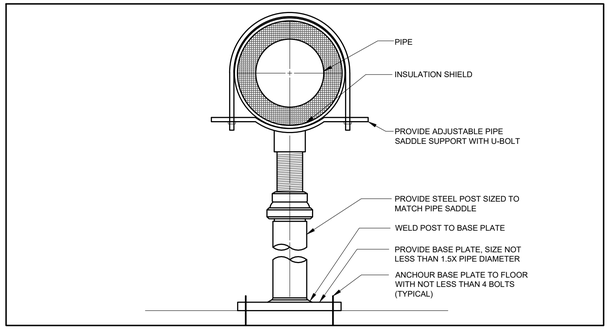
NORMAL OPERATION:
- HOA SELECTOR SWITCH TO 'AUTO'.
- TIMECLOCK SCHEDULE 'ON' (ADJUSTABLE) - MOTORIZED DAMPER OPENS, AND HRV-1 TURNS ON AND RUNS CONTINUOUSLY.
- TIMECLOCK SCHEDULE 'OFF' (ADJUSTABLE) - MOTORIZED DAMPER CLOSES, AND HRV-1 TURNS OFF.
- HEAT REQUEST:
  - IF HEAT REQUEST FROM FUTURE DUCT HEATER CONTROLLER IS ACTIVATED, AND TIMECLOCK SCHEDULE IS 'OFF', MOTORIZED DAMPER AND HRV-1 TIMECLOCK CONTROLS ARE OVERRIDDEN, AND COMMANDED TO OPEN AND RUN CONTINUOUSLY (IF TIMECLOCK SCHEDULE IS 'OFF').
  - WHEN HEAT REQUEST IS DEACTIVATED, MOTORIZED DAMPER AND HRV-1 COMMAND RETURNS BACK TO TIMECLOCK CONTROL.

- HOA SELECTOR SWITCH TO 'HAND' - MOTORIZED DAMPER OPEN AND HRV-1 TURNS ON AND RUNS CONTINUOUSLY.
- HOA SELECTOR SWITCH TO 'OFF' - MOTORIZED DAMPER CLOSE AND HRV-1 REMAINS OFF.

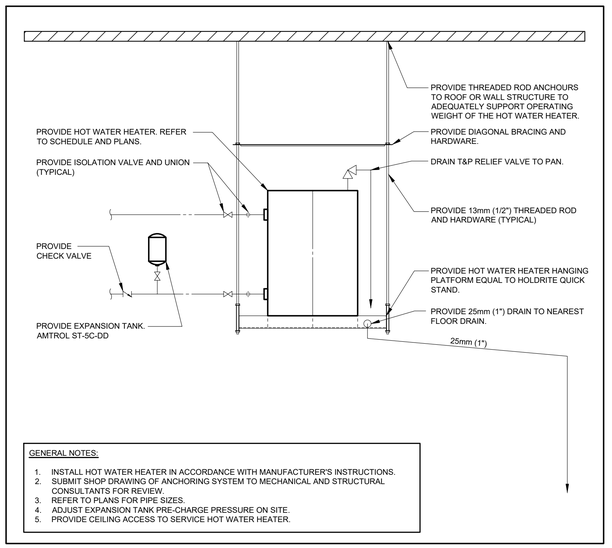
SEQUENCE OF OPERATIONS - HRV
SCALE: N.T.S.



PIPE HANGER DETAIL
SCALE: N.T.S.



BASE MOUNTED PIPE SUPPORT DETAIL
SCALE: N.T.S.



GENERAL NOTES:

1. INSTALL HOT WATER HEATER IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. SUBMIT SHOP DRAWING OF ANCHORING SYSTEM TO MECHANICAL AND STRUCTURAL CONSULTANTS FOR REVIEW.
3. REFER TO PLANS FOR PIPE SIZES.
4. ADJUST EXPANSION TANK PRE-CHARGE PRESSURE ON SITE.
5. PROVIDE CEILING ACCESS TO SERVICE HOT WATER HEATER.

SUSPENDED HOT WATER TANK DETAIL - ELECTRICAL
SCALE: N.T.S.

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REVISIONS/SUBMISSIONS

No.	DATE	DESCRIPTION
1	2024-11-15	ISSUED FOR 60% DD
2	2024-12-20	ISSUED FOR PERMIT
3	2025-01-30	ISSUED FOR CLIENT'S REVIEW - PRE TENDER
4	2025-03-29	ISSUED FOR PERMIT REVISION
5	2025-09-10	ISSUED FOR CLIENT REVIEW
6	2025-10-03	ISSUED FOR PERMIT
7	2025-10-08	ISSUED FOR TENDER

N
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www.cplusp.ca

T Smith Engineering Inc.
707 Kipling Ave, Toronto, ON, M8Z 5G4
Tel. (416) 798-8770
www.tSmithEngineering.com

2025-10-03

Project Title
MISSISSAUGA
COMFORT STATION
HURON PARK
830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

Sheet Title
PLUMBING PLAN AND DETAILS

Project Number	24-053
Date	Oct. 2024
Drawn	AS
Checked	AS
Scale	AS SHOWN

Drawing Number
M002

WC-1
(BARRIER FREE)

Penal-Ware® 1675 Series
Blowout Jet Toilet - Off-Floor

1675-W-1
Fixture May Show Some Available Options

Please visit **www.acorneng.com** for most current specifications.

Blowout Jet Toilet - Off-Floor

Fixture is arranged to be installed on finished wall and serviced from an accessible pipe chase. Optional Wall Sleeve or Metal Template is recommended for all installations for required wall openings. Toilet bowl is fabricated from 14 gauge, type 304 stainless steel and is seamless welded construction. Wall flange is structurally reinforced. Exterior is polished to a satin finish. The inside of the toilet bowl also has a satin finish. There are no accessible voids or crevices where contraband can be concealed.

Toilet is a blowout jet type with an elongated bowl manufactured to ASME A112.19.3 and CSA B45.4 requirements and will flush with a minimum of 25 PSI flow pressure when used in conjunction with a minimum of 1.28 GPF. Trap has a minimum 3-1/2" seal and will pass a 2-1/8" ball. Toilet waste outlet is 2-3/8" diameter plain end extending 3" beyond the back of the unit.

Regularly Furnished items include mounting hardware.

GUIDE SPECIFICATION

Provide and install Acorn Penal-Ware Blowout Jet Toilet (specify model number and options). Toilet bowl shall be fabricated from 14 gauge, type 304 stainless steel. Construction shall be seamless welded and exposed surfaces shall have a satin finish. Toilet shall be concealed blowout jet type with an elongated bowl, a self-draining flushing rim, and an integral contoured seat. Toilet shall meet ASME A112.19.3 and CSA B45.4 requirements and will flush with a minimum of 25 PSI flow pressure when used in conjunction with a minimum of 1.28 GPF. Toilet trap shall have a minimum 3-1/2" seal that shall pass a 2-1/8" diameter ball and be fully enclosed. Fixture shall withstand loadings of 3,000 pounds without permanent damage. Fixture shall be furnished with necessary fasteners for proper installation.

Page 1 P.1675 Revised: 05/16/24

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WC-1
(BARRIER FREE)

Penal-Ware® 1675: Blowout Jet Toilet - Off-Floor

WALL THICKNESS AND TYPE (Must Specify)
Thickness: 190mm Type: ❑ Concrete ☒ Block ❑ Steel

MODEL NUMBER AND OPTIONS SELECTION:

BASE MODEL NUMBER
☑ 1675 Blowout Jet Toilet

SUPPLY (Must Specify)
❑ -T Top (Exposed)
☒ -W Wall (Concealed)

FIXTURE MOUNTING AND WASTE
☑ -1 Off-Floor, Wall Outlet
❑ -ADA 18" Integral Seat Height

FLUSH VALVE GPFs (Must Specify)
☒ -1.28 GPF (HET)
❑ -1.6 GPF (Not Available in California)
❑ -3.5 GPF (Not Available in California)

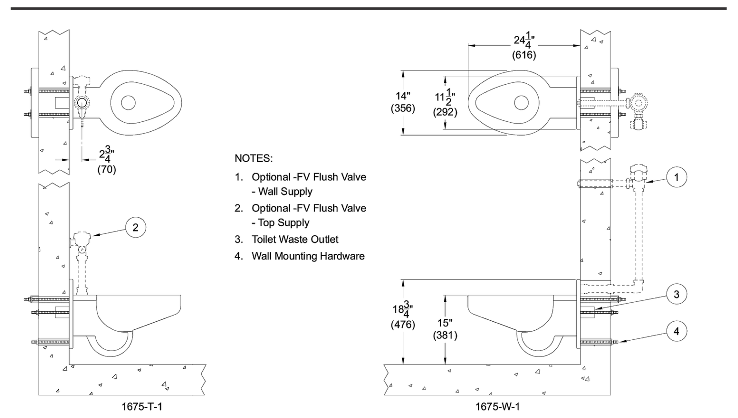
FLUSH VALVE OPTIONS (Must Specify)
***NOTE: FOR FLUSH VALVE ACCESS PANEL OR COVER REFER TO ACORN OPTIONS MODEL #2898 (-W SUPPLY) OR # 2802 (-T SUPPLY).**
❑ -EVSFV Master-Trol® Electronic Flush Valve (N/A for Top Supply)
❑ -EVSPFV Master-Trol® Electronic Flush Valve w/ Piezo Button (N/A for Top Supply)
❑ -FV Flush Valve, Mechanical (N/A for ADA)
☒ -FVBO Flush Valve by Others
❑ -FVH Flush Valve, Hydraulic (N/A for Top Supply)
❑ -FVL Flush Valve, Lever Handle (Wall Supply)
❑ -MTPFV Master-Trol® PLUS Electronic Flush Valve (N/A for Top Supply)
❑ -MTPPFV Master-Trol® PLUS Electronic Flush Valve w/ Piezo Button (N/A for Top Supply)
❑ -MVCFV Time-Trol® Electronic Flush Valve (N/A for Top Supply)

TOILET SEAT OPTIONS
❑ -HPS High Polish Integral Seat
❑ -HS Hinged Seat (N/A with #2802 Flush Valve Cover)
☒ -PFS Punched for Seat by Others

TOILET OPTIONS
❑ -CO1 Cleanout w/ O-Ring Connecting to No-Hub 4" (Plain End Only)
❑ -CO1-3 Cleanout w/ O-Ring Connecting to No-Hub 3" (Plain End Only, N/A with -WO3)
❑ -COH Cleanout Hook Assembly
❑ -FT Flood-Trol (N/A w/ Top Supply)
❑ -FTA Flood-Trol Auto-Reset (N/A w/ Top Supply)
❑ -FTE Flood-Trol Electronic
❑ -FVT Flush Thru Wall Connector
❑ -GW Gasketed Toilet Waste
❑ -PC Pinned Cleanout Plug (For -CO1 Options above)
❑ -TSC Toilet Shipping Cover
❑ -TWE Toilet Waste Extension (3" Standard) Specify Length Beyond Fixture: ________
❑ -WO3B 3" Bell Waste Outlet w/ Std. 2-3/8" Trap

PRODUCT OPTIONS
❑ -EGE Enviro-Glaze Color Specify:__________ Toilet Exterior Only
☒ -MT Metal Template (Only 1 Required Per Project)
❑ -SW Wall Sleeve
❑ -TF Transformer, 120VAC to 24VAC (-MVCFV option)
❑ -VAC AcornVac System

Please visit **www.acorneng.com** for most current specifications.



NOTES:
1. Optional -FV Flush Valve - Wall Supply
2. Optional -FV Flush Valve - Top Supply
3. Toilet Waste Outlet
4. Wall Mounting Hardware

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Important: Installation instructions and current rough-in are furnished with each fixture. Do not rough in without certified dimensions.
Dimensions are subject to manufacturer's tolerance of plus or minus 1/4" and change without notice. Acorn assumes no responsibility for use of void or superseded data. © Copyright 2009 Acorn Engineering Company

Selection Summary	Approved for Manufacturing
Model No. & Option______	Company______ Title______
Quantity______	Signature______ Date______

Page 2 P.1675 Revised: 05/16/24

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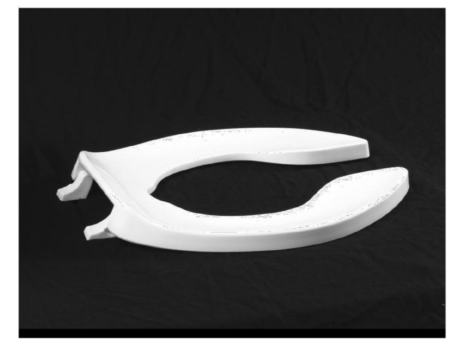
CENTOCO

WC-1
(BARRIER FREE)

1500STSCC-001

COMMERCIAL HEAVY DUTY

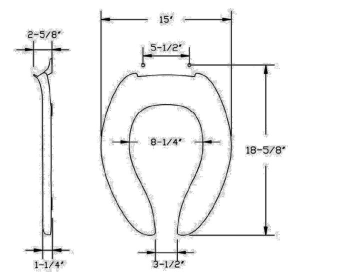


Product Specifications

Shape	Elongated
Seat Material	Polypropylene
Seat Form	Open front
Commercial Hinge	Yes
Bolt Material	Stainless steel
Hardware Material	Stainless Steel
Check Hinge	Yes
Cover	No
Custom Gasket	Yes
Color	White
Warranty	1 year limited warranty
Available Colors	White, black,

Features

Commercial Hinge
Includes commercial grade hinges. One piece solid metal hinge pin and bolt over molded with plastic.



Dimensions shown are nominal and may vary within a range of tolerance. Product specifications are subject to change without notice.

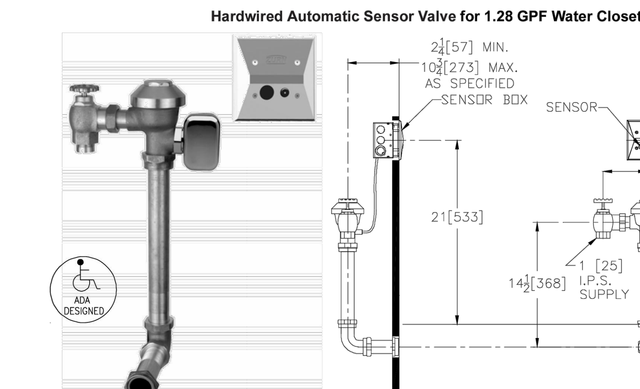
ZURN

WC-1
(BARRIER FREE)

AquaSense® AV
TAG ____________

ZEMS6152AV-HET

Hardwired Automatic Sensor Valve for 1.28 GPF Water Closets



Accessories
❑ -______ Other

Power Supply Choices (Sold Separately)
❑ **-ACA-BA** 6VDC Plug-in Power Converter (Up to 6 valves)
■ **-HW6** Hardwired Power Converter (Up to 8 Valves)
■ **-MJ** Mini Junction Box

NOTE: MUST USE EITHER ZURN P6000-HW6 HARDWIRE POWER CONVERTER OR ZURN P6900-ACA-BA PLUG-IN POWER CONVERTER TO ENSURE PROPER OPERATION. USING A POWER CONVERTER OTHER THAN ZURN MAY RESULT IN OPERATION MALFUNCTION OR UNIT FAILURE.

Architectural/Engineering Approval

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

ZURN INDUSTRIES, LLC. ♦ COMMERCIAL BRASS OPERATION
5900 ELWIN BUCHANAN DRIVE ♦ SANFORD NC 27330
Phone: 1-800-997-3876 ♦ Fax: 919-775-3541
www.zurn.com
In Canada: ZURN INDUSTRIES LIMITED
3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2
Phone: 905-405-8272 Fax: 905-405-1292

ENGINEERING SPECIFICATIONS

Concealed, quiet diaphragm-type, rough brass flushometer valve.
- Zurn's 1.28 GPF diaphragm
  - Clog Resistant by-pass
  - Chloramine resistant
  - Dual seal
- Proprietary DR resistant low lead brass alloy
- Actuator
  - ZEMS 6 VDC Motorized Actuator
- Automatic Sensor
  - Fully configurable sensor range adjustment
  - Manual push button override
  - 48 or 168 hour trap seal flush
  - Capacitive sensing push button override
- Control Stop
  - Internal siphon-guard protection
  - Sweat solder kit
- Vacuum Breaker
  - High back pressure
  - One piece hex coupling nut
- Internal seals
  - Chloramine resistant
- Adjustable tailpiece
- Spud coupling and flange for back spud connection

AquaSense® is a registered trademark of Zurn Industries, LLC. Rev. B Dwg. No. 200298 Date: 7/8/15 Product No. ZEMS6152AV-HET

WC-1
(BARRIER FREE)

ES-WD-ISCA-121

For Commercial Applications

Job Name ______ Contractor ______
Job Location ______ Approval ______
Engineer ______ Contractor's P.O. No. ______
Approval ______ Representative ______
Tag ______

ISCA-121
Industry Standard Single Vertical
500 lb. Closet Carrier

Specification

Watts ISCA-121 *Industry Standard* single vertical adjustable water closet carrier with epoxy coated cast iron fitting 4"(102) no hub waste and 2"(51) no hub vent connections, epoxy coated cast iron patented compression seal faceplate assembly, and epoxy coated cast iron foot supports with incremental height markings. Adjustable for standard and wheelchair height, adjustable ABS nipple with integral test cap and neoprene bowl gasket, plated hardware and chrome cap nuts. Carrier complies with requirements of ASME A112.6.1M up to a 500 lb. (227 kg.) static load.

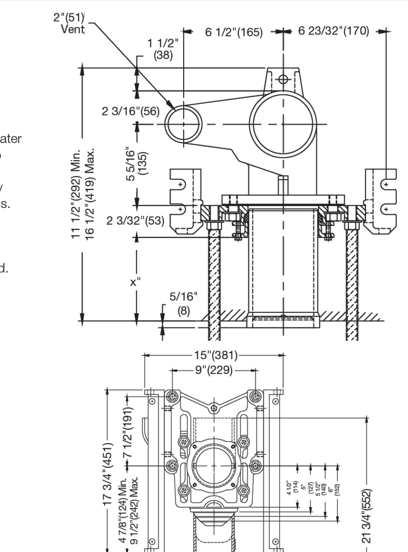
Suffix	Options (Select One or More) Description	
-CA-100-EXT	Aux. Support System w/Extended Nipple	☑
-CI	Cast Iron Nipple	☑
-HS	Hub & Spigot Connections	☐
-M1	ABS Extended Nipple (Up to 24")	☐
-M11	Tiling Frame	☐
-M20	Flush Valve Support	☐

Please refer to watts.com for BAA information on specific models.

NOTICE
Anchor legs to concrete floor with minimum 1/2"(13) anchor bolts (by others).

Dual slotted carrier feet require one 1/2"(13) anchor bolt per foot.

x = 5 3/4"(146) Maximum with Standard Nipple



NOTICE
The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

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L-1
(BARRIER FREE)

Penal-Ware® 1652LRB Series
18" Lavatory with Rectangular Bowl - ADA 2010 Compliant

1652LRB-1-DMS-04-M
Fixture May Show Some Available Options

Please visit **www.acorneng.com** for most current specifications.

18" Lavatory with Lavy Rectangular Bowl - ADA 2010 Compliant

Fixture is designed to be installed on a finished wall and serviced from an accessible pipe chase. There are no voids or crevices where contraband can be concealed. Features include an integral self-draining soap dish and mounting hardware for walls up to 8" thick. Optional Wall Sleeve or Metal Template is recommended to provide through wall openings and mounting points. Lavatory complies with ANSI, UFAS, CBC and ADA 2010 requirements for accessibility. Compliance is subject to the interpretation and requirements of the local code authority.

Cabinet is fabricated from 14 gage, type 304 stainless steel and is seamless welded construction with exposed surfaces polished to a satin finish. Cabinet interior is sound deadened with fire-resistant material.

Lavatory Rectangular Bowl is 14" x 12" x 4-1/2" deep and includes an integral fast drain. Standard elbow waste outlet is 1-1/2" O.D. plain end and extends 11" beyond the back of wall.

Optional Lavatory Valve is an pneumatically operated, pushbutton Air-Control valve using atmospheric air. Pushbutton is vandal-resistant and requires less than 5 pounds to activate valve. Valve is metering, non-hold open type. Valve timing is adjustable from 5 to 60 seconds. Valve includes a 0.5 GPM flow control and can be remotely located up to 10 feet from the operating pushbutton. Valve and Bubbler conforms with lead free requirements of NSF61, Section 9 and CHSC 116875.

Suffix Option DMB, Deck Mounted Bubbler optionally available, provides a drinking bubbler that meets ADA requirements and lead free requirements of NSF61, Section 9 and CHSC 116875. This option also includes a separate pushbutton and non-metering Air-Control valve with .7 GPM flow control.

GUIDE SPECIFICATION
Provide and install an Acorn Penal-Ware, 18" wide ADA 2010 Compliant Lavatory with rectangular bowl (specify model number and options). Unit shall conform to ANSI, UFAS, CBC and ADA requirements for accessibility. Fixture shall be fabricated from 14 gage, type 304 stainless steel. Construction shall be seamless welded and exposed surfaces shall have a satin finish. Deck shall have an air-circulating, self-draining soap dish. Provide Air-Control pneumatically operated, metering, non-hold open valve with ADA compliant pushbutton. Valve and Bubbler conform with lead free requirements of NSF61, Section 9 and CHSC 116875. Cabinet interior shall be sound deadened with fire-resistant material. Fixture shall be furnished with necessary fasteners for proper installation.

Page 1 P.1652LRB Revised: 02/15/19

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L-1 (BARRIER FREE)

MGI SpecBuilder™ —— Configure products and create specs with ease. —— Get Started ➡ www.mgispecbuilder.com

Penal-Ware®: 1652LRB 18" Lavatory with Lavy Rectangular Bowl ADA Compliant

WALL THICKNESS AND TYPE (Must Specify)
Thickness: ________ Type: ❑ Concrete ❑ Block ❑ Steel

MODEL AND OPTIONS SELECTION:

BASE MODEL NUMBER
☑ 1652LRB 18" Lavatory with Lavy Rectangular Bowl - ADA Compliant

FIXTURE MOUNTING AND WASTE (Must Specify)
☑ -1 Off-Floor, Wall Outlet

SPOUT SELECTION (Must Specify) FAUCET BY OTHERS
❑ -DMS Deck Mounted Spout
❑ -BPH Hemispherical Penal Bubbler

VALVE SELECTION (Must Specify)
Air-Control (Pneumatic)
❑ -03-M Single Temp, Metering
❑ -04-M Hot & Cold, Metering

Master-Trol® (Electronic)
❑ -EVS1 Single Temp
❑ -EVS2 Hot & Cold
❑ -EVSP1 Single Temp, Piezo Button
❑ -EVSP2 Hot & Cold, Piezo Buttons

Master-Trol® PLUS (Electronic)
❑ -MTP1 Single Temp
❑ -MTP2 Hot & Cold
❑ -MTPP1 Single Temp, Piezo Button
❑ -MTPP2 Hot & Cold, Piezo Buttons
-MTP VALVE OPTION
❑ -PFB Power Failure Bypass (Provides drinking water in the event of power failure)

Time-Trol® (Electronic)
❑ -MVC1 Single Temp
❑ -MVC1-BAT Single Temp Battery Powered (Batteries Not Included)
❑ -MVC2 Hot & Cold
❑ -MVC2-BAT Hot & Cold Battery Powered (Batteries Not Included)

Programmable (Electronic) w/9VDC Plug-In Transformer
❑ -PPZ1 Single Temp Programmable Piezo Button
❑ -PPZ2 Hot & Cold Programmable Piezo Button

Valve By Others
❑ -9 Punched for Valve by Others

DECK PUNCHING (1-5/16" Diameter)
☒ -H1 Single Hole Centered
❑ -H24 Two Holes 4" Centered
❑ -H28 Two Holes 8" Centered (will eliminate soap depression)
❑ -H34 Three Holes 4" Centered
❑ -H38 Three Holes 8" Centered (will eliminate soap depression)

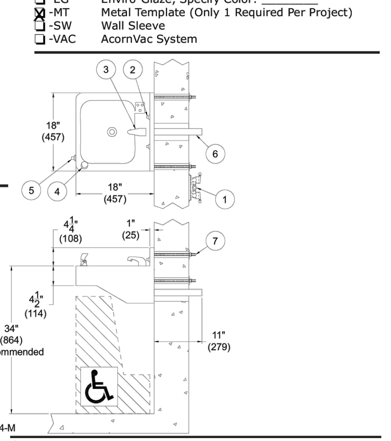
VALVE OPTIONS
☒ -BRS Brass Body Valve
❑ -CI Cycle Interrupt for Time-Trol® Valves
❑ -MA2 Manifolded, 2-Stack
❑ -MA3 Manifolded, 3-Stack (N/A with -PFB option)
❑ -MA4 Manifolded, 4-Stack (N/A with -PFB option)
❑ -PBH Hemispherical Pushbutton
❑ -TF Transformer, 120VAC to 24VAC (-MVC option only)

CABINET OPTIONS
❑ -FMT Fixture Mounted Trim
❑ -TB Toothbrush Holder ❑ Left ❑ Right
❑ -TG 12 Gage Cabinet
❑ -TH Towel Hook ❑ Single ❑ Double ❑ Left ❑ Right

LAVATORY WASTE OPTIONS
☒ -LW1 Thru-Wall Waste Extension with P-Trap
❑ -LWE Lavy Waste Extension (11" Standard) Specify Length Beyond Fixture: ________
☒ -OF Lavatory Overflow

PRODUCT OPTIONS
❑ -DMB Deck Mounted Drinking Bubbler (Cold water only) N/A with -03-M tempered supply
❑ -BP Penal Style ❑ -BC Code Style
❑ -BPH Penal Hemispherical Style
❑ -EG Enviro-Glaze, Specify Color: ________
☒ -MT Metal Template (Only 1 Required Per Project)
❑ -SW Wall Sleeve
❑ -VAC AcornVac System

NOTES:
1. Optional -4 Air-Control Valve
2. Lavy Valve Pushbuttons
3. Lavy Bubbler
4. Optional -DMB Deck Mounted Bubbler
5. Pushbutton for option -DMB
6. Lavy Waste Outlet. Extended 11" Beyond Fixture
7. Wall Mounting Hardware



Please visit **www.acorneng.com** for most current specifications. ⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Important: Installation instructions and current rough-in are furnished with each fixture. Do not rough in without certified dimensions.
Dimensions are subject to manufacturer's tolerance of plus or minus 1/4" and change without notice. Acorn assumes no responsibility for use of void or superseded data. © Copyright 2009 Acorn Engineering Company

Selection Summary	Approved for Manufacturing
Model No. & Option______	Company______ Title______
Quantity______	Signature______ Date______

Page 2 P.1652LRB Revised: 02/15/19

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L-1 (BARRIER FREE)

ES-WD-CA-311 2139

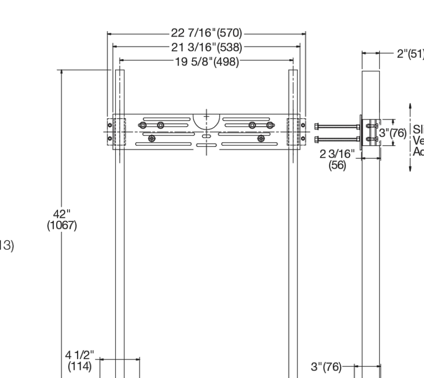
Engineering Specification

Job Name ______ Contractor ______
Job Location ______ Approval ______
Engineer ______ Contractor's P.O. No. ______
Approval ______ Representative ______
Tag ______

CA-311
Floor Mounted Urinal Carrier

Specification

Watts CA-311 epoxy coated floor mounted urinal carrier with heavy gauge steel offset uprights with welded feet, universal steel hangar support plate with integral mounting brackets and plated hardware.



Note: Anchor legs to concrete floor with minimum 1/2"(13) anchor bolts (by others).

Please refer to watts.com for BAA information on specific models.

NOTICE
The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

WATTS®

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ZURN

Z86300-XL
L-1 (BARRIER FREE)
Single Basin Metering

TAG ____________

Architectural/Engineering Specification:
Polished chrome-plated single lavatory, slow-closing metering faucet with an integral brass 3-3/4" centerline spout, and a vandal-resistant, ADA compliant color-coded handle. Easily adjustable cycle time, preset to 10 seconds at 80 PSI. Unit is furnished with a standard water-conserving 1.0 GPM spray outlet, integral shank filter, mounting hardware and a 1/2" NPSM coupling nut for standard lavatory riser. Requires less than 5 pounds force to activate per ANSI A117.1.
Zurn Lead Free products (-XL) is the line of durable, high quality brass faucets and fixtures that are designed and manufactured to comply with Section 1417 of the Safe Drinking Water Act (SDWA) which mandates the weighted average lead content of no more than 0.25% of the wetted surface.

Product Features:
- Polymer Metering Cartridge Sleeve
- Chrome-plated Cast Brass Body
- Vandal-resistant
- Color Coded Brass Metering Handle
- Adjustable Cycle Timing

Compliance and Certification:
- Low-Lead Compliant
- ADA Compliant

Aerator Options:

	Flow rate GPM [LpM]	Vandal Resistant	Pressure Compensation	Outlet Type
☒ -3M	0.5[1.9]	✓	✓	Spray
☐ -7M	1.0[3.8]		✓	Spray
☐ -16M	1.0[3.8]	✓	✓	Spray
☐ -22M	1.0[3.8]	✓		Laminar
☐ -25M	0.35[1.3]	✓	✓	Spray
☐ -28M	0.5[1.9]	✓		Laminar

Suffix Options:
☐ -CS Check Stop
☐ -CP4 Chrome Plated 4" Cover Plate
☐ -G 1-1/4" [32mm] Grid Strainer Drain
☒ -IN Institutional handle - Tamper Proof and Vandal Resistant
☒ -RKR ADA Cmpliant Rocker Handle

Architectural/Engineering Approval

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

Rev. A | Date: 11/22/22 | C.N. No. 144877 | Prod./Dwg. No. SS Z86300-XL

Patent zurn.com/patents
US 1.855.ONE.ZURN CANADA 1.877.892.5216
ZURN.COM

by ZURN ELKAY Water Solutions

ELKAY SPECIFICATIONS

Outdoor ezH2O® Lower Bottle Filling Station Bi-Level Pedestal with Pet Station Non-Filtered Non-Refrigerated Freeze Resistant

DF-1 **Model LK4420BF1LDBFRK**

PRODUCT SPECIFICATIONS
Outdoor ezH2O® Lower Bottle Filling Station Bi-Level Pedestal with Pet Station Non-Filtered Non-Refrigerated Freeze Resistant. Features shall include Heavy Duty Vandal Resistant, Laminar Flow, Pet Fountain, Sealed Freeze Resistant, 300 Series Stainless. Furnished with Vandal Resistant bubbler. Mechanical Button activation. Product shall be Floor Mount/Freestanding, for Outdoor applications, serving 2 station(s).

Special Features:	Heavy Duty Vandal Resistant, Laminar Flow, Pet Fountain, Sealed Freeze Resistant, 300 Series Stainless
Finish:	Black (BK), Blue (BLU), Evergreen (EVG), Gray (GRY)
Power:	No Electrical Required
Bubbler Style:	Vandal Resistant
Activation by:	Mechanical Button
Mounting Type:	Floor Mount/Freestanding
Chilling Capacity:	Non-refrigerated
Dimensions (L x W x H):	26" x 31" x 64"
Approx. Shipping Weight:	184 lbs.
Installation Location:	Outdoor
No. of Stations Served:	2

**When used in non-temperature controlled environments, unit(s) must be adequately winterized and/or protected from extreme heat to prevent damage where climates dictate.

Special Note: Bottle Filler Stations 1 (Low), Bubbler Stations 1 (Upper), Choose from 4 color options
- Mechanically-Activated unit continues to supply water in event of service disruptions.
- Laminar flow provides clean fill with minimal splash.
- Pet Fountain: Features slow drainage for easy drinking.
- Sealed Freeze Resistant Valve System: Fully sealed freeze resistant system that minimizes chance of ground water contamination, and prevents drain water from mixing with fresh water. Designed for ground installation below the frost line.

Included with Product: **Outdoor Bottle Filler, Freeze Resistant Valve**

▼ Ships in multiple boxes.
A Century of Tradition and Quality.
For more than 100 years, Elkay has been making innovative products and providing exceptional customer care. We take pride in offering plumbing products that make life easier, inspire change and leave the world a better place.

PRODUCT COMPLIANCE
ADA & ICC A117.1
ASME A112.19.3/CSA B45.4
GreenSpec®
NSF/ANSI 61 (Q≤1) & 372 (lead free)

Complies with ADA & ICC A117.1 accessibility requirements when installed according to the requirements outlined in these standards. Installation may require additional components and/or construction features to be fully compliant. Consult the local Authority Having Jurisdiction if necessary.
Installation Instructions (PDF) - 1000003949

Warranty pertains to drinking water applications only. Non-drinking water applications are not covered under warranty.
Warranty (PDF)

PART:______ QTY: ______
PROJECT:______
CONTACT:______
DATE:______
NOTES:______
APPROVAL:______

In keeping with our policy of continuing product improvement, Elkay reserves the right to change product specifications without notice. Please visit elkay.com for the most current version of Elkay product specification sheets. This specification describes an Elkay product with design, quality, and functional benefits to the user. When making a comparison of other producers' offerings, be certain these features are not overlooked.

Elkay REV 11142024 | LK4420BF1LDBFRK | 1-800-260-6640 | SVtechservice@Elkay.com | Patent zurn-elkay.com/patents | © 2024 Page 1 | LK4420BF1LDBFRK_spec.pdf

ELKAY SPECIFICATIONS

Outdoor ezH2O® Lower Bottle Filling Station Bi-Level Pedestal with Pet Station Non-Filtered Non-Refrigerated Freeze Resistant

DF-1 **Model LK4420BF1LDBFRK**

Optional Accessories		
~~LK4471LHB~~	~~Locking Hose Bib Spec Sheet (PDF)~~	
97890C ✔	Accessory - Direct Bury Adaptor Spec Sheet (PDF)	

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ELKAY SPECIFICATIONS

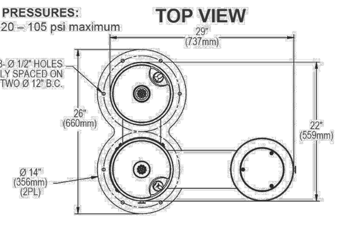
Outdoor ezH2O® Lower Bottle Filling Station Bi-Level Pedestal with Pet Station Non-Filtered Non-Refrigerated Freeze Resistant

DF-1 **Model LK4420BF1LDBFRK**

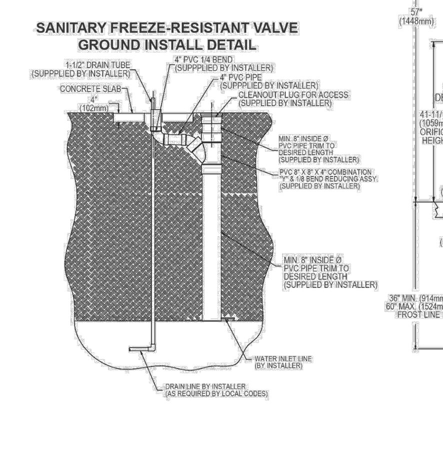
MOUNTING INSTRUCTIONS and PLUMBING INSTRUCTIONS
Site and drainage excavation is required for fountain installation. Refer to owner's manual for site preparation details. Provide solid, well-drained surface to mount pedestal fountain (concrete pad recommended) with adequate support (300 lb. load minimum). (8) 3/8" minimum fasteners (not included) should be attached securely to mounting surface in order to secure fountain. (Refer to rough-in diagram), and be sure to allow an opening for the freeze-resistant valve in the ground as shown in the installation instructions that accompany the fountain. (Refer to page 4 for freeze resistant valve installation). NOTE: Pet Fountain will not be freeze resistant. Refer to local codes for any additional requirements.
Locate and install plumbing through ground as required. Assemble fountain to prepared site and mounting pad.
NOTE: Fountain is not furnished with service valve.
Position pedestal over plumbing and secure base to fasteners. Remove access panels and connect supply and water lines. Turn on water supply and check for leaks. Refer to owner's manual for detailed instructions. Reassemble access panels to pedestal.
Trap and service stop not included.

OPERATING PRESSURES:
Supply water 20 – 105 psi maximum

TOP VIEW

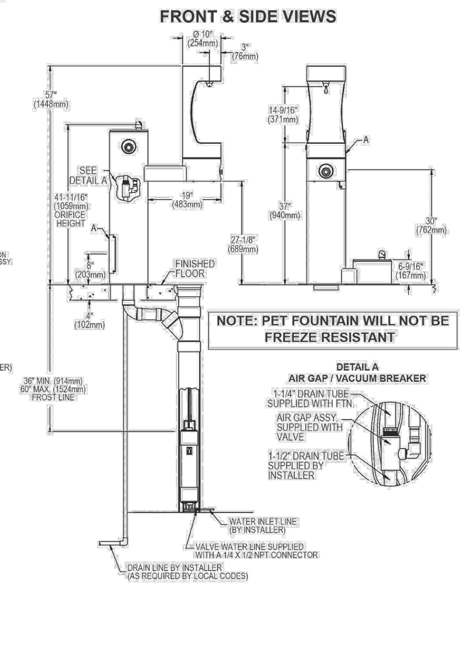


SANITARY FREEZE-RESISTANT VALVE GROUND INSTALL DETAIL



LEGEND
A = Access panel (8" X 10")

FRONT & SIDE VIEWS



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MS

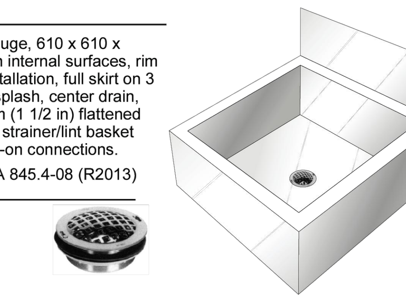
CAN-AQUA INTERNATIONAL

CA-EV2424-P-J
STAINLESS STEEL SERVICE SINK

DESCRIPTION

Stainless steel mop basin, type 304, 16 gauge, 610 x 610 x 254/406 mm (24 x 24 x 10 /16 in), #4 finish internal surfaces, rim and backsplash panel, against the wall installation, full skirt on 3 sides, 152 mm (6 in) high integrated backsplash, center drain, preslopped, interior square corners, 38 mm (1 1/2 in) flattened rim. DN 76 mm (3 in) stainless steel dome strainer/lint basket with locking nut, neoprene gasket for push-on connections.

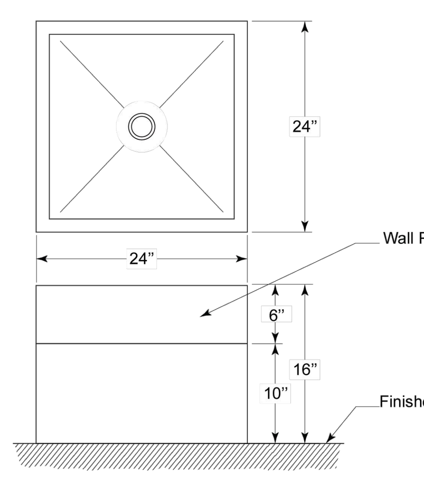
Meets standards : ASME A 112.19.3 / CSA 845.4-08 (R2013)



Stainless steel dome strainer/lint basket with locking nut, neoprene gasket for push-on oonnections for DN 3".

OPTIONS

☒ Suffixe **-C** : 2 Panels and skirt for corner installation.
☐ Suffixe **-PM3** : Wall and sklrt panels on all 3 sides
☐ Suffixe **-PMEXT** : Extended Wall panel (max. 36").
☐ Suffixe **-316** : Type 316 (for Inst.allatlon In corrosive locations)



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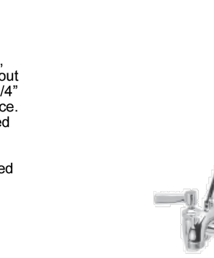
ZURN

Z843M1
MS
Sink Faucet

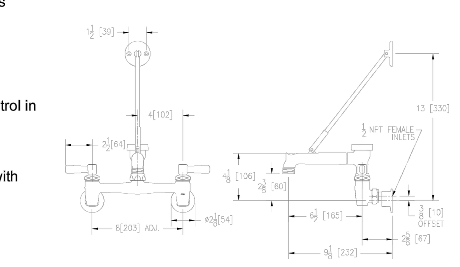
TAG ____________

Architectural/Engineering Specification:
Polished chrome-plated cast brass 8" sink faucet with quarter turn ceramic disc cartridges, 3/8" short swivel inlets providing adjustable centers from 7-1/4" to 8-3/4", integral service stops and a 6" centerline cast brass spout with chemical resistant atmospheric vacuum breaker, 3/4" hose threaded outlet, pail hook and adjustable wall brace. Unit is furnished with 2-1/2" vandal-resistant color-coded brass lever handles. Vacuum breaker is certified to the uniform plumbing code®, ASSE 1001- 2002 and CSA b64-01. (note: atmoshperic vacuum breaker not intended for continuous pressure applications.)



Product Features:
- 6" Vacuum Breaker Spout with 3/4" Threaded Outlet, Brace and Pail Hook
- 2-1/2" Vandal Resistant Color Coded Lever Handles
- Ceramic Disc Cartridge
- Chrome-plated Cast Brass Body

Suffix Options:
☑ -CS Check Stop
☐ -FC 2.0 GPM [7.6 L] Laminar Flow Control in Base of Spout
☐ -FC ____ Plain End Spout with Flow Control (Specify GPM Flow: 0.5, 1.0, 1.5)
☐ -LSI 2-1/2" [64mm] Long Swivel Inlets with Integral Stops
☐ -RC Rough Chrome Plated
☑ -WHK Wall Hook
☐ -5H 5' [152cm] Vinyl Hose
☐ -6P Master Carton (Qty. 6)



Rough-in/Overview dimensions

Architectural/Engineering Approval

The information contained in this document is subject to change without notice. Please contact Zurn for most up to date information.

Compliance and Certification:
- ADA Compliant
- ASSE 1001- 2002
- CSA b64-01

Meets the American Disabilities Guidelines and ANSI A117.1 requirements when installed according to these requirements.
In Canada - Consult local codes and standards.

ZURN INDUSTRIES, LLC 511 W. Freshwater Way, Milwaukee, WI U.S.A. 53204 · Ph. 1-855-ONE-ZURN, Fax 919-775-3541
In Canada: ZURN INDUSTRIES LIMITED 7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, Ph. 905-405-8272, Fax 905-405-1292
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REVISIONS/SUBMISSIONS

No.	DATE	DESCRIPTION
1	2024-11-15	ISSUED FOR 60% DD
2	2024-12-20	ISSUED FOR PERMIT
3	2025-01-30	ISSUED FOR CLIENT'S REVIEW - PRE TENDER
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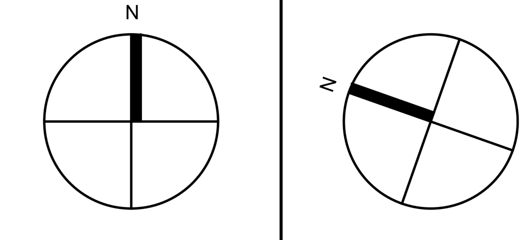

PROJECT NORTH TRUE NORTH

ARCHITECT

Cellucci+Pace
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2025-10-03

Project Title

MISSISSAUGA

COMFORT STATION
HURON PARK

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

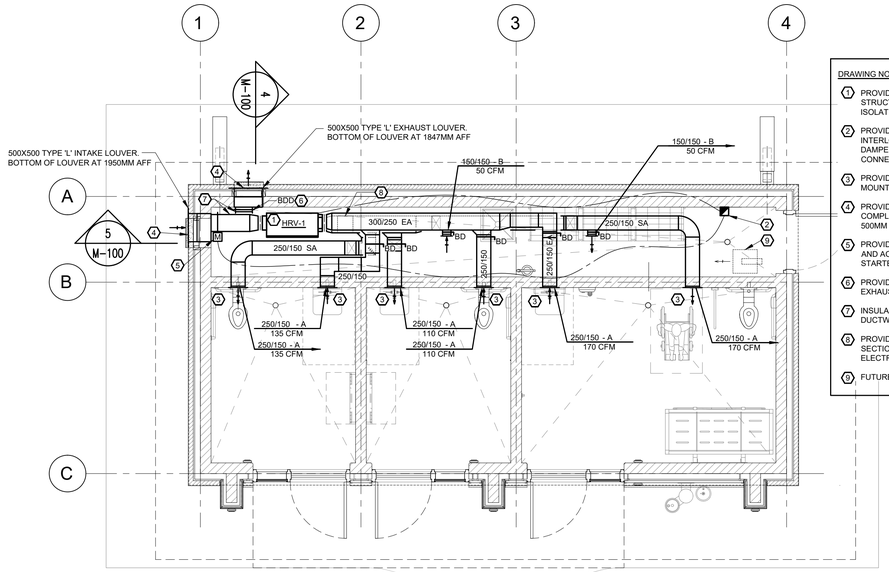
Sheet Title

PLUMBING FIXTURES

Project Number	24-053
Date	Oct. 2024
Drawn	AS
Checked	AS
Scale	AS SHOWN

Drawing Number

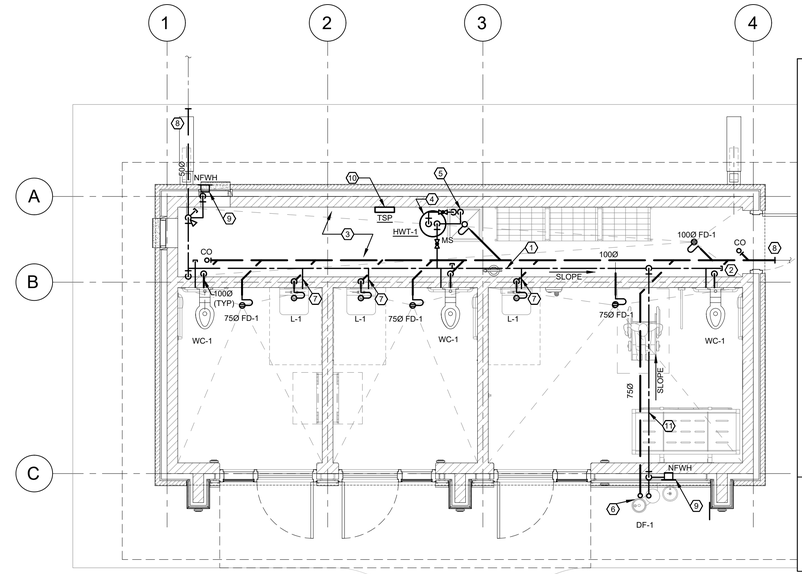
M003



DRAWING NOTES (HVAC):

1. PROVIDE NEW HRV SUSPENDED FROM CEILING STRUCTURE COMPLETE WITH VIBRATION ISOLATION.
2. PROVIDE HOA STARTER AND TIMECLOCK. INTERLOCK OPERATION WITH MOTORIZED DAMPER ACTUATOR. COORDINATE POWER CONNECTION WITH ELECTRICIAN.
3. PROVIDE NEW MEDIUM SECURITY GRILLE MOUNTED ON SIDE WALL AT HIGH LEVEL.
4. PROVIDE INTAKE/EXHAUST LOUVER COMPLETE WITH BIRDSCREEN AND MINIMUM 500MM DEEP INSULATED PLENUM.
5. PROVIDE MOTORIZED INSULATED DAMPER AND ACTUATOR INTERLOCKED WITH HRV-1 STARTER.
6. PROVIDE GRAVITY BACKDRAFT DAMPER IN EXHAUST PLENUM.
7. INSULATE ALL INTAKE AND EXHAUST DUCTWORK BETWEEN LOUVERS AND HRV.
8. PROVIDE MINIMUM 600MM STRAIGHT DUCT SECTION FOR FUTURE 15KW DUCT MOUNTED ELECTRIC HEATER IN SA DUCT.
9. FUTURE 4KW CEILING MOUNTED UNIT HEATER.

1 / M100 COMFORT STATION - HVAC
SCALE: 1:50



DRAWING NOTES (PLUMBING AND DRAINAGE):

1. PROVIDE 50Ø DOMESTIC COLD WATER HEADER AND 25Ø TAKE-OFFS TO SERVE WATER CLOSETS.
2. PROVIDE 25Ø CAPPED CONNECTION FOR COMPLETE DRAINAGE AND WINTERIZATION OF THE DOMESTIC WATER PIPING SYSTEM.
3. SLOPE ALL DOMESTIC WATER PIPING TO DRAIN POINTS FOR WINTERIZATION.
4. PROVIDE WALL-MOUNTED DOMESTIC HOT WATER TANK AND INSTALL AT HIGH LEVEL. PROVIDE HOT WATER TANK PLATFORM AND EXPANSION TANK. PIPE DRAIN TO MOP SINK.
5. PROVIDE 20Ø DOMESTIC HOT AND COLD WATER DOWN TO MOP SINK.
6. PROVIDE 15Ø DOMESTIC COLD WATER AND 50Ø SANITARY DRAIN TO OUTDOOR DRINKING FOUNTAIN. REFER TO DETAIL ON M003 FOR FREEZE-PROOF CONNECTION INSTALLATION.
7. PROVIDE 15Ø DOMESTIC COLD WATER AND 30Ø SAN DOWN TO SERVE LAVATORIES.
8. CONNECT NEW DOMESTIC WATER AND SANITARY DRAIN TO SITE SERVICE. REFER TO CIVIL DRAWINGS.
9. PROVIDE 20Ø DCW TO NEW WALL HYDRANT.
10. PROVIDE ELECTRONIC TRAP SEAL PRIMER PPP INC PTS-4-500 COMPLETE WITH SURFACE MOUNTING BOX. PROVIDE 12Ø DCW CONNECTION.
11. INSTALL NEW PIPING ON WARM SIDE OF INSULATION.

GENERAL NOTES

1. VENT ALL PLUMBING FIXTURES IN ACCORDANCE WITH OBC REQUIREMENTS.
2. PROVIDE PRIMING LINE FROM TRAP SEAL PRIMER FOR ALL FLOOR DRAINS.

2 / M100 COMFORT STATION - PLUMBING AND DRAINAGE
SCALE: 1:50

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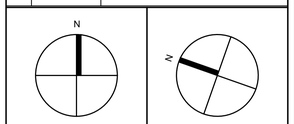

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2025-10-03

Project Title

MISSISSAUGA

COMFORT STATION HURON PARK

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

Sheet Title

MECHANICAL NEW

Project Number	24-053
Date	Oct. 2024
Drawn	AS
Checked	AS
Scale	AS SHOWN
Drawing Number	M100

AIR TERMINALS - GRILLES, REGISTERS, AND DIFFUSERS

TAG	TYPE	MANUFACTURER	MODEL	MATERIAL	FINISH	MOUNTING TYPE	COMMENTS
A	GRILLE (MEDIUM SECURITY)	EH PRICE	MSBL	STEEL	WHITE	WALL	REFER TO PLANS FOR FACE SIZE. PROVIDE FP16 FRAME, C7 CORE, S14 SLEEVE, TYPE MF2 MOUNTING FRAME, CS8 SPNR-SS FASTENING, 3BR VOLUME DAMPER.
B	EXHAUST/SUPPLY GRILLE	EH PRICE	510Z-L	STEEL	WHITE	CEILING	REFER TO PLANS FOR FACE SIZE. PROVIDE TYPE F FRAME, TYPE A COUNTERSUNK SCREW FASTENING, OPPOSED BLADE DAMPER.
MD	MOTORIZED DAMPER AND ACTUATOR	EH PRICE	CCD-AE5I-IB	ALUMINUM	MILL	DUCT	REFER TO PLANS FOR DUCT SIZE. PROVIDE FACTORY FURNISHED BELIMO AF24-SR (-S) ACTUATOR COMPLETE WITH 120/24V TRANSFORMER.
L	LOUVER	VENTEX	2430	ALUMINUM	SEE COMMENTS	WALL	REFER TO PLANS FOR APPROXIMATE FACE SIZE. PROVIDE CUSTOM COLOUR FINISH TO ARCHITECTS APPROVAL. PROVIDE GALVANIZED BIRDSCREEN. COORDINATE FINAL SIZE ON SITE TO MATCH WINDOW AND WALL OPENINGS.

HEAT RECOVERY VENTILATOR

TAG	LOCATION	MANUFACTURER	MODEL	FAN								HEAT EXCHANGER		DEFROST	FILTERS	ELECTRICAL					DIMENSIONS			WEIGHT		COMMENTS
				SUPPLY				RETURN					EFFECTIVENESS		MERV	VOLTAGE	PHASE	HZ	MCA	MOCP	UNIT			LBS	KG	
				AIRFLOW (CFM)	E.S.P.	HP	TYPE	AIRFLOW (CFM)	E.S.P.	HP	TYPE		%								L (MM)	W (MM)	H (MM)			
HRV-1	STORAGE	NU-AIR	NH500-CDPA118	465	0.45	FRAC	PSC	465	0.45	FRAC	PSC	SUMMER	15	BYPASS	8	120	1	60	5.5	15	914	406	584	100	45	SEE NOTES
												WINTER	45													

NOTE:
1. PROVIDE DISCONNECT AND STARTER FOR ALL EQUIPMENT 2. PROVIDE CSA APPROVED MOTOR. 3. PROVIDE INTERLOCK CONTACTS TO OPERATE OUTDOOR AIR DAMPER. 4. PROVIDE DRY CONTACT FOR 24V CONTROL SIGNAL. 5. PROVIDE HANGING VIBRATION ISOLATION.

EXPANSION TANK

TAG	SERVICE	MANUFACTURER	MODEL	STORAGE VOLUME		MAXIMUM ACCEPTANCE VOLUME		PRECHARGE	MAX. WORKING PRESSURE	DIMENSION		WEIGHT (INCLUDING WATER)		COMMENTS
				US GAL	LITERS	US GAL	LITERS	PSI	PSIG	DIAMETER (MM)	HEIGHT (MM)	LBS	KG	
ET-1	HWT-1	AMTROL	ST-5C-DD	2	8	0.9	3	55	150	203	356	20	9	SEE NOTES

NOTE:
1. ADJUST TANK PRESSURE TO MATCH SYSTEM PRESURE ON SITE.

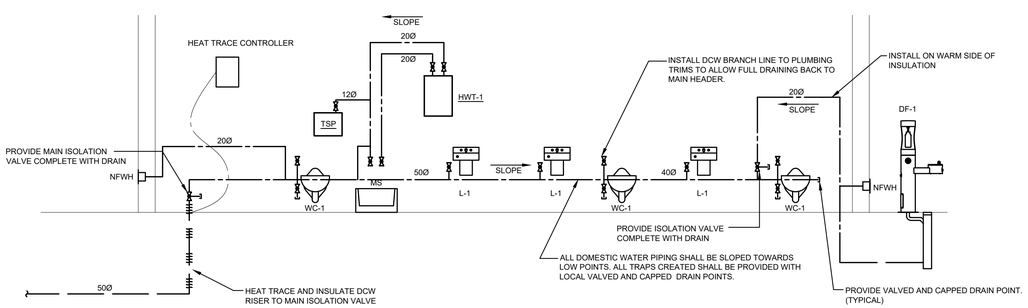
HOT WATER TANK - ELECTRIC

TAG	SERVICE	MANUFACTURER	MODEL	STORAGE VOLUME		HEATING ELEMENTS			RECOVERY	ELECTRICAL			DIMENSION		WEIGHT (INCLUDING WATER)		COMMENTS
				US GAL	LITERS	QTY	KW	MBH	GAL/HR	VOLT	PH	HZ	DIAMETER (MM)	HEIGHT (MM)	LBS	KG	
HWT-1	MOP SINK	AO SMITH	DEL-10	10	38	1	3	10.236	12	240	1	60	457	464	150	68	SEE NOTES

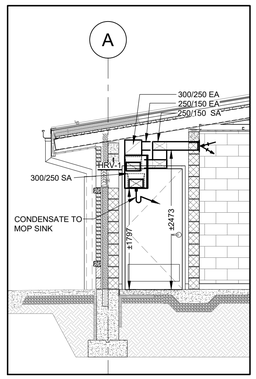
NOTE:
1. PROVIDE DISCONNECT AND STARTER FOR ALL EQUIPMENT 2. RECOVERY RATE IS BASED ON 100F TEMPERATURE RISE 3. PROVIDE HOLDRITE QUICK STAND WALL MOUNTED WATER HEATER PLATFORM

HEAT TRACING SYSTEM AND COMPONENTS (RAYCHEM)

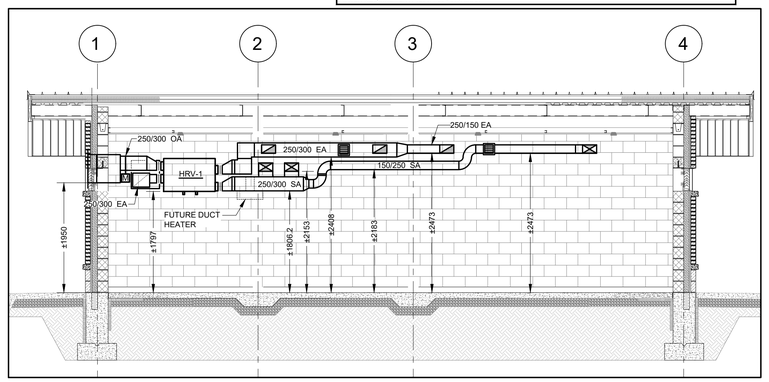
ITEM	CATALOG NUMBER	DESCRIPTION
	B/61SA2100/106.1/136/120/7/S29A/X/N12	120V Raychem XMI-A Single Conductor Heating Cable (terminated)
T0002069	MIJB-864-A	Junction Box
P000000181	JBS-100-ECW-A	Electronic temperature controller
RTD10CS	RTD10CS	Raychem RTD with 10 foot S/S corrugated shield
C77203-000	ETL-ENGLISH	Electric Traced Label for traced pipes and tanks
PB125	PB125	Pipe strap for MI cables - to 1.25 in. (pack of 50 pc)
C77211-000	PS-1	Pipe Strap 1/4 to 1 in.
Design Conditions:	Pipe Maintenance: 40°F, Min Ambient: -20°F, Max Ambient: 104°F	
POWER REQUIREMENT: 120V/1/60 - 30A MOCP		



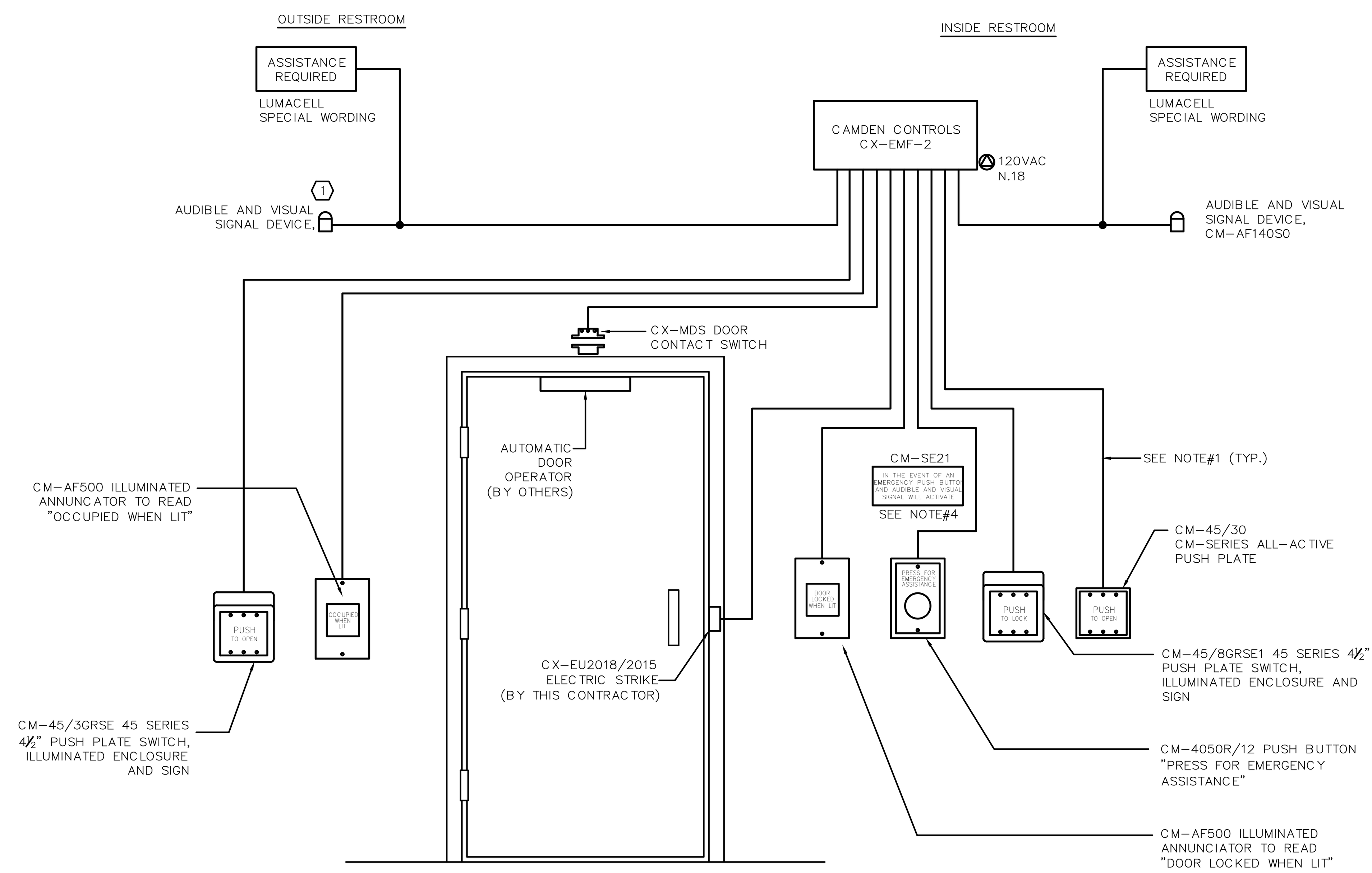
3 / M100 DOMESTIC WATER PIPING SCHEMATIC
N.T.S.



4 / M100 SECTION A
SCALE: 1:50



5 / M100 SECTION B
SCALE: 1:50



NOTES:

1. THIS ELECTRICAL CONTRACTOR TO PROVIDE ALL WIRING, CONDUIT AND BACKBOXES AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM. WIRING SHALL BE RUN IN CONDUIT AS PER DOOR HARDWARE MANUFACTURER'S WIRING REQUIREMENTS.
2. COORDINATE WITH DOOR HARDWARE SUPPLIER FOR INSTALLATION OF ALL DEVICES..
3. COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL DEVICES AND PLATES WITH ARCHITECTURAL DRAWINGS AND LOCAL INSPECTOR PRIOR TO ROUGH-IN.
4. LETTERS FOR SIGNAGE SHALL BE AT LEAST 25mm HIGH WITH A 5mm STROKE, WITH SIGN POSTED ABOVE THE EMERGENCY BUTTON.
5. SYSTEM SHALL BE CAMDEM CAT.# CX-WEC SERIES TO BE SUITABLE FOR USAGE WITH DOOR OPERATOR AND CONTROL KIT, OR APPROVED EQUAL.
6. EMERGENCY PUSH BUTTON TO BE INSTALLED BESIDE THE TOILET SEAT.
7. ALL DEVICES SHALL BE MOUNTED AT HANDICAP HEIGHT AS PER LOCAL BUILDING CODE STANDARDS.
8. THE EXTERIOR AUDIBLE AND VISUAL SIGNAL DEVICE SHALL BE CUSTOM BUILT IN ORDER TO BE LOUDER AND BIGGER IN PHYSICAL SIZE.

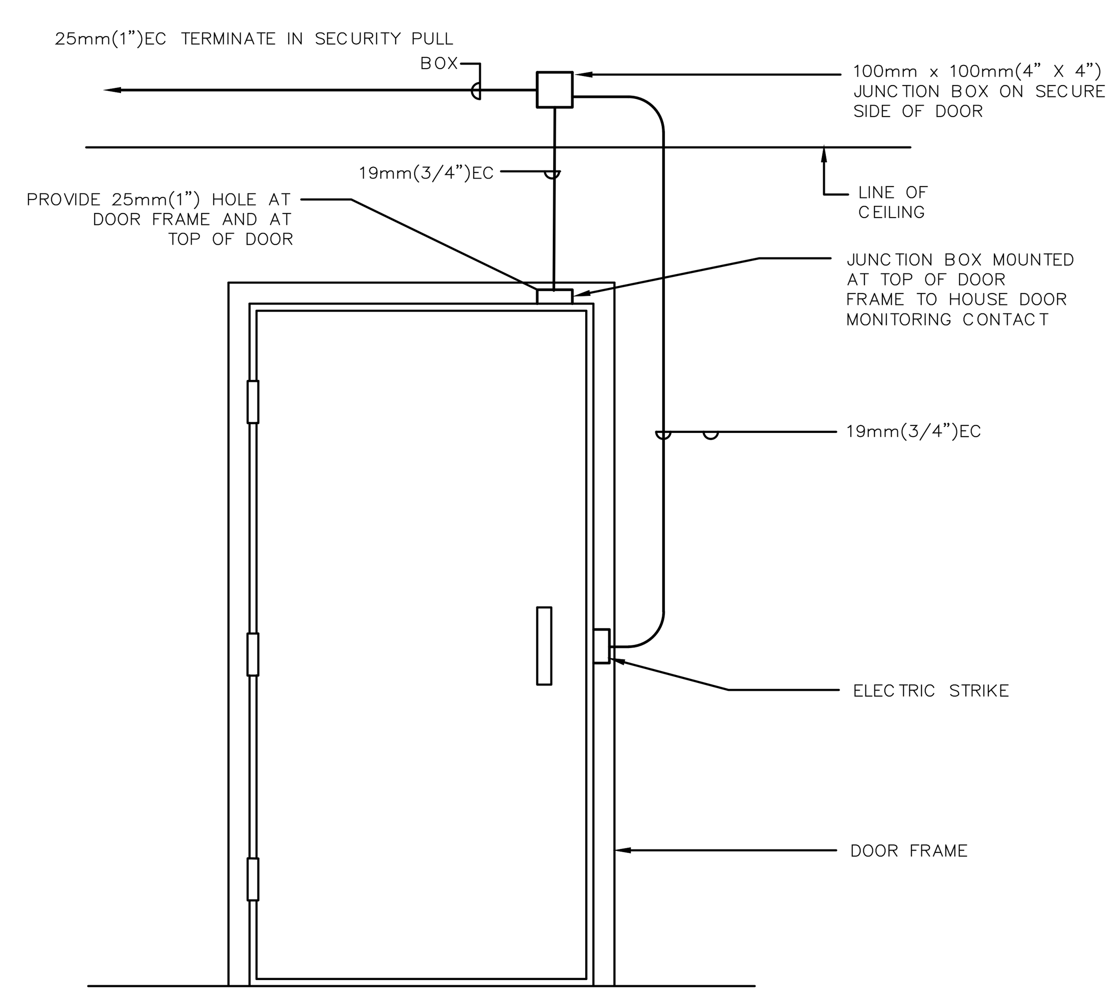
UNIVERSAL WASHROOM SEQUENCE OF OPERATION:

A. WHEN THE OUTSIDE H/C PUSH PLATE IS PUSHED, THE ELECTRIC DOOR STRIKE REMAIN DE-ENERGIZED WHILE THE OPERATOR CYCLES OPEN AND CLOSED.
B. WHEN THE DOOR IS CLOSED AND THE "PUSH TO LOCK" BUTTON INSIDE THE WASHROOM IS PRESSED, THE ELECTRIC DOOR STRIKE IS ENERGIZED AND THE DOOR IS SOLIDLY LOCKED.
C. WHEN THE "PUSH TO OPEN" BUTTON INSIDE THE WASHROOM IS PRESSED, THE ELECTRIC DOOR STRIKE IS AGAIN DE-ENERGIZED, THE OPERATOR CYCLES OPEN AND CLOSED.
D. WHEN THE DOOR IS CLOSED AFTER EXIT, THE ELECTRIC DOOR STRIKE REMAINS IN THE DE-ENERGIZED MODE READY FOR THE NEXT ENTRY/EXIT OR FOR A MANUAL OPENING OF THE DOOR.
E. WALL MOUNTED ROOM OCCUPANCY INDICATOR LIGHT SHALL BE TIED TO THE 'PUSH TO LOCK' BUTTON SUCH THAT UPON ACTIVATION OF THE 'PUSH TO LOCK' BUTTON, THE OCCUPANCY LIGHT IS ILLUMINATED, AND UPON ACTIVATION OF THE 'PUSH TO OPEN' BUTTON, THE OCCUPANCY LIGHT TURNS OFF.
F. UPON ACTIVATION OF THE EMERGENCY CALL BUTTON, THE AUDIBLE AND VISUAL ALARMS ARE ACTIVATED AND THE DOOR IS DE-ENERGISED AND UNLOCKED.
G. UPON ACTIVATION OF THE EMERGENCY CALL BUTTON, THE AUDIBLE AND VISUAL ALARMS ARE ACTIVATED AND THE DOOR IS DE-ENERGISED AND UNLOCKED.
H. FOR EMERGENCY ACCESS, THE DOOR CAN ALSO BE OPENED FROM OUTSIDE BY A MASTER KEY.

KEY NOTES:

1. PROVIDE A CUSTOM AUDIO AND VISUAL SIGNALING DEVICE FOR THIS UNIVERSAL WASHROOM. DEVICE SHALL BE LARGER AND LOUDER THAN STANDARD UNITS TO ENSURE IT IS CLEARLY VISIBLE AND AUDIBLE IN AN OUTDOOR PARK ENVIRONMENT. THE UNIT SHALL BE WEATHER-RESISTANT (MINIMUM IP65 RATING), EQUIPPED WITH HIGH-INTENSITY VISUAL INDICATORS SUITABLE FOR DAYLIGHT VISIBILITY, AND AN ENHANCED AUDIBLE ALARM DESIGNED TO OVERCOME TYPICAL OUTDOOR AMBIENT NOISE.

1/E100 **UNIVERSAL WASHROOM DETAIL**
SCALE: N.T.S.



NOTES

1. REFER TO PLAN DRAWINGS FOR EXACT QUANTITY AND TYPE OF DEVICES AT EACH DOOR.
2. ALL CONDUIT TO BE MARKED CLEARLY AT BOTH ENDS.

2/E100 **SINGLE DOOR ELECTRIC STRIKE DETAIL**
SCALE: N.T.S.

ELECTRICAL LEGEND

E/R	EXISTING ELECTRICAL DEVICE IN RELOCATED LOCATION
AD	AUTO DOOR
AF	AUTO FLUSH
WP	WEATHERPROOF
GFCI	GROUND FAULT INTERRUPTER CIRCUIT
MD	MOTORIZED DAMPER

GENERAL NOTES

A. THESE DRAWINGS ARE DIAGRAMMATIC REFERENCE DRAWINGS ONLY. BEFORE ANY ELECTRICAL EQUIPMENT IS ROUGHED IN, REFER TO ARCHITECTURAL DRAWING DETAILS AND ELEVATIONS OR DETAILS ON THE ELECTRICAL DRAWINGS FOR EXACT LOCATION. WHERE THIS DETAILED INFORMATION IS NOT SHOWN ON THE DRAWING, VERIFY THE EXACT LOCATION ON SITE.

B. DETAILS ARE INTENDED TO BE FOR GENERAL ARRANGEMENT ONLY. THEY DO NOT SHOW ALL NECESSARY COMPONENTS, BUT ARE MERELY A GUIDE AS TO THE ORIENTATION OF EQUIPMENT WHERE IT IS REQUIRED.

C. MAINTAIN THE INTEGRITY OF ALL FIRE SEPARATIONS. PROVIDE ALL NECESSARY PRODUCTS APPROVED BY RELEVANT AUTHORITY HAVING JURISDICTION, WHICH ARE REQUIRED TO GO AROUND AND IN CABLE THROUGH CONDUIT, ETC., WHICH PASS THROUGH FIRE RATED ASSEMBLIES TO RETAIN THE FIRE RATING OF THESE ASSEMBLIES.

D. ROOFING WORK, WHERE ROOF REVISIONS AND/OR REPLACEMENTS ARE PART OF THE PROJECT, INCLUDE FOR DISCONNECTING, LIFTING, OR TEMPORARILY REMOVING ELECTRICAL EQUIPMENT AND ELECTRICAL CONNECTIONS TO OTHER ROOF MOUNTED EQUIPMENT AS REQUIRED TO PERMIT COMPLETION OF THE ROOFING WORK, AND FOR RE-INSTALLING/RE-CONNECTING THE EQUIPMENT WHEN THE ROOFING WORK IS COMPLETE.

E. HAZARDOUS MATERIALS AND WASTE, IF HAZARDOUS MATERIALS AND/OR WASTE NOT LISTED IN THE SPECIFICATION IS FOUND, STOP THE ASSOCIATED WORK AND NOTIFY THE OWNER AND CONSULTANT IMMEDIATELY AND AWAIT DIRECTIONS

F. DRILLING OF FLOORS, WALLS AND CEILINGS SHALL BE BY THIS CONTRACTOR. OBTAIN WRITTEN APPROVAL FOR ALL LOCATIONS FROM THE GENERAL CONTRACTOR.

G. CUTTING EFFECTING STRUCTURAL INTEGRITY OF THE BUILDING SHALL NOT BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE STRUCTURAL ENGINEER.

H. PROVIDE FIRE RATED PATCH AROUND PENETRATION POINTS FROM ANY LOCATIONS WHERE CONDUITS PASS THROUGH FIRE RATED STRUCTURES.

I. LIMIT ALL USE OF Bx CABLE FOR SHORT RUNS IN CEILING SPACE THAT SHALL NOT EXCEED 10 FT. USE CONDUIT FOR ALL OTHER RUNS INCLUDING VERTICAL RUNS AND IN INACCESSIBLE CEILING AREAS.

J. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL BUILDING CODE AND NATIONAL SAFETY CODE STANDARDS.

K. NO SURFACE MOUNTED CONDUITS SHALL BE PERMISSIBLE ON WALLS.

L. ALL CONDUIT SHALL BE EMT UNLESS OTHERWISE NOTED. USE WEATHERPROOF PVC CONDUIT FOR ALL OUTDOOR RUNS.

M. PROVIDE COMPLETE LABELING INDICATING PANEL & BREAKER NUMBER ON ALL FACES OF RECEPTACLES, SWITCHES & JUNCTION BOX COVERPLATES & RESPECTIVE POWER CONNECTIONS. ENSURE FONT SIZE OF 18 PT. LABEL. MECHANICAL & OTHER EQUIPMENT. DISCONNECT SWITCHES SHALL STATE LOCATION OF ELECTRICAL PANELS PROVIDING POWER.

N. ALL ABOVE SLAB ELECTRICAL CONDUITS TO RUN UNDERSIDE OF TOP CHORD OF JOIST.

O. FASTENERS AND SUPPORT FOR ELECTRICAL SYSTEMS SHALL NOT BE ATTACHED TO THE ROOF DECK. THIS IS CONFLICTING WITH THE ELECTRICAL GUIDANCE FOR SUPPORTING SYSTEMS. ELECTRICAL CONTRACTOR TO COORDINATE ON SITE AND OBTAIN APPROVAL AND DIRECTION FROM GENERAL CONTRACTOR, ROOFING COMPANY AND STRUCTURAL ENGINEER FOR ALL PROPOSED CONDUIT AND MOUNTING INSTALLATIONS TO AND WITHIN DECK STRUCTURE, PRIOR TO COMMENCING ANY WORK ON SITE.

P. ALL DISTRIBUTION AND PANEL BOARDS TO BE SPRINKLER PROOF.

LUMINARIES SCHEDULE

TYPE	DESCRIPTION
L1	4'-0" LONG, RECESSED LINEAR LED LIGHTING C/W 3000 LUMEN OUTPUT, 3500K COLOUR TEMPERATURE AND SUITABLE FOR 120V APPLICATIONS. CONTRACTOR TO PROVIDE ALL CUSTOMER MOUNTING ACCESSORIES TO SUIT NEW CEILING TYPE. NIGHTINGALE HPL HPL 48LONG MULTI 750LMF F MVOLT 35K 90CRI
S1	6" DIAMETER, RECESSED LED DOWN LIGHTING C/W 1500 LUMEN OUTPUT, 4000K COLOUR TEMPERATURE, 120V DRIVER AND SUITABLE FOR EXTERIOR APPLICATIONS. CONTRACTOR TO PROVIDE ALL CUSTOMER MOUNTING ACCESSORIES TO SUIT NEW CEILING TYPE. FIXTURES TRIM TO MATCH CEILING COLOUR. LITHONIA LIGHTING LDN6 40 15 L06 AR TRW MVOLT
	WALL OR CEILING MOUNTED EXIT SIGN, SINGLE OR DOUBLE FACE, GREEN WITH RUNNING MAN SYMBOL, TWO (2) - 7W, LED REMOTE HEADS AND A 12VDC, 36W SELF BATTERY UNIT AS INDICATED ON DRAWINGS. PROVIDE ALL MOUNTING ACCESSORIES TO SUIT. STANPRO PRMXL SERIES OR APPROVED EQUAL
	WALL OR CEILING MOUNTED EMERGENCY REMOTE HEADS, AS INDICATED ON THE DRAWINGS, C/W 12VDC, 7W LED MR16 LAMPS. PROVIDE ALL MOUNTING ACCESSORIES TO SUIT. STANPRO N SERIES OR APPROVED EQUAL

LIGHTING NOTES

A. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE EXACT VOLTAGE OF PROPOSED LIGHT FIXTURES WITH SYSTEM VOLTAGE ON SITE AND THEIR SUPPLIER.

B. PROVIDE ALL REQUIRED MOUNTING ACCESSORIES TO SUIT FIXTURES INSTALLATION.

C. CONTRACTOR TO PROVIDE ALL REQUIRED LOW VOLTAGE CONTROL WIRING TO SUIT LIGHTING CONTROL SYSTEM'S REQUIREMENTS.

D. IT IS CONTRACTOR'S RESPONSIBILITY TO ENSURE VOLTAGE DROPS FOR NORMAL LIGHTING CIRCUITS AND EMERGENCY LIGHTING CIRCUITS ARE COORIDANTED PRIOR TO INSTALLATION OF FIXTURES.

E. CONFIRM MOUNTING HEIGHTS OF ALL EMERGENCY LIGHTING AND EXIT SIGNS PRIOR TO ROUGH-IN AND INSTALLATION. PROVIDE ALL REQUIRED MOUNTING ACCESSORIES FOR PENDANT UNITS TO SUIT.

DRAWING LIST

E100	ELECTRICAL LEGEND, NOTES AND DETAILS
E101	NEW ELECTRICAL LAYOUTS AND DETAILS
E102	NEW ELECTRICAL SITE PLAN AND DISTRIBUTION DIAGRAM
E103	ELECTRICAL SPECIFICATIONS

ELECTRICAL LEGEND

POWER SYSTEM

- WALL MOUNTED DUPLEX RECEPTACLE 15A, 125V
- WALL MOUNTED QUAD RECEPTACLE 15A, 125V
- WP/GFCI — 120V, 20A GFCI DUPLEX RECEPTACLE MOUNTED IN A WEATHERPROOF BOX FOR ROOF TOP UNITS. INTERMATIC CAT# WP1000C
- DIRECTION POWER CONNECTION
- DIRECTION POWER CONNECTION C/W DISCONNECT SWITCH
- HD — HAND DRYER, SUPPLIED AND INSTALLED BY THIS ELECTRICAL CONTRACTOR DYSON AIRBLADE V HU02-NICKLE
- JB — JUCTION BOX
- PULL BOX
- UNFUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- ELECTRICAL PANEL, RECESSED OR SURFACE MOUNTED
- ELECTRICAL DISTRIBUTION PANELBOARD
- TRANSFORMER
- SINGLE PHASE MOTOR
- THREE PHASE MOTOR
- DOOR RELEASE PUSH BUTTON
- T — DIGITAL TIME CLOCK
- ELECTRIC HEATER SUPPLIED BY MECHANICAL CONTRACTOR, INSTALLED AND WIRED BY THIS ELECTRICAL CONTRACTOR, REFER TO MECHANICAL DRAWINGS FOR SPECIFICATIONS.

LIGHTING SYSTEM

- 1'x4' LED LIGHTING FIXTURE, CEILING MOUNTED
- 1'X4' LED LIGHTING FIXTURE AS NIGHT LIGHT, CEILING MOUNTED
- WALL MOUNTED LIGHTING FIXTURE
- WALL MOUNTED LIGHTING FIXTURE AS NIGHT LIGHT
- POT LIGHT CEILING MOUNTED
- NIGHT LIGHT POT LIGHT, CEILING MOUNTED
- CEILING MOUNTED EXIT SIGN, ARROW DENOTES DIRECTION
- WALL MOUNTED EXIT SIGN, ARROW DENOTES DIRECTION
- EMERGENCY LIGHT
- BATTERY UNIT C/W DOUBLE LIGHT HEADS
- $ — SINGLE POLE SWITCH 15A, 125V
- $3 — THREE-WAY SWITCH, 15A, 125V
- $D — LIGHTING DIMMING SWITCH, 125V
- DOUBLE GANG SINGLE POLE SWITCHES
- TRIPLE GANG SINGLE POLE SWITCHES
- OS — CEILING MOUNTED ADAPTIVE TECHNOLOGY OCCUPANCY SENSORS SHALL BE HUBBELL DUAL TECHNOLOGY H-MOSS OCCUPANCY SENSORS ATD SUITABLE FOR 120V OR 347V AS REQUIRED. SENSOR SHALL BE C/W POWER PACK AND ALL NECESSARY WIRING ACCESSORIES AND SUITABLE FOR 500, 1000 OR 2000 SQ. FT. AS REQUIRED. PROVIDE INDIVIDUAL TIME AND SENSOR ADJUSTMENT TO CLIENT'S REQUIREMENTS.
- $V — LOW VOLTAGE LIGHT SWITCH SUITABLE FOR POWER PACK SYSTEM
- $OS — MOTION SENSOR LIGHT SWITCH SHALL BE HUBBELL H-MOSS OCCUPANCY SENSORS AD1277W1 SUITABLE FOR 120V. SENSOR SHALL BE MANUAL "ON" WITH AUTO-OFF FUNCTION AND C/W FIELD ADJUSTABLE VIEWING ANGLE AND ADAPTIVE TECHNOLOGY. PROVIDE INDIVIDUAL TIME AND SENSOR ADJUSTMENT TO CLIENT'S REQUIREMENTS. OR APPROVED EQUAL
- PC — PHOTOCELL
- T — TIMER
- C — CONTACTOR

SECURITY SYSTEM

- CR — SECURITY CARD READER
- DC — SECURITY DOOR CONTACT
- DR — SECURITY DOOR RELEASE
- ML — ELECTROMAGNETIC LOCK
- ES — ELECTRIC DOOR STRIKE

COMMUNICATIONS SYSTEM

- WALL MOUNTED TELEPHONE OUTLET C/W 21mmC
- WALL MOUNTED DATA OUTLET C/W 21mmC
- WALL MOUNTED TELEPHONE AND DATA OUTLET C/W 27mmC

ABBREVIATIONS

RT	RAIN TIGHT
AFF	ABOVE FINISHED FLOOR
E	EXISTING ELECTRICAL DEVICE TO REMAIN
R	EXISTING ELECTRICAL DEVICE TO BE REMOVED
R/R	EXISTING ELECTRICAL DEVICE TO BE REMOVED AND RE-INSTALLED.
R/E	EXISTING ELECTRICAL DEVICE TO BE RELOCATED

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REVISIONS/SUBMISSIONS

No.	DATE	DESCRIPTION
01.	NOV 6, 2024	ISSUED FOR REVIEW
02.	NOV 18, 2024	ISSUED FOR 60% DD
03.	JAN 06, 2025	ISSUED FOR PERMIT
04.	JAN 30, 2025	ISSUED FOR CLIENT'S REVIEW - PRE TENDER
05.	SEP 12, 2025	ISSUED FOR CLIENT'S REVIEW
06.	SEP 25, 2025	ISSUED FOR RE-COSTING CLASS B
07.	OCT 03, 2025	ISSUED FOR PERMIT
08.	OCT 08, 2025	ISSUED FOR TENDER

PROJECT NORTH | TRUE NORTH

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Professional Engineering Design Services

Project Title

MISSISSAUGA

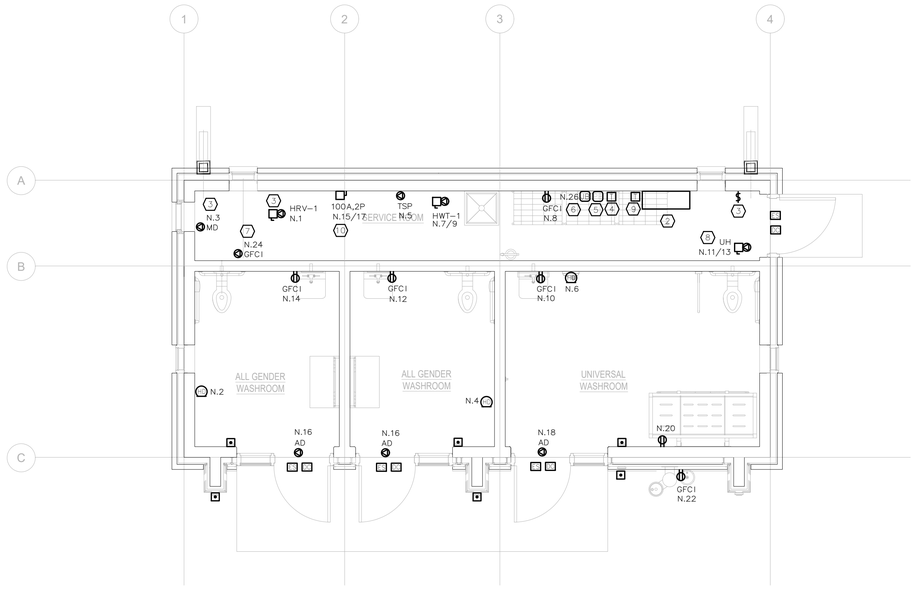
COMFORT STATION
HURON PARK

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

Sheet Title

ELECTRICAL LEGEND, NOTES AND DETAILS

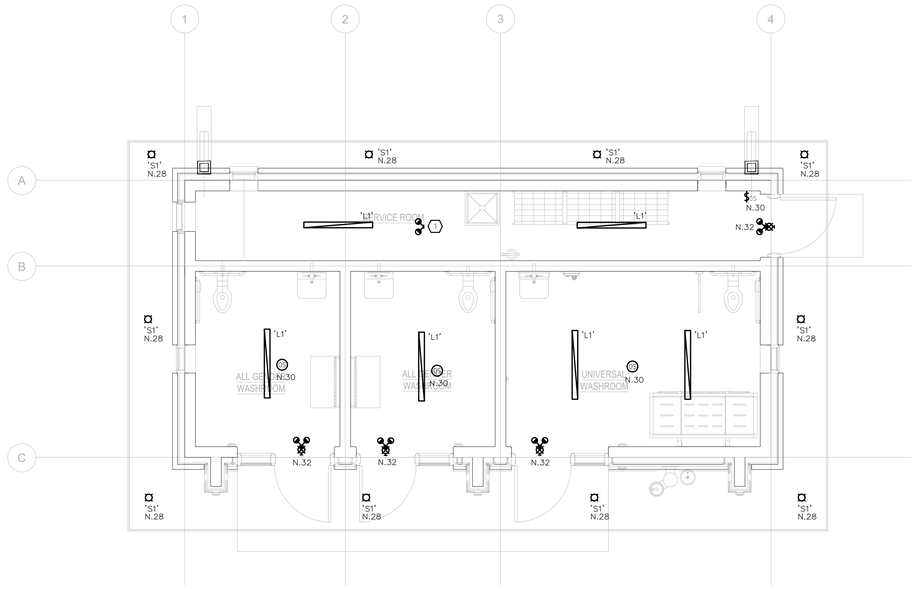
Project Number	24-123
Date	OCTOBER 2025
Drawn	N.Y.
Checked	F.R.B.
Scale	AS SHOWN
Drawing Number	E100



KEY NOTES:

1. PROVIDE A FULLY FUNCTIONAL UNIVERSAL WASHROOM AS PER LATEST OBC REQUIREMENTS. REFER TO 2/E103 FOR MORE DETAILS.
2. APPROXIMATE LOCATION OF NEW ELECTRICAL PANEL RP-N, FINAL LOCATION SHALL BE VERIFIED ON SITE.
3. PROVIDE ALL REQUIRED LINE VOLTAGE WIRING FOR NEW HRV-1 AND ITS MOTORIZED DAMPER'S STARTER. COORDINATE SCOPE OF WORK WITH MECHANICAL DRAWINGS.
4. SECURITY PULL BOX, TERMINATE ALL EMPTY CONDUITS FOR DOOR'S SECURITY WIRING INSIDE THE PULL BOX.
5. PROVIDE A DIGITAL TIME CLOCK AND TIE INTO THE SECURITY PANEL TO ENERGIZE AND DE-ENERGIZE THE ELECTRICAL STRIKES, COORDINATE ALL REQUIREMENTS WITH SECURITY CONTRACTOR, COORDINATE HOURS OF OPERATIONS WITH CLIENT'S REPRESENTATIVE.
6. 120V JUNCTION BOX FOR SECURITY SYSTEM SUPPLIED AND INSTALLED BY OTHERS.
7. POWER CONNECTION FOR NEW HEAT TRACING SYSTEM, PROVIDE ALL REQUIRED WIRING AND CONDUITS TO SUIT. COORDINATE EXACT LOCATION AND SCOPE OF WORK WITH MECHANICAL DRAWINGS.
8. POWER CONNECTION FOR FUTURE UNIT HEATER. TERMINATE WIRING AND CONDUITS IN A CEILING-MOUNTED JUNCTION BOX AND CLEARLY LABEL "POWER CONNECTION FOR FUTURE UNIT HEATER".
9. APPROXIMATE LOCATION OF NEW DIGITAL TIME CLOCK FOR GENERAL LIGHTING.
10. POWER CONNECTION FOR FUTURE ELECTRIC DUCT HEATER. TERMINATE WIRING AND CONDUITS IN A WALL MOUNTED DISCONNECT SWITCH, CLEARLY LABEL "POWER CONNECTION FOR FUTURE ELECTRIC DUCT HEATER".

1 / E101 **ELECTRICAL – NEW POWER LAYOUT**
SCALE: 1:50



KEY NOTES:

1. EMERGENCY REMOTE HEAD SHALL BE CONNECTED TO EXIT SIGNS BATTERY UNIT IN THE BACK AREA. PROVIDE ALL REQUIRED WIRING AND CONDUITS TO SUIT.

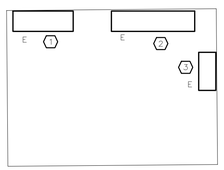
2 / E101 **ELECTRICAL – NEW LIGHTING LAYOUT**
SCALE: 1:50

DESCRIPTION	LOAD (KW)	BRKR	CCT No	PH	CCT No	BRKR	LOAD (KW)	DESCRIPTION
HRV-1	–	15	1	A	2	20	–	HAND DRYER
MOTORIZED DAMPER	–	15	3	B	4	20	–	HAND DRYER
TSP	–	15	5	A	6	20	–	HAND DRYER
HWT-1	–	20 / 2P	7	B	8	20	–	GFI RECEPTACLES
			9	A	10	20	–	GFI RECEPTACLES
UH 2#3+G-1.25"C	–	30 / 2P	11	B	12	20	–	GFI RECEPTACLES
			13	A	14	20	–	GFI RECEPTACLES
FUTURE ELECTRIC DUCT HEATER 2#10+G-0.75"C	–	80 / 2P	15	B	16	20	–	UNIVERSAL WASHROOM/AD
			17	A	18	20	–	AUTO DOORS
SPARE	–	15	19	B	20	20	–	RECEPTACLE
SPARE	–	15	21	A	22	20	–	WATER FOUNTAIN
SPARE	–	15	23	B	24	15	–	HEAT TRACE (GFCI)
–	–	–	25	A	26	15	–	SECURITY SYSTEM
–	–	–	27	B	28	20	–	EXTERIOR LIGHTING
–	–	–	29	A	30	20	–	INTERIOR LIGHTING
–	–	–	31	B	32	20	–	EXIST SIGNS

NOTES: –
–

PANEL RP-N

VOLTS (V):	120/240	TYPE:	–	FLUSH	☐
PHASE:	3	CONN. LOAD (KW):	–	SURFACE	☒
WIRES:	3	DEMAND LOAD (A):	–	SPRINKLERPROOF	☒
MAINS (A):	225	LOCATION:	–	FED THRU LUGS	☐
I.C. (K.A):	10			MAIN BREAKER	☒ 200A,2P



KEY NOTES:

1. EXISTING 600A, 120/240V ELECTRICAL PANEL A.
2. EXISTING MAIN 600/600A,2P FUSIBLE DISCONNECT SWITCH.
3. EXISTING HYDRO METERING CABINET.

3 / E101 **EXISTING SITE ELECTRICAL ROOM DETAIL**
SCALE: N.T.S.

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01.	NOV 6, 2024	ISSUED FOR REVIEW
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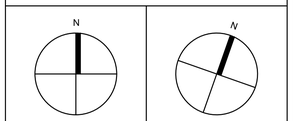
05.	SEP 12, 2025	ISSUED FOR CLIENT'S REVIEW
06.	SEP 25, 2025	ISSUED FOR RE-COSTING CLASS B
07.	OCT 03, 2025	ISSUED FOR PERMIT
08.	OCT 08, 2025	ISSUED FOR TENDER



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Project Title
MISSISSAUGA

COMFORT STATION HURON PARK

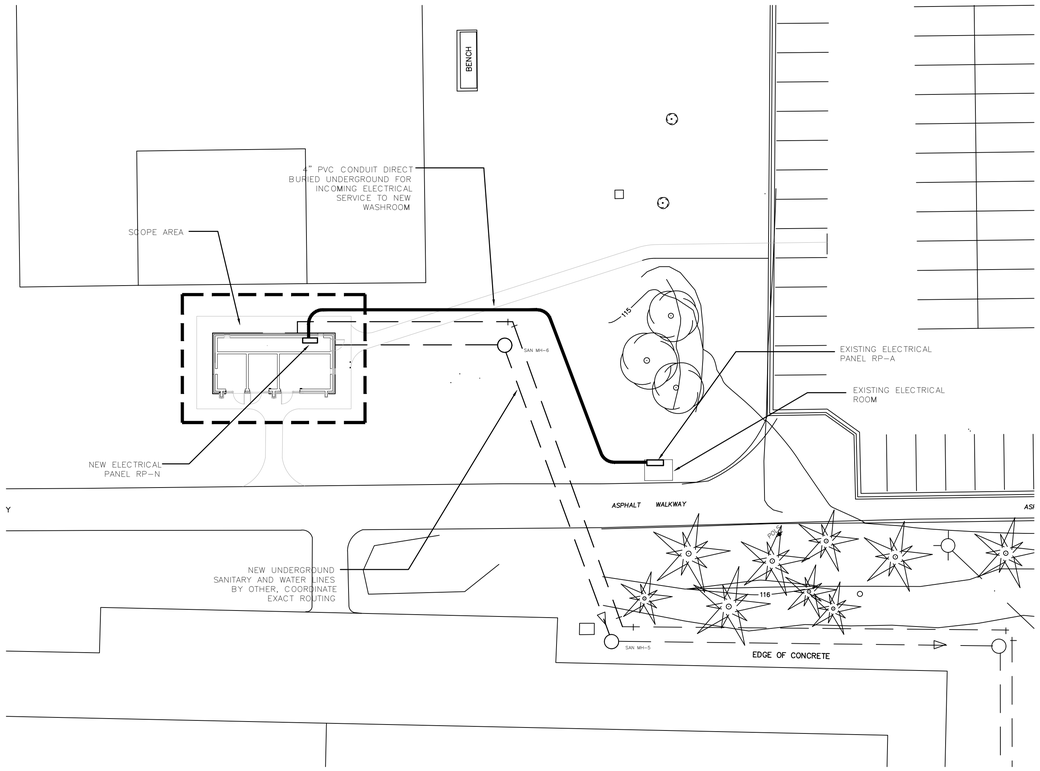
830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

Sheet Title

NEW ELECTRICAL LAYOUTS

Project Number	24-123
Date	OCTOBER 2025
Drawn	N.Y.
Checked	F.R.B.
Scale	AS SHOWN

Drawing Number
E101



1 ELECTRICAL – SITE PLAN
SCALE: 1:200

KEY NOTES:

1. PROVIDE A NEW 200A,2P BREAKER INSIDE THE EXISTING ELECTRICAL PANEL A TO FEED NEW ELECTRICAL PANEL N, NEW BREAKER TO MATCH EXISTING.
2. PROVIDE A NEW DIGITAL TIME CLOCK TO TURN THE GENERAL LIGHT FIXTURES ON/OFF. PROVIDE ALL REQUIRED WIRING, CONDUITS AND CONTACTORS TO SUIT. COORDINATE HOURS OF OPERATIONS WITH CLIENT'S REPRESENTATIVE.

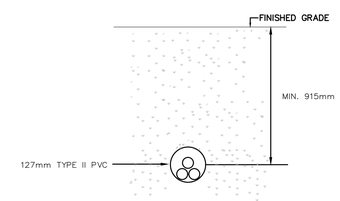
LEGEND

———	NEW
- - - -	EXISTING TO REMAIN
—×—×—	EXISTING TO BE REMOVED

2 ELECTRICAL DISTRIBUTION DIAGARAM
SCALE: N.T.S.

NOTES:

1. CONTRACTOR TO CONFIRM THE DIRECT BURIAL CONFIGURATION AND INSTALLATION WITH THE ESA REPRESENTATIVE AND ESA REQUIREMENTS.
2. DIRECT BURIED INSTALLATION INSIDE PVC CONDUITS TO BE COMPLIANCE WITH 2021 ONTARIO ELECTRICAL SAFETY CODE (OESC), TABLE D10A AND DIAGRAM D10. WHERE ANY CONTRADICTION EXISTS BETWEEN THIS DETAIL AND THE OESC, THE OESC DIMENSIONS GOVERN.
3. A CHANGE IN ANY ONE OR MORE INSTALLATION CONDITIONS OR CABLES CONSTRUCTION WILL RESULT IN A CHANGE IN MAXIMUM INSULATED CONDUCTOR AMPACITY. COORDINATE ALL REQUIREMENTS WITH OESC TABLE D17.



3 DIRECT BURIED PVC AND CONDUCTOR DETAIL
SCALE: N.T.S.

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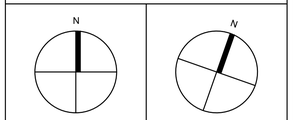

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COMFORT STATION HURON PARK

830 PAISLEY BLVD. WEST, MISSISSAUGA, ON. L5C 4P1

Sheet Title

NEW ELECTRICAL SITE PLAN AND DISTRIBUTION DIAGRAM

Project Number	24-123
Date	OCTOBER 2025
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Checked	F.R.B.
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Drawing Number

E102

ELECTRICAL SPECIFICATIONS

1. GENERAL
1.1. REFER TO THE PROJECT GENERAL CONDITIONS, TENDER FORMS, ARCHITECTURAL SPECIFICATIONS AND DRAWINGS, ETC PRIOR TO SUBMITTING BID, CAREFULLY EXAMINE EXISTING SITE CONDITIONS TO ENSURE THE BID INCLUDES FOR EVERYTHING NECESSARY FOR COMPLETION OF WORK IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.

1.2. REFER TO ARCHITECTURAL MILLWORK DRAWINGS FOR EXACT DIMENSIONING RELATED TO ELECTRICAL DEVICES (SWITCHES, POWER AND COMMUNICATION OUTLETS, FLOOR MONUMENTS, ETC..)

2. CODES AND BY-LAWS
2.1. COMPLY WITH LAWS, REGULATIONS AND CODES OF AUTHORITIES HAVING JURISDICTION. PERFORM WORK IN ACCORDANCE WITH LOCAL APPLICABLE GOVERNING CODES AND AUTHORITIES INCLUDING THE NATIONAL BUILDING CODE (NBC)

3. PERMITS, CERTIFICATES AND FEES
3.1. PAY FOR AND OBTAIN PERMITS, INSPECTION AND CERTIFICATES TO COMPLETE WORK. KEEP COPY OF SUCH PERMITS AND CERTIFICATES, ETC., ON JOB SITE. WHERE WORK INVOLVES ELECTROMAGNETIC LOCK WORK, PROVIDE PERMITS AS REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.

4. OWNER'S GUIDELINES FOR TENANT CONSTRUCTION
4.1. SHALL BE STRICTLY ADHERED TO BY THIS CONTRACTOR.

4.2. WORK WHICH MAY CAUSE NOISE DISTURBANCES MUST BE SCHEDULED AT TIMES APPROVED BY OWNER AND/OR LANDLORD. COORDINATE WORK WITH TRADES TO MINIMIZE NOISE DISTURBANCES.

5. SCOPE OF WORK
5.1. INCLUDES BUT IS NOT LIMITED TO, SUPPLY LABOUR, TOOLS, SERVICES AND EQUIPMENT, AND PROVIDE MATERIALS REQUIRED TO COMPLETE INSTALLATION AND/OR RELOCATION, AND TESTING OF ALL SYSTEMS IN ACCORDANCE WITH THIS SPECIFICATION AND DRAWINGS, INCLUDING:
5.1.1. DEMOLITION AND PROVISION OF NEW ELECTRICAL SYSTEMS AS INDICATED ON DRAWINGS. POWER DISTRIBUTION INCLUDING ALL CONDUITS, OUTLET BOXES, FLOOR BOXES, WIRING, DEVICES AS INDICATED ON THE LAYOUT DRAWINGS.
5.1.2. RELOCATION OF EXISTING LUMINAIRES AND PROVISION OF NEW LUMINAIRES AS INDICATED ON DRAWINGS, INCLUDING LIGHTING CONTROL DEVICES.
5.1.3. PROVISION OF EXIT SIGNS AND EMERGENCY BATTERY UNITS / REMOTE HEADS INCLUDING ASSOCIATED CONDUITS AND WIRING TO FORM A COMPLETE EMERGENCY LIGHTING SYSTEM.
5.1.4. RELOCATION AND PROVISION OF NEW FIRE ALARM DEVICES AS INDICATED.

5.2. UNLESS NOTED OTHERWISE, ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL WIRING, CABLES AND ELECTRICAL DEVICES EXISTING IN WALLS TO BE DEMOLISHED AND REMOVAL OF ALL OTHER REDUNDANT ELECTRICAL DEVICES NOT SHOWN ON PLANS. CUT BACK AND CAP UNUSED RACEWAYS AND OUTLETS AND REMOVE UNUSED WIRING BACK TO PANELBOARD. REVISE PANELBOARD DIRECTORIES ACCORDINGLY, IF AFFECTED BY WORK. OBSOLETE MATERIALS, WHICH ARE DISCONNECTED AND ARE NOT TO BE RELOCATED OR REUSED, WILL BECOME THE PROPERTY OF THIS CONTRACTOR. REMOVE FROM SITE AND DISPOSE.

5.3. PROVIDE JUNCTION BOXES, OUTLET BOXES, WIRING, PLATES, ETC., AS NECESSARY FOR COMPLETE RELOCATION OF DEVICES. CLEAN AND RELAMP RELOCATED LUMINAIRES. REPLACE FAULTY BALLASTS. WHEN RELOCATION WORK IS COMPLETE, CONFIRM RELOCATED DEVICES ARE IN PROPER WORKING ORDER.

5.4. WHERE EXISTING SERVICES PASS THROUGH OR ARE IN AN AREA TO SERVE ITEMS WHICH ARE TO REMAIN, MAINTAIN SERVICES. INCLUDE FOR RE-ROUTING OF EXISTING SERVICES CONCEALED BEHIND FINISHES AND WHICH BECOME EXPOSED DURING RENOVATION WORK, SO AS TO BE CONCEALED BEHIND FINISHES.

5.5. IN AREAS WHICH ARE NOT BEING ARCHITECTURALLY RENOVATED AND WHICH DIVISION 26, 27, 28 MUST RUN SERVICES THROUGH, BE RESPONSIBLE FOR REMOVAL AND REINSTALLATION OF ARCHITECTURAL CEILING TILES, MECHANICAL EQUIPMENT, ETC., AS REQUIRED FOR INSTALLATION OF WORK. SECURELY SUPPORT ANY DEVICE/LUMINAIRE LEFT "DANGLING" DUE TO REMOVAL OF SUPPORTING MEANS. PRIOR TO REMOVAL OF CEILING TILES OR OTHER DEVICES, INSPECT FOR DAMAGES/WORKING ORDER AND REPORT ANY DEFICIENCIES TO OWNER PRIOR TO START OF WORK.

5.6. ANY FIRE ALARM, SECURITY SYSTEM OR COMMUNICATION SYSTEM (IF APPLICABLE) DEVICE THAT HAS BEEN WORKED ON OR RELOCATED SHALL BE TESTED AND VERIFIED BY THE OWNER'S AUTHORIZED CONTRACTOR AFTER COMPLETION OF WORK. INCLUDE IN BID FOR ALL COSTS.

5.7. ENSURE ALL EXISTING CEILING MOUNTED FIRE ALARM BELLS/SPEAKERS ARE SECURELY ATTACHED TO CEILING/WALL AND ARE FLUSH WITH CEILING TILES AS REQUIRED.

6. CHANGES TO SCOPE OF WORK
6.1. NO EXTRA CHARGE FOR MATERIAL AND LABOUR SHALL BE ADDED TO THE CONTRACT FOR OUTLETS MOVED WITHIN TEN (10) FEET FROM THE LOCATION SHOWN ON THE PLANS PRIOR TO ROUGH-IN.

6.2. ADDITION OR DELETION OF WORK SHALL BE PRICE BASED ON INDUSTRY STANDARD LABOUR RATES. MATERIAL PRICES STANDARD TRADE DISCOUNTS. LABOUR UNITS SHALL NOT EXCEED NECA 1. MARK-UP SHALL NOT EXCEED TEN PERCENT (10%) FOR OVERHEAD AND FIVE PERCENT (5%) FOR PROFIT.

7. COORDINATION AND COOPERATION
7.1. COORDINATE WORK WITH ALL TRADES TO ENSURE A PROPER AND COMPLETE INSTALLATION.

7.2. THIS CONTRACTOR IS RESPONSIBLE FOR OBTAINING ACCURATE DIMENSIONS FROM THE ARCHITECTURAL DRAWINGS AND AT SITE; AND TO NOTIFY ALL TRADES CONCERNED OF REQUIREMENT FOR OPENINGS, SLEEVES, INSERTS AND OTHER HARDWARE NECESSARY IN THEIR WORK FOR INSTALLATION OF YOUR WORK, PRIOR TO AND DURING INSTALLATION.

7.3. EXACT LOCATIONS AND ROUTING OF SERVICES MUST BE PROPERLY PLANNED, COORDINATED AND ESTABLISHED WITH ALL AFFECTED TRADES PRIOR TO INSTALLATION. VERIFY THE LOCATION OF EXISTING MECHANICAL AND ELECTRICAL SERVICES IN THE CEILING SPACE OF THIS FLOOR, AND IN THE CEILING SPACE OF THE FLOOR BELOW WHERE NEW SERVICES ARE REQUIRED TO PASS THROUGH THAT SPACE.

7.4. THIS CONTRACTOR SHALL COORDINATE AND PROVIDE TEMPORARY POWER SERVICES AND LIGHTING TO OTHER TRADES THROUGHOUT DURATION OF CONSTRUCTION.

8. HAZARDOUS MATERIALS
8.1. IF AT ANY TIME DURING COURSE OF WORK ASBESTOS MATERIALS ARE ENCOUNTERED OR SUSPECTED, CEASE WORK IN AREA IN QUESTION AND IMMEDIATELY REPORT, IN ACCORDANCE WITH NATIONAL BUILDING CODE REGULATION TO GENERAL CONTRACTOR. DO NOT RESUME WORK IN AFFECTED AREA WITHOUT APPROVAL FROM GENERAL CONTRACTOR.

8.2. MATERIALS CONTAINING PCBS OR MERCURY SHALL BE PROPERLY DISPOSED OF OFFSITE IN ACCORDANCE WITH LOCAL GOVERNING AUTHORITY REGULATIONS.

9. INTERRUPTIONS TO AND SHUT_DOWNS OF EXISTING SERVICES AND SYSTEMS
9.1. COORDINATE WITH BUILDING'S OPERATING STAFF AND OBTAIN A OWNERS'S WRITTEN APPROVAL TO PERFORM SHUT DOWNS AND INTERRUPTIONS TO EXISTING BASE BUILDING SYSTEMS AND SERVICES AT ACCEPTABLE TIMES. INCLUDE FOR COSTS OF PREMIUM TIME TO PERFORM WORK DURING NIGHTS, WEEKENDS OR OTHER TIME OUTSIDE OF NORMAL WORKING HOURS, AS NECESSARY TO MAINTAIN SERVICES IN OPERATION OR WITH MINIMUM INTERRUPTIONS.

10. CUTTING, PATCHING AND CORE DRILLING
10.1. PIPE SLEEVES SHALL BE PROVIDED THROUGH FIRE-RATED WALL AND FLOORS.

10.2. IN FIRE RATED CONSTRUCTION, PACK AND SEAL VOID BETWEEN OPENING AND PIPE, DUCTS OR CONDUIT FOR LENGTH OF OPENING, WITH ASBESTOS FREE ELASTOMERIC AND INTUMESCENT ULC LISTED AND LABELED MATERIALS. MAKE WATERTIGHT AND INSTALL FIRESTOP AND SMOKE SEAL MATERIALS IN ACCORDANCE TO ULC CERTIFICATION AND MANUFACTURER'S REQUIREMENTS TO PROVIDE FIRESTOP RATINGS SEPARATION OF OPENINGS IN ACCORDANCE WITH GOVERNING BUILDING CODE REQUIREMENTS.

10.3. CUTTING OR CORE DRILLING OF CONCRETE STRUCTURE IS PERMITTED ONLY WITH THE APPROVAL OF THE LANDLORD, LANDLORDS STRUCTURAL CONSULTANT AND X-RAY INSPECTION. COORDINATE WITH STRUCTURAL STEEL, ADJACENT TENANTS AND WORK TO BE PERFORMED OUTSIDE OF NORMAL WORKING HOURS. OBTAIN WRITTEN APPROVAL FROM LANDLORD PRIOR TO ANY DRILLING, CORING OR X-RAYING. ANY DRILLING, CORING OR X-RAYING IS TO BE PERFORMED BY BASE BUILDING CONTRACTOR AND TO BE INCLUDED IN TENDER PRICE.

11. NOISE AND VIBRATION
11.1. ELECTRICAL EQUIPMENT SHALL OPERATE WITHOUT OBJECTIONABLE NOISE OR VIBRATION. IF, IN THE OPINION OF THE CONSULTANT, THE EQUIPMENT OPERATES WITH NOISE OR VIBRATION, THEN THE EQUIPMENT SHALL BE REPLACED OR NOISE OR VIBRATION ELIMINATED.

11.2. CONNECTION TO NOISE-PRODUCING AND VIBRATING EQUIPMENT SHALL BE MADE WITH LIQUID-TIGHT FLEXIBLE CONDUIT AND ASSOCIATED CONNECTORS. THIS INCLUDES TRANSFORMERS, DIMMING EQUIPMENT RACKS, CONVERTERS, AND MOTORS. USE A MINIMUM OF 1m (3FT) OF FLEXIBLE CABLE WITH SLACK AT EACH DEVICE.

11.3. VIBRATION ISOLATORS SHALL BE PROVIDED WHERE INDICATED OR REQUIRED. TRANSFORMERS SHALL BE ISOLATED FROM THE STRUCTURE, WITH SPRING AND RUBBER ISOLATORS WHEN WALL MOUNTED OR SUSPENDED AND 12mm (1/2") HIGH DENSITY NEOPRENE SANDWICH PADS (TYPE MWP) WHEN FLOOR MOUNTED.

12. ACCESS DOORS AND PANELS
12.1. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF LOCATION OF ACCESS DOORS AND/OR PANELS TO GIVE ACCESS TO NEW AND EXISTING ELECTRICAL EQUIPMENT OR SYSTEMS AND OTHER SIMILAR ELECTRICAL WORK WHICH MAY NEED MAINTENANCE OR REPAIR BUT WHICH IS CONCEALED IN INACCESSIBLE CONSTRUCTION.

12.2. ACCESS DOORS AND/OR PANELS WILL BE SUPPLIED AND INSTALLED BY OTHERS. BEFORE COMMENCING INSTALLATION OF ELECTRICAL WORK, PREPARE ON A SET OF REFLECTED CEILING PLANS, COMPLETE LAYOUTS OF ALL CEILING ACCESS DOORS WHICH WILL BE REQUIRED. SUBMIT THESE LAYOUTS FOR APPROVAL AND SHOW THE EXACT SIZES AND LOCATIONS OF SUCH CEILING ACCESS DOORS.

13. INSPECTION OF WORK
13.1. CONSULTANT SHALL AT ALL TIMES HAVE ACCESS TO WORK AND SHALL BE NOTIFIED AT AGREED UPON TIMES OF STAGES OF WORK.

13.2. WHERE STANDARDS OF WORK ARE SPECIFIED OR IMPLIED AND WORK DOES NOT COMPLY WITH PERFORMANCE SPECIFIED OR IMPLIED, SUCH DEFICIENCY SHALL BE CORRECTED AS DIRECTED BY CONSULTANT. ANY SUBSEQUENT TESTING TO VERIFY PERFORMANCE SHALL BE DONE AT CONTRACTOR'S EXPENSE. ANY CHARGES FOR OWNER'S STAFF, CONSULTANT OR OTHER PERSONNEL RELATED TO SUCH RETESTING SHALL ALSO BE AT EXPENSE OF CONTRACTOR.

14. PRODUCTS AND MATERIALS
14.1. CSA, UL, ULC AND CGA APPROVALS SHALL BE PROVIDED BY THE MANUFACTURER WHERE REQUIRED BY FEDERAL, PROVINCIAL OR LOCAL AUTHORITIES.

14.2. PRODUCTS LISTED AND/OR SPECIFIED REQUIRED FOR THE PERFORMANCE OF THE WORK SHALL BE NEW, THE BEST OF THEIR RESPECTIVE KIND AND OF UNIFORM PATTERN THROUGHOUT. EXCEPT OTHERWISE NOTED, ALL MATERIALS AND PRODUCTS SHALL BE EQUAL TO THE BASE BUILDING MATERIALS.

14.3. ENSURE PRODUCTS AND MATERIALS SUPPLIED FROM MANUFACTURERS OTHER THAN BASE SPECIFIED MANUFACTURERS ARE EQUIVALENT TO THE SPECIFIED ONES. ALTERNATIVES TO THE PRODUCTS AND MATERIALS SPECIFIED HEREIN AND/OR ON THE DRAWING MAY BE SUBMITTED SEPARATELY SHOWING ANY CHANGE TO THE BASE CONTRACT PRICE FOR THEIR SUBSTITUTION.

15. CONDUIT
15.1. EMT, GALVANIZED, COLD ROLLED STEEL TUBING TO CSA C22.2 NO. 83M, STEEL SET SCREW FITTINGS.

15.2. LIQUIDTIGHT FLEXIBLE STEEL CONDUIT WITH PVC COVER TO CSA C22.2 NO. 56.

15.3. RIGID, SCHEDULE 40, PVC CONDUIT AND FITTINGS TO CAN/CSA C22.2 NO. 85M AND CSA C22.2 NO. 136.

15.4. USE LIQUIDTIGHT FLEXIBLE METAL CONDUIT FOR FINAL CONNECTIONS TO ROTATING EQUIPMENT AND DRY-TYPE TRANSFORMERS.

15.5. USE RIGID PVC CONDUIT IN CONCRETE SLABS.

15.6. USE EMT FOR ALL OTHER APPLICATIONS.

15.7. INSTALL, SUPPORT AND SECURE CONDUIT AND CONDUCTORS CONCEALED AND PROVIDE INSTALLATIONS IN ACCORDANCE WITH OESC AND LOCAL GOVERNING AUTHORITIES. PLAN AND COORDINATE LOCATIONS AND ROUTING OF SERVICES, WITH TRADES PRIOR TO INSTALLATION. IDENTIFY CONDUIT RUNS (I.E. TAG BOTH ENDS OF CONDUIT RUNS). EXPLOSIVE POWDER ACTUATED FASTENERS WILL NOT BE PERMITTED UNLESS SPECIFIC WRITTEN APPROVAL FOR THEIR USE AND TYPE HAS BEEN OBTAINED FROM LANDLORD. UNDER NO CIRCUMSTANCES USE CEILING SUSPENSION HANGERS OR GRIDS FOR SUSPENSION OF CONDUIT AND CONDUCTORS.

15.8. WHERE CONDUIT AND/OR CONDUCTORS ARE EXPOSED, ARRANGE SAME TO AVOID INTERFERENCE WITH OTHER WORK AND PARALLEL TO BUILDING LINES. WHERE HORIZONTAL CONDUITS AND/OR CONDUCTORS ARE EXPOSED, INSTALL AS HIGH AS POSSIBLE. DO NOT INSTALL CONDUIT AND/OR CONDUCTORS WITHIN 6" (150 MM) OF "HOT" PIPES OR EQUIPMENT UNLESS CONDUIT AND/OR CONDUCTORS ARE ASSOCIATED WITH EQUIPMENT. INDEPENDENTLY RUN CONDUIT AND CONDUCTORS MUST BE SUPPORTED FROM THE CEILING/WALL STRUCTURE.

15.9. ALL NON CONTINUOUS CONDUIT SYSTEMS FOR LAN CABLING SHALL BE INSTALLED COMPETE WITH GROUNDING BUSHINGS AND A GROUND WIRE CONNECTION TO THE NEAREST GROUNDING POINT. WHERE LAN CABLES ARE NOT RUN IN CONDUIT WITHIN CEILING SPACES, THEY SHALL BE RATED FT6 AND SUPPORTED ON J HOOKS IN ACCORDANCE WITH MANUFACTURERS INSTALLATION GUIDLEINES.

15.10. THE CONTRACTOR SHALL ADVISE THE CONSULTANT OF ANY COMMUNICATIONS CONDUIT LENGTHS IN EXCESS OF 70M PRIOR TO INSTALLATION.

15.11. INSTALL ALL WIRING IN CONDUIT UNLESS NOTED OTHERWISE, MINIMUM SIZE – 1/2" (16mm).

15.12. THE MINIMUM SIZE FOR TELECOMMUNICATIONS CONDUITS SHALL BE 3/4" (21mm).

15.13. MINIMUM SIZE CONDUIT FOR LAN SYSTEM SHALL BE 3/4" (21mm).

16. CABLE TRAYS
16.1. CABLE TRAY FITTINGS TO: EEMAC F5-1

16.2. CABLE TRAY SHALL BE cUL LISTED AND TYPE AND DIMENSIONS AS INDICATED ON DRAWINGS.

16.3. FITTINGS: HORIZONTAL ELBOWS, END PLATES, DROP OUTS, VERTICAL RISERS AND DROPS, TEES, WYES, EXPANSION JOINTS AND REDUCERS WHERE REQUIRED MANUFACTURED ACCESSORIES FOR CABLE TRAY SUPPLIED. RADII ON FITTINGS TO SUIT APPLICATION AND INSTALLATION.

16.4. ACCEPTABLE MANUFACTURERS:
16.4.1. HUBBELL, LEGRAND CABLOFIL, CANADIAN ELECTRICAL RACEWAYS

16.5. HANGERS AND SUPPORTS
16.5.1. PROVIDE SUPPORTS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND TO SUIT LOADING OF CABLE TRAYS.

16.6. EXECUTION
16.6.1. INSTALL COMPLETE CABLE TRAY SYSTEM
16.6.2. INSTALL #6 AWG GREEN INSULATED GROUND WIRE AND BOND TO EACH SECTION AND FITTING.
16.6.3. REMOVE SHARP BURRS AND PROJECTIONS TO PREVENT DAMAGE TO CABLES OR INJURY TO PERSONS.

17. EXIT SIGNS
EXIT LIGHTS TO BE GREEN 'RUNNING MAN' LED EDE SERIES FLAT TRIM (FULLY RECESSED) TYPE UNLESS OTHERWISE NOTED.

17.1. BACK-TO-WALL, CEILING MOUNTED, SUSPENDED, SINGLE SIDED, DOUBLE SIDED AS INDICATED ON DRAWINGS.

17.2. ACCEPTABLE MANUFACTURERS ARE:
17.2.1. EMERGI-LITE, LUMACELL, BEGHELLI, AIMLITE

17.3. INSTALL EXIT SIGNS IN ACCORDANCE TO NATIONAL BUILDING CODE.

17.4. MOUNT EXIT LIGHTS ON CEILING OR WALL AND ORIENT FOR PROPER EXITING DIRECTION AS INDICATED ON DRAWINGS.

17.5. CHAIN HANG EXIT LIGHT FROM CEILING SLAB.

18. OUTLET BOXES, PULLBOXES AND JUNCTION BOXES
18.1. BOXES – CODE GAUGE, GALVANIZED PRESSED STEEL, GALVANIZED CAST STEEL AND RIGID PVC TO CSA C22.2 NO. 18.

18.2. USE MULTI-GANG BOXES WHERE DEVICES ARE GROUPED.

18.3. USE PRESSED STEEL BOXES WITH EMT CONDUIT, USE CAST STEEL BOXES WITH RIGID METAL CONDUIT AND USE RIGID PVC BOXES WITH RIGID PVC CONDUIT.

18.4. USE SINGLE AND MULTI-GANG PRESSED STEEL BOXES FOR FLUSH INSTALLATIONS IN STUD WALLS WITH EXTENSION RINGS AS REQUIRED.

18.5. USE 102MM SQUARE BOXES OR OCTAGON BOXES FOR OUTLETS IN CEILING SPACES.

18.6. USE CONCRETE BOXES FOR FLUSH INSTALLATIONS IN POURED CONCRETE. PROVIDE EXTENSION RINGS AS REQUIRED.

18.7. INSTALL ALL DEVICES FLUSH MOUNTED IN FINISHED AREAS UNLESS OTHERWISE INDICATED.

18.8. PROVIDE PULLBOXES AND JUNCTION BOXES WHEREVER NECESSARY TO FACILITATE CONDUCTOR/CONDUIT INSTALLATIONS. GENERALLY, PROVIDE CONDUIT RUNS EXCEEDING 30 METRES IN LENGTH OR WITH MORE THAN 3 NO 90 DEGREE BENDS WITH PULLBOX INSTALLED AT CONVENIENT AND SUITABLE INTERMEDIATE ACCESSIBLE LOCATION. PROVIDE JUNCTION BOXES AND PULLBOXES SIZED IN ACCORDANCE WITH CODE TO SUIT NUMBER AND SIZE OF CONDUITS AND CONDUCTORS.

18.9. OUTLET BOXES FOR POWER AND LIGHTING TO BE SINGLE GANG. WHERE MULTIPLE OUTLETS OR LIGHT SWITCHES ARE INDICATED PROVIDE MULTI GANG BOXES AND MATCHING SINGLE COVER PLATE TO SUIT.

18.10. FLOOR BOXES FOR POWER AND DATA/TELEPHONE ARE TO BE COMPARTMENTALIZED (SEPARATING SERVICES), STEEL POKE-THRU TYPE WITH STEEL FLUSH FITTING COVER PLATES. ACCEPTABLE MANUFACTURER: WIREMOLD (6ATC EVOLUTION MULTI-SERVICE POKE-THRU DEVICE SERIES), HUBBELL, OR APPROVED EQUIVALENT.

18.11. OUTLET BOXES FOR LAN SYSTEM TO BE 102MM SQUARE, DEEP BOX WITH SINGLE GANG PLASTER RING FOR DRYWALL FINISHES.

18.12. PROVIDE SEPARATE OUTLET BOXES FOR POWER, LIGHTING AND LAN SYSTEMS.

18.13. LAN AND SECURITY CONDUIT SYSTEMS, INSTALL PULL BOX AT EVERY 30METRES IN LENGTH OR AFTER EVERY 2NO 90 DEGREE BENDS. CONDUITS MUST ENTER AND EXIT THE PULL BOXES AT 180 DEGREES TO EACH OTHER. CONDUITS FOR LAN SYSTEMS TO BE SIZED IN ACCORDANCE WITH TIA-569.

19. WIRE AND CABLE
19.1. CONDUCTORS: ASTM CLASS B, SOFT, BARE, STRANDED ELECTROLYTIC COPPER.

19.2. CONDUCTORS #8 AWG AND LARGER: XPLE INSULATION TO CSA C22.2 NO. 38. RW90 XPLE, 90 C, 600V INSULATION.

19.3. CONDUCTORS #14 TO #10 AWG: THERMOPLASTIC INSULATION TO CSA C22.2 NO. 75M. T90 NYLON 90 C, 600V INSULATION.

19.4. USE T90 NYLON CONDUCTORS FOR RECEPTACLE AND BRANCH CIRCUIT WIRING.

19.5. USE RW90 CONDUCTORS FOR ALL EQUIPMENT FEEDERS.

19.6. AC90 CABLE, 600 V, 90 C TO CSA 22.2 NO. 51.

19.7. REFER TO DRAWINGS FOR SIZING OF CONDUCTORS. GENERALLY, BRANCH CIRCUIT CONDUCTOR SIZES ARE INDICATED ON CONSULTANT'S DRAWINGS. SUCH SIZES ARE MINIMUM REQUIREMENTS AND MUST BE INCREASED, TO SUIT LENGTH OF RUN AND VOLTAGE DROP. CONDUCTORS NOT SIZED ON DRAWINGS SHALL BE SIZED IN ACCORDANCE WITH OESC. MAXIMUM 2% VOLTAGE DROP IS PERMITTED.

19.8. CONDUCTORS FOR RUNS LONGER THAN 21M SHALL BE NO. 10 AWG AND FOR RUNS OVER 39M SHALL BE NO. 8AWG. DO NOT USE CONDUCTORS SMALLER THAN NO. 12 AWG UNLESS OTHERWISE NOTED.

19.9 CONDUCTORS IN PLENUM SPACES AND IN RAISED FLOOR AREAS SHALL COMPLY WITH NATIONAL BUILDING CODE REQUIREMENTS WITH REGARDS TO FLAME AND SMOKE TEST FT6 (PLENUM RATED).

19.10 USE AC90 CABLE FOR CONNECTIONS FROM CEILING BOXES TO LUMINAIRES IN CONCEALED CEILINGS. THE LENGTH OF AC90 CABLE FROM THE JUNCTION BOX TO THE LUMINAIRE NOT TO EXCEED 1200MM.

19.11 USE AC90 CABLE CONCEALED IN DRYWALL WALLS, PLASTER WALLS, BLOCK WALLS, STUD PARTITIONS FOR RECEPTACLES AND LIGHTING SWITCHES ONLY. THE LENGTH OF AC90 CABLE FROM THE JUNCTION BOX TO THE OUTLET NOT TO EXCEED 3600MM.

19.12 Bx #12 MAY BE USED IN CEILING SPACE FROM BOX DOWN TO RECEPTACLES IN PARTITIONS. Bx RUNS SHALL NOT EXCEED 10' IN LENGTH AND SHALL NOT TERMINATE TO PANELS.

19.13 PROVIDE A 6MM POLYPROPYLENE PULL LINE IN EACH EMPTY CONDUIT.
19.14 MINIMUM CONDUCTOR SIZES: POWER (#12 AWG), LIGHTING (#12 AWG), CONTROL (#14 AWG)

20. WIREWAY
20.1 PROVIDE LOW-PROFILE, DURABLE WIREWAY AS INDICATED ON DRAWINGS
20.2 INSTALLATION SHALL REQUIRE NO CORE DRILLING OR TRENCHING.
20.3 COORDINATE POWER AND TELECOM COMPONENTS ACCORDING TO LOCATION AND ROUTING REQUIREMENTS. PROVIDE PRE-WIRED POWER COMPONENTS AS REQUIRED.
20.4 FINISHES SHALL BE REVIEWED AND CONFIRMED BY ARCHITECT

21. PANELBOARDS
21.1 PANELBOARDS TO CSA 22.1 NO 29.

21.2 ENCLOSURES: DEAD FRONT CONSTRUCTION, CODE GAUGE STEEL NEMA 2.

21.3 BUS: COPPER INCLUDING HALF CAPACITY GROUND BAR AND 200% NEUTRAL BAR. BRACED FOR MINIMUM INTERRUPTING CAPACITY OF 14KA RMS SYMMETRICAL.

21.4 CIRCUIT BREAKERS: BOLT-ON, QUICK-MAKE, QUICK-BREAK, THERMAL AND MAGNETIC TRIPS, TRIP INDICATING, TRIP FREE HANDLE. MINIMUM INTERRUPTING CAPACITY 14KA RMS SYMMETRICAL, TO CSA C22.2 NO 5. MULTI-POLE BREAKERS TO HAVE COMMON HANDLE.

21.5 PROVIDE 2 KEYS PER PANEL BOARD, ALL PANELS KEYED ALIKE.

21.6 ACCEPTABLE MANUFACTURER: SQUARE D OR APPROVED EQUAL.

21.7 CONTRACTOR TO VERIFY AND MAKE NECESSARY ADJUSTMENTS TO ENSURE THAT LOADING ON EACH PHASE OF EXISTING AND NEW PANELBOARDS IS BALANCED. PROVIDE CONSULTANT WITH A PHASE LOADING REPORT. UNBALANCE LOAD SHALL BE LESS THAN 5%.

21.8 PROVIDE A CIRCUIT LOCK-ON DEVICE FOR FIRE ALARM, EMERGENCY LIGHTING, NIGHT LIGHTS, SECURITY AND EXIT LIGHTS CIRCUITS.

21.9 WHERE CIRCUITS ARE BEING ADDED TO EXISTING PANELBOARDS, PROVIDE BREAKERS OF TYPE TO MATCH EXISTING DEVICES. QUALITY AND STANDARDS OF BREAKERS SHALL MATCH EXISTING. CONFIRM REQUIREMENTS ON SITE PRIOR TO ORDERING.

22. WIRING DEVICES
22.1 SWITCHES: COMMERCIAL GRADE BACK AND SIDE WIRED, WITH GROUND SCREW TO CSA C22.2 NO 111, 15 AND 20 AMP AS REQUIRED, 1 POLE, 125V WHITE DECORATOR TYPE.

22.2 RECEPTACLES: COMMERCIAL GRADE BACK AND SIDE WIRED. WITH GROUND SCREW TO CSA C22.2 NO 111, 15 AND 20 AMP AS REQUIRED, 1 POLE, 125V WHITE DECORATOR TYPE.

22.3 SURGE PROTECTION DEVICE (SPD): TYPE 1 SURGE PROTECTIVE DEVICE. 100kA – 200kA PER PHASE RATING. MODEL (TE02XDS154XA2) MANUFACTURER: ADVANCED PROTECTION TECHNOLOGIES (APT), SIEMENS, OR APPROVED EQUAL.

23. MOUNTING HEIGHTS AND DIMENSIONS
23.1 INSTALL THE FOLLOWING DEVICES/EQUIPMENT AT THE MOUNTING HEIGHTS INDICATED BELOW (DIMENSIONS ARE TO TOP OF DEVICE/EQUIPMENT UNLESS NOTED OTHERWISE).
PANELBOARDS – 2000MM (6'-7") AFF
LIGHT SWITCH – 1200MM (4'-0") AFF
RECEPTACLE – FINISHED AREAS – 450MM (1'-6") AFF
RECEPTACLE – UNFINISHED AREAS – 1200MM (4'-0") AFF
LAN OUTLETS – FINISHED AREAS – 450MM (1'-6") AFF
LAN OUTLETS – UNFINISHED AREAS – 1200MM (4'-0") AFF
FURNITURE WHIP CONNECTIONS – 450MM (1'-6") AFF
FIRE ALARM PULL STATION – 1200MM (4'-0") AFF (CENTRE OF DEVICE)
FIRE ALARM END OF LINE DEVICE – 1400MM (4'-7") AFF
FIRE ALARM AUDIBLE DEVICES – MINIMUM OF 2400MM (8'-0") MM AFF AND MAXIMUM OF 450MM (1'-6") BELOW CEILING
FIRE ALARM VISUAL DEVICES – THE ENTIRE LENS IS NOT LESS THAN 2000MM (6'-7") AND NOT MORE THAN 2400MM (8'-0") AFF
CARD READERS – 950MM (3'-2") AFF
EMERGENCY BATTERY UNITS – 450MM (1'-6") BELOW CEILING
STARTERS/DISCONNECT SWITCHES – 1800MM (5'-11") AFF

24. IDENTIFICATION NAMEPLATES
24.1 FOR EACH PIECE OF ELECTRICAL DISTRIBUTION EQUIPMENT FROM ELECTRICAL SOURCE OF SUPPLY UP TO AND INCLUDING PANELBOARDS, RELAYS OR ANY OTHER DEVICE, PROVIDE ENGRAVED LAMACOID IDENTIFICATION NAMEPLATES SECURED TO APPARATUS, WORDING TO INDICATE SOURCE OF ELECTRICAL SUPPLY AND COLOUR, FORMAT AND SIZE TO MATCH BASE BUILDING.

24.2 PROVIDE REPLACEMENT BRANCH CIRCUIT DIRECTORY CARDS, NEATLY TYPEWRITTEN TO INCORPORATE ADDITIONAL AND EXISTING CONNECTED LOADS. TAG ALL CABLING. PROVIDE ADHESIVE LABELS ON EACH POWER RECEPTACLE IDENTIFYING THE PANEL AND THE CIRCUIT NUMBER. UNLESS NOTED OTHERWISE, LABEL SHALL BE WHITE WITH BLACK LETTERING.

24.3 PROVIDE 'P-TOUCH' LABELS ON ALL WIRING DEVICES TO REFLECT THE PANEL AND CIRCUIT NUMBERS. LABELS TO BE CLEAR WITH BLACK LETTERING, 5MM HIGH BOLD TYPE FACE,

25. GROUNDING
25.1. PROVIDE COMPLETE SYSTEM OF GROUNDING, WHICH COMPLIES WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION FOR ELECTRICAL WORK, INCLUDING REQUIRED GROUNDING SECTIONS OF OESC. CONNECT GROUNDING CONDUCTORS TO EXISTING BUILDING GROUND SYSTEM.

26. FIRE ALARM SYSTEM WORK
26.1. FIRE ALARM SYSTEM WORK, INCLUDING INTERCONNECTIONS SHALL BE PERFORMED BY THE OWNERS'S DESIGNATED CONTRACTOR AS A SUB-CONTRACTOR TO THIS TRADE. TEST AND VERIFY ALL DEVICES UPON COMPLETION AND SUBMIT LETTER OF CERTIFICATION LISTING THE FLOOR, DEVICE AND THE DATE TESTED.

26.2. NEW WORK TO BE AN EXTENSION OF EXISTING SYSTEM. PROVIDE DEVICES TO MATCH EXISTING AND BE COMPLETELY COMPATIBLE WITH EXISTING SYSTEM. PERFORM WORK AND TESTING IN ACCORDANCE WITH LATEST EDITIONS OF CAN/ULC_S524, -S536 AND -S537, AND LOCAL FIRE CODE HAVING JURISDICTION. UNLESS OTHERWISE NOTED, CONNECT ADDITIONAL DEVICES TO EXISTING ZONES SERVING AREA AND AS PER OESC REQUIREMENTS.

26.3. DURING WORK TO THE EXISTING FIRE ALARM SYSTEM THE TIME AND DURATION OF INTERRUPTION SHALL BE APPROVED BY THE OWNER/LANDLORD AND ONLY 1 ZONE SHALL BE INTERRUPTED AT ANY 1 TIME. IN ALL AREAS WHERE THE RENOVATION WORK REQUIRES SHUTDOWN OF ANY PART OF THE FIRE ALARM PROTECTION SYSTEM, PROVIDE MANUAL FIRE ALARM PROTECTION (FIRE WARDEN) BY MEANS OF SUPERVISING THE AREA AS APPROVED BY GOVERNING AUTHORITIES. AT NO TIME SHALL THE FIRE ALARM SYSTEM OR ANY 1 ZONE BE LEFT INOPERATIVE OVERNIGHT. PROVIDE ALL REQUIRED BYPASS WIRING AND TEMPORARY WIRING AS MAY BE REQUIRED TO MAINTAIN ALL PARTS OF THE FIRE ALARM SYSTEM OPERATIVE DURING CONSTRUCTION AND ALTERATIONS.

26.4. PROVIDE FIRE ALARM PULL STATION AT LOCATIONS OF ELECTROMAGNETICALLY LOCKED DOORS. PULL STATIONS SHALL BE C/W AUXILIARY CONTACTS FOR CONNECTIONS TO SECURITY SYSTEM TO RELEASE MAGLOCKS UPON FIRE ALARM SYSTEM AND PULL STATION ACTIVATION. PROVIDE WIRING AND CONDUIT AND REQUIRED INTERCONNECTIONS TO SECURITY SYSTEM. CO-ORDINATE WORK WITH SECURITY SYSTEM CONTRACTOR. PROVIDE NATIONAL BUILDING CODE COMPLIANT MESSAGE SIGNAGE WITH "PULL STATION FOR EMERGENCY EXIT", ADJACENT PULL STATION.

26.5. COORDINATE WORK WITH MECHANICAL DIVISIONS WITH REGARDS TO INTERCONNECTIONS TO AIR HANDLING SYSTEMS, FIRE SUPPRESSION SYSTEMS, SUPERVISORY VALVES AND FLOW SWITCHES, BUILDING AUTOMATION SYSTEM, ETC. PERFORM SUCH INTERCONNECTIONS TO STANDARDS OF EXISTING SYSTEMS AND DOCUMENT IN SHOP DRAWINGS.

26.6. FIRE ALARM SYSTEM TO BE VERIFIED AND A SIGNED VERIFICATION REPORT PROVIDED TO THE ENGINEER. TWO COPIES OF THE FIRE ALARM VERIFICATION REPORT ARE TO BE PROVIDED TO BROOKFIELD PROPERTIES MANAGER PRIOR TO TENANT OCCUPATION. PROJECT MANAGER TO BE NOTIFIED FORTY-EIGHT (48) HOURS PRIOR TO FIRE ALARM VERIFICATION TESTING.

27. CIRCUITRY
27.2. CIRCUITRY SHOWN ON PLANS IS FOR GROUPING PURPOSES ONLY. EXACT CIRCUITS ARE TO BE DETERMINED ON SITE BASED ON AVAILABILITY. RECORD FINAL CIRCUITRY ARRANGEMENT ON PANEL DIRECTORY AND ON "AS-BUILT" DRAWINGS.

27.3. POWER RECEPTACLES MOUNTED ON DEMISING/FIRE RATED PARTITIONS TO HAVE 2LB./SQ.FT SHEET LEAD BARRIER INSTALLED BEHIND AND EXTENDING 6" IN EACH SIDE OF THE OUTLET.

27.4. CIRCUITRY SHOWN ON PLANS AS EXISTING SHALL BE VERIFIED FOR CONTINUITY ON SITE BY THIS CONTRACTOR PRIOR TO COMMENCING NEW WORK. VERIFY THAT NO MORE THAN SIX (6) DUPLEX RECEPTACLES ARE CONNECTED TO ANY ONE CIRCUIT. RECORD EXISTING CIRCUITRY ON PANEL DIRECTORY AND ON "AS-BUILT' DRAWINGS.

28. LIGHTING SYSTEM
28.1. TEMPORARY LIGHTING SHALL BE PROVIDED THROUGHOUT THE PROJECT IN BOTH HARD CEILINGS AND IN T-BAR CEILINGS AREAS, WHERE REQUIRED BY THE GENERAL CONTRACTOR.

28.2. THOROUGHLY REVIEW CEILING TYPES, FINISHES AND CONSTRUCTION DETAILS WITH ARCHITECT/INTERIOR DESIGNER BEFORE PLACING LUMINAIRE ORDERS AND ENSURE REQUIRED FIXTURE PARTS ARE INCLUDED. CONFIRM LUMINAIRE LOCATIONS PRIOR TO ROUGHING_IN AND INSTALL IN ACCORDANCE WITH APPLICABLE ARCHITECTURAL REFLECTED CEILING PLANS, LOCATIONS AND/OR WALL ELEVATIONS.

28.3. SUPPORT NEW AND/OR RELOCATED LUMINAIRES DIRECTLY TO CEILING SLAB STRUCTURE, NOT TO CEILING HANGERS, DUCTWORK, PIPING, CABLE TRAYS, ETC.

28.4. FLUORESCENT LUMINAIRES, UNLESS NOTED OTHERWISE, SHALL BE CONNECTED TO EXISTING LIGHTING CIRCUITS SERVING THE SPACE OR AT ADJACENT CEILING JUNCTION BOXES. LAMP COLOUR TEMPERATURES SHALL MATCH EXISTING STANDARDS. PROVIDE SWITCHING WHERE INDICATED ON PLANS. MULTIPLE SWITCHES TO BE GANGED UNDER A COMMON COVERPLATE.

28.5. ALL LUMINAIRES, FLUORESCENT AND INCANDESCENT, NEW AND EXISTING SHALL BE CIRCUITED TO MAINTAIN THE BUILDING LIGHTING SYSTEM ZONES (WHERE APPLICABLE).

28.6. WHERE AN EXISTING LIGHTING CIRCUIT SERVES MORE THAN ONE TENANT, PROVIDE RELAY(S) AS REQUIRED FOR INDEPENDENT CONTROL AT DEMISING PARTITION AND INTERLOCK WITH THE BUILDING AUTOMATION SYSTEM. INSTALL RELAYS IN/ADJACENT TO THE EXISTING LIGHTING CONTROL PANEL IN THE 9TH FLOOR ELECTRICAL ROOM.

28.7. WHERE NEW INCANDESCENT LUMINAIRES ARE SHOWN CONNECTED TO EXISTING ONES, CONTRACTOR TO VERIFY LOAD ON CIRCUIT TO ENSURE THAT IT WILL NOT BE OVERLOADED.

28.8. MASTER SWITCHES SHALL CONSIST OF RELAYS OR MULTIPLE POLE RELAYS AS REQUIRED TO OPERATE CIRCUITS INDICATED ON PLAN, AND SHALL BE ACTIVATED BY THE BASE BUILDING LIGHTING CIRCUIT SERVING THE RESPECTIVE DESIGNATED AREA. MULTIPLE SWITCHES (TOGGLE, DIMMER, ETC...) SHALL BE GANGED UNDER A COMMON COVERPLATE.

28.9. PROVIDE SEPARATE NEUTRAL WIRING FOR EACH CIRCUIT SERVING LUMINAIRES LOCALLY CONTROLLED BY DIMMERS AND/OR SWITCHES.

29. LUMINAIR SCHEDULE
29.1. REFER TO LUMINAR SCHEDULE AS INDICATED ON DRAWINGS.

30. LIGHTING CONTROLS
30.1. LIGHTING CONTROL SHALL BE AS INDICATED ON DRAWINGS.

30.2. WALL MOUNTED OCCUPANCY SENSOR SWITCH SHALL BE DUAL TECHNOLOGY TYPE WITH BUILT-IN OFF/AUTO/MANUAL SWITCH. FULL AUTO ADJUSTMENT SENSITIVITY AND TIMING ADJUSTMENT. PROGRAMMABLE WITH SELF-ADAPTIVE TECHNOLOGY. WATTSTOPPER MODEL DSW-301 OR APPROVED EQUAL. (OFFICES, STORAGE, ETC.)

31. EMERGENCY LIGHTING
31.2. EMERGENCY LIGHTING SHALL BE FED FROM THE EXISTING EMERGENCY CIRCUIT WHERE POSSIBLE. EMERGENCY CIRCUIT LOADING NOT TO SURPASS 70%. NEW EMERGENCY CIRCUITS ARE TO BE PROVIDED AS NECESSARY.

31.3. INCLUDE FOR AND PROVIDE TESTING OF EMERGENCY SYSTEM AND MEASUREMENT OF LIGHT LEVELS TO MEET NATIONAL BUILDING CODE REQUIREMENTS OF 1 LUX MINIMUM, 10 LUX AVERAGE. OBTAIN LOCAL INSPECTION APPROVALS. INCLUDE REQUIRED TEST MEASUREMENTS IN REPORT, SUBMIT LETTER OF CERTIFICATION, LISTING THE FLOOR AND THE DATE OF TEST.

32. SHOP DRAWINGS AND OPERATING/MAINTENANCE INSTRUCTION MANUALS
32.1. SUBMIT SHOP DRAWINGS AND OPERATING/MAINTENANCE INSTRUCTION MANUALS FOR FIXTURES AND EQUIPMENT WITHIN 7 DAYS OF AWARD OF CONTRACT FOR REVIEW BY THE CONSULTANT AND OWNER.

32.2. PROPERLY IDENTIFY ELECTRONIC SHOP DRAWINGS FOR REVIEW AND SHOW IN DETAIL EQUIPMENT AND MATERIALS. ENDORSE EACH DRAWING; INCLUDE COMPANY NAME AND SUBMITTAL DATE.

33. RECORD DRAWINGS (AS-BUILTS)
33.1. WHEN WORK BEGINS AT SITE, CLEARLY AND ACCURATELY MARK ON A BOUND SET OF WHITE PRINTS OF CONTRACT DRAWINGS, ON A DAILY BASIS, ALL CHANGES AND DEVIATIONS FROM ROUTING AND LOCATIONS OF EQUIPMENT SHOWN ON CONTRACT DRAWINGS, CHANGES AND DEVIATIONS INCLUDING THOSE MADE BY ADDENDA, CHANGE NOTICES, AND SITE INSTRUCTIONS, AND CHANGES AND DEVIATIONS INDICATED ON SUPPLEMENTAL DRAWINGS ISSUED WITH ADDENDA, CHANGE NOTICES, AND SITE INSTRUCTIONS. MAINTAIN "AS-BUILT" WHITE PRINTS AT SITE FOR PERIODIC INSPECTION BY CONSULTANT THROUGHOUT DURATION OF WORK.

33.2. WHEN WORK ENDS AT SITE, UPDATE A COMPUTER FILE COPY OF CONTRACT DOCUMENT DRAWING SET SO THAT IT REFLECTS ALL DEVIATIONS FROM ORIGINAL CONTRACT DOCUMENT DRAWINGS, THUS FORMING A TRUE "AS-BUILT" DRAWING DISK SET. RECORD ALL CHANGES MADE DURING CONSTRUCTION ON A SEPARATE RED LINE LAYER LABELED: "CONTRACTOR_AS-BUILT". SUBMIT ELECTRONIC COPY (AUTOCAD 2004) OF "AS-BUILT" TO THE ENGINEER FOR REVIEW AND APPROVAL.

33.3. TWO SETS OF AS-BUILT DRAWINGS ARE TO BE PROVIDED TO THE LANDLORD INCLUDING AN ELECTRONIC COPY FOR FUTURE REFERENCE AND USE.

33.4. UPDATE LANDLORD'S DISTRIBUTION RISER DIAGRAMS POSTED IN ELECTRICAL ROOMS.

34. WARRANTY
34.1. WARRANT WORK TO BE IN STRICT ACCORDANCE WITH CONTRACT DOCUMENTS AND FREE FROM DEFECTS FOR ONE (1) YEAR PERIOD FROM DATE OF WRITTEN ACCEPTANCE BY CONSULTANT. REPAIR AND/OR REPLACE ANY SUCH DEFECTS WHICH APPEAR IN WORK WITHIN WARRANTY PERIOD, ORDINARY WEAR AND TEAR AND WILFUL DAMAGE BY, OR CARELESSNESS OF OWNER'S STAFF OR AGENTS EXCEPTED, WITHOUT ADDITIONAL EXPENSE TO OWNER. WHERE SUCH DEFECTS OCCUR, BE RESPONSIBLE FOR COSTS INCURRED IN MAKING DEFECTIVE WORK GOOD, INCLUDES REPAIR OR REPLACEMENT OF BUILDING FINISHES, OTHER MATERIALS, OR DAMAGE TO OTHER EQUIPMENT CAUSED BY SUCH DEFECTS, OR BY SUBSEQUENT REPLACEMENT OR REPAIRS.

35. TESTING, COMMISSIONING, DEMONSTRATION OF USE & OPERATION OF SYSTEMS
35.1. ELECTRICAL SYSTEMS DEMONSTRATION WILL BE PERFORMED BY THE RESPECTIVE VENDOR/CONTRACTOR, TO THE OWNER. DEMONSTRATION TO TAKE PLACE AFTER SYSTEMS ARE TESTED AND/OR COMMISSIONED AND BEFORE TURNOVER OF SYSTEMS TO OWNER.

35.2. SUBMIT AMPERAGE READING FOR EACH PHASE OF EACH TRANSFORMER, AFTER LOADS HAVE BEEN BALANCED.

35.3. CONFIRMATION THAT ALL ELECTRICAL PANELS HAVE BEEN TAGGED WITH LAMICOID NAMEPLATES AND TYPED DIRECTORIES AND ALL PERMITS HAVE BEEN CLOSED.

36. FINAL ELECTRICAL SAFETY AUTHORITY CERTIFICATE
36.1. CERTIFICATE SHALL BE SUBMITTED UPON COMPLETION OF CONTRACT. FINAL PAYMENT SHALL BE SUBJECT TO RECEIPT OF THIS CERTIFICATE.

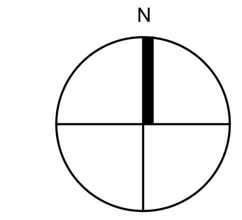
37. CLEANING UP
37.1. DURING CONSTRUCTION, KEEP SITE REASONABLY CLEAR OF RUBBISH AND WASTE MATERIAL RESULTING FROM WORK ON DAILY BASIS. AFTER COMPLETION OF WORK, REMOVE RUBBISH AND DEBRIS, ARRANGE AND PAY FOR REPAIR OF DAMAGES CAUSED AND LEAVE PREMISES AND WORK IN GOOD ORDER.

38. ELECTRICAL SHUT DOWNS
38.1. ALL ELECTRICAL SHUT DOWNS ARE TO BE COORDINATED WITH LANDLORD PROJECT MANAGER AND GENERAL CONTRACTOR A MINIMUM OF THREE (3) WEEKS PRIOR TO TIME OF PLANNED SHUT DOWN.

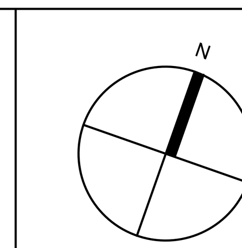
THIS DRAWING, AS AN INSTRUMENT OF SERVICES, IS THE PROPERTY OF THE ARCHITECT AND MAY NOT BE REPRODUCED WITHOUT HIS PERMISSION AND UNLESS THE REPRODUCTION CARRIES HIS NAME. ALL DESIGN AND OTHER INFORMATION SHOWN ON THIS DRAWING ARE FOR USE ON THIS SPECIFIC PROJECT ONLY AND SHALL NOT BE USED OTHERWISE WITHOUT WRITTEN PERMISSION OF THE ARCHITECT. WRITTEN DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THE ARCHITECT SHALL BE INFORMED OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THE DRAWING. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL BEFORE PROCEEDING WITH FABRICATION.

REVISIONS/SUBMISSIONS

No.	DATE	DESCRIPTION
01.	NOV 6, 2024	ISSUED FOR REVIEW
02.	NOV 18, 2024	ISSUED FOR 60% DD
03.	JAN 06, 2025	ISSUED FOR PERMIT
04.	JAN 30, 2025	ISSUED FOR CLIENT'S REVIEW - PRE TENDER
05.	SEP 12, 2025	ISSUED FOR CLIENT'S REVIEW
06.	SEP 25, 2025	ISSUED FOR RE-COSTING CLASS B
07.	OCT 03, 2025	ISSUED FOR PERMIT
08.	OCT 08, 2025	ISSUED FOR TENDER



PROJECT NORTH



TRUE NORTH

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Professional Engineering Design Services

Project Title
MISSISSAUGA
COMFORT STATION HURON PARK
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Sheet Title
ELECTRICAL SPECIFICATIONS

Project Number	24-123
Date	OCTOBER 2025
Drawn	N.Y.
Checked	F.R.B.
Scale	AS SHOWN
Drawing Number	E103