

NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS FOR CITY OF NIAGARA FALLS 3200 STANLEY AVENUE



DRAWING SCHEDULE	
DWG NO	DRAWING TITLE
ARCHITECTURAL	
A0-100	ASSEMBLIES + LEGENDS, ROOM FINISH SCHEDULE AND EXISTING SITE PLANS
A0-200	OBC, EXITS + FRR PLANS
A2-100	FLOOR PLAN - EX. OFFICE, MECH. MEZZ & ROOF
A2-101	FLOOR PLAN - EX. SERVICE AREAS
A2-102	FLOOR PLAN - EX. EAST MEZZANINE
A2-103	FLOORING FINISH PLAN AND NOTES
A2-104	SHELVING LAYOUT
A2-105	SHELVING LAYOUT - MEZZ
A5-100	TYP. SECTION DETAILS
A7-100	DOOR + FRAME SCHEDULES & MECH. PENTHOUSE SECTION
A8-100	TYP. REPAIR PHOTOS

A8-101 TYP. REPAIR PHOTOS	
STRUCTURAL	
S1	FOUNDATION PLAN SECTION NOTES
S2	GROUND FLOOR PLAN - LOADS
S3	MEZZANINE PLAN JOIST ELEVATION, SECTIONS AND DETAILS
S4	CONDENSER UNIT PLAT. FRAMING PLAN, OFFICE ROOF & MECH PLANS, GENERATOR PAD AND SECTIONS
S5	TYPICAL DETAILS
SP1	PLAN VIEW SECTIONS AND DETAILS, SPECIFICATIONS
MECHANICAL	
M-100	LEGENDS AND SCHEDULES
M-101	SCHEDULES 2
M-102	DETAILS
M-103	CONTROLS 1
M-104	CONTROLS 2

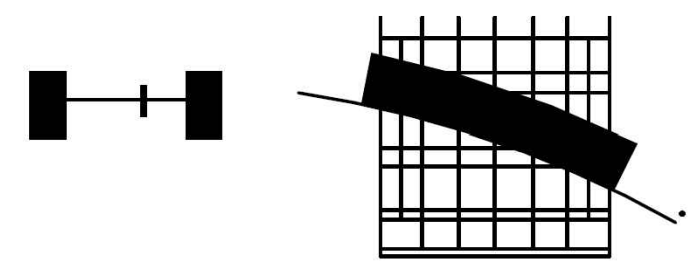
M-105	SPECIFICATIONS 1
M-106	SPECIFICATIONS 2
M-200	NATURAL GAS SCHEMATIC
M-201	DEMOLITION PLUMBING SERVICE CENTRE
M-202	DEMOLITION PLUMBING EAST GROUND FLOOR AND MEZZANINE
M-210	WASTE OIL PLUMBING PLAN
M-211	REVISED PLUMBING SERVICE CENTRE
M-212	REVISED PLUMBING EAST GROUND FLOOR AND MEZZANINE
M-300	DEMOLITION HVAC GROUND FLOOR AND MECHANICAL MEZZANINE
M-301	DEMOLITION HVAC SERVICE CENTRE
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M-303	DEMOLITION HVAC WEST ROOF
M-304	DEMOLITION HVAC ROOF CENTRAL
M-305	DEMOLITION HVAC EAST ROOF

M-310	REVISED HVAC GROUND FLOOR AND MECHANICAL MEZZANINE
M-311	REVISED HVAC SERVICE CENTRE
M-312	REVISED HVAC EAST GROUND FLOOR AND MEZZANINE
M-313	REVISED HVAC WEST ROOF
M-314	REVISED HVAC CENTRAL ROOF
M-315	REVISED HVAC EAST ROOF
M-320	REVISED HVAC EAST GROUND FLOOR AND MEZZANINE SECTIONS
ELECTRICAL	
E000	GENERAL NOTES, DRAWING LIST, LEGEND ND FIXTURE SCHEDULE
E100	SITE PLAN
E200	DEMOLITION LIGHTING - GROUND FLOOR AND MECHANICAL MEZZANINE
E201	DEMOLITION LIGHTING - SERVICE CENTRE
E202	DEMOLITION LIGHTING - EAST GROUND FLOOR AND MEZZANINE
E300	REVISED LIGHTING - GROUND FLOOR AND MECHANICAL MEZZANINE

E301	REVISED LIGHTING - SERVICE CENTRE
E302	REVISED LIGHTING - EAST GROUND FLOOR AND MEZZANINE
E400	DEMOLITION POWER & SYSTEMS - GROUND FLOOR AND MECHANICAL MEZZANINE
E401	DEMOLITION POWER & SYSTEMS - SERVICE CENTRE
E402	DEMOLITION POWER & SYSTEMS - EAST GROUND FLOOR AND MEZZANINE
E403	DEMOLITION POWER & SYSTEMS - WEST ROOF
E404	DEMOLITION POWER & SYSTEMS - CENTRAL ROOF
E405	DEMOLITION POWER & SYSTEMS - EAST ROOF
E406	DEMOLITION POWER & SYSTEMS - MUNICIPAL TRUCK WASH AND SMALL ENGINE BUILDING
E500	REVISED POWER & SYSTEMS - GROUND FLOOR AND MECHANICAL MEZZANINE
E501	REVISED POWER & SYSTEMS - SERVICE CENTRE
E502	REVISED POWER & SYSTEMS - EAST GROUND FLOOR AND MEZZANINE
E503	REVISED POWER & SYSTEMS - WEST ROOF
E504	REVISED POWER & SYSTEMS - CENTRAL ROOF

E505	REVISED POWER & SYSTEMS - EAST ROOF
E506	REVISED POWER & SYSTEMS - MUNICIPAL TRUCK WASH AND SMALL ENGINE BUILDING
E600	DEMOLITION SINGLE LINE DIAGRAM
E601	NEW SINGLE LINE DIAGRAM
E700	ELECTRICAL DETAILS
E800	PANEL SCHEDULES

GENERAL NOTES



RAIMONDO + ASSOCIATES
ARCHITECTS INC.

SEI
Electrical Engineering

ACA
ENGINEERING SERVICES LIMITED

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR CONSTRUCTION	MAY 07, 2021	P.G.
3	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
2	RE-ISSUED FOR PERMIT	DEC. 03, 2020	P.G.
1	RE-ISSUED FOR PERMIT	NOV. 06, 2020	P.G.
0	ISSUED FOR PERMIT	SEPT. 4, 2020	P.G.

REVISIONS

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PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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DRAWING TITLE:
COVER SHEET

SCALE: N.T.S.	DRAWING No.:
PROJECT: 20-201-010	G-000

PLOT DATE: May 7, 2021

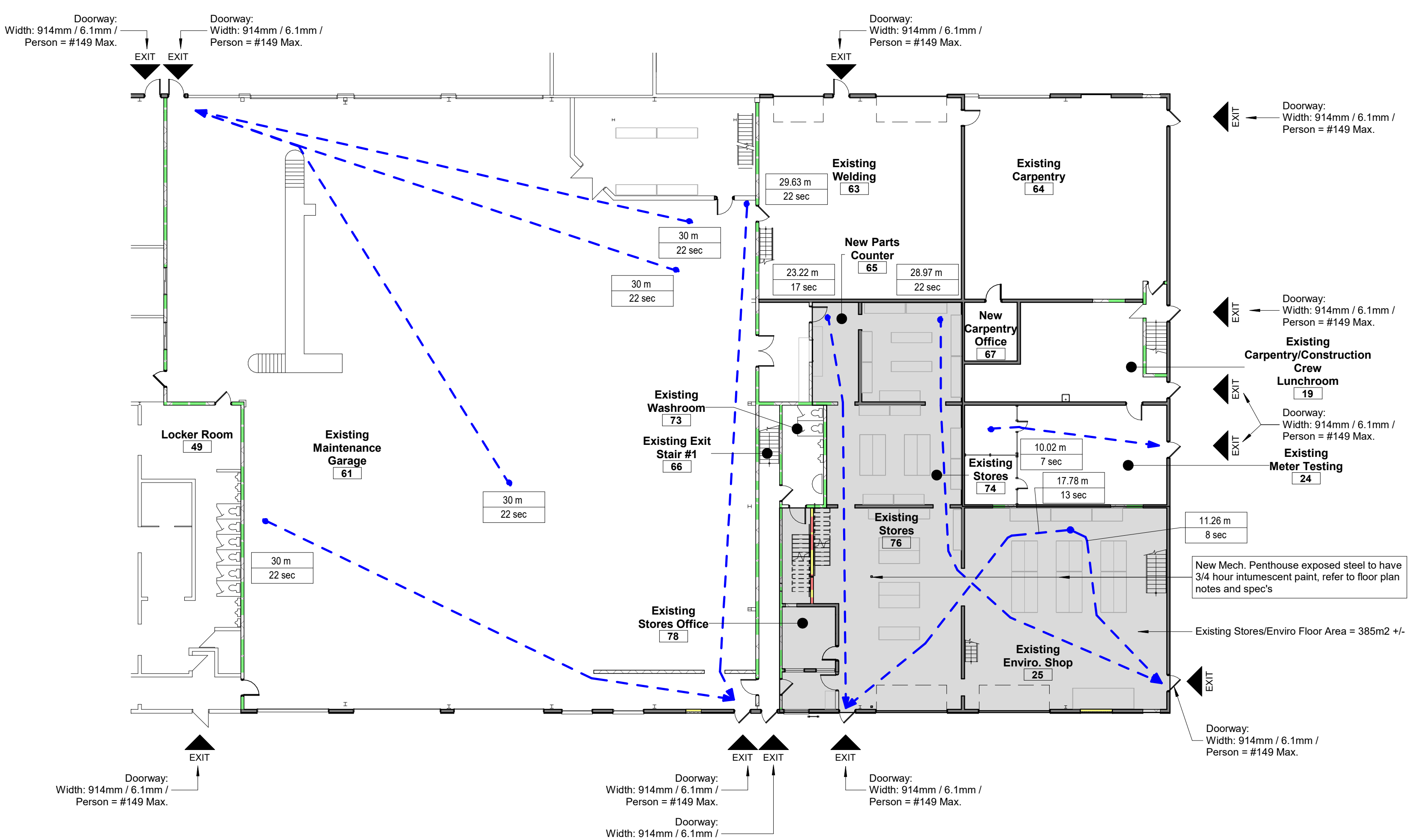
Project Name			Ontario Building Code Reference		
Item	Ontario Building Code Data Matrix Parts 3 & 9				
1.	Project Description <input type="checkbox"/> New <input type="checkbox"/> Addition <input type="checkbox"/> Change of Use <input type="checkbox"/> Alteration	Part 11 11.1 to 11.4	<input type="checkbox"/> Part 3 1.1.2 [A]	<input type="checkbox"/> Part 9 1.1.2 [A] 9.10.1.3	
2.	Major Occupancy(s)	F2 - Service Centre	3.1.2.1.(1)	9.10.2	
3.	Building Area (m²)	Existing: 2,972 New: Total: 2,972	1.4.1.2 [A]	1.4.1.2 [A]	
4.	Gross Area (m²)	Existing: 422 New: 51.4 Total: 473.4	1.4.1.2 [A]	1.4.1.2 [A]	
5.	Number of Storeys	Above Grade: 2 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: 2		3.2.2.10 & 3.2.5		
7.	Building Classification:	Existing 11.2.1.(1)(3)	3.2.2.20-.83	9.10.2	
8.	Sprinkler System Proposed:	<input type="checkbox"/> Entire Building (For Insurance Purposes) <input type="checkbox"/> Basement Only <input type="checkbox"/> In Lieu of Roof Rating <input checked="" type="checkbox"/> Not Required	3.2.2.20-83 3.2.1.5 3.2.2.17 INDEX	9.10.8.2 INDEX	
9.	Standpipe Required:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.9	N/A	
10.	Fire Alarm Required:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.4	9.10.18	
11.	Water Service/Supply is Adequate:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.2.5.7	N/A	
12.	High Building:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.6	N/A	
13.	Permitted Construction:	<input type="checkbox"/> Combustible <input type="checkbox"/> Non-Combustible <input checked="" type="checkbox"/> Both Actual Construction: <input type="checkbox"/> Combustible <input checked="" type="checkbox"/> Non-Combustible <input type="checkbox"/> Both	3.2.2.20-83	9.10.6	
14.	Importance Category:	<input type="checkbox"/> Low <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High <input type="checkbox"/> Post-disaster	4.1.2.1.(3) 5.2.2.1.(2)	9.4.1.1, 4.1.2.1.(3) 5.2.5.1.(2)	
	Site Class (A,B,C,D,E from Geotechnical Report)	<u>D</u>	4.1.8.4	4.1.8.4	
	Earthquake Importance Factor (I _e)	<u>1.0</u>	T.4.1.8.5	T.4.1.8.5	
	Acceleration Based Coefficient (F _a)	<u>1.135</u>	T.4.1.8.4.B	T.4.1.8.4.B	
	5% Spectral Response Acceleration S _s (0.2)	<u>.321</u>	4.1.8.4.(1) & SB-1, T.1.2	4.1.8.4.(1) & SB-1, T.1.2	
	Seismic Hazard Index	I _e F _a S _s (0.2) = 0.41	4.1.8.18.(1)	4.1.8.18.(1)	
	Design for Seismic Required for Categories 6 to 21. Table 4.1.1.18. (Equal or Above 0.357) (Yes or No)	<u>Yes</u>	4.1.8.18.(2)	4.1.8.18.(2), 9.20.1.2 9.31.6.2.(3)	
15.	Occupant Load Based on:	<input type="checkbox"/> m²/person <input type="checkbox"/> Design of Building	3.1.17.1	9.9.1.3	
	First Floor Occupancy: F2 Load: 100 persons				
	Mezz. Occupancy: F2 Load: 20 persons				
16.	Barrier-Free Design:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Not Required)	3.8		
17.	Hazardous Substances:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.3.1.2 & 3.3.1.19		
18.	Required Fire Resistance Rating (FRR)	Horizontal Assemblies FRR (Hours) Listed Design No. or Description (SG-2)	3.2.2.20-83 & 3.2.1.4	9.5.2 9.10.1.3 (4) 9.10.8 9.10.9	
	Floors	3/4 Hours SB-2 / Existing			
	Roof	n/a Hours			
	Mezzanine	3/4 Hours ULC W407 / Existing			
	FRR of Supporting Members	Listed Design No. or Description (SG-2)			
	Floors	3/4 Hours SB-2 / Existing			
	Roof	n/a Hours			
	Mezzanine	3/4 Hours SB-2 / Existing			
19.	Spatial Separation - Construction of Exterior Walls		3.2.3	9.10.14	
	Wall	Area of EBF (m²) L.D. L/H or H/L	Permitted Max. % of Openings Proposed % of Openings	FRR (Hours) Listed Design or Description	Comb. Const. Nonc. Glazing Non-comb. Const.
	NE	-	-	0	-
	NW	-	-	0	-
	SE	-	-	0	-
	SW	-	-	0	-
20.	Other - Describe				

Firm Name: Raimondo + Associates Architects Inc.
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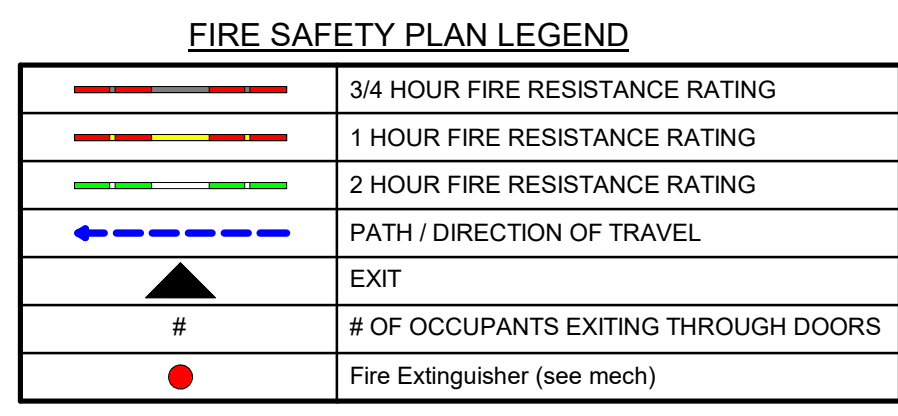
Name of Project: **Alteration to Service Centre**
Location: 3200 Stanley Ave, N.F

Ontario Building Code Data Matrix - Part 11 - Renovation of Existing Building			OBC Reference
11.1	Existing Building classification:	Describe Existing Use: Office and Service Centre (F2) Construction Index: n/a Hazard Index: n/a	11.2.1 T 11.2.1.1A T 11.2.1.1B to N
11.2	Alteration to Existing Building is:	Basic Renovation <input checked="" type="checkbox"/> Extensive Renovation <input type="checkbox"/>	11.3.3.1 11.3.3.2
11.3	Reduction in Performance Level:	Structural: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes By increase in occupant load: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes By change of major occupancy: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Plumbing: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Sewage-system: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	11.4.2 11.4.2.1 11.4.2.2 11.4.2.3 11.4.2.4 11.4.2.5
11.4	Compensating Construction:	Structural: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain) Increase in occupant load: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain) Change of major occupancy: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain) Plumbing: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain) Sewage-system: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explain)	11.4.3 11.4.3.2 11.4.3.3 11.4.3.4 11.4.3.5 11.4.3.5
11.5	Compliance Alternatives Proposed:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (give numbers)	11.5.1

ONTARIO ASSOCIATION OF ARCHITECTS NOVEMBER, 2007



1 1st Floor Level - Service Area (FRR)
A0-200 scale: 1/16" = 1'-0"



2 East Mezzanine (FRR)
A0-200 scale: 1/16" = 1'-0"

General Notes

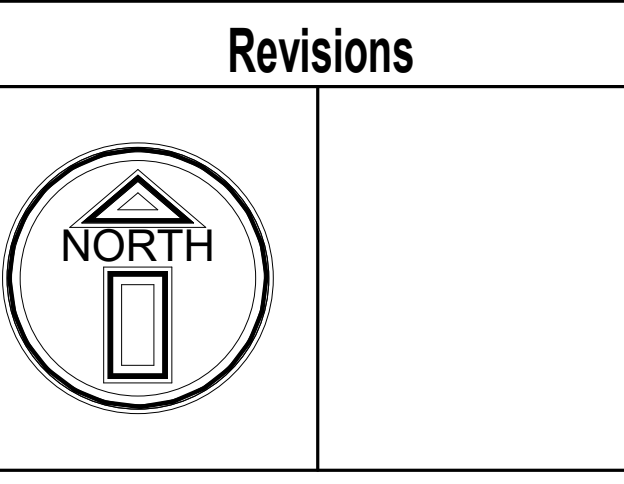
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Key Plan



Rev	Date	Description
K	May 7, 2021	Issued for Construction

Revisions	



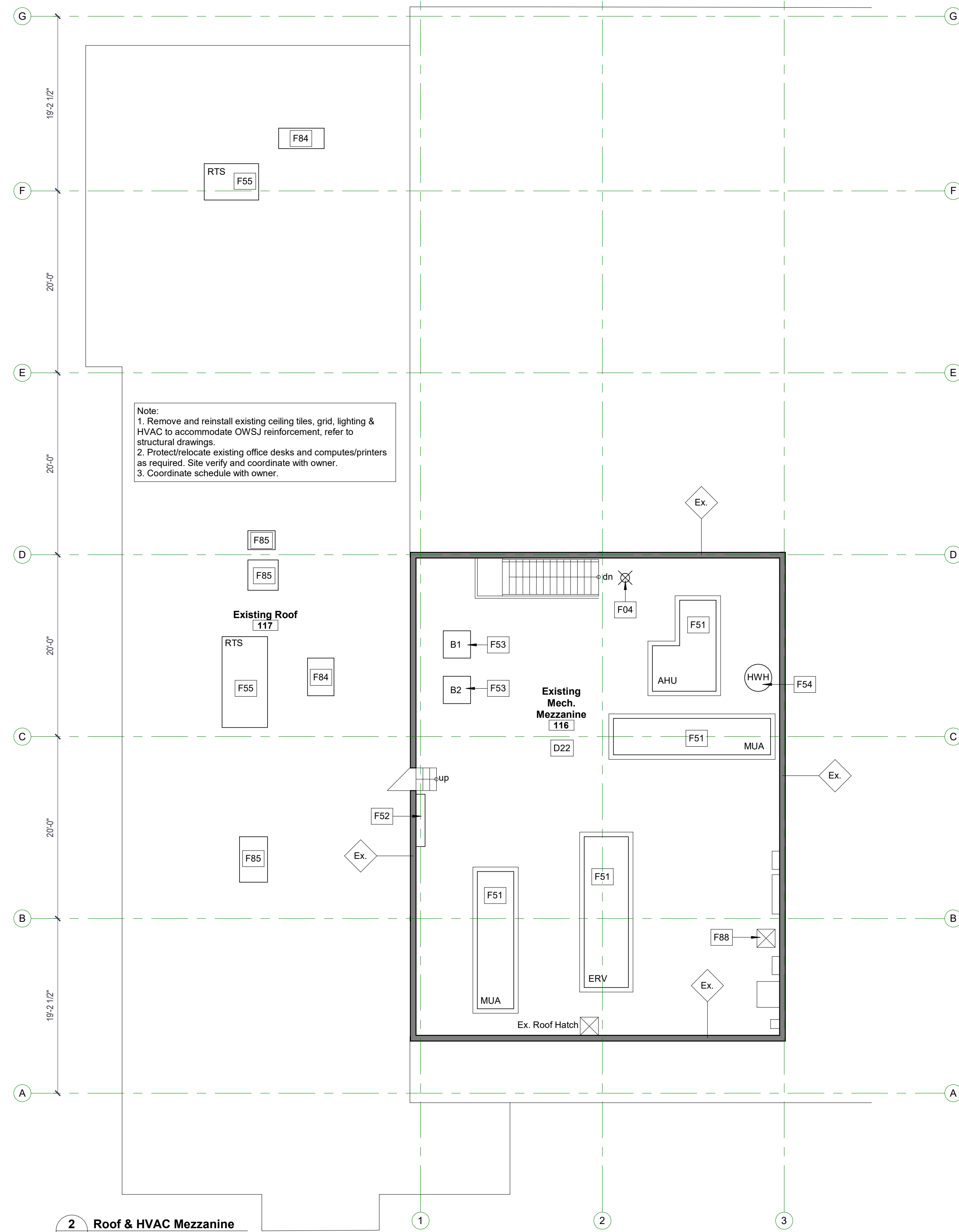
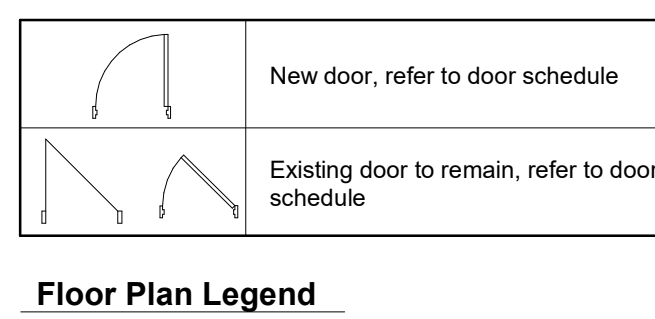
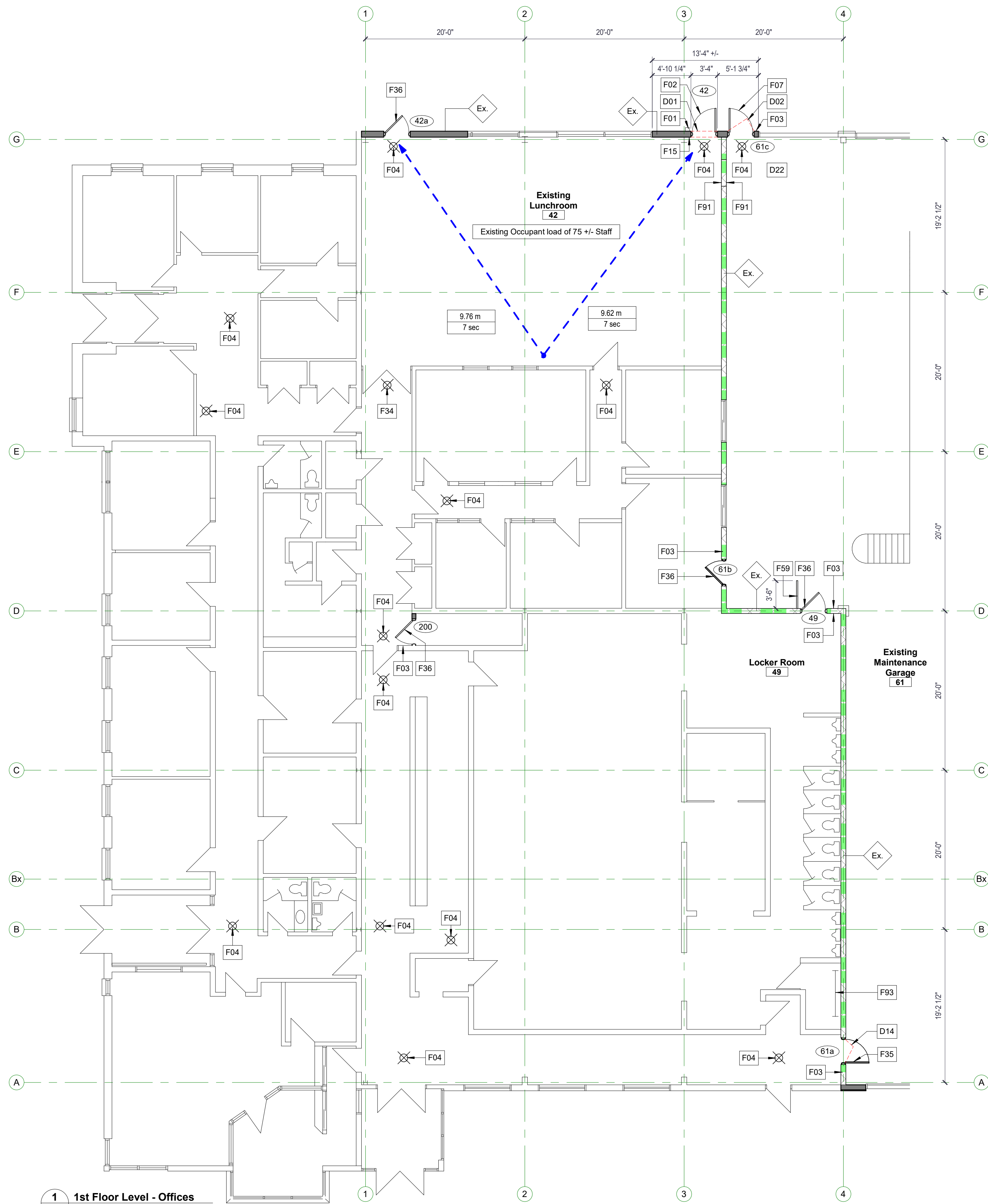
RAIMONDO + ASSOCIATES ARCHITECTS INC.
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City of Niagara Falls
Municipal Service Centre
3200 Stanley Ave, Niagara Falls

DATE: 5/5/2021 8:51:52 AM	DRAWN BY: JV	CHECKED BY: ER
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OBC, Exits + FRR Plans

SCALE: 1/16" = 1'-0"	A0-200
PROJECT NO.: 20-055	



1 1st Floor Level - Offices
A2-100 scale: 1/8" = 1'-0"

2 Roof & HVAC Mezzanine
A2-100 scale: 1/8" = 1'-0"

Demolition Notes	
#	Notes
D01	Locally breakout remove and dispose of existing wall construction to accommodate new exterior (exit only) door and frame. Make good all materials, systems and finishes to receive new work. Refer to electrical drawings.
D02	Locally breakout remove and dispose of existing door and frame. Make good all materials, systems and finishes to receive new work.
D14	Locally breakout remove and dispose of existing door only and frame to remain. Make good all materials, systems and finishes to receive new work.
D22	Locally scan/ray all penetrations through walls or floors to accommodate new work (typ.). (site verify)

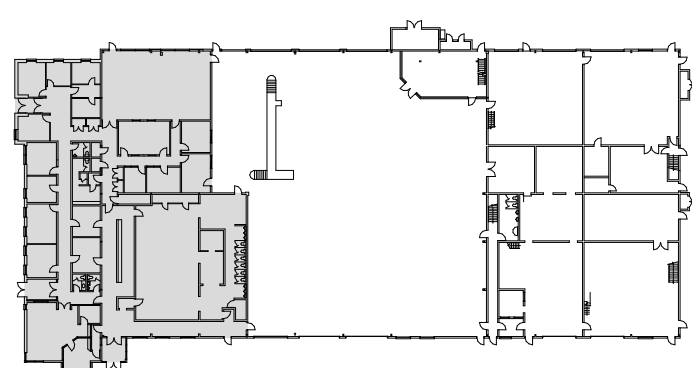
Floor Plan Notes	
#	Notes
F01	Existing RWL to remain, modified as required to accommodate new door and frame. (site verify)
F02	New door and frame in existing construction c/w new pre-finished metal flashing trim at existing siding, refer to structural drawing S2 and spec's. (site verify and provide flashing sample for approval)
F03	New electric strike/card reader, refer to electrical drawings, door schedule and spec's.
F04	New exit sign, refer to electrical drawings and spec's.
F07	New door and frame in existing opening, patch and repair existing construction as required. Refer to door schedule and spec's (site verify)
F15	New 8" metal stud in-fill c/w 3" (R-18) spray foam insulation & 1/2" gypsum board c/w paint finish (match existing) to accommodate new door and frame. (site verify) Refer to room finish schedule and spec's.
F34	Relocated exit sign, refer to electrical drawings and spec's. Patch and repair existing location as required. (site verify)
F35	New door in existing frame, site verify size, refer to spec's and door schedule.
F36	New door hardware upgrades on existing door and frame, refer to door schedule and spec's.

Floor Plan Notes	
#	Notes
F51	New mechanical units c/w 4" high concrete housekeeping pads 6" around the equipment. Refer to spec's, structural and mechanical drawings. (site verify)
F52	Existing Data/IT equipment location, ensure items are removed from the floor, coordinate with owner.
F53	Existing boiler to remain, refer to mechanical drawings.
F54	Existing hot water tank, refer to mechanical drawings.
F55	New rooftop unit c/w curbs, refer to mechanical drawings.
F59	New guard at 3/16" c/w yellow paint at existing door to accommodate door swing, provide shop drawings for approval by misc. metal Div.#5. (site verify)
F84	New carbon filter c/w curbs, refer to mechanical, electrical and structural drawings.
F85	New condensing unit c/w curbs, refer to electrical, mechanical and structural drawings.
F88	New electrical disconnect, panel and transformer, refer to electrical drawings.
F91	New paint finish to match existing on existing concrete block, refer to finish schedule and spec's. (provide sample for approval)
F93	New water meter c/w backflow, refer to mechanical drawings.

General Notes

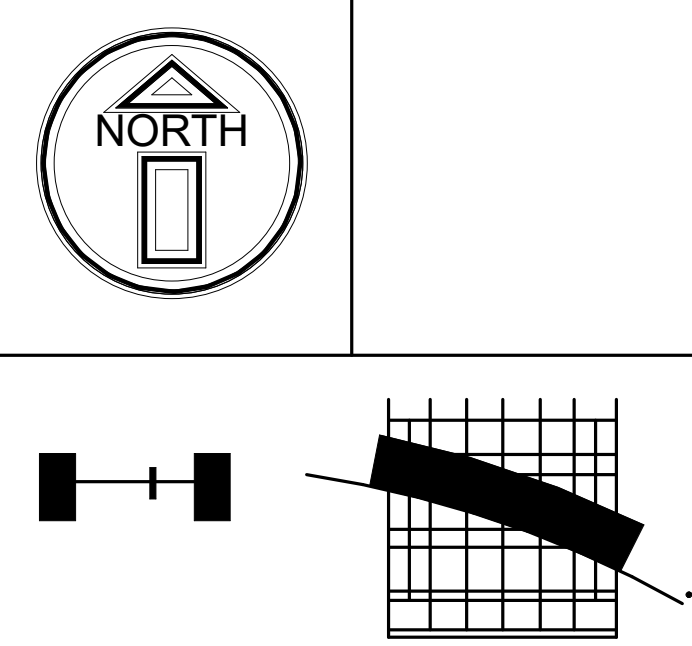
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Key Plan



K May 7, 2021 Issued for Construction

Revisions



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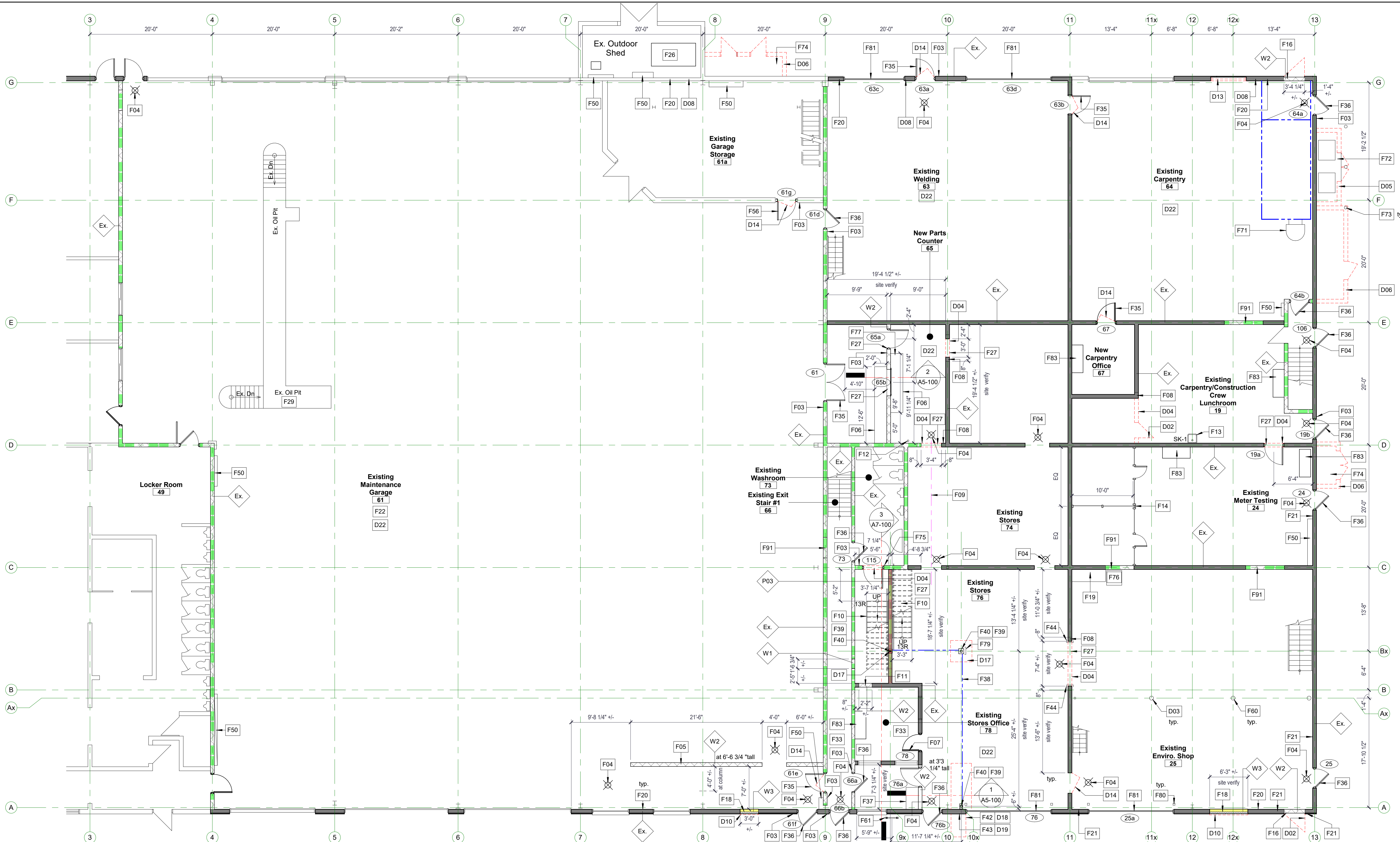
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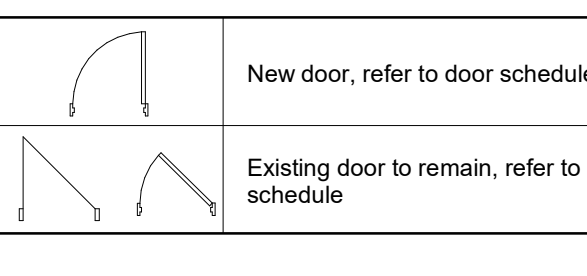
Floor Plan - Ex. Offices, Mech. Mezz. & Roof

SCALE: As Indicated
PROJECT NO.: 20-055
A2-100

J:\2020-055 - City of Niagara Falls Service Centre\05-Drafting\02-Rev\05-05 - City of Niagara Falls Service Centre.rvt



1 1st Floor Level - Service Area
scale: 1/8" = 1'-0"



Demolition Notes	
#	Notes
D02	Locally breakout remove and dispose of existing door and frame. Make good all materials, systems and finishes to receive new work.
D03	Locally wire brush/sand and remove existing paint on Mezzanine steel columns (x4), base plates and beam to accommodate new work. Make good all materials, systems and finishes. (site verify)
D04	Locally breakout remove and dispose of existing wall construction to accommodate new opening. Make good all materials, systems and finishes to receive new work.
D05	Locally breakout remove and dispose of existing structure, concrete slab to remain. Make good all materials, systems and finishes to receive new work. (site verify)
D06	Locally breakout remove and dispose of existing structure, concrete slab to remain. Make good all materials, systems and finishes to receive new work. (site verify)
D08	Locally breakout remove and dispose of existing insulation, plywood, pegboard, etc. and exposed existing metal purlins/metal siding. Make good all materials, systems and finishes to receive new work. Refer to sheets A8-100/101 for details.
D10	Locally breakout remove and dispose of existing glazing and frames or pass-thru opening. Make good all materials, systems and finishes to receive new work. Refer to sheets A8-100/101 for details.
D13	Locally breakout remove and dispose of existing glazing and frames to accommodate to wall in-fill. Make good all materials, systems and finishes to receive new work.
D14	Locally breakout remove and dispose of existing door only and frame to remain. Make good all materials, systems and finishes to receive new work. (site verify)
D17	Locally breakout remove and dispose of existing concrete slab to accommodate steel columns and foundations. Make good all materials systems and finishes to receive new work. (site verify)
D18	Locally breakout remove & salvage existing gravel to accommodate steel columns and foundations. Make good all materials systems and finishes to receive new work. (site verify)
D19	Locally breakout remove & salvage existing exterior wall construction to accommodate steel columns and foundations. Make good all materials systems and finishes to receive new work. (site verify)
D22	Locally scan/x-ray all penetrations through walls or floors to accommodate new work (typ.). (site verify)

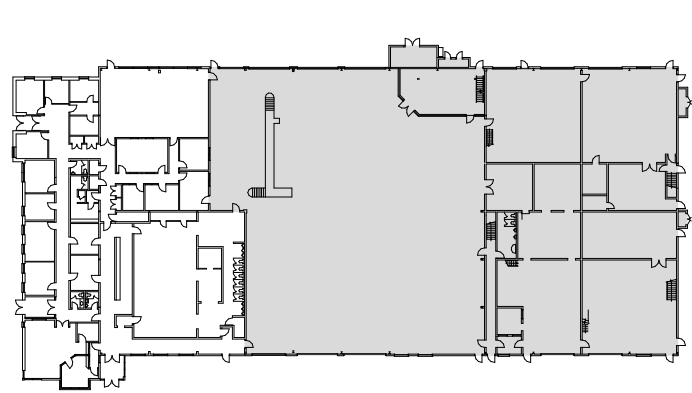
Floor Plan Notes	
#	Notes
F03	New electric strike/card reader, refer to electrical drawings, door schedule and specs.
F04	New exit sign, refer to electrical drawings and specs.
F05	New concrete block partition c/w bullnose at end and C-Channel on top, refer to structural drawings for reinforcement details. (site verify)
F06	New stainless steel counters c/w power and data, refer to typical details, spec's and electrical drawings. Provide shop drawings to architect and owner.
F07	New door and frame in existing opening, patch and repair existing construction as required. Refer to door schedule and spec's (site verify)
F08	New bullnose concrete block at each side of the new opening and repair existing concrete slab, toothing as required. Refer to spec's and structural drawings (site verify)
F09	New opening to be in-line with existing opening below. (site verify)
F10	New steel stairs and railings, refer to typ. details and structural drawings. Provide P Eng stamped shop drawings by misc. metal Div.#5.
F11	New concrete block in-fill to match existing construction c/w paint finish and maintain existing 3/4 hour fire rating. Refer to room finish schedule and spec's (site verify)
F12	Existing sanitary pipe to remain, site verify location.
F13	New laundry tub & faucet. Refer to mechanical drawings and site verify location.
F14	New tool crib c/w posts & 2' galvanized gates, refer to spec's and provide shop drawings for app. (floor to ceiling, site verify)
F16	New concrete block in-fill to match existing exterior construction. Refer to room schedule and spec's (site verify)
F18	New metal stud in-fill c/w metal siding to match existing, provide flashing sample for approval. (site verify existing opening)
F19	New electrical outlets to existing millwork, refer to electrical drawings.
F20	New 8" metal stud in-fill c/w 3" (R-18) spray foam insulation & 1/2" cement board, site verify. Refer to spec's, structural drawings & sheets A8-100/101 for details.
F21	Remove & Replace existing broken masonry/walls or patch and repair existing gaps/bolt holes. site verify. Refer to structural drawings & sheets A8-100/101 for details.
F22	Repair damaged pre-eng roof batt insulation with rockwool to match existing equal, site verify. Refer to sheets A8-100/101 for details.
F26	New waste oil tank, heater and exhaust fan, refer to electrical and mechanical drawings.
F27	New steel lintel c/w 3/4 hour intumescent paint to accommodate new opening, refer to structural drawings and spec's.
F29	Refer to structural drawings for Service Pit repairs/upgrades.
F32	New surfaced mount lighting u/s of platform, refer to electrical drawings. Ensure 3/4 hour intumescent paint is maintained.
F35	New door in existing frame, site verify size, refer to spec's and door schedule.
F36	New door hardware upgrades on existing door and frame, refer to door schedule and spec's.

Floor Plan Notes	
#	Notes
F37	New 3" +/- stainless steel counter c/w door, refer to typical details. Refer to spec's and provide shop drawings by misc. metal Div.#5.
F38	Outline of new platform above, refer to sheet A2-102.
F39	New concrete pier/foundation and slab in-fill c/w vapour barrier, refer to spec's, OESN & structural drawings. (site verify)
F40	New steel HSS column and base plate with 3/4 hour intumescent paint, refer to spec's and structural drawings.
F42	New/Restore existing gravel and base asphalt to accommodate concrete foundation. (site verify)
F43	Restate existing exterior wall construction to accommodate new concrete foundations. Refer to spec's & structural drawings. (site verify)
F44	New rubber corner guards (x4) at each corner, U-Line ca Model H-5175 or approved equal.
F50	Existing electrical panels and splitter to remain, refer to electrical drawings.
F56	New door and frame fasten/welded to existing steel channel, provide new steel angles by misc. metal Div.#5. Refer to door schedule and spec's.
F60	Paint existing steel columns (x4), base plates and steel beam with 3/4 hour intumescent paint. (site verify)
F61	Galvanized access ladder c/w cage, refer to spec's and structural drawings. Provide P Eng stamped shop drawings by misc. metal Div.#5.
F71	New steel platform c/w ladder and cage to accommodate new AHU by misc. metal Div.#5. Refer to spec's, mechanical and structural drawings.
F72	Existing concrete slab to remain, patch and repair at existing concrete block walls as required and ensure smooth slab c/w positive drainage to accommodate new condensers. Refer to mechanical drawings. (site verify)
F73	New steel bollards filled with concrete c/w paint finish by misc. metal Div.#5., refer to structural drawings and spec's.
F74	New gravel and asphalt in-fill to match existing at removed structure. (site verify)
F75	Relocate existing paper towel dispenser and electrical outlet to accommodate new Mech. Penthouse door. (site verify)
F76	Relocated fridge on existing electrical outlet, provide power upgrade as required. Refer to electrical drawings.
F77	New under counter millwork, refer to spec's and typ. millwork details.
F79	Column protection (x1), U-Line ca Model H-5557 or app. equal.
F80	Square safety bollard (x4), U-Line ca Models H-2121 & H-8264 or app. equal. (site verify location)
F81	New overhead door locks, site verify. Refer to door schedule & spec's.
F83	New fan coil unit or HRV, refer to mechanical and electrical drawings.
F91	New paint finish to match existing on existing concrete block, refer to finish schedule and spec's. (provide sample for approval)

General Notes

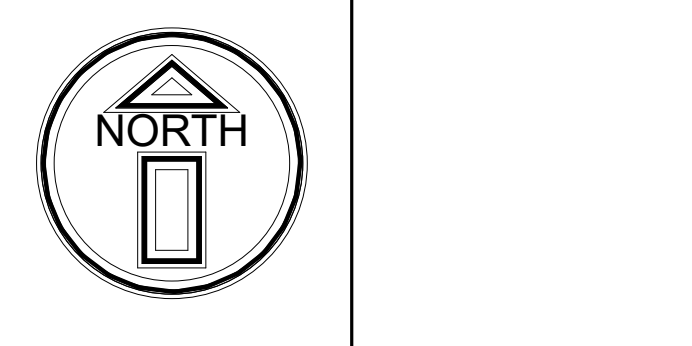
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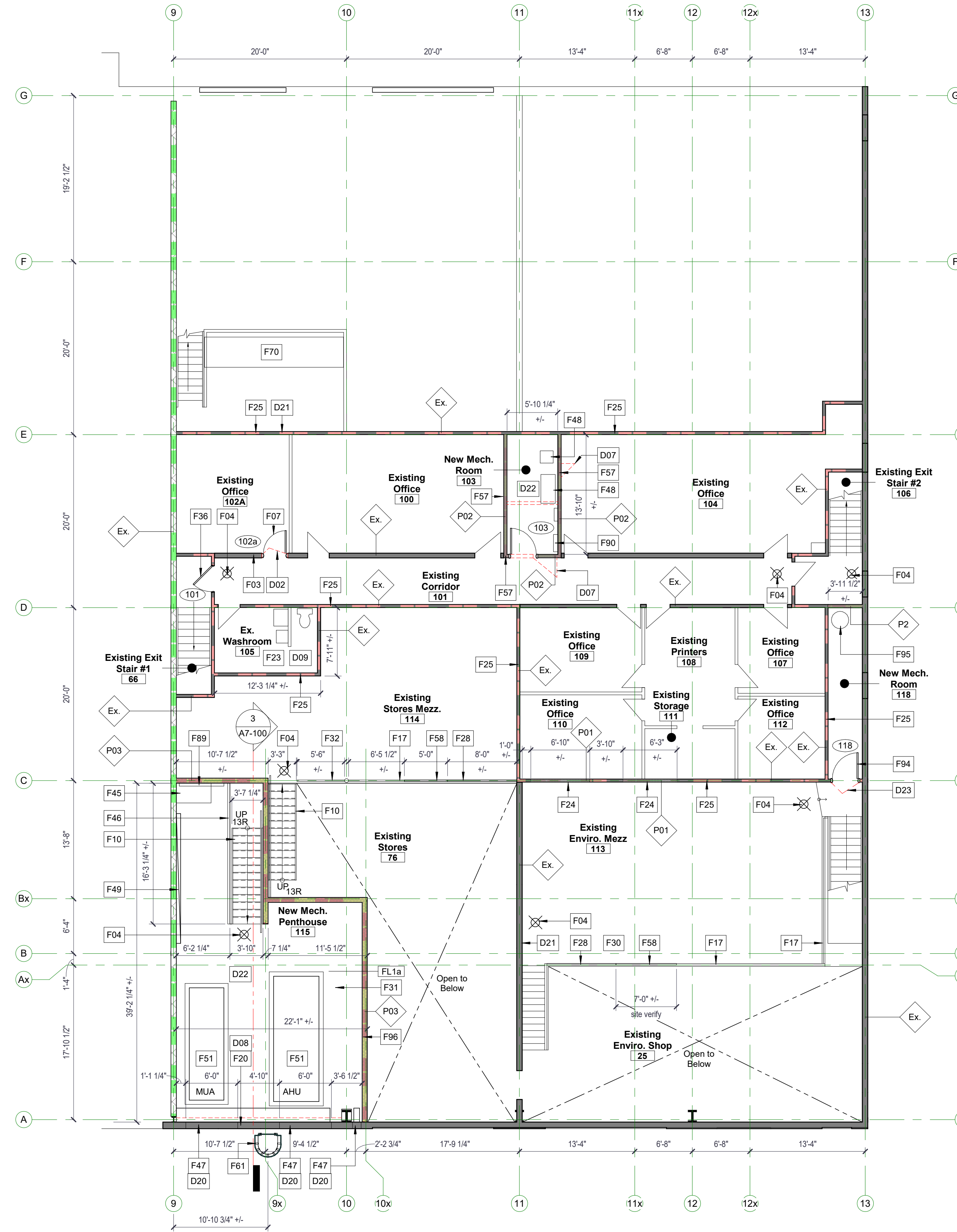
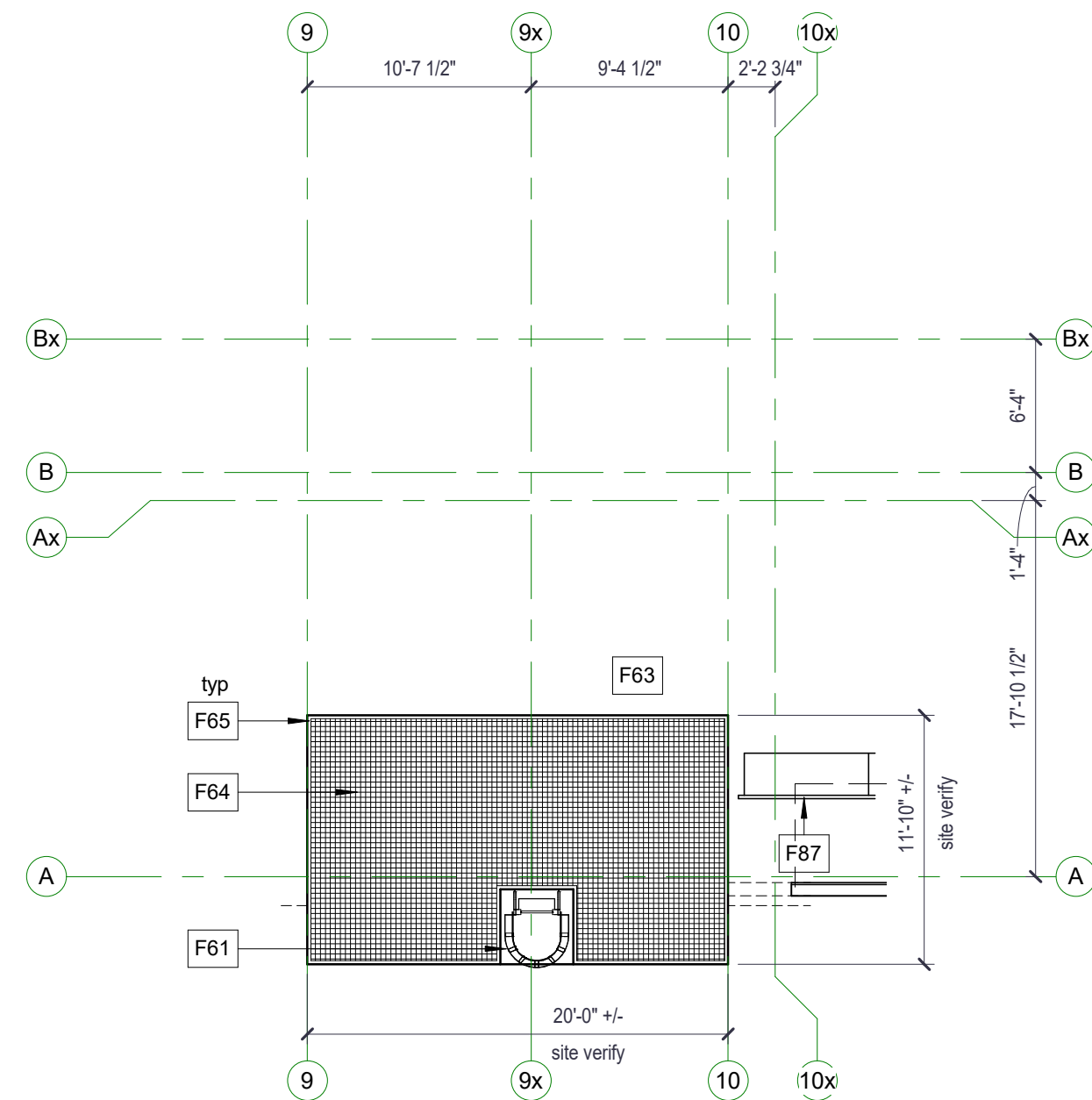
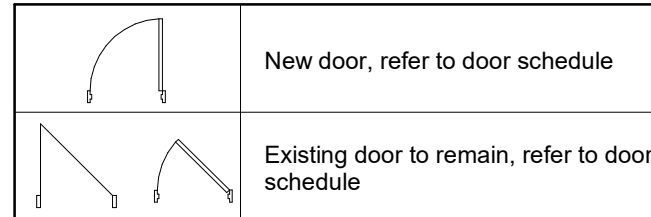
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CHECKED: ER

Floor Plan - Ex. Service Areas

SCALE: As Indicated
PROJECT NO.: 20-055
A2-101

Demolition Notes	
#	Notes
D02	Locally breakout remove and dispose of existing door and frame. Make good all materials, systems and finishes to receive new work.
D07	Locally breakout remove and dispose of existing partitions c/w door and frame. Make good all materials, systems and finishes to receive new work.
D08	Locally breakout remove and dispose of existing insulation, plywood, pegboard, etc. and exposed existing metal purlins/metal siding. Make good all materials, systems and finishes to receive new work. Refer to sheets A8-100/101 for details.
D09	Locally breakout remove and dispose of existing t-bar ceiling system and lighting. Make good all materials, systems and finishes to receive new work.
D20	Locally breakout remove and dispose of existing wall construction to accommodate new exterior HVAC louvers. Make good all materials, systems and finishes to receive new work. Refer to mechanical and structural drawings.
D21	Locally breakout remove and dispose of existing rigid insulation and pegboard, plywood, etc. Make good all materials, systems and finishes to receive new work. Refer to sheets A8-100/101 for details.
D22	Locally scan/x-ray all penetrations through walls or floors to accommodate new work (typ.). (site verify)
D23	Locally breakout remove and dispose of existing wall construction to accommodate new interior door and frame. Make good all materials, systems and finishes to receive new work. Refer to electrical drawings.

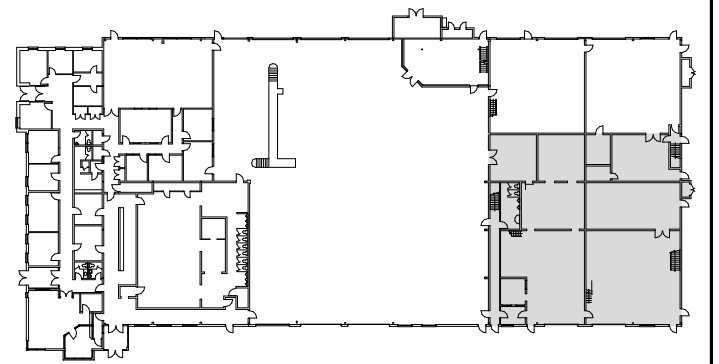
Floor Plan Notes	
#	Notes
F03	New electric strike/card reader, refer to electrical drawings, door schedule and spec's.
F04	New exit sign, refer to electrical drawings and spec's.
F07	New door and frame in existing opening, patch and repair existing construction as required. Refer to door schedule and spec's (site verify)
F10	New steel stairs and railings, refer to typ, details and structural drawings. Provide P.Eng stamped shop drawings by misc. metal Div.#5.
F17	Existing guards to be extended to 3' 6" 1/8" and toe guards to be extended to 5" c/w yellow paint. Refer to typical details and structural drawings. Provide P.Eng stamped shop drawings by misc. metal Div.#5.
F20	New 8" metal stud in-fill c/w 3" (R-18) spray foam insulation & 1/2" cement board, site verify. Refer to spec's, structural drawings & sheets A8-100/101 for details.
F23	New fire rated ceiling on existing partitions c/w with new lighting, refer to spec's, ceiling assemblies (CO1) and electrical drawings.
F24	New partition in-fill to match existing construction and maintain existing 3/4 hour fire rating, refer to room finish schedule and spec's. (site verify)
F25	Patch and repair as required to match existing construction and maintain existing 3/4 hour fire rating, refer to room finish schedule and spec's. (site verify)
F28	New removable guard and tie-off at existing guardrail location, refer to typ, details and structural drawings. (site verify) Provide P.Eng stamped shop drawings by misc. metal Div.#5.
F30	Repair existing pre-eng roof framing at overhead jib crane location by misc. metal Div.#5. Refer to spec's, structural drawings & sheets A8-100/101 for details.
F31	New concrete slab and steel deck c/w new guard rails to accommodate new HVAC units. Refer to typ, details, structural, electrical and mechanical drawings. (site verify size and location)
F32	Existing guards to be extended to 3' 6" 1/8" and toe guards to be extended to 5" c/w yellow paint to accommodate new stairs, site verify. Provide P.Eng stamped shop drawings by misc. metal Div.#5.
F36	New door hardware upgrades on existing door and frame, refer to door schedule and spec's.
F45	Existing mezzanine flooring to remain, ensure new construction is level with existing.
F46	New guard rail c/w yellow paint finish, refer to typical details and structural drawings. Provide P.Eng stamped shop drawings by misc. metal Div.#5.
F47	New mechanical louver c/w blindscreen, new c-channels and metal flashing. Refer to spec's, mechanical and structural drawings. (site verify)
F48	New furnace and HRV, refer to mechanical drawings.
F49	New electrical panels c/w 15.9mm fire retardant plywood, refer to electrical drawings.
F51	New mechanical units c/w 4" high concrete housekeeping pads 6" around the equipment. Refer to spec's, structural and mechanical drawings. (site verify)
F57	New partitions in existing location c/w rubber base to match existing (provide sample for approval), patch and repair existing flooring & walls to accommodate new work. Remove and reinstall ceiling tiles and grid as required.
F58	New guard at existing guardrail location, refer to typ, details and structural drawings. (site verify) Provide P.Eng stamped shop drawings by misc. metal Div.#5.
F61	Galvanized access ladder c/w cage, refer to spec's and structural drawings. Provide P.Eng stamped shop drawings by misc. metal Div.#5.
F63	Existing pre-engineered roof to remain, report any issues to architect.
F64	Galvanized platform c/w railings and grating, refer to structural and mechanical drawings. Provide P.Eng stamped shop drawings by misc. metal Div.#5.
F65	EPDM/Silicone universal round base pipe flashing at existing metal roof/new column locations. (site verify)
F70	New AHU on existing steel mezzanine, refer to structural and mechanical drawings.
F87	New Skyline non-penetrating (or app. equal) 14003 Series Walkway with Guardrail w/ S-5 clamps on existing pre-eng roof, refer to structural & mechanical drawings for layout. (provide P.Eng shop drawings by misc. metal Div.#5)
F89	New communications board c/w 15.9mm fire retardant plywood, refer to electrical drawings.
F90	New electrical panel and data rack c/w 15.9mm fire retardant plywood, refer to electrical drawings.
F94	New door and frame in existing partition, refer to door hardware schedule.
F95	New hot water tank, refer to mechanical drawings.
F96	Install HVAC Equipment prior to installation of fire rated partitions, coordinate with HVAC sub-trade.



General Notes

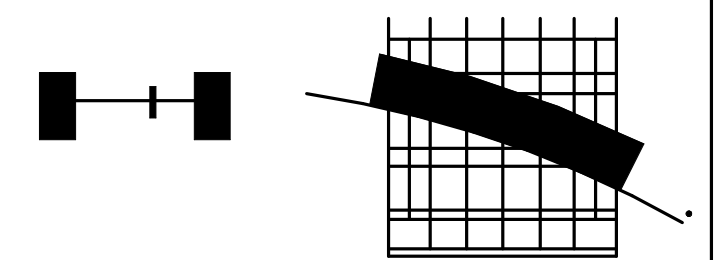
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City of Niagara Falls
Municipal Service Centre

3200 Stanley Ave, Niagara Falls

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Floor Plan - Ex. East Mezzanine

SCALE: As Indicated

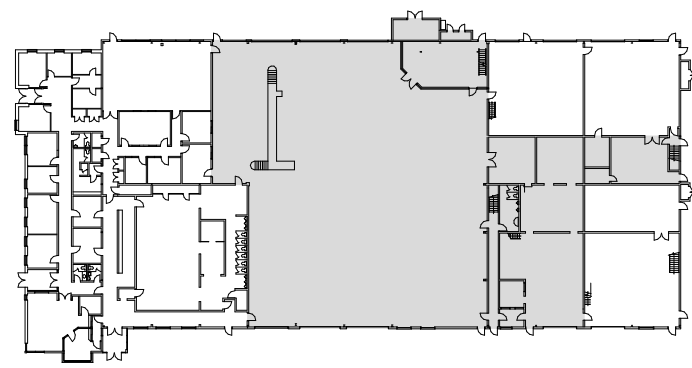
PROJECT NO.: 20-055

A2-102

General Notes

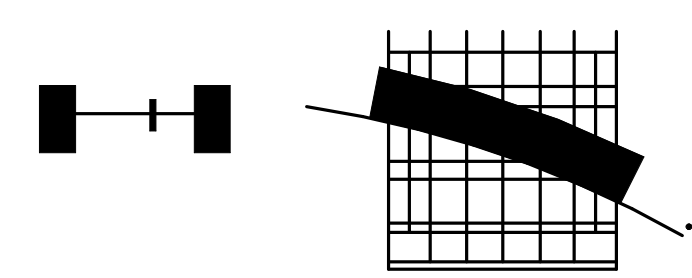
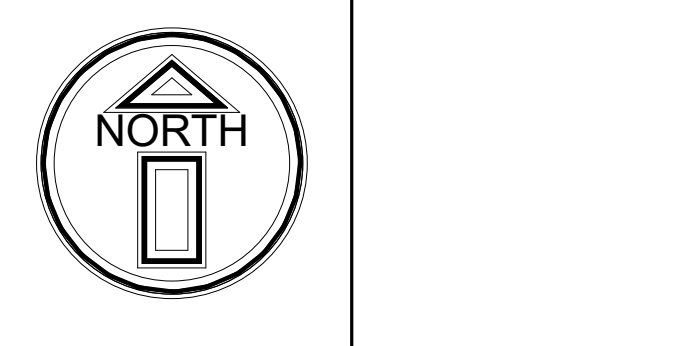
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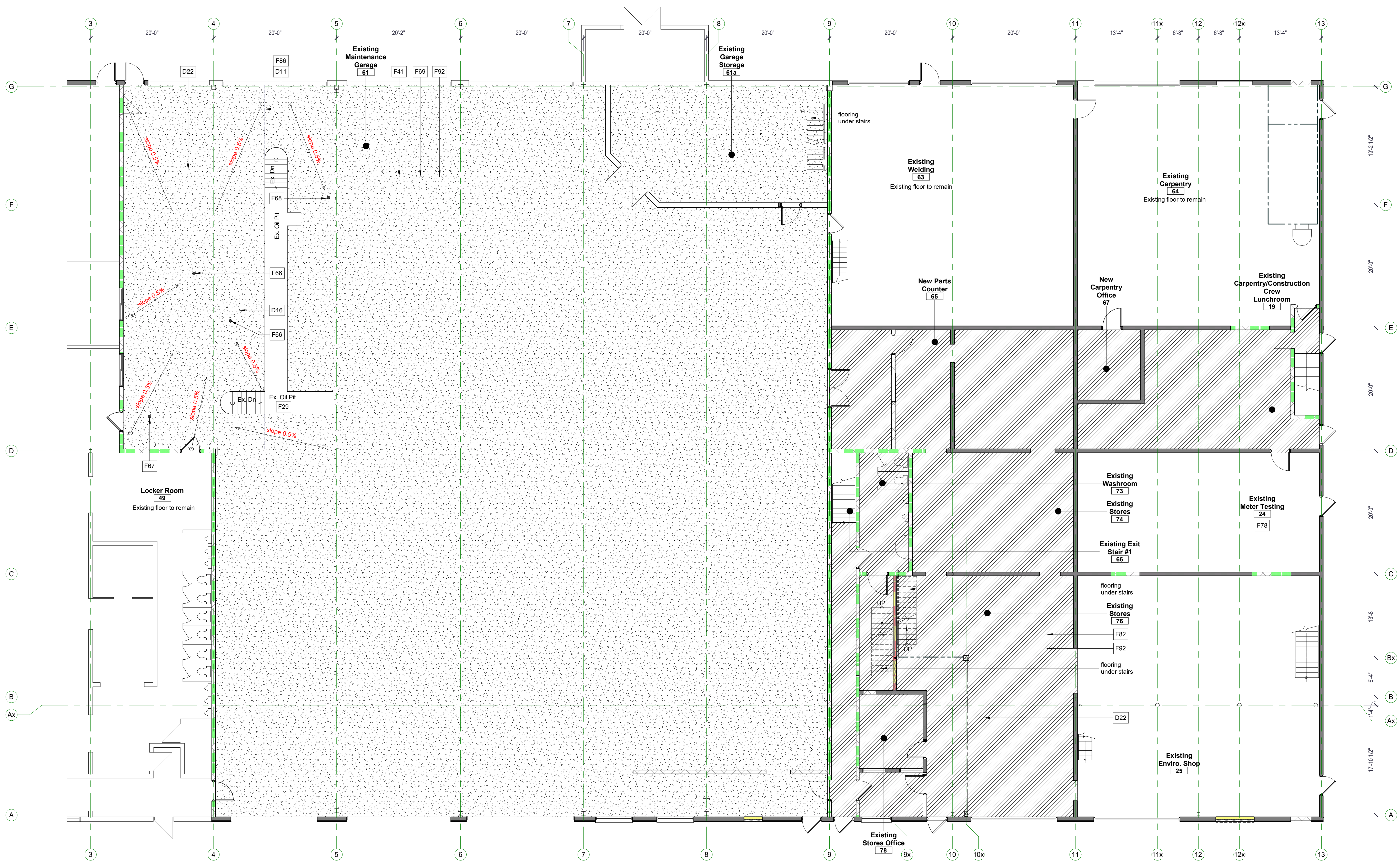
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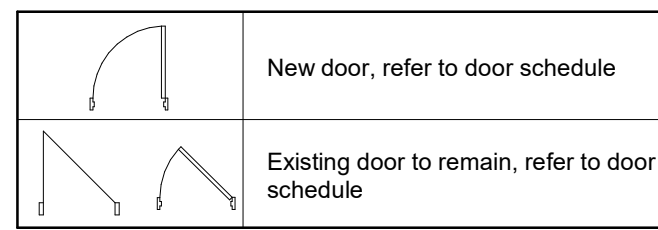
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Flooring Finish Plan & Notes

SCALE: As Indicated PROJECT NO: 20-055 **A2-103**



2 1st Floor Level - Service Area Flooring Plan
1/8" = 1'-0"

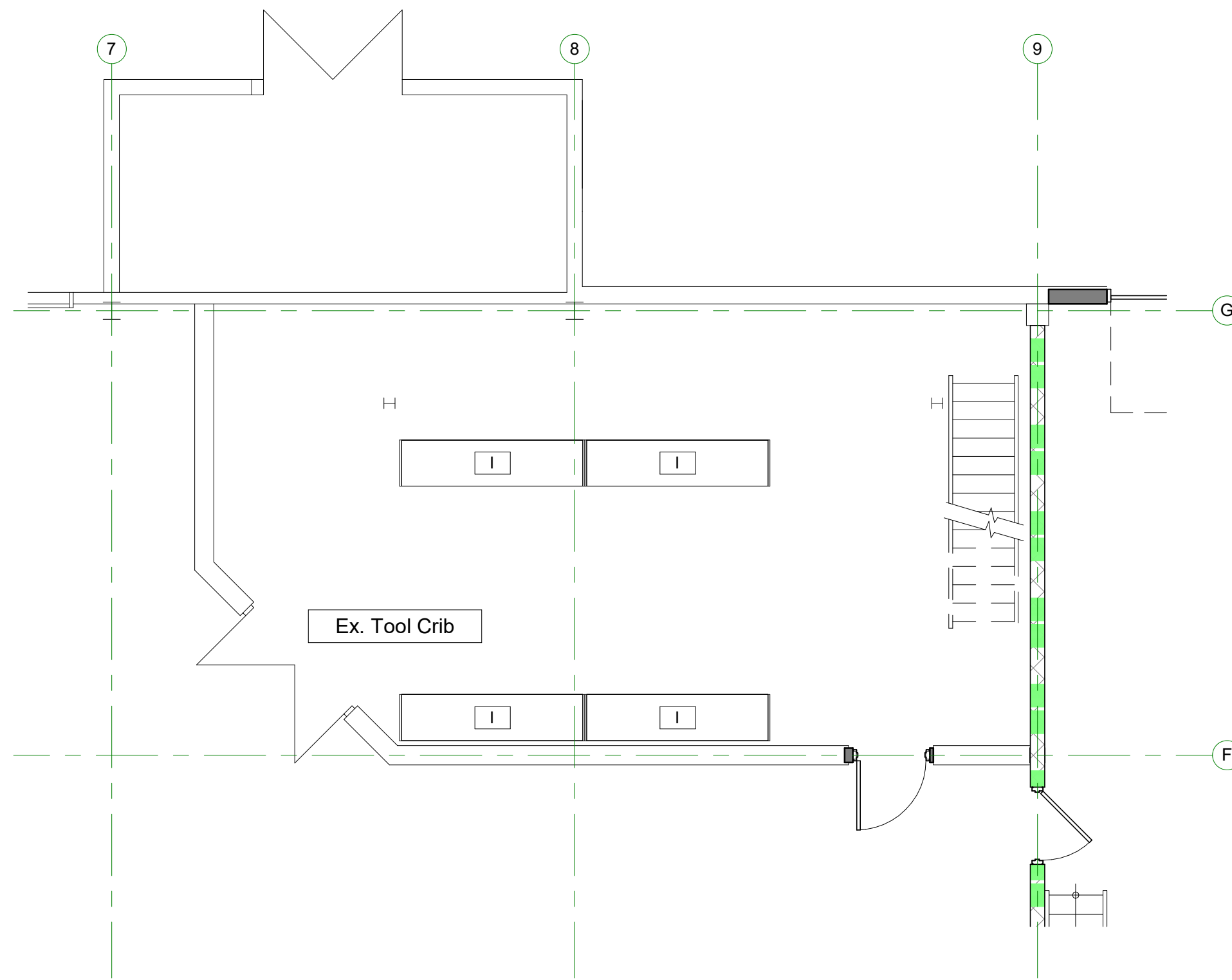


Floor Plan Legend

#	Notes
D11	CASH ALLOWANCE - Locally breakout remove and dispose of existing concrete slab if thickness is less than 4" (approx. 1500 sq ft.). Make good all materials, systems and finishes to receive new work.
D16	Locally grind existing concrete slab and create positive slope to new floor drains (approx. 1,800 sq ft). Make good all materials, systems and finishes to receive new work. (site verify)
D22	Locally scan/ray all penetrations through walls or floors to accommodate new work (typ.). (site verify)

#	Notes
F29	Refer to structural drawings for Service Pit repairs/upgrades.
F41	CASH ALLOWANCE - Approximate 13,000 sq ft of Kromquartz SLD - Series 3000 covered with a solid colour Epoxal 100HP Silver Grey with Medium Texture #55 Exposal Flooring by Niagara Protective Coating, provide sample to owner for approval. (site verify)
F66	New floor drains at existing locations, refer to OESN & Mechanical drawings (site verify)
F67	Remove existing floor drain grate and provide new clean out cap. Refer to mechanical drawings. (site verify)
F68	Existing floor drain to remain, refer to mechanical drawings. (site verify)
F69	CASH ALLOWANCE - Install a nominal 1/4" kromquartz sld epoxy mortar system abrade entire floor area to receive epoxal coating (dry dustless surface prep, diamond grinders), sweep, vacuum and make ready for floor coating. (divots, holes to be filled with epoxy paste), as per manufacturers specification
F78	CASH ALLOWANCE - Patch and repair existing Niagara Protective Coatings - Epoxal 100HP Silver Grey with Medium Texture #55 flooring as required to new work. (site verify)
F82	CASH ALLOWANCE - Approximate 4,000 sq ft of New Niagara Protective Coatings - Epoxal 100HP Silver Grey with Medium Texture #55 flooring to match adjacent flooring. (site verify)
F86	CASH ALLOWANCE - New 6" reinforced concrete slab (approx. 1500 sq ft.). Refer to structural drawings.
F92	Contractor to provide waste receptacle for duration of flooring.

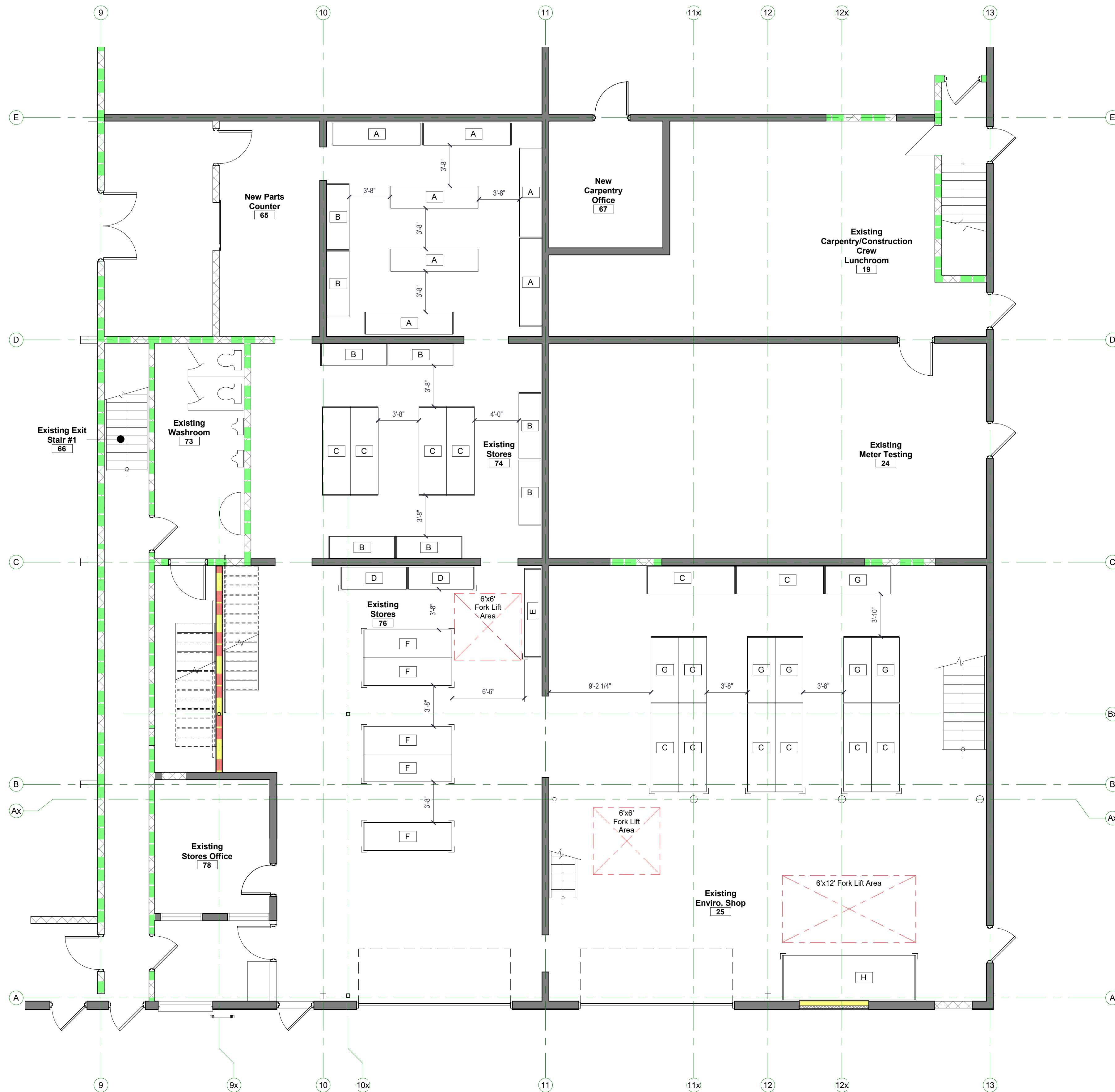
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2 1st Floor Level - Tool Crib - Shelving
A2-104 scale: 3/16" = 1'-0"

SHELVING PLAN LEGEND (CASH ALLOWANCE)

Shelving Type	Code	Dimensions	Notes
	A	96" L X 24" D X 72" H	Note: 1. Coordinate new shelving locations with lighting, ductwork, structure and existing conditions. 2. Wide Span Shelving - System 800 (boltless assembly) c/w Wood Shelves or approved equal. - Frames at each end - 3 Beams levels - 2 Extra support on 30" depths - Load capacity labels on each shelf 3. Pallet Rack (boltless assembly) - Frames at each end c/w post protector - 3 beams levels - Load capacity labels on each shelf 4. Rack protections (x23), U-Line.ca Models H-6295 & H-3722 or app. equal by shelving supplier. Design Loads - Refer to structural drawings for max. shelving design loads on each Mezzanine. Racking Posts Plates - Refer to structural drawings for plate and bolt sizes. Shelving supplier to provide P. Eng shop drawings with Design Loads for each shelving unit and self, seismic reinforcement and bracing details
	B	72" L X 24" D X 72" H	
	C	96" L X 30" D X 72" H	
	D	72" L X 24" D X 120" H	
	E	96" L X 18" D X 120" H	Design Loads - Refer to structural drawings for max. shelving design loads on each Mezzanine. Racking Posts Plates - Refer to structural drawings for plate and bolt sizes. Shelving supplier to provide P. Eng shop drawings with Design Loads for each shelving unit and self, seismic reinforcement and bracing details
	F	96" L X 30" D X 120" H	
	G	72" L X 30" D X 72" H	
	H	144" L X 48" D X 144" H	
	H	144" L X 48" D X 144" H	Design Loads - Refer to structural drawings for max. shelving design loads on each Mezzanine. Racking Posts Plates - Refer to structural drawings for plate and bolt sizes. Shelving supplier to provide P. Eng shop drawings with Design Loads for each shelving unit and self, seismic reinforcement and bracing details
	I	96" L X 24" D X 96" H	
	J	72" L X 24" D X 96" H	
	K	96" L X 30" D X 96" H	
	L	72" L X 30" D X 96" H	Design Loads - Refer to structural drawings for max. shelving design loads on each Mezzanine. Racking Posts Plates - Refer to structural drawings for plate and bolt sizes. Shelving supplier to provide P. Eng shop drawings with Design Loads for each shelving unit and self, seismic reinforcement and bracing details
	L	72" L X 30" D X 96" H	

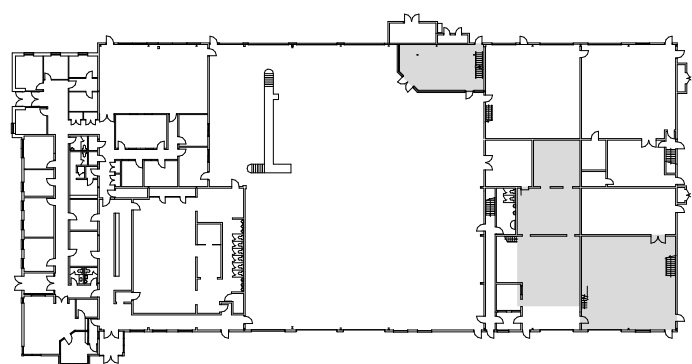


1 1st Floor Level - Service Area - Shelving
A2-104 scale: 3/16" = 1'-0"

General Notes

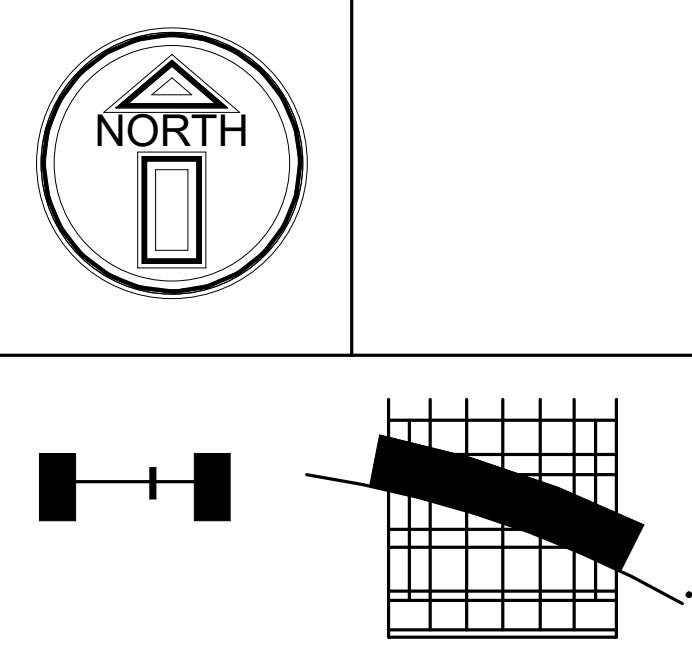
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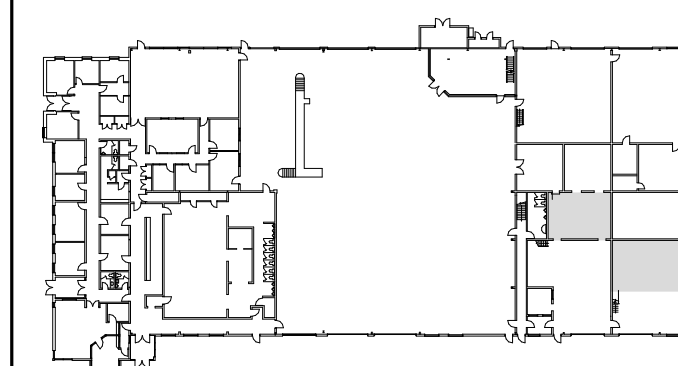
Shelving Layout

SCALE: As Indicated	A2-104
PROJECT NO.: 20-055	

General Notes

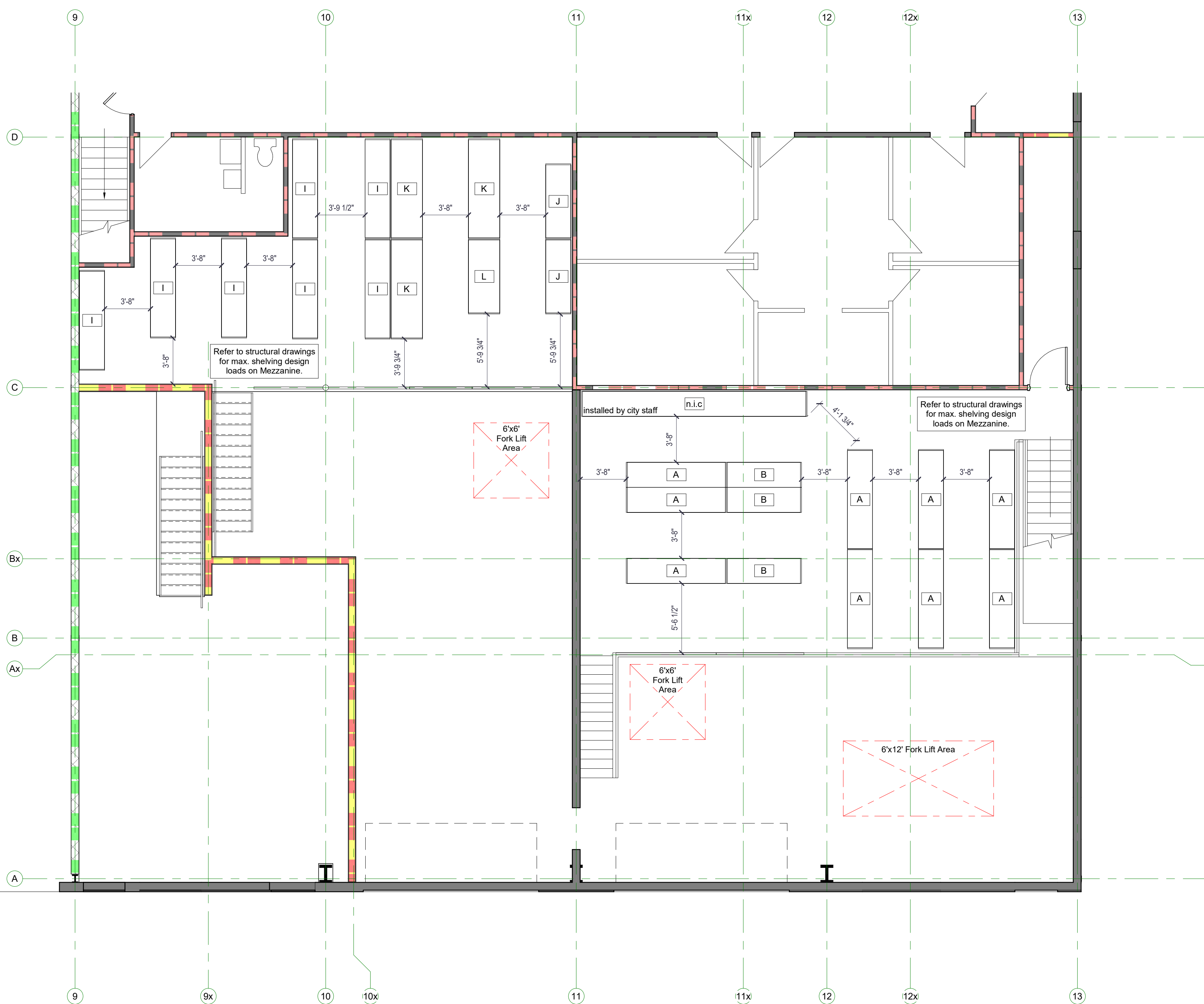
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Key Plan



SHELVING PLAN LEGEND (CASH ALLOWANCE)

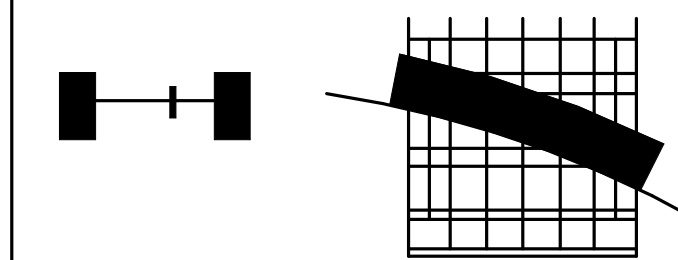
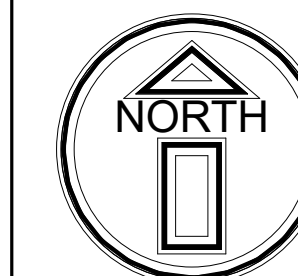
	A	96" L X 24" D X 72" H	<p>Note:</p> <ol style="list-style-type: none"> Coordinate new shelving locations with lighting, ductwork, structure and existing conditions. Wide Span Shelving - System 800 (boltless assembly) c/w Wood Shelves or approved equal. <ul style="list-style-type: none"> - Frames at each end - 3 Beams levels - 2 Extra support on 30" depths - Load capacity labels on each shelf Pallet Rack (boltless assembly) <ul style="list-style-type: none"> - Frames at each end c/w post protector - 3 beams levels - Load capacity labels on each shelf Rack protections (x23), U-Line.ca Models H-6295 & H-3722 or app. equal by shelving supplier. <p>Design Loads</p> <ul style="list-style-type: none"> - Refer to structural drawings for max. shelving design loads on each Mezzanine. <p>Racking Posts Plates</p> <ul style="list-style-type: none"> - Refer to structural drawings for plate and bolt sizes. <p>Shelving supplier to provide P. Eng shop drawings with Design Loads for each shelving unit and self, seismic reinforcement and bracing details</p>
	B	72" L X 24" D X 72" H	
	C	96" L X 30" D X 72" H	
	D	72" L X 24" D X 120" H	
	E	96" L X 18" D X 120" H	
	F	96" L X 30" D X 120" H	
	G	72" L X 30" D X 72" H	
	H	144" L X 48" D X 144" H	
	I	96" L X 24" D X 96" H	
	J	72" L X 24" D X 96" H	
	K	96" L X 30" D X 96" H	
	L	72" L X 30" D X 96" H	



1 Mezzanine - Shelving
 A2-105 scale: 3/16" = 1'-0"

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Shelving Layout -Mezz.

SCALE: As Indicated	A2-105
PROJECT NO.: 20-055	

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Key Plan

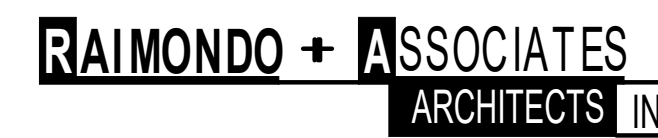


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NO.	DATE	DESCRIPTION

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NO.	DATE	DESCRIPTION



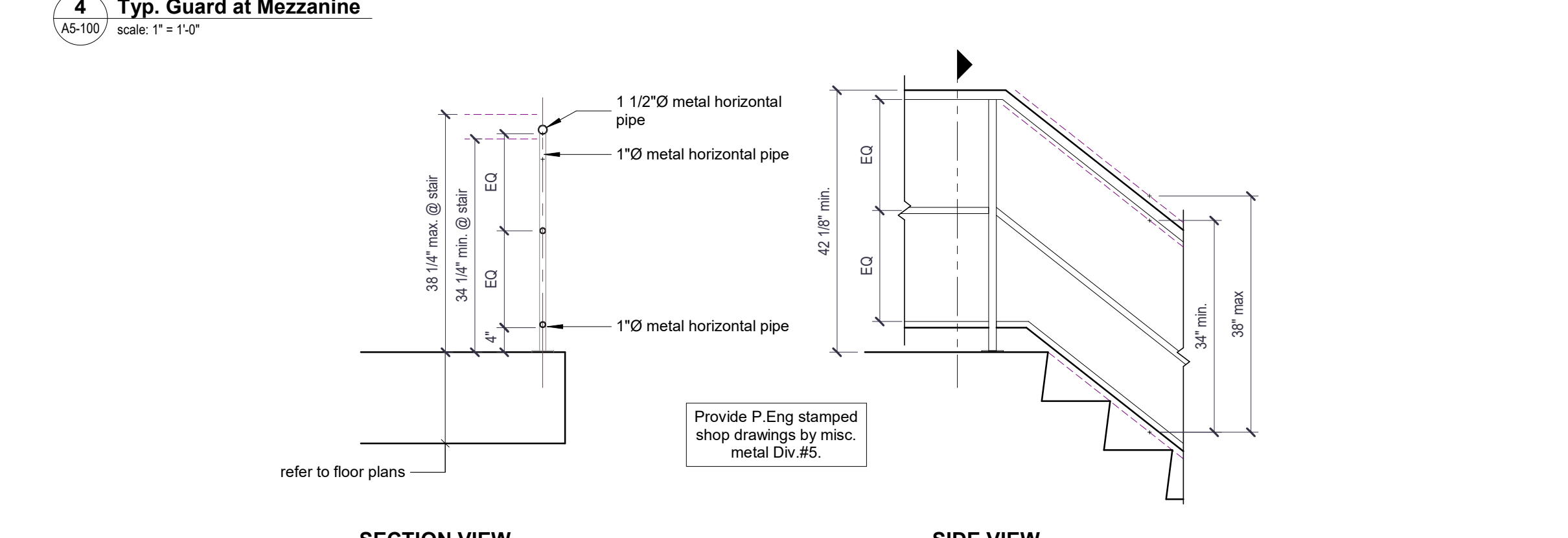
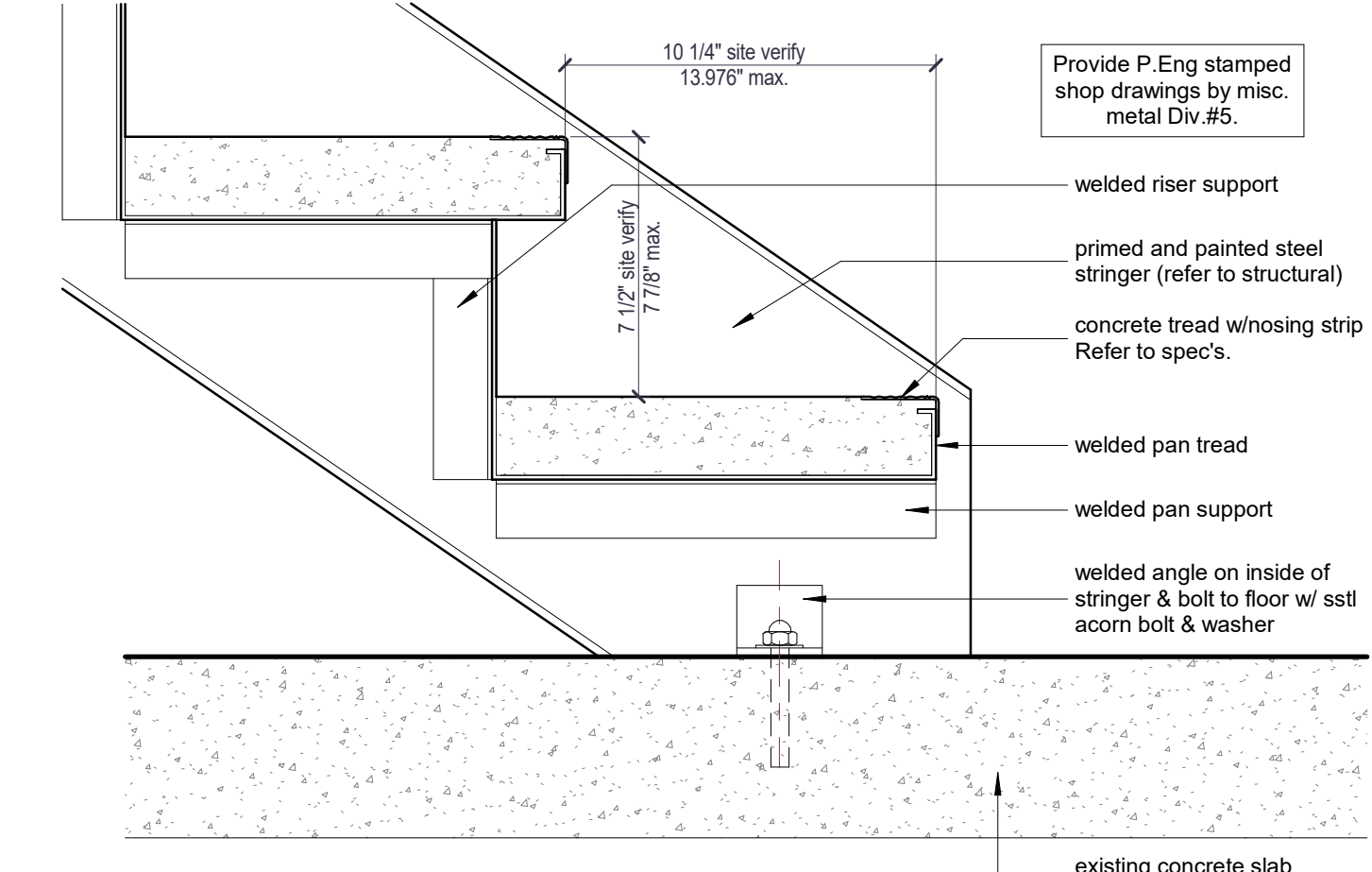
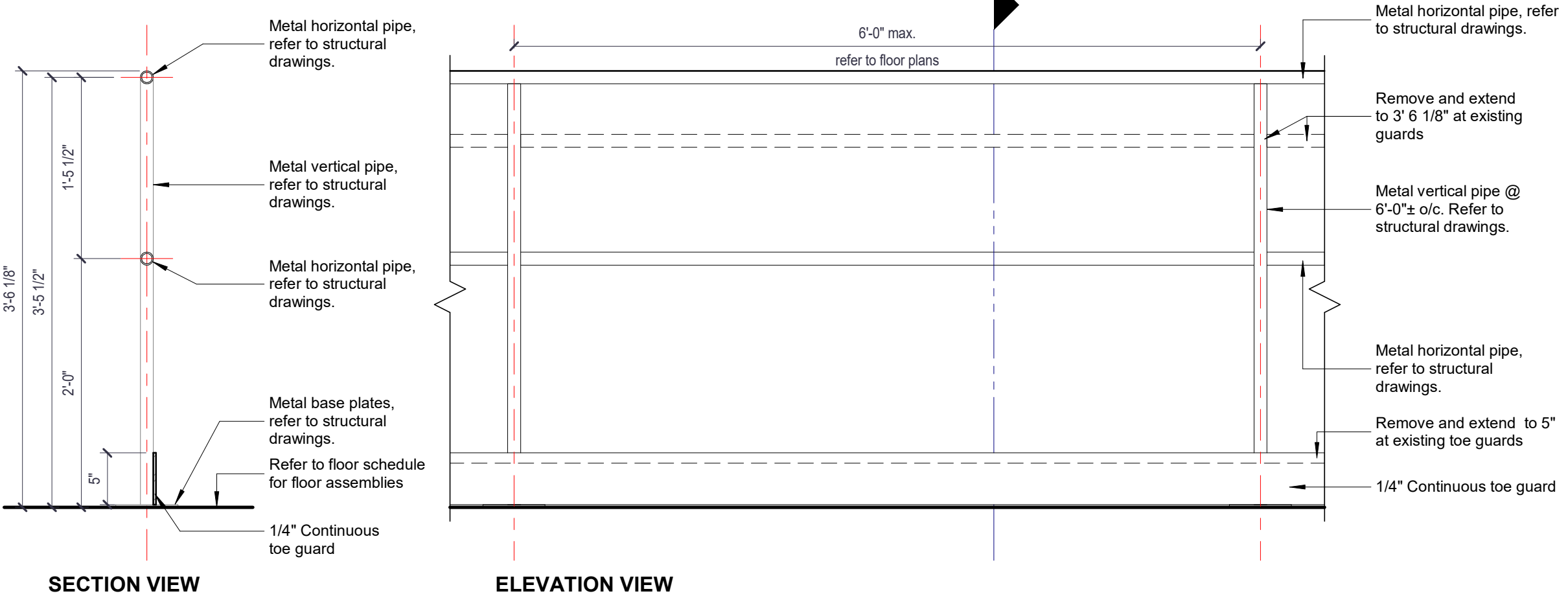
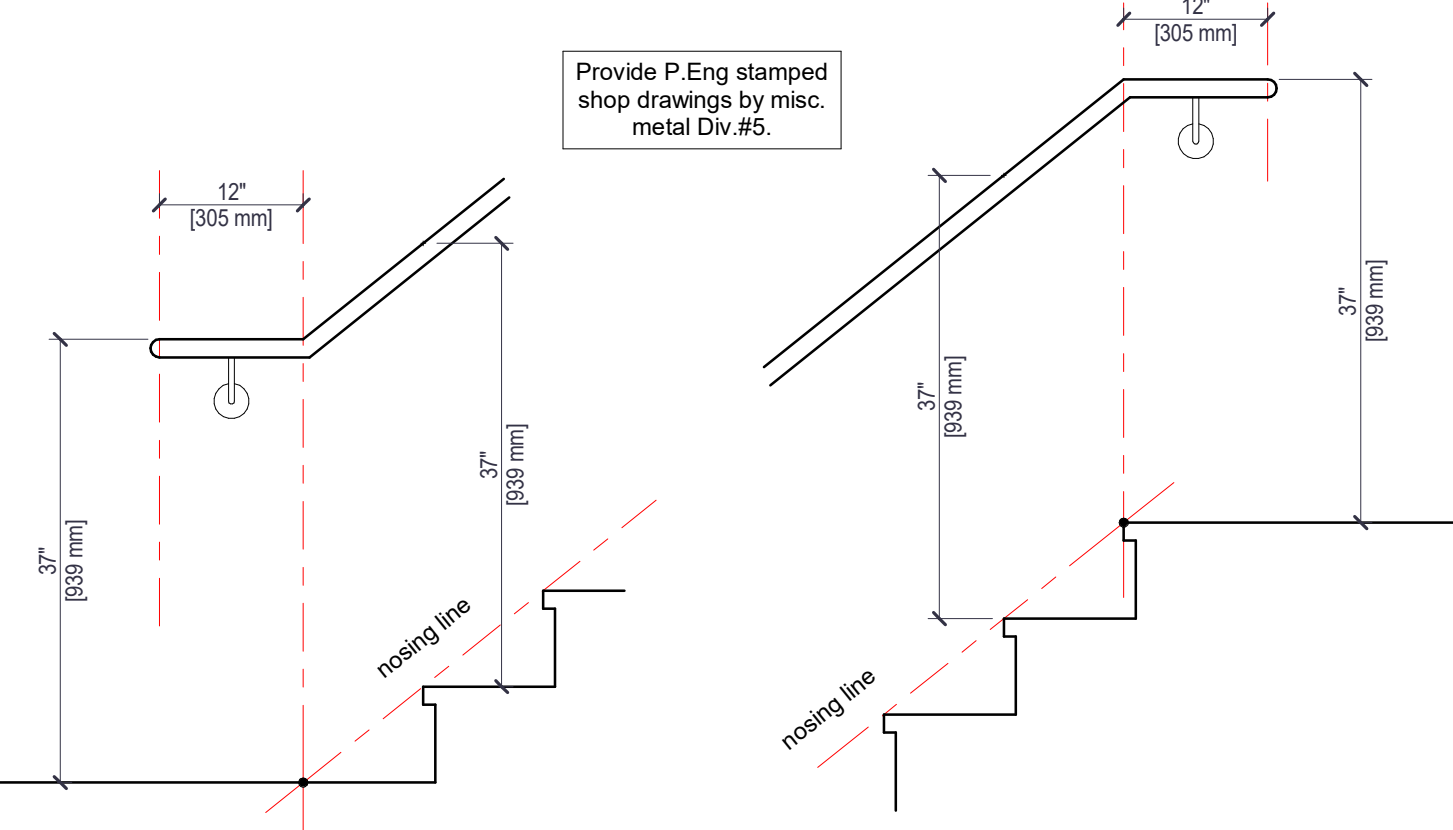
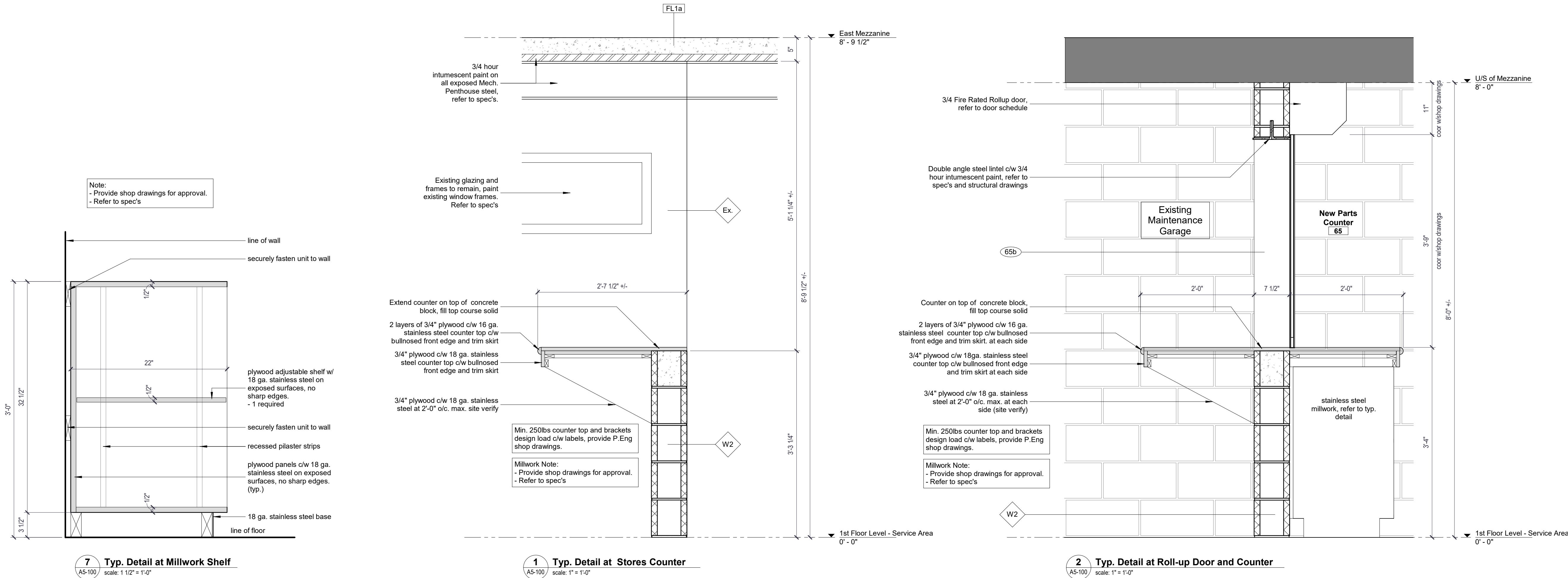
4687 Queen Street Suite 2, Niagara Falls, Ontario, L2E 2L9
TEL. 905-357-4441 FAX. 905-357-9203
WEB. www.raimondoarchitects.com
EMAIL. mail@raimondoarchitects.com

City of Niagara Falls
Municipal Service Centre
3200 Stanley Ave, Niagara Falls

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Typ. Section Details

SCALE: As Indicated	A5-100
PROJECT NO.: 20-055	



Note:
- Provide shop drawings for approval.
- Refer to spec's

Existing glazing and frames to remain, paint existing window frames. Refer to spec's

Min. 250lbs counter top and brackets design load c/w labels, provide P.Eng shop drawings.
Millwork Note:
- Provide shop drawings for approval.
- Refer to spec's

Min. 250lbs counter top and brackets design load c/w labels, provide P.Eng shop drawings.
Millwork Note:
- Provide shop drawings for approval.
- Refer to spec's

Note:
Paint guards yellow
Provide shop drawings stamped and signed by a professional engineer licenced in the province of Ontario by misc. metal Div.#5.

7 Typ. Detail at Millwork Shelf

1 Typ. Detail at Stores Counter

2 Typ. Detail at Roll-up Door and Counter

3 TYPICAL HANDRAIL TERMINATIONS

4 Typ. Guard at Mezzanine

5 TYPICAL METAL STAIR W/ CONCRETE TREAD DETAIL

6 TYPICAL ROUND GUARDRAIL DETAIL AT STAIRS

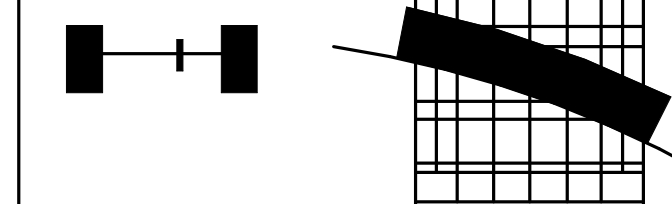
General Notes

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Key Plan

K May 7, 2021 Issued for Construction

Revisions



RAIMONDO + ASSOCIATES ARCHITECTS INC.

4687 Queen Street Suite 2, Niagara Falls, Ontario, L2E 2L9
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WEB: www.raimondoaarchitects.com
EMAIL: mail@raimondoaarchitects.com

City of Niagara Falls
Municipal Service Centre
3200 Stanley Ave, Niagara Falls

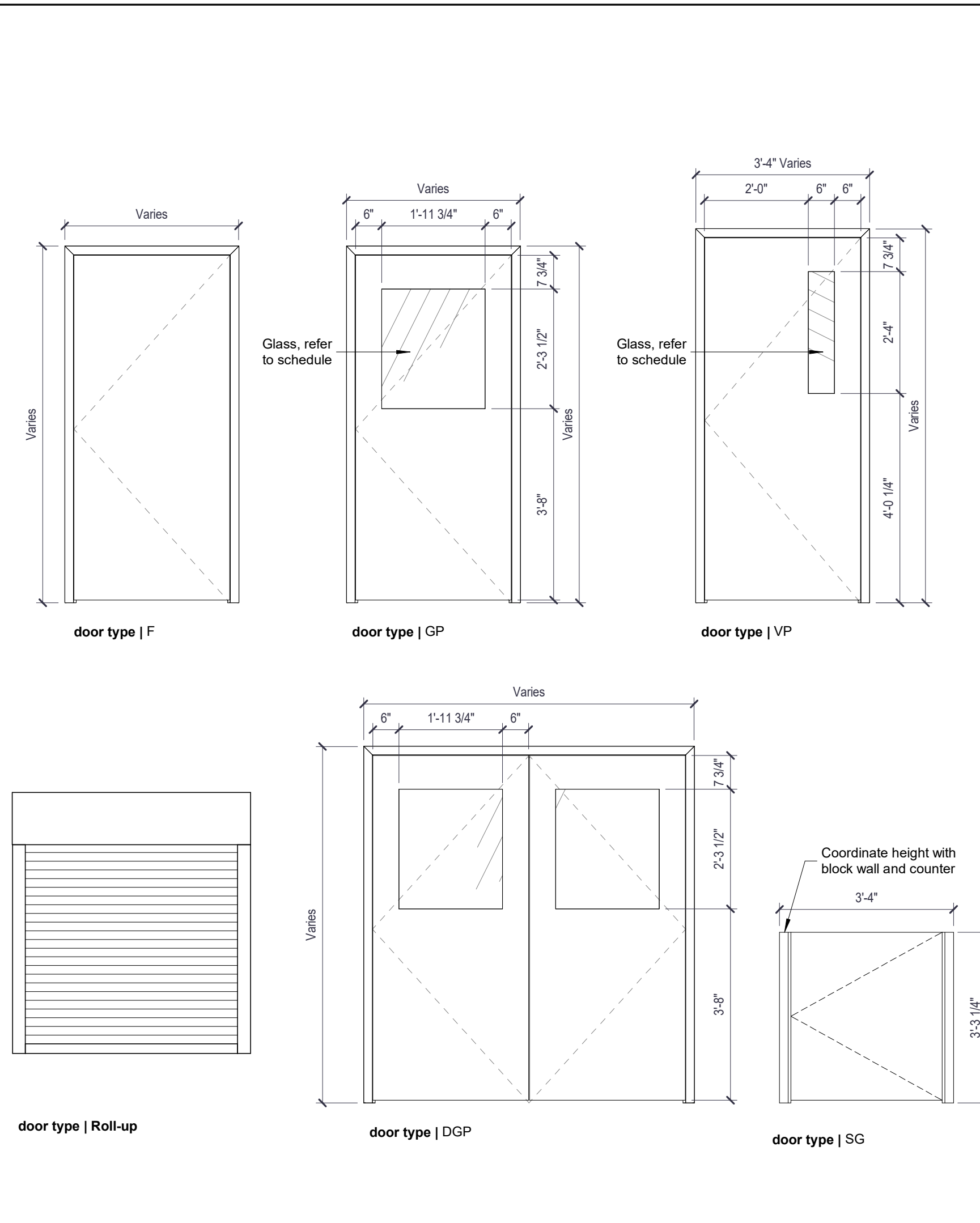
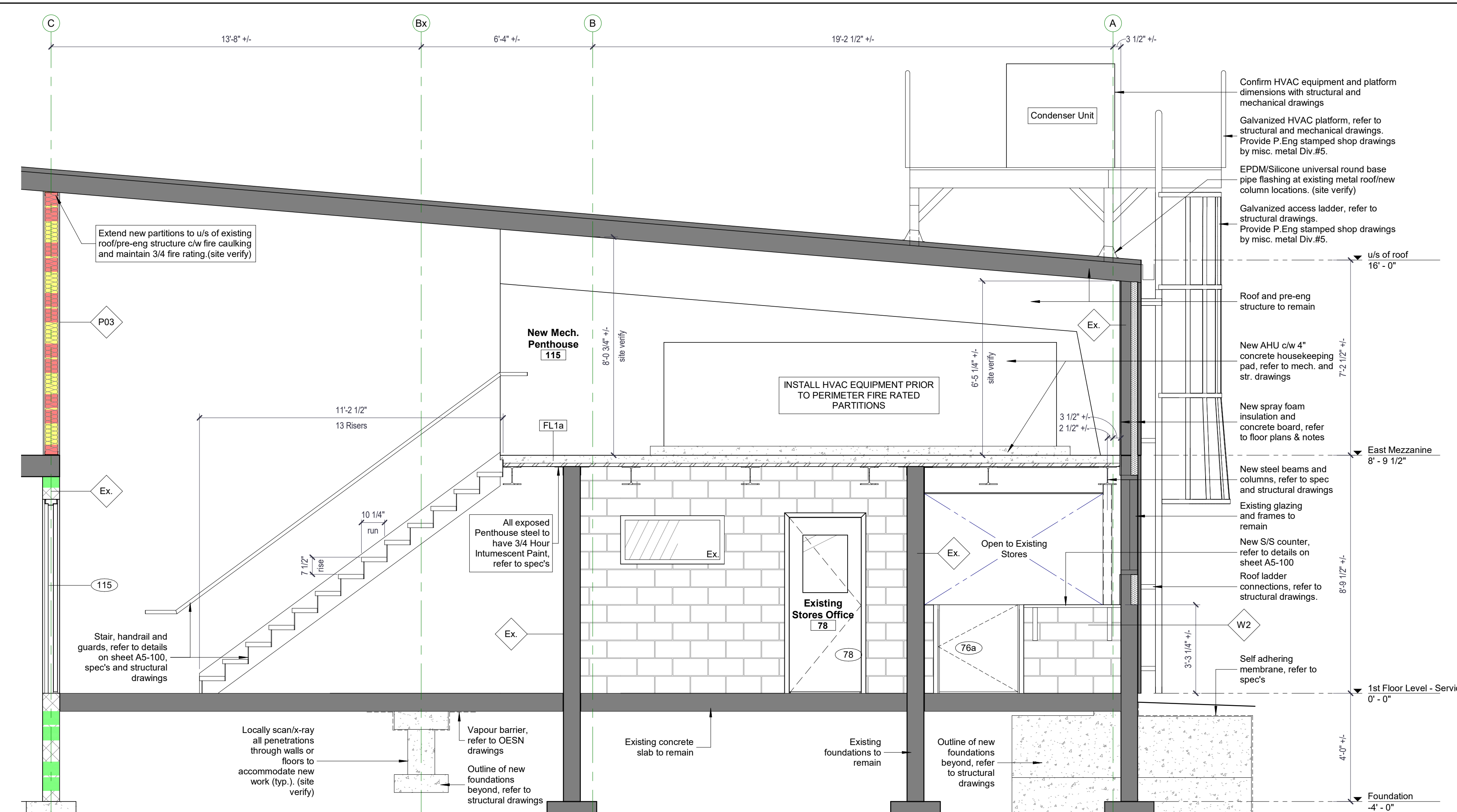
DATE: 5/5/2021 8:52:02 AM
DRAWN BY: JV
CHECKED: ER

Door + Frame Schedules & Mech. Penthouse Section

SCALE: As Indicated

PROJECT NO.: 20-055

A7-100

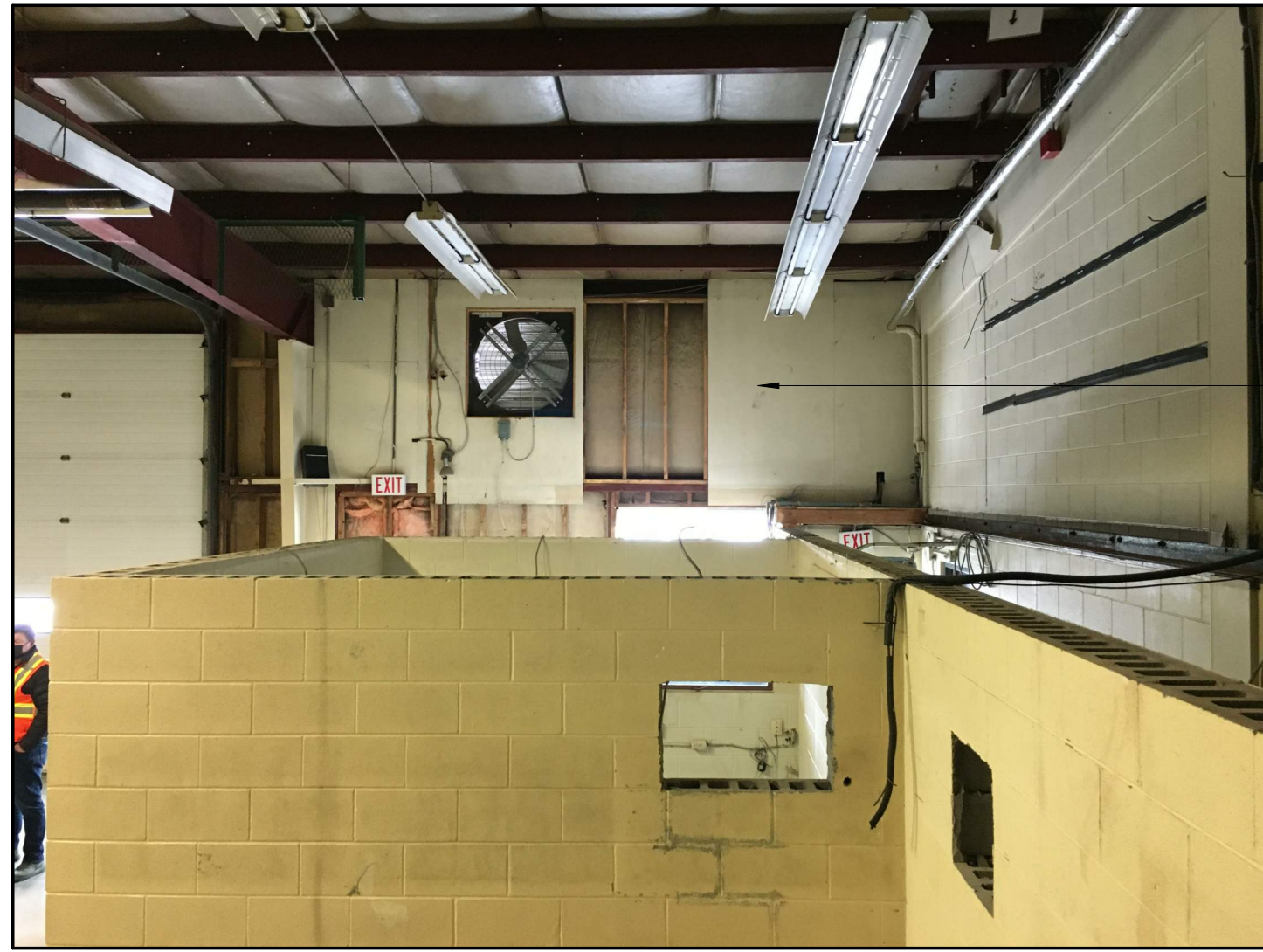


Mark	Unit Sizes			Unit Info.		Fire Rating	Hardware Set	Ele. Strike & Card Reader	Weather Stripping and Door Sweep	Comments
	Width	Height	Thickness	Door Type	Door Material					
19a	3'-0"	7'-0"	0'-1 3/4"	F	Hollow Metal	N/A	3/4 Hour	Refer to Specs	Yes	Report any issues to Architect.
19b	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	N/A	Existing	Refer to Specs For New Hardware	Yes	Report any issues to Architect.
24	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	N/A	Existing	Refer to Specs For New Hardware	Yes	Report any issues to Architect.
25a	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	Existing	Existing	Refer to Specs For New Hardware	Yes	Report any issues to Architect.
25a	14'-0"	10'-0"	0'-0"	Existing	Existing	N/A	Existing	Refer to Specs For New Hardware	Yes	Report any issues to Architect.
42	3'-0"	7'-0"	0'-1 3/4"	GP	Ins. Hollow Metal	1" Ins. Unit	Ins. Hollow Metal	Paint	1.5	Refer to Specs
42a	3'-0"	7'-0"	0'-1 3/4"	GP	Existing	Existing	Existing	Paint	Existing	Refer to Specs For New Hardware
49	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	N/A	Existing	Paint	Existing	Refer to Specs For New Hardware
61	6'-0"	7'-0"	0'-1 3/4"	DGP	Hollow Metal	Firelite or App. Eq	Existing	Paint	1.5	Refer to Specs
61a	3'-0"	7'-0"	0'-1 3/4"	GP	Hollow Metal	Firelite or App. Eq	Existing	Paint	1.5	Refer to Specs
61b	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	N/A	Existing	Paint	Existing	Refer to Specs
61c	3'-0"	7'-0"	0'-1 3/4"	GP	Ins. Hollow Metal	1" Ins. Unit	Ins. Hollow Metal	Paint	1.5	Refer to Specs
61d	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	Existing	Existing	Paint	Existing	Refer to Specs For New Hardware
61e	3'-0"	7'-0"	0'-1 3/4"	GP	Hollow Metal	Firelite or App. Eq	Existing	Paint	1.5	Refer to Specs
61f	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	Existing	Existing	Paint	Existing	Refer to Specs For New Hardware
61g	3'-0"	7'-0"	0'-1 3/4"	GP	Hollow Metal	6mm Laminated	Hollow Metal	Paint	N/A	Refer to Specs
63a	3'-0"	7'-0"	0'-1 3/4"	GP	Ins. Hollow Metal	1" Ins. Unit	Existing	Paint	Existing	Refer to Specs
63b	3'-0"	7'-0"	0'-1 3/4"	VP	Hollow Metal	6mm Laminated	Existing	Paint	N/A	Refer to Specs
63c	10'-0"	10'-0"	0'-0"	Existing	Existing	N/A	Existing	Existing	N/A	Refer to Specs For New Hardware
63d	14'-0"	10'-0"	0'-0"	Existing	Existing	N/A	Existing	Existing	N/A	Refer to Specs For New Hardware
64a	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	Existing	Existing	Paint	Existing	Refer to Specs For New Hardware
64b	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	N/A	Existing	Paint	Existing	Refer to Specs For New Hardware
65a	3'-0"	7'-0"	0'-1 3/4"	GP	Hollow Metal	N/A	Hollow Metal	Paint	3/4 Hour	Storage room lockset and closer
65b	4'-3"	3'-9"	0'-0"	Metal	N/A	Metal	Metal	3/4 Hour	Fire-Rated Counter Shutter	Wayne Dalton FireStar Model 550 or Cornell Model ERC10 or App Eq.
66a	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	Existing	Existing	Paint	Existing	Refer to Specs For New Hardware
66b	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	Existing	Existing	Paint	Existing	Refer to Specs For New Hardware
67	3'-0"	7'-0"	0'-1 3/4"	GP	Hollow Metal	Firelite or App. Eq	Existing	Paint	Existing	Refer to Specs
73	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	N/A	Existing	Paint	Existing	Refer to Specs For New Hardware
76	14'-0"	10'-0"	0'-0"	Existing	Existing	N/A	Existing	Existing	N/A	Refer to Specs For New Hardware
76a	3'-0"	3'-1 1/4"	0'-1 3/4"	SG	Hollow Metal	N/A	Hollow Metal	Paint	N/A	Refer to Specs
76b	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	Existing	Existing	Paint	Existing	Refer to Specs For New Hardware
78	2'-8"	6'-0"	0'-1 3/4"	GP	Hollow Metal	6mm Laminated	Hollow Metal	Paint	N/A	Refer to Specs
101	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	N/A	Existing	Paint	Existing	Refer to Specs For New Hardware
102a	2'-8"	7'-0"	0'-1 3/4"	F	Wood	N/A	Hollow Metal	Paint	N/A	Refer to Specs
103	3'-0"	7'-0"	0'-1 3/4"	F	Hollow Metal	N/A	Hollow Metal	Paint	3/4 Hour	Refer to Specs
106	3'-0"	7'-0"	0'-1 3/4"	F	Existing	Existing	Existing	Paint	Existing	Refer to Specs For New Hardware
115	3'-2"	7'-0"	0'-1 3/4"	F	Hollow Metal	N/A	Hollow Metal	Paint	3/4 Hour	Refer to Specs
118	3'-0"	7'-0"	0'-1 3/4"	F	Hollow Metal	N/A	Hollow Metal	Paint	3/4 Hour	Refer to Specs
200	3'-0"	7'-0"	0'-1 3/4"	Existing	Existing	Existing	Existing	Paint	Existing	Refer to Specs

- Note:
 1. Refer to cash allowance for hardware and Design Electronics
 2. Refer to door hardware spec for additional info.
 3. Site verify all door and frame sizes
 4. Sand and repair existing door and frames for new paint finish.
 5. Hinges to accommodate 170d swing.
 6. Provide floor mounted door stop as per hardware schedule.
 7. Extra heavy duty hinges
 8. Steel stiffen all hollow metal doors.

J:\2020-055 - City of Niagara Falls Service Center\05-Drafting\02-Rev\20-055 - City of Niagara Falls Service Centre.rvt

Photo #1



Approx. 350sq ft of new metal stud in-fill c/w spray foam insulation & cement board at existing plywood locations, site verify.
Refer to floor plan notes.

Photo #2



Approx. 350 sq ft of new metal stud in-fill c/w spray foam insulation & cement board at existing plywood locations, site verify.
Refer to floor plan notes.

Photo #3



Approx. 240 sq ft of new metal stud in-fill c/w spray foam insulation & cement board at existing exposed insulation and pegboard, site verify.
Refer to floor plan notes.

New metal stud in-fill c/w metal siding to match existing at existing door.
Refer to floor plan notes.

Photo #4



Approx. 300 sq ft of new metal stud in-fill c/w spray foam insulation & cement board at existing insulation, site verify.
Refer to floor plan notes.

New metal stud in-fill c/w metal siding to match existing at existing door.
Refer to floor plan notes.

Approx. 100 sq ft. remove and replace concrete masonry, refer to structural drawings.
Refer to floor plan notes.

Photo #5



Repair existing cracked foundation with new concrete in-fill, site verify.

Photo #6



Approx. 100 sq ft of stonewool insulation to match existing at damaged pre-eng roof, site verify.
Refer to floor plan notes.

Photo #7



Approx. 120sq ft of new metal stud in-fill c/w spray foam insulation & cement board at existing insulation, site verify.
Refer to floor plan notes.

Photo #8



Approx. 220sq ft of new metal stud in-fill c/w spray foam insulation & cement board at existing insulation, site verify.
Refer to floor plan notes.

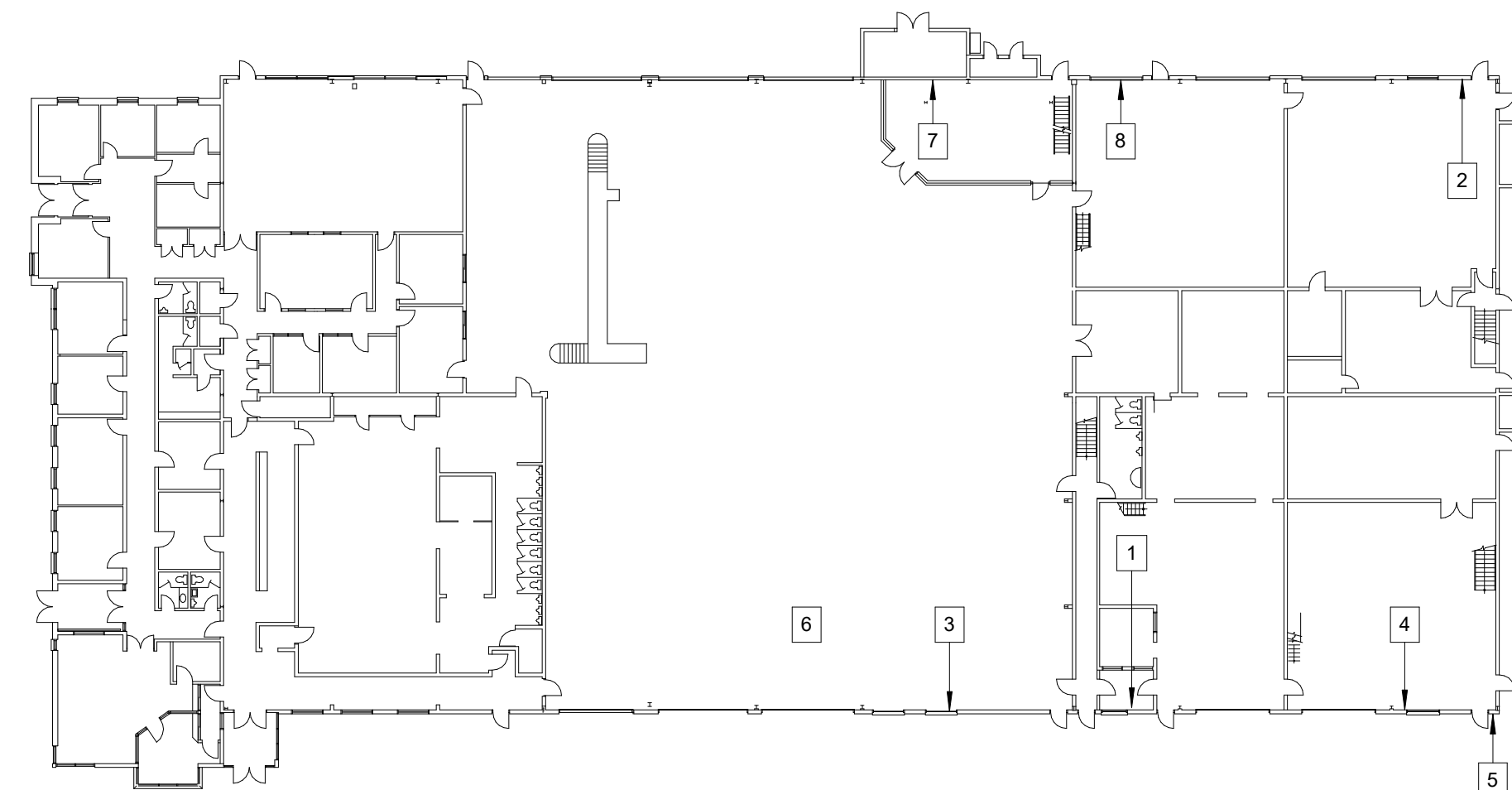
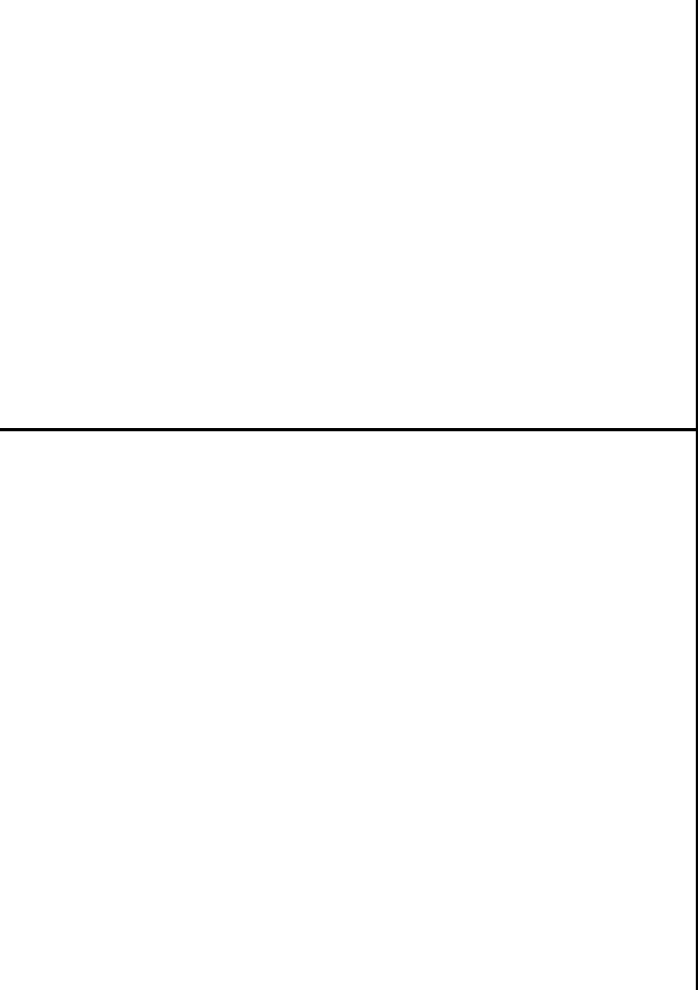


Photo Key Plan

General Notes

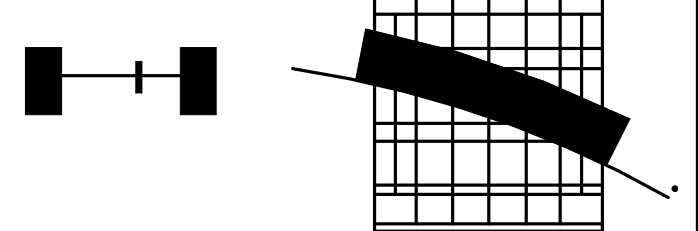
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Key Plan



K	May 7, 2021	Issued for Construction

Revisions



RAIMONDO + ASSOCIATES ARCHITECTS INC.

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TEL: 905-357-4441 FAX: 905-357-9203
WEB: www.raidmooarchitects.com
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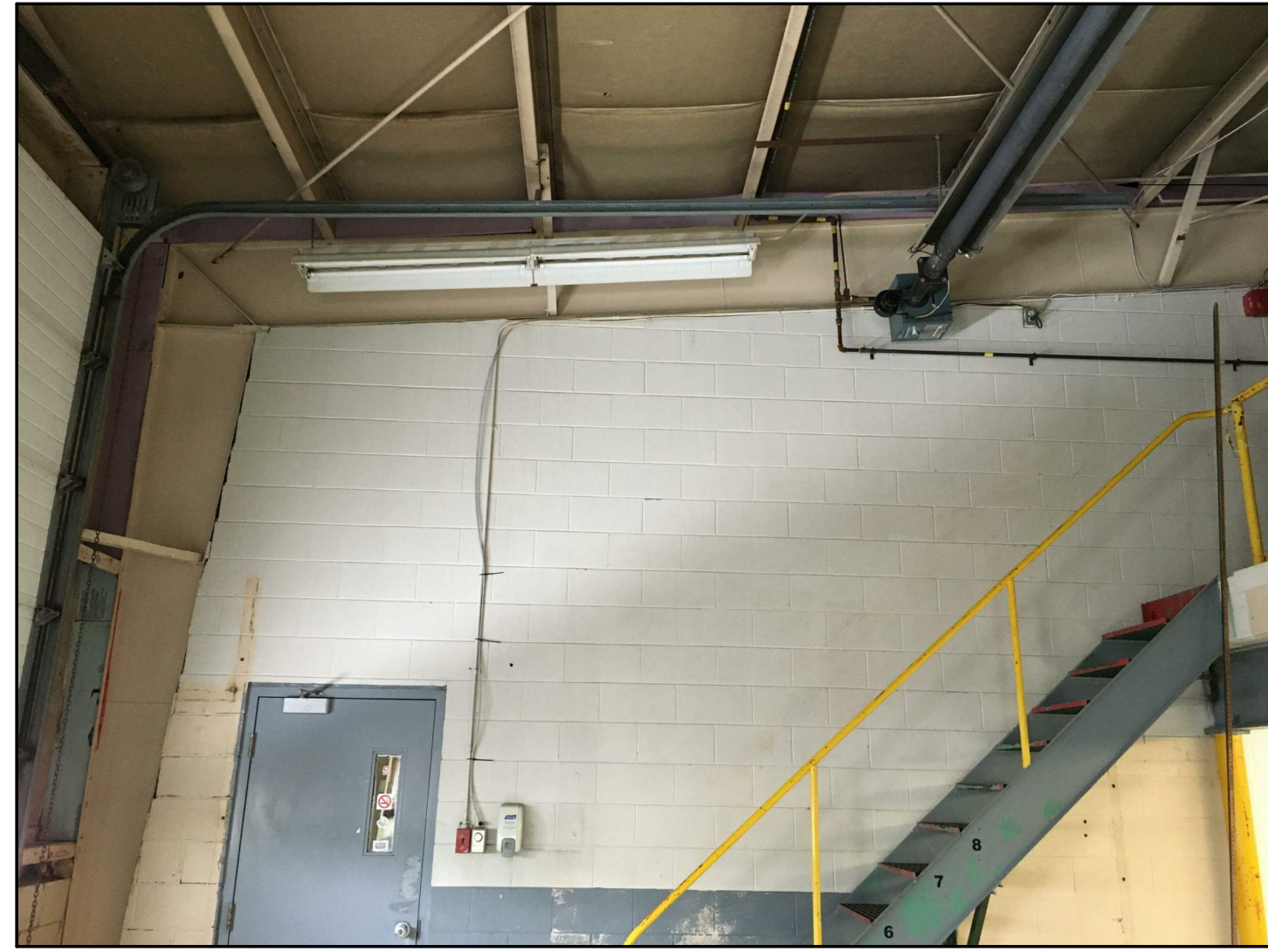
City of Niagara Falls
Municipal Service Centre
3200 Stanley Ave, Niagara Falls

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Typ. Repair Photos

SCALE: As Indicated	A8-100
PROJECT NO.: 20-055	

Photo #9



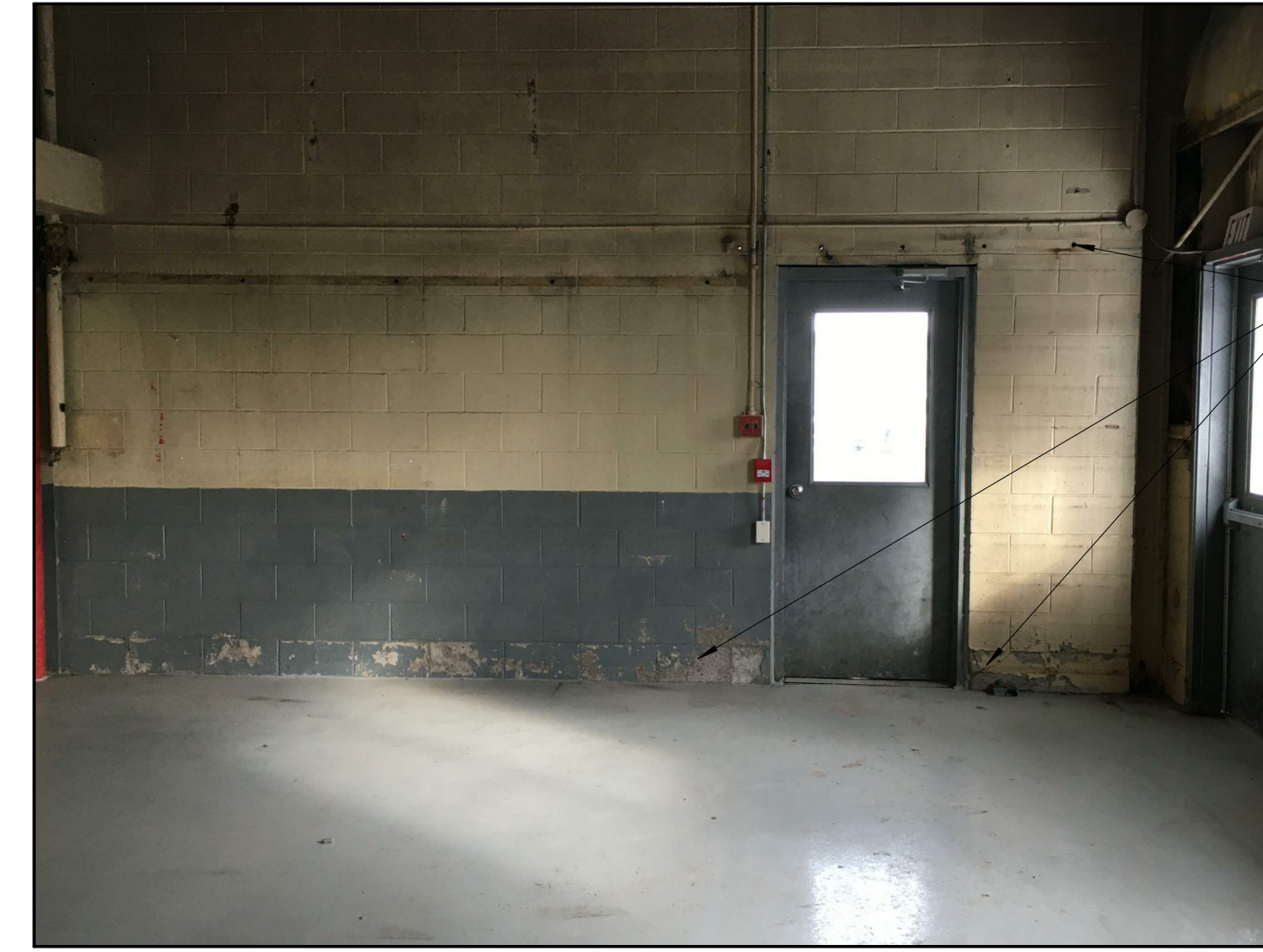
Remove all exposed rigid insulation, site verify all locations. Refer to floor plan notes.

Photo #10



Approx. 15 sq ft, remove and replace concrete masonry, refer to structural drawings. Refer to floor plan notes.

Photo #11



Approx. 15 sq ft, remove and replace base course, refer to structural drawings. Refer to floor plan notes.

Photo #12



Approx. 5 sq ft, remove and replace base course, refer to structural drawings. Refer to floor plan notes.

Photo #13



Approx. 5 sq ft, remove and replace base course, refer to structural drawings. Refer to floor plan notes.

Photo #14



Repair existing pre-eng roof framing, (site verify). Refer to floor plan notes.

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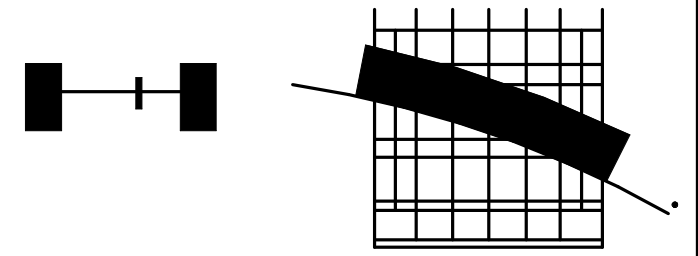
Key Plan

Key Plan area containing photo locations 9, 10, 11, 12, 13, and 14.

Revisions

K	May 7, 2021	Issued for Construction

Revisions



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Municipal Service Centre
3200 Stanley Ave, Niagara Falls

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Typ. Repair Photos

SCALE: As Indicated	A8-101
PROJECT NO.: 20-055	

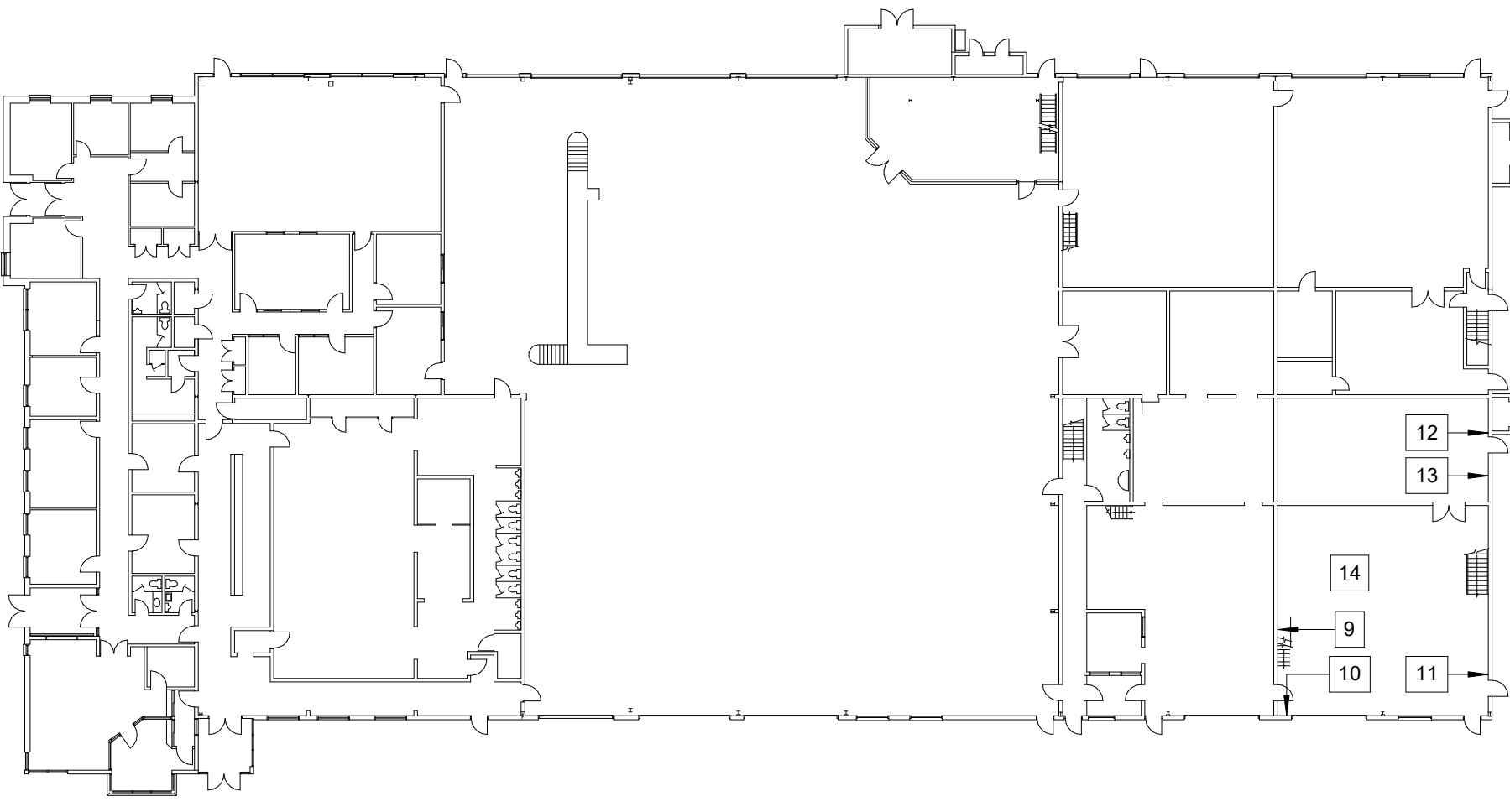
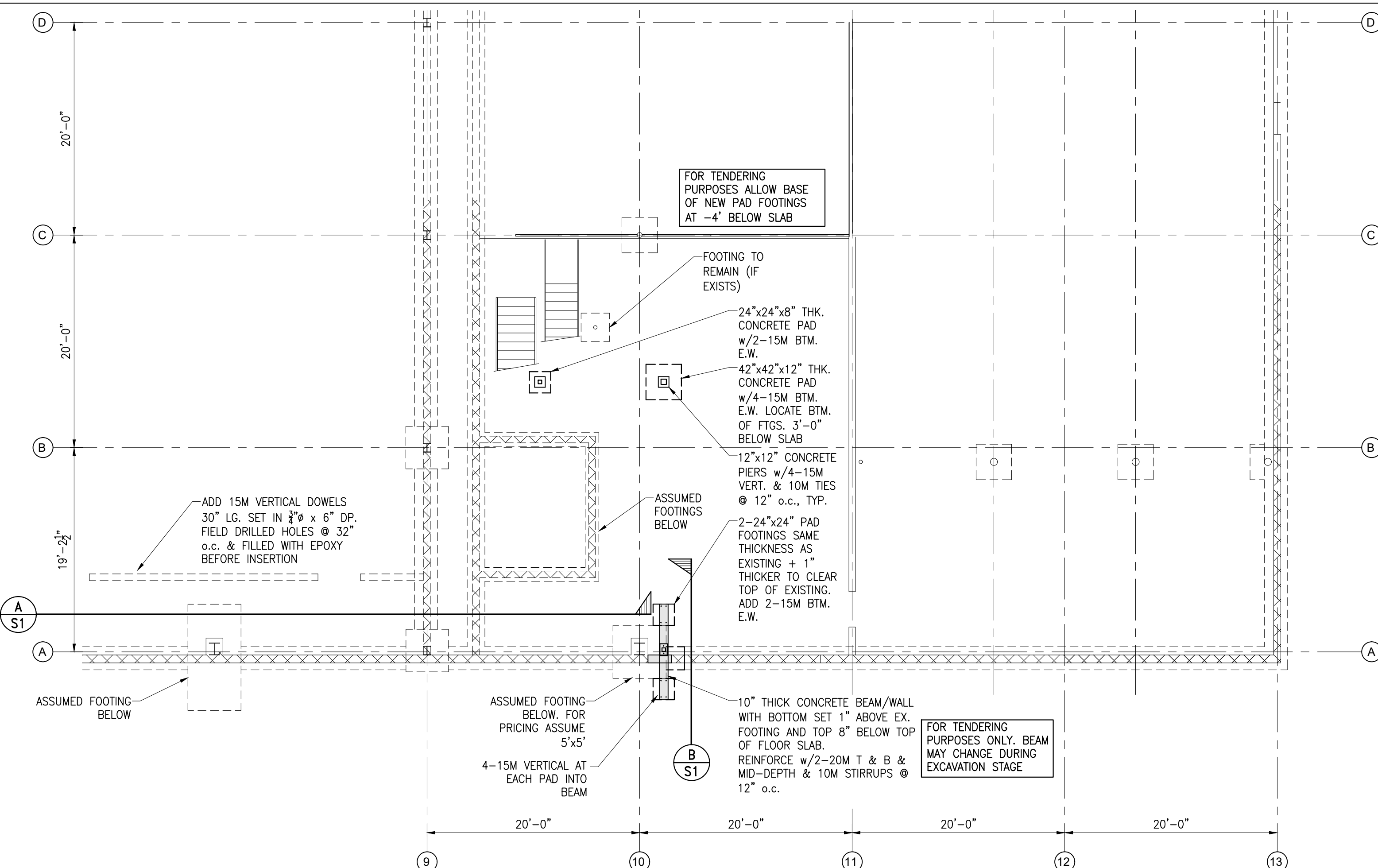


Photo Key Plan



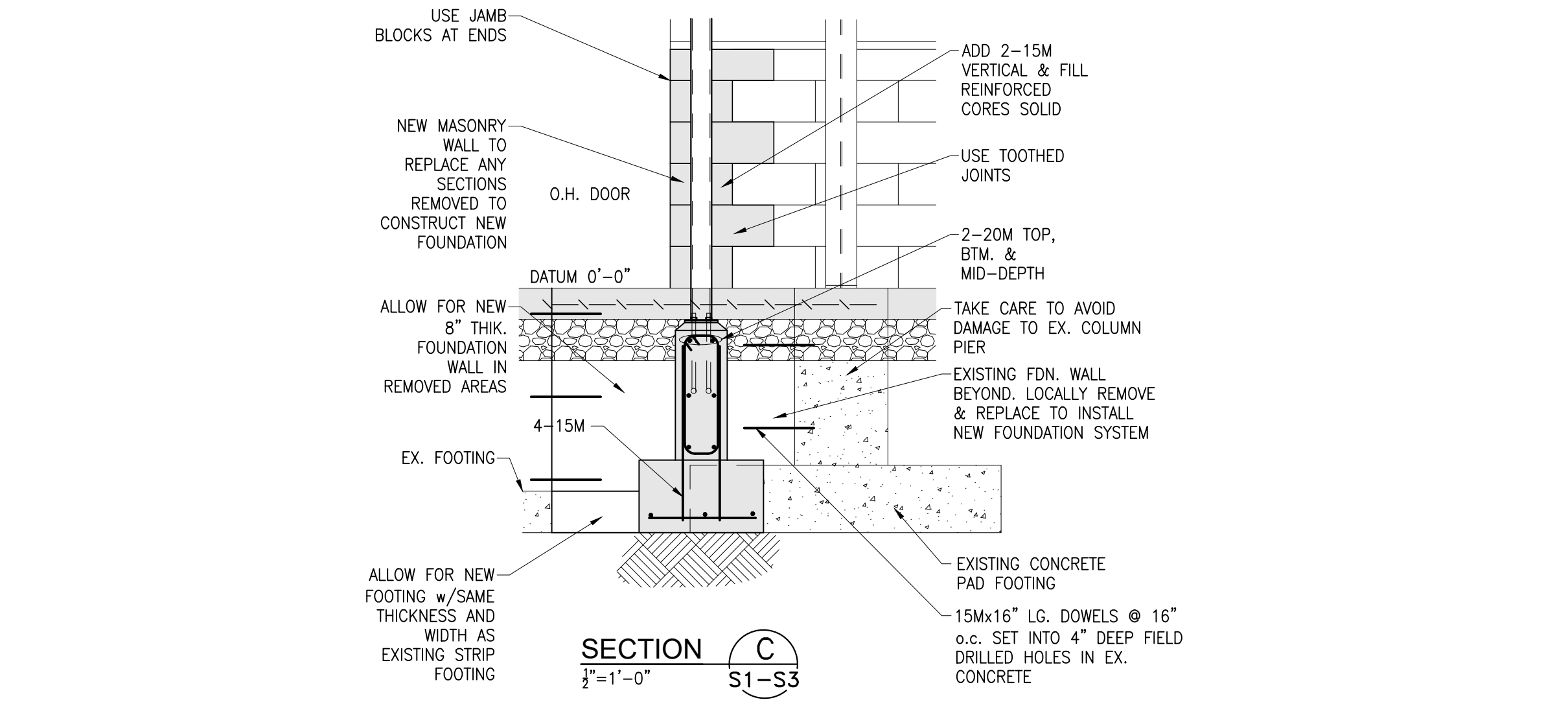
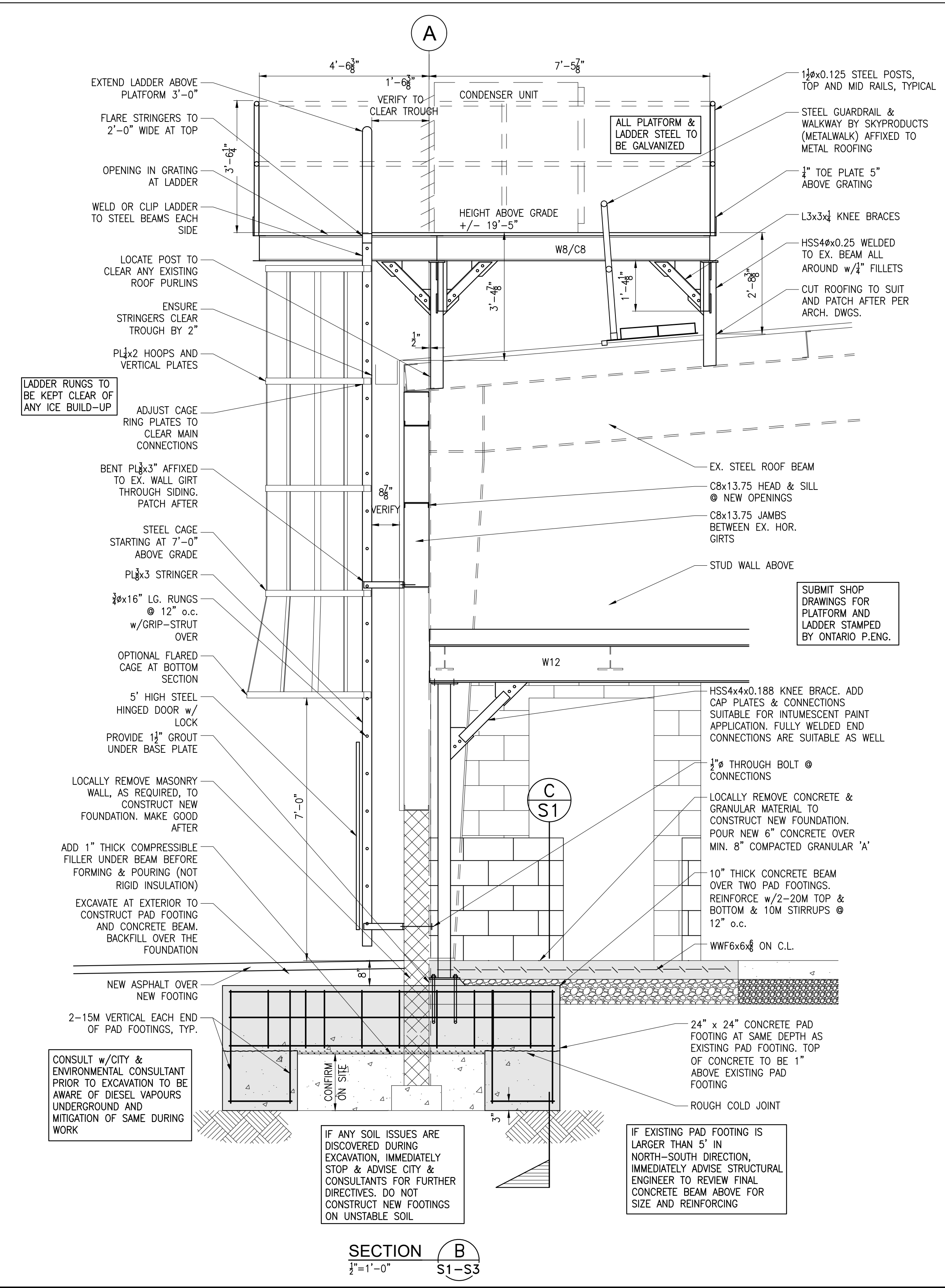
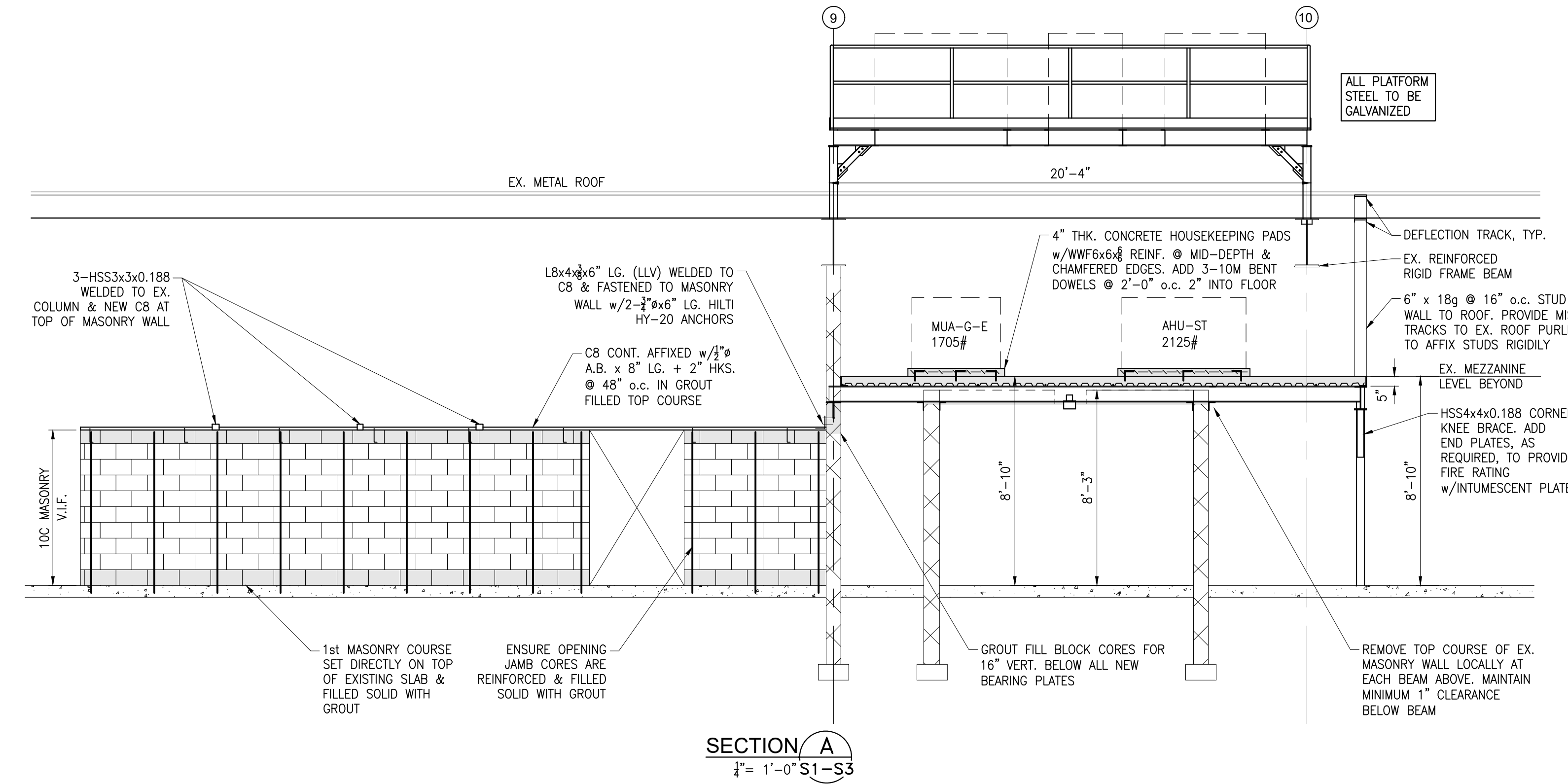
FOUNDATION PLAN
1/2" = 1'-0"

FOUNDATION PLAN NOTES

- TOP OF SLAB ON GRADE AT 1ST FLOOR IS AT ELEVATION +0000, UNLESS NOTED OTHERWISE.
- FOOTINGS HAVE BEEN DESIGNED FOR A SAFE ALLOWABLE BEARING PRESSURE OF 150 kPa AND FACTORED BEARING PRESSURE OF 225 kPa ON NATIVE UNDISTURBED SOIL. BEARING PRESSURES TO BE VERIFIED BY GEOTECHNICAL INVESTIGATION AND REPORTED TO STRUCTURAL CONSULTANT.
- UNDERSIDE OF FOOTINGS AT EXTERIOR OF BUILDING TO BE A MINIMUM 4" (122mm) BELOW FINISHED EXTERIOR GRADE ELEVATION OR THE SAME AS EXISTING FOOTING ELEVATION WHICHEVER IS LOWEST. ALL FOOTINGS ARE TO BEAR ON NATIVE UNDISTURBED SOIL.
- TYPICAL REPLACEMENT SLAB ON GRADE CONSTRUCTION: 6" (150mm) MIN. CONCRETE SLAB WITH WWF 6x6x6 (152x152 MW18.7/MW18.7) ON MIN. 8" (200mm) GRANULAR 'A' COMPACTED TO 100% SPMD.
- SEE ARCHITECTURAL DRAWINGS FOR SLOPES TO ANY DRAINS IN FLOOR AREAS. MAINTAIN ALL STRUCTURAL THICKNESSES SHOWN.
- AT ALL LOCATIONS ON PLAN NOTED AS THUS \square , PROVIDE A SAW CUT OR A CONSTRUCTION JOINT (SEE TYPICAL DETAILS 3.09). FINAL LOCATIONS OF CONTROL JOINTS MUST BE COORDINATED BETWEEN THE CONCRETE CONTRACTOR AND THE FLOOR FINISHING CONTRACTOR THROUGH THE OWNER.
- CONCRETE CONTRACTOR TO COORDINATE WITH ALL TRADES THE LOCATION OF ALL PIPE SLEEVES THROUGH CONCRETE FOUNDATION WALLS. PIPE SLEEVES MAY NOT BE PLACED WITHIN FOOTINGS. FOUNDATIONS MUST BE STEPPED DOWN TO ACCOMMODATE ELEVATION OF PIPE SLEEVES. REPORT ANY DISCREPANCIES TO ACA ENGINEERING SERVICES.
- THE STRUCTURAL DRAWINGS MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS.

GENERAL NOTES

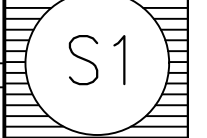
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND ADDITIONAL INFORMATION.
- DO NOT SCALE THESE DRAWINGS.
- THE GENERAL CONTRACTOR IS ADVISED THAT THE STRUCTURAL CONSULTANT MUST BE CONTACTED ON A PERIODIC BASIS TO INSPECT THE PROGRESS OF THE WORK. ENSURE THAT THE STRUCTURAL CONSULTANT IS CONTACTED AT LEAST 48 HRS. BEFORE ANY CONCRETE POURS.
- REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR CASH ALLOWANCE ITEMS. CONTACT THE STRUCTURAL CONSULTANT IF ANY CLARIFICATIONS ARE REQUIRED PRIOR TO COMMENCING ANY CASH ALLOWANCE WORK.



DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL MEASUREMENTS ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER BEFORE PROCEEDING WITH WORK. ALL WORK TO BE DONE IN ACCORDANCE WITH ALL GOVERNING CODES AND LOCAL BUILDING AUTHORITIES. DESIGNER IS NOT RESPONSIBLE FOR ANY FAILURES IN MATERIALS OR ERRORS CAUSED BY WORKMANSHIP OR DEVIATION FROM THIS DRAWING.

No.	Revisions	Date
0	ISSUED FOR CONSTRUCTION	5/7/21

No.	ITEM	DATE
REVISIONS		
ACA ENGINEERING SERVICES LIMITED		
4082 Portage Road, Unit 1 Niagara Falls, Ontario L2E 6A3 PH: 905-357-2030 FX: 905-357-1783		
PROJECT:		
CITY OF NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS 3200 STANLEY AVENUE NIAGARA FALLS, ON		
DRAWING TITLE:		
FOUNDATION PLAN SECTIONS NOTES		
SCALE	DATE	
AS NOTED	SEP. 4, 2020	
DRAWN BY	JOB NO.	
ACA	20-053	



DO NOT SCALE DRAWING. CONTRACTOR MUST VERIFY ALL MEASUREMENTS ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER BEFORE PROCEEDING WITH WORK. ALL WORK TO BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES AND LOCAL BUILDING AUTHORITIES. DESIGNER IS NOT RESPONSIBLE FOR ANY FAILURES IN MATERIALS OR ERRORS CAUSED BY WORKMANSHIP OR DEVIATION FROM THIS DRAWING.

ENVIRONMENTAL DATA

WIND PRESSURE

q_{so} 0.43 kPa (9 psf)
 w_r 1.0

SEISMIC DATA

$S_a(0.2)$ 0.321
 $S_a(0.5)$ 0.157
 $S_a(1.0)$ 0.072
 $S_a(2.0)$ 0.032
 PGA 0.207
 I_e 1.0

SNOW/RAIN LOAD:

S_s 1.8 kPa
 S_r 0.4 kPa

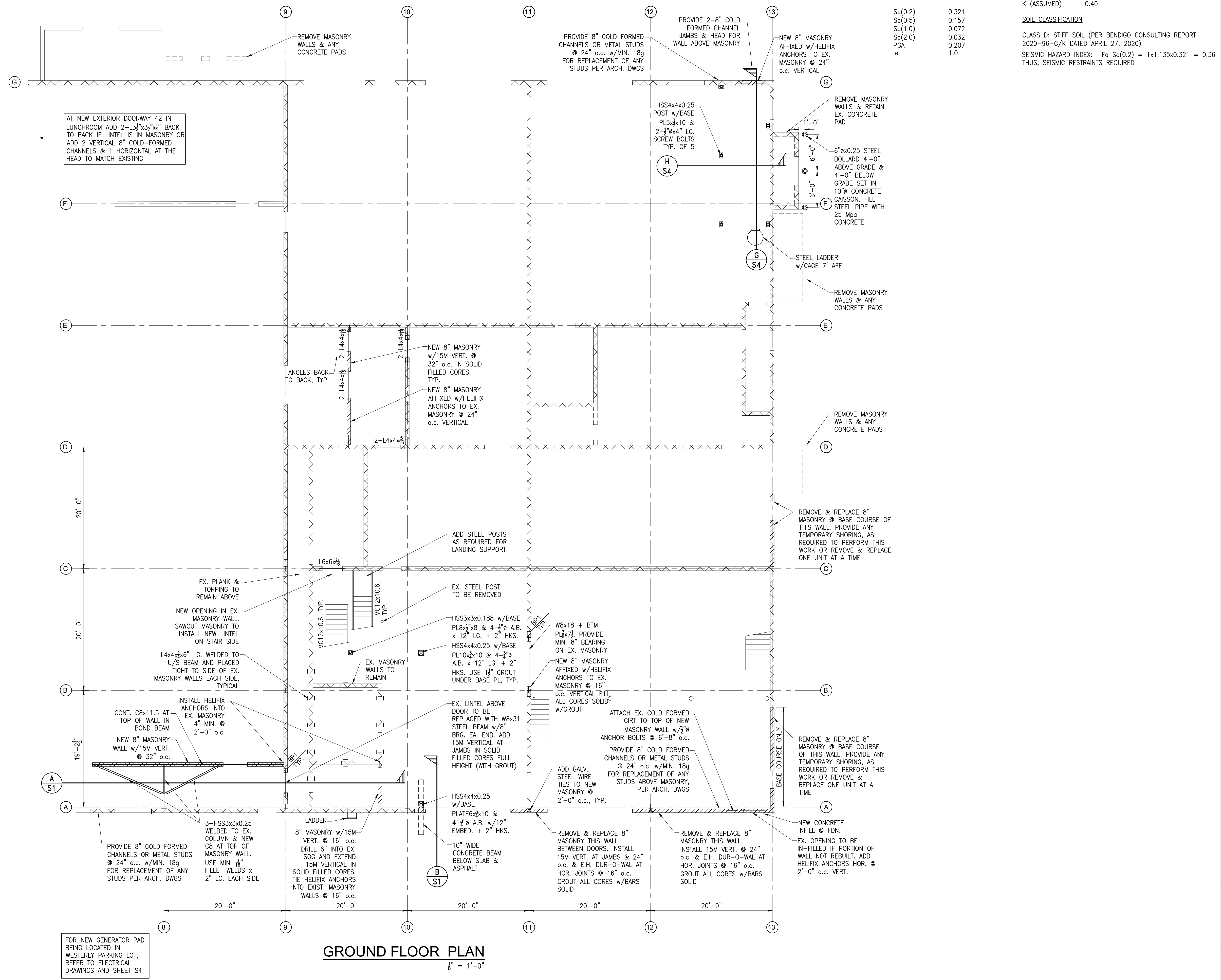
LATERAL EARTH PRESSURE

K (ASSUMED) 0.40

SOIL CLASSIFICATION

CLASS D: STIFF SOIL (PER BENDIGO CONSULTING REPORT 2020-96-G/K DATED APRIL 27, 2020)
 SEISMIC HAZARD INDEX: I_{Fa} $S_a(0.2) = 1 \times 1.135 \times 0.321 = 0.36$
 THUS, SEISMIC RESTRAINTS REQUIRED

No.	Revisions	Date
0	ISSUED FOR CONSTRUCTION	5/7/21



GROUND FLOOR PLAN
 1/8" = 1'-0"

NO.	ITEM	DATE

REVISIONS

ACA ENGINEERING SERVICES LIMITED
 4082 Portage Road, Unit 1
 Niagara Falls, Ontario
 L2E 6A3
 PH: 905-357-2030 FX: 905-357-7183

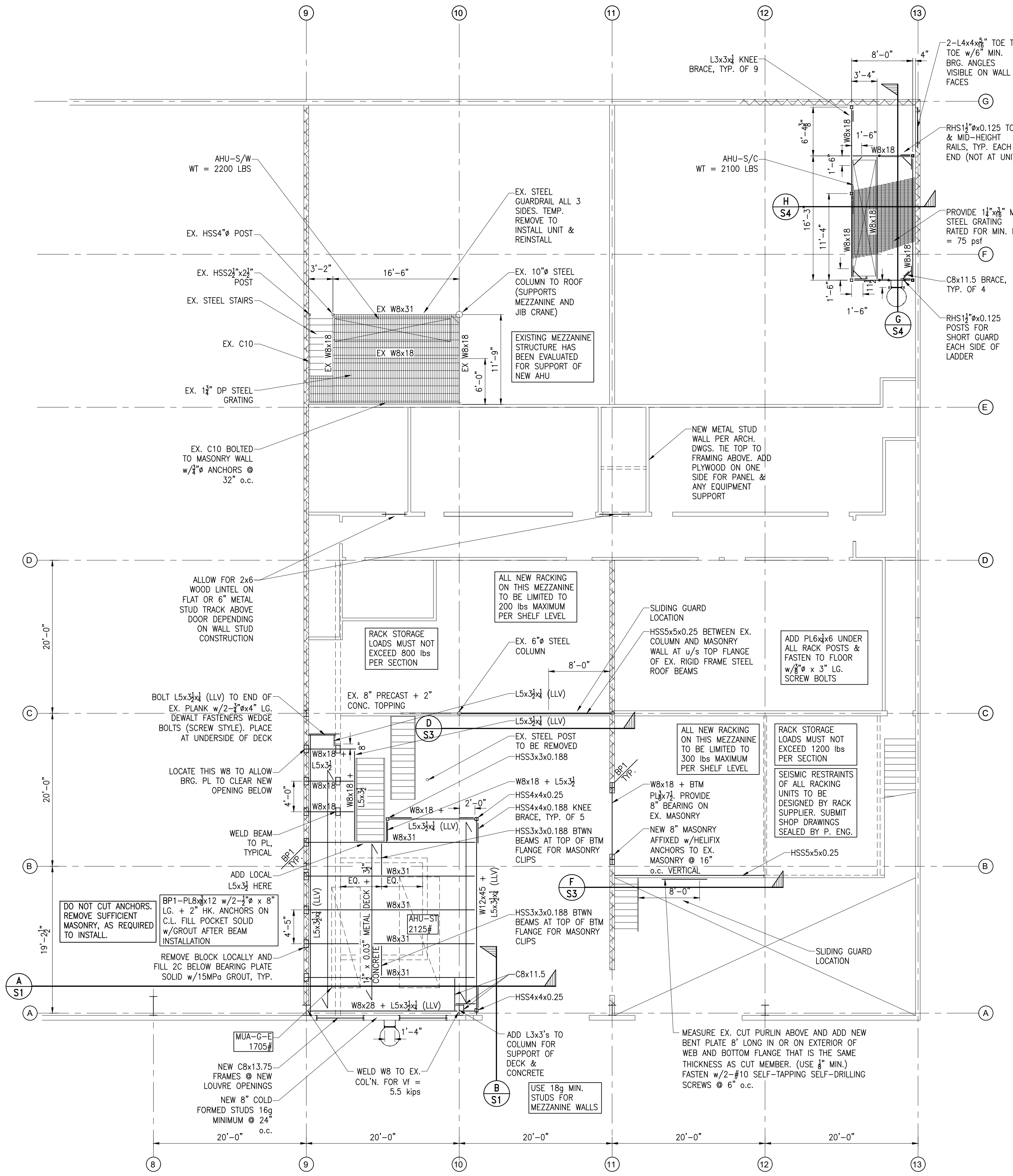
PROJECT:
 CITY OF NIAGARA FALLS
 SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE
 NIAGARA FALLS, ON

DRAWING TITLE:
 GROUND FLOOR PLAN

LOADS

SCALE	DATE
1/8"=1'-0"	SEP. 4, 2020
DRAWN BY	JOB NO.
ACA	20-053

S2



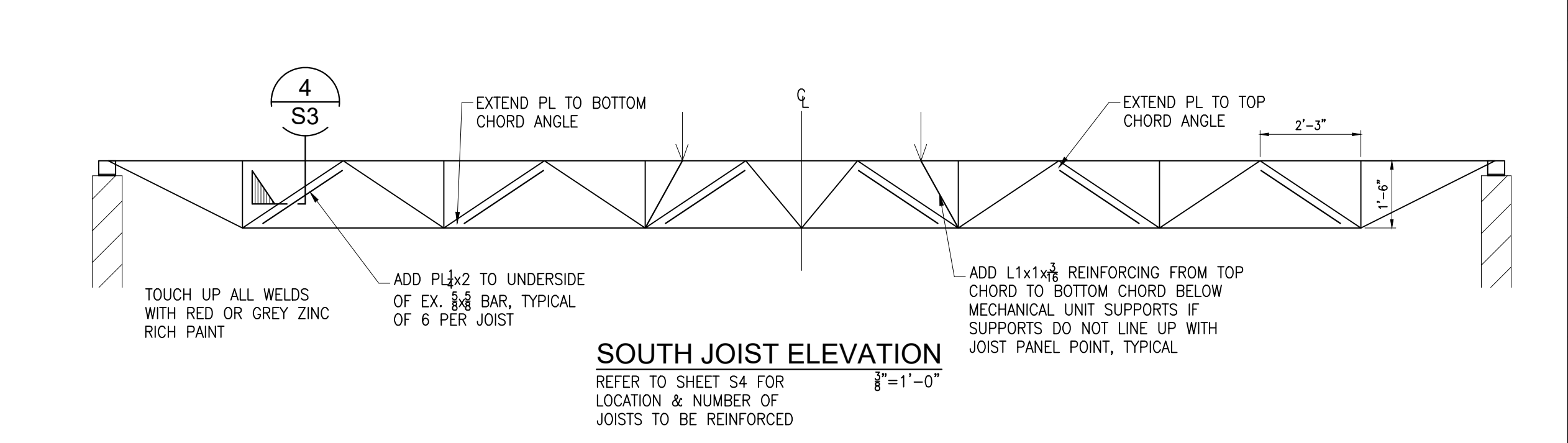
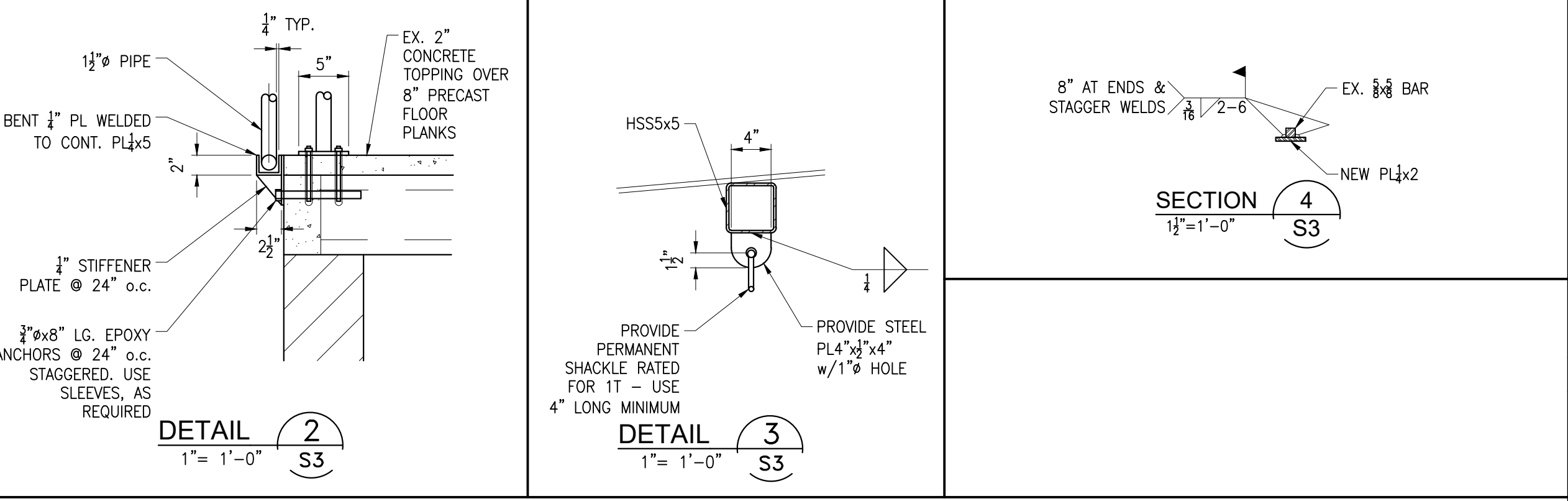
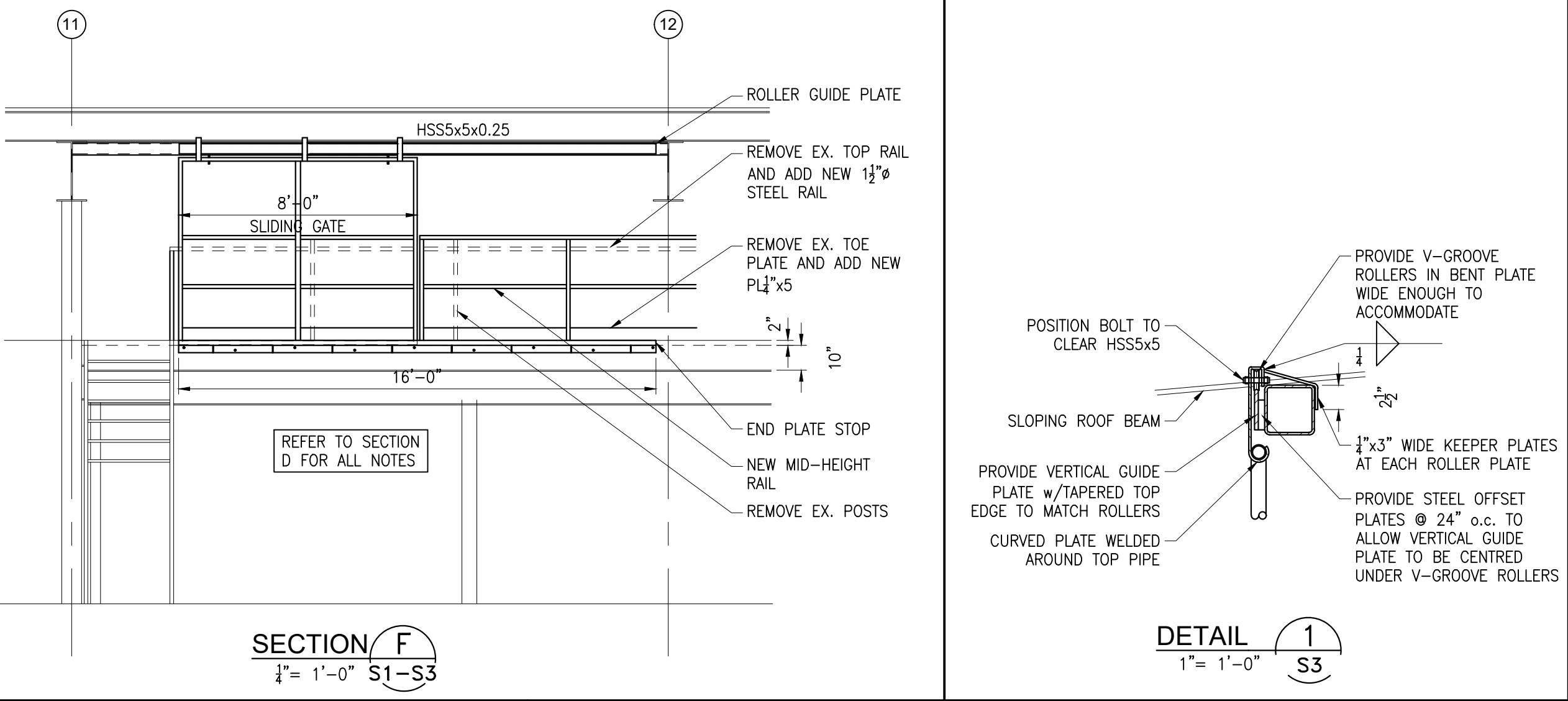
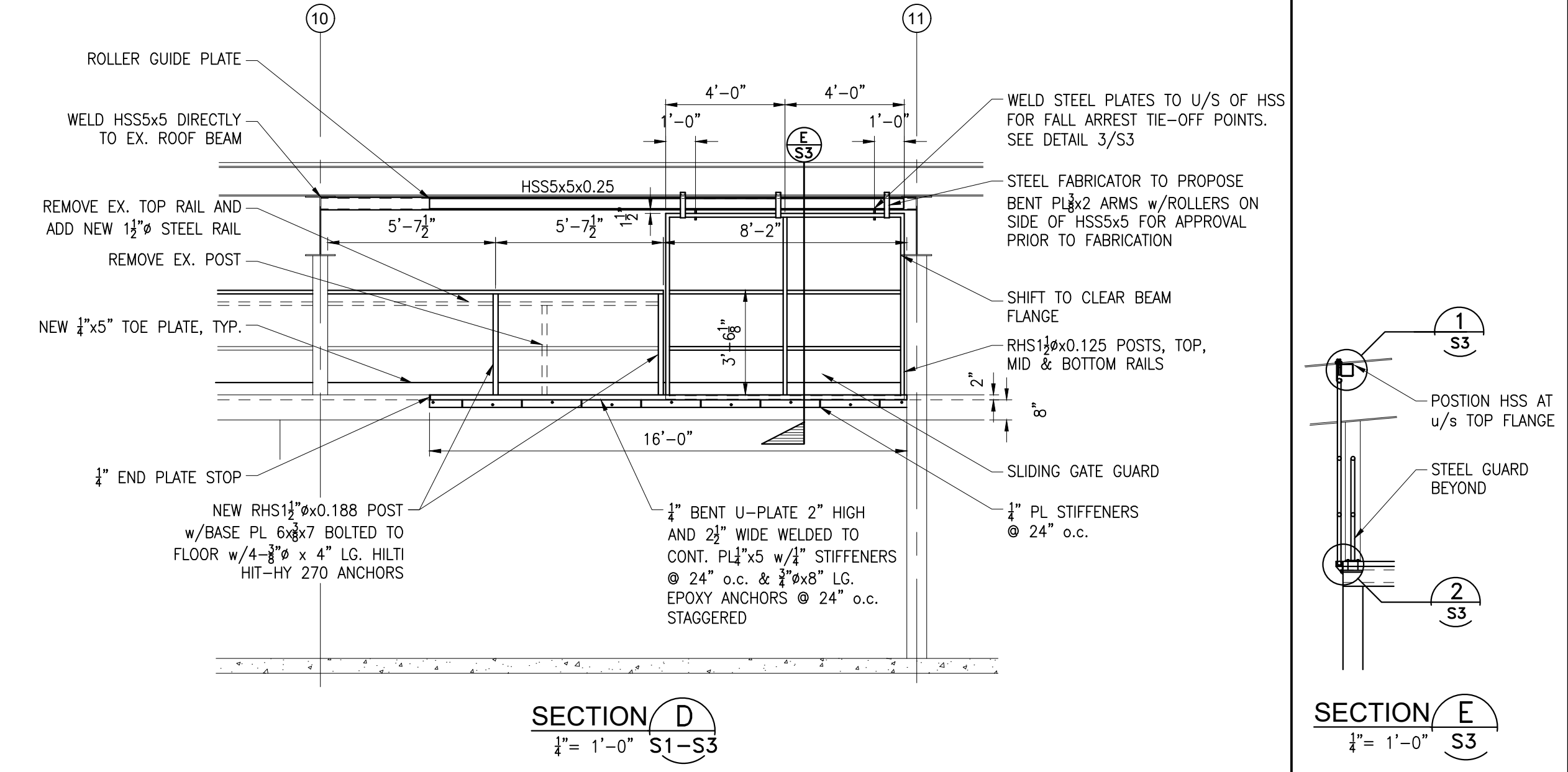
MEZZANINE PLAN
 1/8" = 1'-0"

MEZZANINE FLOOR LOADS

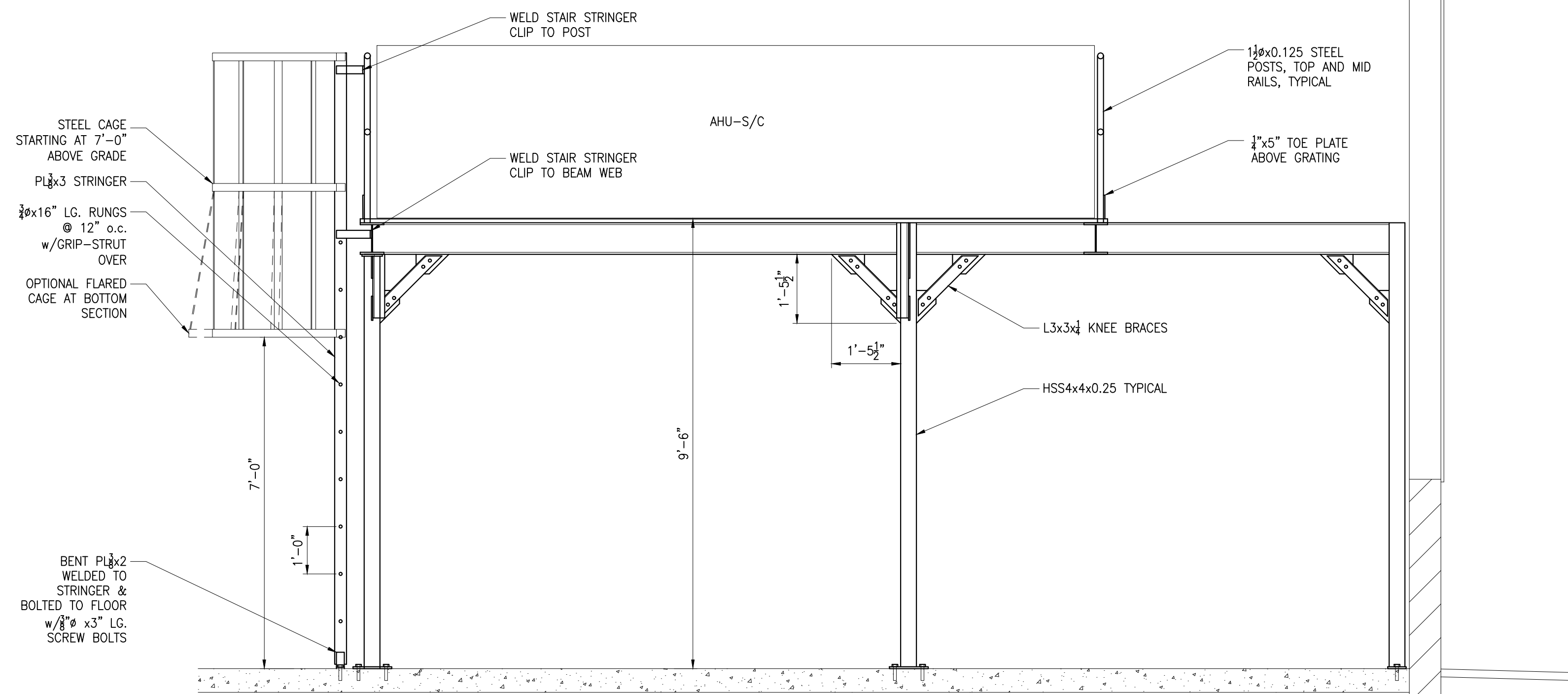
LIVE LOAD: MICE OCCUPANCY 75 psf
 CORRIDORS, STAIRS 100 psf
 DEAD LOAD: CONCRETE & DECK 50 psf
 EQUIPMENT 10 psf
 TOTAL LOADS 135 psf or 160 psf

DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL MEASUREMENTS ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER BEFORE PROCEEDING WITH WORK. ALL WORK TO BE DONE IN ACCORDANCE WITH ALL GOVERNING CODES AND LOCAL BUILDING AUTHORITIES. DESIGNER IS NOT RESPONSIBLE FOR ANY FAILURES IN MATERIALS OR ERRORS CAUSED BY WORKMANSHIP OR DEVIATION FROM THIS DRAWING.

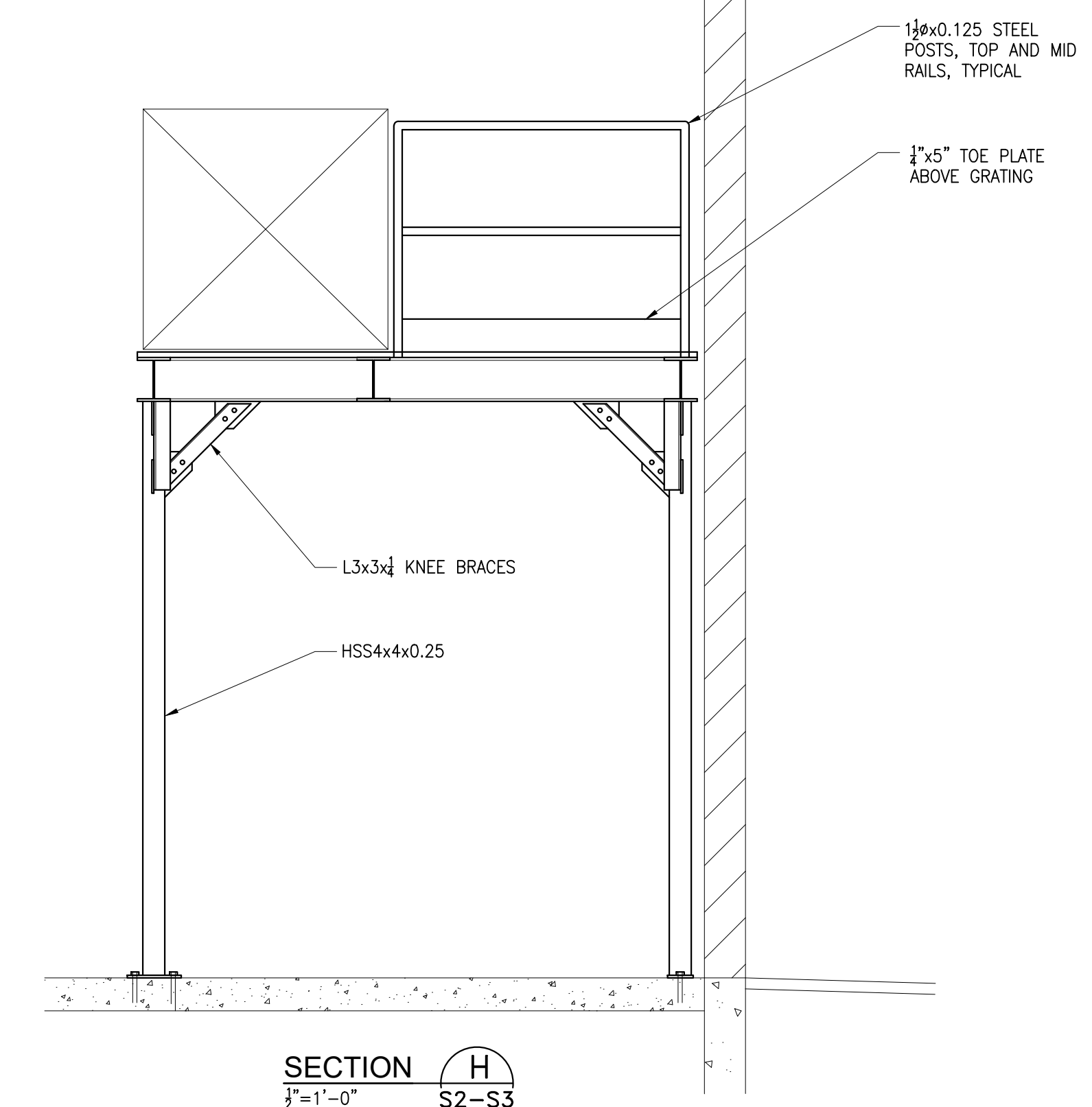
No.	Revisions	Date
0	ISSUED FOR CONSTRUCTION	5/7/21



No.	Item	Date
REVISIONS		
ACA ENGINEERING SERVICES LIMITED		
4082 Portage Road, Unit 1 Niagara Falls, Ontario L2E 6A3 PH: 905-357-2030 FX: 905-357-1783		
PROJECT:		
CITY OF NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS 3200 STANLEY AVENUE NIAGARA FALLS, ON		
DRAWING TITLE:		
MEZZANINE PLAN JOIST ELEVATION SECTIONS & DETAILS		
SCALE	DATE	
1/8" = 1'-0"	SEP. 4, 2020	
DRAWN BY	JOB NO.	
ACA	20-053	



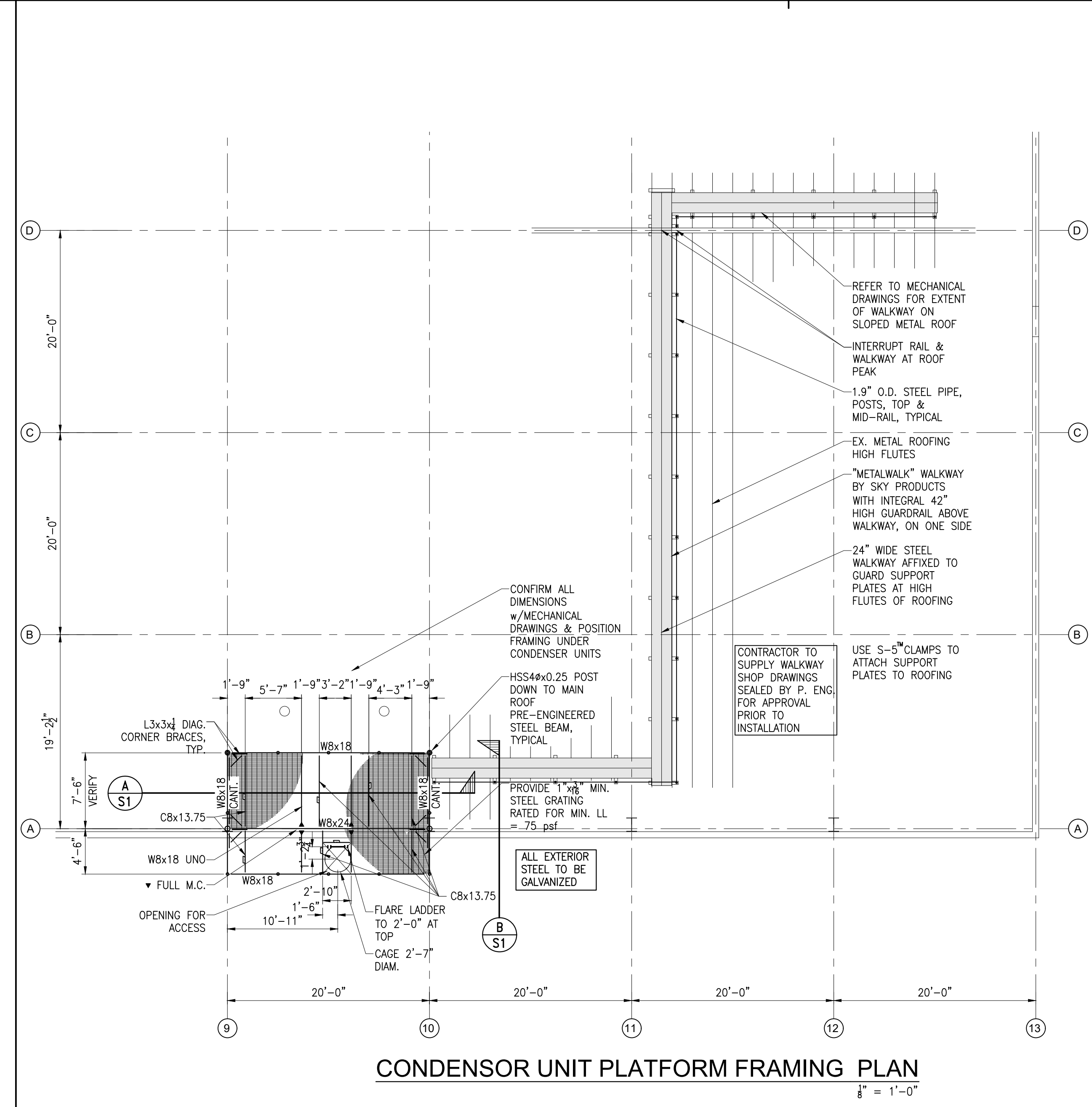
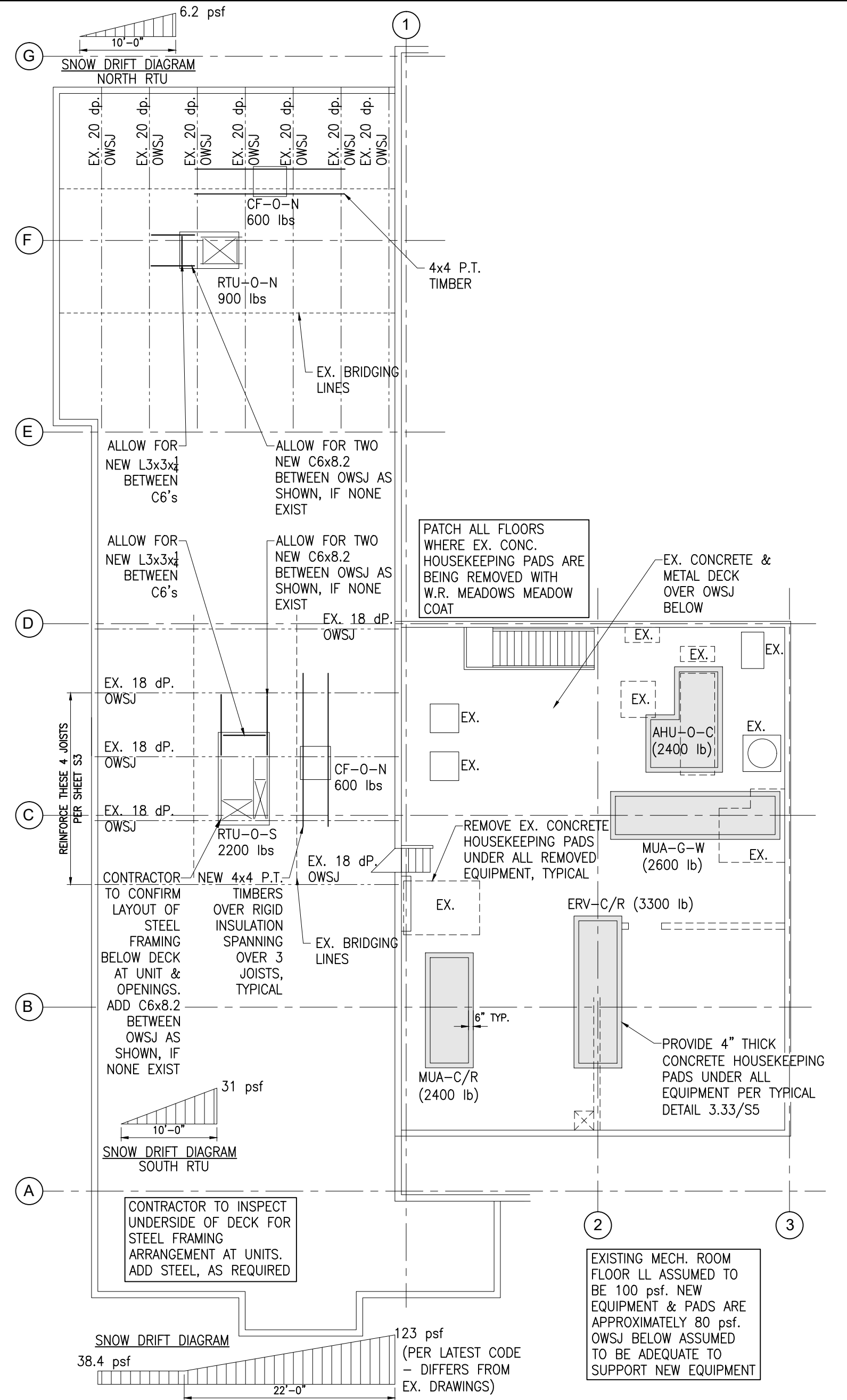
SECTION G
1/2" = 1'-0"



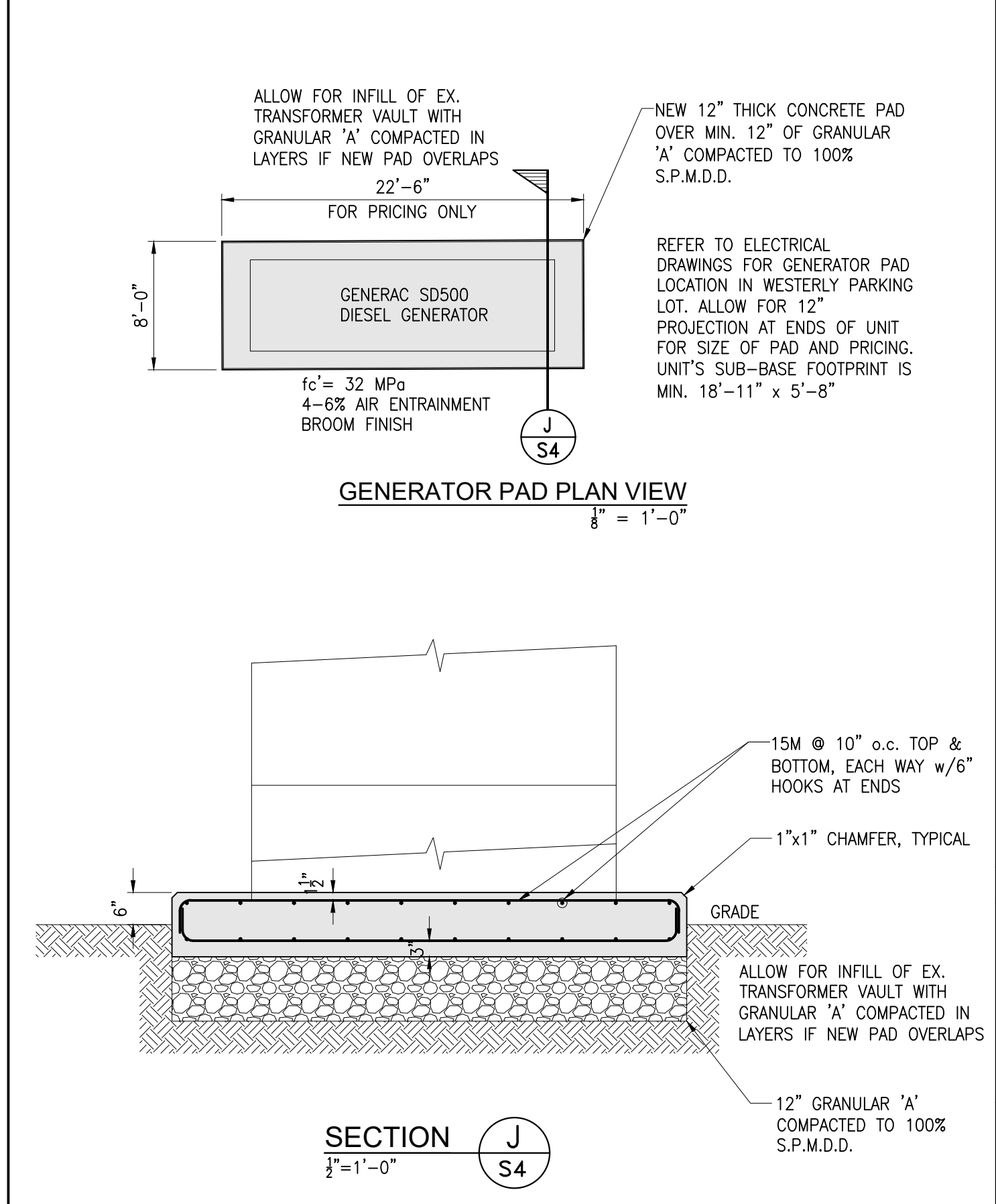
SECTION H
1/2" = 1'-0"

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No.	Revisions	Date
0	ISSUED FOR CONSTRUCTION	5/7/21



CONDENSOR UNIT PLATFORM FRAMING PLAN
1/8" = 1'-0"

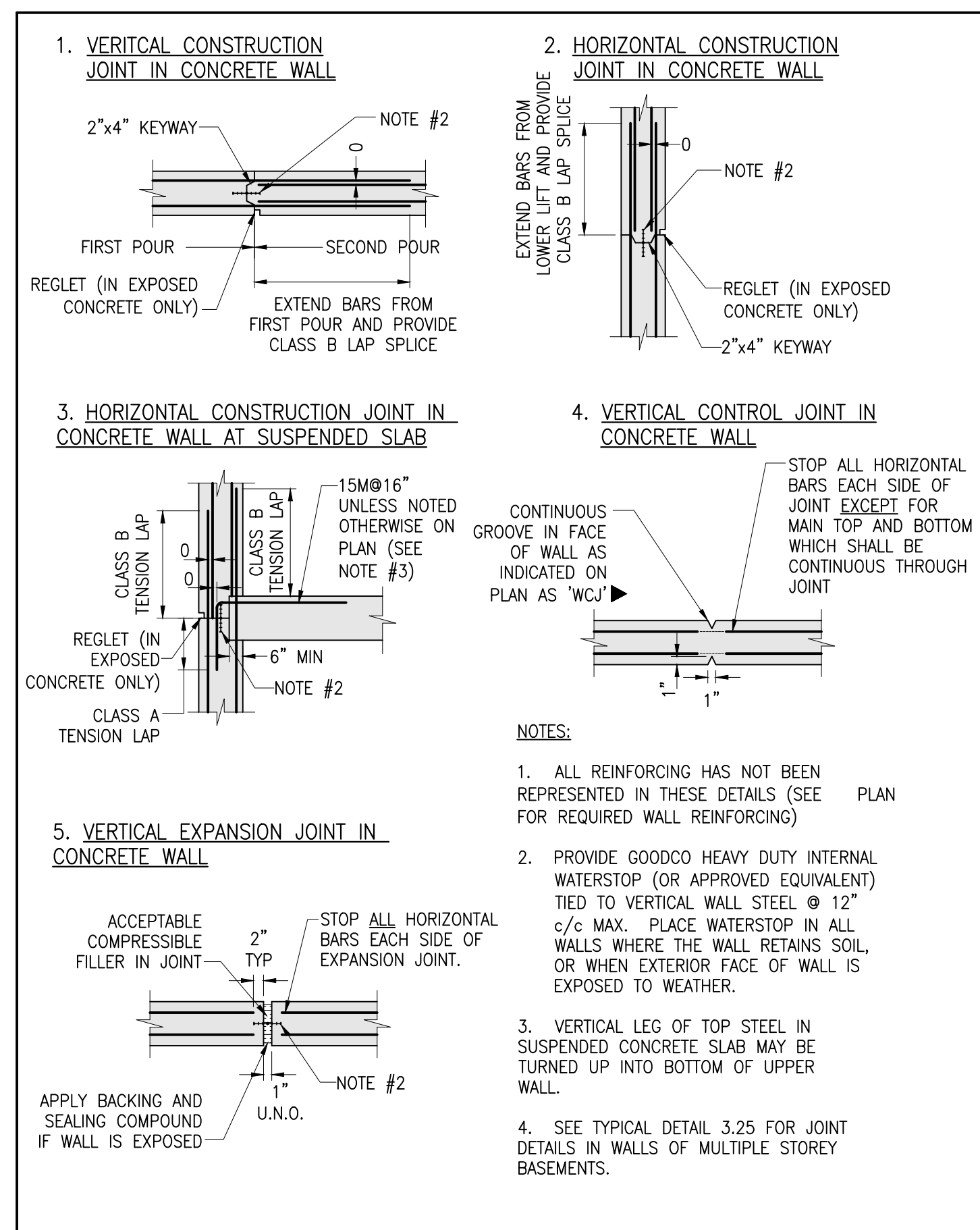


SECTION J
1/8" = 1'-0"

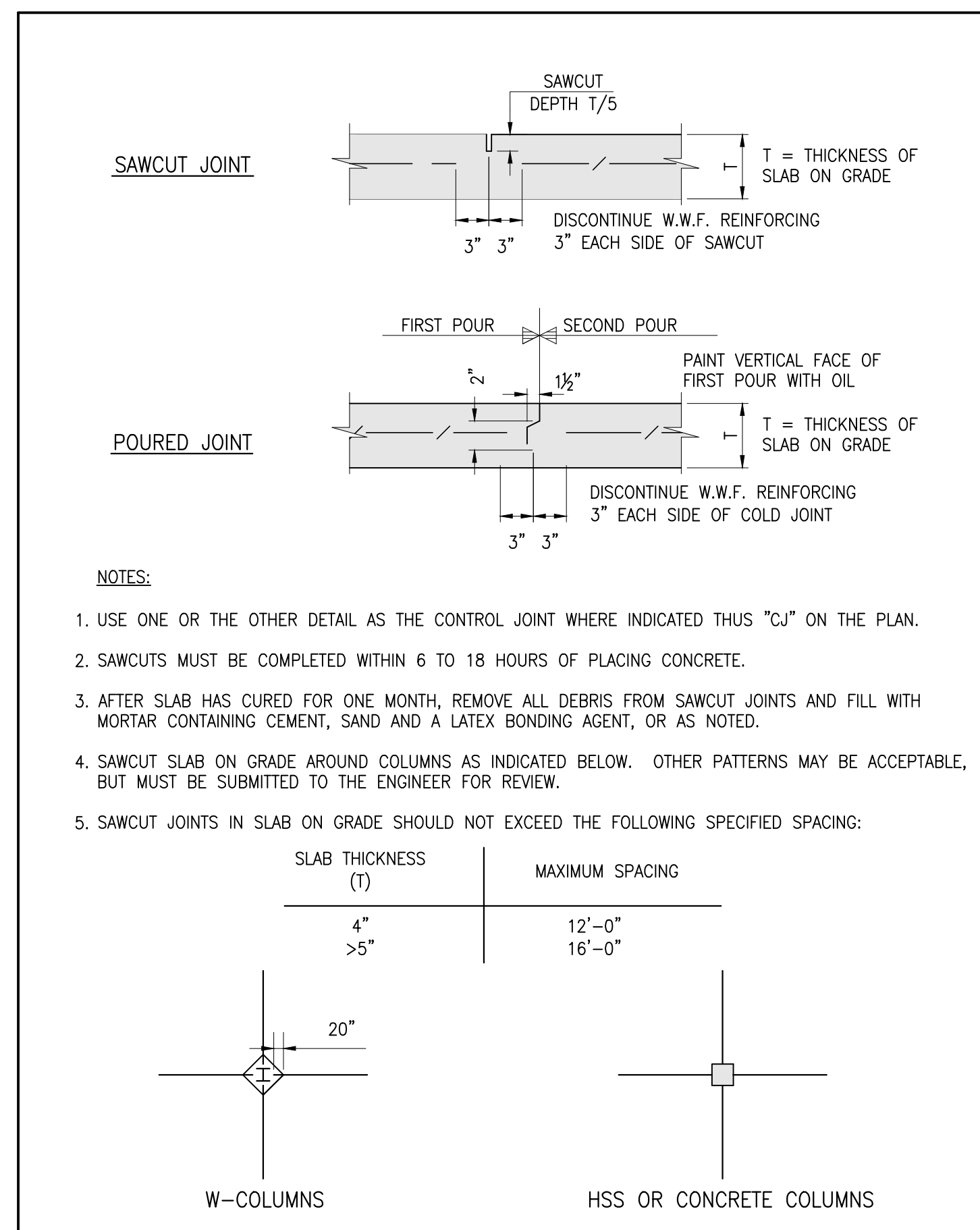
NO.	ITEM	DATE
REVISIONS		
ACA ENGINEERING SERVICES LIMITED		
4082 Portage Road, Unit 1 Niagara Falls, Ontario L2E 6A3 PH: 905-357-2030 FX: 905-357-7183		
PROJECT:		
CITY OF NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS 3200 STANLEY AVENUE NIAGARA FALLS, ON		
DRAWING TITLE:		
CONDENSOR UNIT PLAT. FRAMING PLAN OFFICE ROOF & MECH. RM PLANS GENERATOR PAD & SECTIONS		
SCALE	DATE	S4
AS NOTED	SEP. 4, 2020	
DRAWN BY	JOB NO.	
ACA	20-053	

DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL MEASUREMENTS ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER BEFORE PROCEEDING WITH WORK. ALL WORK TO BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES AND LOCAL BUILDING AUTHORITIES. DESIGNER IS NOT RESPONSIBLE FOR ANY FAILURES IN MATERIALS OR ERRORS CAUSED BY WORKMANSHIP OR DEVIATION FROM THIS DRAWING.

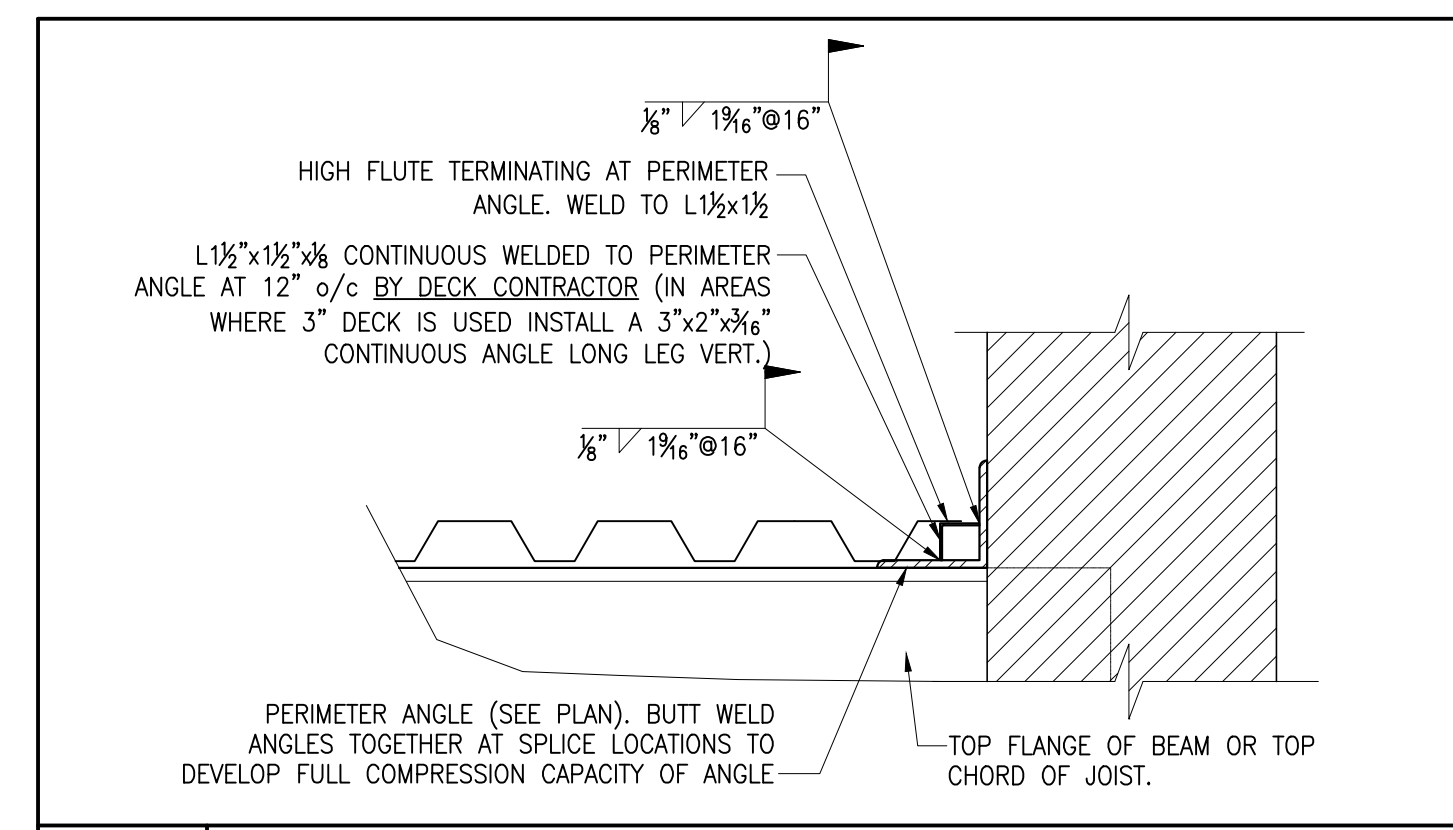
No.	Revisions	Date
0	ISSUED FOR CONSTRUCTION	5/7/21



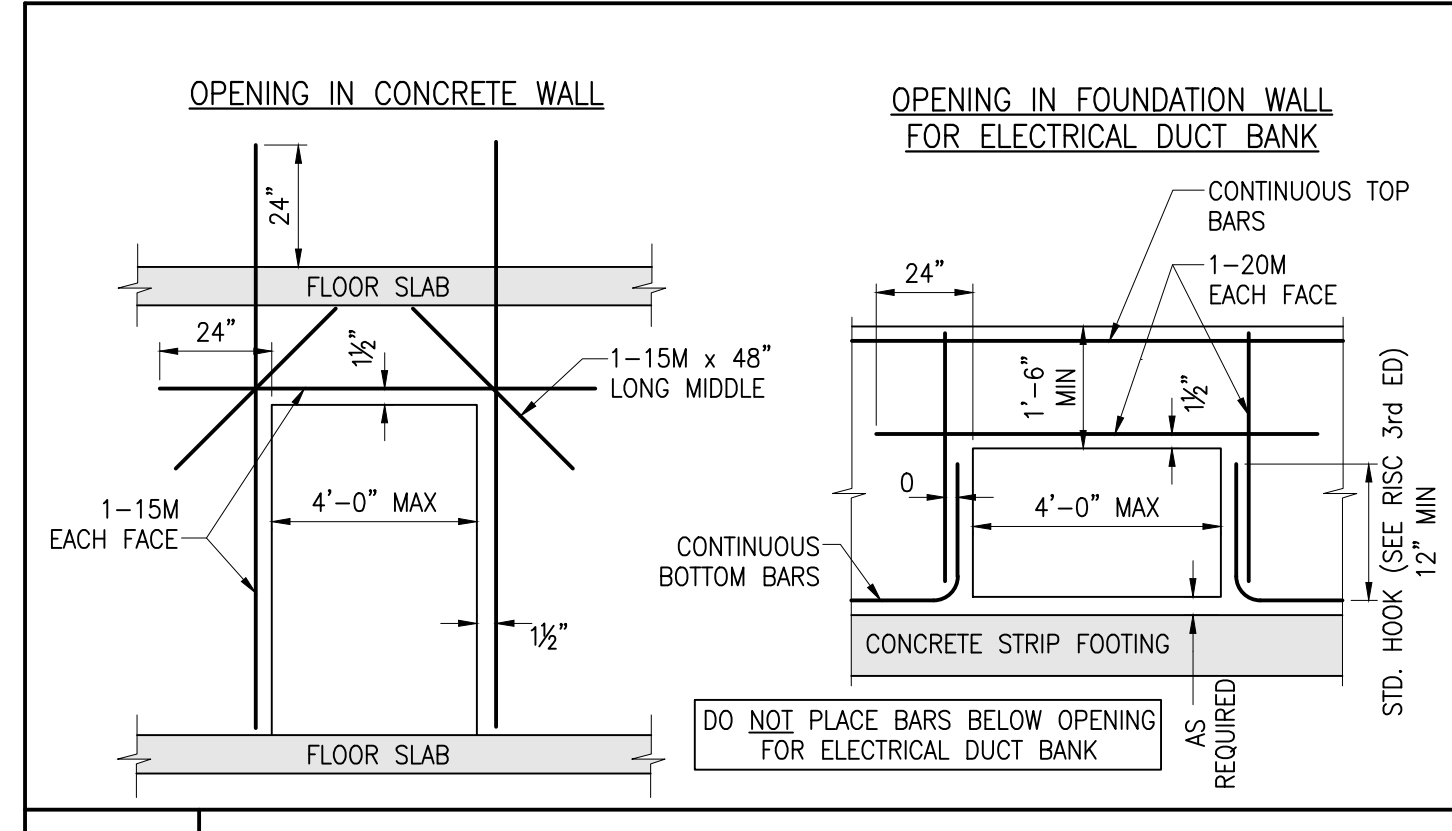
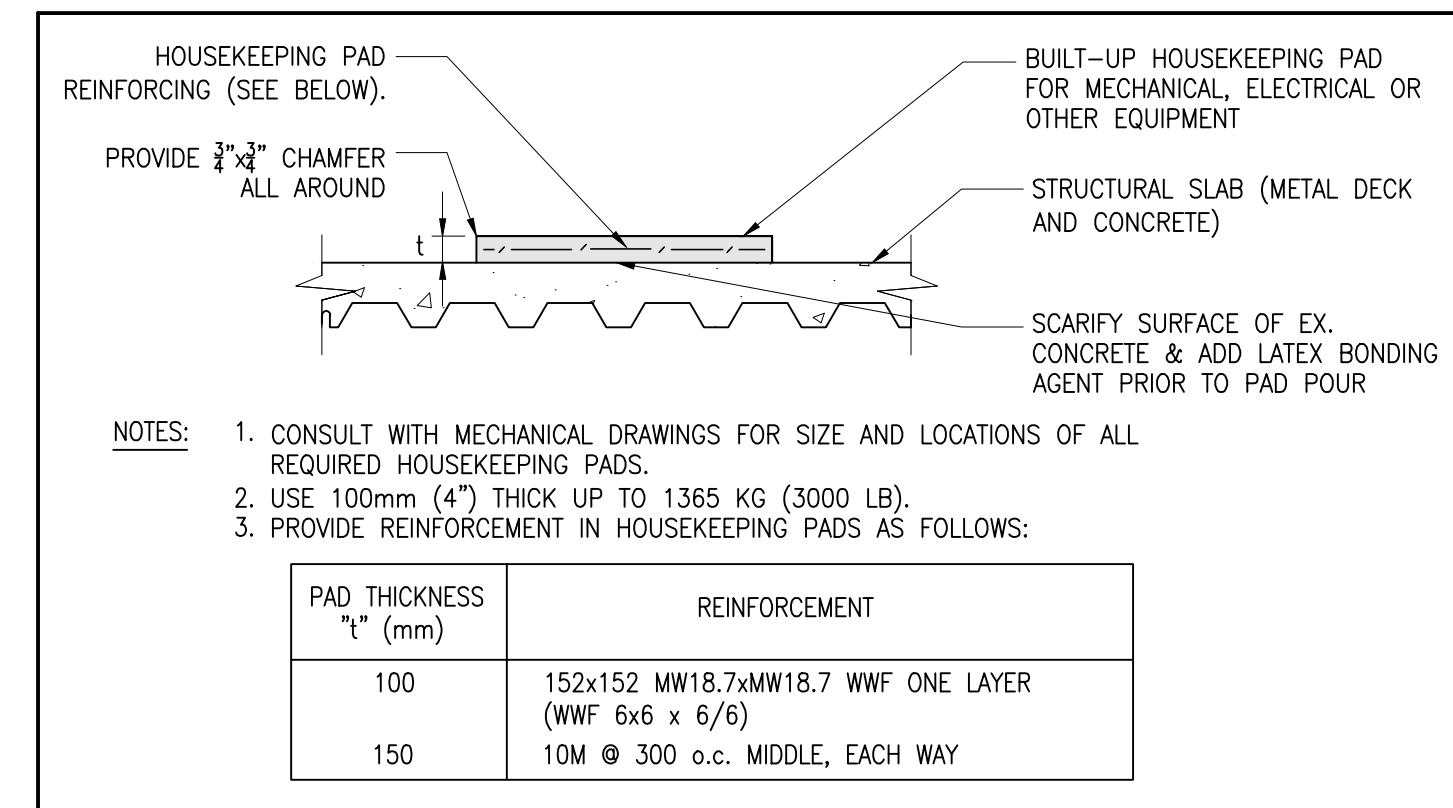
3.05 TYPICAL JOINTS IN CONCRETE WALLS



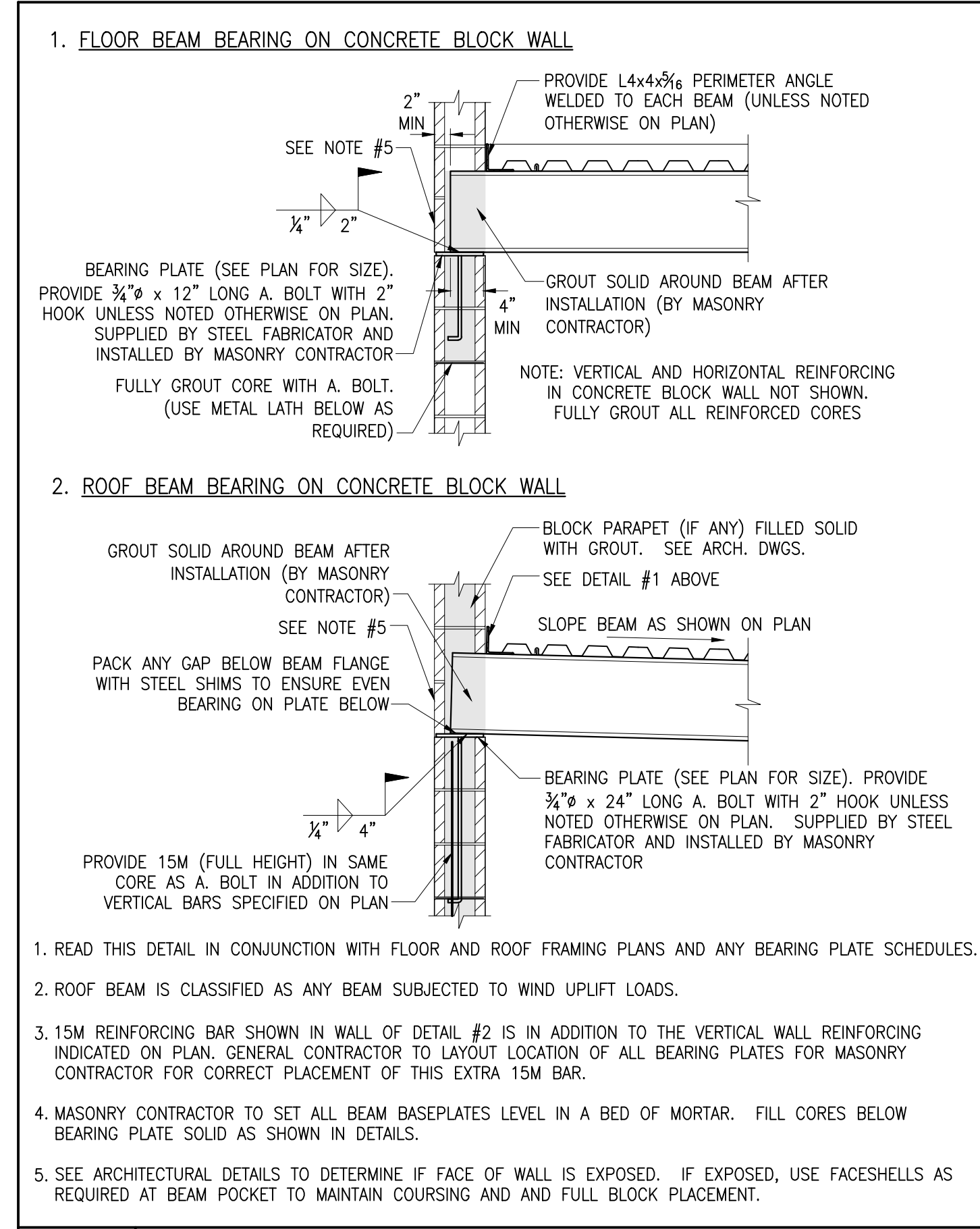
3.09 TYPICAL FLOOR SLAB CONTROL JOINT DETAIL



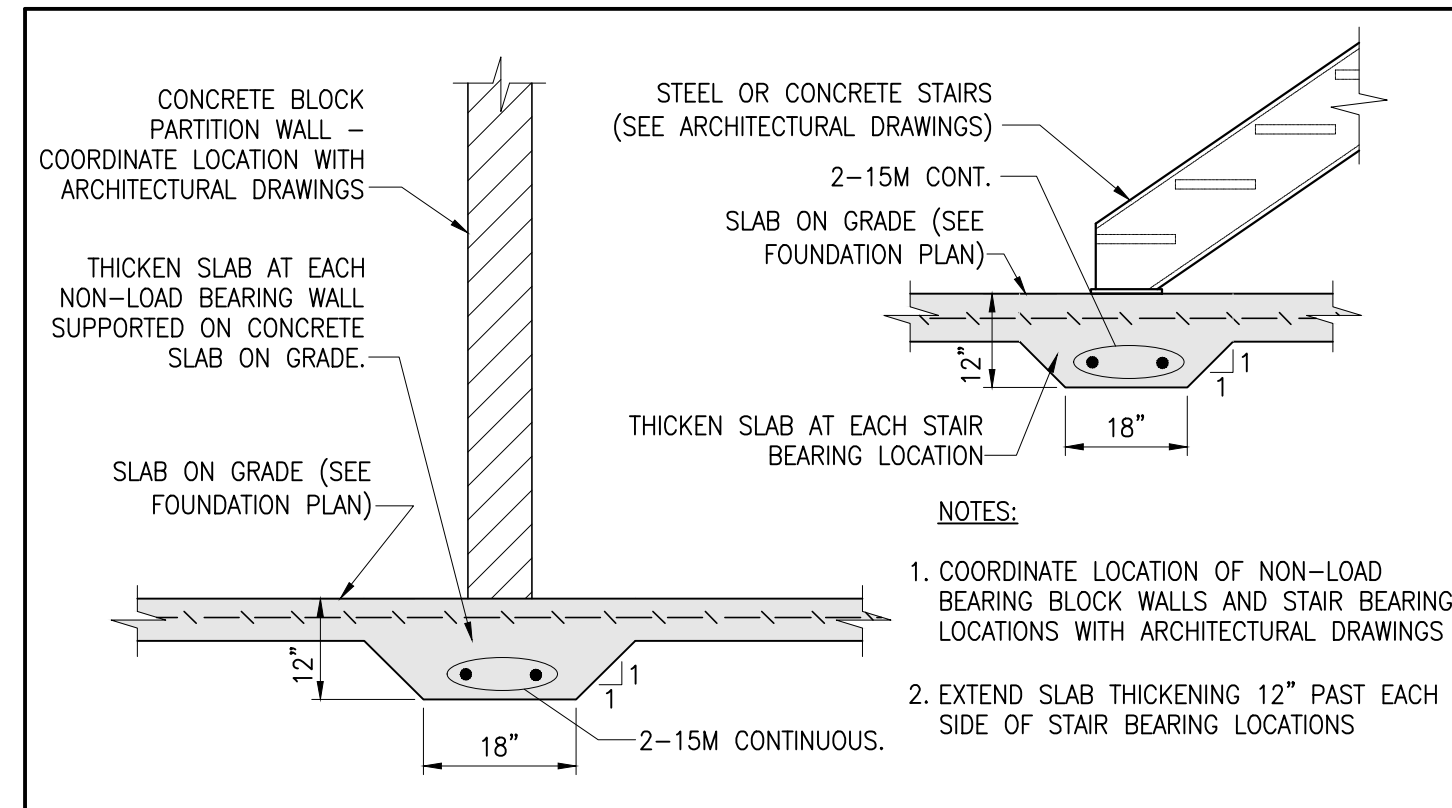
5.07 TYPICAL DECK CLOSURE DETAIL WHERE HIGH FLUTE DOES NOT CLOSE WITH PERIMETER ANGLE



3.08 TYPICAL OPENING IN CONCRETE WALL



5.11 STEEL BEAMS SUPPORTED ON CONCRETE BLOCK WALLS



3.10 TYPICAL SLAB ON GRADE THICKENINGS

No.	ITEM	DATE

REVISIONS

ACA ENGINEERING SERVICES LIMITED
 4082 Portage Road, Unit 1
 Niagara Falls, Ontario
 L2E 6A3
 PH: 905-357-2030 FX: 905-357-7183

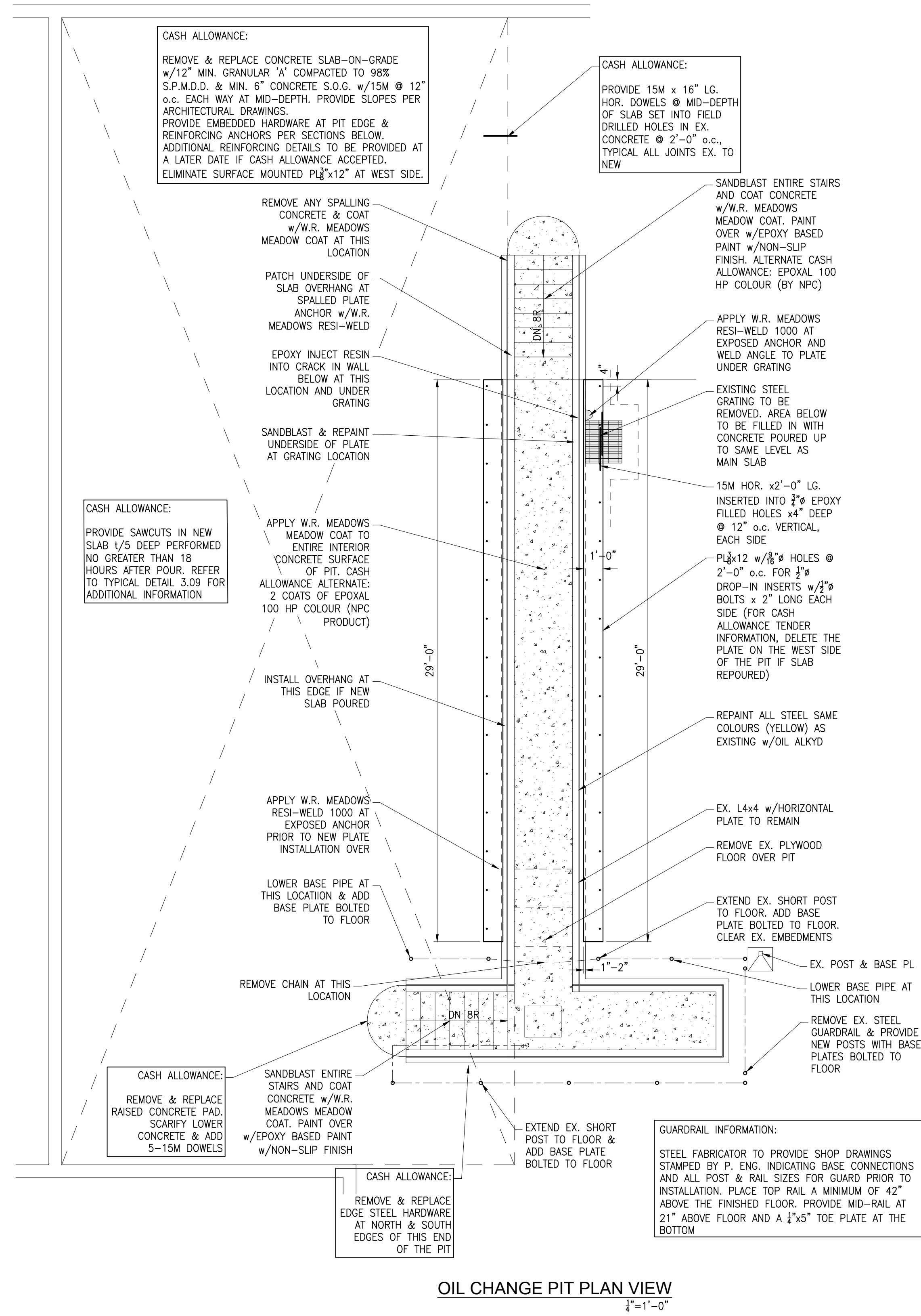
PROJECT:
 CITY OF NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE
 NIAGARA FALLS, ON

DRAWING TITLE:
 TYPICAL DETAILS

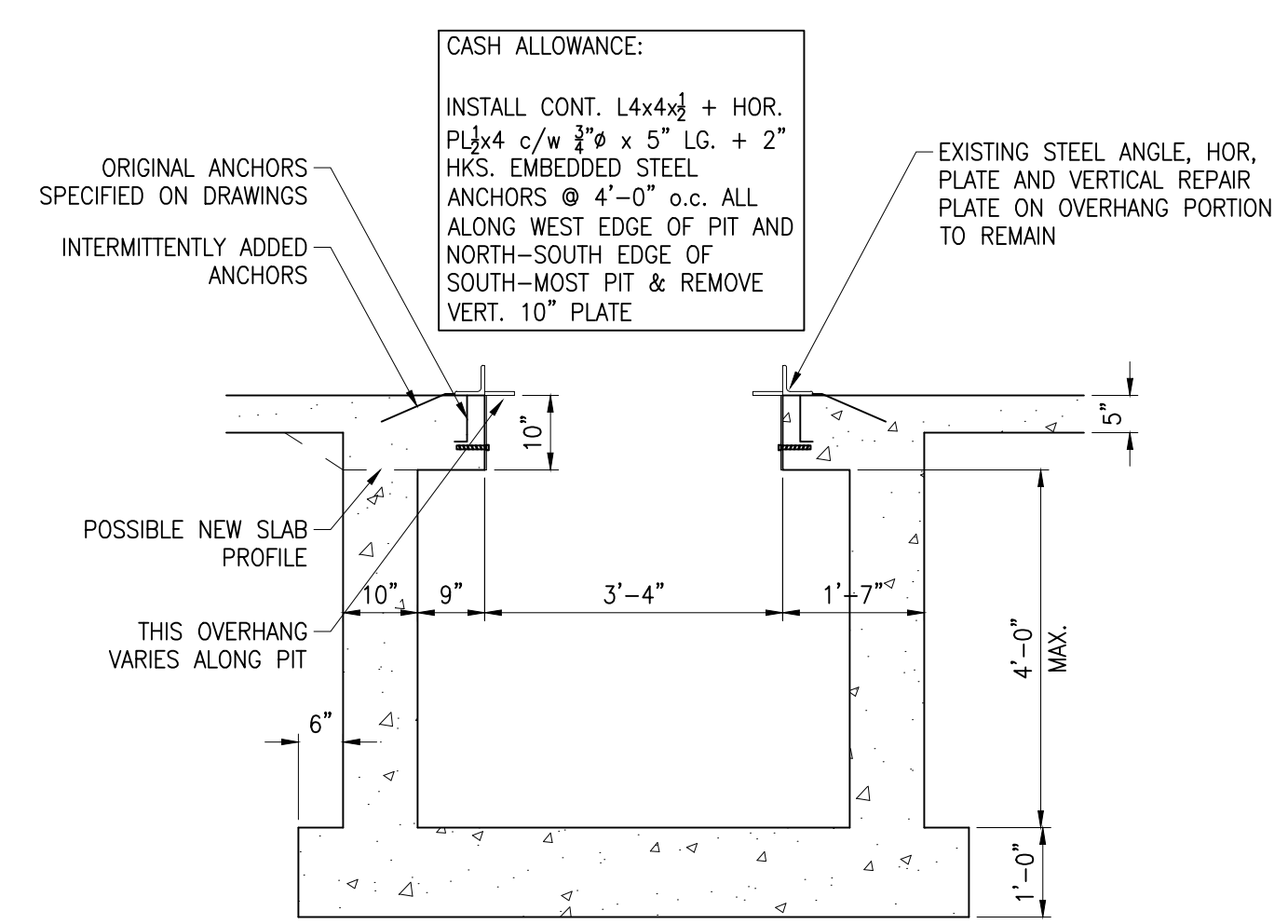
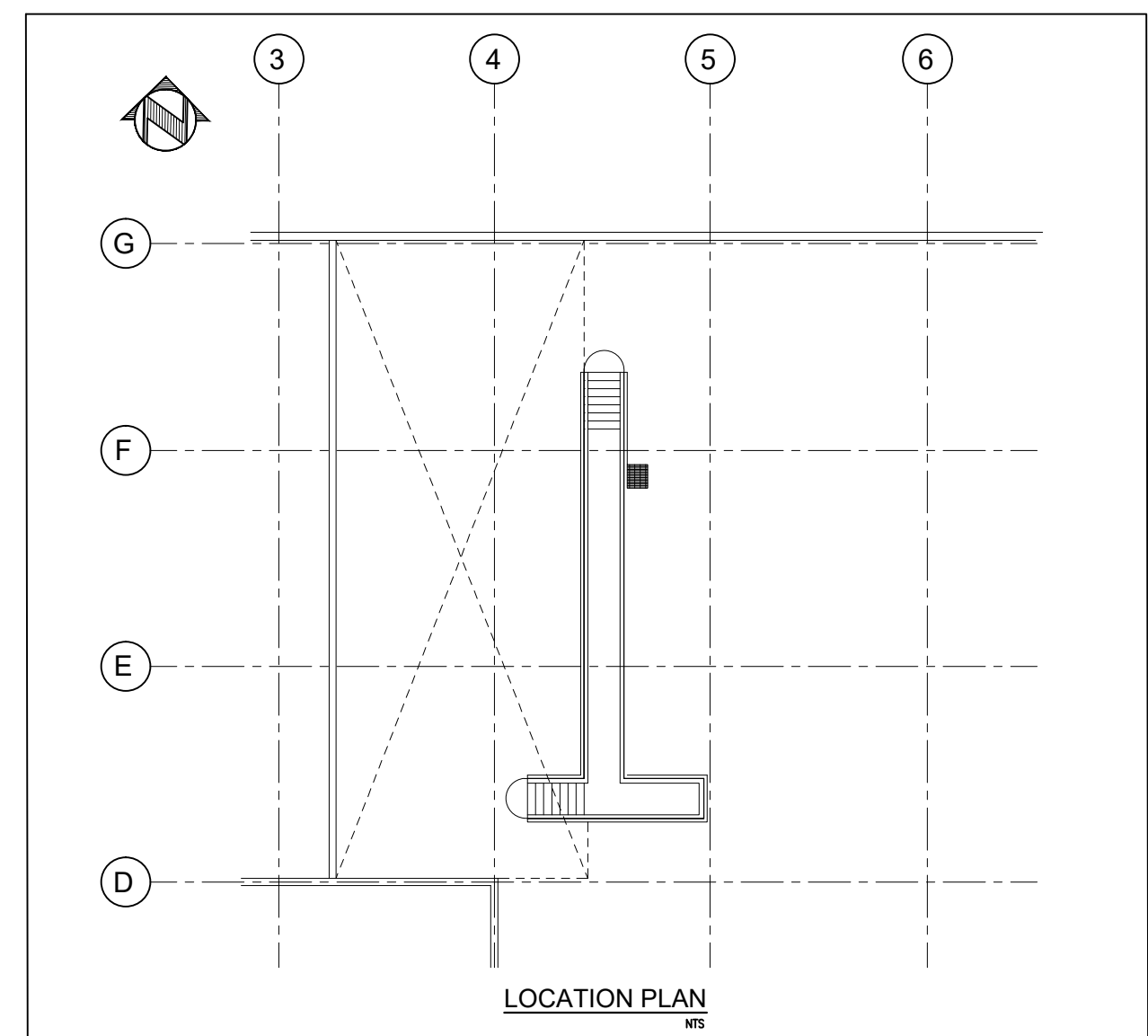
SCALE	DATE
NTS	SEP. 4, 2020
DRAWN BY	JOB NO.
ACA	20-053

DO NOT SCALE DRAWINGS. CONTRACTOR MUST VERIFY ALL MEASUREMENTS ON SITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER BEFORE PROCEEDING WITH WORK. ALL WORK TO BE DONE IN ACCORDANCE WITH ALL GOVERNING CODES AND LOCAL BUILDING AUTHORITIES. DESIGNER IS NOT RESPONSIBLE FOR ANY FAILURES IN MATERIALS OR ERRORS CAUSED BY WORKMANSHIP OR DEVIATION FROM THIS DRAWING.

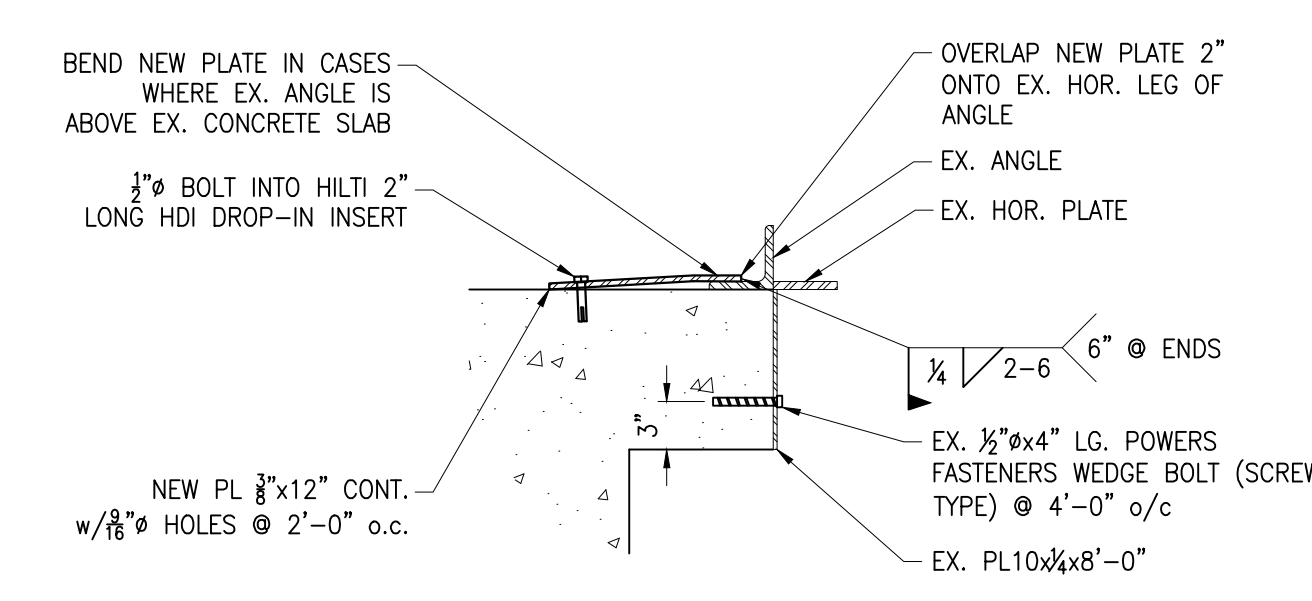
No.	Revisions	Date
0	ISSUED FOR CONSTRUCTION	5/7/21



OIL CHANGE PIT PLAN VIEW
1/2"=1'-0"



EXISTING PIT SECTION
1/2"=1'-0"



REPAIR PLATE DETAIL
1/2"=1'-0"

- SPECIFICATIONS**
- INSPECT ENTIRE PIT CONCRETE PRIOR TO COMMENCEMENT OF WORK. DO NOT SCALE THIS DRAWING.
 - SANDBLAST EACH STAIRWAY AND ALL INTERIOR SURFACES OF OIL PIT.
 - APPLY W.R. MEADOWS MEADOW COAT PRODUCT TO ANY SPALLED AREAS AT CONCRETE STAIRS, WALLS AND BASE SLAB.
 - INSTALL NEW STEEL PLATE ALONG TWO LONG SIDES OF PIT TO PREVENT ROLLOVER OR PULLOUT OF EXISTING EMBEDDED ANCHORS OR STEEL ANGLES AT PIT EDGE.
 - REMOVE AND REPLACE STEEL GUARDRAIL AND POSTS AT SOUTH END OF PIT. PROVIDE NEW STEEL POSTS WITH BASE PLATES BOLTED TO THE CONCRETE FLOOR. DESIGN THE POST, BASE PLATES AND CONNECTIONS TO RESIST ALL OBC GUARD LOADS. SUBMIT STAMPED SHOP DRAWINGS TO THE CONSULTANTS FOR REVIEW PRIOR TO ANY FABRICATION.
 - PAINT ALL NEW CONCRETE PATCHED SURFACES AND EXISTING SURFACES ALONG ENTIRE PIT WITH WHITE, EPOXY BASED PAINT. PROVIDE EPOXY BASED PAINT WITH NON-SLIP FINISHES AT BASE OF PIT AND EACH STAIRWAY.
 - REMOVE PLYWOOD FLOOR SPANNING BETWEEN PIT EDGES.
 - CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS TO BE 32 MPa MIN. ADD 4-6% AIR ENTRAINMENT. SLUMP TO BE 4" +/- 1".
 - STEEL REINFORCING TO HAVE MINIMUM 400 MPa TENSILE GRADE.

No.	ITEM	DATE

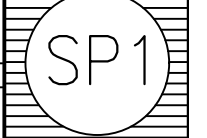
REVISIONS

ACA ENGINEERING SERVICES LIMITED
4082 Portage Road, Unit 1
Niagara Falls, Ontario
L2E 6A3
PH: 905-357-2030 FX: 905-357-7183

PROJECT:
CITY OF NIAGARA FALLS
SERVICE CENTRE OIL PIT REPAIRS
3200 STANLEY AVENUE
NIAGARA FALLS, ON

DRAWING TITLE:
PLAN VIEWS
SECTIONS & DETAILS
SPECIFICATIONS

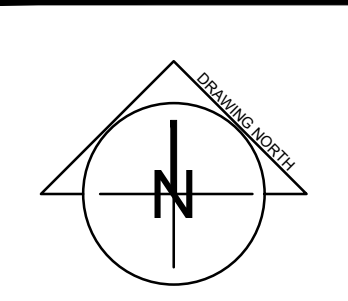
SCALE	DATE
AS NOTED	SEP. 15, 2020
DRAWN BY	JOB NO.
ACA	20-053



GENERAL NOTES

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
3	ISSUED FOR PLUMBING PERMIT	FEB. 26, 2021	P.G.
2	RE-ISSUED FOR PERMIT	DEC. 03, 2020	P.G.
1	RE-ISSUED FOR PERMIT	NOV. 06, 2020	P.G.
0	ISSUED FOR PERMIT	SEPT. 4, 2020	P.G.

REVISIONS



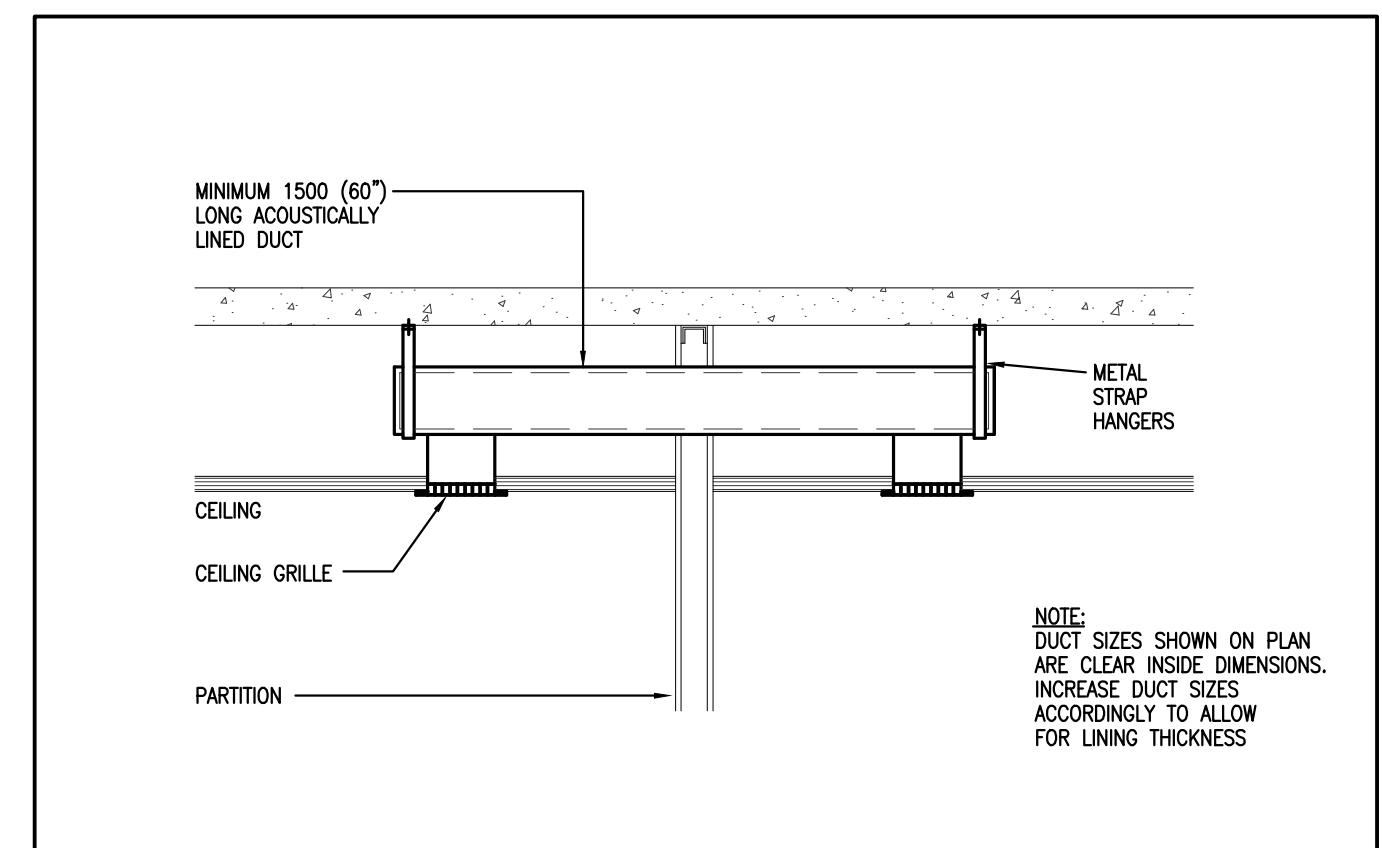
ARC Engineering Inc.
Creating Solutions Through Engineering Excellence
 1100 South Service Rd., #417
 Stoney Creek ON L8E 0C5
 T • (905) 643-8530
 F • (905) 643-8510
 www.arcengineering.ca
 contact@arcengineering.ca

PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

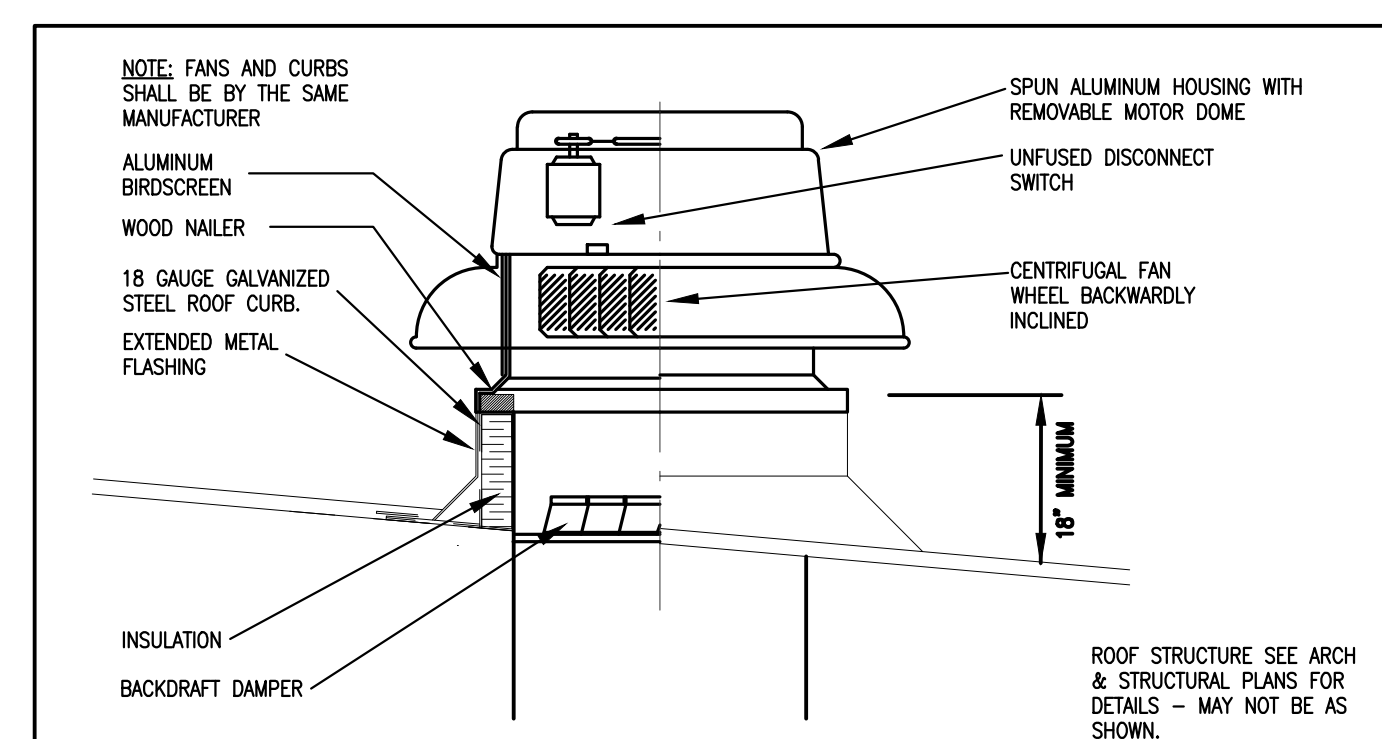
START DATE: 2020 03 24
 DRAWN BY: M.B.
 DESIGNED BY: P.G.

DRAWING TITLE:
DETAILS

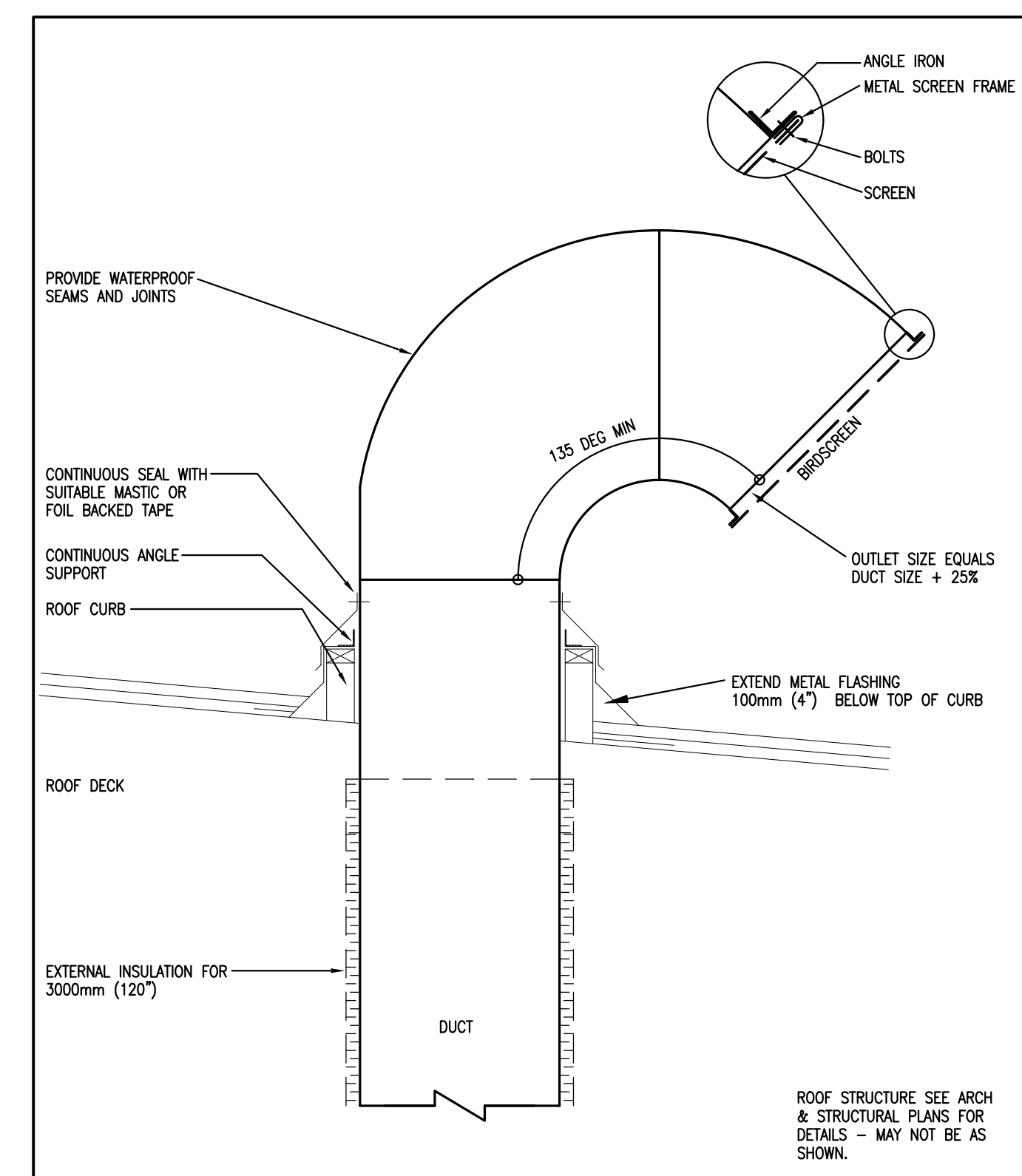
SCALE: AS NOTED
 PROJECT: 20-201-010
 DRAWING No.: **M-102**



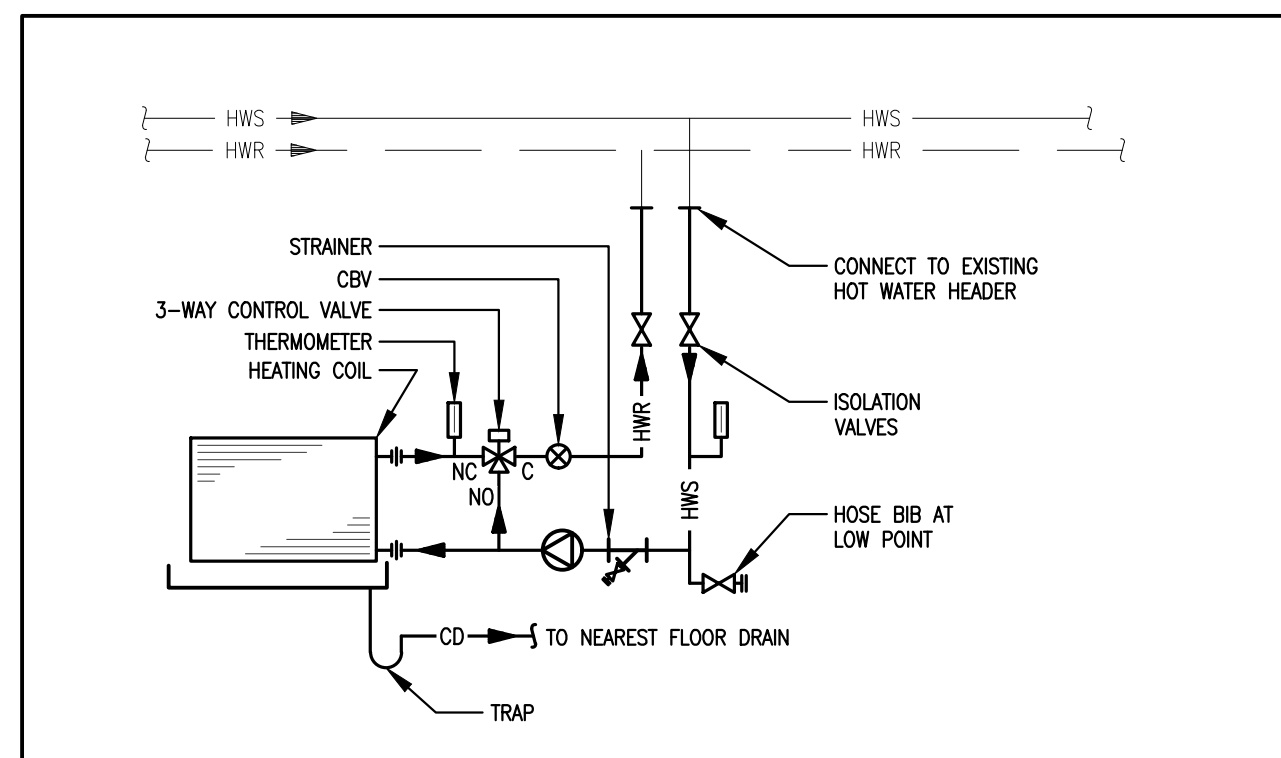
9 TRANSFER AIR DUCT
 M-102 SCALE: N.T.S.



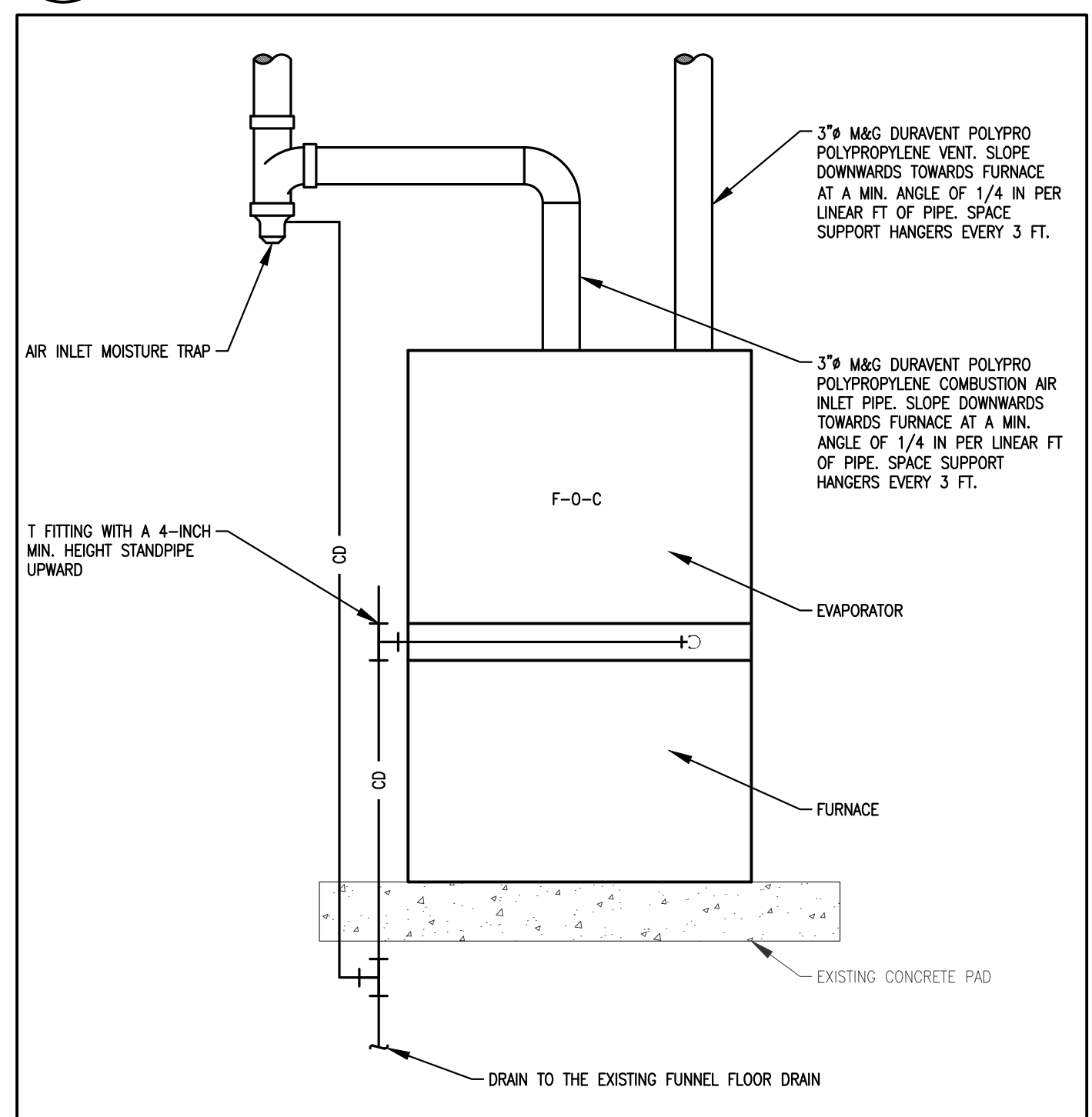
10 ROOF MOUNTED EXHAUST FAN
 M-102 SCALE: N.T.S.



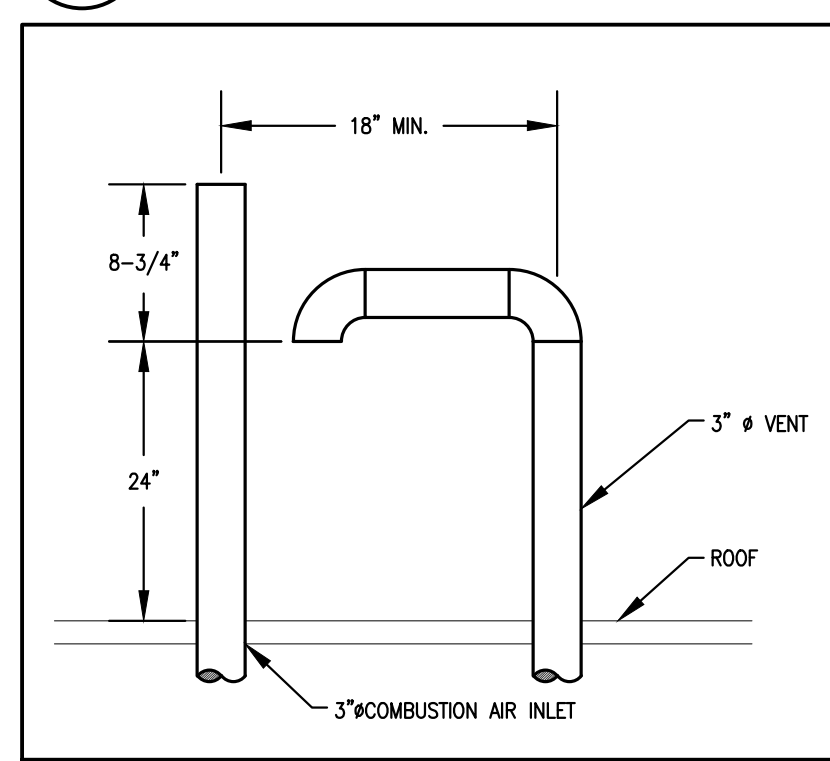
11 RECTANGULAR GOOSENECK ABOVE ROOF
 M-102 SCALE: N.T.S.



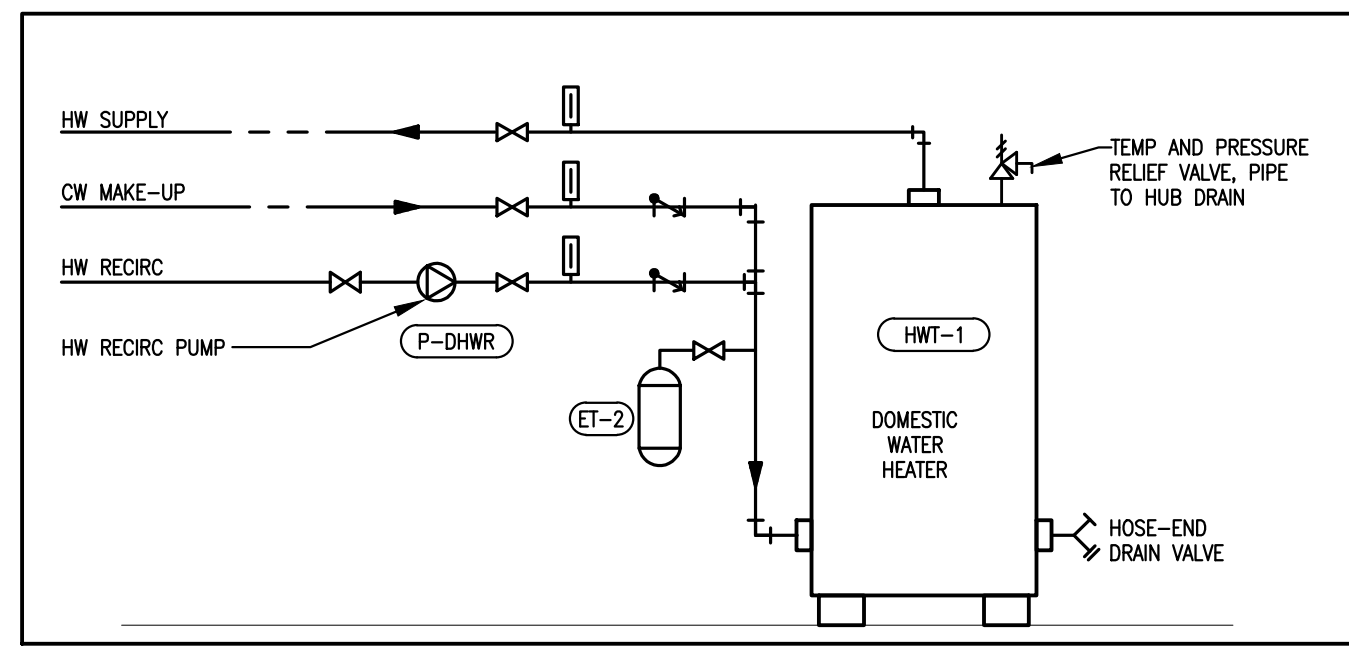
6 AHU HYDRONIC HEATING COIL
 M-102



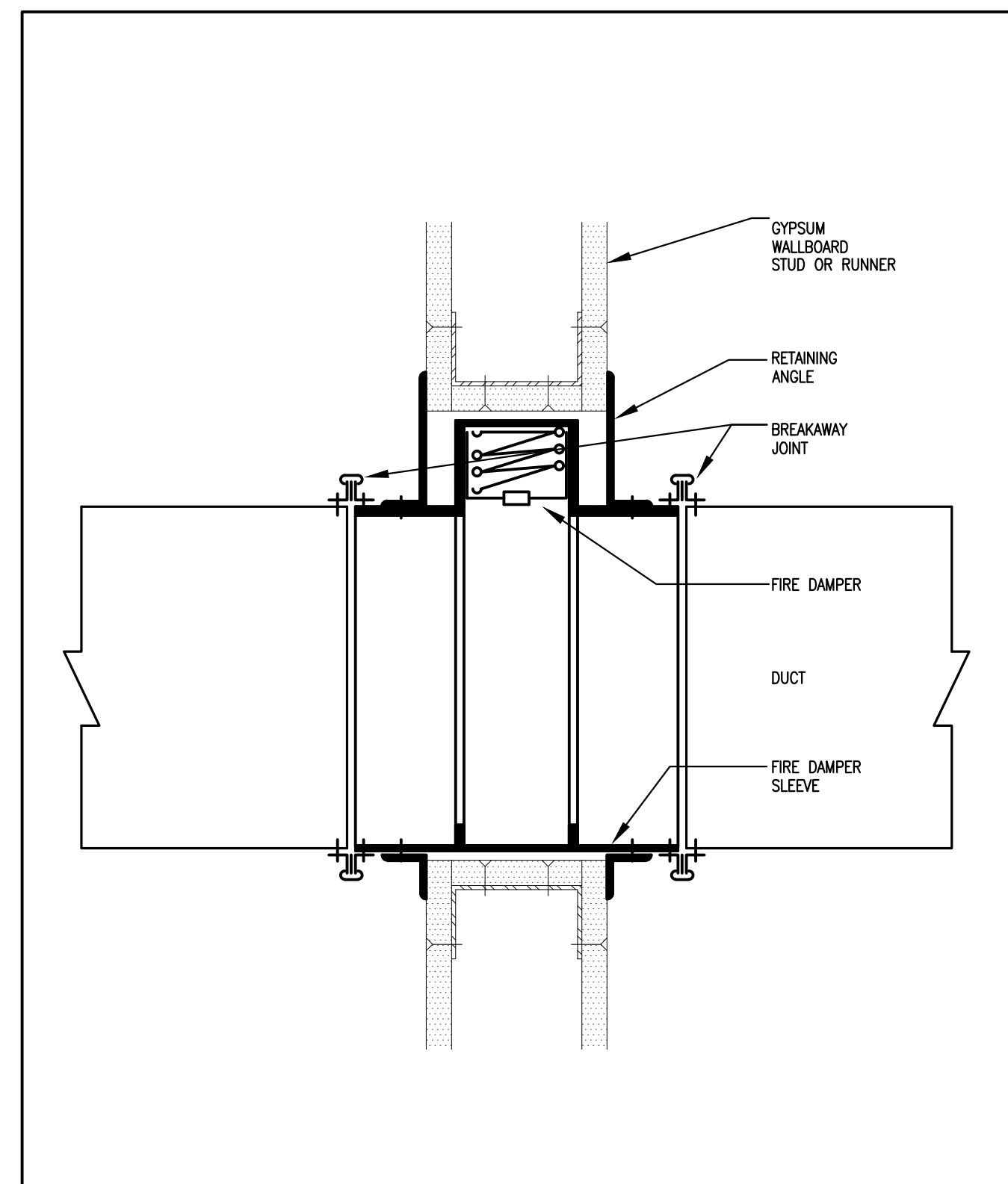
7 F-O-M MOISTURE TRAP
 M-102 SCALE: N.T.S.



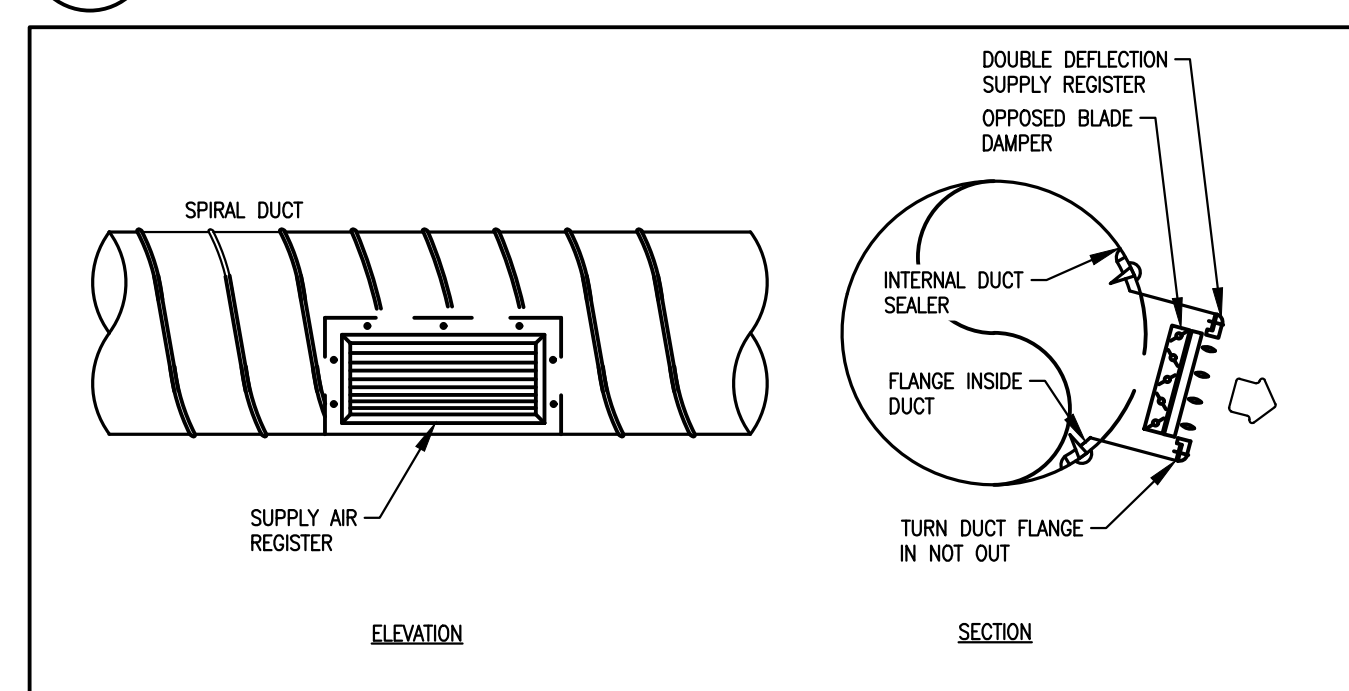
8 F-O-M VENT PIPE TERMINATION
 M-102 SCALE: N.T.S.



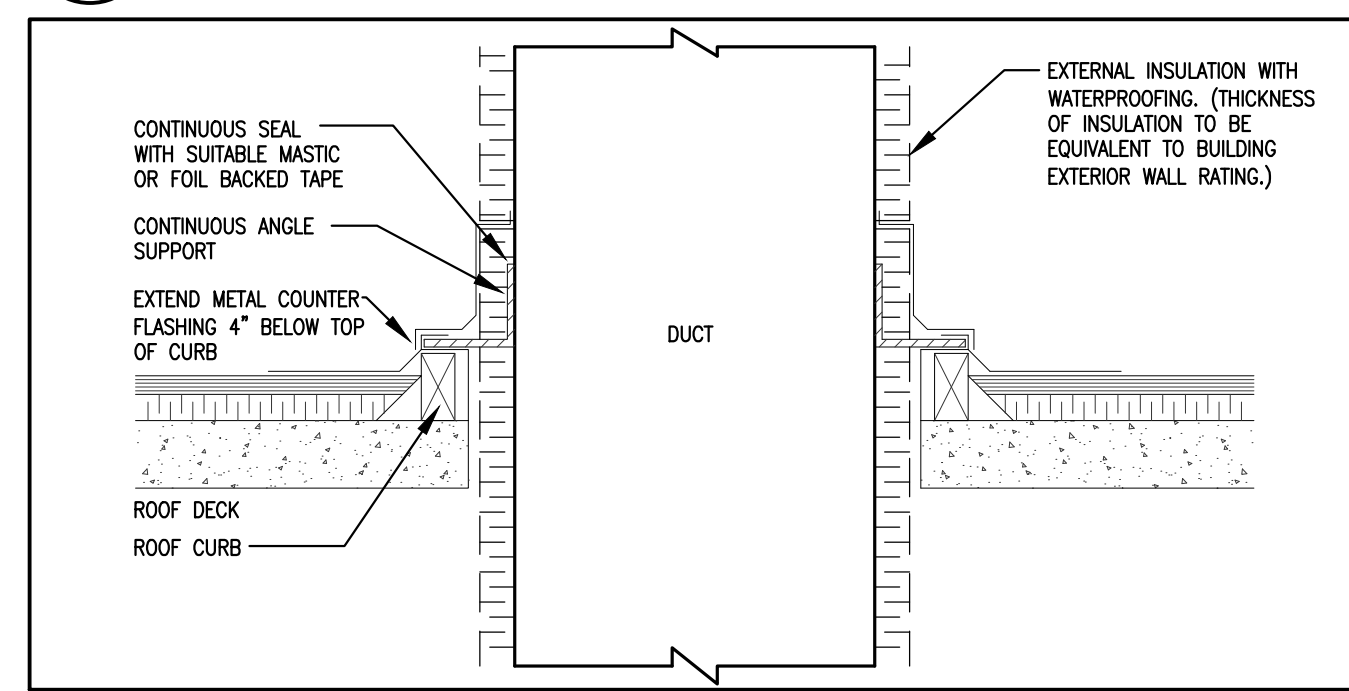
12 HOT WATER HEATER
 M-102 SCALE: N.T.S.



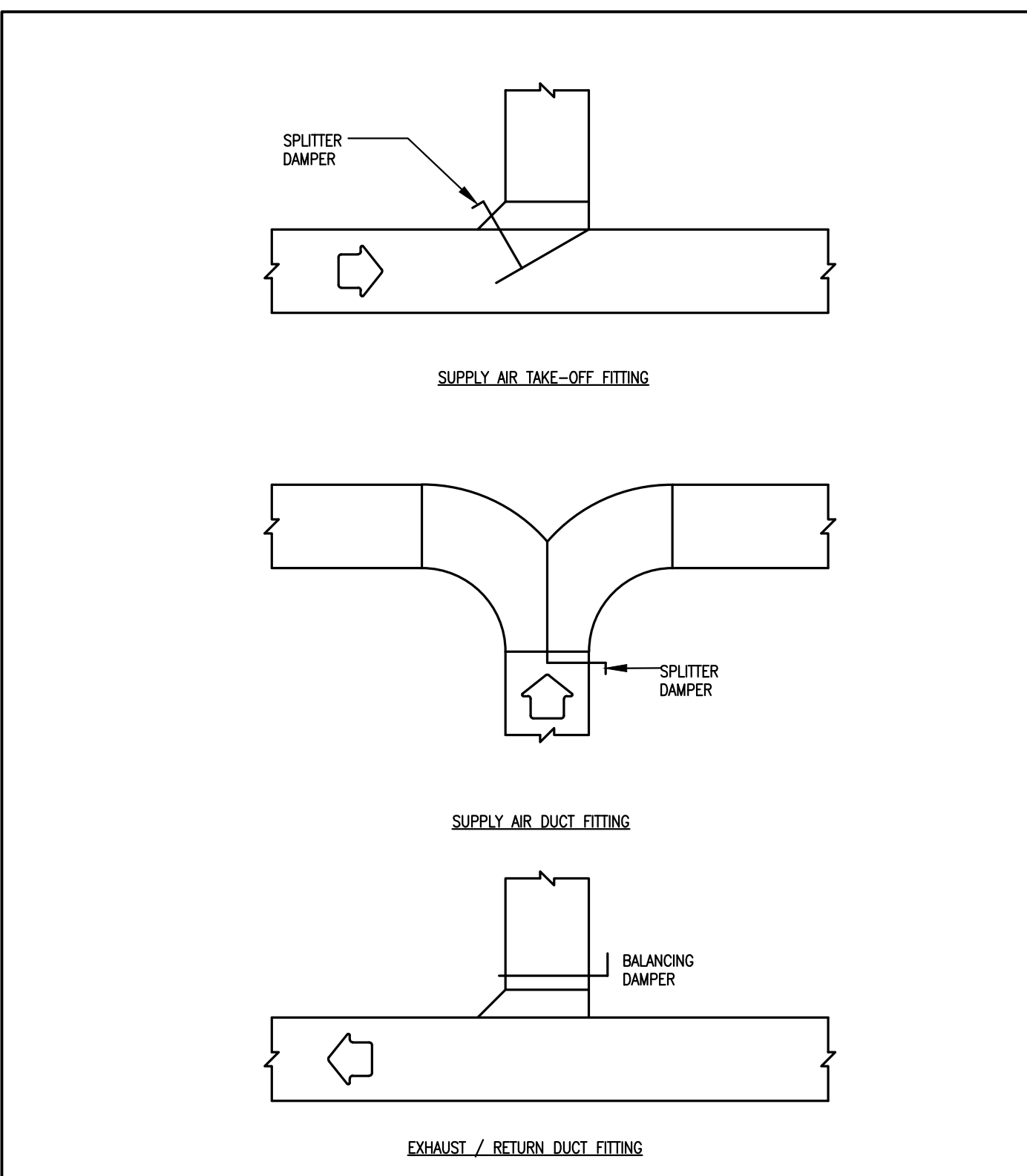
3 FIRE DAMPER
 M-102 SCALE: N.T.S.



4 REGISTER AT SPIRAL DUCT
 M-102 SCALE: N.T.S.



5 SUPPLY OR RETURN DUCT THROUGH ROOF
 M-102 SCALE: N.T.S.



2 DUCT FITTINGS
 M-102 SCALE: N.T.S.

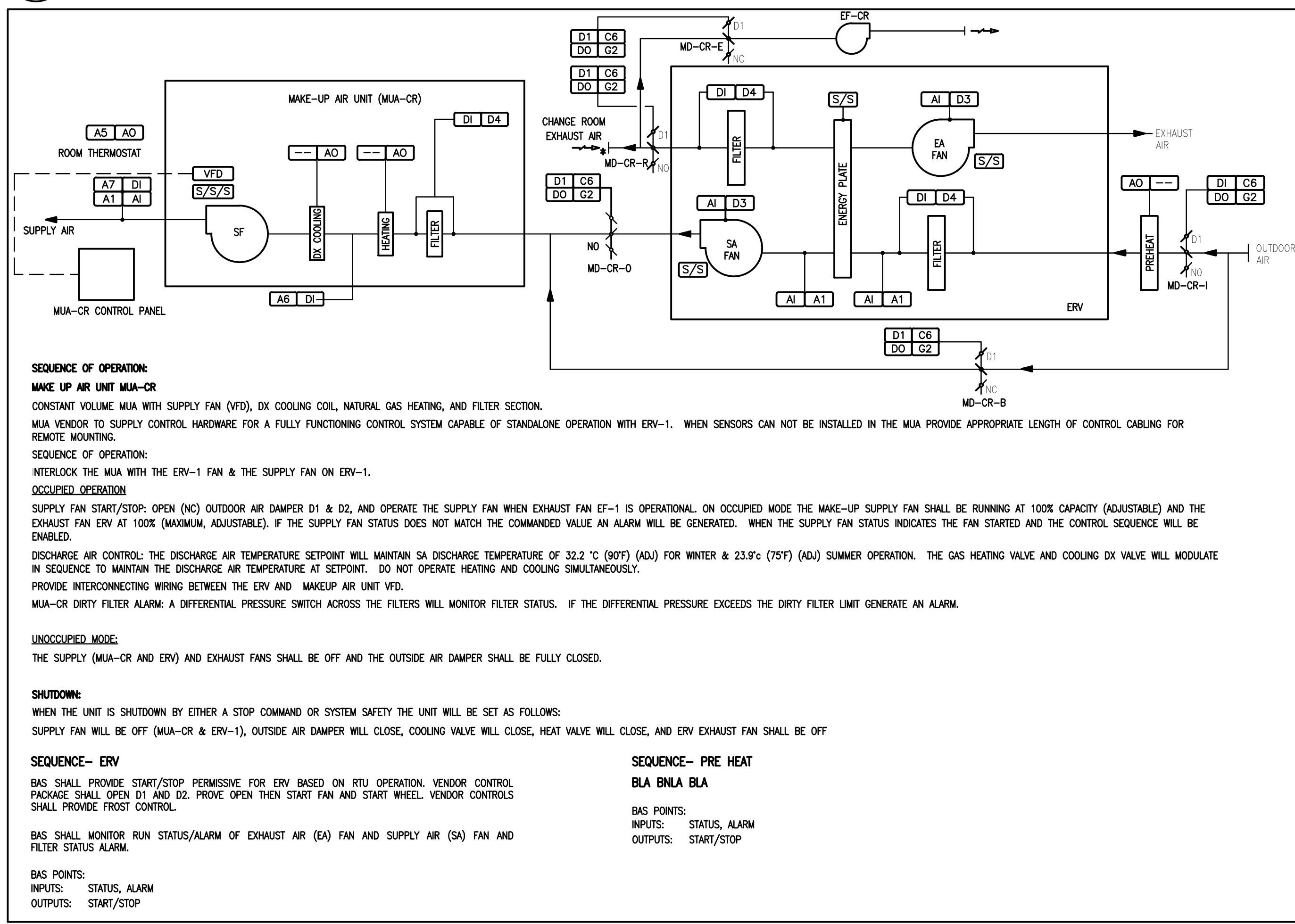
PLOT DATE: May 7, 2021

ORIGINAL SHEET SIZE: ARCH D

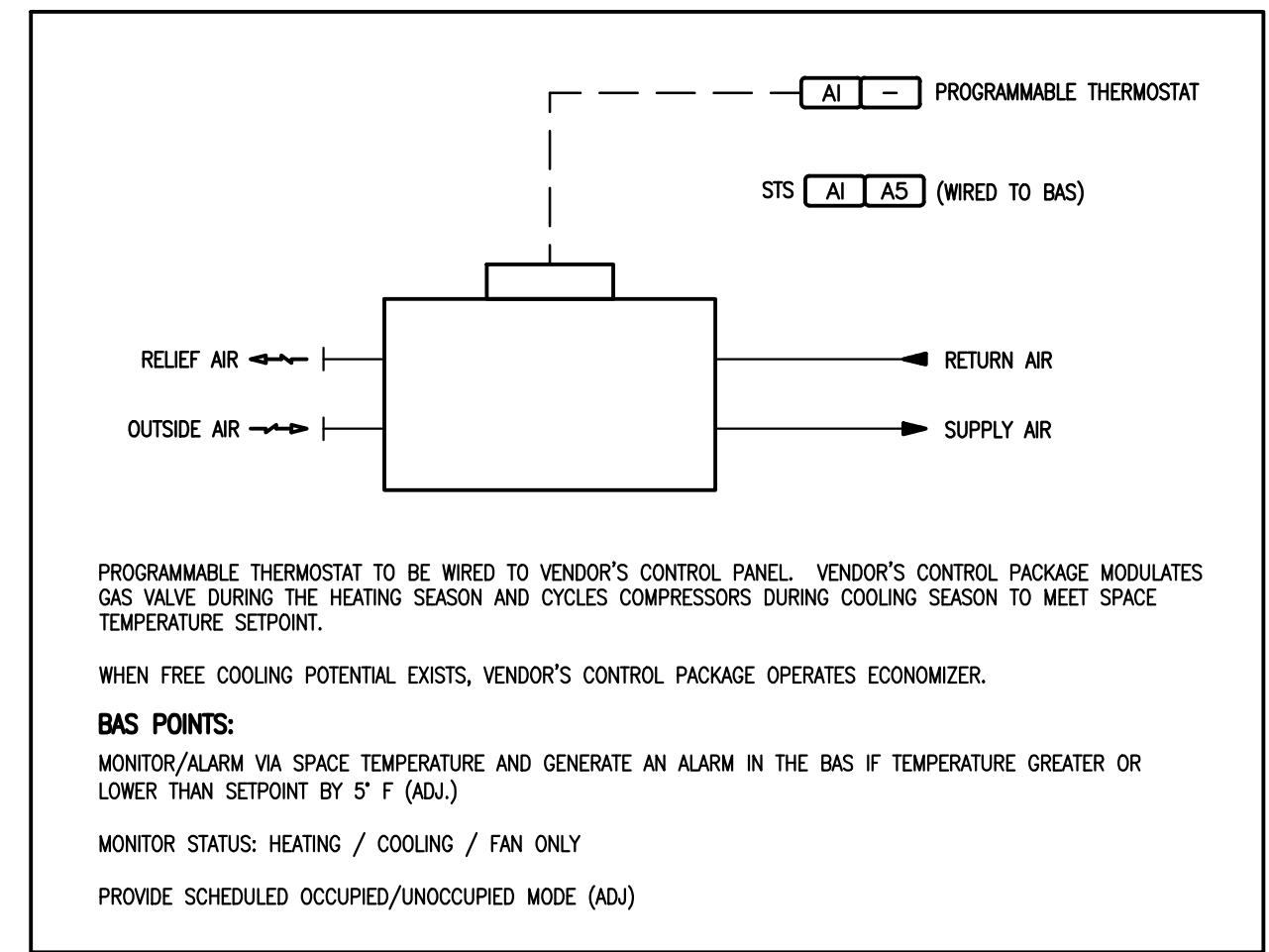
15" 10" 5" 0

CONTROL LEGEND			
SENSOR AND INSTRUMENT CODES	ABBREVIATIONS		
A1	TEMPERATURE SENSOR, DUCT MOUNTED	ADJ	ADJUSTABLE
A2	TEMPERATURE SENSOR, PIPE MOUNTED	AI	ANALOG INPUT
A3	TEMPERATURE SENSOR, AVERAGING ELEMENT	AO	ANALOG OUTPUT
A4	TEMPERATURE SENSOR, OUTSIDE AIR TYPE	BAS	BUILDING AUTOMATION SYSTEM
A5	TEMPERATURE SENSOR, ROOM TYPE	CACF	CENTRAL ALARM & CONTROL FACILITY
A6	TEMPERATURE SENSOR, LOW LIMIT	CHWS	CHILLED WATER SUPPLY
A7	TEMPERATURE SENSOR, HIGH LIMIT	CHWR	CHILLED WATER RETURN
B1	HUMIDITY SENSOR, DUCT MOUNTED	CLC	COOLING
B2	HUMIDITY SENSOR, ROOM TYPE	CWS	CONDENSER WATER SUPPLY
B3	HUMIDITY SENSOR, OUTSIDE AIR TYPE	CWR	CONDENSER WATER RETURN
B5	HUMIDITY SENSOR, HIGH LIMIT TYPE	DI	DIGITAL INPUT
C1	DIFFERENTIAL PRESSURE	DO	DIGITAL OUTPUT
C2	PRESSURE SENSOR	DP	DIFFERENTIAL PRESSURE
C3	STATIC PRESSURE SENSOR	EAT	EXHAUST AIR TEMPERATURE
C4	PRESSURE SWITCH	EF	EXHAUST FAN
C5	WATERFLOW SWITCH	EW	ENTERING WATER TEMPERATURE
C6	DAMPER STATUS SWITCH	FPVAV	FAN POWERED VAV TERMINAL
C7	AIR VOLUME	FCS	FAN COIL SUPPLY
C8	PULSED OUTPUT FROM POWER METER	FCR	FAN COIL RETURN
C9	PULSED OUTPUT FROM WATER METER	FCU	FAN COIL UNIT
C10	EMERSON HEATER ON/OFF	FS	FLOW SENSOR
C11	CURRENT SENSOR	HL	HIGH LIMIT
C12	CO ₂ SENSOR	HWS	HEATED WATER SUPPLY
C02	CARBON DIOXIDE SENSOR	HWR	HEATED WATER RETURN
C0	CARBON MONOXIDE SENSOR	HTG	HEATING
D1	MOTOR CONTROL RELAYS, START/STOP/STATUS TYPE	LL	LOW LIMIT
D2	CURRENT TRANSFORMERS AND RELAYS	LMT	LEAVING WATER TEMPERATURE
D3	MOTOR STATUS CONTACTS	MAT	MIXED AIR TEMPERATURE
D4	DIFFERENTIAL PRESSURE SWITCH	OARH	OUTSIDE AIR RELATIVE HUMIDITY
D5	LEVEL SWITCH, TANK MOUNTED	OAT	OUTSIDE AIR TEMPERATURE
D6	LEVEL SWITCH, FLOAT TYPE	RA	RETURN AIR
D7	DIFFERENTIAL PRESSURE TRANSMITTER	RARH	RETURN AIR RELATIVE HUMIDITY
D8	CURRENT SENSITIVE RELAY	RAT	RETURN AIR TEMPERATURE
D9	LEVEL TRANSMITTER	RF	RETURN FAN
K1	WATERFLOW TRANSMITTER, ANNULAR TYPE	RTT	RUN TIME TOTALIZATION
K2	WATERFLOW TRANSMITTER, TURBINE TYPE	SA	SUPPLY AIR
K3	AIRFLOW TRANSMITTER, DIGITRON TYPE	SARH	SUPPLY AIR RELATIVE HUMIDITY
K4	AIRFLOW TRANSMITTER, ANNULAR ARRAY	SAT	SUPPLY AIR TEMPERATURE
K5	ENERGY METER, DELTA T AND FLOW	SF	SUPPLY FAN
K6	GAS DETECTOR	SF	STATIC PRESSURE
F1	INTERFACE CONTACT TO CACF	ST	SPACE TEMPERATURE
F2	VIBRATION DETECTOR	STP	SETPOINT
F3	INTERFACE CONTACT	STS	SPACE TEMPERATURE SENSOR
F4	INTERFACE TO HOOD SUPPRESSION	TUC	TERMINAL UNIT CONTROLLER
G1	OUTPUT TO VALVE	VAV	VARIABLE AIR VOLUME
G2	OUTPUT TO DAMPER	FZ	FREEZE STAT
G3	START/STOP		
G4	OUTPUT TO VSD		
G5	FAULT INPUT		
G6	STATUS		
G7	VIBRATION CUT-OUT		
G8	ELECTRICAL POWER CONSUMPTION		

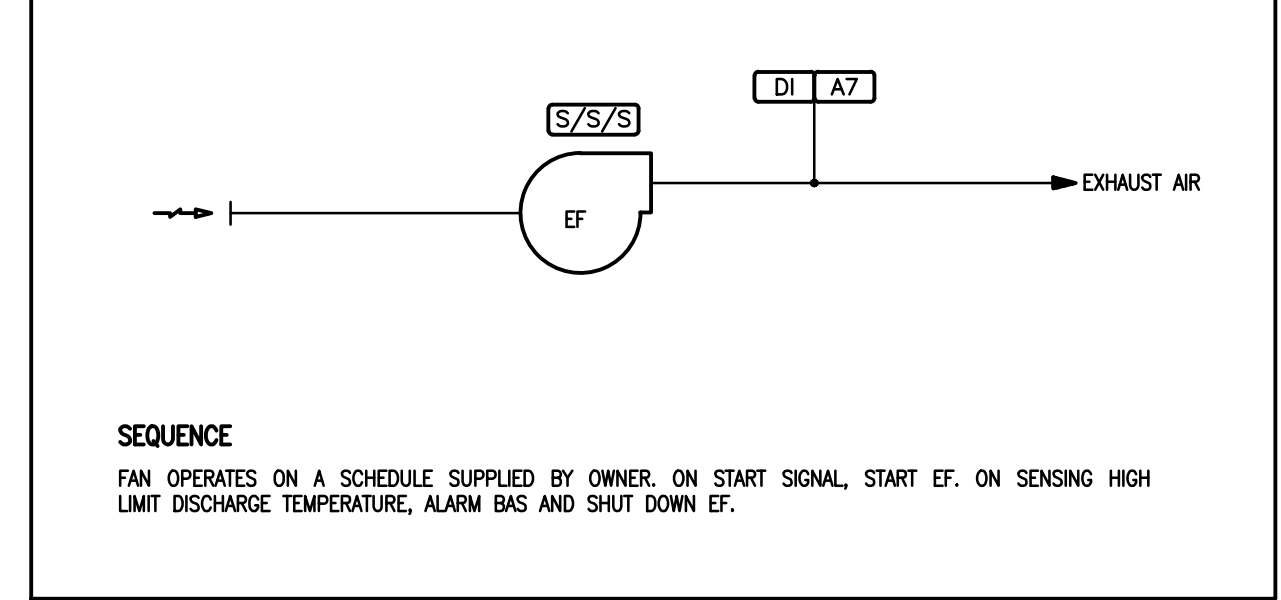
CD-1
M-103 CONTROL LEGEND



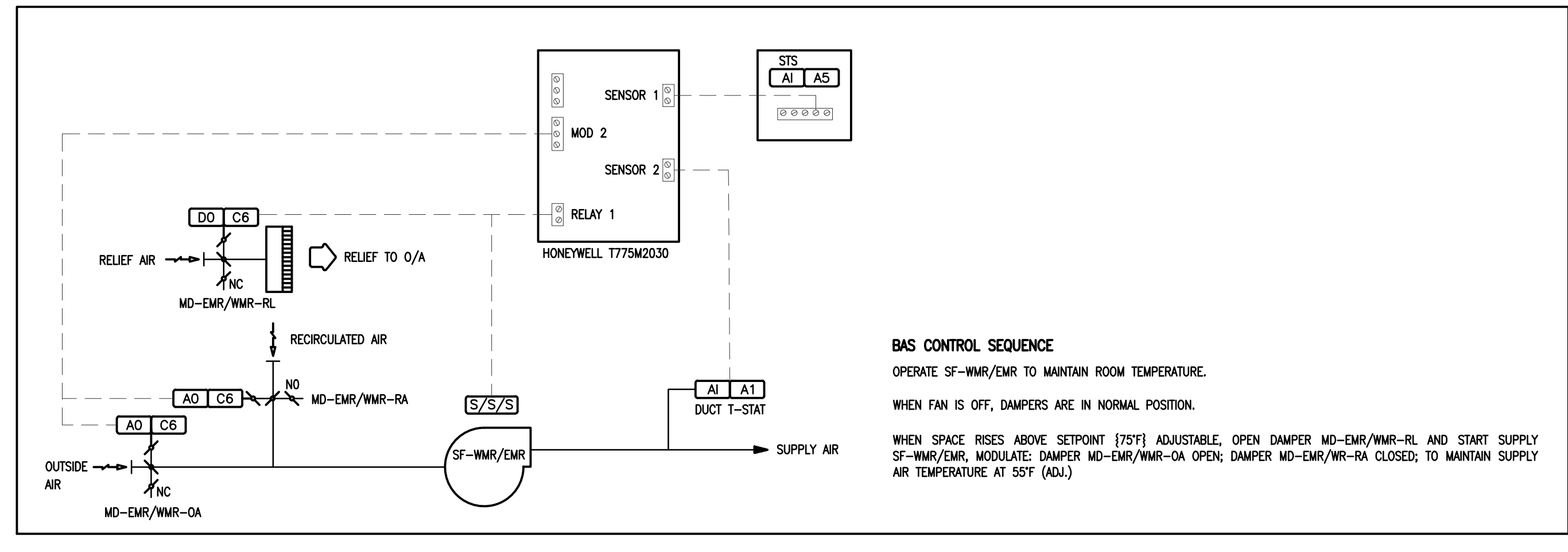
CD-2
M-103 MAKE-UP AIR SYSTEM
MUA-C/R



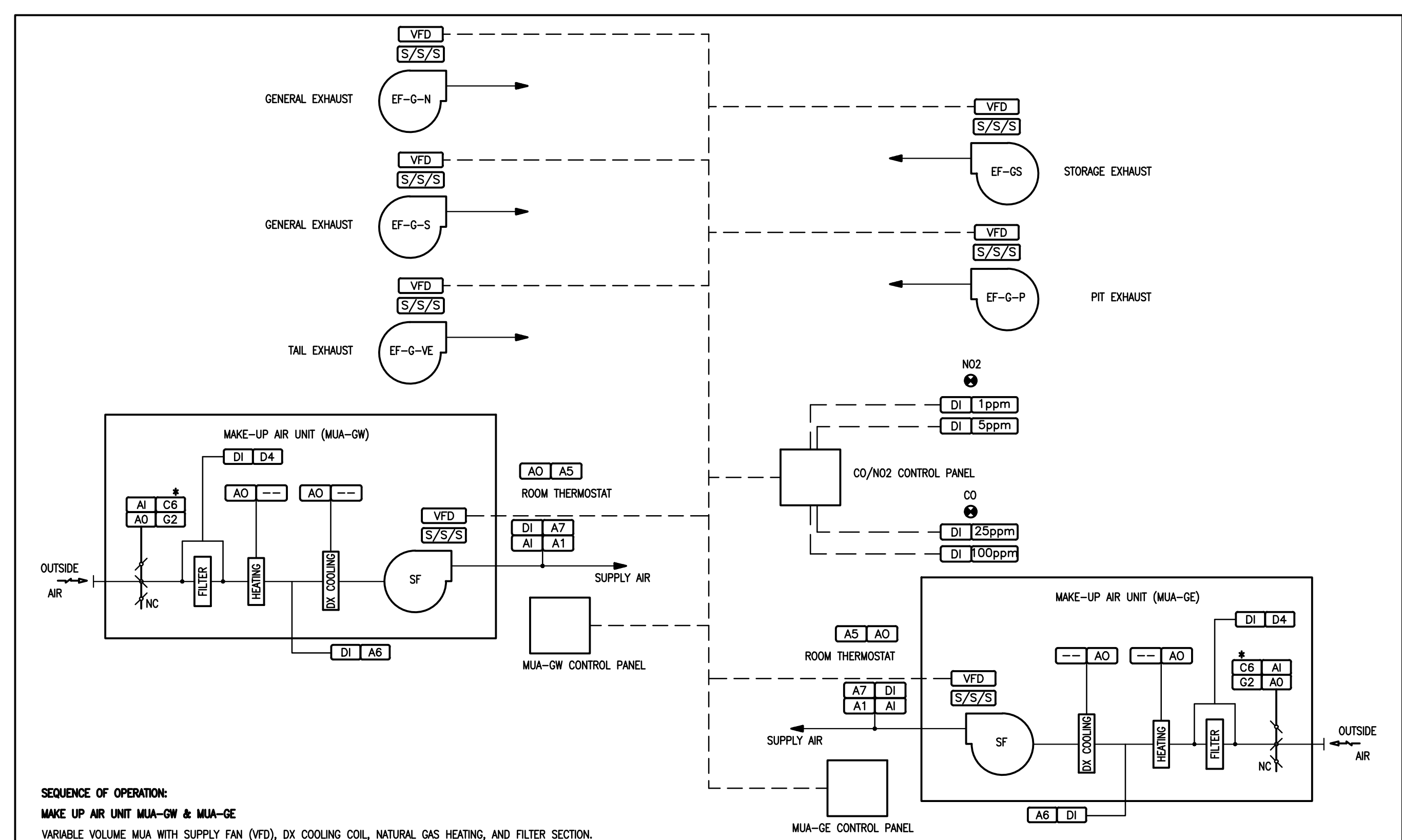
CD-3
M-103 PACKAGED CONSTANT VOLUME ROOF TOP UNIT
RTU-0-S/ RTU-0-N



CD-4
M-103 EXHAUST FAN WITHOUT DAMPERS
EF-1



CD-6
M-103 SUPPLY FAN WITH DAMPERS
SF-WMR/ SF-EMR (Mechanical Room)



CD-5
M-103 MAKE-UP AIR SYSTEM
MUA-G-W, MUA-G-E

GENERAL NOTES

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR CONSTRUCTION	MAY 07, 2021	P.G.
3	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
2	RE-ISSUED FOR PERMIT	DEC. 03, 2020	P.G.
1	RE-ISSUED FOR PERMIT	NOV. 06, 2020	P.G.
0	ISSUED FOR PERMIT	SEPT. 4, 2020	P.G.

REVISIONS



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Creating Solutions Through Engineering Excellence

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 contact@arcengineering.ca

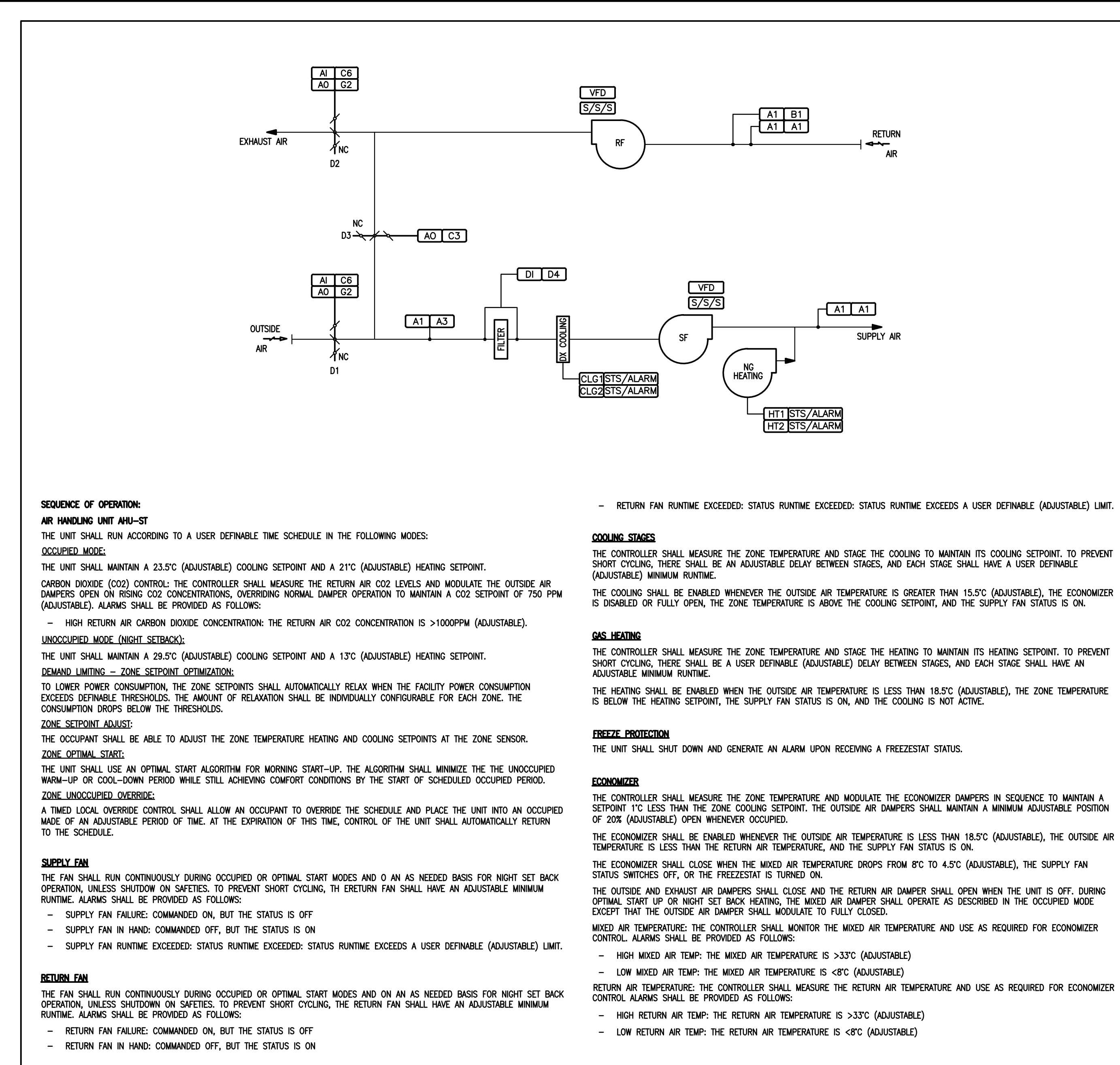
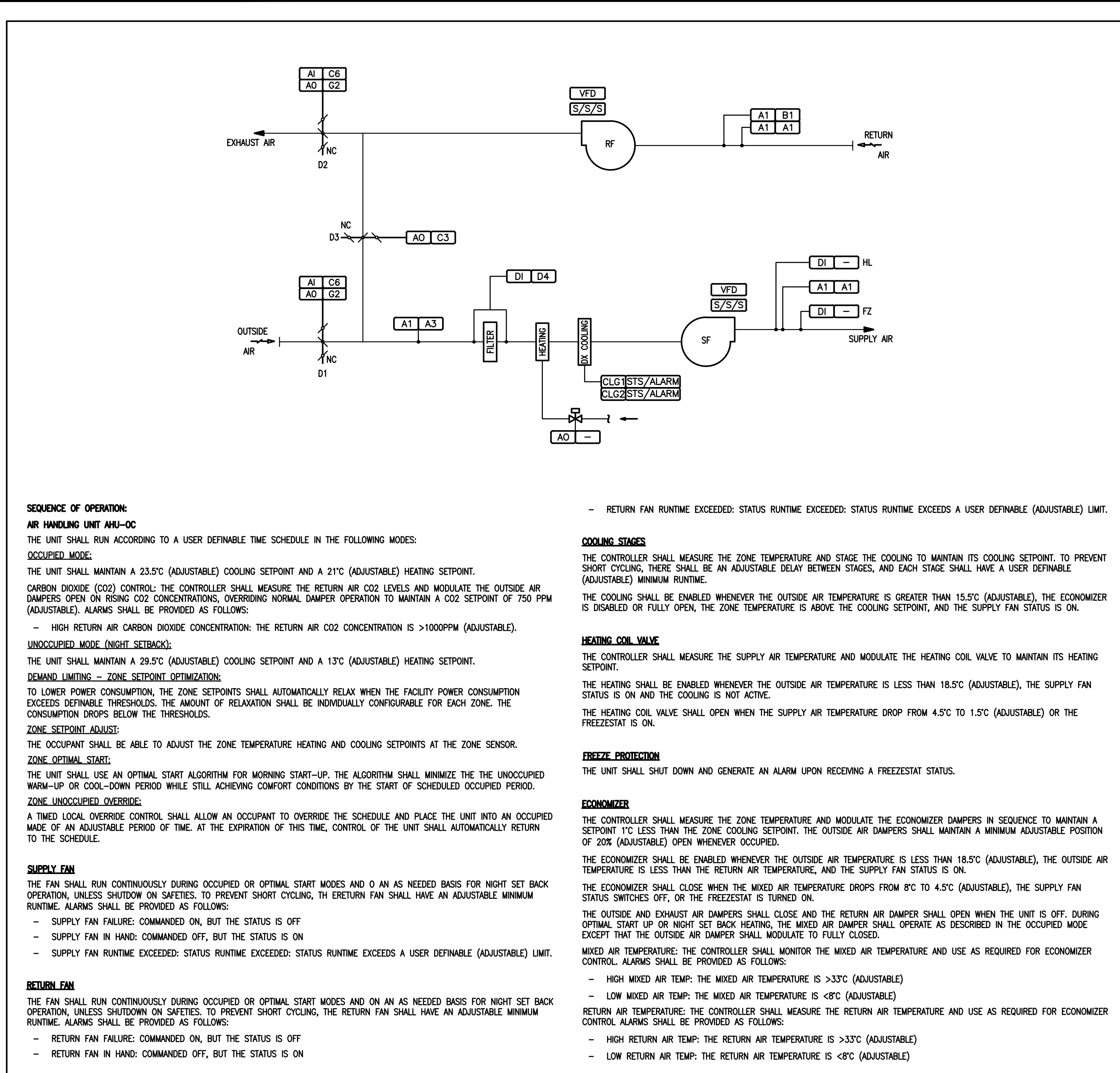
PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE,
 NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24
 DRAWN BY: M.B.
 DESIGNED BY: P.G.

DRAWING TITLE:
CONTROLS 1

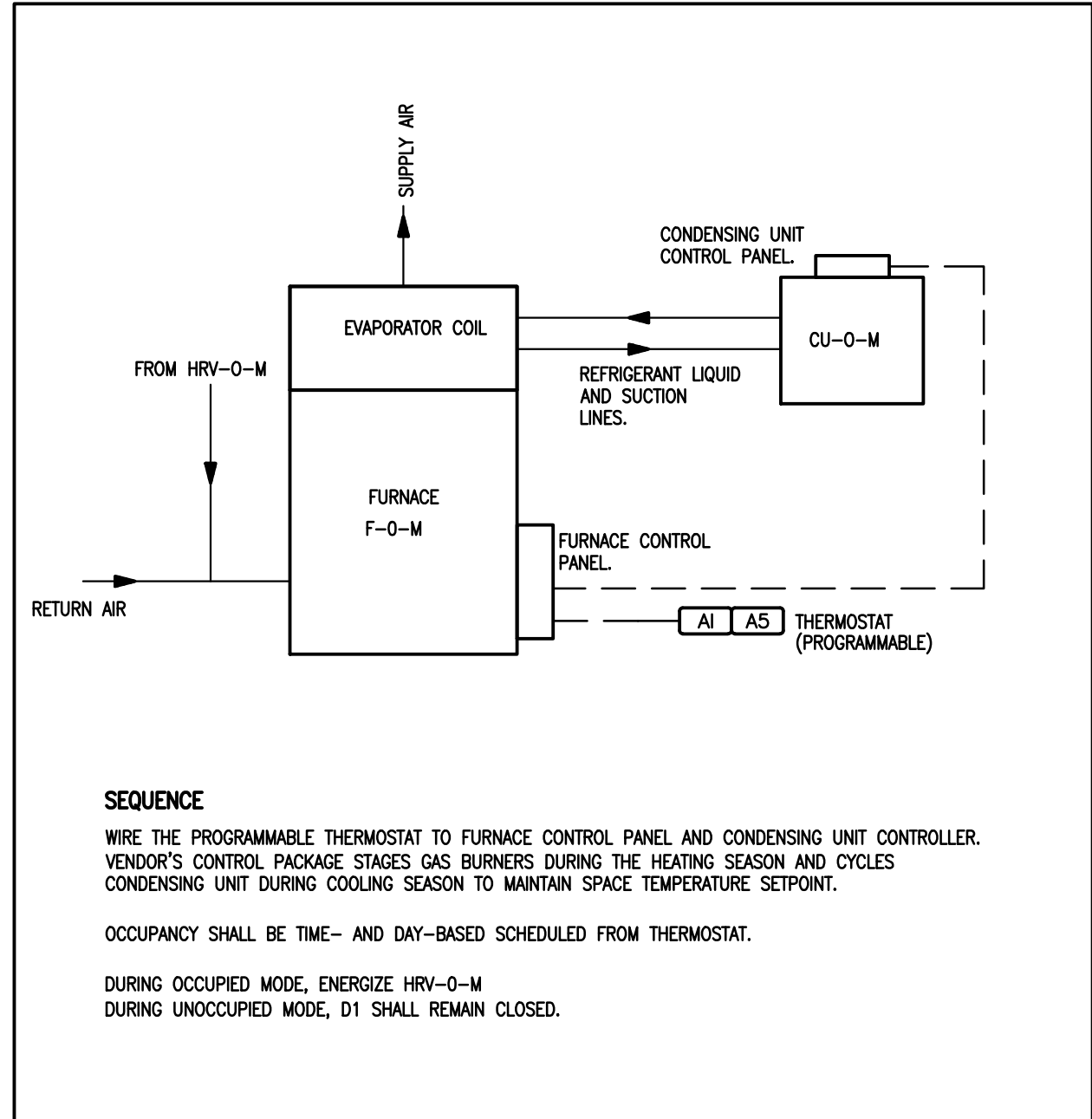
SCALE: AS NOTED
 PROJECT: 20-201-010
 DRAWING No.: **M-103**

PLOT DATE: May 7, 2021

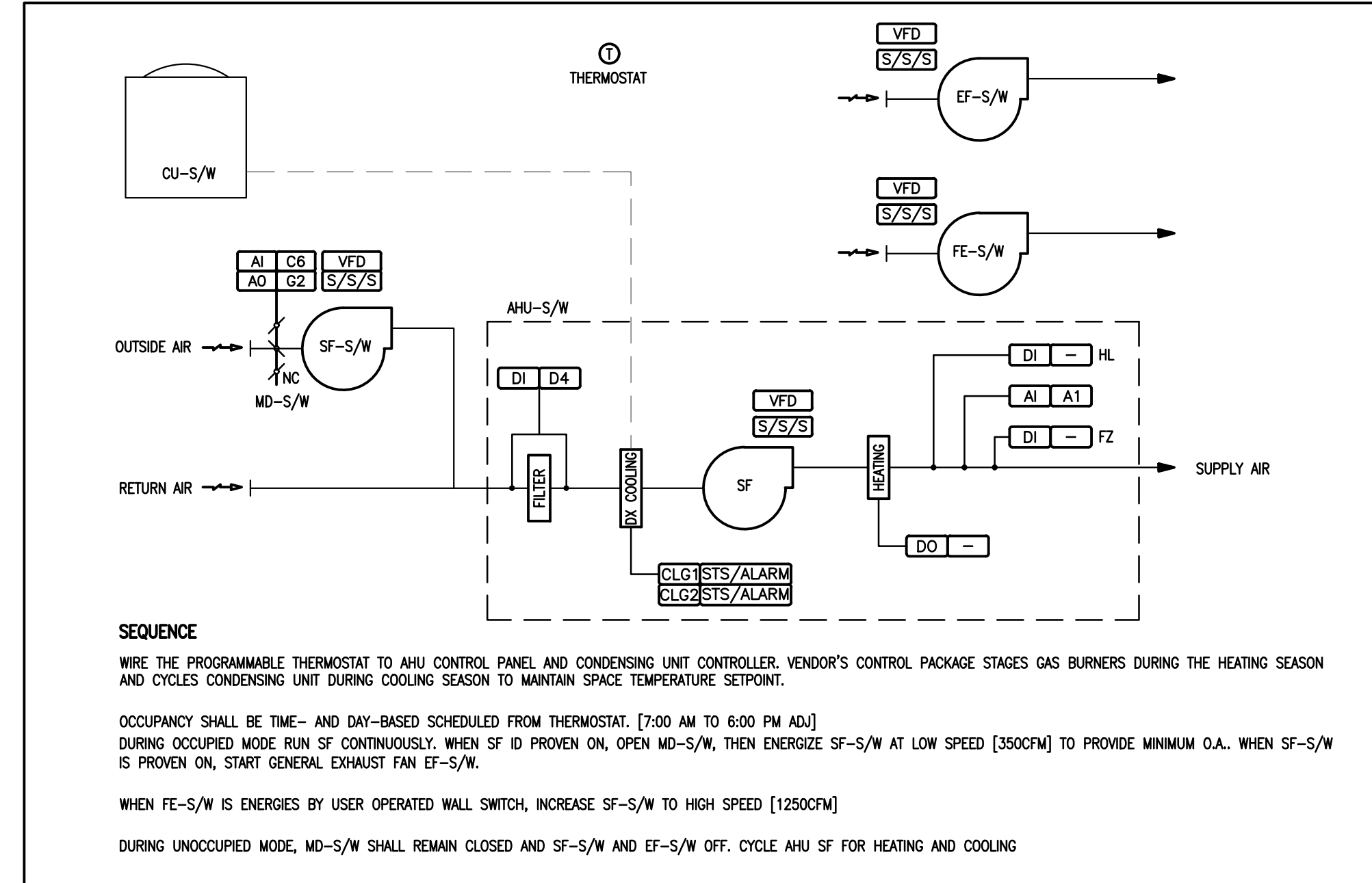


CD-1 AIR HANDLING UNIT
M-104 AHU-0/C

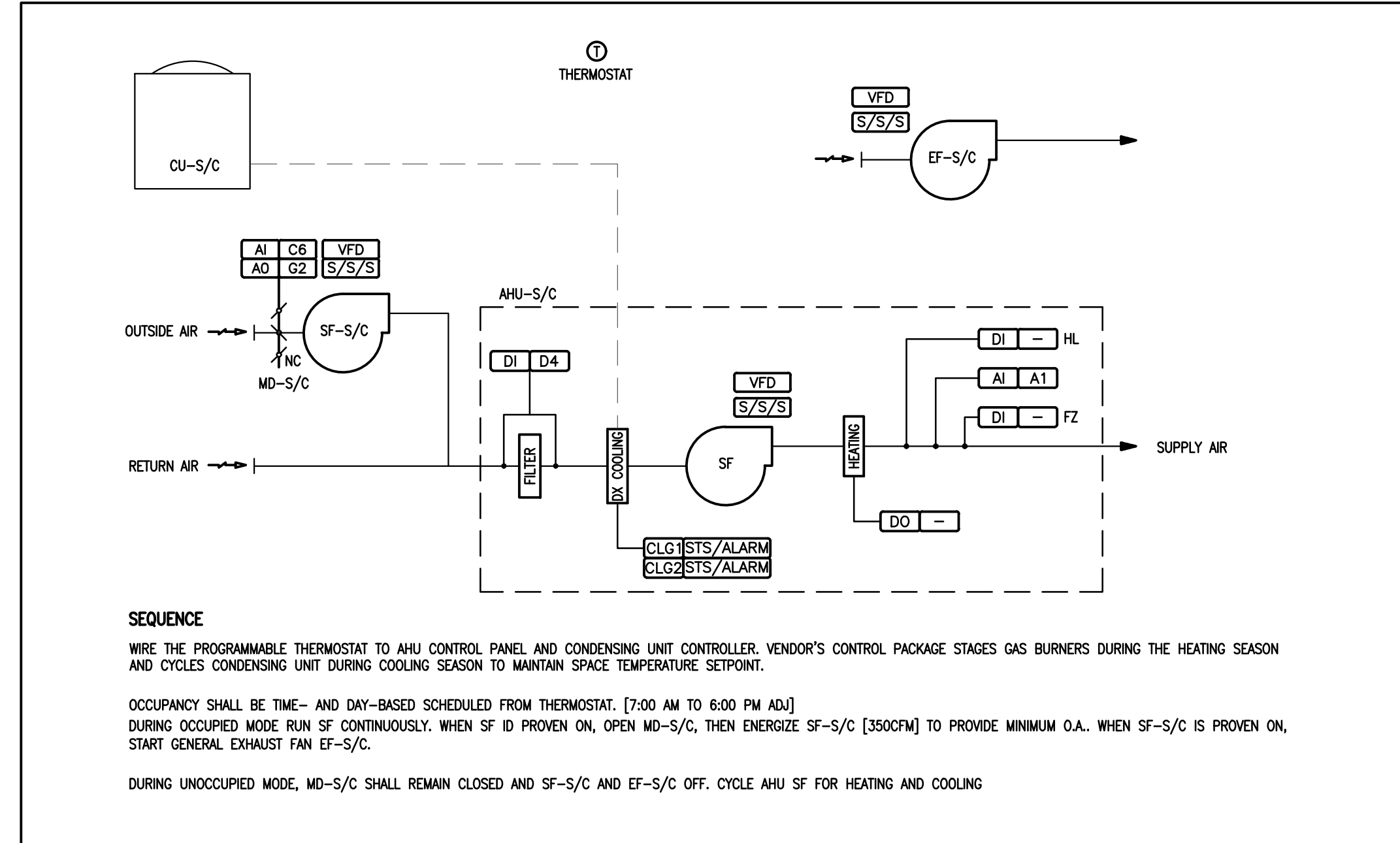
CD-2 AIR HANDLING UNIT
M-104 AHU-ST



CD-3 PACKAGED FURNANCE WITH CONDENSING UNIT
M-104 F-0-M



CD-4 WELDING SHOP AIR HANDLING EQUIPMENT
M-104 AHU-S/W, EF-S/W, FE-S/W, SF-S/W



CD-4 CARPENTRY SHOP AIR HANDLING EQUIPMENT
M-104 AHU-S/C, EF-S/C, SF-S/C

GENERAL NOTES

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR CONSTRUCTION	MAY 07, 2021	P.G.
3	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
2	RE-ISSUED FOR PERMIT	DEC. 03, 2020	P.G.
1	RE-ISSUED FOR PERMIT	NOV. 06, 2020	P.G.
0	ISSUED FOR PERMIT	SEPT. 4, 2020	P.G.

REVISIONS

No.	DESCRIPTION	DATE	BY



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PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE,
 NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24
 DRAWN BY: M.B.
 DESIGNED BY: P.G.

DRAWING TITLE:
CONTROLS 2

SCALE: AS NOTED
 PROJECT: 20-201-010
 DRAWING No.: **M-104**

PLOT DATE: May 7, 2021

- 12.21. SRS for static floor-mounted equipment and systems:
 12.21.1. Anchor equipment to equipment supports.
 12.21.2. Anchor equipment supports to structure.
 12.21.3. Use size of bolts scheduled in approved shop drawings.
 12.22. SRS for static suspended equipment, systems:
 12.22.1. Use one or combination of following methods:
 - Install light to structure.
 - Cross-brace in all directions.
 - Brace back to structure
 - Slack cable restraint systems.
 12.22.2. SCS to prevent sway in horizontal plane, 'rocking' in vertical plane, sliding and buckling in axial direction.
 12.22.3. Hanger rods to withstand compressive loading and buckling.
 12.23. SRS for vibration isolated floor mounted equipment and systems:
 12.23.1. Use one or combination of following methods:
 - Vibration isolators with built-in snubbers.
 - Vibration isolators and separate snubbers.
 - Built-up snubber system approved by seismic specialist, consisting of structural elements and elastomeric layer.
 12.23.2. SRS to resist complete isolator unloading.
 12.23.3. SRS not to jeopardize noise and vibration isolation systems. Provide 4-8 mm clearance between seismic restraint snubbers and equipment during normal operation of equipment and systems.
 12.23.4. Cushioning action to be gentle and steady by utilizing elastomeric material or other means in order to avoid high impact loads.
 12.24. SRS for suspended isolated floor mounted equipment and systems:
 12.24.1. Use one or combination of following methods:
 - Slack cable restraint system.
 - Brace back to structure via vibration isolators and snubbers
 12.25. Attachment points and fasteners to withstand same maximum load that seismic restraint is to resist and in all directions.
 12.26. Install SRS at least 25 mm from all other equipment, systems, services.
 12.27. Miscellaneous equipment not vibration-isolated to be bolt through house-keeping pad to structure.
 12.28. Co-ordinate connections with all disciplines.
 12.29. Anchor vertical tanks through house-keeping pad to structure and provide steel bands above centre of gravity.
 12.30. Provide at least two (2) straps with anchor bolts fastened to structure for horizontal tanks.
 12.31. SRS to be inspected and certified by Manufacturer upon completion of installation.
 12.32. Provide written report to Engineer with certificate of compliance from seismic specialist.
 12.33. Upon completion and acceptance of certification, hand over to Engineer complete set of construction documents, revised to show 'as-built' conditions.

GENERAL NOTES

No.	DESCRIPTION	DATE	BY
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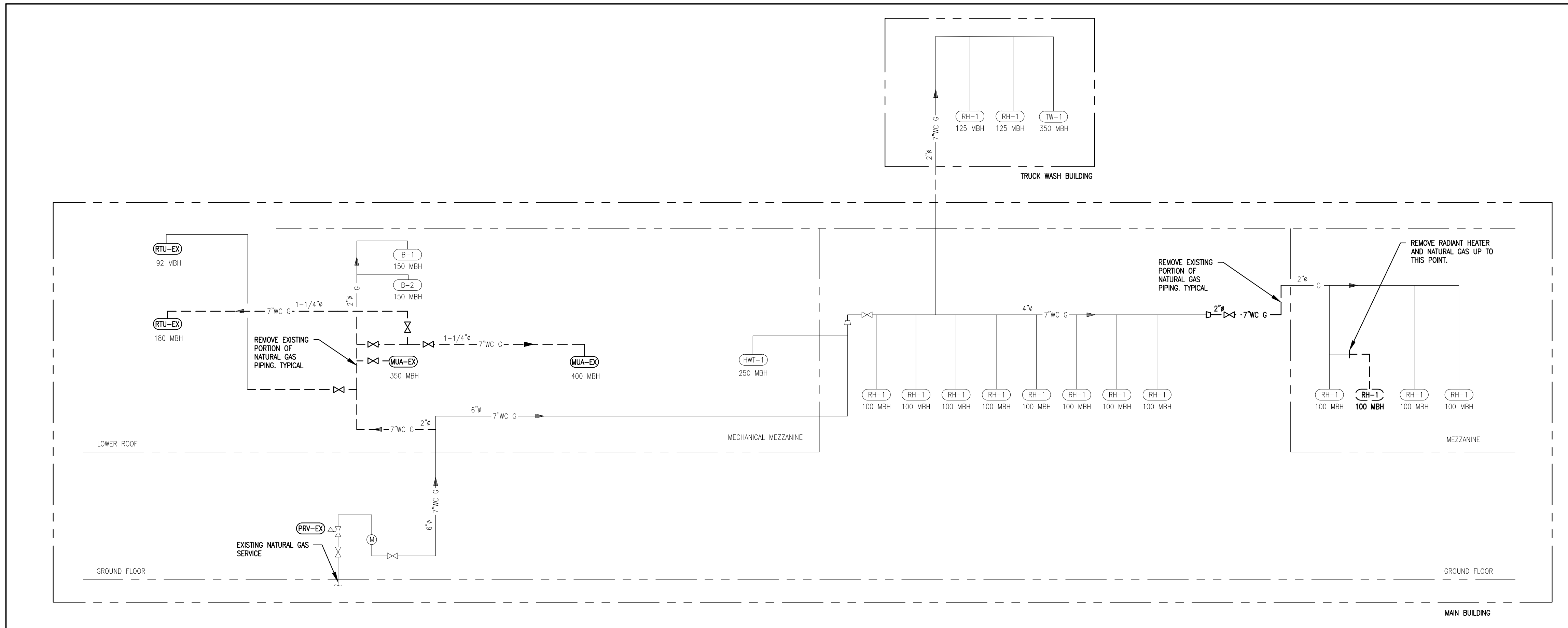
PROJECT:
**NIAGARA FALLS
 SERVICE CENTRE
 IMPROVEMENTS**
 3200 STANLEY AVENUE,
 NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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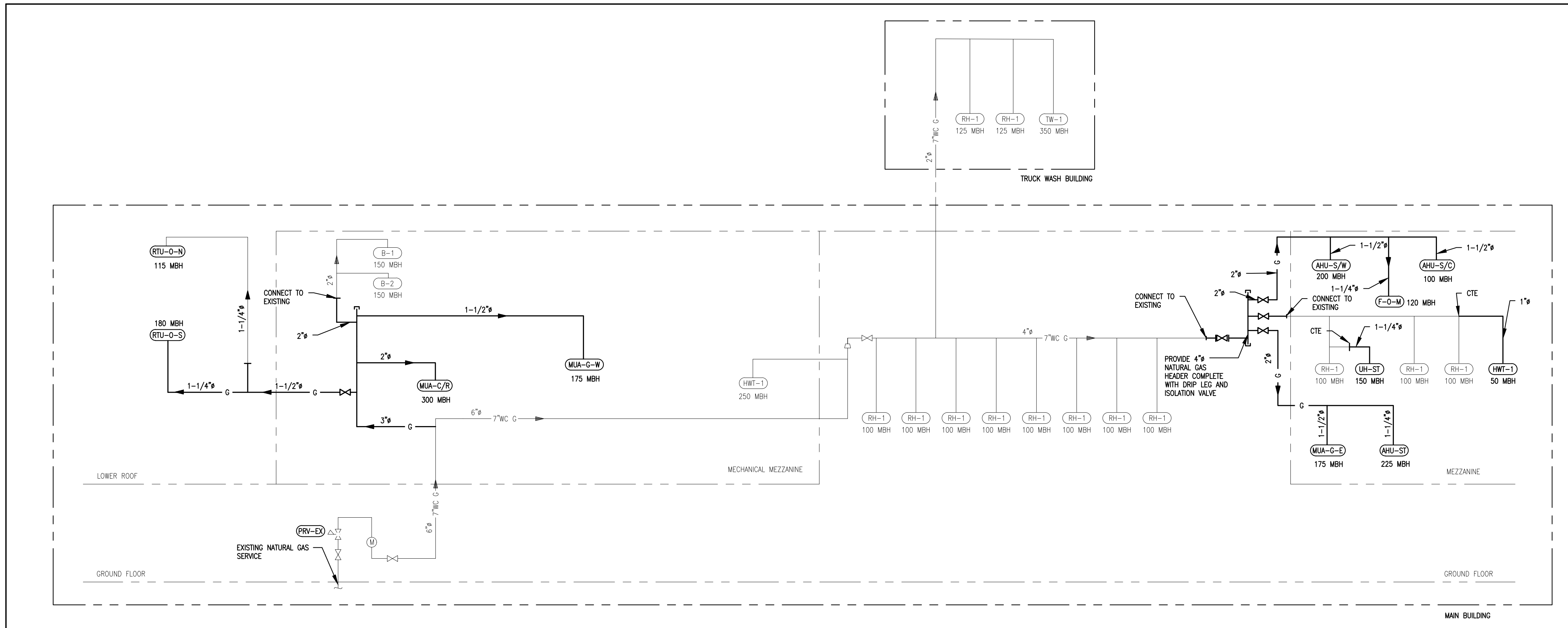
DRAWING TITLE:
SPECIFICATIONS 2

SCALE: AS NOTED	DRAWING No.: M-106
PROJECT: 20-201-010	

PLOT DATE: May 7, 2021



1 NATURAL GAS SCHEMATIC DEMOLITION
 M-200 SCALE: N.T.S.



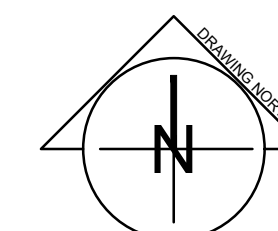
2 NATURAL GAS SCHEMATIC REVISED
 M-200 SCALE: N.T.S.

GENERAL NOTES

- NATURAL GAS PIPING TO EXISTING EQUIPMENT TO BE VERIFIED.
- MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
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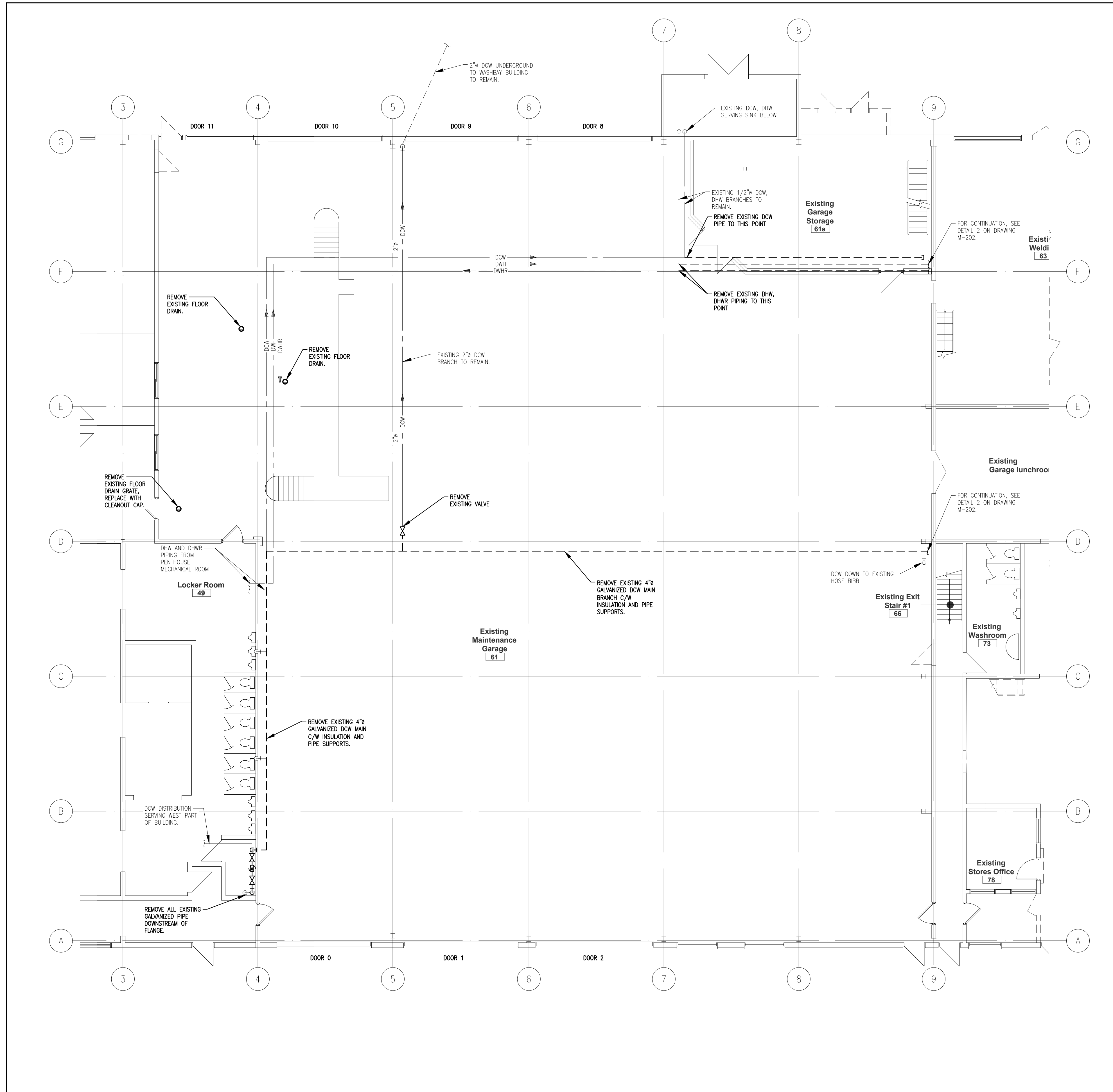
PROJECT:
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 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24
DRAWN BY: M.B.
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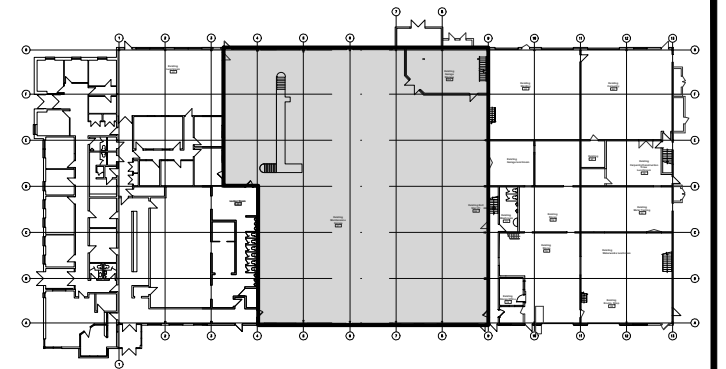
DRAWING TITLE:
NATURAL GAS SCHEMATIC

SCALE: AS NOTED
PROJECT: 20-201-010
DRAWING No.: **M-200**

PLOT DATE: May 7, 2021



GENERAL NOTES

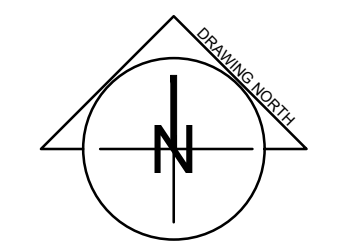


KEY PLAN

MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
0	ISSUED FOR PLUMBING PERMIT	FEB. 26, 2021	P.G.

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START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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DRAWING TITLE:

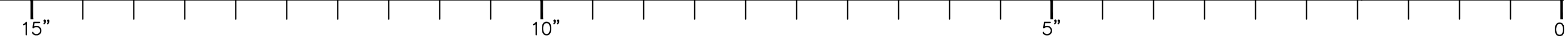
DEMOLITION PLUMBING SERVICE CENTRE

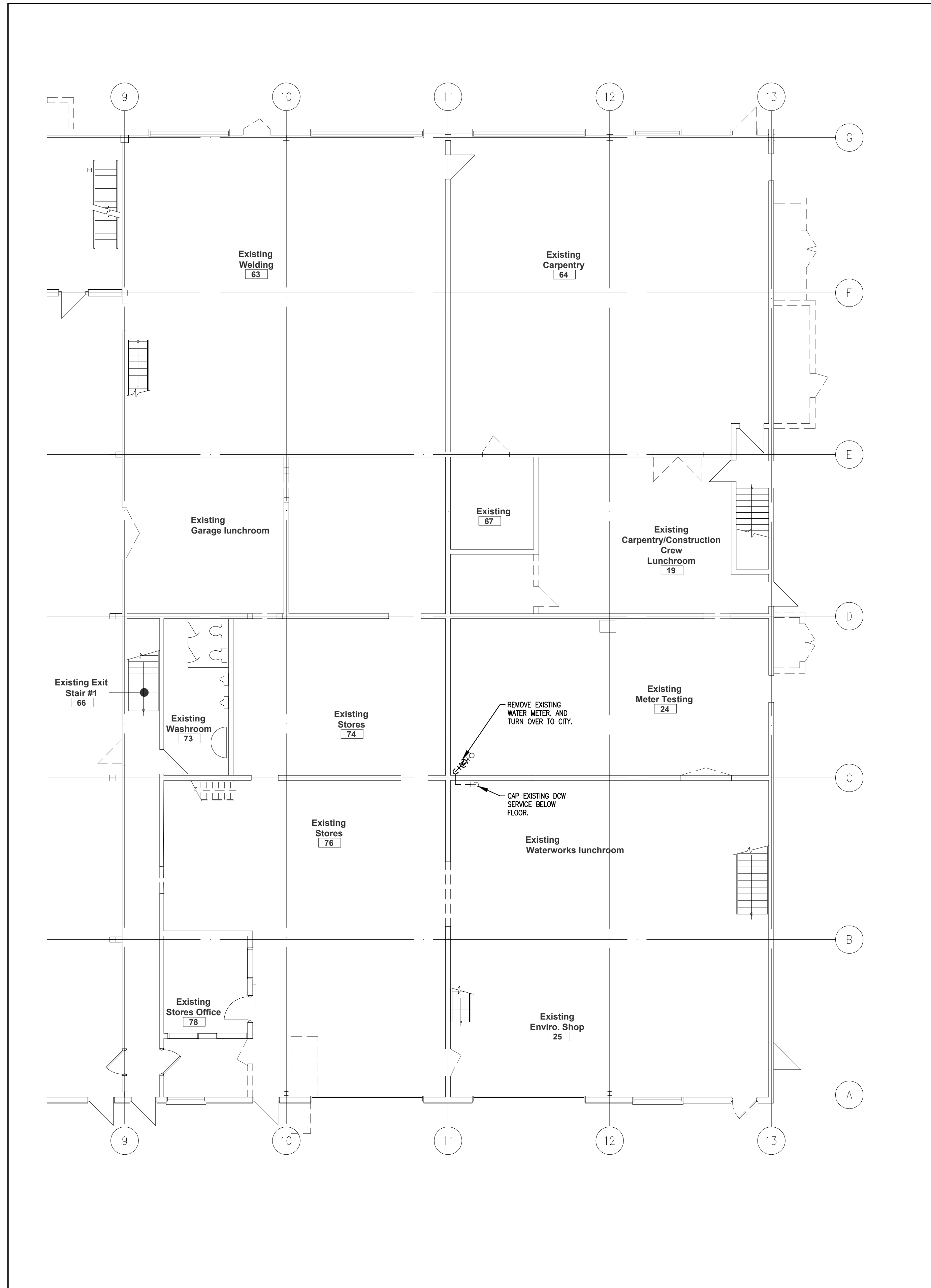
SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-201

1 PLUMBING SERVICE CENTRE - DEMOLITION
 M-201 SCALE: 1/8" = 1'-0"

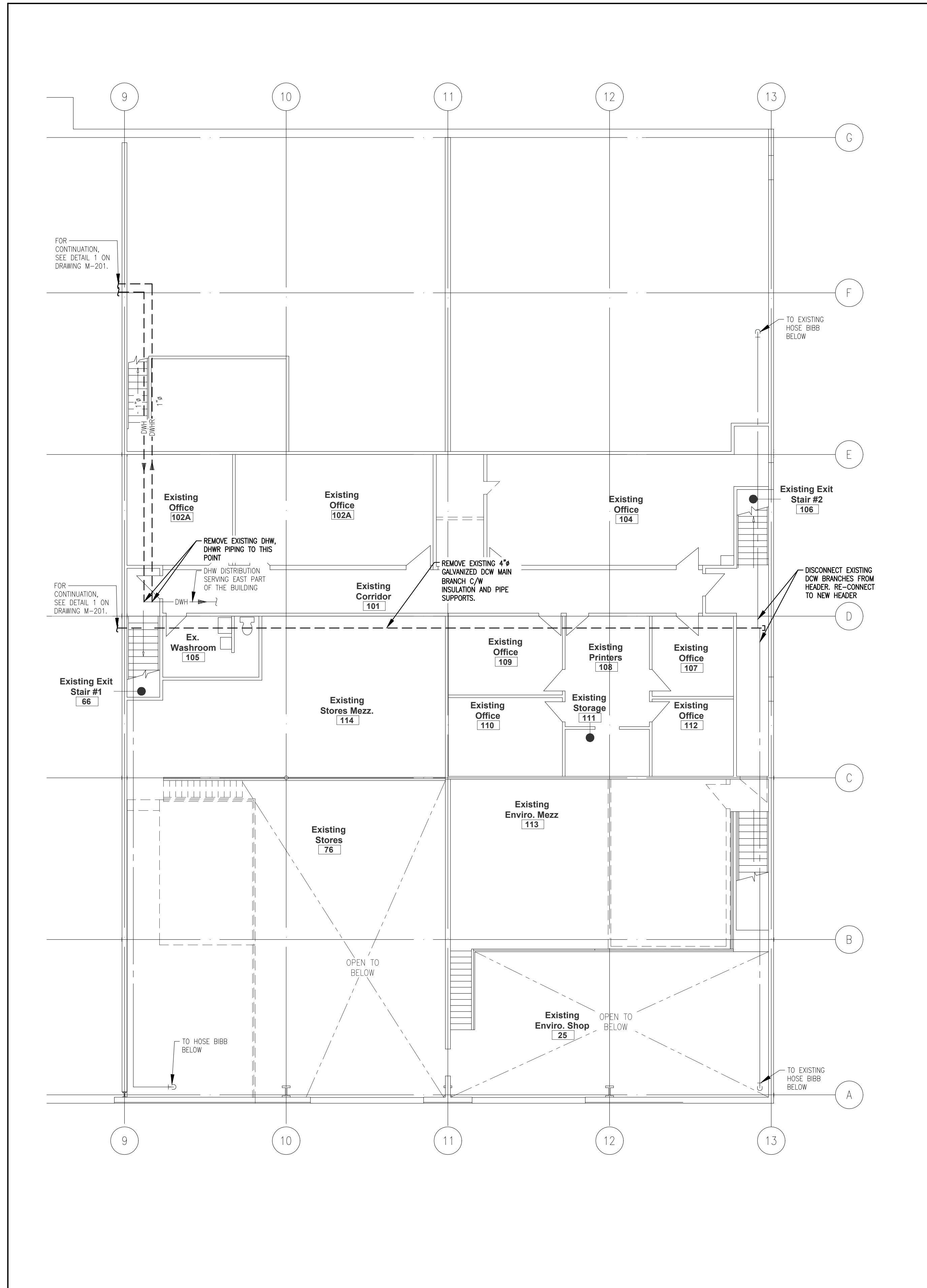
PLOT DATE: May 7, 2021

ORIGINAL SHEET SIZE: ARCH D



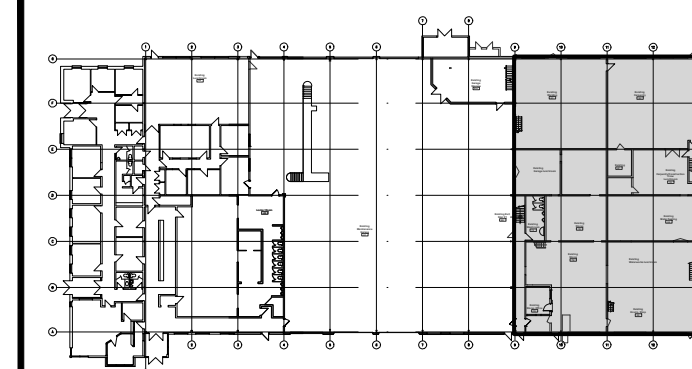


1 PLUMBING EAST GROUND FLOOR - DEMOLITION
 M-202 SCALE: 1/8" = 1'-0"



2 PLUMBING EAST MEZZANINE - DEMOLITION
 M-202 SCALE: 1/8" = 1'-0"

GENERAL NOTES

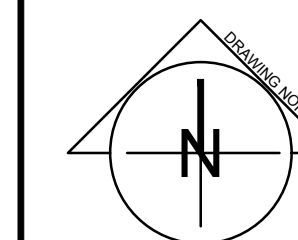


KEY PLAN

MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
0	ISSUED FOR PLUMBING PERMIT	FEB. 26, 2021	P.G.

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PROJECT:

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 IMPROVEMENTS**
 3200 STANLEY AVENUE,
 NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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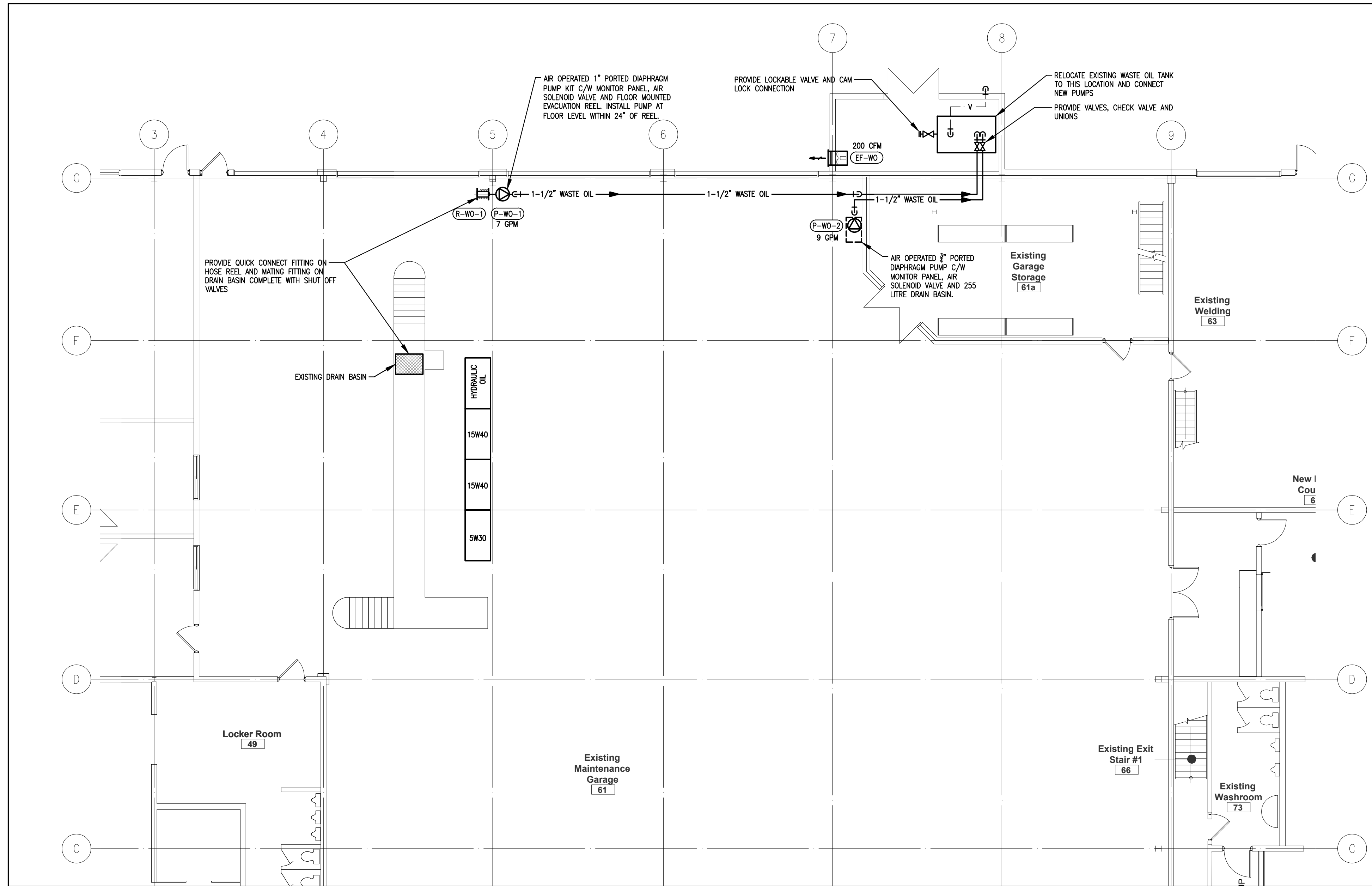
DRAWING TITLE:
**DEMOLITION
 PLUMBING EAST
 GROUND FLOOR AND
 MEZZANINE**

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-202

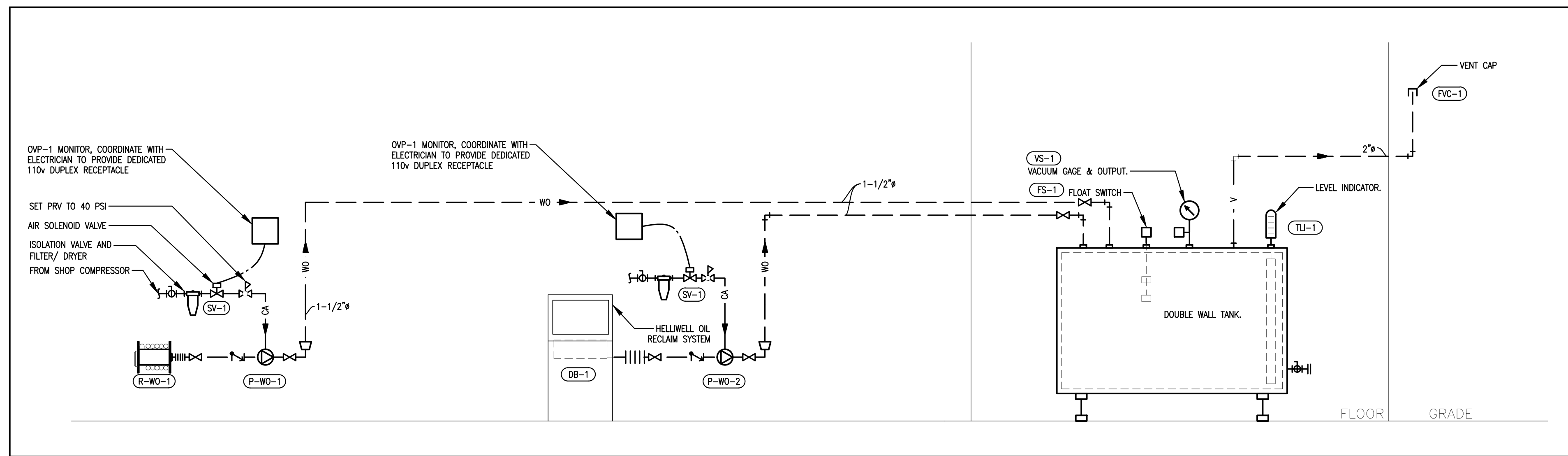
PLOT DATE: May 7, 2021

ORIGINAL SHEET SIZE: ARCH D

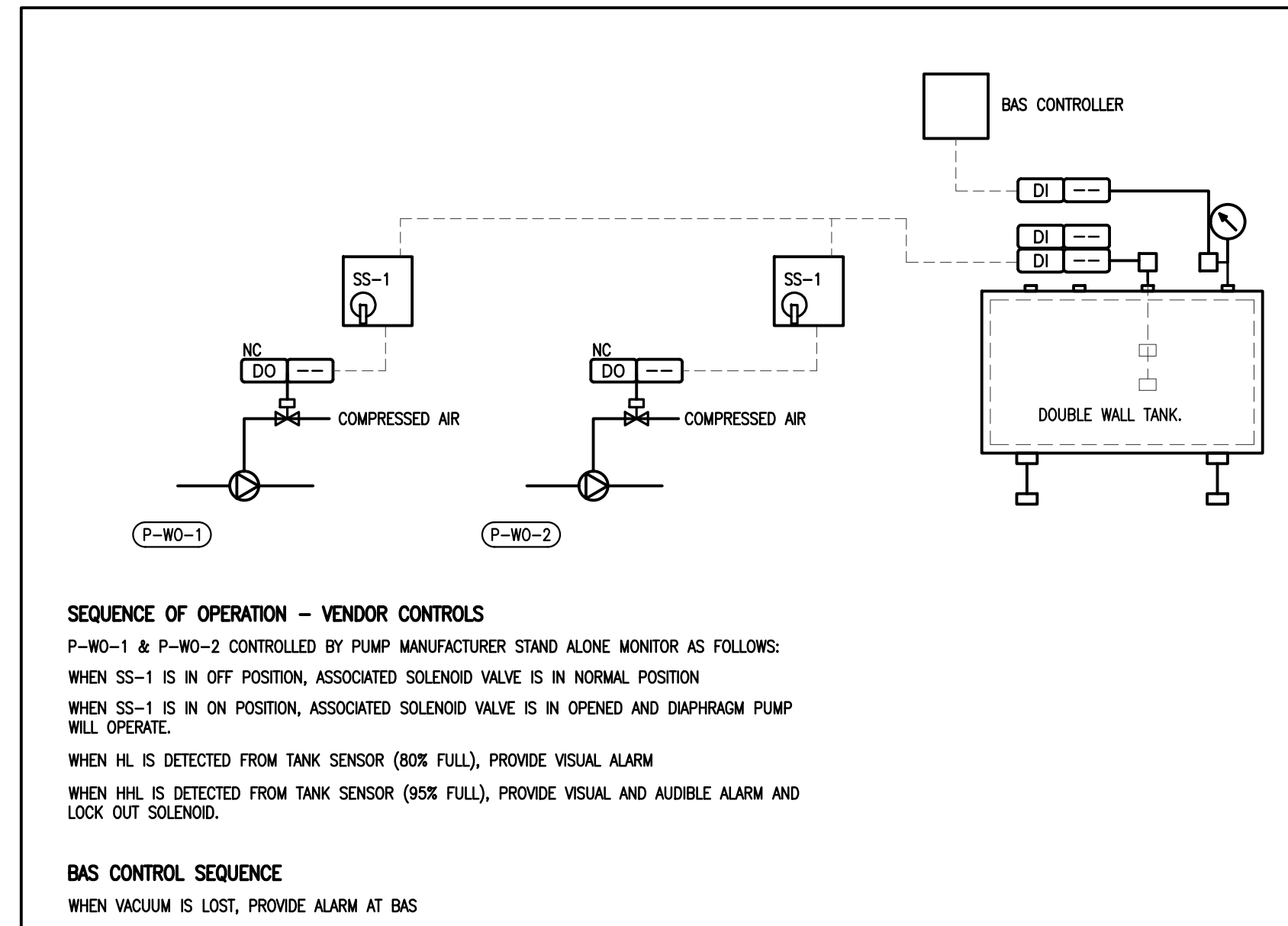
15" 10" 5" 0



1 WASTE OIL SYSTEM PLAN
M-210 SCALE: 1/8" = 1'-0"



2 WASTE OIL SCHEMATIC
M-210 SCALE: NTS



CD-1 WASTE OIL SYSTEM
M-210

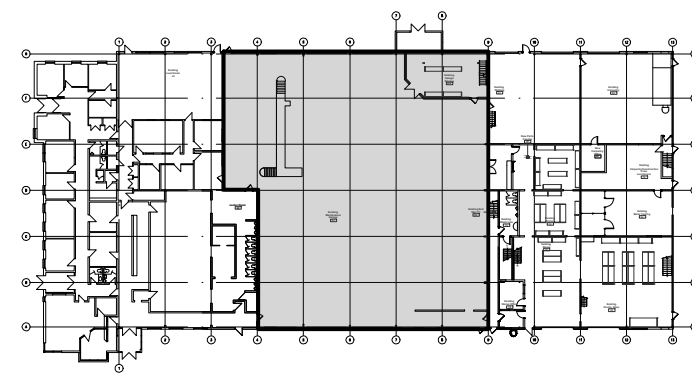
FUEL EQUIPMENT SCHEDULE					
TAG	DESCRIPTION	LOCATION	MAKE	MODEL	REMARKS
OVP-1	OVERFLOW PREVENTION ALARM	SERVICE GARAGE	HELLIWELL	PS102H-2	COMPLETE WITH TWO LEVEL SWITCHES (90% AND 95%) FILLED, AUDIBLE AND VISUAL ALARM
FVC-1	TANK VENT	EXTERIOR	OPW	23-0033	
TU-1	TANK LEVEL INDICATOR	TANK	GLOBAL INDUSTRIES	T9FB887727	TANK LIQUID LEVEL GAUGE, ALUMINUM BUSHING, GALVANIZED ROD, HDPE FLOAT, 2" FITTING, 44" DEPTH
FS-1	TANK LEVEL INDICATOR	TANK	HELLIWELL	FS301-2	2 SWITCH LEVEL INDICATOR
R-WO-1	EVACUATION REEL	SERVICE GARAGE	GRACO	H5MD5B	INSTALL AT FLOOR LEVEL WITHIN 24" OF P-WO-1
DB-1	DRAIN BASIN	SERVICE GARAGE	DIEKO	TKFD255	
SV-1	AIR SOLENOID VALVE	SERVICE GARAGE	HELLIWELL	HES3V21008-C	

NOTES:
1. SPECIFICATIONS BASED ON MAKE MODEL NO.

WASTE OIL PUMP SCHEDULE													
TAG	SERVICE	LOCATION	GRACO PUMP KIT NUMBER	PUMP MANUFACTURER	MODEL	FLUID	TYPE	CONTROL	AIR PRESSURE	FLOW		HEAD	
										L/S	GPM	KPA	PSI
P-WO-1	WASTE OIL PUMP #1	SERVICE GARAGE	24E166	HUSKY	1050	WASTE OIL	DIAPHRAGM	COMPRESSED AIR	40 PSI	0.6	10	9.1	30
P-WO-2	WASTE OIL PUMP #2	SERVICE GARAGE	224873	HUSKY	716	WASTE OIL	DIAPHRAGM	COMPRESSED AIR	40 PSI	0.6	9	3.0	10

NOTES:
SPECIFICATIONS BASED ON GRACO

GENERAL NOTES

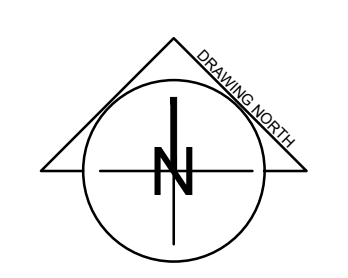


KEY PLAN

- MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
3	ISSUED FOR PRICING	JAN. 04, 2021	P.G.
2	RE-ISSUED FOR PERMIT	DEC. 03, 2020	P.G.
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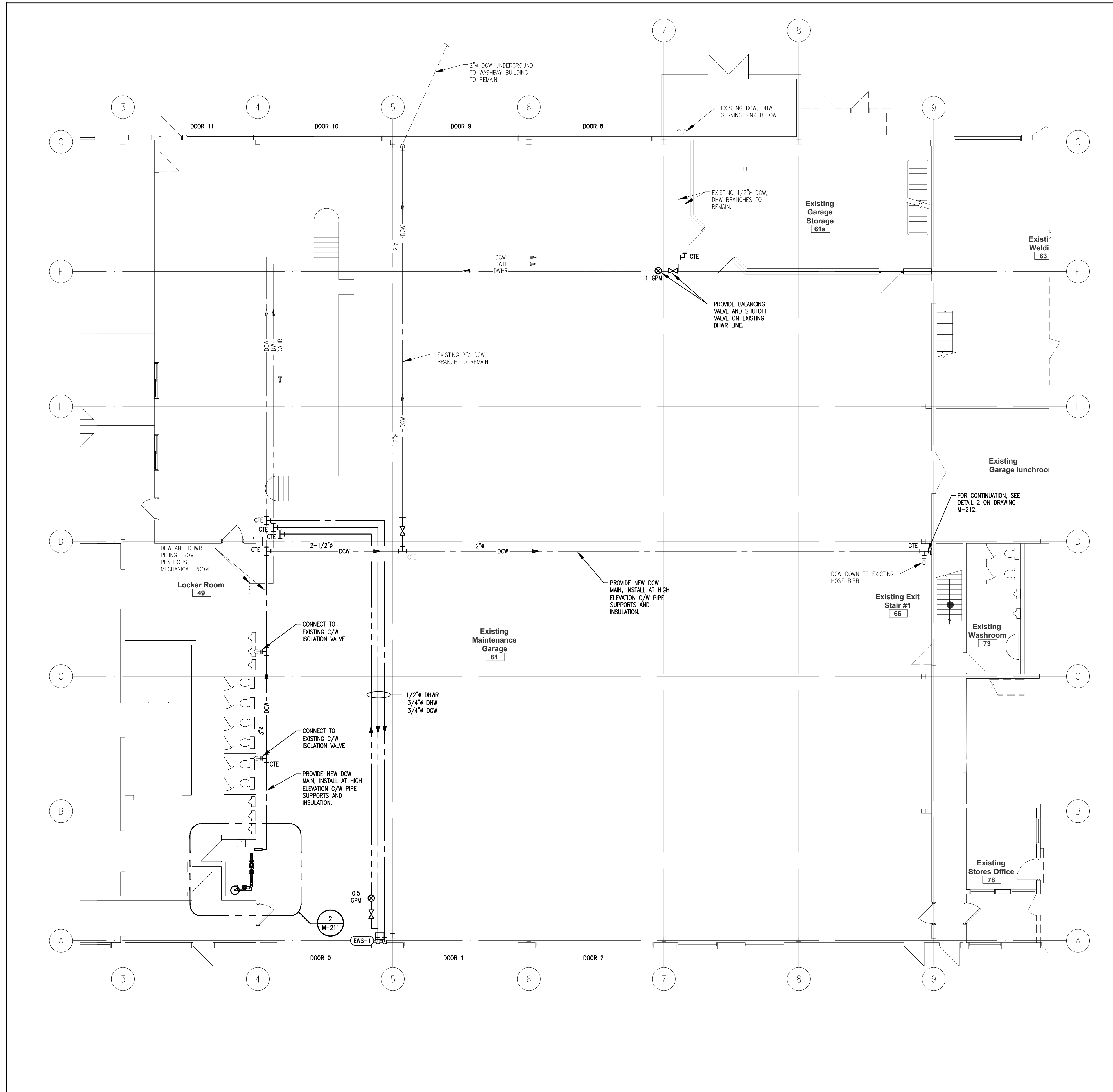
PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24
DRAWN BY: M.B.
DESIGNED BY: P.G.

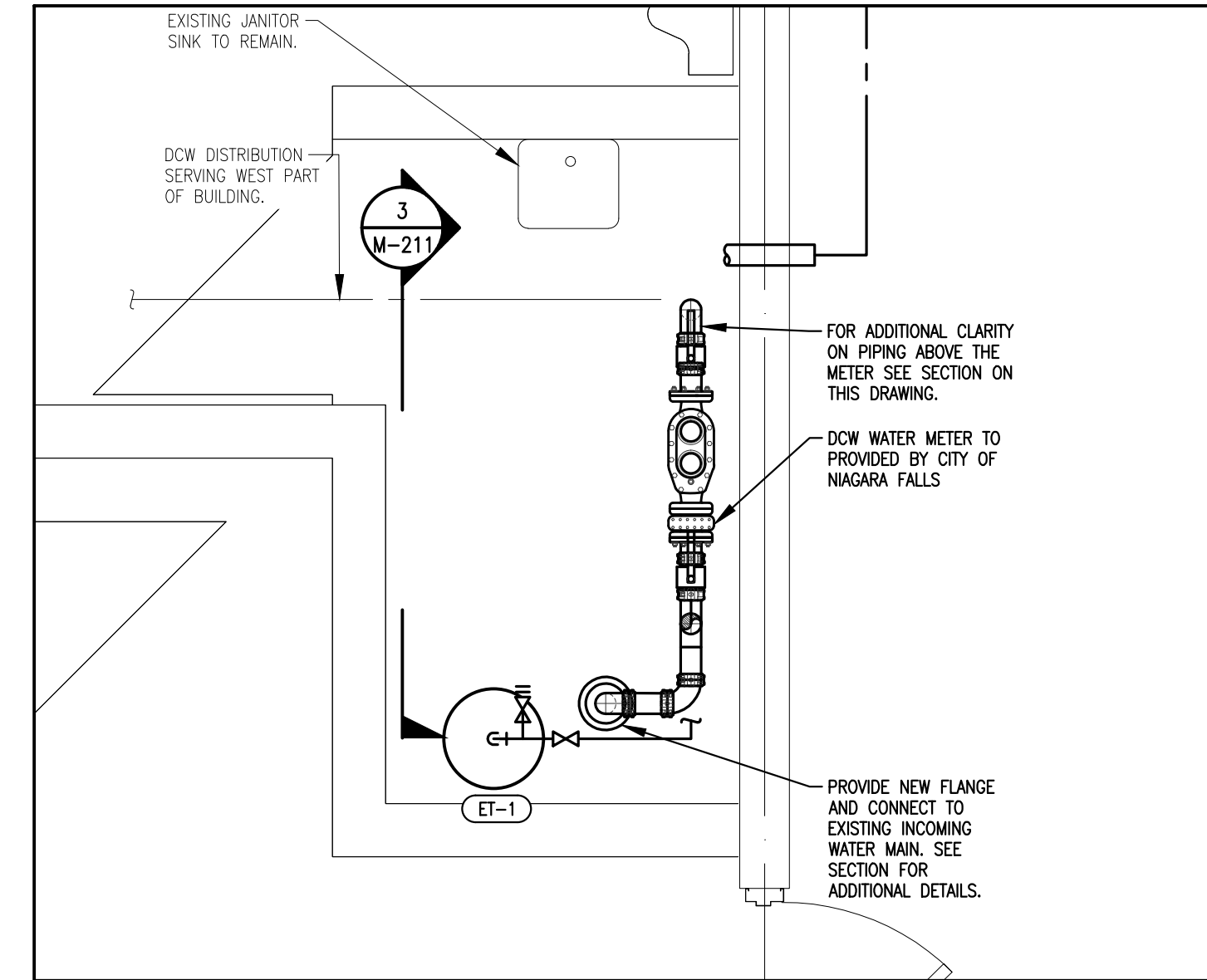
DRAWING TITLE:
WASTE OIL PLUMBING PLAN

SCALE: AS NOTED
PROJECT: 20-201-010
DRAWING No.: **M-210**

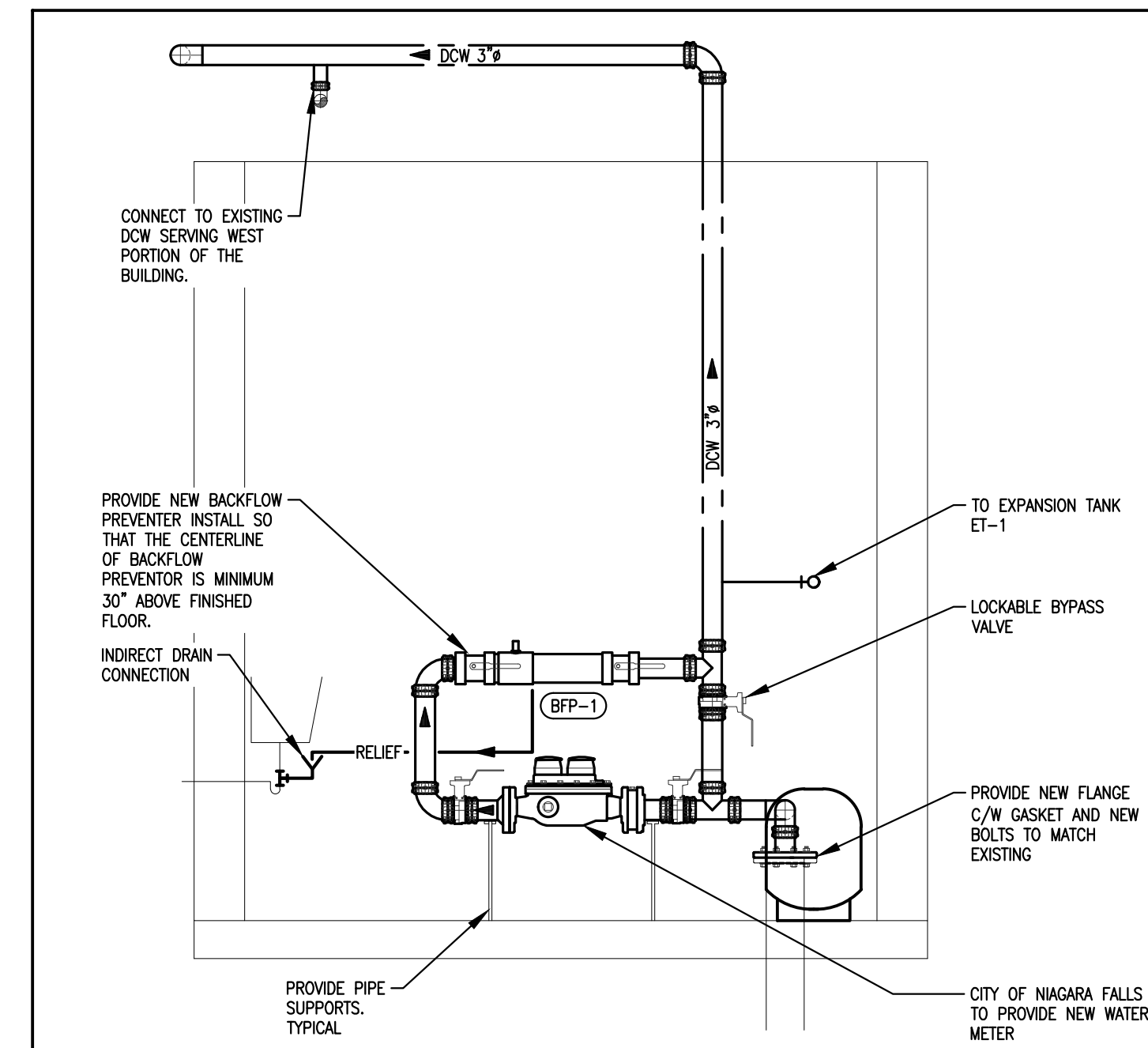
PLOT DATE: May 7, 2021



1 PLUMBING SERVICE CENTRE - REVISED
 M-211 SCALE: 1/8" = 1'-0"

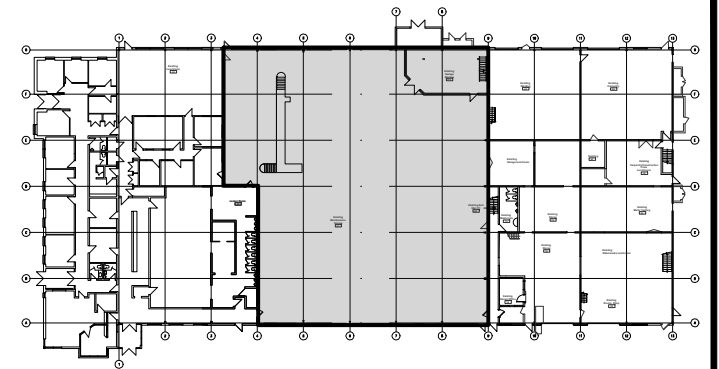


2 DCW METER ROOM PART PLAN
 M-211 SCALE: 1/2" = 1'-0"



3 DCW METER ROOM SECTION
 M-211 SCALE: 1/2" = 1'-0"

GENERAL NOTES

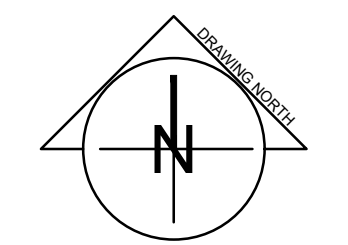


KEY PLAN

MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
0	ISSUED FOR PLUMBING PERMIT	FEB. 26, 2021	P.G.

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START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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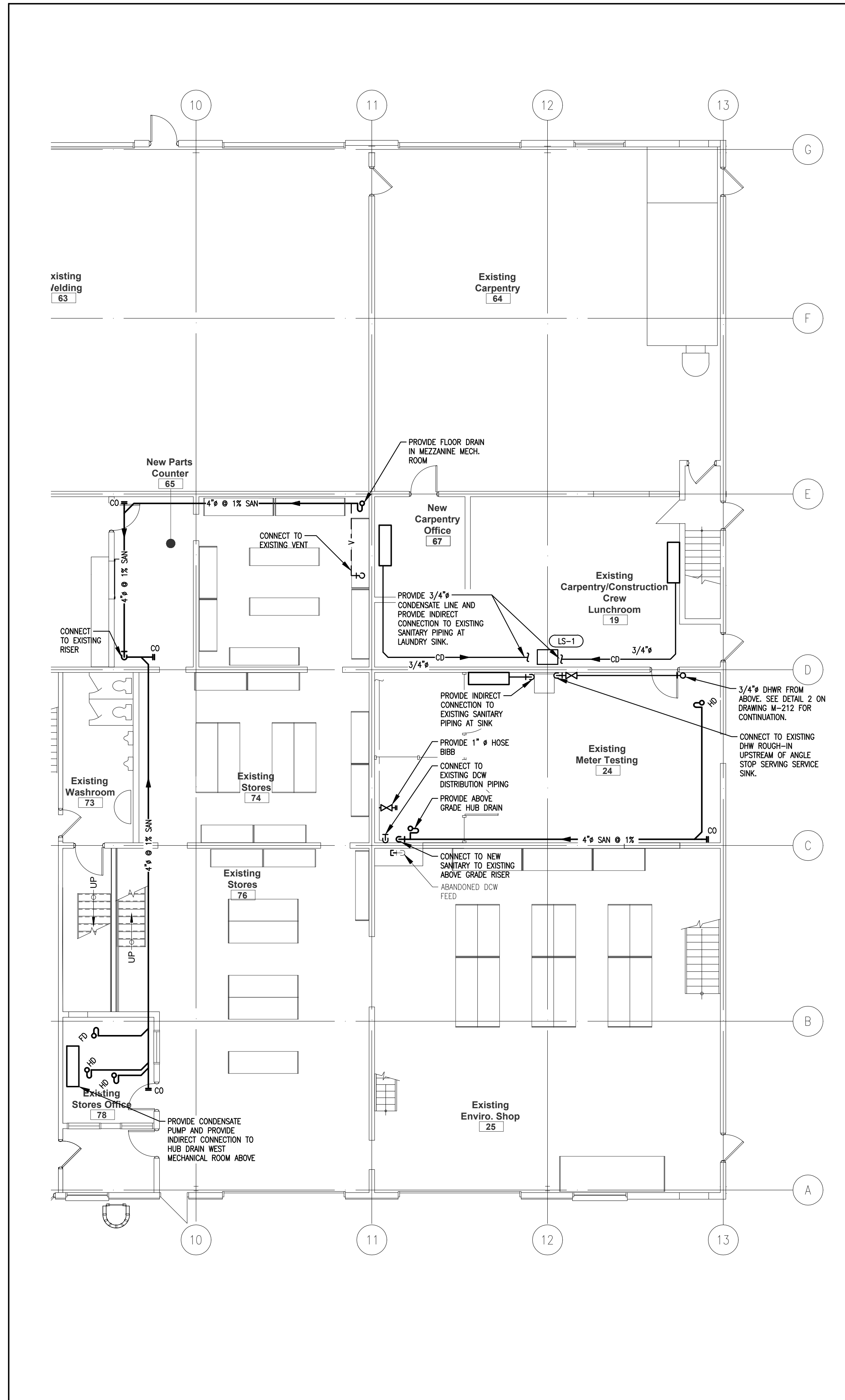
DRAWING TITLE:
REVISED PLUMBING SERVICE CENTRE

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-211

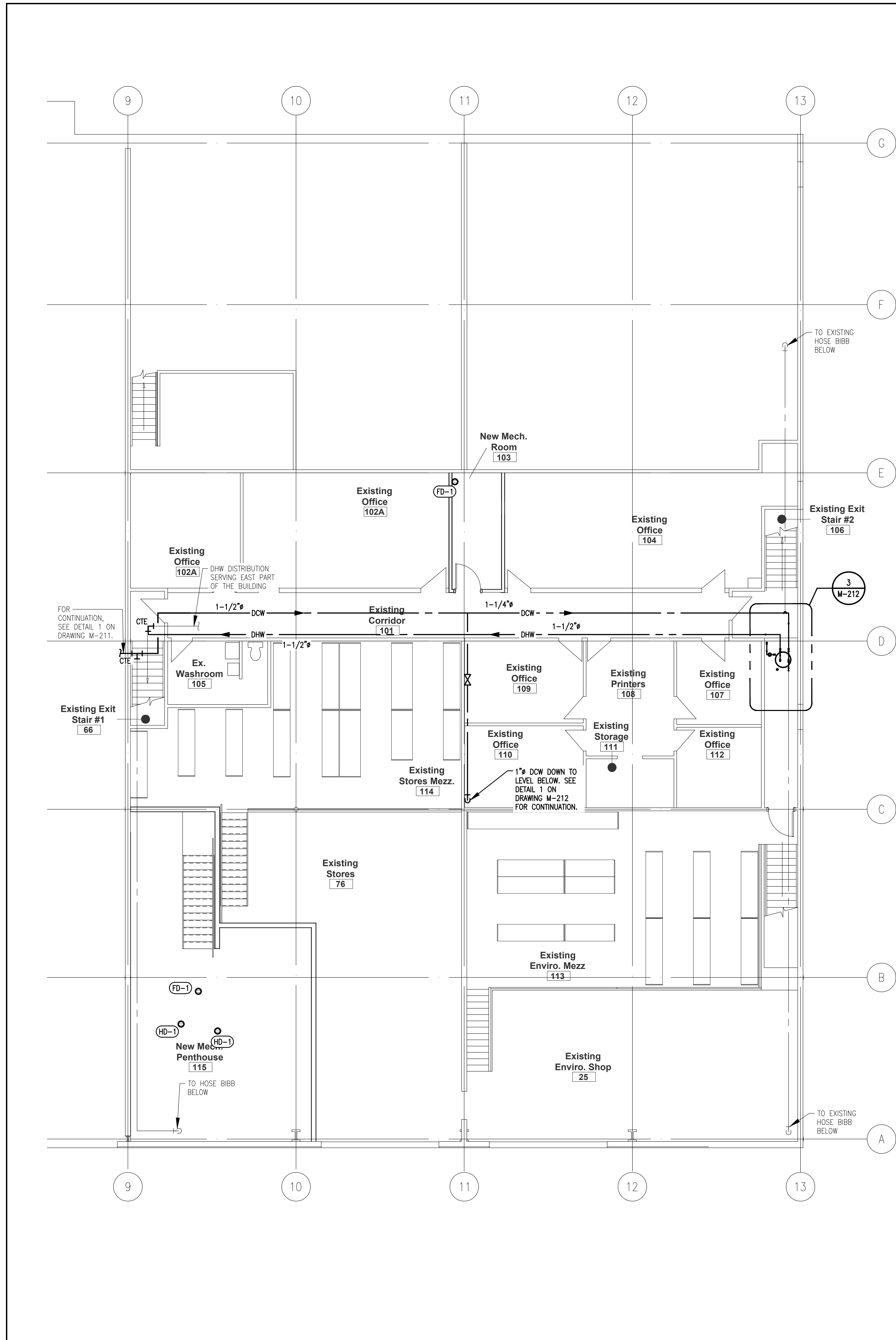
PLOT DATE: May 7, 2021

ORIGINAL SHEET SIZE: ARCH D

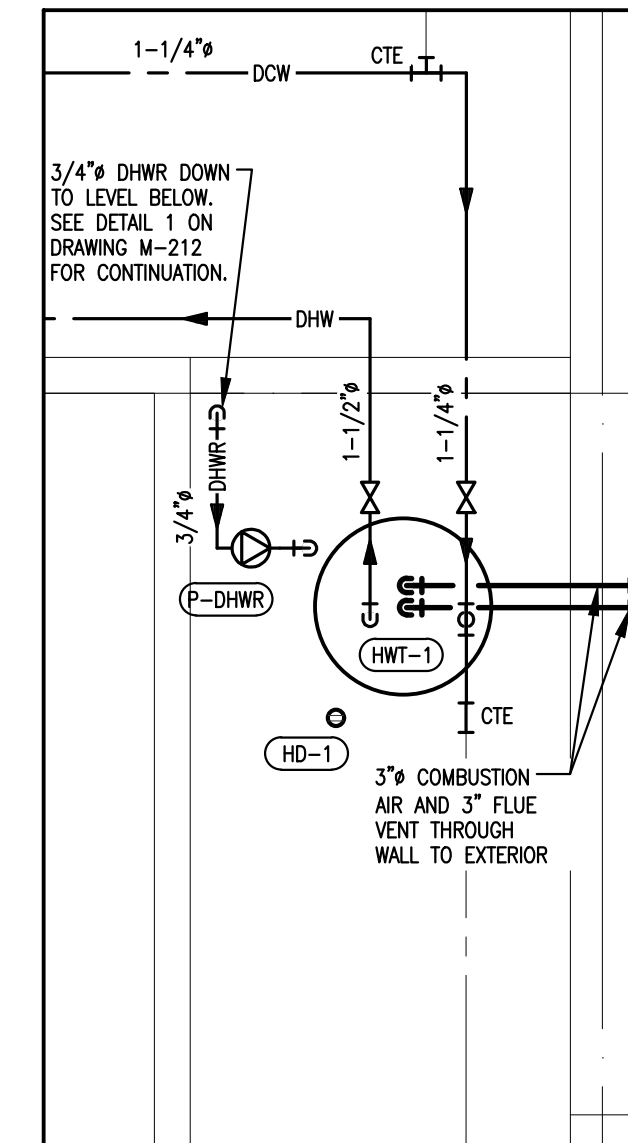
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1 PLUMBING EAST GROUND FLOOR - REVISED
 M-212 SCALE: 1/8" = 1'-0"

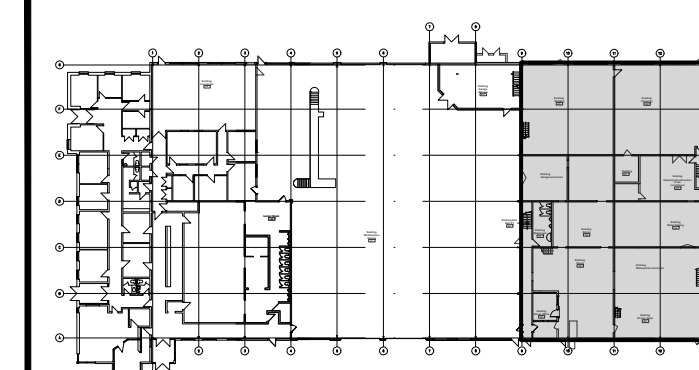


2 PLUMBING EAST MEZZANINE - REVISED
 M-212 SCALE: 1/8" = 1'-0"



3 PART PLAN
 M-212 SCALE: 1/2" = 1'-0"

GENERAL NOTES

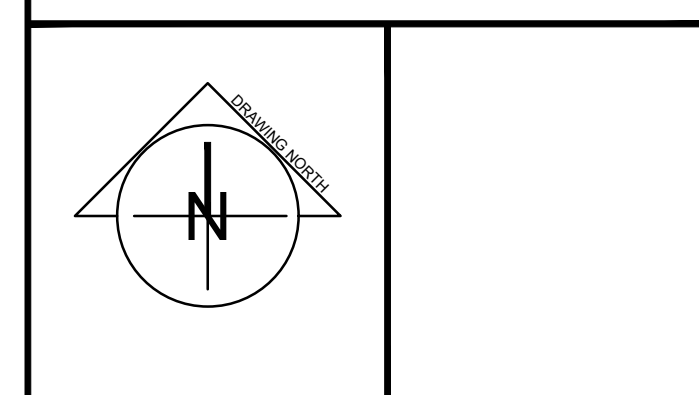


KEY PLAN

MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
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START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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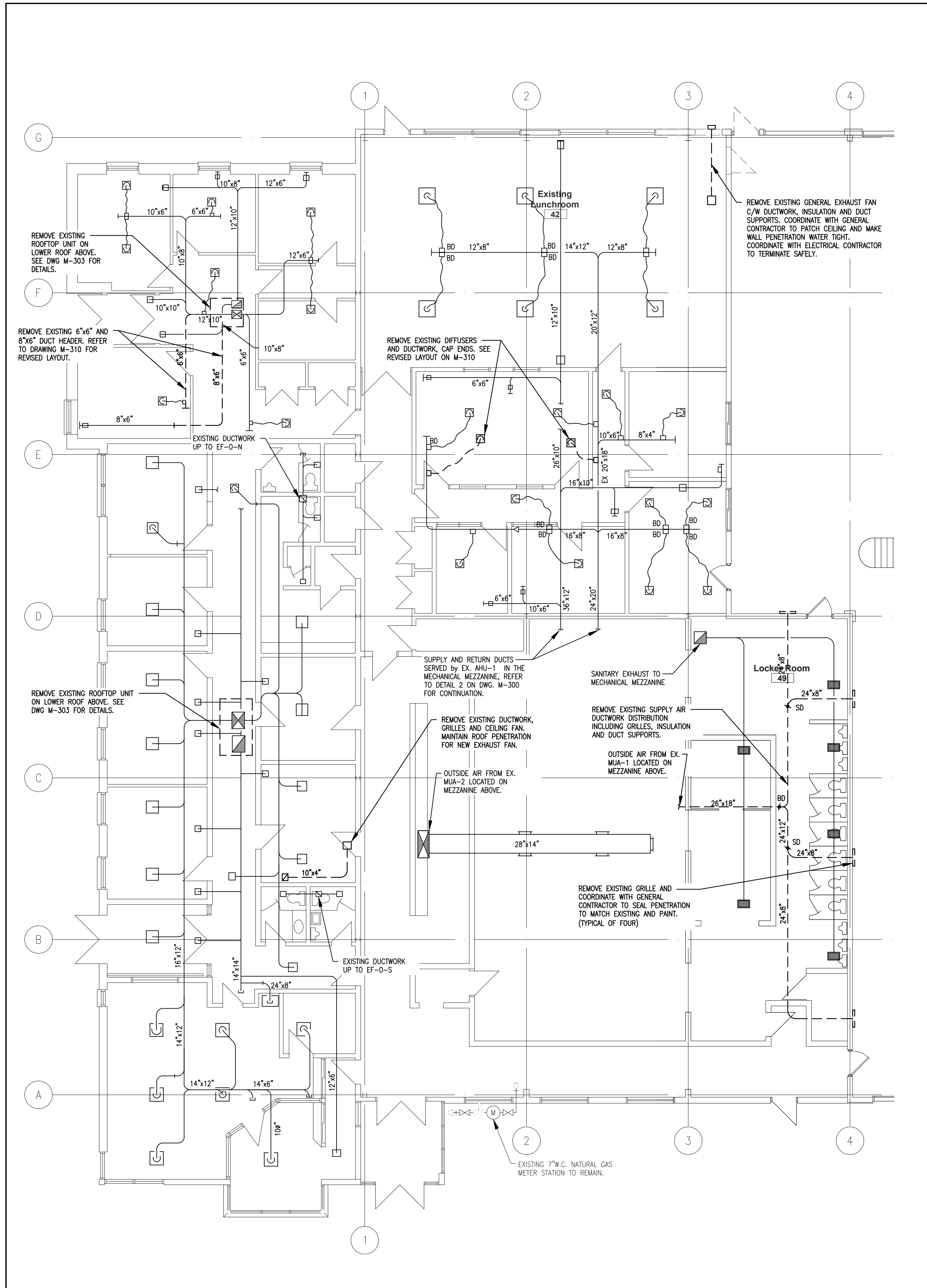
DRAWING TITLE:
REVISED PLUMBING EAST GROUND FLOOR AND MEZZANINE

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-212

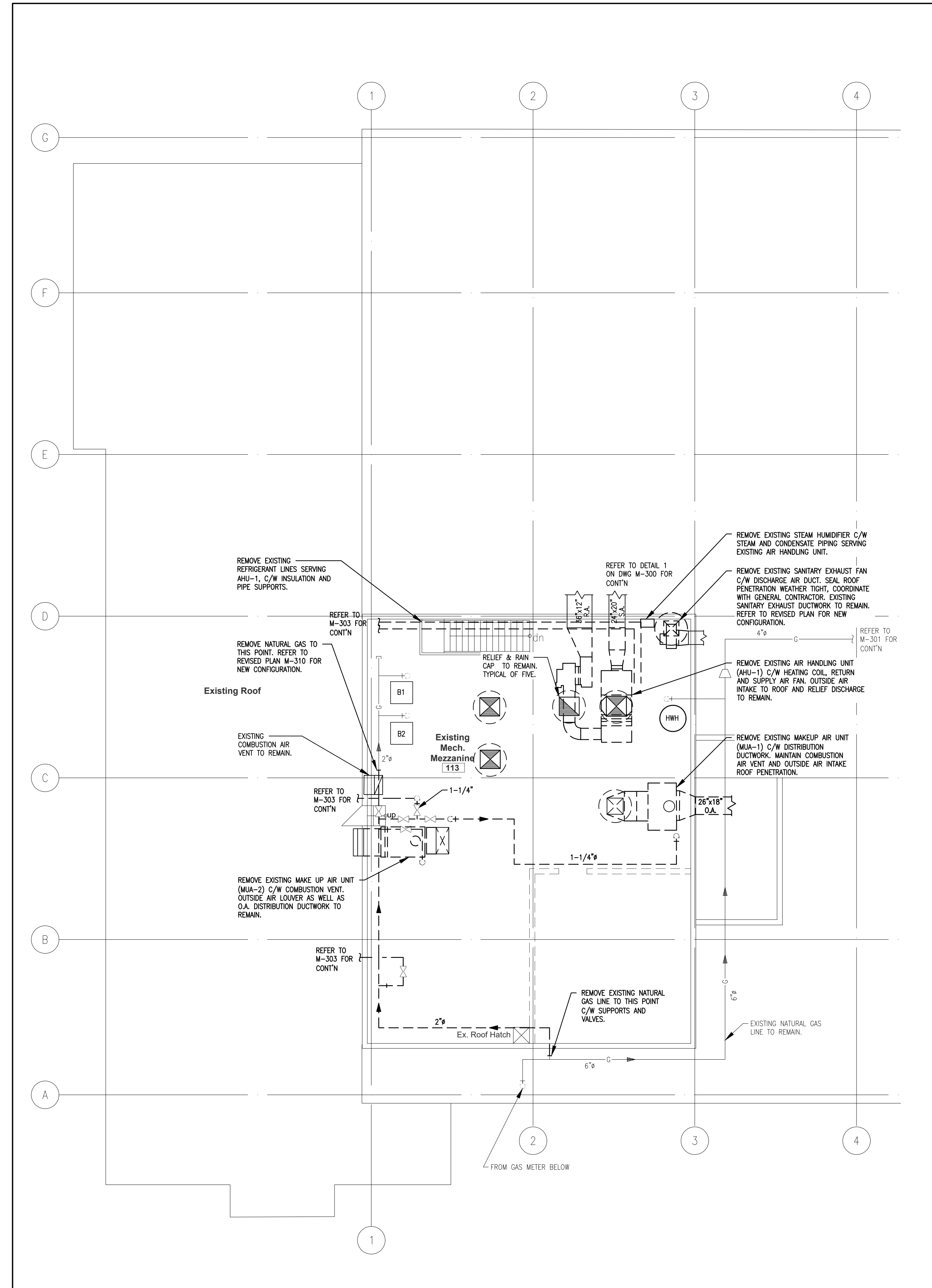
PLOT DATE: May 7, 2021

ORIGINAL SHEET SIZE: ARCH D

15" 10" 5" 0

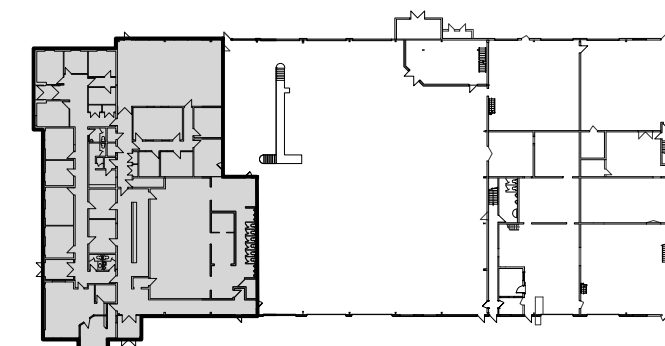


1 HVAC WEST GROUND FLOOR - DEMOLITION
M-300 SCALE: 1/8" = 1'-0"



2 HVAC MECHANICAL MEZZANINE - DEMOLITION
M-300 SCALE: 1/8" = 1'-0"

GENERAL NOTES



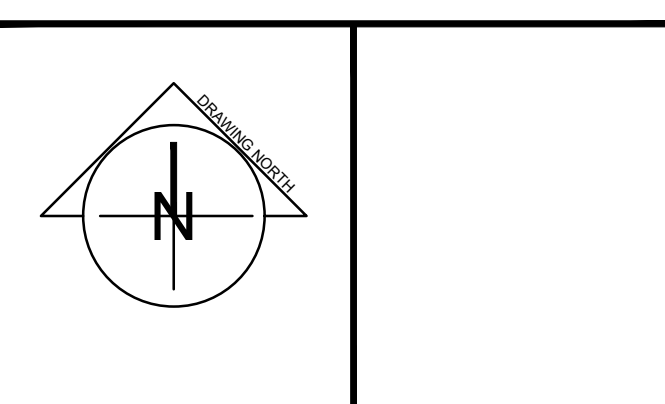
KEY PLAN

SCALE: 1:1000

MECHANICAL DRAWING FOR REFERENCE. GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
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PROJECT:

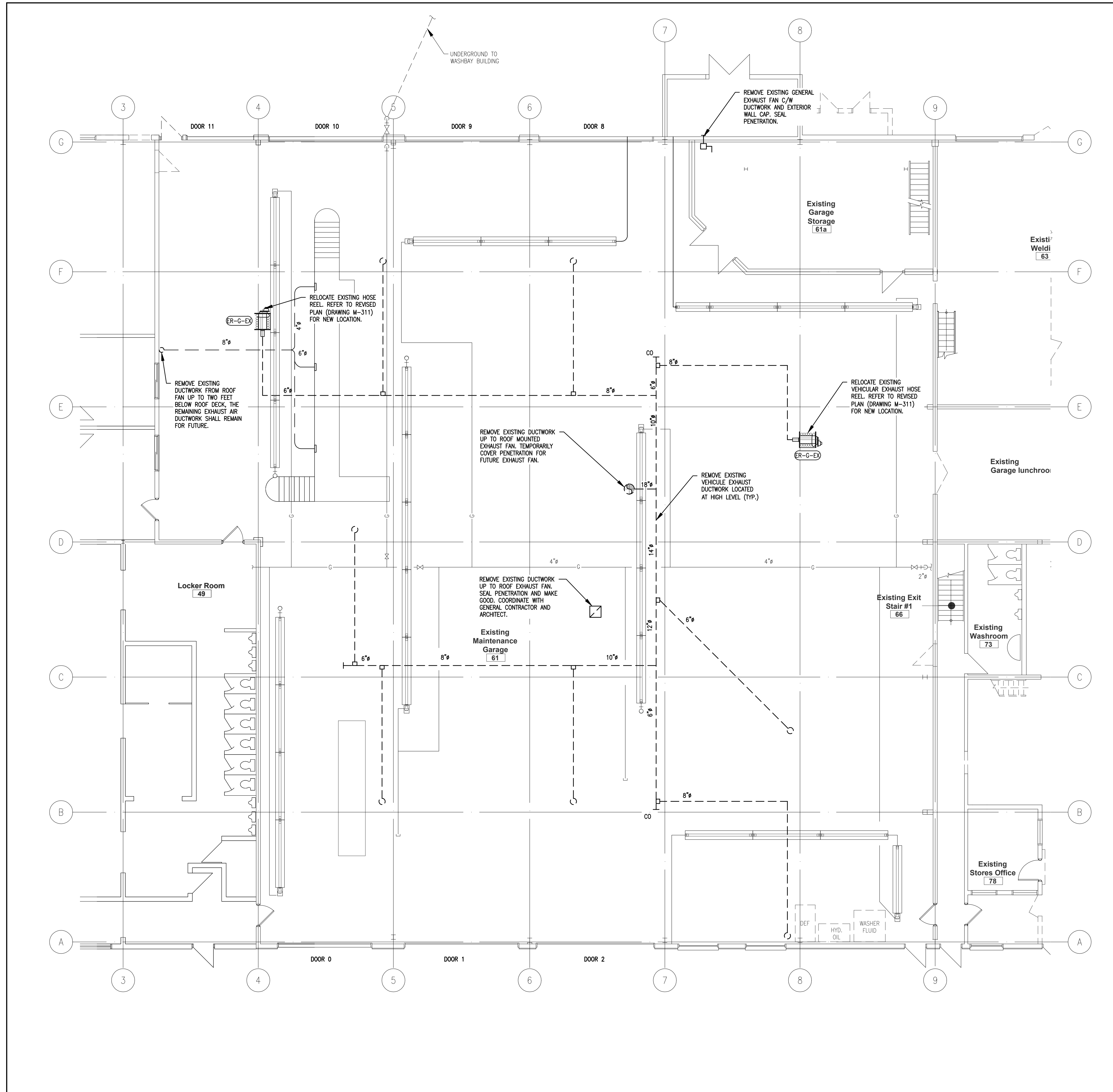
NIAGARA FALLS
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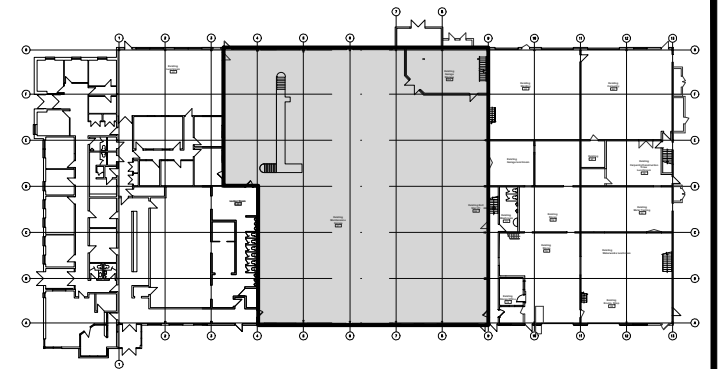
DRAWING TITLE:

DEMOLITION HVAC
GROUND FLOOR AND
MECHANICAL MEZZANINE

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-300



GENERAL NOTES

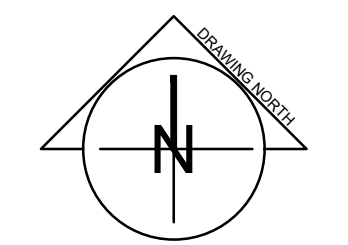


KEY PLAN

MECHANICAL DRAWING FOR REFERENCE. GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

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START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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DRAWING TITLE:

DEMOLITION HVAC SERVICE CENTRE

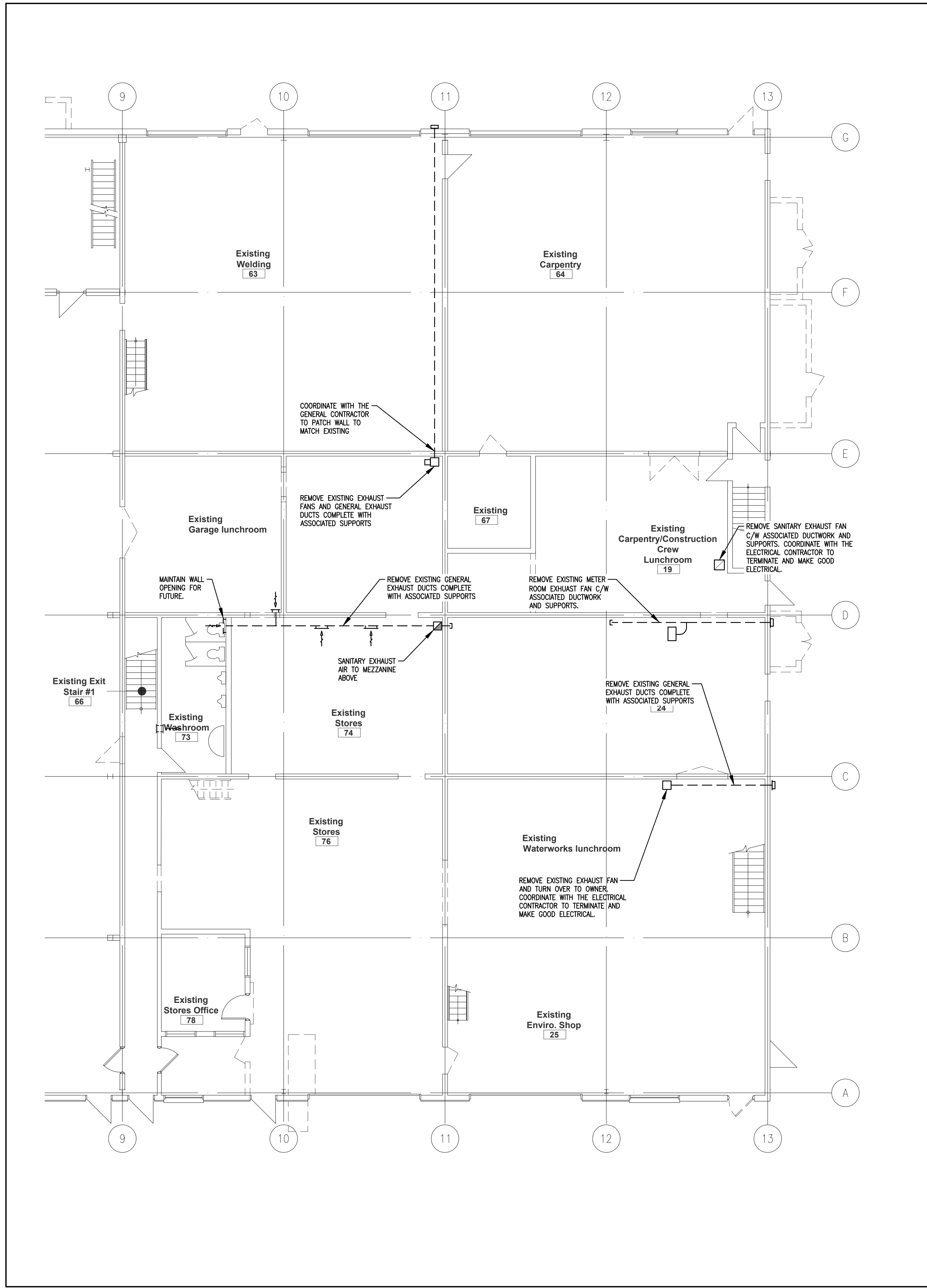
SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-301

1 HVAC SERVICE CENTRE - DEMOLITION
 M-301 SCALE: 1/8" = 1'-0"

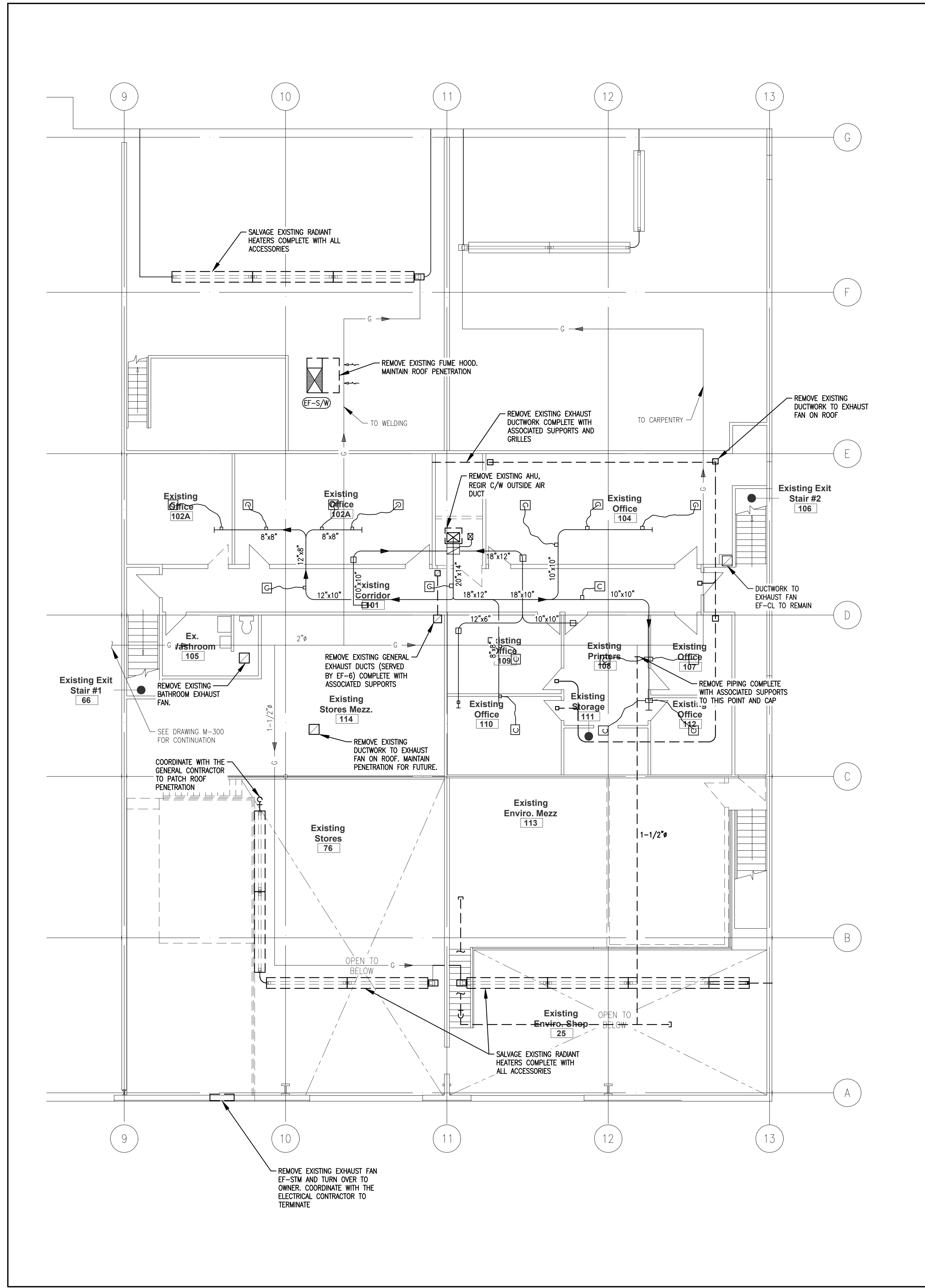
PLOT DATE: May 7, 2021

ORIGINAL SHEET SIZE: ARCH D

15" 10" 5" 0

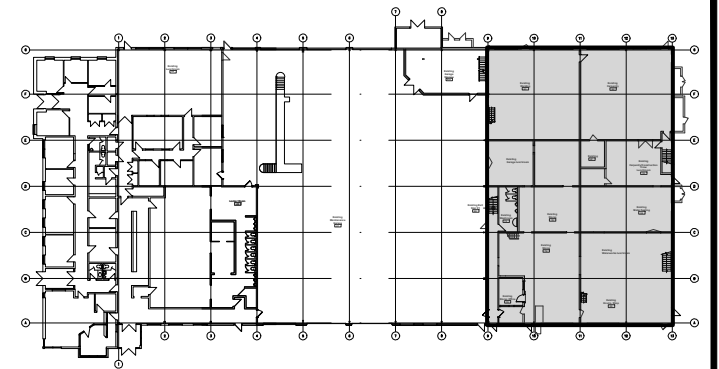


1 HVAC EAST GROUND FLOOR - DEMOLITION
 M-302 SCALE: 1/8" = 1'-0"



2 HVAC EAST MEZZANINE - DEMOLITION
 M-302 SCALE: 1/8" = 1'-0"

GENERAL NOTES

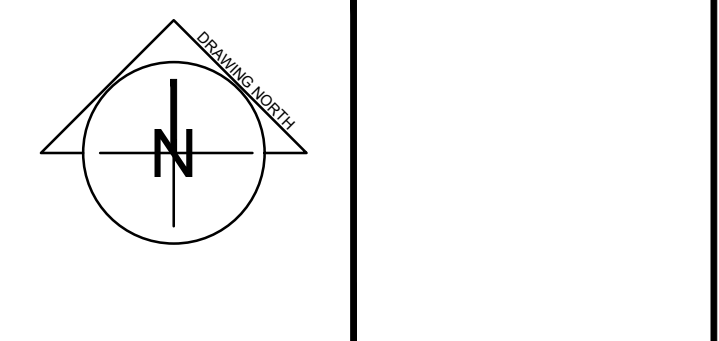


KEY PLAN

- MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR CONSTRUCTION	MAY 07, 2021	P.G.
3	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
2	RE-ISSUED FOR PERMIT	DEC. 03, 2020	P.G.
1	RE-ISSUED FOR PERMIT	NOV. 06, 2020	P.G.
0	ISSUED FOR PERMIT	SEPT. 4, 2020	P.G.

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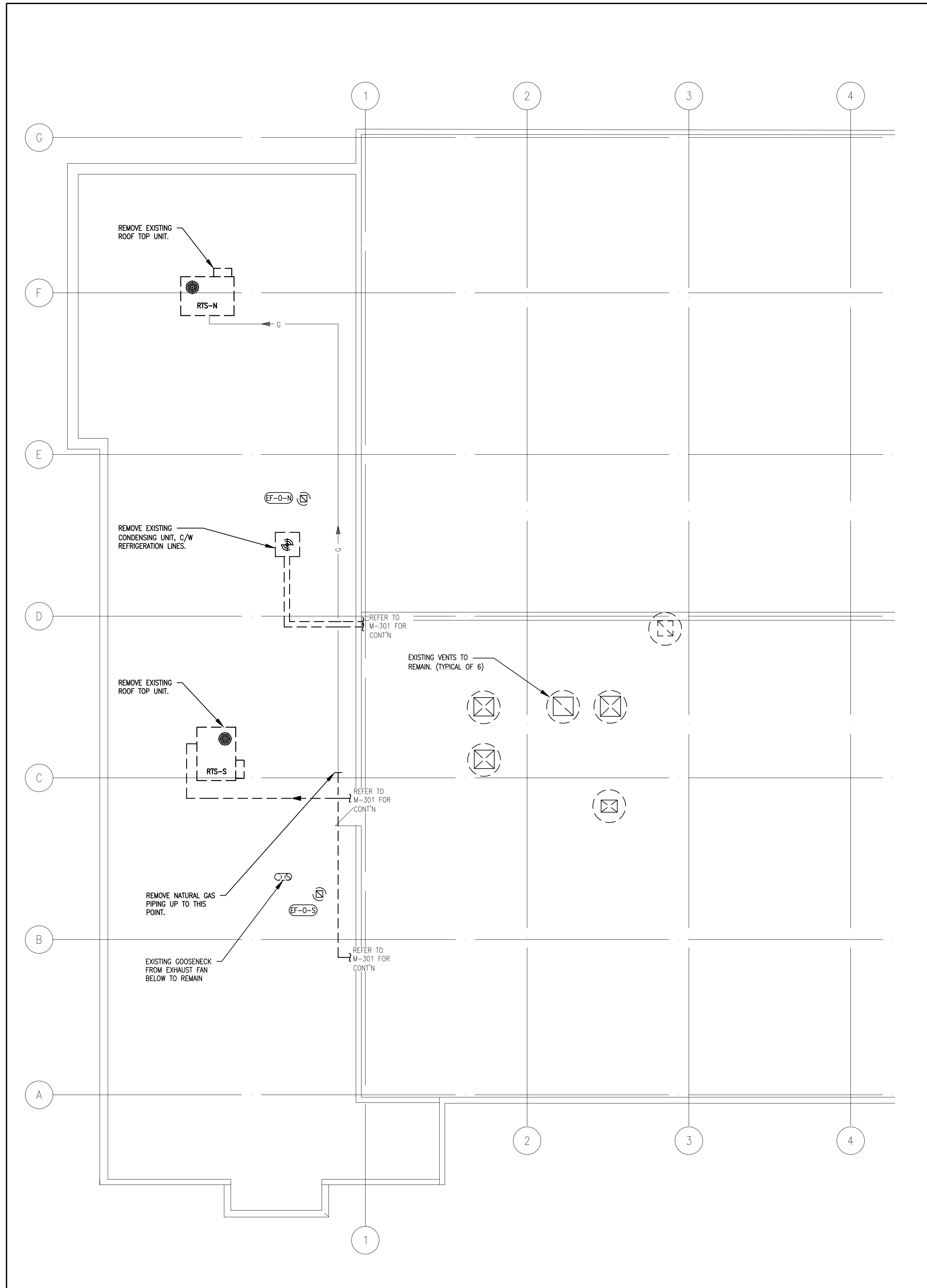
PROJECT:
 NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
----------------------------------	--------------------------	-----------------------------

DRAWING TITLE:
 DEMOLITION HVAC EAST GROUND FLOOR AND MEZZANINE

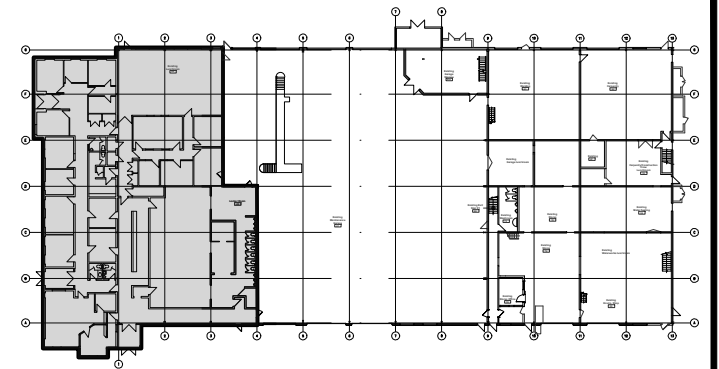
SCALE: AS NOTED	DRAWING No.: M-302
PROJECT: 20-201-010	

PLOT DATE: May 7, 2021



1 HVAC WEST ROOF PLAN - DEMOLITION
 M-303 SCALE: 1/8" = 1'-0"

GENERAL NOTES

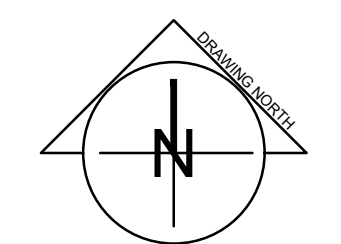


KEY PLAN

- MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR CONSTRUCTION	MAY 07, 2021	P.G.
3	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
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0	ISSUED FOR PERMIT	SEPT. 4, 2020	P.G.

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PROJECT:

**NIAGARA FALLS
 SERVICE CENTRE
 IMPROVEMENTS**
 3200 STANLEY AVENUE,
 NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
---------------------------	-------------------	----------------------

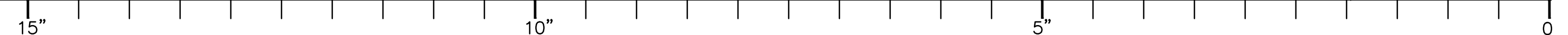
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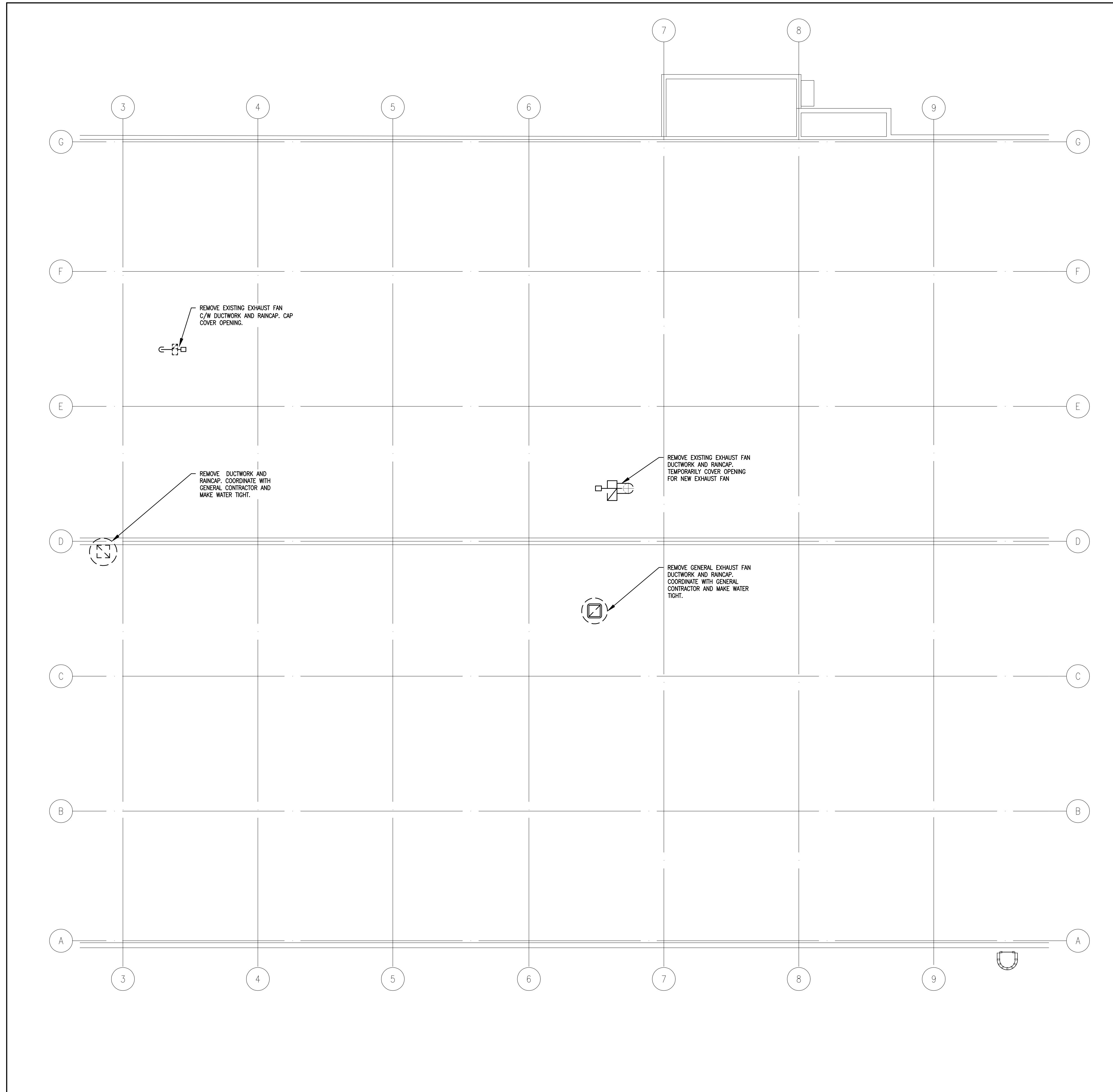
**DEMOLITION HVAC
 WEST ROOF**

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-303

PLOT DATE: May 7, 2021

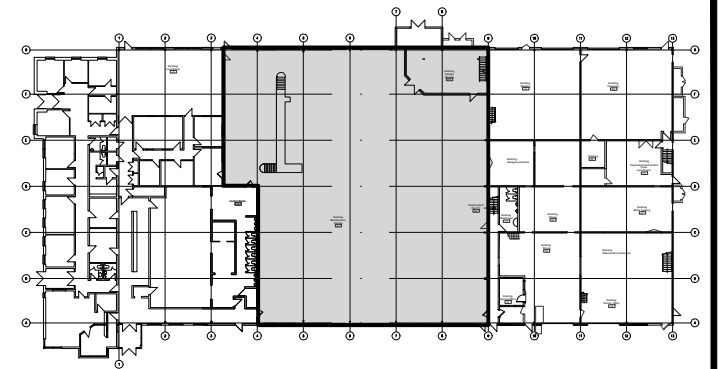
ORIGINAL SHEET SIZE: ARCH D





1 HVAC CENTRAL ROOF PLAN - DEMOLITION
 M-304 SCALE: 1/8" = 1'-0"

GENERAL NOTES

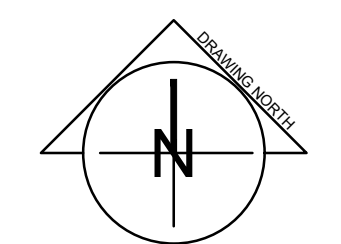


KEY PLAN

- MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR CONSTRUCTION	MAY 07, 2021	P.G.
3	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
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PROJECT:

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 3200 STANLEY AVENUE,
 NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
---------------------------	-------------------	----------------------

DRAWING TITLE:

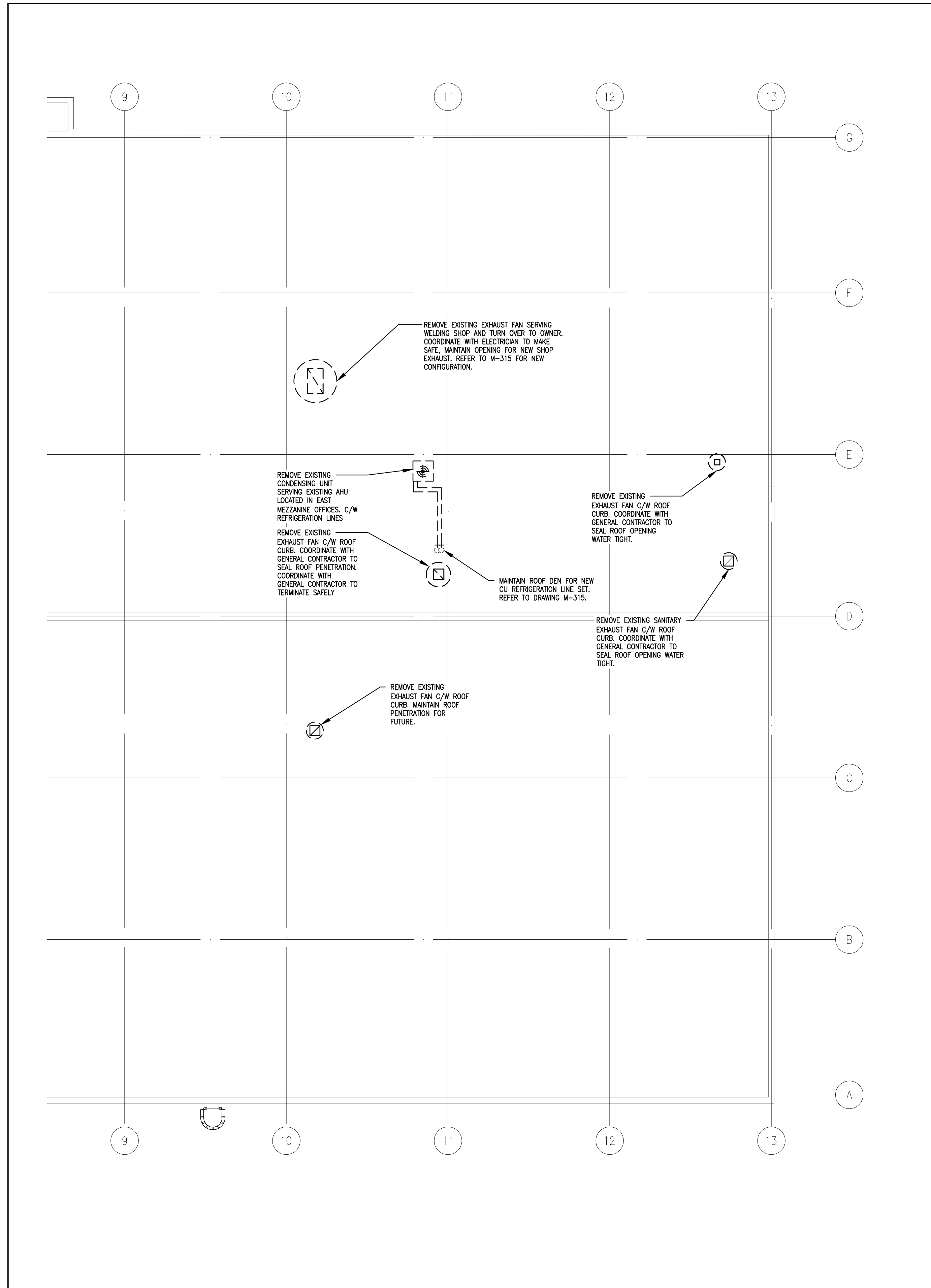
**DEMOLITION
 HVAC CENTRAL
 ROOF**

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-304

PLOT DATE: May 7, 2021

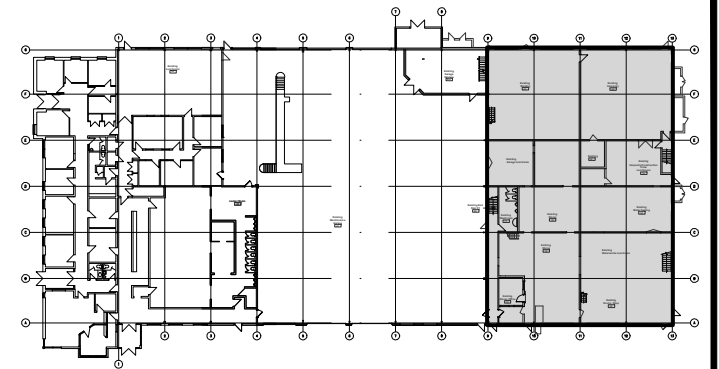
ORIGINAL SHEET SIZE: ARCH D

15" 10" 5" 0



1 HVAC EAST ROOF PLAN - DEMOLITION
M-305 SCALE: 1/8" = 1'-0"

GENERAL NOTES

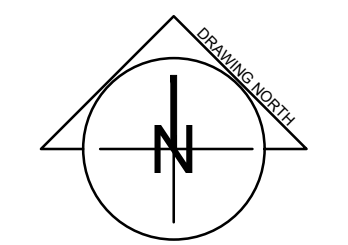


KEY PLAN

- MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR CONSTRUCTION	MAY 07, 2021	P.G.
3	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
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PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24
 DRAWN BY: M.B.
 DESIGNED BY: P.G.

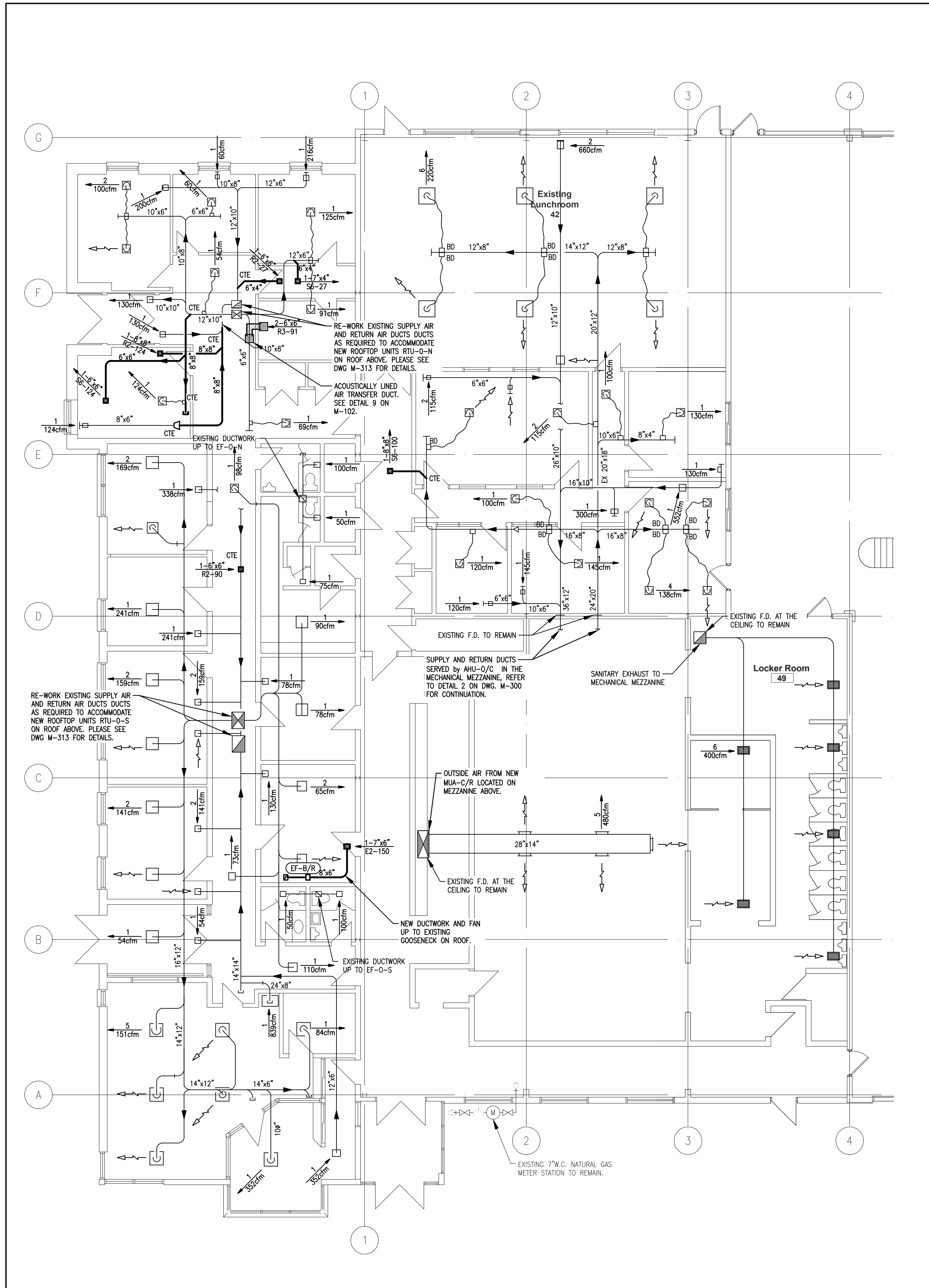
DRAWING TITLE:
DEMOLITION HVAC EAST ROOF

SCALE: AS NOTED
 PROJECT: 20-201-010
 DRAWING No.: **M-305**

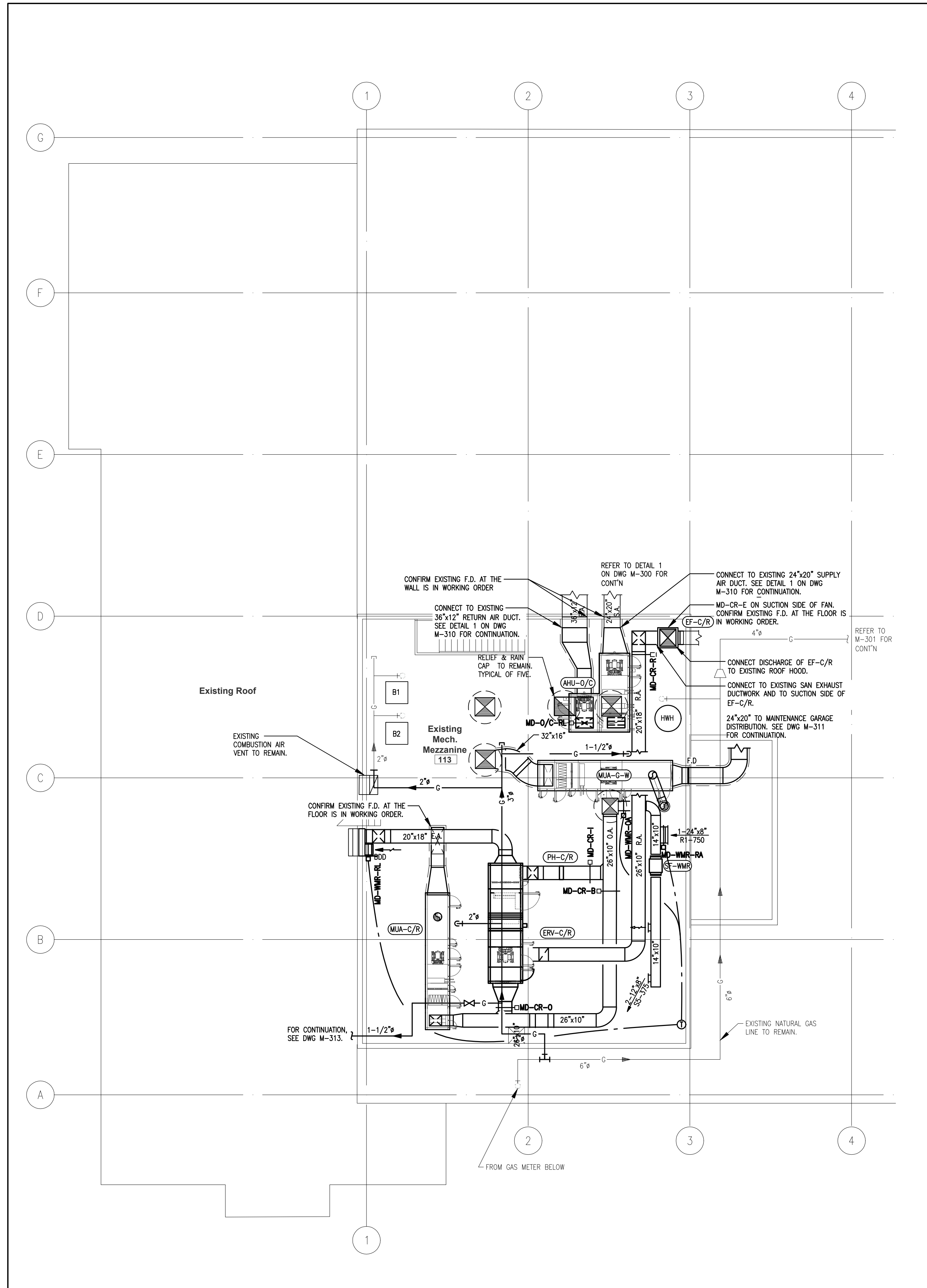
PLOT DATE: May 7, 2021

ORIGINAL SHEET SIZE: ARCH D

15" 10" 5" 0

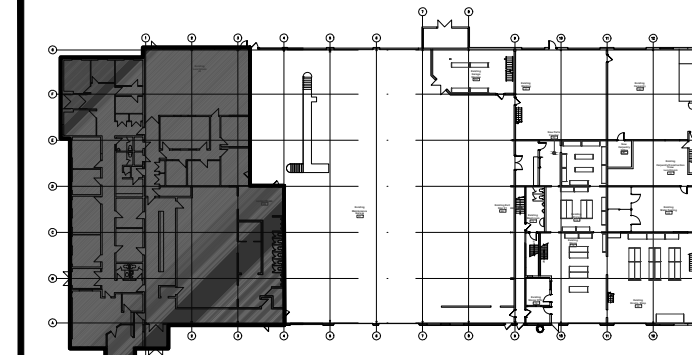


1 HVAC GROUND FLOOR WEST - REVISED
M-310 SCALE: 1/8" = 1'-0"



2 HVAC MECHANICAL MEZZANINE AND ROOF - REVISED
M-310 SCALE: 1/8" = 1'-0"

GENERAL NOTES



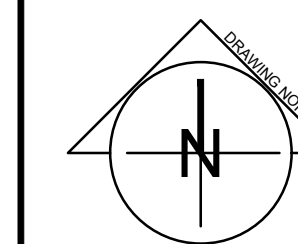
KEY PLAN

SCALE: 1:1000

MECHANICAL DRAWING FOR REFERENCE. GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR TENDER	FEB 26, 2021	P.G.
3	ISSUED FOR CITY COMMENT	JAN 26, 2020	P.G.
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PROJECT:

NIAGARA FALLS
SERVICE CENTRE
IMPROVEMENTS
3200 STANLEY AVENUE,
NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24
DRAWN BY: M.B.
DESIGNED BY: P.G.

DRAWING TITLE:

REVISED HVAC
GROUND FLOOR AND
MECHANICAL MEZZANINE

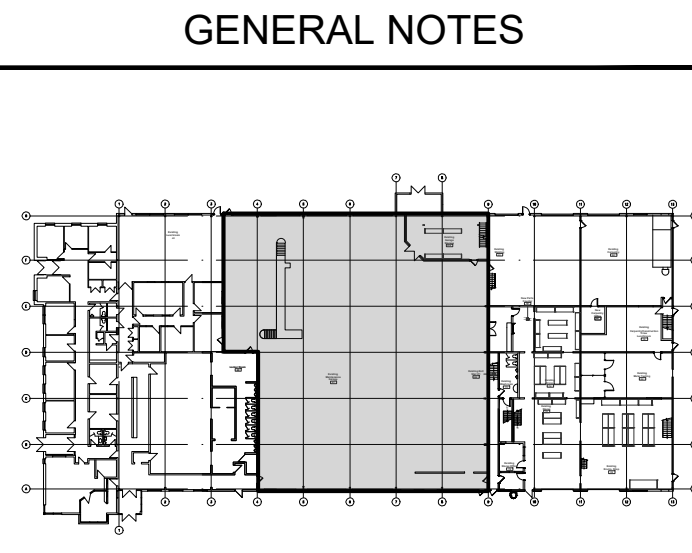
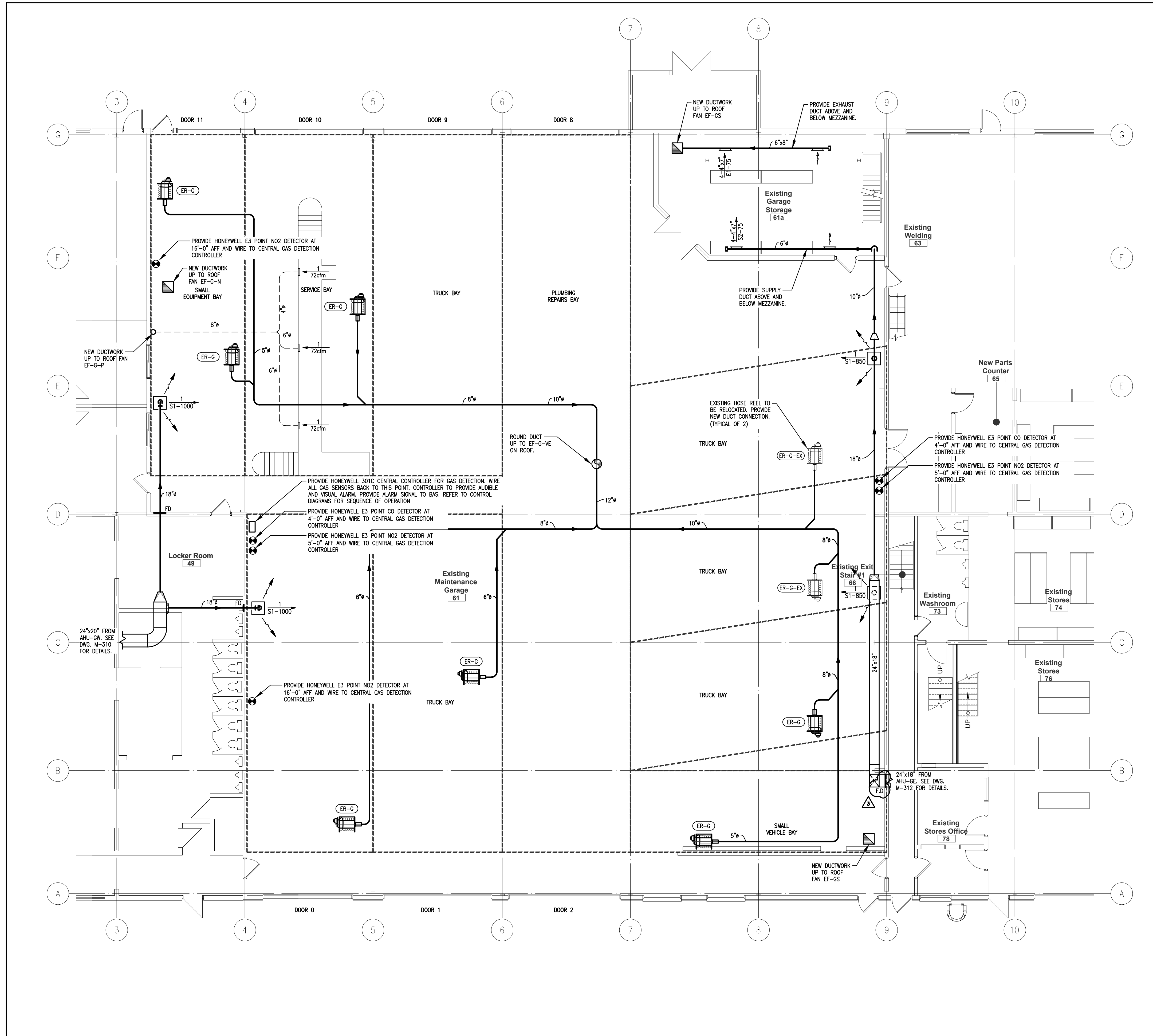
SCALE:
AS NOTED
PROJECT:
20-201-010

DRAWING No.:
M-310

PLOT DATE: May 7, 2021

ORIGINAL SHEET SIZE: ARCH D

15" 10" 5" 0

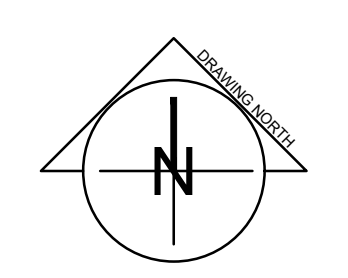


KEY PLAN

MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
3	ISSUED FOR CITY COMMENT	JAN. 26, 2020	P.G.
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PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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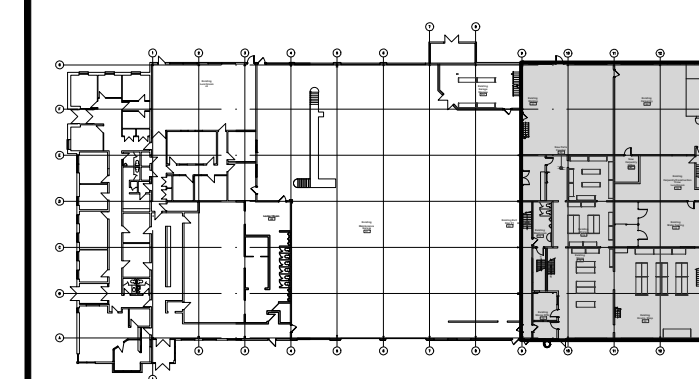
DRAWING TITLE:
REVISED HVAC SERVICE CENTRE

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-311

1 HVAC SERVICE CENTRE - REVISED
 M-311 SCALE: 1/8" = 1'-0"

PLOT DATE: May 7, 2021

GENERAL NOTES

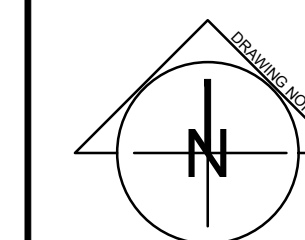


KEY PLAN

MECHANICAL DRAWING FOR REFERENCE. GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
3	ISSUED FOR CITY COMMENT	JAN. 26, 2020	P.G.
2	RE-ISSUED FOR PERMIT	DEC. 03, 2020	P.G.
1	RE-ISSUED FOR PERMIT	NOV. 06, 2020	P.G.
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PROJECT:

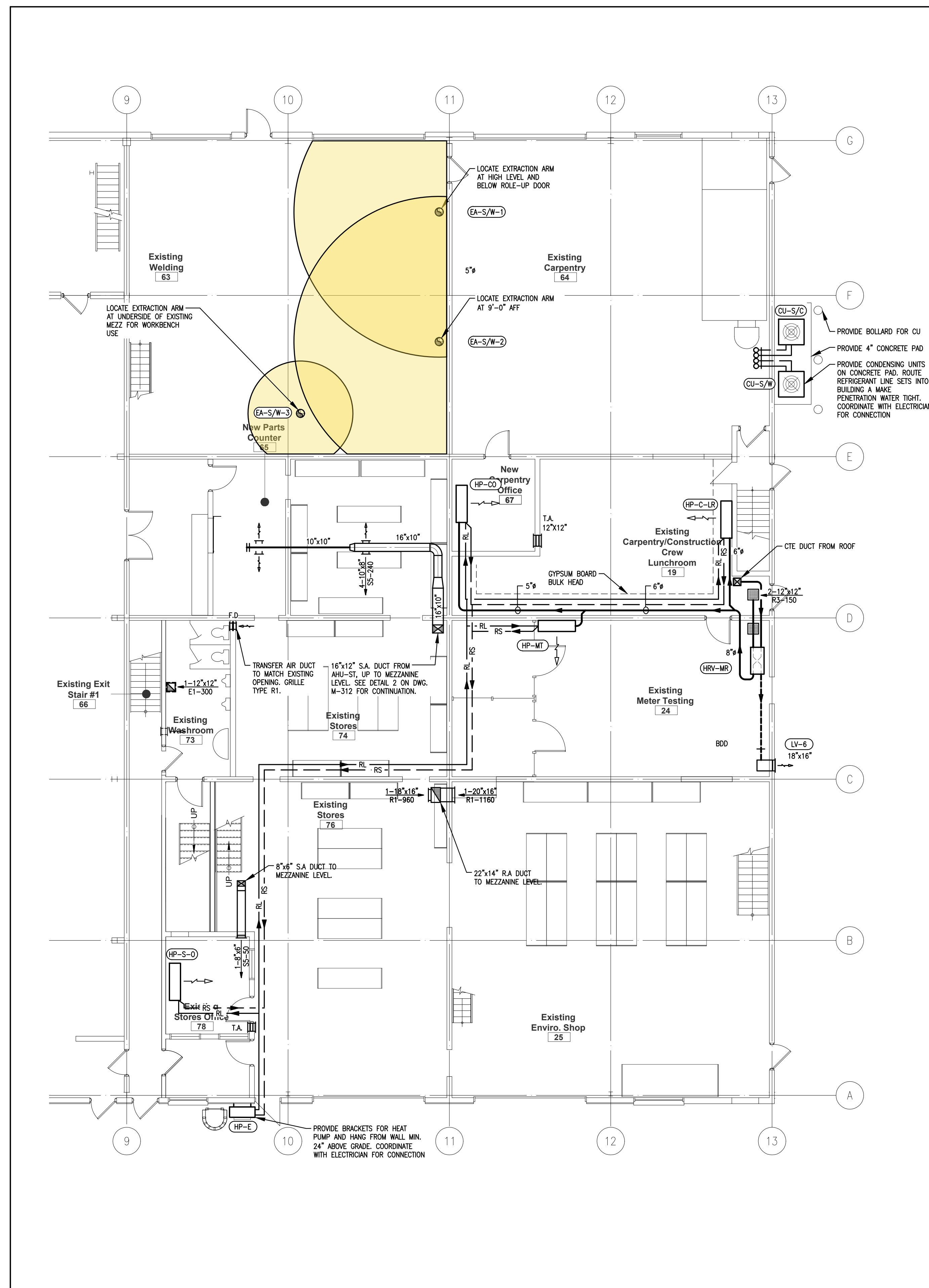
NIAGARA FALLS
SERVICE CENTRE
IMPROVEMENTS

3200 STANLEY AVENUE,
NIAGARA FALLS, ONTARIO

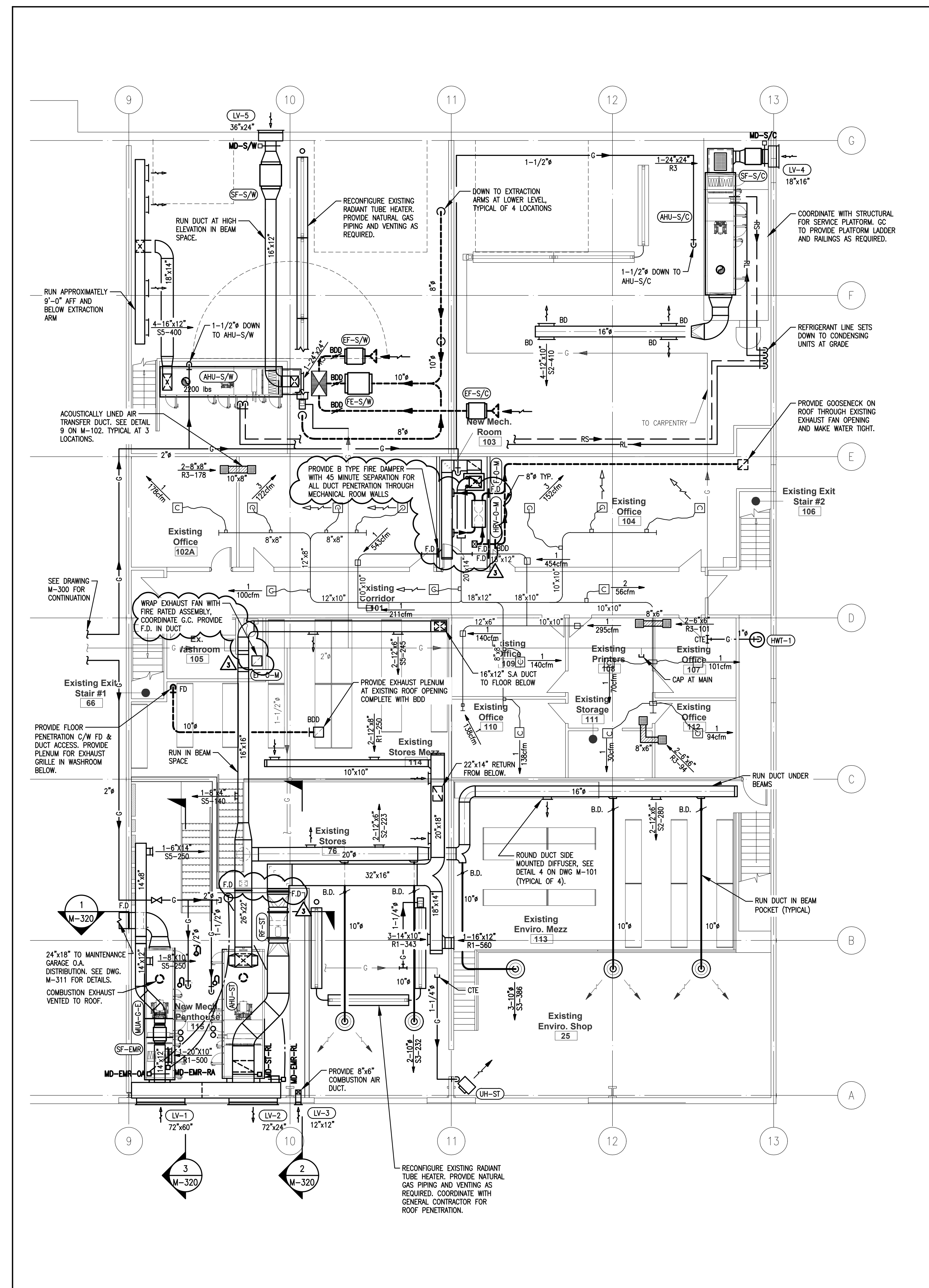
START DATE: 2020 03 24
DRAWN BY: M.B.
DESIGNED BY: P.G.

DRAWING TITLE:
REVISED HVAC EAST
GROUND FLOOR AND
MEZZANINE

SCALE: AS NOTED
PROJECT: 20-201-010
DRAWING No.:
M-312



1 HVAC GROUND FLOOR EAST - REVISED
M-312 SCALE: 1/8" = 1'-0"

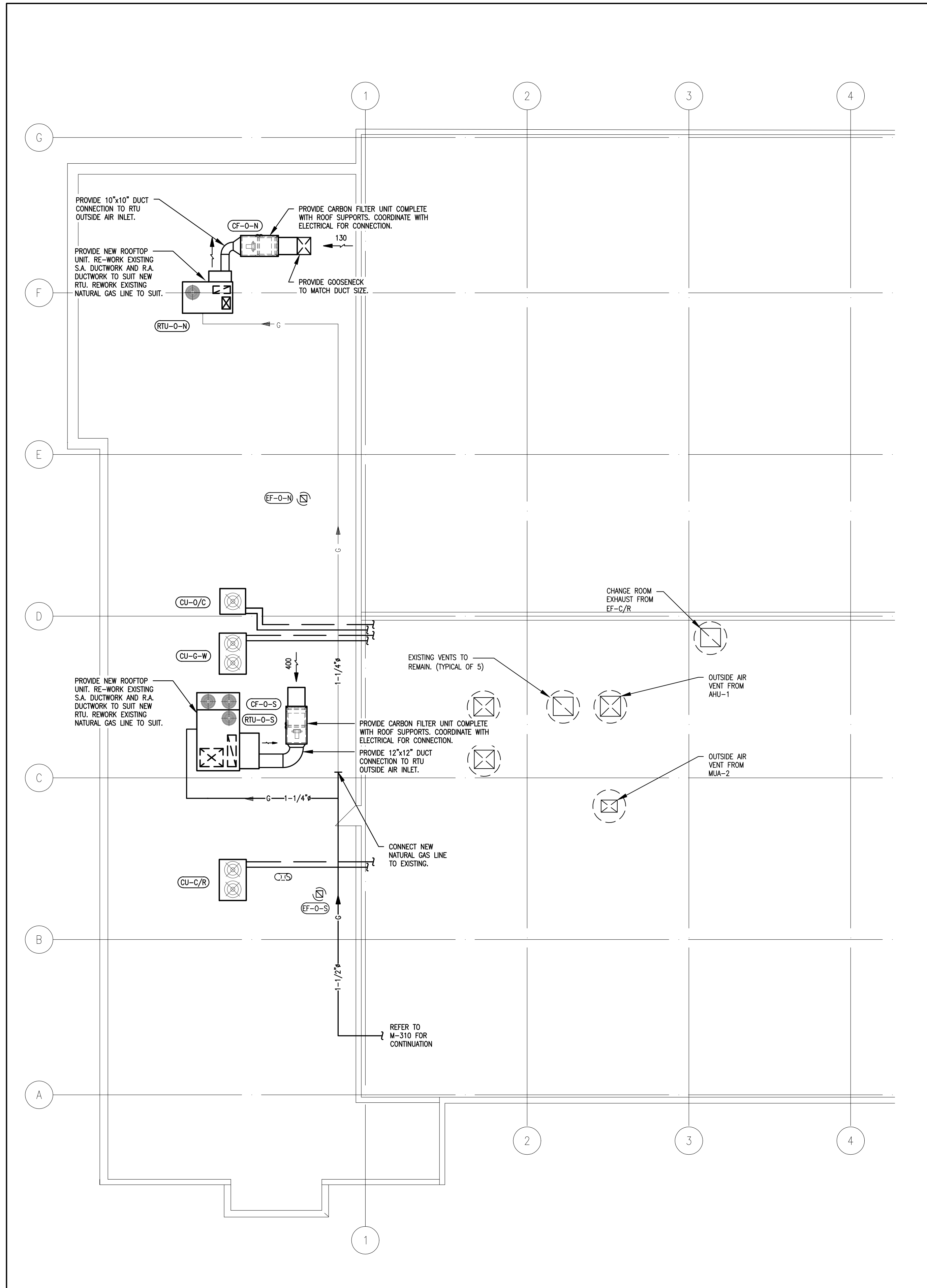


2 HVAC EAST MEZZANINE - REVISED
M-312 SCALE: 1/8" = 1'-0"

PLOT DATE: May 7, 2021

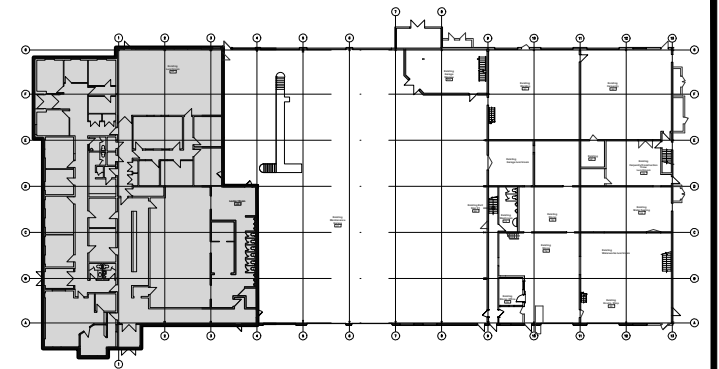
ORIGINAL SHEET SIZE: ARCH D

15" 10" 5" 0



1 HVAC ROOF WEST - REVISED
M-313 SCALE: 1/8" = 1'-0"

GENERAL NOTES

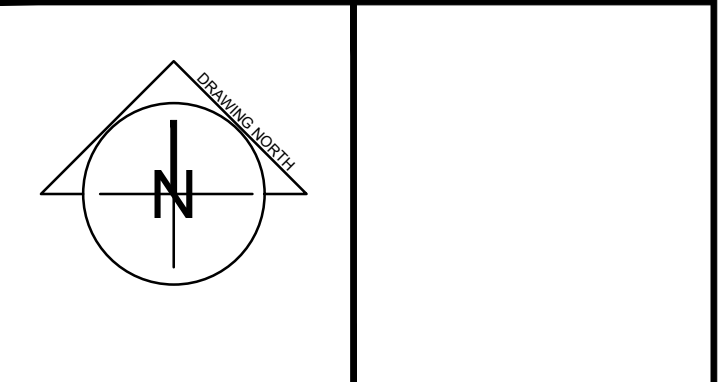


KEY PLAN

- MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR CONSTRUCTION	MAY 07, 2021	P.G.
3	ISSUED FOR TENDER	FEB. 26, 2021	P.G.
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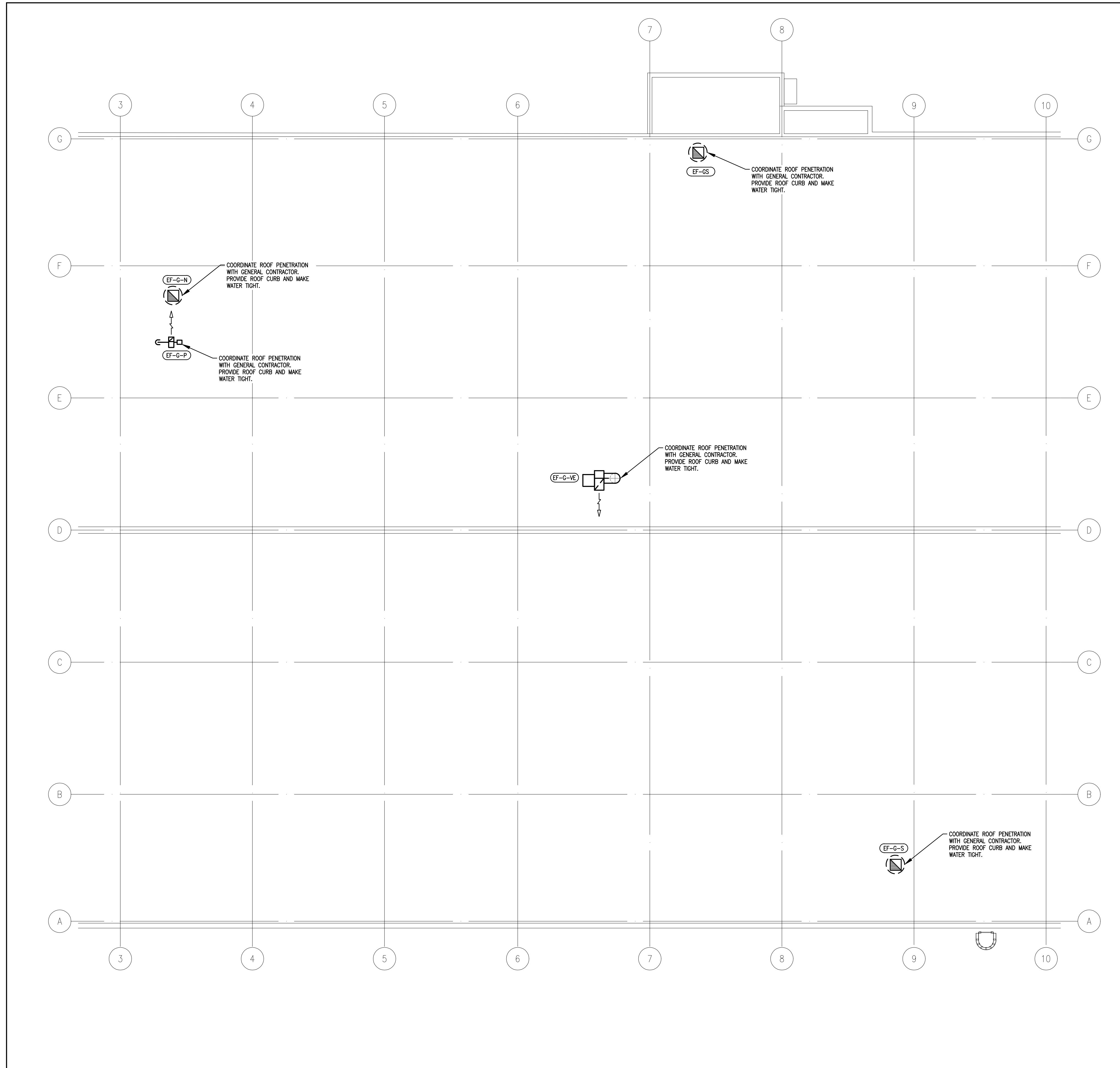
www.arcengineering.ca
contact@arcengineering.ca

PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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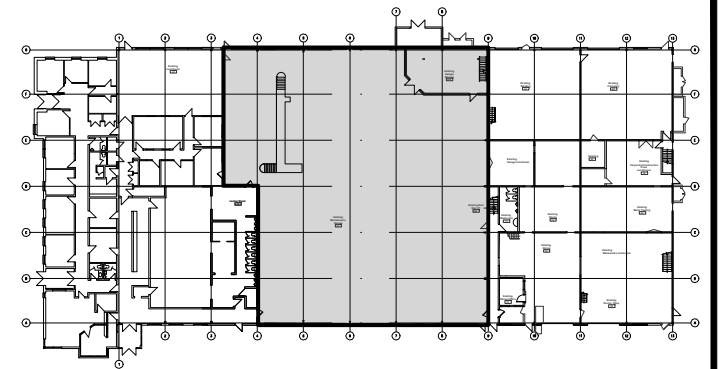
DRAWING TITLE:
HVAC REVISED WEST ROOF

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-313



1 HVAC ROOF CENTRAL - REVISED
 M-314 SCALE: 1/8" = 1'-0"

GENERAL NOTES

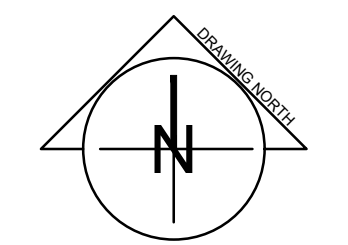


KEY PLAN

- MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

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PROJECT:

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 IMPROVEMENTS**
 3200 STANLEY AVENUE,
 NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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DRAWING TITLE:

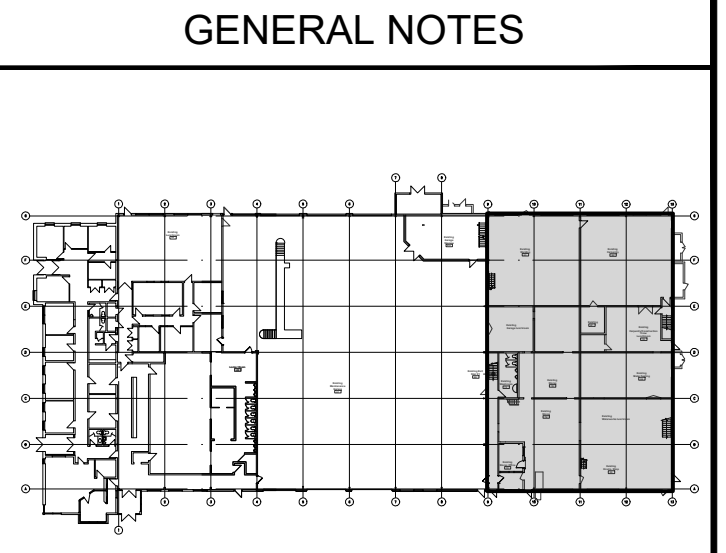
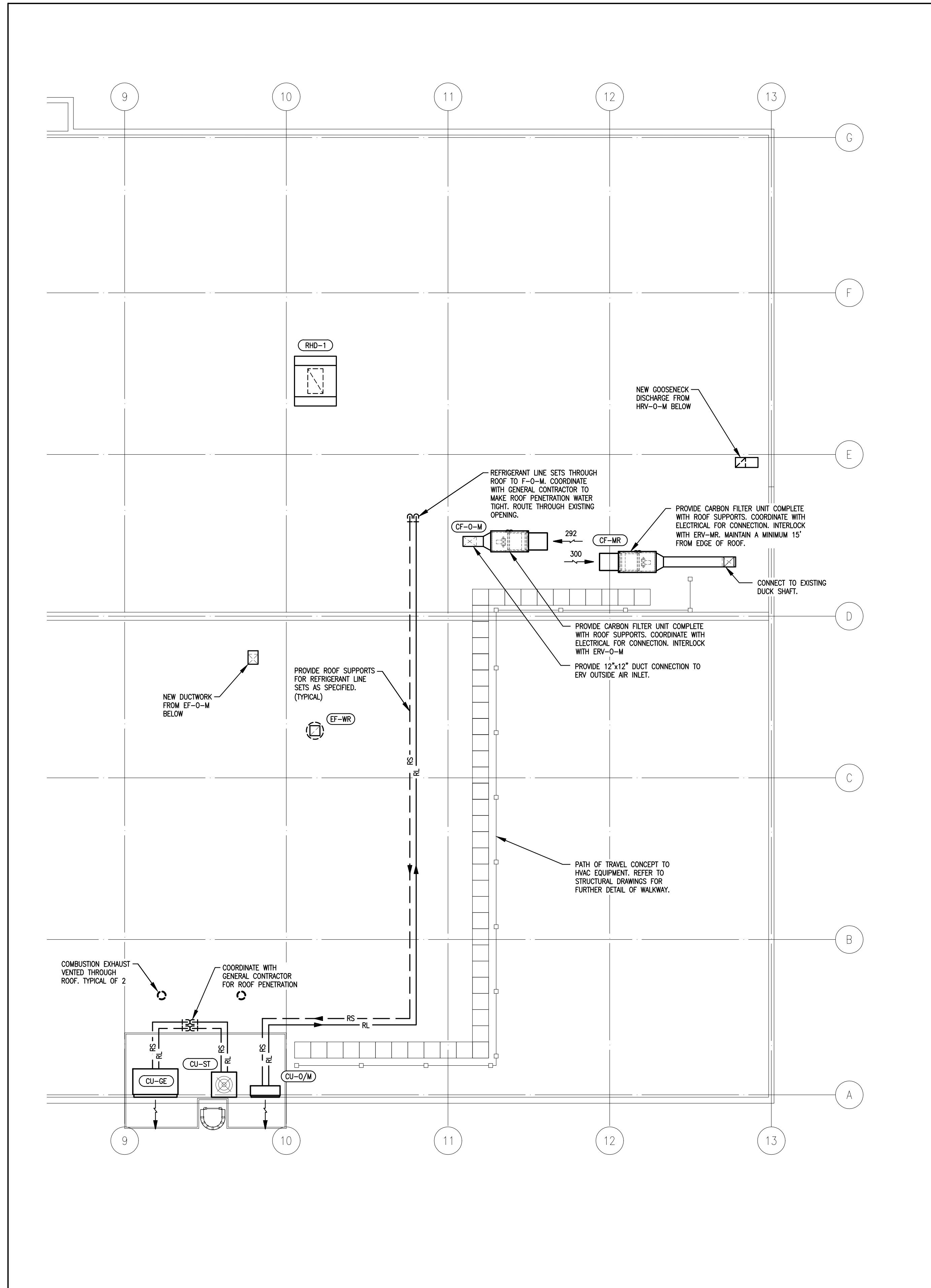
**HVAC ROOF
 CENTRAL REVISED**

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-314

PLOT DATE: May 7, 2021

ORIGINAL SHEET SIZE: ARCH D

15" 10" 5" 0

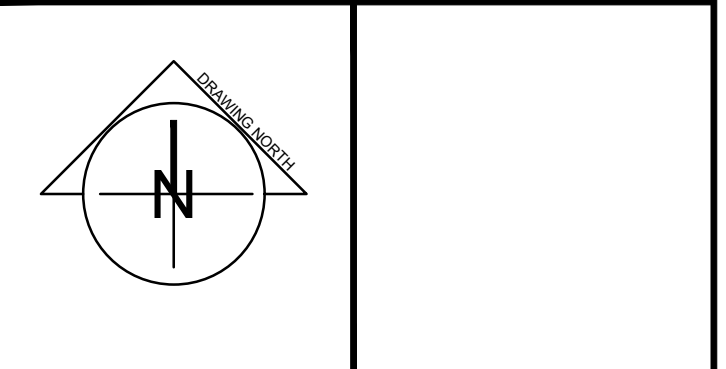


KEY PLAN

- MECHANICAL DRAWING FOR REFERENCE, GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
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PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

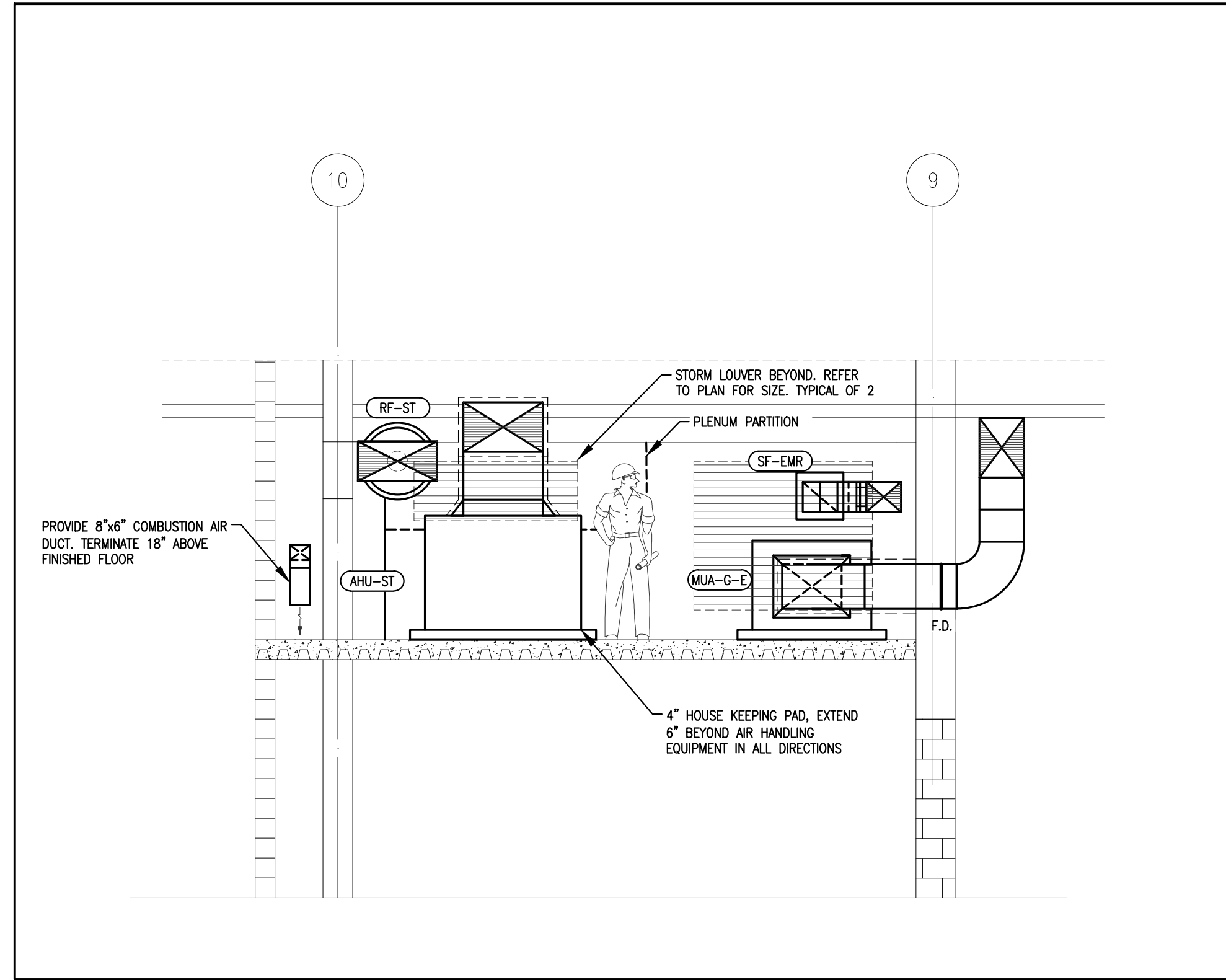
START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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DRAWING TITLE:
REVISED HVAC EAST ROOF

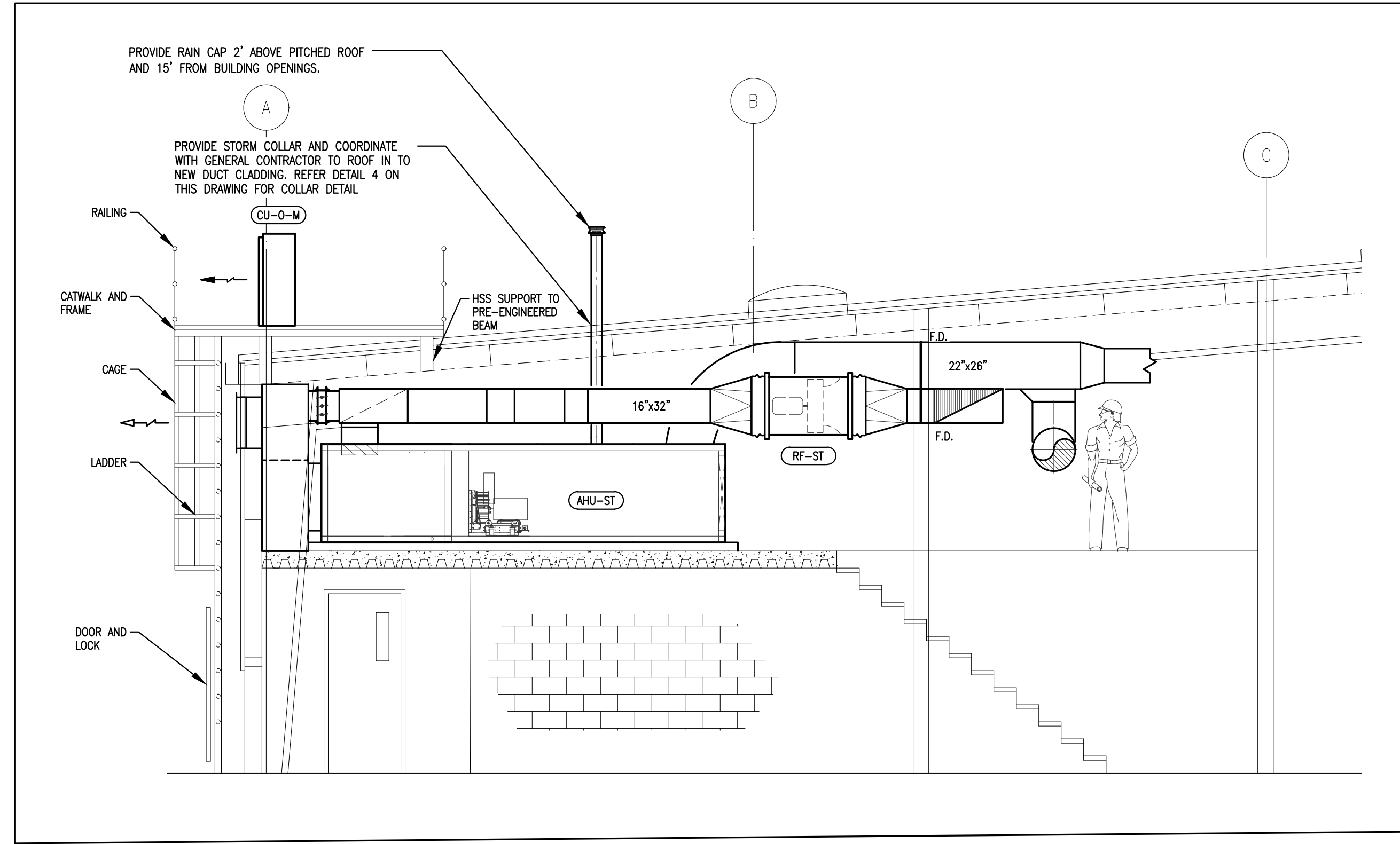
SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-315

1 HVAC EAST ROOF PLAN - REVISED
 M-305 SCALE: 1/8" = 1'-0"

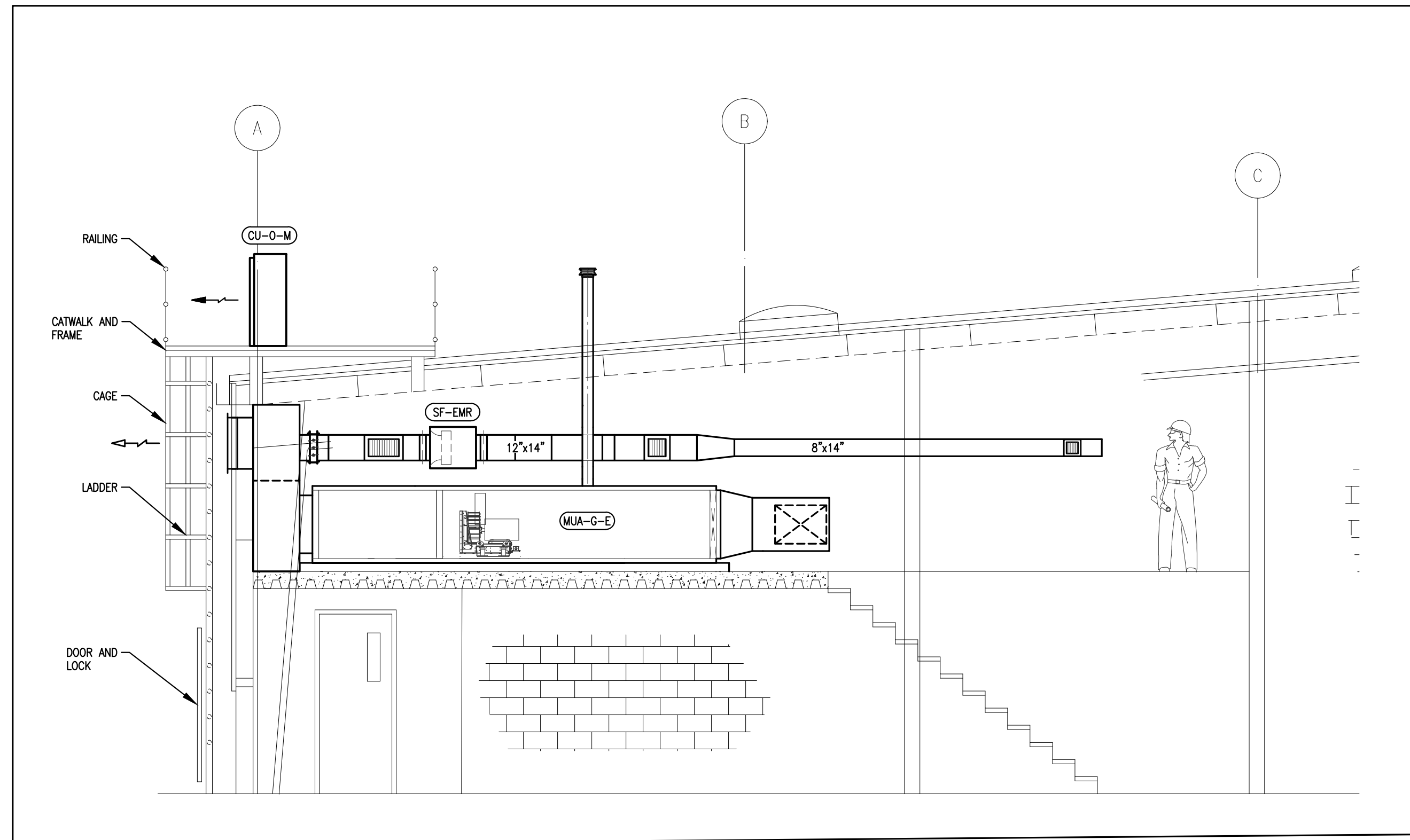
PLOT DATE: May 7, 2021



1 SECTION
M-320 SCALE: 1/4" = 1'-0"



2 SECTION
M-320 SCALE: 1/4" = 1'-0"



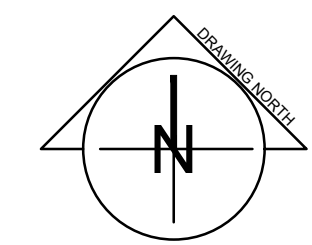
3 SECTION
M-320 SCALE: 1/4" = 1'-0"

GENERAL NOTES

- MECHANICAL DRAWING FOR REFERENCE. GENERAL CONTRACTOR TO ENGAGE AND COORDINATE MECHANICAL SCOPE WITH REFRIGERATION ENERGY SOLUTIONS LTD.

No.	DESCRIPTION	DATE	BY
4	ISSUED FOR CONSTRUCTION	MAY 07, 2021	P.G.
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1	RE-ISSUED FOR PERMIT	NOV 06, 2020	P.G.
0	ISSUED FOR PERMIT	SEPT 4, 2020	P.G.

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Creating Solutions Through Engineering Excellence

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www.arcengineering.ca
contact@arcengineering.ca

PROJECT:

**NIAGARA FALLS
SERVICE CENTRE
IMPROVEMENTS**

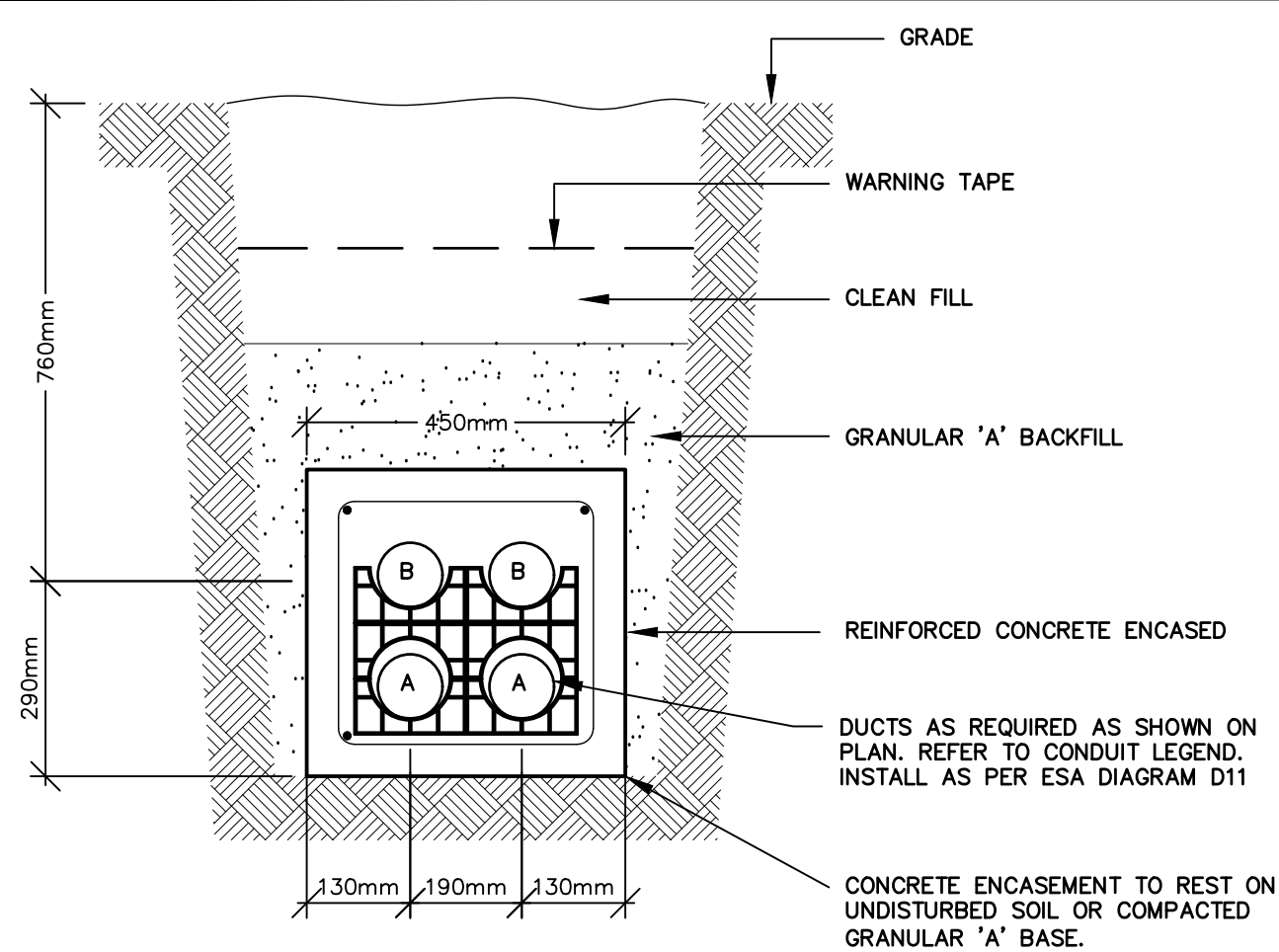
3200 STANLEY AVENUE,
NIAGARA FALLS, ONTARIO

START DATE: 2020 03 24	DRAWN BY: M.B.	DESIGNED BY: P.G.
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DRAWING TITLE:

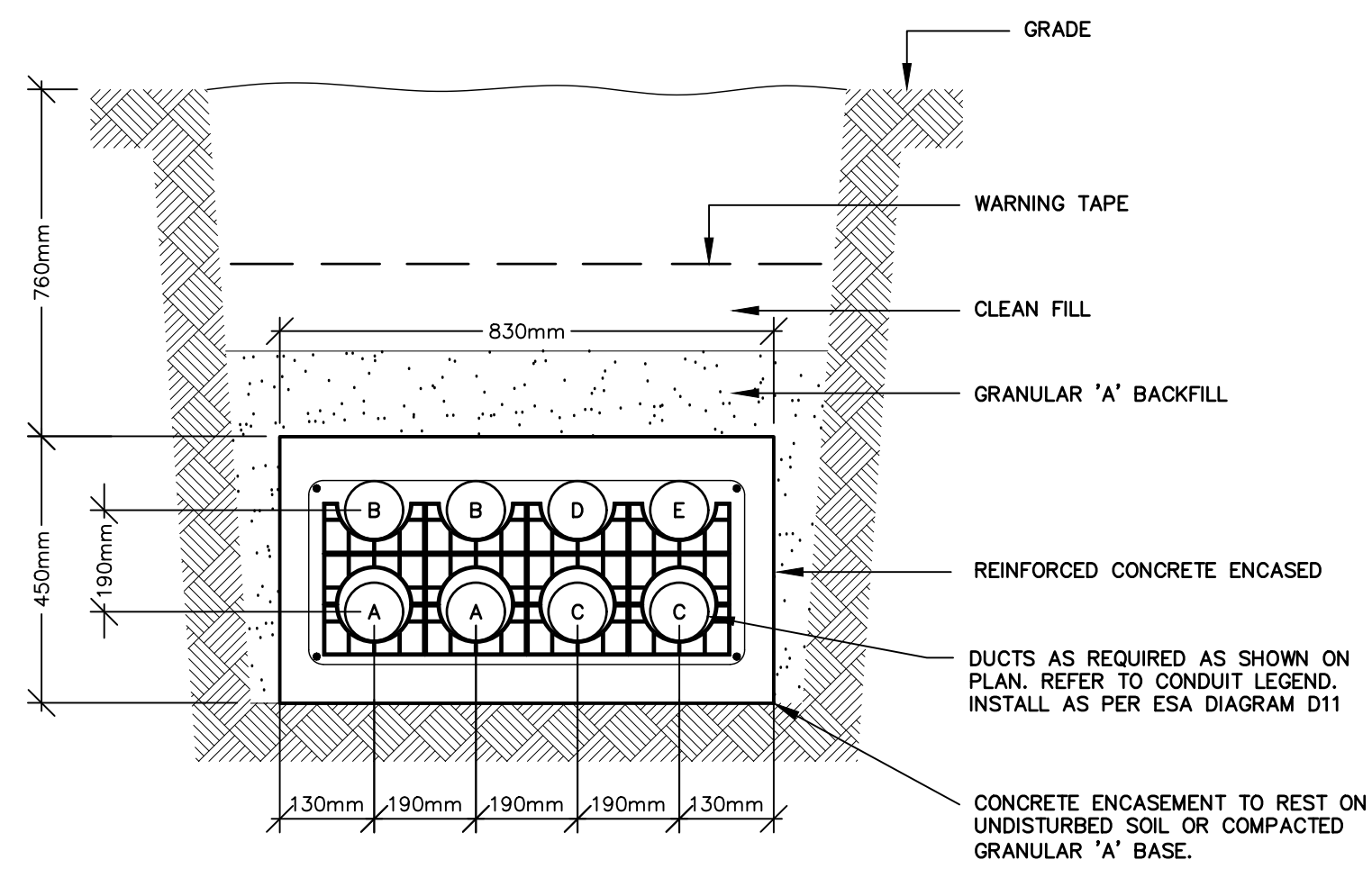
**REVISED HVAC EAST
GROUND FLOOR AND
MEZZANINE**

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-201-010	M-320



- CONDUIT LEGEND:**
- A. 103mm (4") 600V, 3 ϕ POWER
 - B. 103mm (4") SPARE

1 CONCRETE ENCASED DUCT BANK DETAIL
E100 SCALE: NTS



- DETAIL NOTES:**
1. REFER TO DETAIL 1/E100 NOTES.
- CONDUIT TYPE:**
- A. 103mm (4") 600V, 3 ϕ POWER (UTILITY)
 - B. 103mm (4") SPARE
 - C. 103mm (4") 600V, 3 ϕ POWER (GENERATOR)
 - D. 51mm (2") GENERATOR START SIGNAL
 - E. 51mm (2") GENERATOR SHORE POWER

2 CONCRETE ENCASED DUCT BANK DETAIL
E100 SCALE: NTS

DETAIL NOTES:

1. ALL REBAR TO HAVE A MINIMUM OF 2" OF COVER.
2. CONCRETE TO BE MIN 30MPA.
3. REINFORCING TO BE 10M BARS. SPACE TIES EVERY 60" UNDER OPEN AREAS. AREAS UNDER PARKING LOTS, ROADWAYS OR VEHICULAR TRAFFIC TO BE SPACED AT 24" ON CENTER. BARS TO BE LAPPED AT 40 BAR DIAMETERS FOR SPLICES.
4. FORMS ARE REQUIRED FOR BOTH SIDES OF THE FULL LENGTH OF THE CONCRETE ENCASED STRUCTURE.
5. DUCTS AND TRENCHES ARE TO BE INSPECTED BY LOCAL UTILITY AUTHORITY PRIOR TO POURING CONCRETE.
6. DUCT SPACERS TO BE PLACED THE SMALLER OF 5'-0" OR MAXIMUM SPACING AS DETERMINED BY THE MANUFACTURE OF THE PIPE SPACER. SPACERS TO BE PROVIDED AT EACH END AT 6" FROM EACH END OF THE DUCT BANK.
7. DUCTS TO BE TYPE DB2 PVC DUCT, CSA C22.2 No. 211.1 APPROVED. DUCTS TO BE COMPLETE WITH 1/4" POLYPROPYLENE ROPE.

DRAWING NOTES:

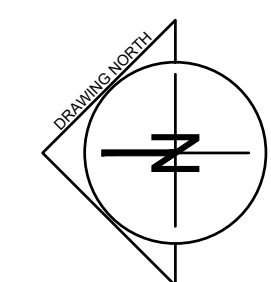
- 1 EXISTING PAD MOUNT TRANSFORMER AND EXISTING ELECTRICAL SERVICE TO BE REMOVED. COORDINATE DEMOLITION WITH NPEI. NPEI TO REMOVE EXISTING KIOSK TRANSFORMER AND PRIMARY CABLE AFTER COMPLETION OF SERVICE CHANGEOVER. CONTRACTOR IS RESPONSIBLE FOR REMOVAL EXISTING SECONDARY SERVICE CONDUCTORS (M CABLE) AND KIOSK. EXISTING UNDERGROUND BUILDING COMMUNICATIONS SERVICES TO REMAIN.
- 2 NEW PADMOUNT TRANSFORMER BY NPEI. PROVIDE SECONDARY POWER WIRING UNDERGROUND VIA DUCT BANK FROM NEW MAIN SWITCH IN BUILDING TO NEW PADMOUNT TRANSFORMER LOCATION. CONDUITS TO RISE UP ALONG BUILDING EXTERIOR AND PENETRATE AT UPPER MEZZANINE. CONDUITS TO BE TERMINATED WITH BELL ENDS AND SEALED INSIDE NEW TRANSFORMER FOUNDATION. COORDINATE NEW TRANSFORMER FOUNDATION ENTRY WITH NPEI. PROVIDE 4M WIRE COILS AT TRANSFORMER FOR NPEI TERMINATIONS. ALL WORK PER ESA AND NPEI CODES AND REGULATIONS.
- 3 NEW STANDBY DIESEL GENERATOR. INSTALL ON NEW CONCRETE PAD, COORDINATE WITH STRUCTURAL DIVISION. CONFIRM GENERATOR LOCATION WITH OWNER PRIOR TO ROUGH-IN.
- 4 PROVIDE UNDERGROUND LOCATES AND AVOID INTERFERENCES WITH EXISTING GAS LINE AND BUILDING COMMUNICATIONS CONDUITS FOR NEW ELECTRICAL SERVICE FEEDER ROUTING.

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3	ISSUED FOR CONSTRUCTION	MAY 7, 2021	K.S.
2	ISSUED FOR TENDER	FEB 26, 2021	K.S.
1	RE-ISSUED FOR PERMIT	DEC 3, 2020	K.S.
0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS

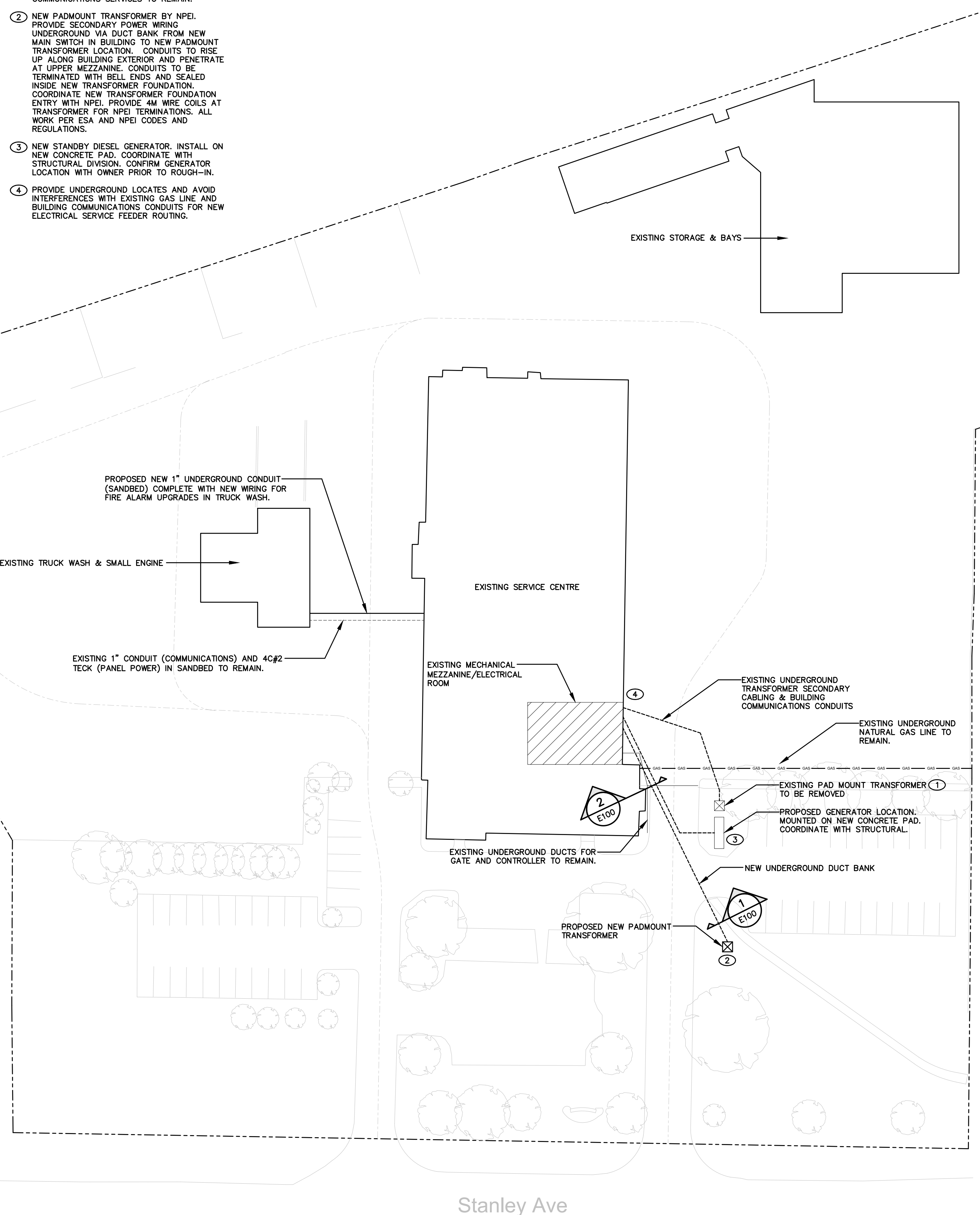


PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

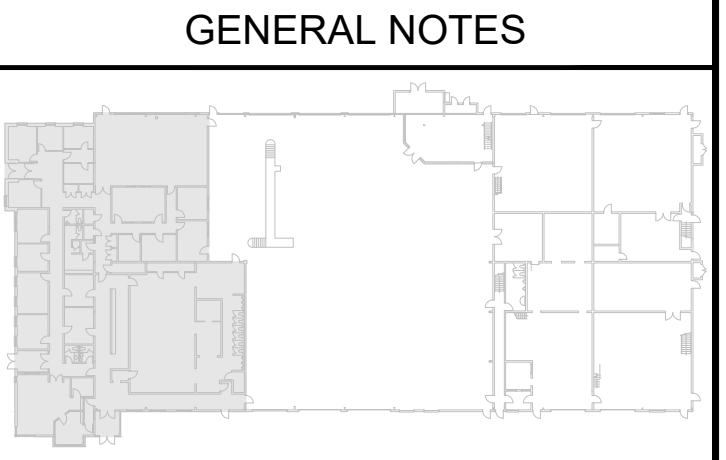
DRAWING TITLE:
SITE PLAN

SCALE: 1"=40'-0"
PROJECT: 20-101
DRAWING No.: E100



File: X:\Projects\2020\20-101_City of Niagara Falls-Municipal Service Centre_ARC\E\20-101 E200 EXISTING LIGHTING - GRND FLOOR & MECH MEZZANINE.dwg
May 06, 2021 - 08:26am Plotted by: Brennan

- DRAWING NOTES:**
- ① EXISTING EXIT SIGN TO BE REMOVED AND REPLACED. REFER TO NEW LIGHTING LAYOUT. MAINTAIN EXISTING 120V CIRCUIT DURING DEMOLITION FOR CONNECTIONS TO NEW SIGN.
 - ② EXISTING MECHANICAL MEZZANINE LIGHTING TO BE REMOVED AND REPLACED.
 - ③ REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXISTING ROOF REINFORCEMENT WORK. ELECTRICAL CONTRACTOR TO RELOCATE EXISTING CEILING MOUNT DEVICES (LIGHTING/POWER/COMMS ETC) AS REQUIRED TO ACCOMMODATE NEW STRUCTURAL. SITE VERIFY AND COORDINATE WITH OWNER AND GENERAL CONTRACTOR.

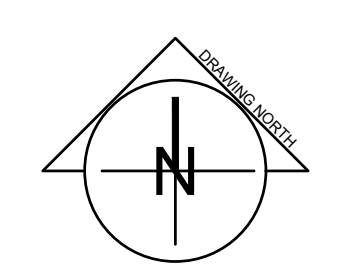


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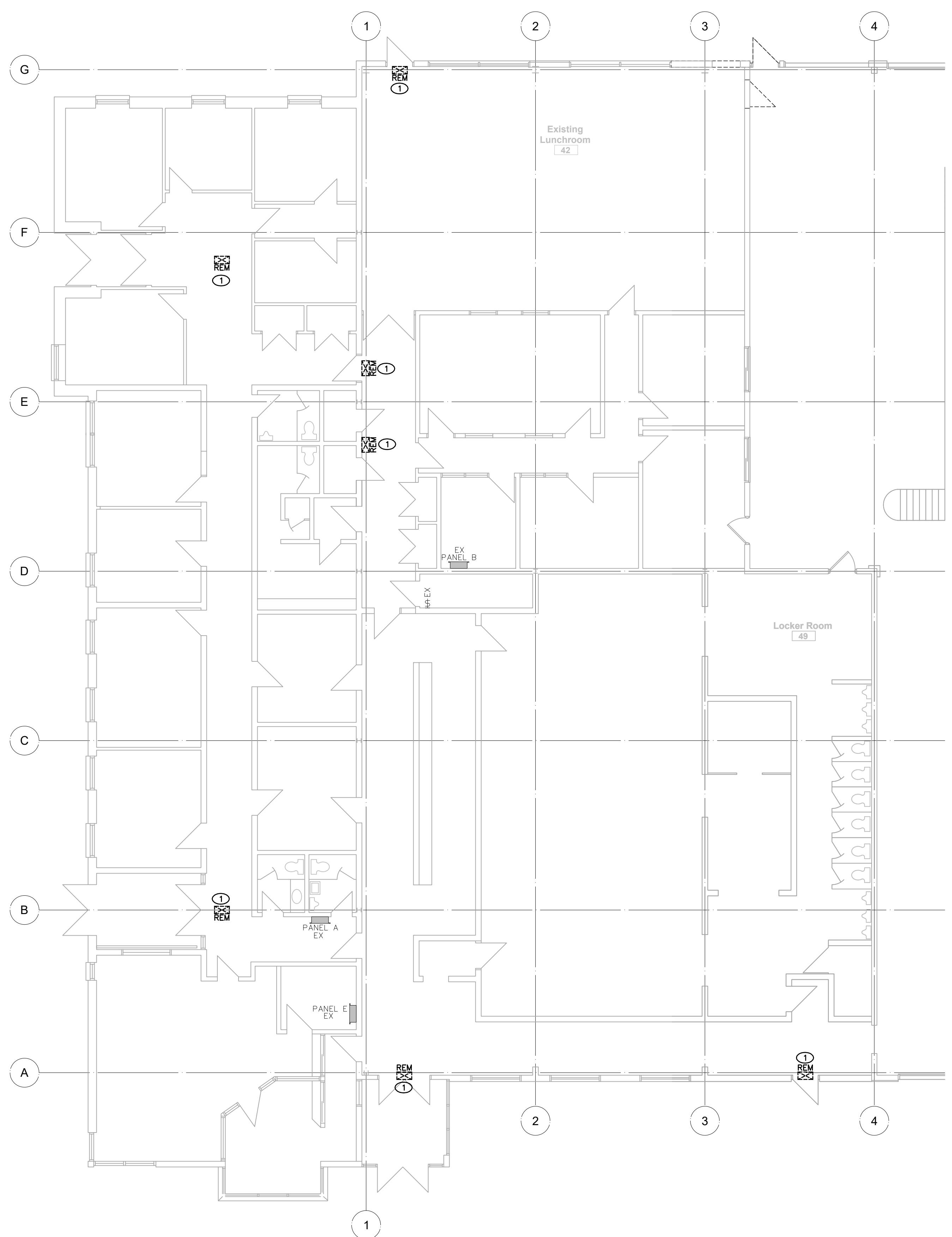


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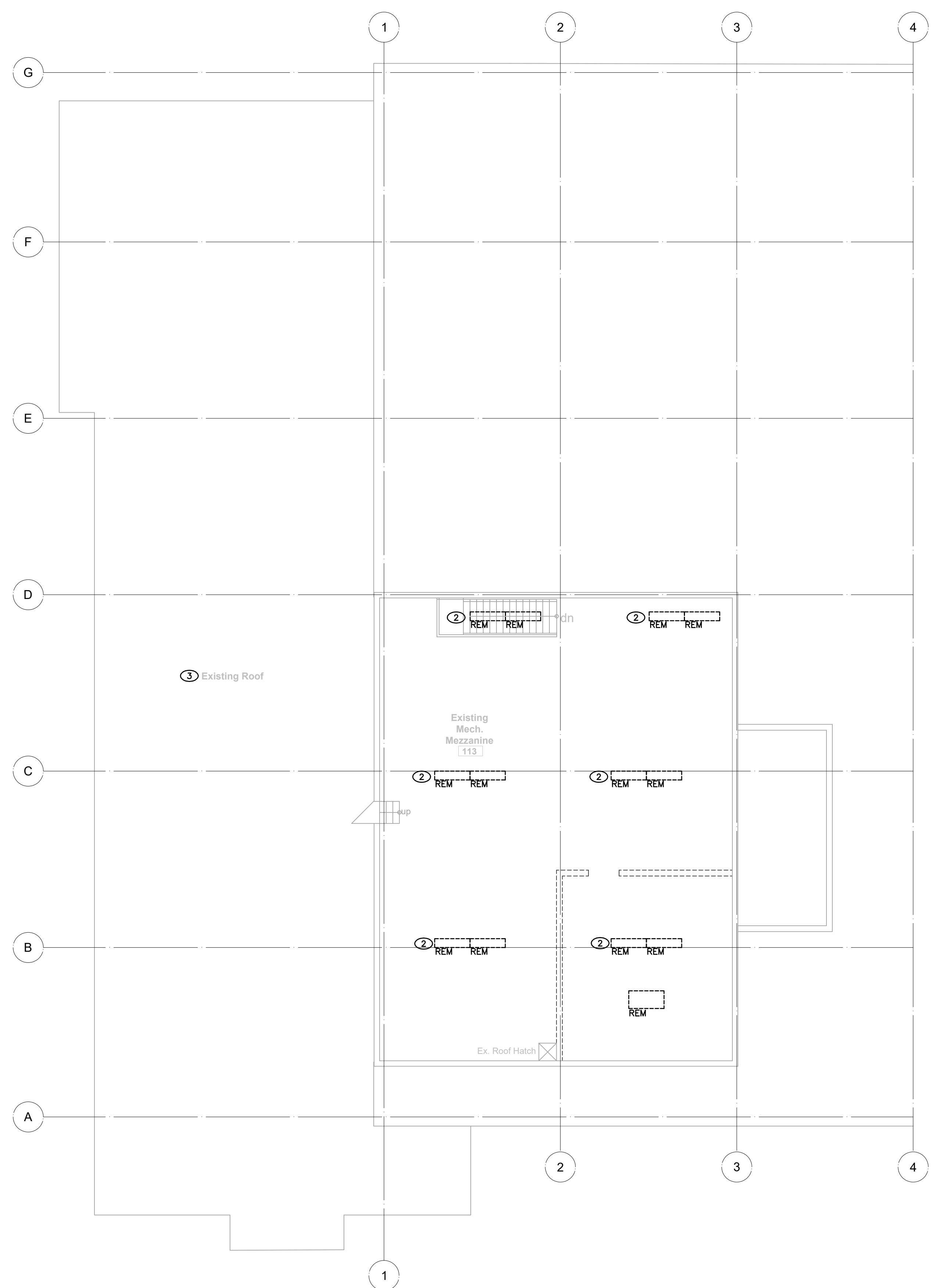
START DATE: JULY 2020	DRAWN BY: B.M.	DESIGNED BY: P.S.
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DRAWING TITLE:
DEMOLITION LIGHTING GROUND FLOOR AND MECHANICAL MEZZANINE

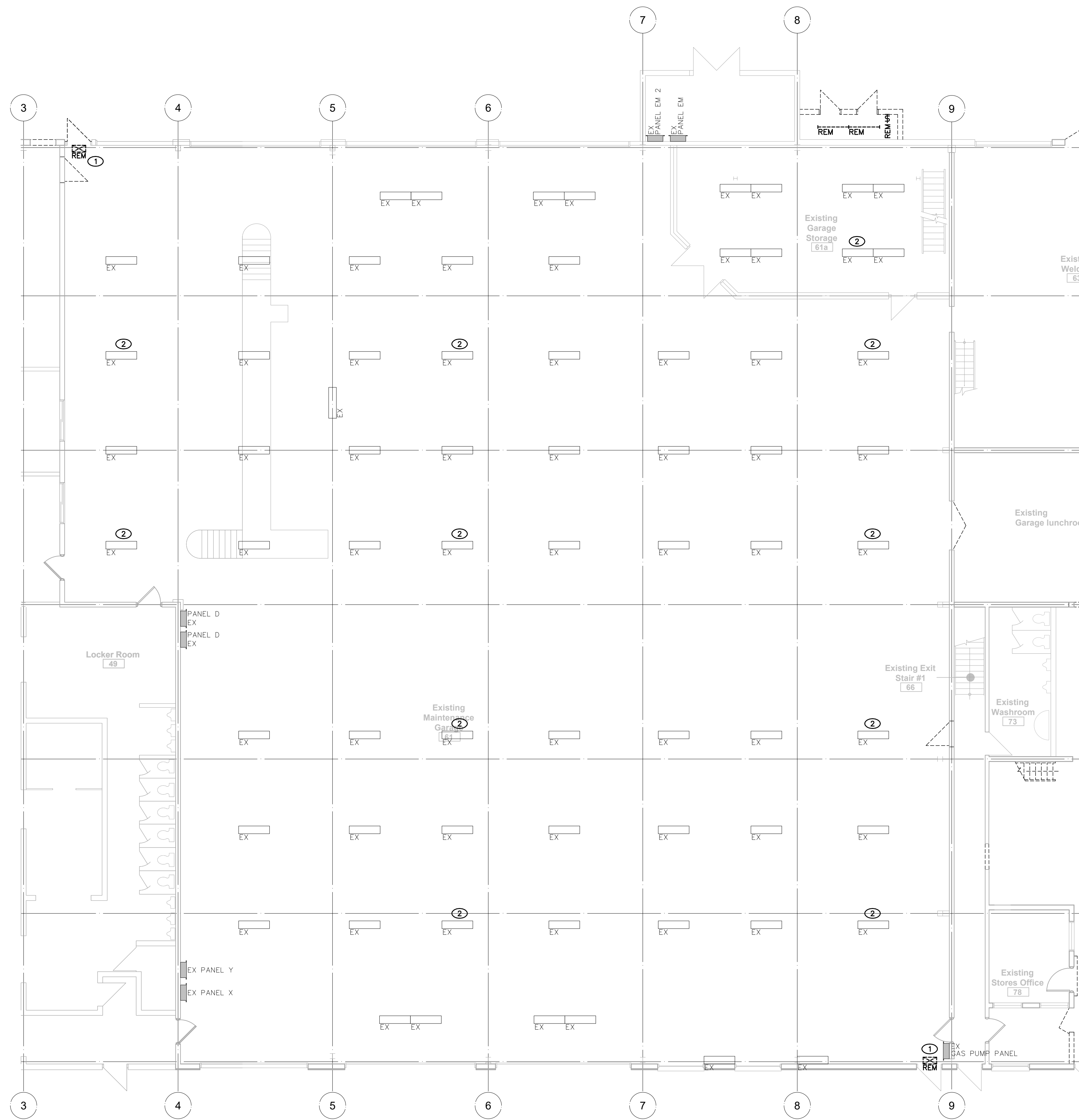
SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-101	E200



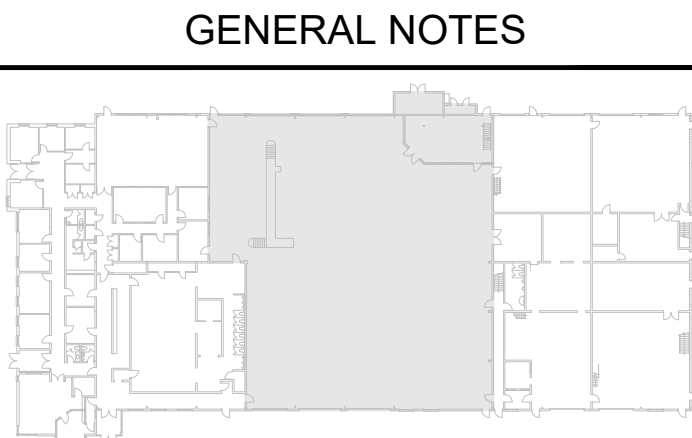
1 GROUND FLOOR WEST PLAN - DEMOLITION
SCALE: 1/8"=1'-0"



2 MECHANICAL MEZZANINE FLOOR PLAN - DEMOLITION
SCALE: 1/8"=1'-0"



- DRAWING NOTES:**
- ① EXISTING EXIT SIGN TO BE REMOVED AND REPLACED. REFER TO NEW LIGHTING LAYOUT. MAINTAIN EXISTING 120V CIRCUIT DURING DEMOLITION FOR CONNECTIONS TO NEW SIGN.
 - ② EXISTING GARAGE LIGHTING TO REMAIN. REFER TO NEW LIGHTING LAYOUT FOR SWITCHING MODIFICATIONS..

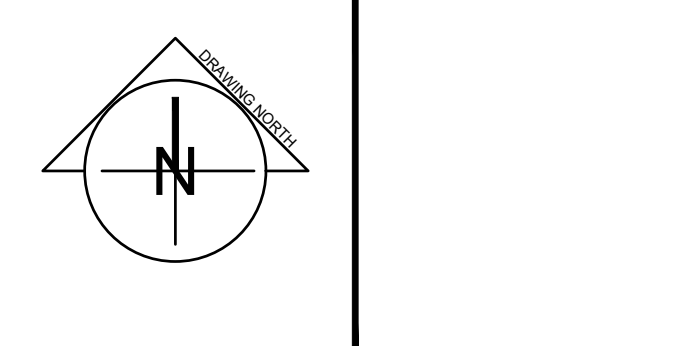


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REVISIONS



PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE
 NIAGARA FALLS, ONTARIO

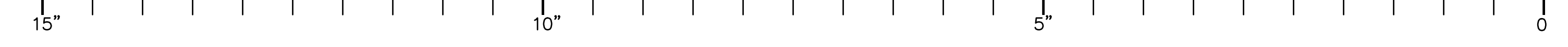
START DATE: JULY 2020	DRAWN BY: B.M.	DESIGNED BY: P.S.
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DRAWING TITLE:
DEMOLITION LIGHTING SERVICE CENTRE

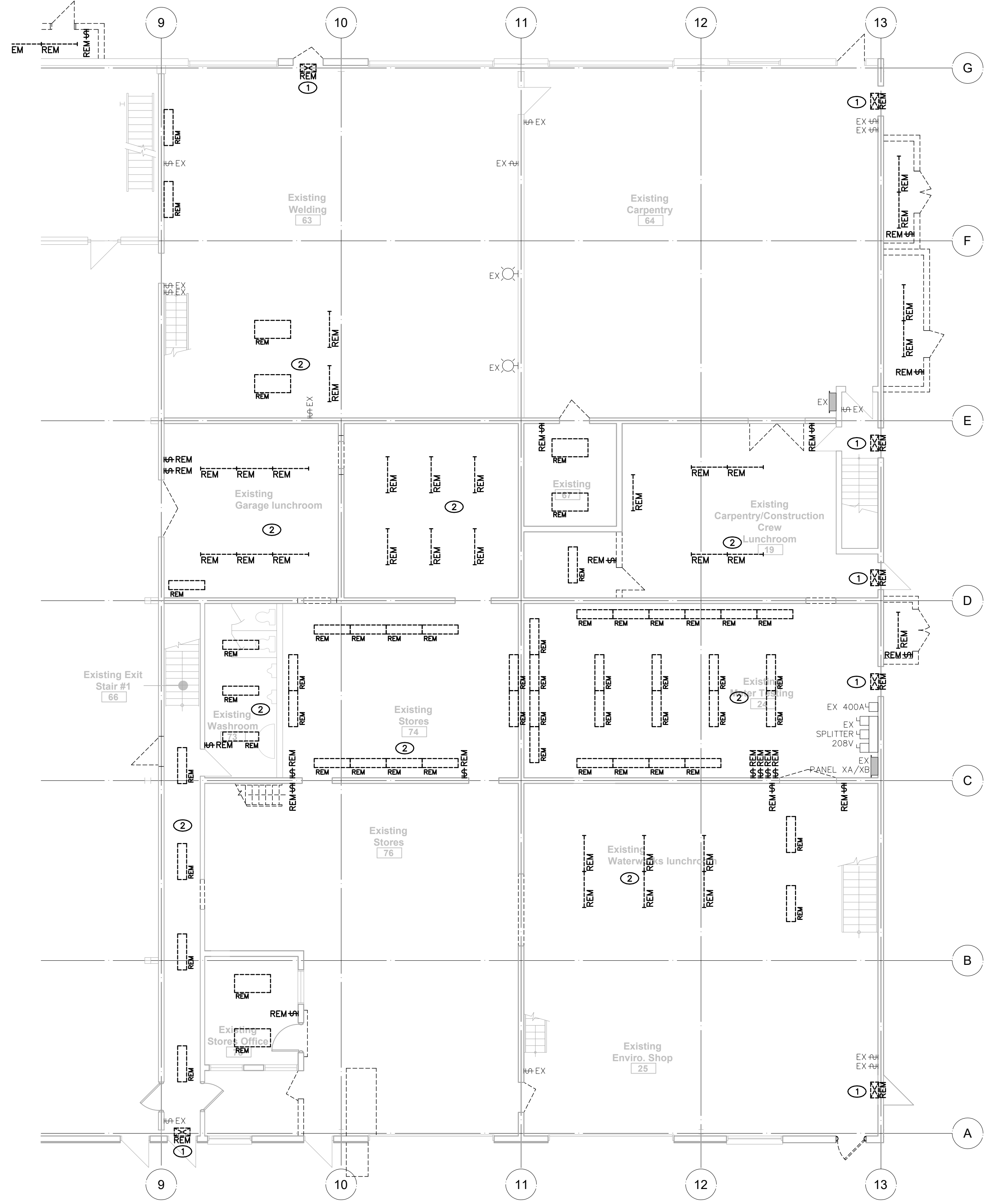
SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-101	E201

1 SERVICE CENTRE FLOOR PLAN – DEMOLITION
 SCALE: 1/8"=1'-0"

File: X:\Projects\2020\20-101_City of Niagara Falls-Municipal Service Centre_ARC\E20-101 E201 EXISTING LIGHTING - SERVICE CENTRE.dwg
 May 06, 2021 - 08:26am Plotted by: Brennan

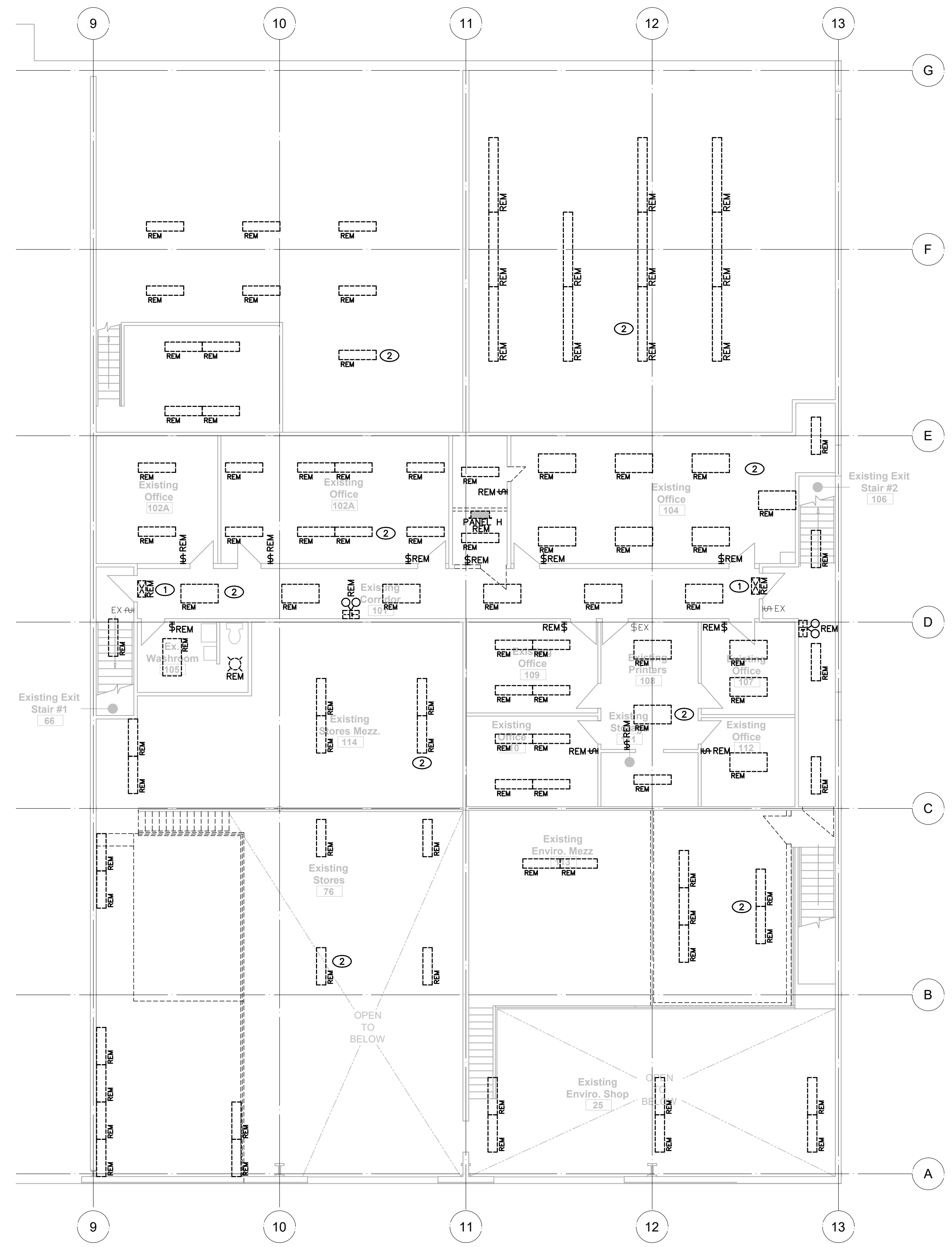


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May 06, 2021 - 08:26am Plotted by: Brennan



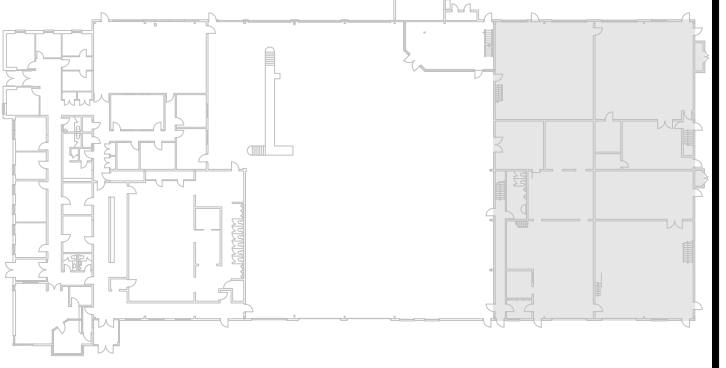
1 GROUND FLOOR EAST PLAN - DEMOLITION
SCALE: 1/8"=1'-0"

DRAWING NOTES:
 ① EXISTING EXIT SIGN TO BE REMOVED AND REPLACED. REFER TO NEW LIGHTING LAYOUT. MAINTAIN EXISTING 120V CIRCUIT DURING DEMOLITION FOR CONNECTIONS TO NEW SIGN.
 ② EXISTING LIGHTING TO BE REMOVED AND REPLACED.



2 EAST MEZZANINE FLOOR PLAN - DEMOLITION
SCALE: 1/8"=1'-0"

GENERAL NOTES

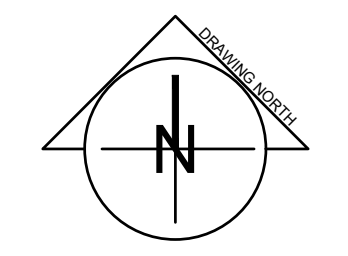


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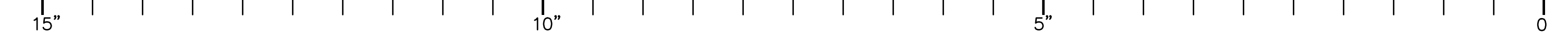


PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE,
 NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

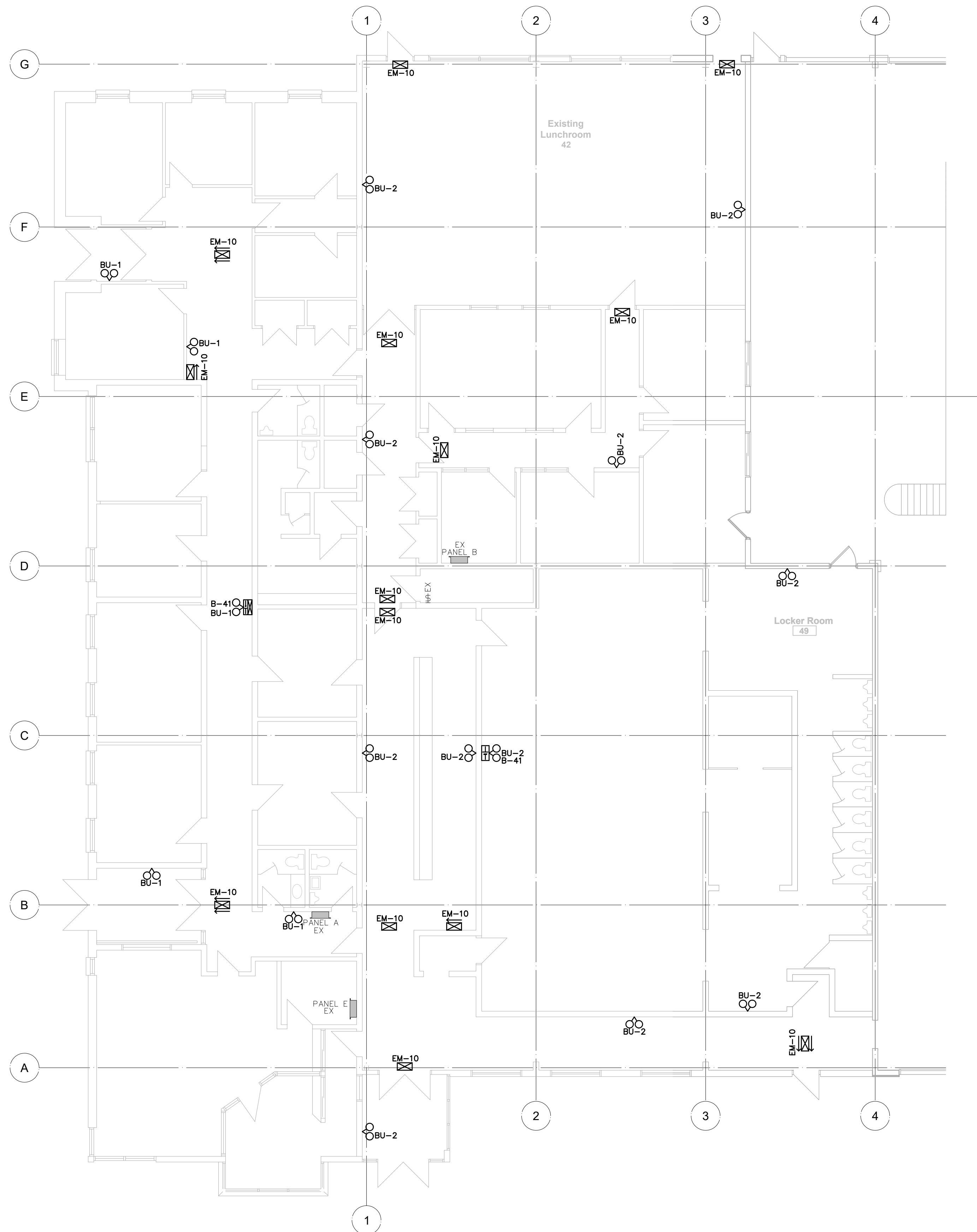
DRAWING TITLE:
DEMOLITION LIGHTING EAST GROUND FLOOR AND MEZZANINE

SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: E202

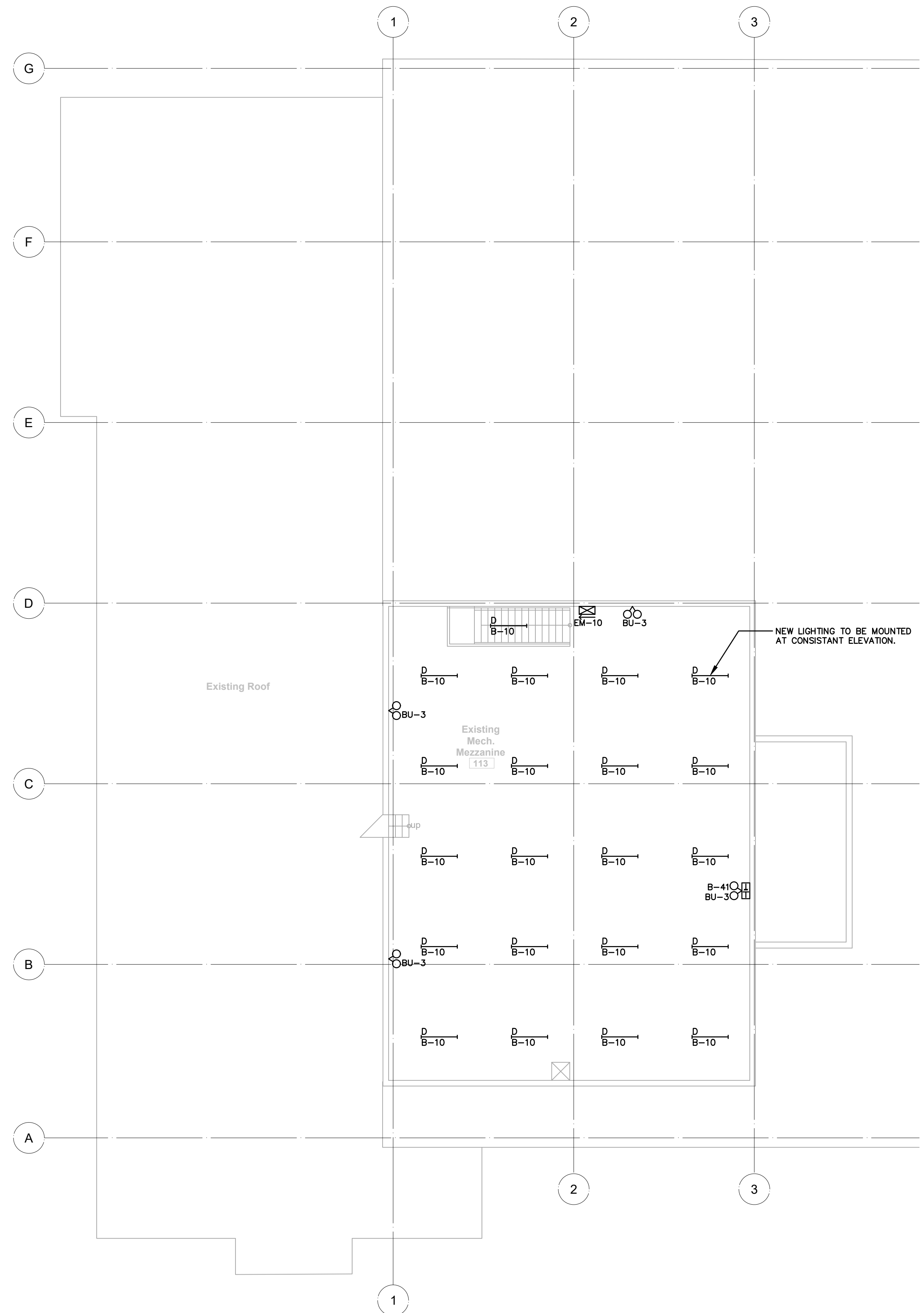


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May 06, 2021 - 08:26am Plotted by: Brennan

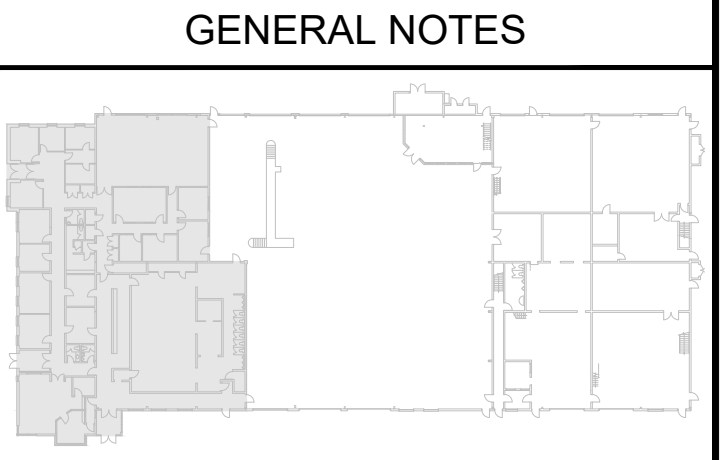
- GENERAL NOTES:**
- (A) CONTRACTOR TO FIELD VERIFY CONNECTIONS TO EXISTING CIRCUITS WHERE SHOWN. NOTIFY ENGINEER OF ANY DISCREPANCIES.
- DRAWING NOTES:**
- (1) PROVIDE NEW DEDICATED 120V CIRCUIT FOR EMERGENCY BATTERY UNITS FROM EXISTING PANEL AND NEW 20A-1P BREAKER.



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



2 MECHANICAL MEZZANINE AND ROOF PLAN -- REVISED
SCALE: 1/8"=1'-0"

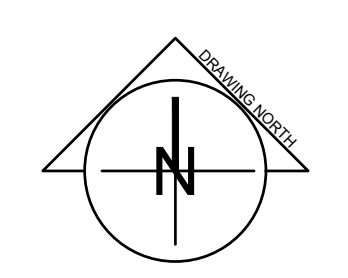


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REVISIONS

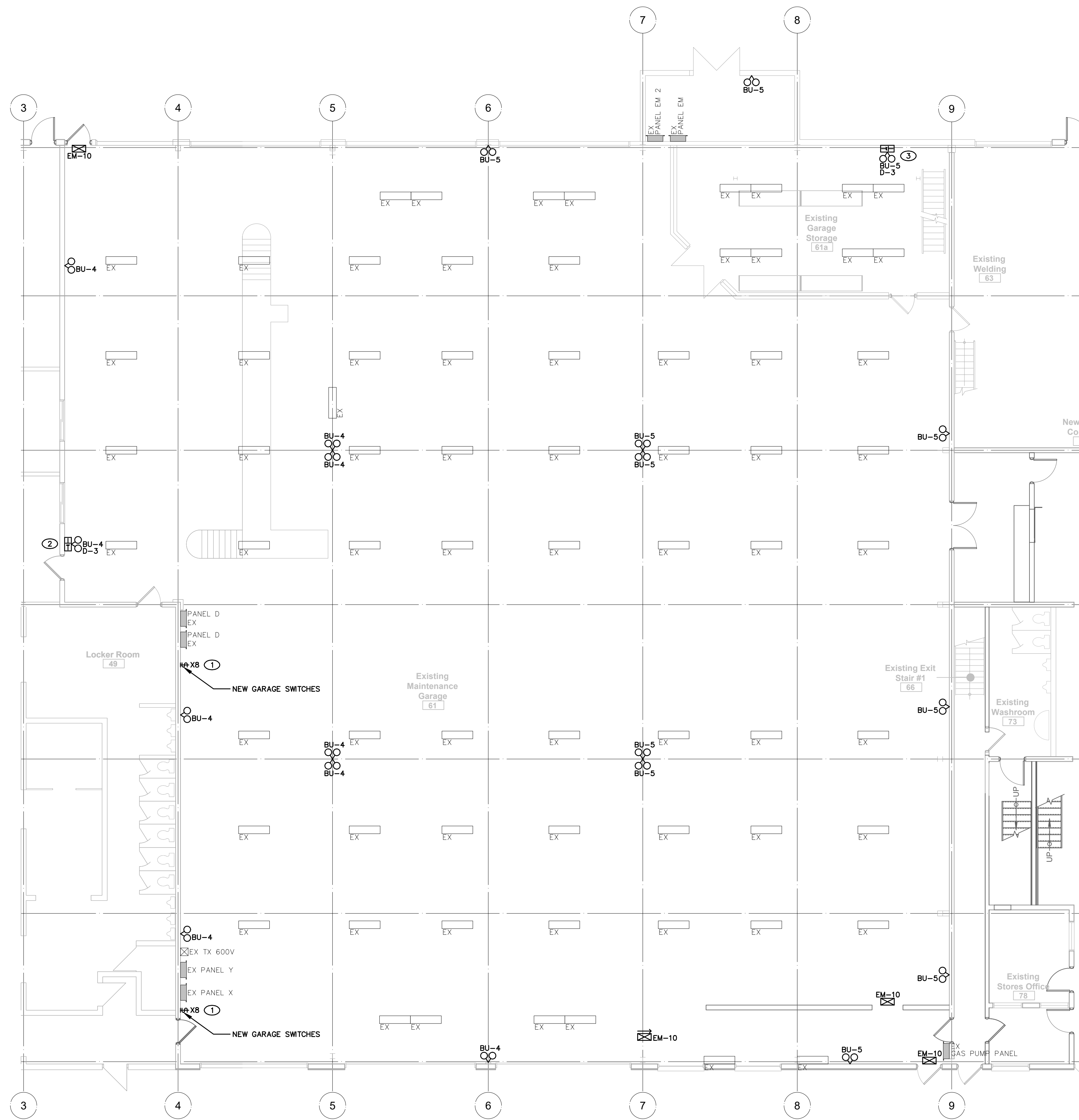


PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

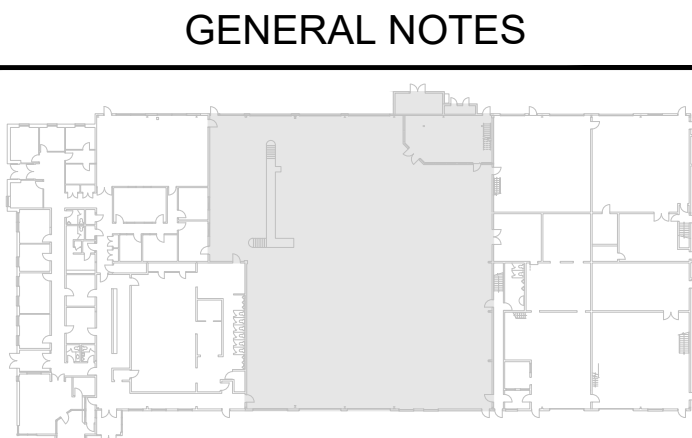
START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

DRAWING TITLE:
REVISED LIGHTING GROUND FLOOR AND MECHANICAL MEZZANINE

SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: **E300**



- DRAWING NOTES:**
- 1 PROVIDE NEW SWITCH BANK FOR EXISTING GARAGE LIGHTING. CONTRACTOR TO INVESTIGATE AND CONFIRM NUMBER OF EXISTING LIGHTING CIRCUITS REQUIRING NEW SWITCHES. CONFIRM SWITCH BANK LOCATION WITH OWNER PRIOR TO ROUGH-IN.
 - 2 PROVIDE NEW DEDICATED 120V CIRCUIT FOR EMERGENCY BATTERY UNITS FROM EXISTING PANEL AND NEW 20A-1P BREAKER.
 - 3 PROVIDE ADDITIONAL EMERGENCY REMOTE HEAD ON UPPER GARAGE STORAGE. CONFIRM LOCATIONS PRIOR TO ROUGH-IN.

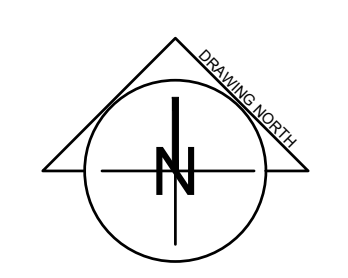


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0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS



PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

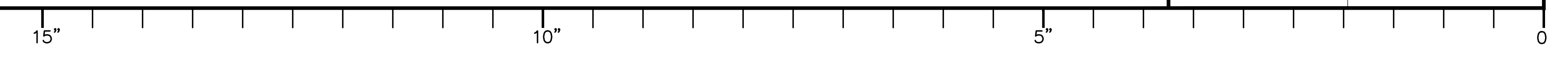
START DATE: JULY 2020	DRAWN BY: B.M.	DESIGNED BY: P.S.
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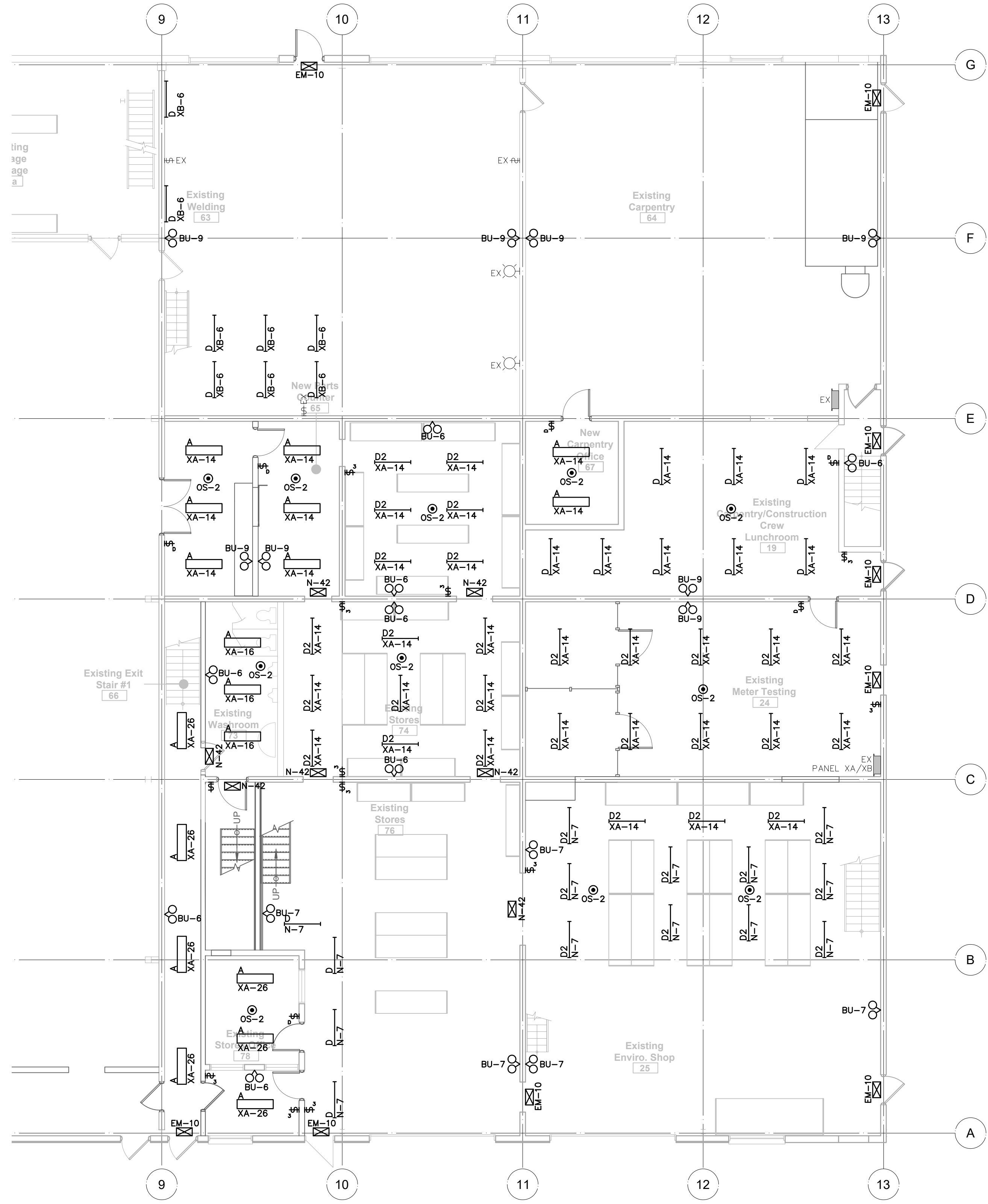
DRAWING TITLE:
REVISED LIGHTING SERVICE CENTRE

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-101	E301

1 SERVICE CENTRE FLOOR PLAN – REVISED
 SCALE: 1/8"=1'-0"

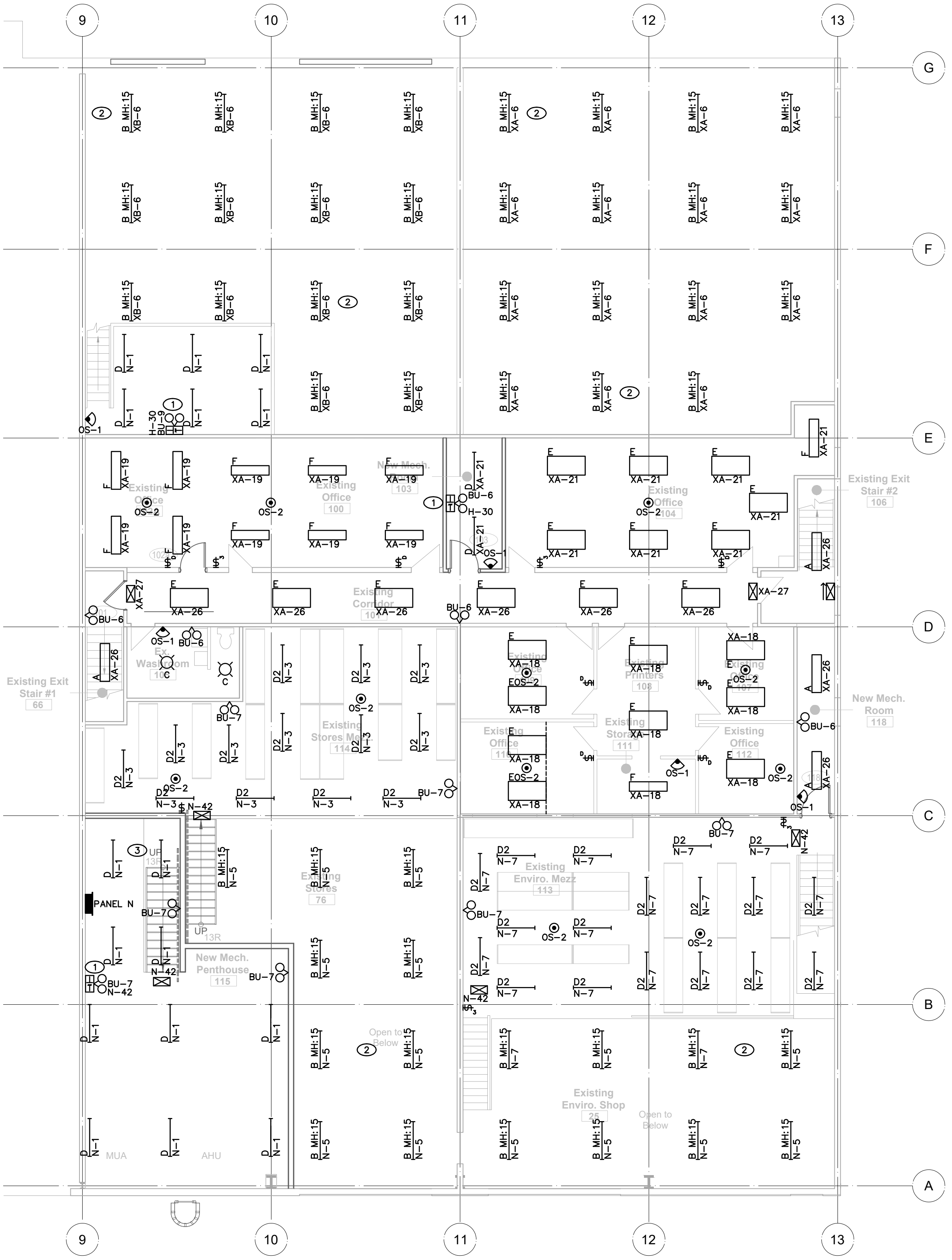
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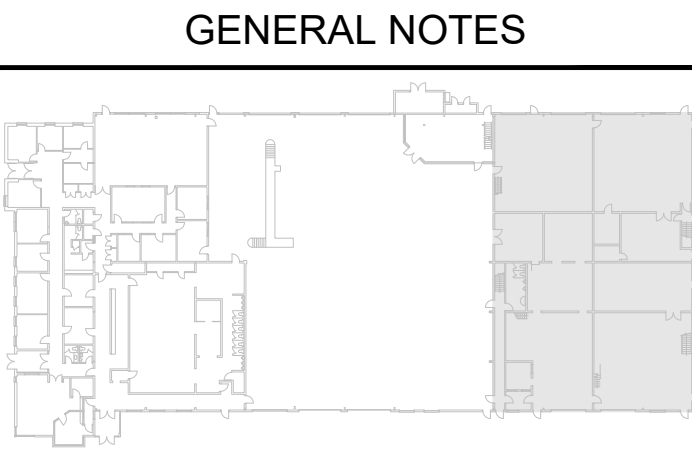


1 GROUND FLOOR EAST PLAN -- REVISED
SCALE: 1/8"=1'-0"

- DRAWING NOTES:**
- 1 PROVIDE NEW DEDICATED 120V CIRCUIT FOR EMERGENCY BATTERY UNITS FROM EXISTING PANEL AND NEW 20A-1P BREAKER.
 - 2 NEW LIGHTING AT HIGH LEVEL TO BE INSTALLED WITH TWIST LOCK RECEPTACLE PER FIXTURE (TYPICAL TYPE B). CONTRACTOR TO INCLUDE ADDITIONAL THIRTY (30) TYPE B FIXTURES FOR ON SITE LIGHTING ADJUSTMENTS TO SUIT MECHANICAL INTERFERENCES IN CARPENTRY, WELDING, ENVIRO SHOP AND STORES. CONTRACTOR TO INCLUDE ALL COSTS FOR SUPPORTS, WIRING AND TWIST LOCK RECEPTACLE PER ADDITIONAL FIXTURE. UNUSED FIXTURES TO BE TURNED OVER TO OWNER AS SPARE. MOUNT FIXTURES AT CONSISTANT ELEVATION. SITE VERIFY ALL EXISTING OBSTRUCTIONS.
 - 3 INCLUDE FIVE (5) ADDITIONAL TYPE D FIXTURES FOR ON SITE LIGHTING ADJUSTMENTS TO SUIT MECHANICAL INTERFERENCES IN NEW MECH. PENTHOUSE. INCLUDE ALL COSTS FOR SUPPORTS, WIRING PER ADDITIONAL FIXTURE. UNUSED FIXTURES TO BE TURNED OVER TO OWNER AS SPARE.



2 EAST MEZZANINE FLOOR PLAN -- REVISED
SCALE: 1/8"=1'-0"

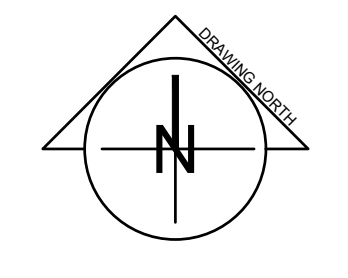


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3200 STANLEY AVENUE,
NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

DRAWING TITLE:
REVISED LIGHTING EAST GROUND FLOOR AND MEZZANINE

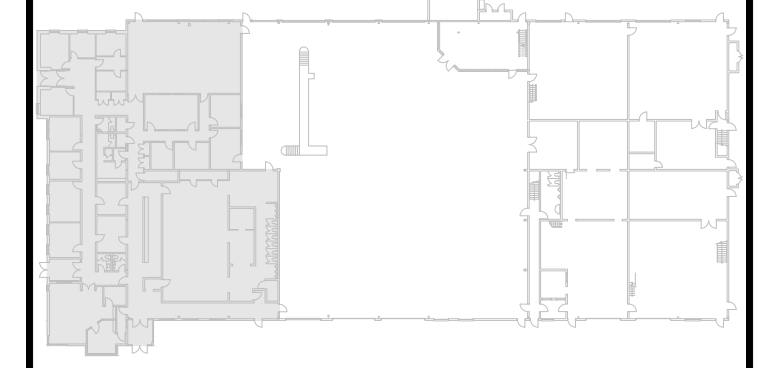
SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: E302

File: X:\Projects\2020\20-101_City of Niagara Falls-Municipal Service Centre_ARC\20-101 E400 EXISTING POWER & SYSTEMS - GRND FLOOR & MECH MEZZANINE.dwg
May 06, 2021 - 08:26am Plotted by: Brennan

DRAWING NOTES:

- ① EXISTING MECHANICAL UNIT TO BE REMOVED. DEMOLISH ALL WIRE, CONDUIT AND JUNCTION BOXES BACK TO SOURCE PANEL/DISCONNECT.
- ② EXISTING FIRE ALARM CONTROL SYSTEM TO BE REMOVED AND REPLACED WITH NEW ADDRESSABLE SYSTEM.
- ③ REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXISTING ROOF REINFORCEMENT WORK. ELECTRICAL CONTRACTOR TO RELOCATE EXISTING CEILING MOUNT DEVICES (LIGHTING/POWER/COMMS, ETC) AS REQUIRED TO ACCOMMODATE NEW STRUCTURAL. SITE VERIFY AND COORDINATE WITH OWNER AND GENERAL CONTRACTOR.

GENERAL NOTES

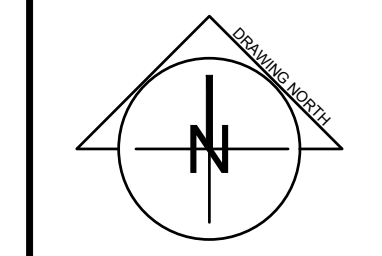


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0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS

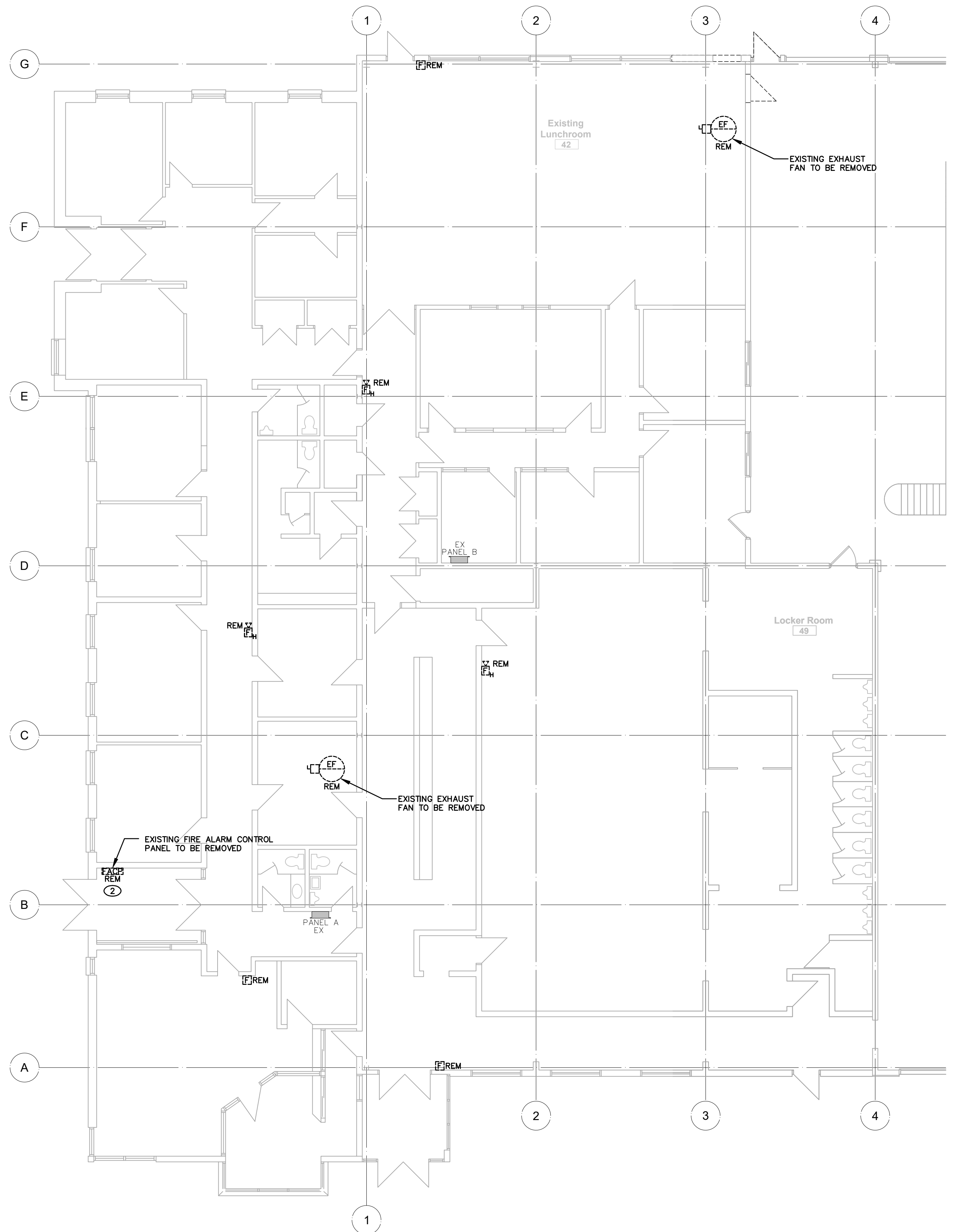


PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE
NIAGARA FALLS, ONTARIO

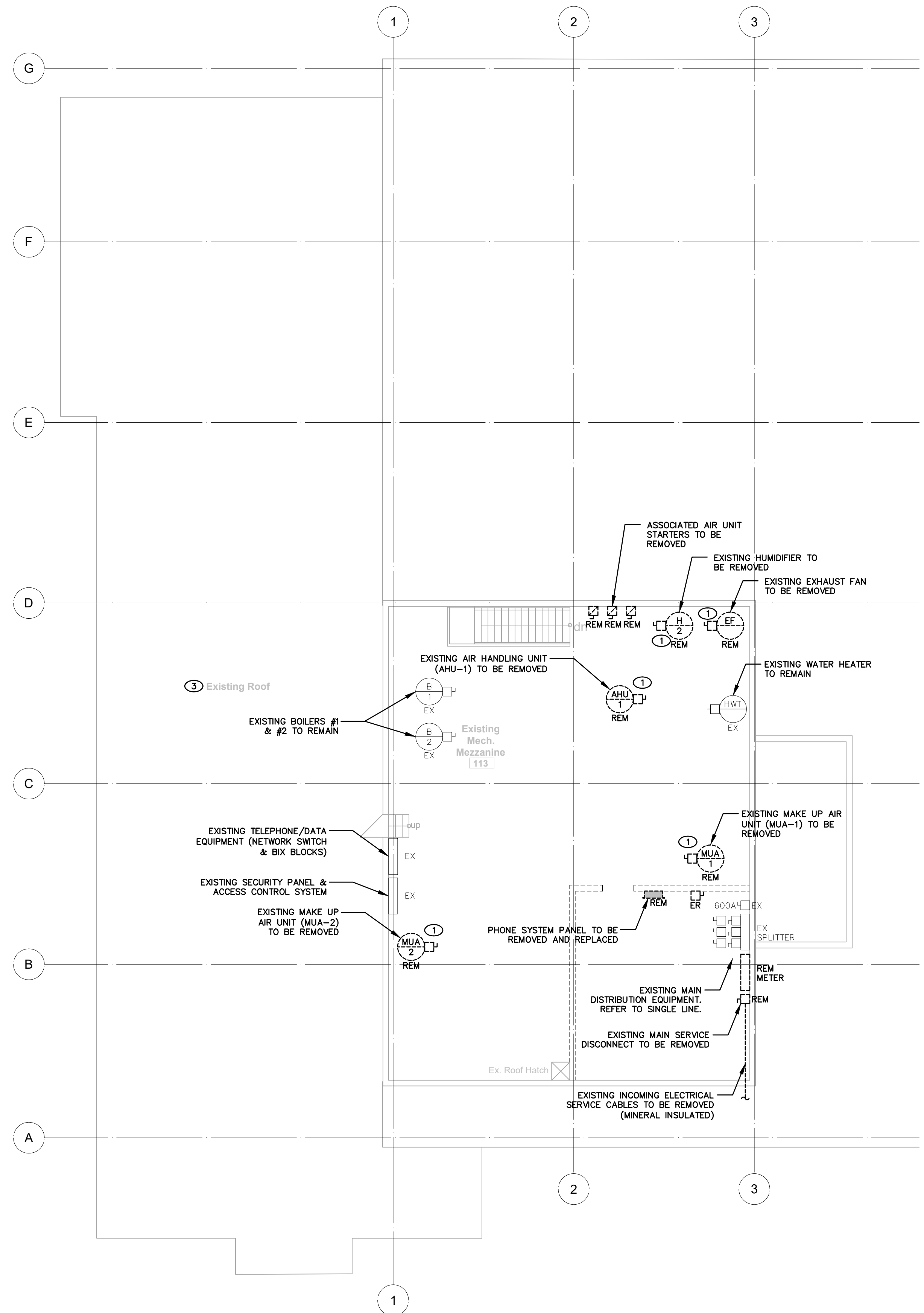
START DATE: JULY 2020	DRAWN BY: B.M.	DESIGNED BY: P.S.
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DRAWING TITLE:
**DEMOLITION POWER & SYSTEMS
GROUND FLOOR AND
MECHANICAL MEZZANINE**

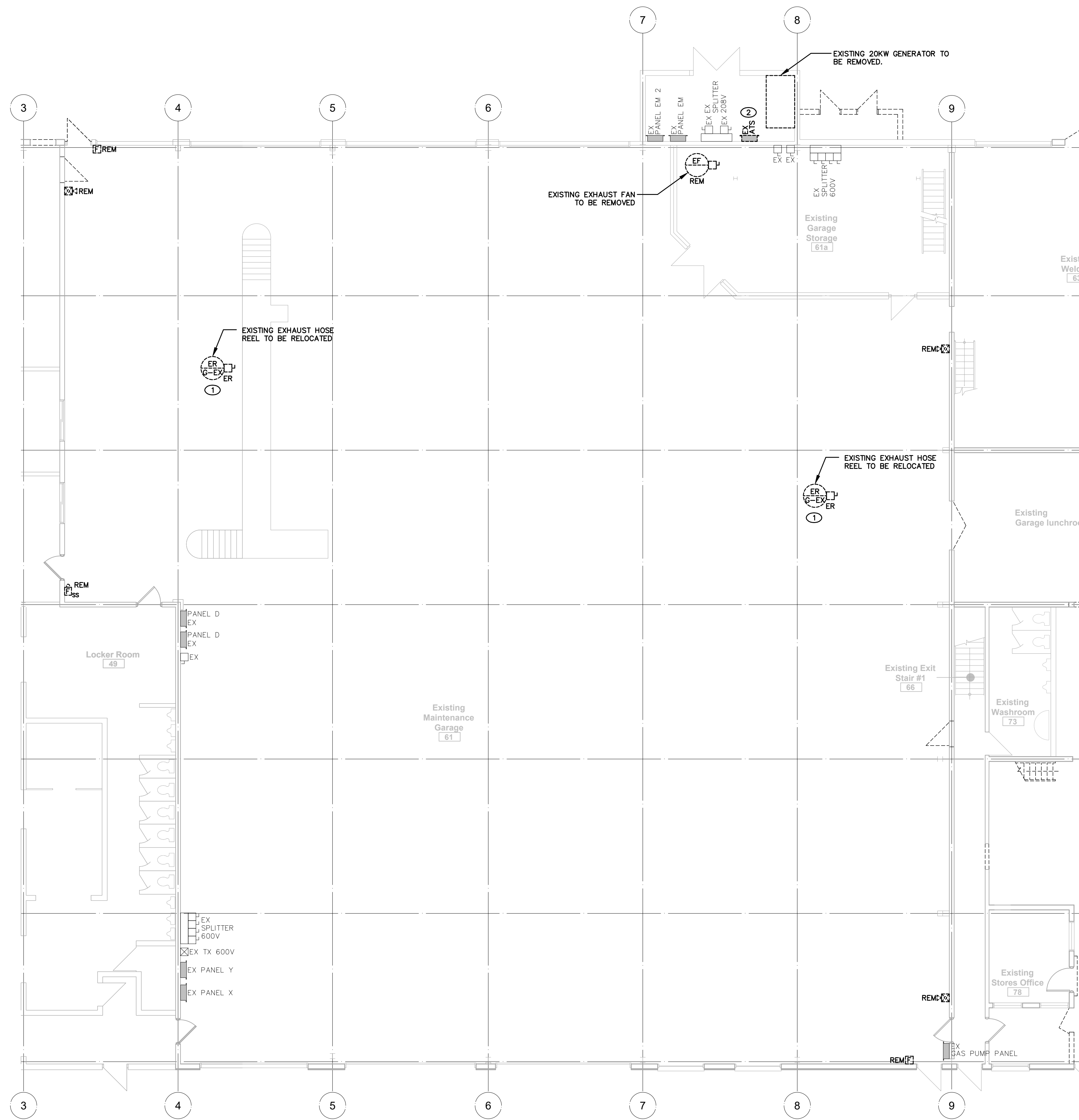
SCALE: NTS	DRAWING No.:
PROJECT: 20-101	E400



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

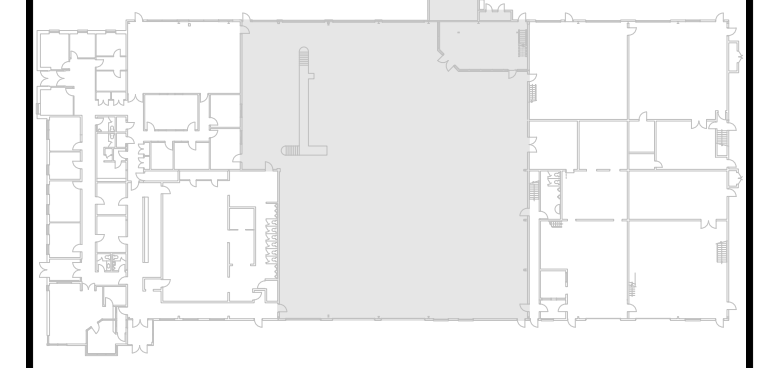


② MECHANICAL MEZZANINE FLOOR PLAN - DEMOLITION
SCALE: 1/8"=1'-0"



- DRAWING NOTES:**
- ① EXISTING ELECTRIC MOTOR DRIVEN EXHAUST HOSE REEL TO BE RELOCATED. PROVIDE ALL REQUIRED CONDUIT, WIRE AND JUNCTION BOXES TO REWORK EXISTING POWER CIRCUIT TO NEW EQUIPMENT LOCATION.
 - ② EXISTING STANDBY GENERATOR AND ASSOCIATED COMPONENTS (BATTERIES/CHARGER, CONTROL PANEL, TRANSFER SWITCH, ETC) TO BE REMOVED.

GENERAL NOTES

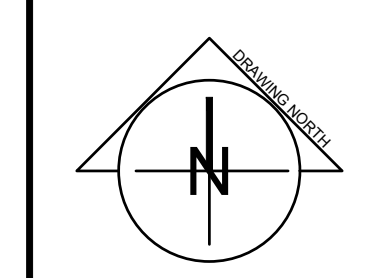


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3	ISSUED FOR CONSTRUCTION	MAY 7, 2021	K.S.
2	ISSUED FOR TENDER	FEB 26, 2021	K.S.
1	RE-ISSUED FOR PERMIT	DEC 3, 2020	K.S.
0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS



PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

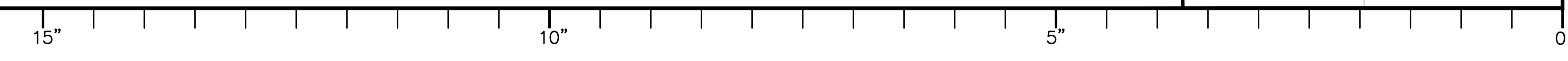
START DATE: JULY 2020	DRAWN BY: B.M.	DESIGNED BY: P.S.
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DRAWING TITLE:
DEMOLITION POWER & SYSTEMS SERVICE CENTRE

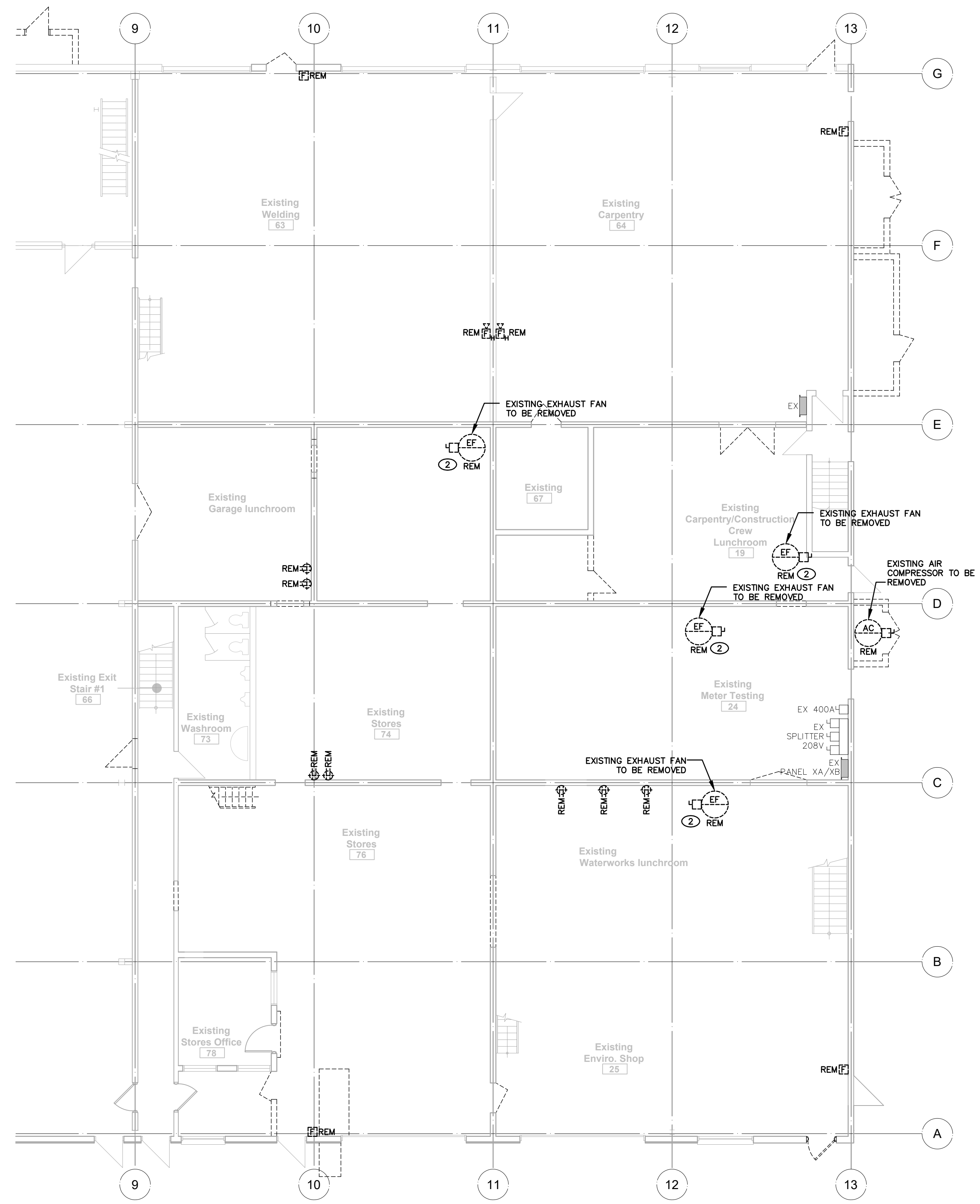
SCALE: AS NOTED	DRAWING No.: E401
PROJECT: 20-101	

1 SERVICE CENTRE FLOOR PLAN – DEMOLITION
 SCALE: 1/8"=1'-0"

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 May 06, 2021 08:26am Plotted by: Brennan

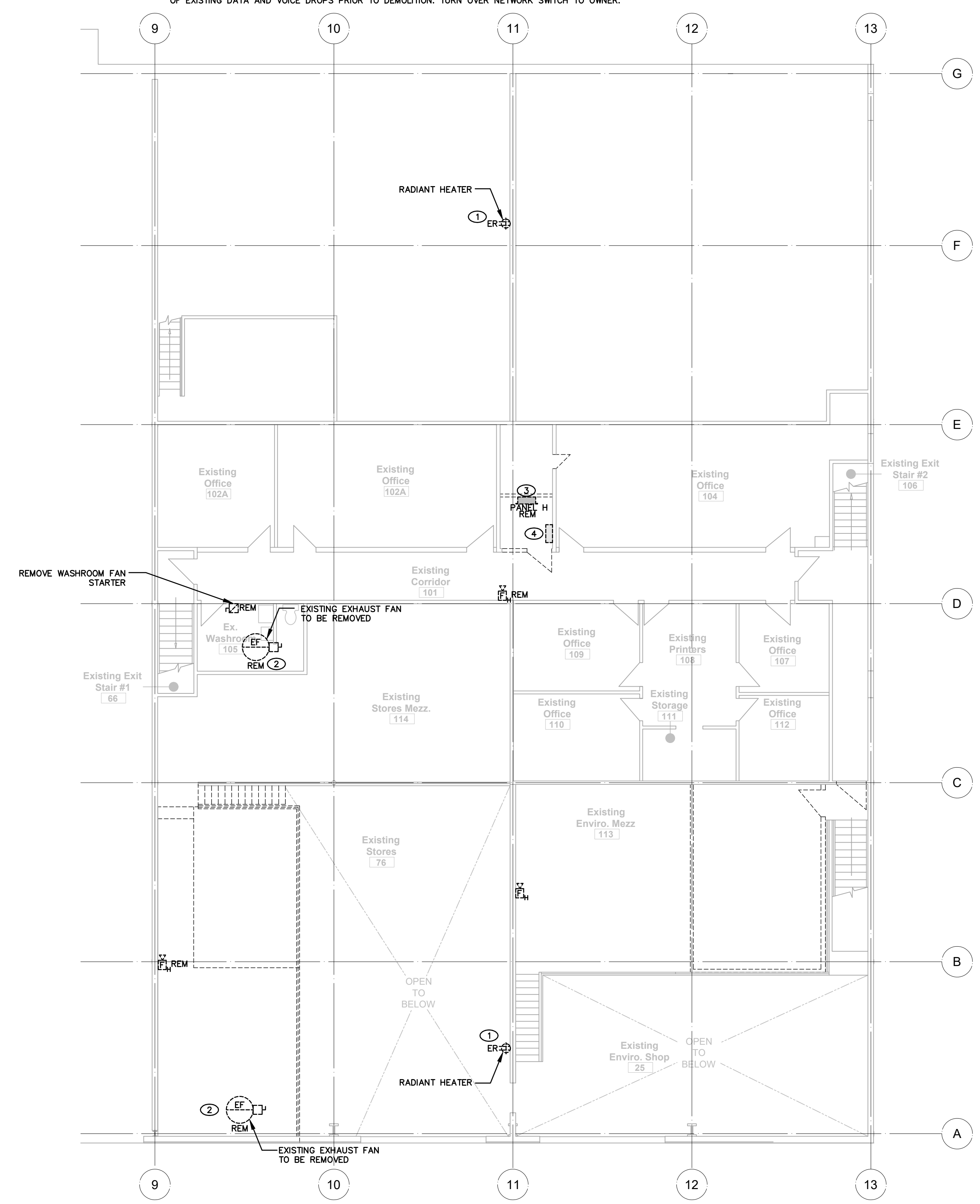


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May 06, 2021 08:26am Plotted by: Brennan



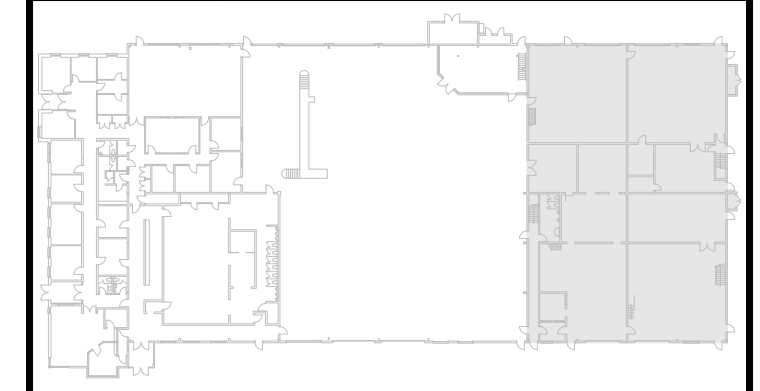
1 GROUND FLOOR EAST PLAN - DEMOLITION
SCALE: 1/8"=1'-0"

- DRAWING NOTES:**
- ① EXISTING RADIANT HEATING TO BE SALVAGED FOR RE-USE. COORDINATE WITH MECHANICAL DIVISION AND RELOCATE EXISTING 120V RECEPTACLE AT HIGH LEVEL TO NEW HEATER MOTOR LOCATION.
 - ② EXISTING MECHANICAL UNIT TO BE REMOVED. DEMOLISH ALL WIRE, CONDUIT AND JUNCTION BOXES BACK TO SOURCE PANEL/DISCONNECT.
 - ③ EXISTING PANEL H TO BE REMOVED AND REPLACED.
 - ④ EXISTING VOICE/DATA COMMUNICATIONS EQUIPMENT TO BE REMOVED AND REPLACED TO SUIT NEW MECHANICAL ROOM LAYOUT. CONFIRM NUMBER OF EXISTING DATA AND VOICE DROPS PRIOR TO DEMOLITION. TURN OVER NETWORK SWITCH TO OWNER.



2 EAST MEZZANINE FLOOR PLAN - DEMOLITION
SCALE: 1/8"=1'-0"

GENERAL NOTES

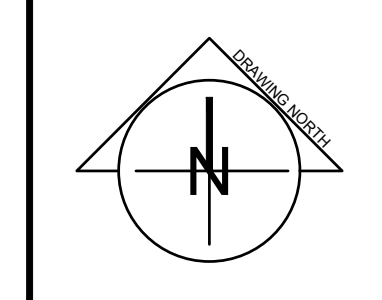


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0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS



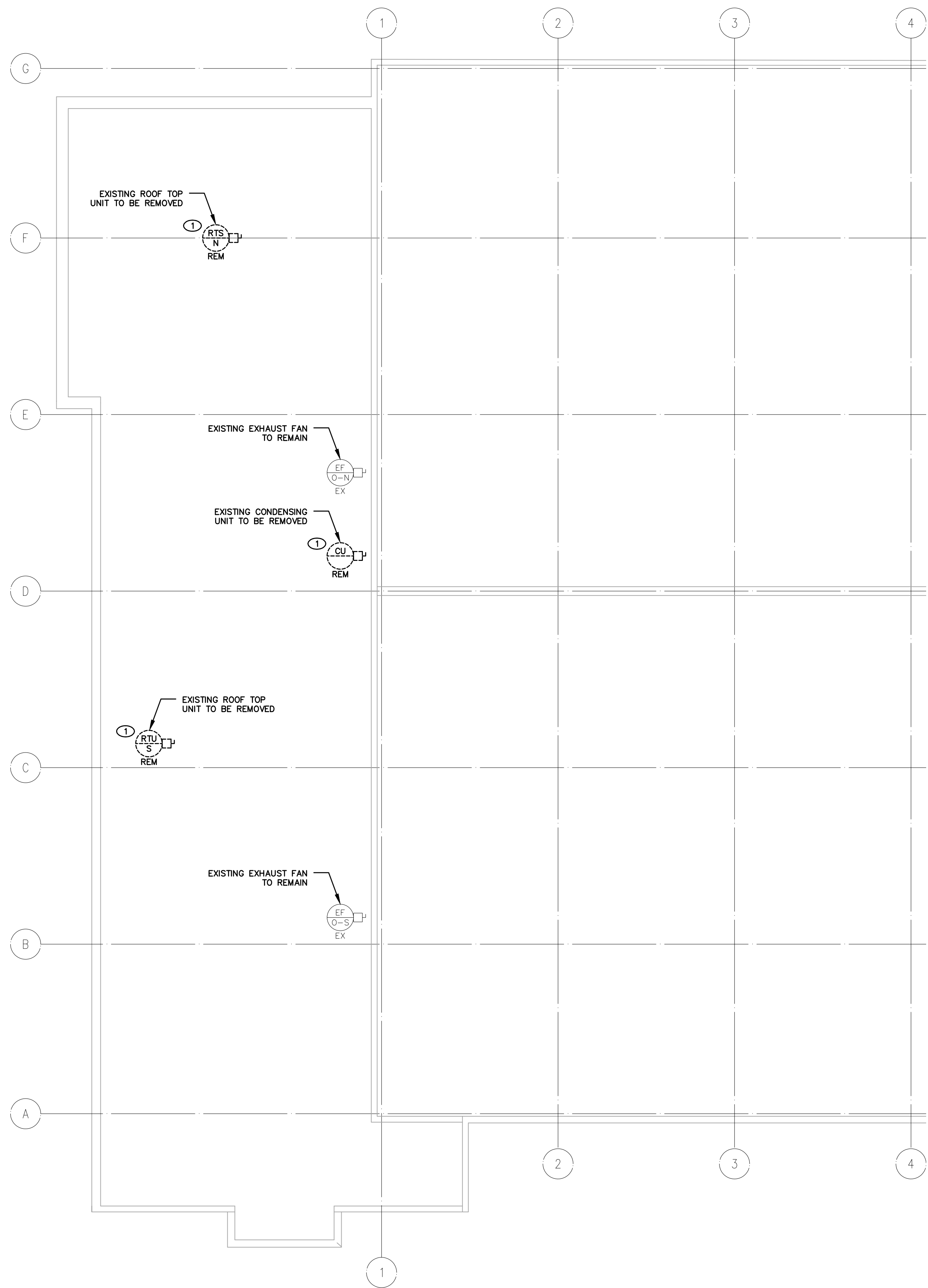
PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE
NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

DRAWING TITLE:
DEMOLITION POWER & SYSTEMS EAST GROUND FLOOR AND MEZZANINE

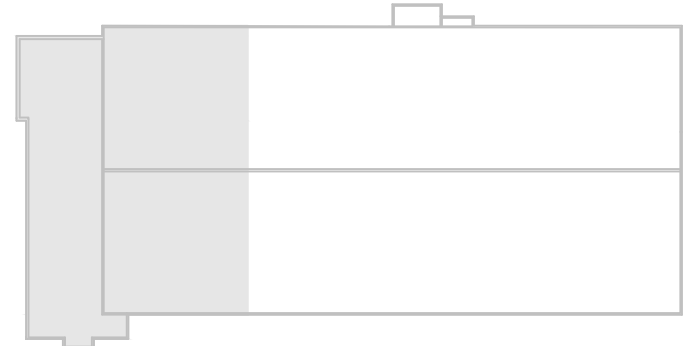
SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: **E402**

File: X:\Projects\2020\20-101 City of Niagara Falls-Municipal Service Centre_ARC\20-101 E403 EXISTING POWER & SYSTEMS - WEST ROOF.dwg
May 06, 2021 - 08:26am Plotted by: Brennan



DRAWING NOTES:
 ① EXISTING MECHANICAL UNIT TO BE REMOVED. DEMOLISH ALL WIRE, CONDUIT AND JUNCTION BOXES BACK TO SOURCE PANEL/DISCONNECT.

GENERAL NOTES

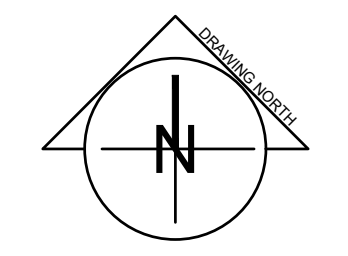


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REVISIONS



PROJECT:
 NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

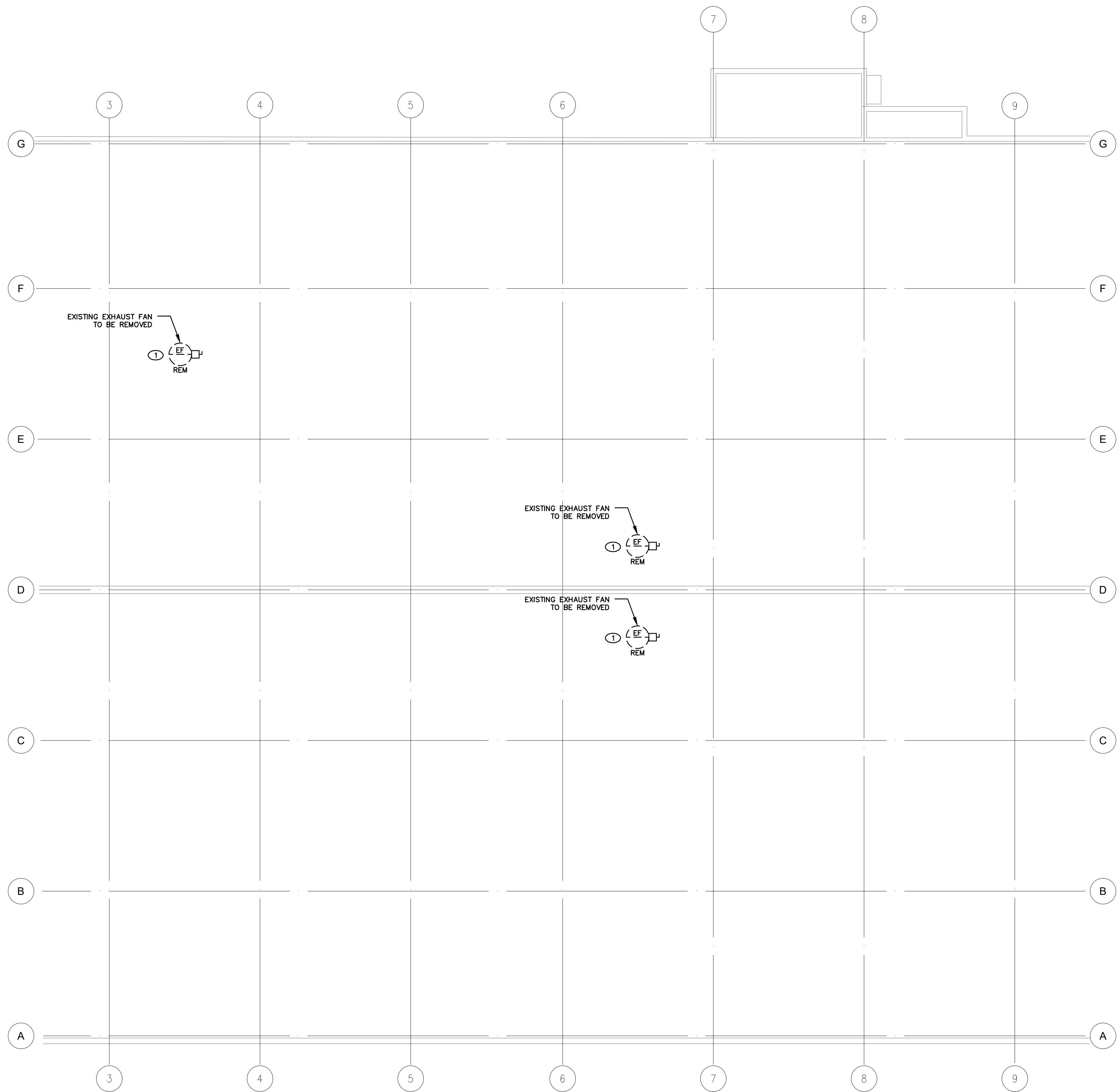
START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

DRAWING TITLE:
 DEMOLITION POWER & SYSTEMS WEST ROOF

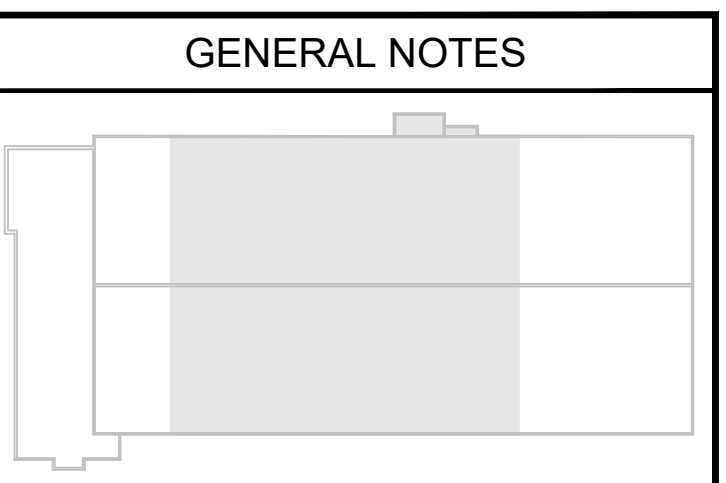
SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: E403

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

File: X:\Projects\2020\20-101 City of Niagara Falls-Municipal Service Centre_ARC\20-101 E404 EXISTING POWER & SYSTEMS - ROOF CENTRAL.dwg
May 06, 2021 - 08:26am Plotted by: Brennan



DRAWING NOTES:
 ① EXISTING MECHANICAL UNIT TO BE REMOVED. DEMOLISH ALL WIRE, CONDUIT AND JUNCTION BOXES BACK TO SOURCE PANEL/DISCONNECT.

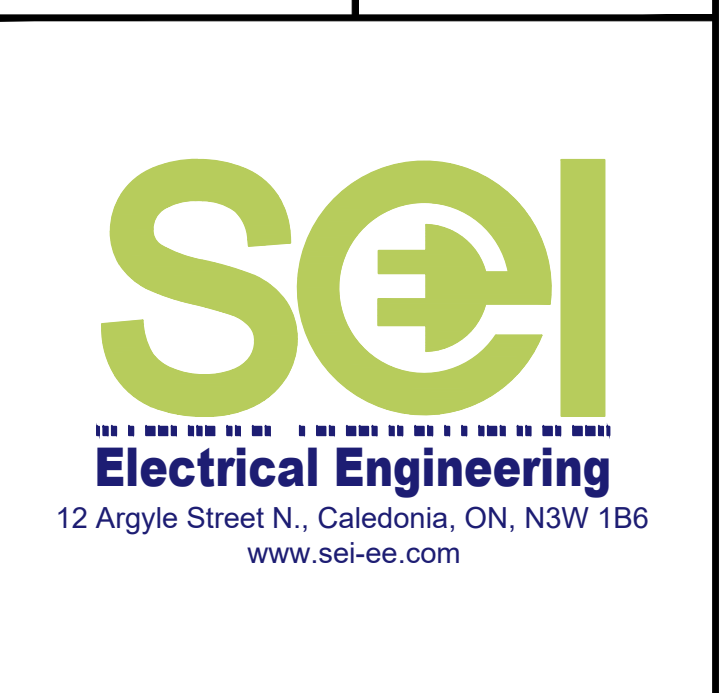
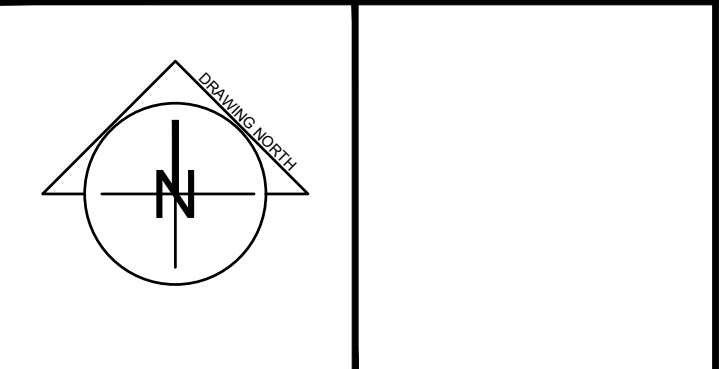


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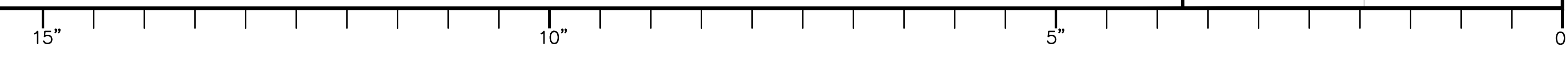
PROJECT:
 NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

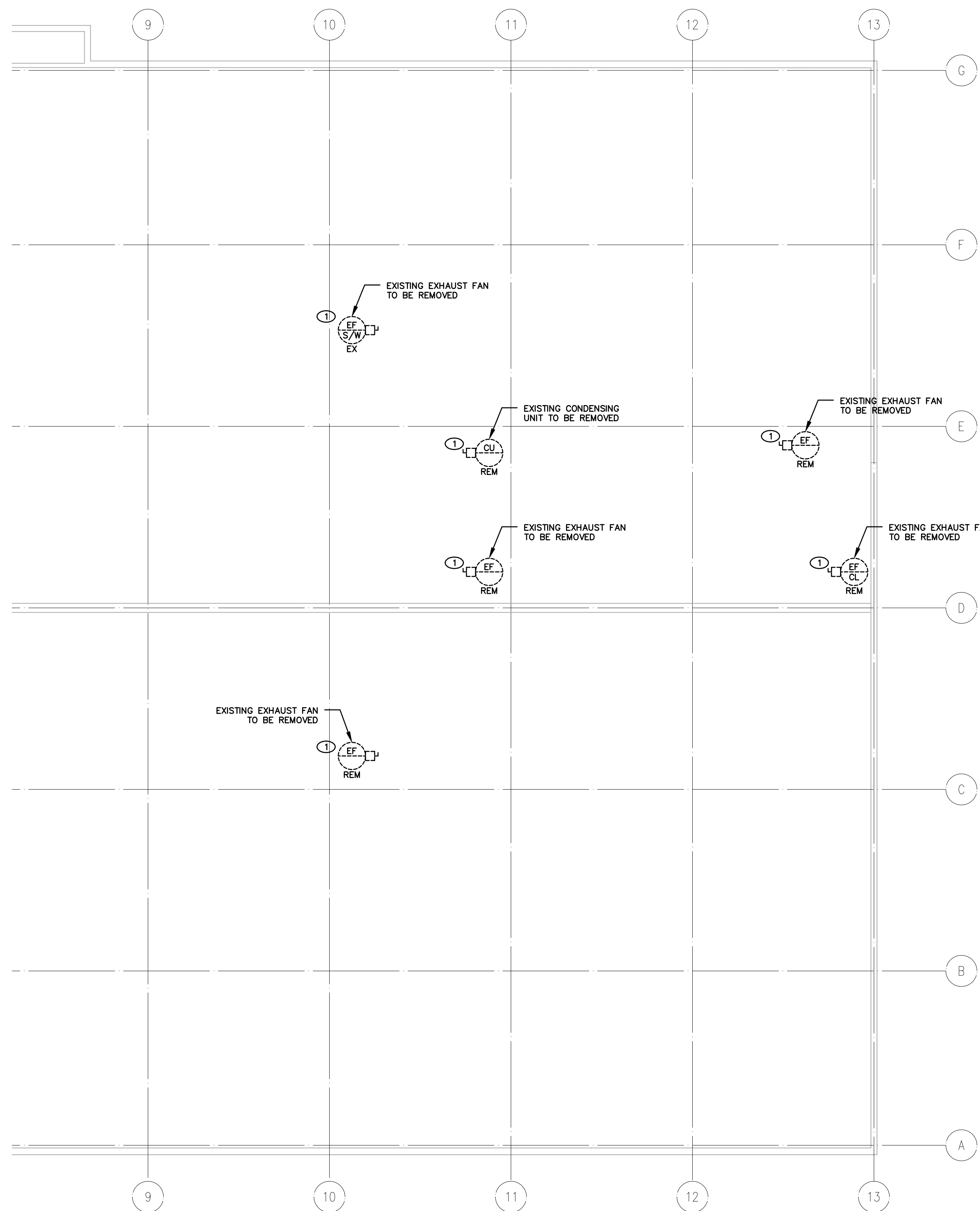
DRAWING TITLE:
 DEMOLITION POWER & SYSTEMS CENTRAL ROOF

SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: E404

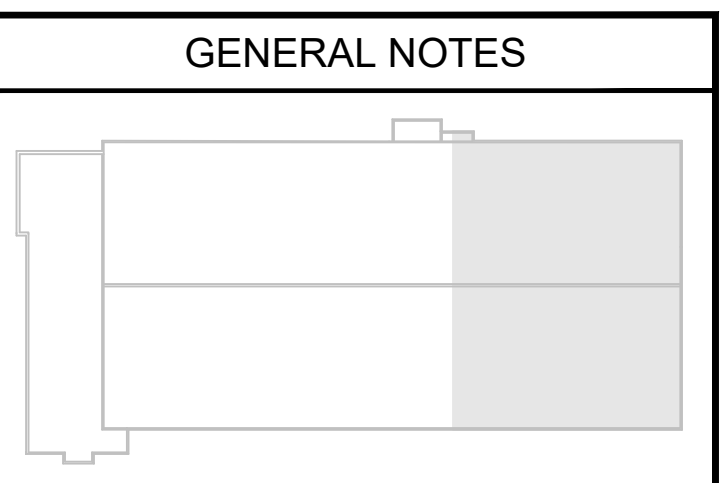
1 CENTRAL ROOF -- DEMOLITION
 SCALE: 1/8"=1'-0"



File: X:\Projects\2020\20-101 City of Niagara Falls-Municipal Service Centre_ARC\20-101 E405 EXISTING POWER & SYSTEMS - ROOF EAST.dwg
May 06, 2021 - 08:28am Plotted by: Brennan



DRAWING NOTES:
 ① EXISTING MECHANICAL UNIT TO BE REMOVED. DEMOLISH ALL WIRE, CONDUIT AND JUNCTION BOXES BACK TO SOURCE PANEL/DISCONNECT.



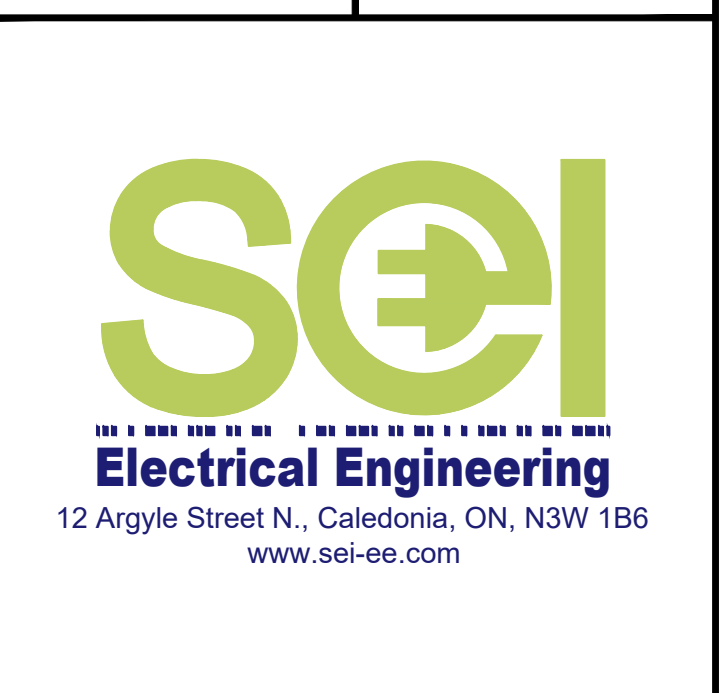
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REVISIONS

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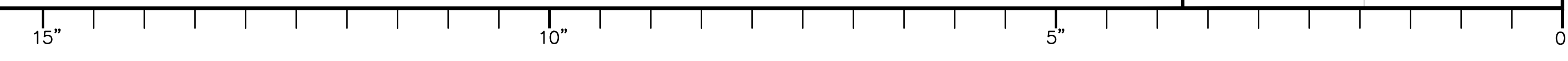
PROJECT:
 NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

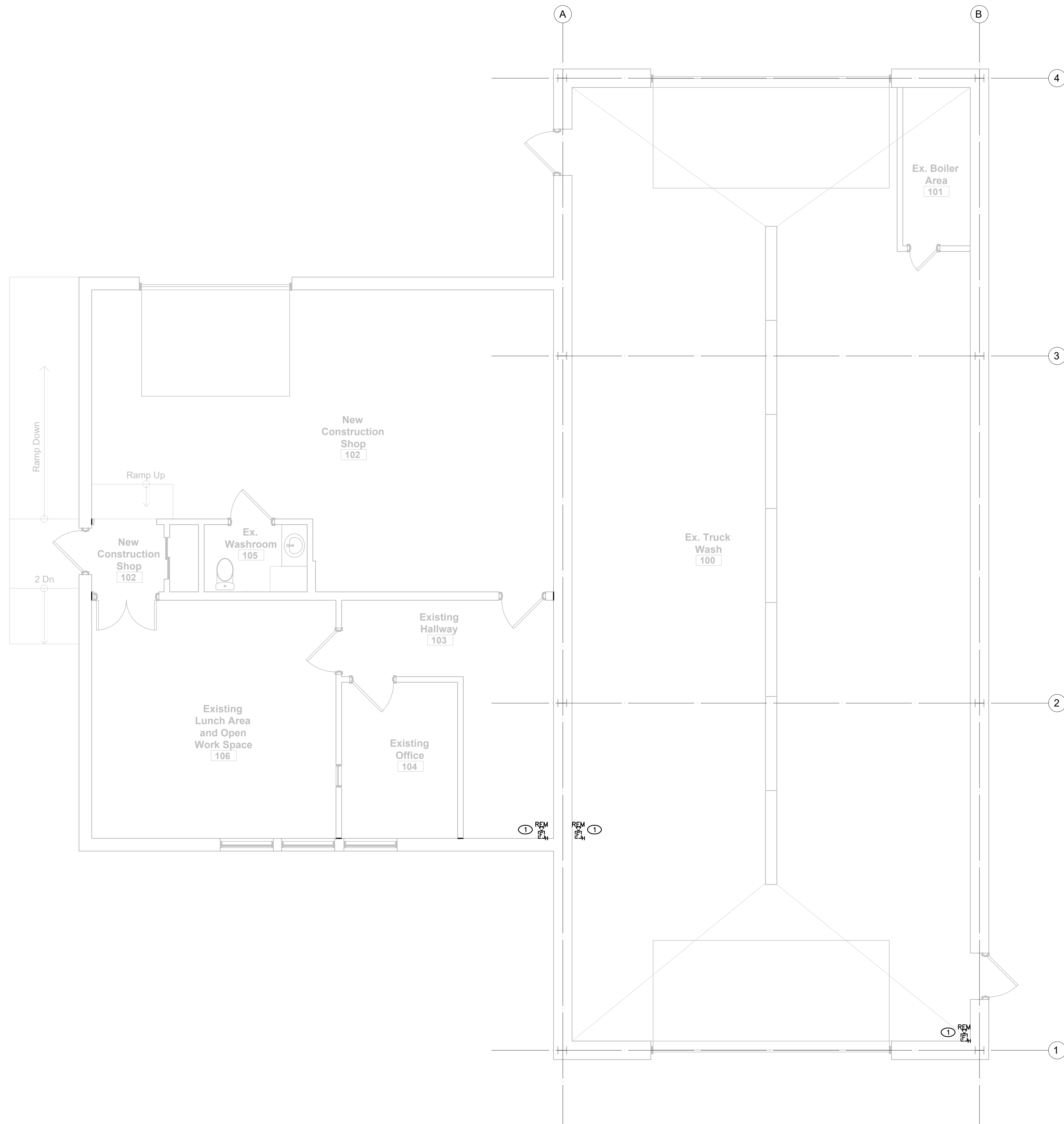
DRAWING TITLE:
 DEMOLITION POWER & SYSTEMS EAST ROOF

SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: E405

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

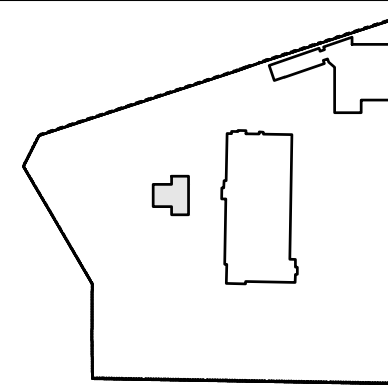


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May 06, 2021 - 08:28am Plotted by: Brennan



DRAWING NOTES:
 ① EXISTING FIRE ALARM DEVICES TO BE REMOVED IN TRUCK WASH BUILDING FOR NEW SYSTEM UPGRADES. REFER TO NEW POWER PLANS.

GENERAL NOTES

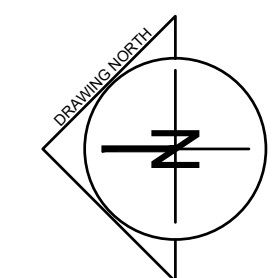


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0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

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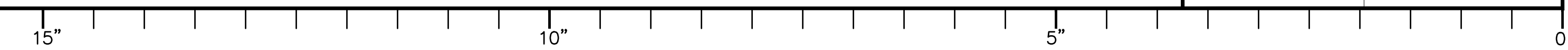
PROJECT:
 NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

DRAWING TITLE:
 DEMOLITION POWER & SYSTEMS MUNICIPAL TRUCK WASH AND SMALL ENGINE BUILDING

SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: E406

1 MUNICIPAL TRUCK WASH AND SMALL ENGINE BUILDING
 SCALE: 1/4"=1'-0"



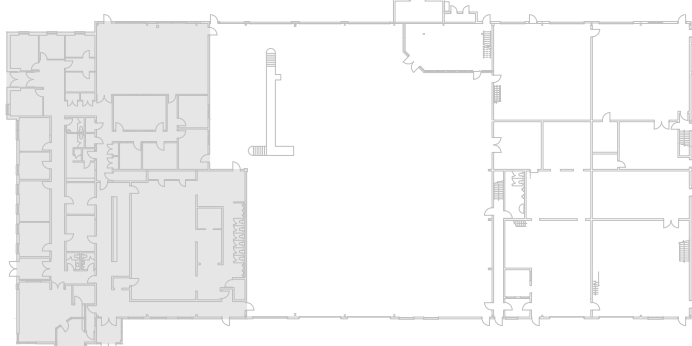
File: X:\Projects\2020\20-101_City of Niagara Falls-Municipal Service Centre_ARC\20-101 E500 REVISED POWER & SYSTEMS - GRND FLOOR & MECH MEZZANINE.dwg
May 06, 2021 08:26am Plotted by: Brennan

- GENERAL NOTES:**
- (A) CONTRACTOR TO FIELD VERIFY CONNECTIONS TO EXISTING CIRCUITS WHERE SHOWN. NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - (B) COORDINATE WITH MECHANICAL FOR EQUIPMENT REQUIRING LOCAL POWER DISCONNECT. ELECTRICAL CONTRACTOR TO PROVIDE IF NOT INCLUDED WITH NEW MECHANICAL UNIT.

- DRAWING NOTES:**
- (1) NEW ADDRESSABLE FIRE ALARM CONTROL PANEL. ALL NEW DEVICES TO BE ADDRESSABLE TYPE AND CONNECTED TO ZONING AS SHOWN.
 - (2) PROVIDE NEW 20A-1P BREAKER IN EXISTING PANEL FOR DEDICATED 120V CIRCUIT TO NEW EXHAUST FAN. UTILIZE SPARE CIRCUIT MADE AVAILABLE DURING DEMOLITION.
 - (3) CONFIRM ELECTRICAL ROOM LAYOUT FOR NEW DISTRIBUTION EQUIPMENT (SERVICE DISCONNECT, TRANSFORMER, TRANSFER SWITCH, ETC) PRIOR TO ROUGH-IN. ALL FLOOR MOUNT EQUIPMENT TO BE MOUNTED ON 4" CONCRETE HOUSE KEEPING PAD. COORDINATE WITH STRUCTURAL.

- (4) ALL NEW ELECTRICAL EQUIPMENT ARE TO BE BROUGHT UP THROUGH THE EXISTING MECHANICAL MEZZANINE STAIRWELL.
- (5) CONFIRM NEW BAS PANEL LOCATION WITH MECHANICAL DIVISION PRIOR TO ROUGH-IN. PROVIDE CAT6 DATA CABLE CONNECTION FROM THE WEST MECHANICAL ROOM IN 1" EMT CONDUIT. THE MAIN BAS WILL BE LOCATED IN THE WEST MECHANICAL ROOM AND A SLAVE CONTROLLER WILL BE LOCATED IN THE EAST MECHANICAL ROOM.

GENERAL NOTES

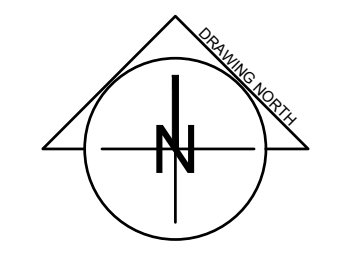


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0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS

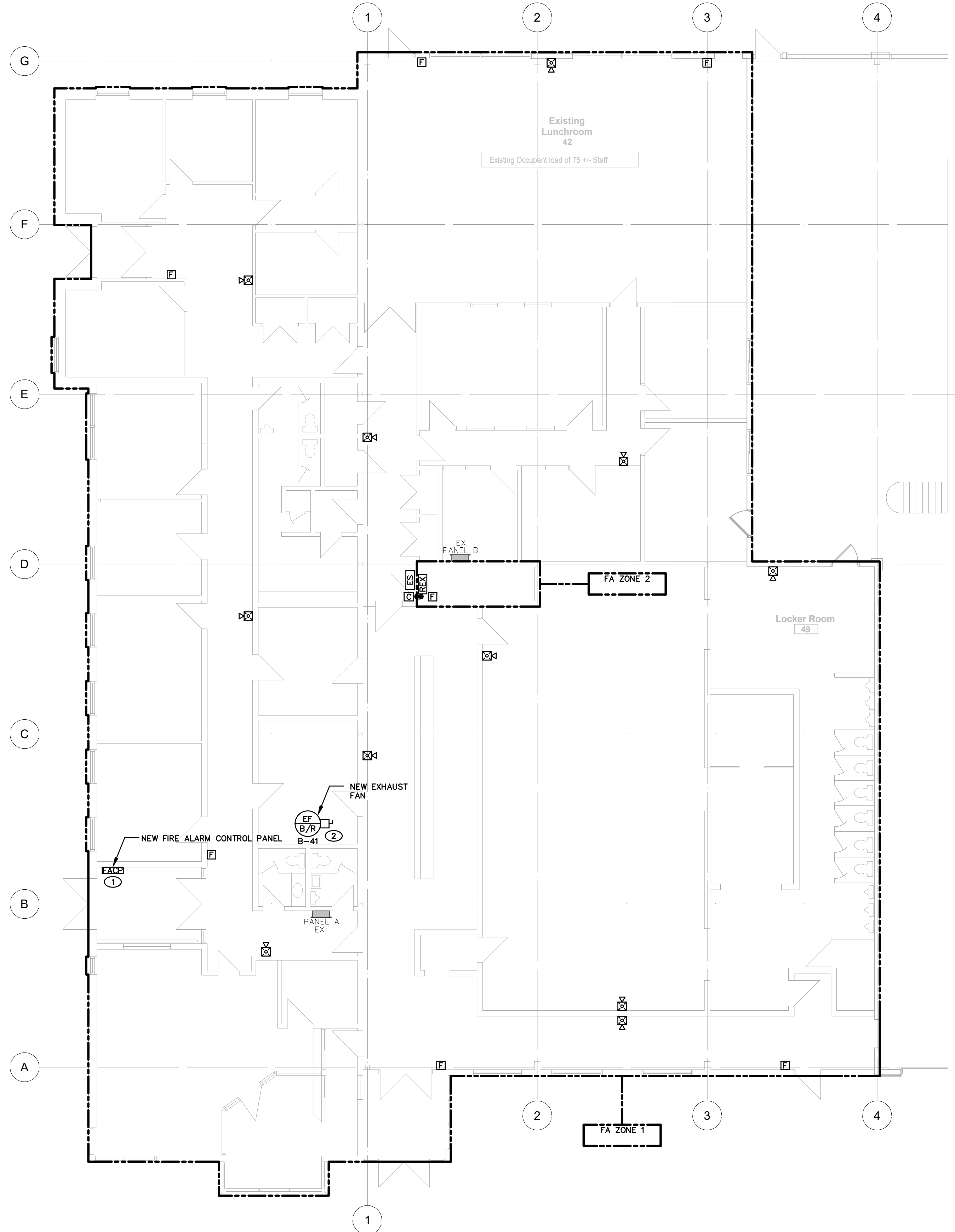


PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

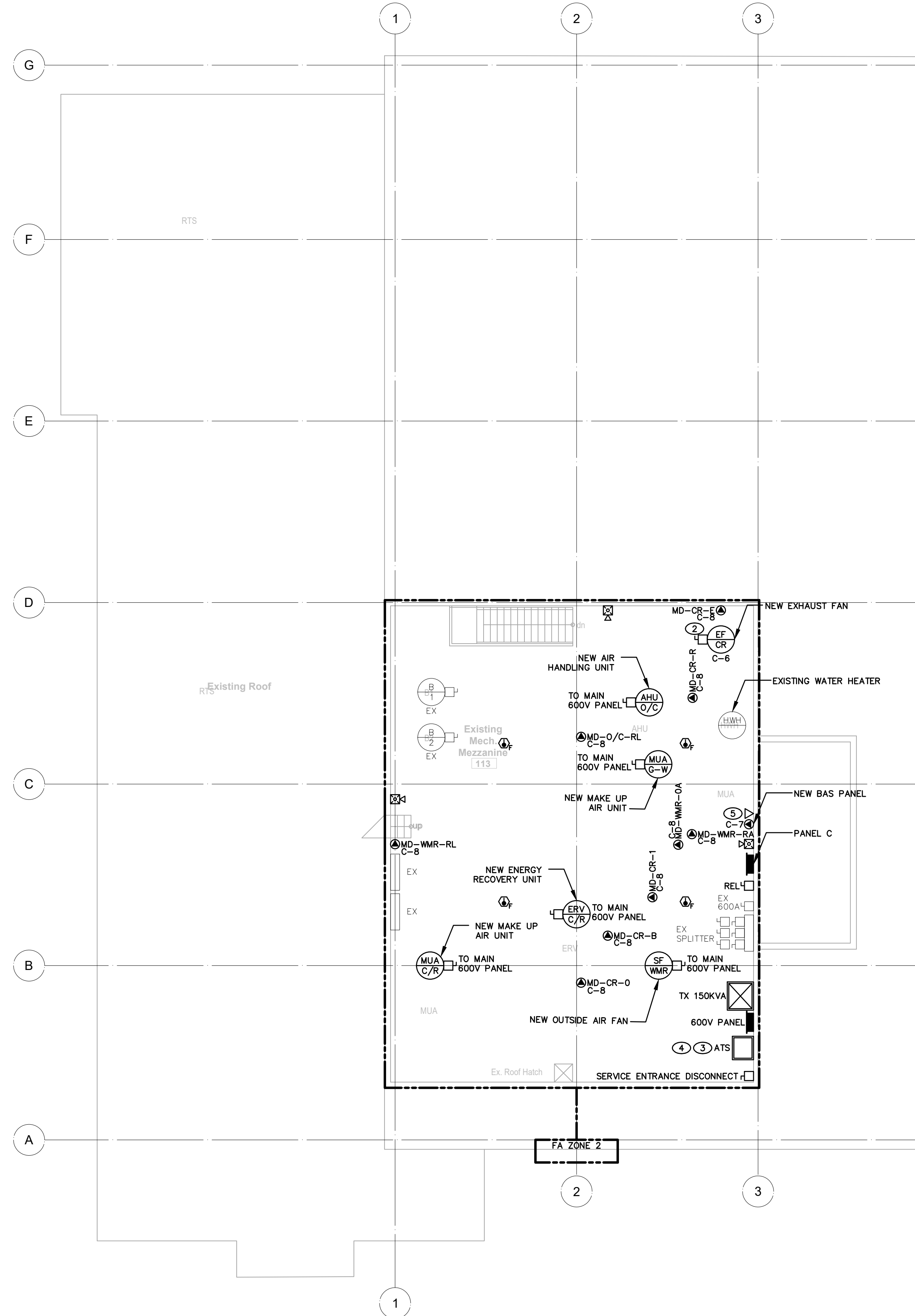
START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

DRAWING TITLE:
REVISED POWER & SYSTEMS GROUND FLOOR AND MECHANICAL MEZZANINE

SCALE: AS NOTED
DRAWING No.: E500
PROJECT: 20-101

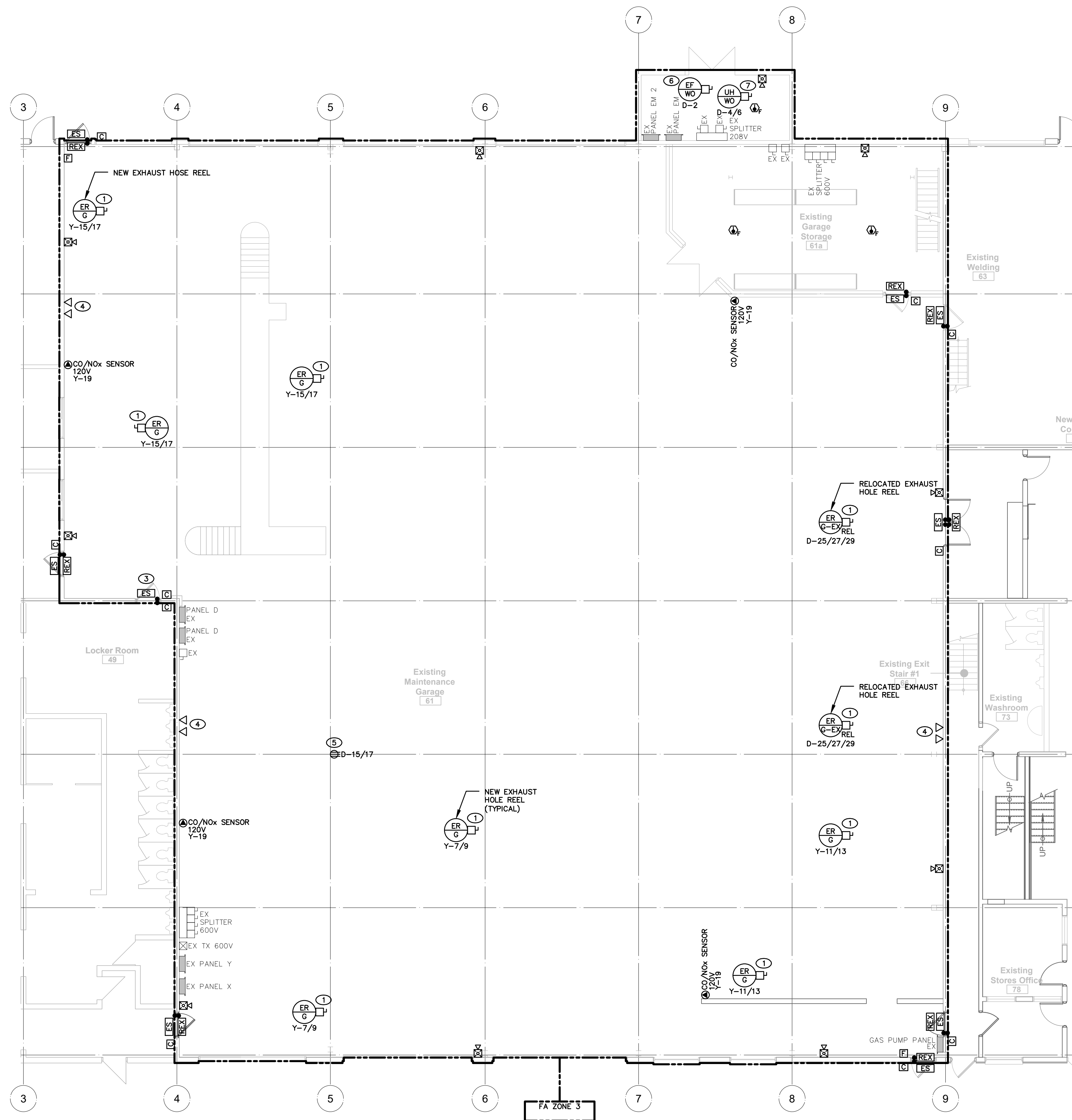


1 GROUND FLOOR WEST PLAN - REVISED
SCALE: 1/8"=1'-0"

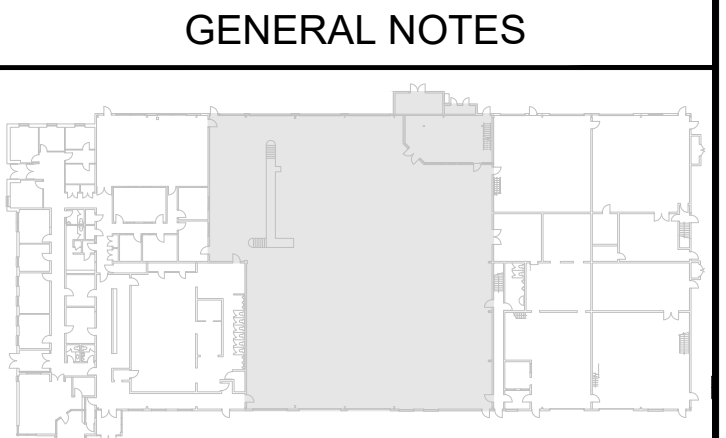


2 MECHANICAL MEZZANINE AND ROOF PLAN - REVISED
SCALE: 1/8"=1'-0"

File: X:\Projects\2020\20-101_City of Niagara Falls--Municipal Service Centre_ARC\20-101 E501 REVISED POWER & SYSTEMS - SERVICE CENTRE.dwg
May 06, 2021 08:26am Plotted by: Brennan



- GENERAL NOTES:**
- Ⓐ CONTRACTOR TO FIELD VERIFY CONNECTIONS TO EXISTING CIRCUITS WHERE SHOWN. NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - Ⓑ COORDINATE WITH MECHANICAL FOR EQUIPMENT REQUIRING LOCAL POWER DISCONNECT. ELECTRICAL CONTRACTOR TO PROVIDE IF NOT INCLUDED WITH NEW MECHANICAL UNIT.
- DRAWING NOTES:**
- ① NEW ELECTRIC MOTOR DRIVEN EXHAUST HOSE REEL SUPPLIED BY MECHANICAL DIVISION AND WIRED BY ELECTRICAL CONTRACTOR. INSTALL AS PER MANUFACTURER'S INSTRUCTIONS FOR POWER AND CONTROL WIRING TO ALL COMPONENTS/ACCESSORIES SUPPLIED. CONFIRM EQUIPMENT DISCONNECT LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
 - ② NEW CO/NO2 SENSORS BY MECHANICAL DIVISION. PROVIDE DEDICATED 120V CIRCUIT AND 15A-1P BREAKER.
 - ③ REFER TO ELECTRICAL DETAILS FOR NEW DOOR SECURITY HARDWARE. DOORS SHOWN WITH CARD READERS ON ENTRANCE AND EGRESS SIDES TO RELEASE UPON FIRE ALARM SIGNAL.
 - ④ PROVIDE NEW DATA OUTLETS IN MECHANICS BAY. CONFIRM LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
 - ⑤ PROVIDE NEW WELDING RECEPTACLE MOUNTED TO EXISTING COLUMN. CONFIRM LOCATION WITH OWNER PRIOR TO ROUGH-IN. PROVIDE NEW 50A-2P BREAKER IN EXISTING PANEL.
 - ⑥ PROVIDE DEDICATED 120V CIRCUIT TO NEW EXHAUST FAN FROM NEW 15A-1P BREAKER IN EXISTING PANEL.
 - ⑦ PROVIDE DEDICATED 208V CIRCUIT TO NEW ELECTRIC UNIT HEATER FROM NEW 30A-2P BREAKER IN EXISTING PANEL.

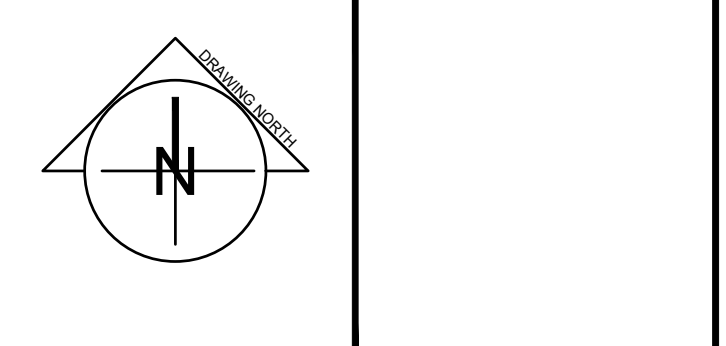


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0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS



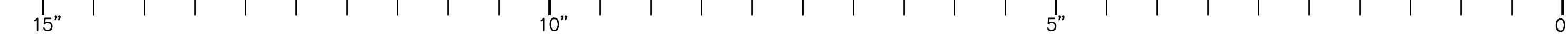
PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE
NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

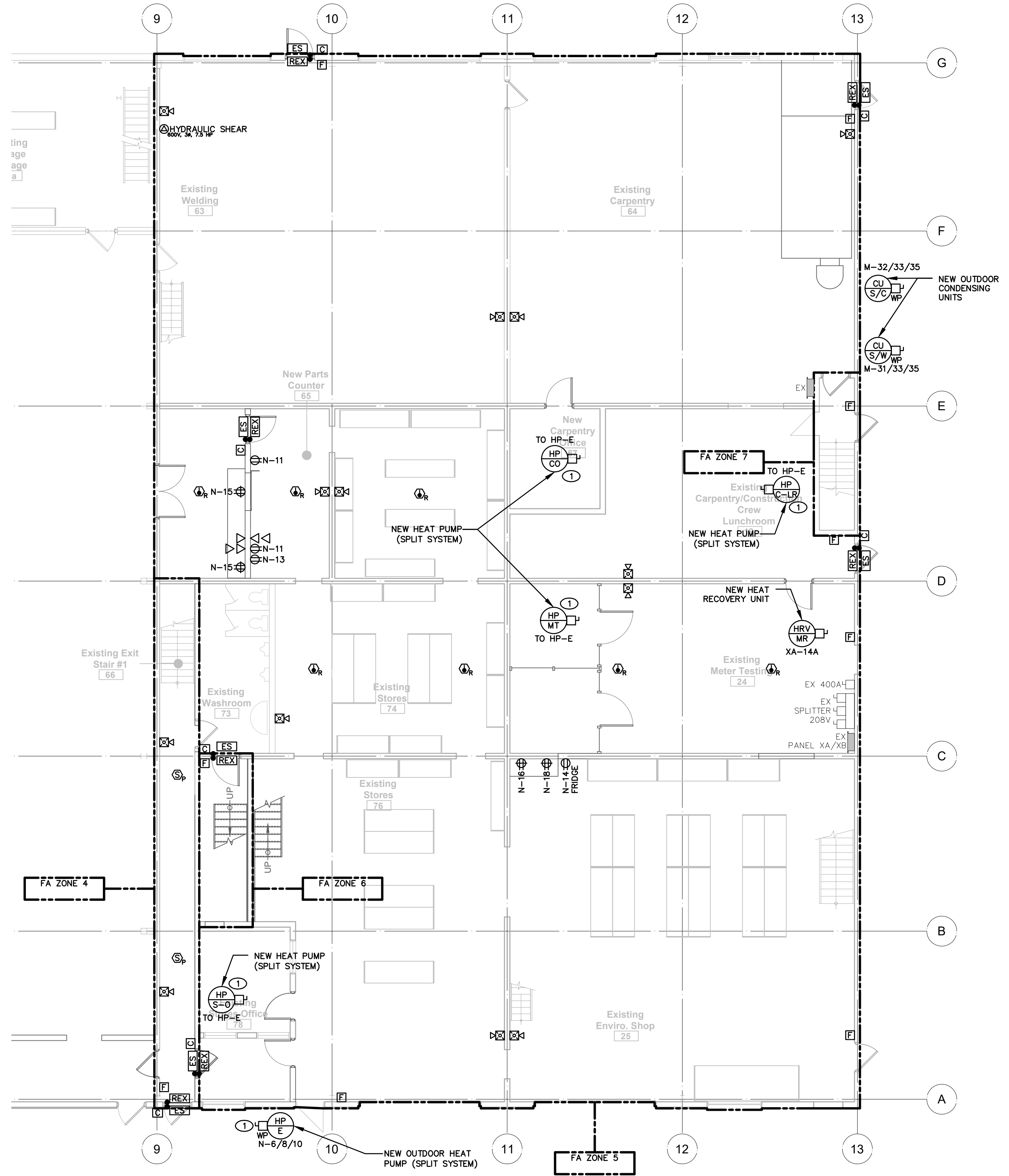
DRAWING TITLE:
REVISED POWER & SYSTEMS SERVICE CENTRE

SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: E501

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

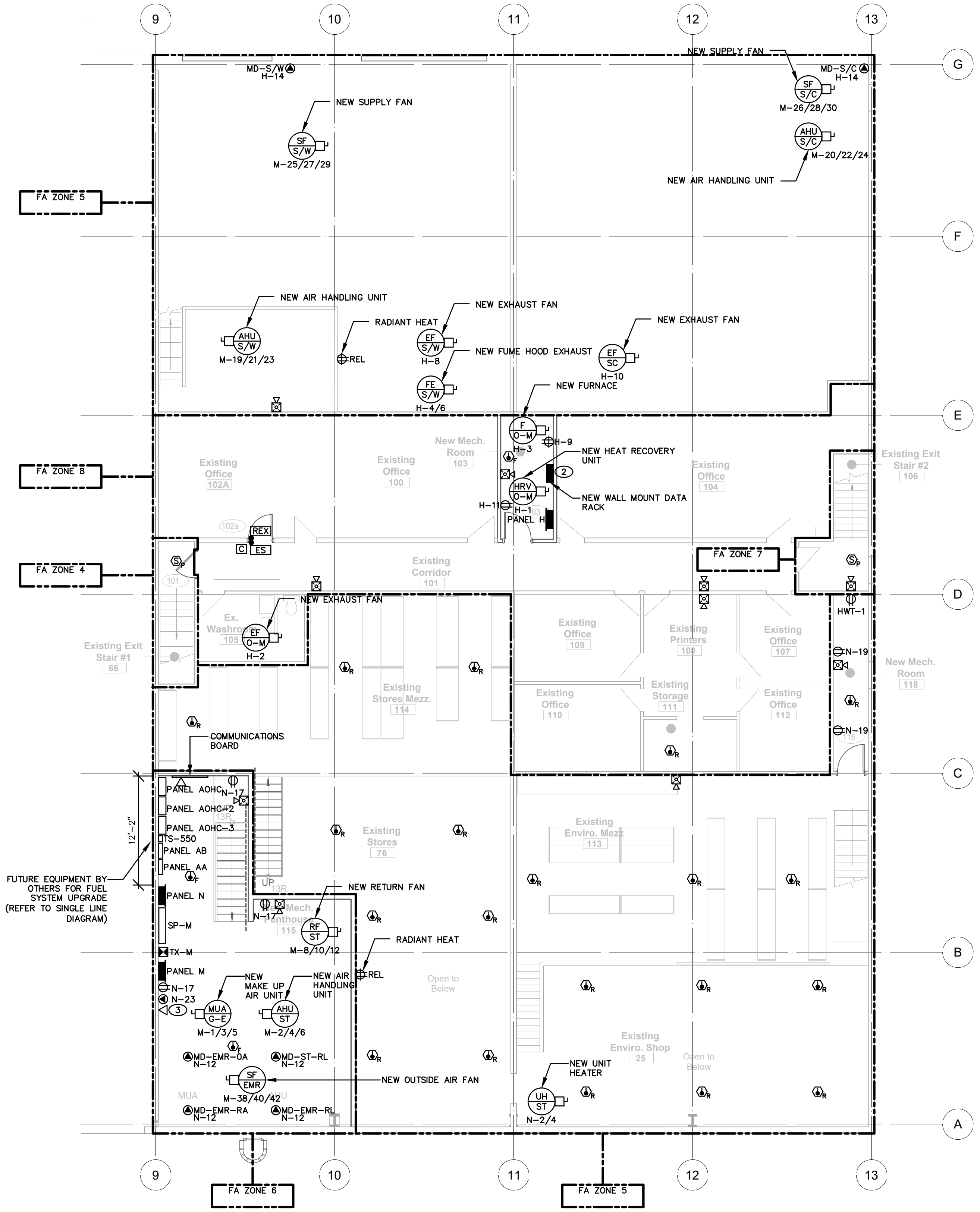


File: X:\Projects\2020\20-101_City of Niagara Falls-Municipal Service Centre_ARC\20-101 E502 REVISED POWER & SYSTEMS - EAST GROUND FLOOR & MEZZANINE.dwg
May 06, 2021 08:26am Plotted by: Brennan



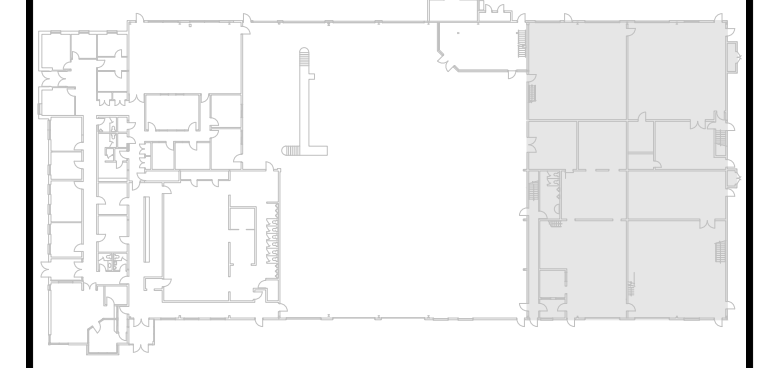
1 GROUND FLOOR EAST PLAN -- REVISED
SCALE: 1/8"=1'-0"

- DRAWING NOTES:**
- NEW INDOOR/OUTDOOR HEAT PUMP SYSTEM. WIRE ALL NEW HEAT PUMPS TO OUTDOOR CONDENSING UNIT AS PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
 - CONFIRM NEW DATA RACK LOCATION WITH OWNER PRIOR TO ROUGH IN. ALL NEW DATA OUTLETS ARE TO HOME RUN TO THIS LOCATION. CONNECT EXISTING OFFICE VOICE/DATA WIRING AS REQUIRED.
 - CONFIRM NEW BAS PANEL LOCATION WITH MECHANICAL DIVISION PRIOR TO ROUGH-IN. PROVIDE A CAT6 DATA CABLE CONNECTION FROM THE WEST MECHANICAL ROOM TO THE EAST MECHANICAL ROOM IN 1" EMT CONDUIT. THE MAIN BAS WILL BE LOCATED IN THE WEST MECHANICAL ROOM AND A SLAVE CONTROLLER WILL BE LOCATED IN THE EAST MECHANICAL ROOM



2 EAST MEZZANINE FLOOR PLAN -- REVISED
SCALE: 1/8"=1'-0"

GENERAL NOTES

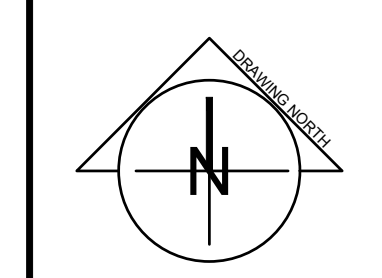


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1	RE-ISSUED FOR PERMIT	DEC 3, 2020	K.S.
0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS



PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

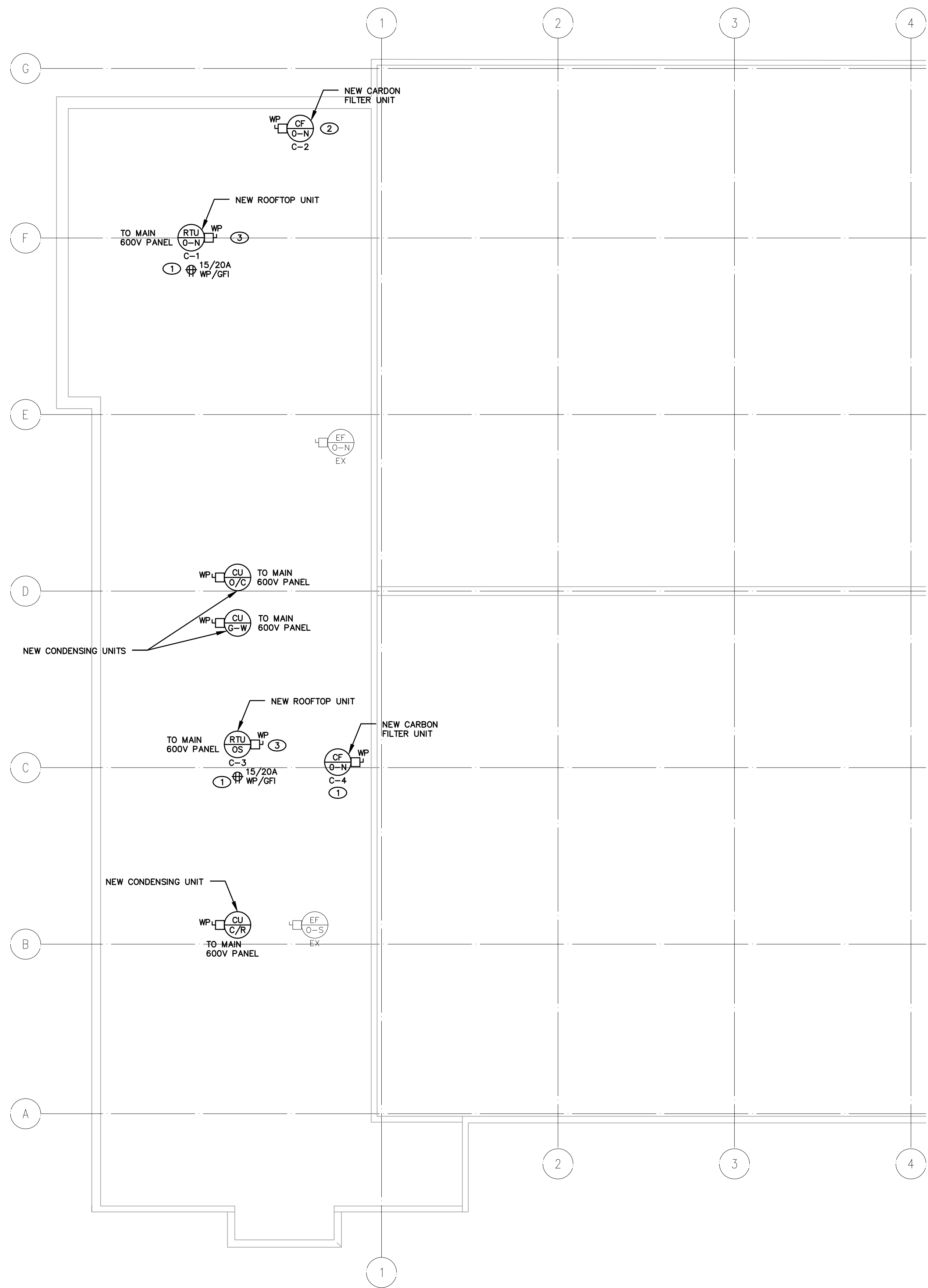
START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

DRAWING TITLE:
REVISED POWER & SYSTEMS EAST GROUND FLOOR AND MEZZANINE

SCALE: AS NOTED
DRAWING No.: **E502**
PROJECT: 20-101



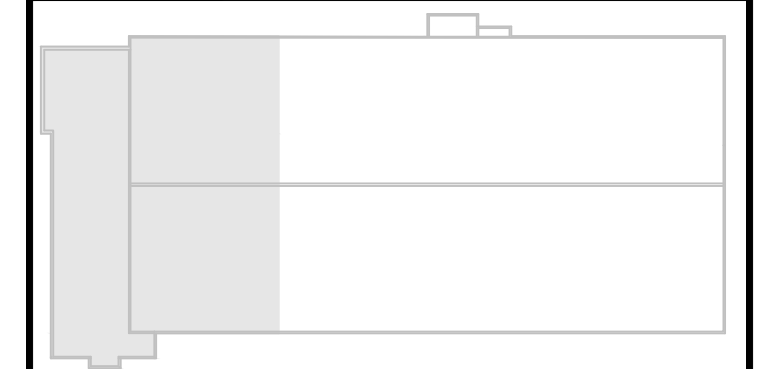
File: X:\Projects\2020\20-101_City of Niagara Falls--Municipal Service Centre_ARC\20-101 E503 REVISED POWER & SYSTEMS - WEST ROOF.dwg
May 06, 2021 - 08:26am Plotted by: Breanna



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

- DRAWING NOTES:**
- ① PROVIDE DEDICATED ROOFTOP MAINTENANCE RECEPTION AS REQUIRED BY ESA. REFER TO SPECIFICATIONS.
 - ② PROVIDE DEDICATED POWER CIRCUIT TO NEW CARBON FILTER UNIT PROVIDED BY MECHANICAL DIVISION.
 - ③ PROVIDE DEDICATED POWER CIRCUIT TO NEW HVAC UNIT PROVIDED BY MECHANICAL DIVISION.

GENERAL NOTES

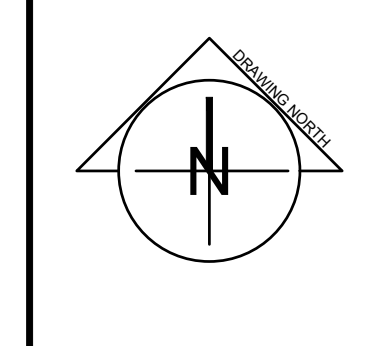


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0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS



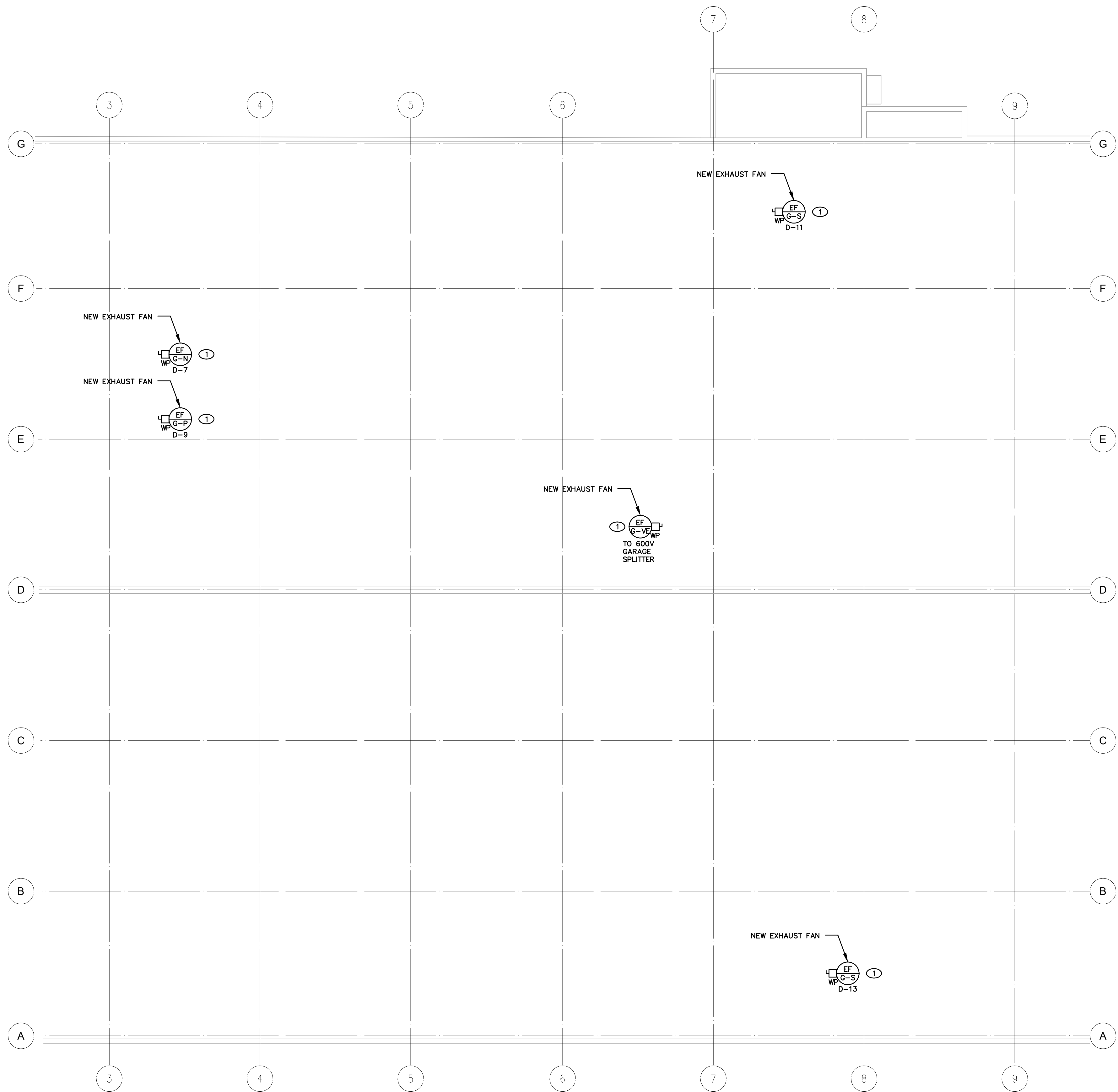
PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: JULY 2020	DRAWN BY: B.M.	DESIGNED BY: P.S.
--------------------------	-------------------	----------------------

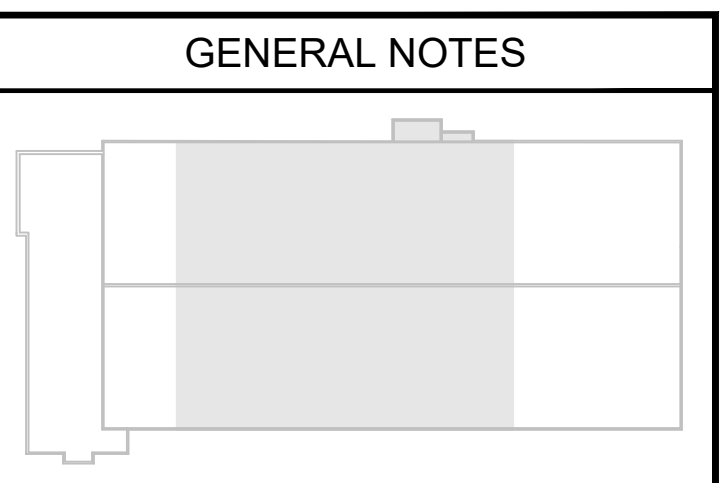
DRAWING TITLE:
REVISED POWER & SYSTEMS WEST ROOF

SCALE: AS NOTED	DRAWING No.:
PROJECT: 20-101	E503

File: X:\Projects\2020\20-101_City of Niagara Falls-Municipal Service Centre_ARC\20-101 E504 REVISED POWER & SYSTEMS - ROOF CENTRAL.dwg
May 06, 2021 - 08:26am Plotted by: Brennan



DRAWING NOTES:
 ① PROVIDE DEDICATED POWER CIRCUIT TO NEW EXHAUST FAN UNIT PROVIDED BY MECHANICAL DIVISION.



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REVISIONS

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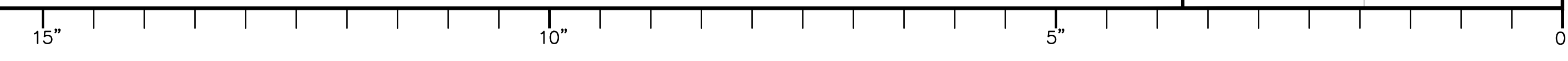
PROJECT:
 NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

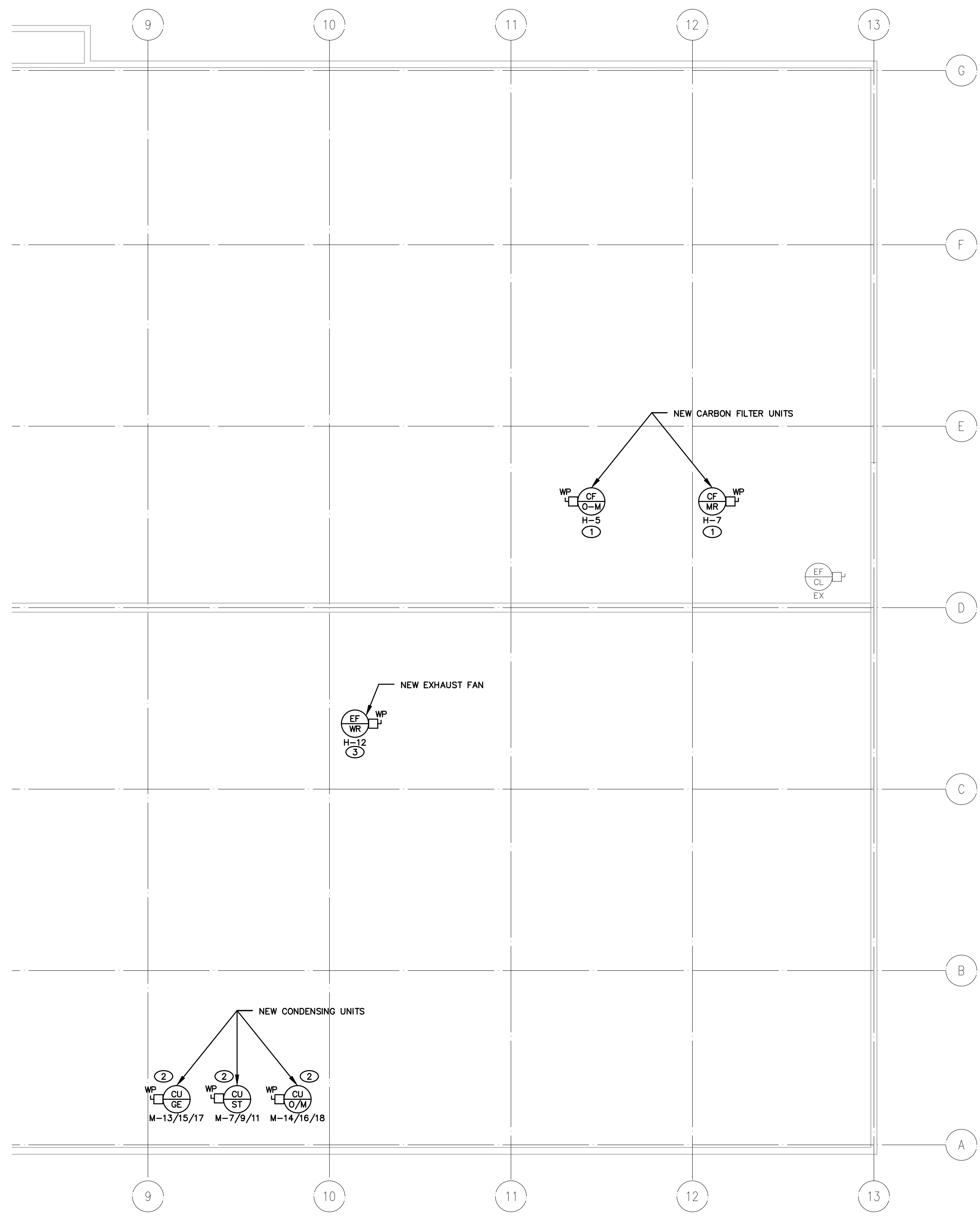
DRAWING TITLE:
 REVISED POWER & SYSTEMS CENTRAL ROOF

SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: E504

1 CENTRAL ROOF -- DEMOLITION
 SCALE: 1/8"=1'-0"

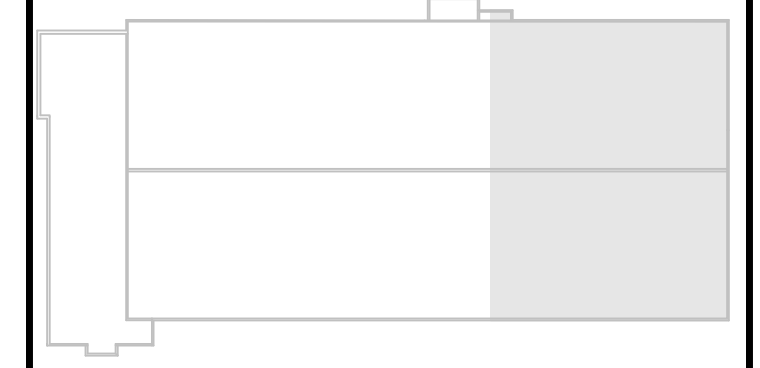


File: X:\Projects\2020\20-101 City of Niagara Falls-Municipal Service Centre_ARC\20-101 E505 REVISED POWER & SYSTEMS - ROOF EAST.dwg
May 06, 2021 - 08:26am Plotted by: Brennan



- DRAWING NOTES:**
- ① PROVIDE DEDICATED POWER CIRCUIT TO NEW CARBON FILTER UNIT PROVIDED BY MECHANICAL DIVISION.
 - ② PROVIDE DEDICATED POWER CIRCUIT TO NEW HVAC UNIT PROVIDED BY MECHANICAL DIVISION.
 - ③ PROVIDE DEDICATED POWER CIRCUIT TO NEW EXHAUST FAN PROVIDED BY MECHANICAL DIVISION.

GENERAL NOTES

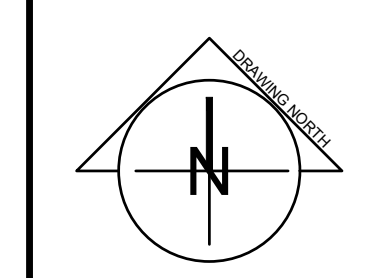


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REVISIONS



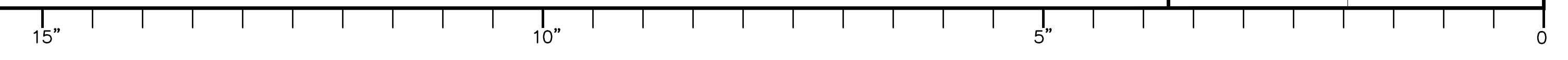
PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE,
NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

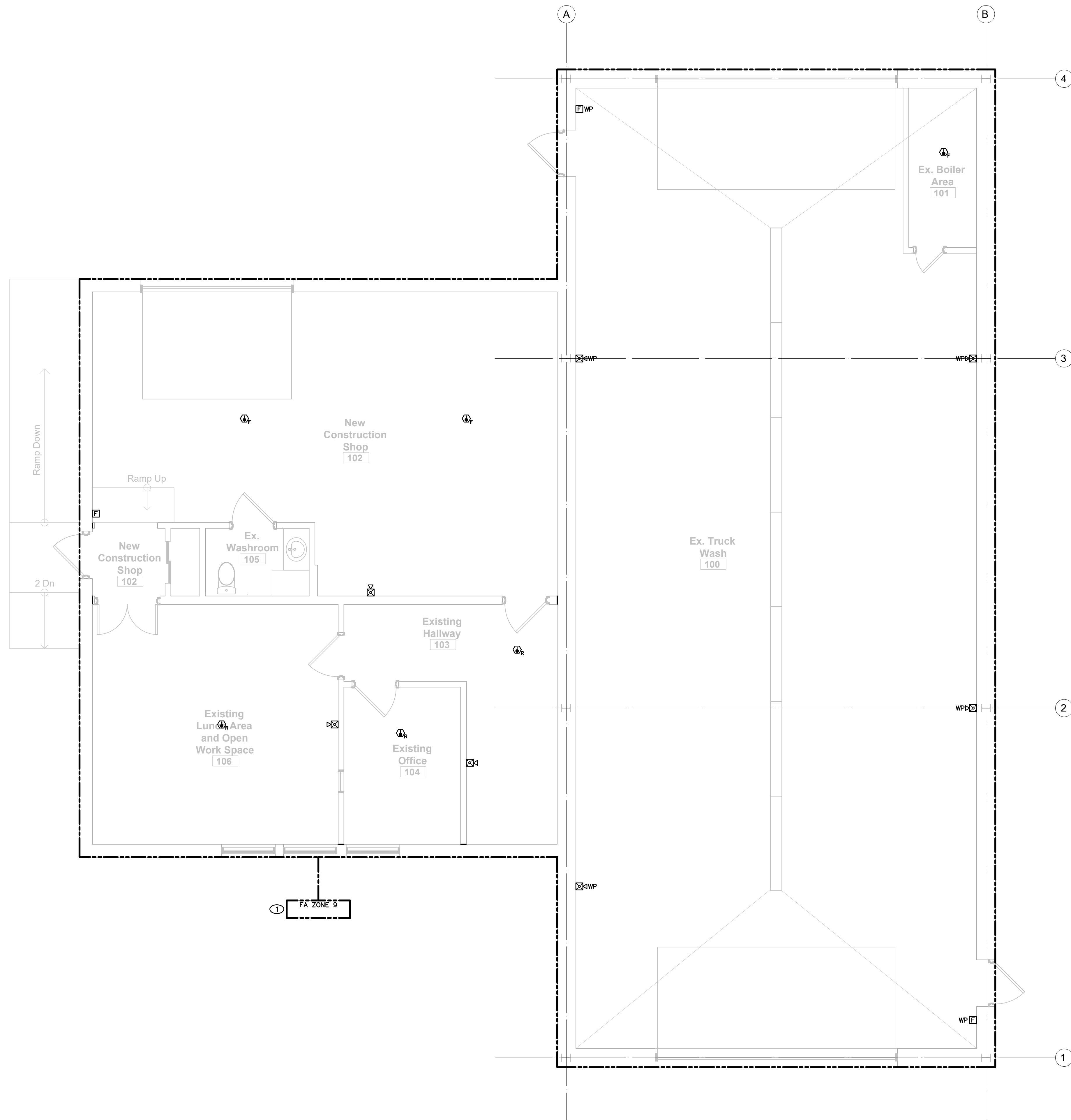
DRAWING TITLE:
REVISED POWER & SYSTEMS EAST ROOF

SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: E505

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

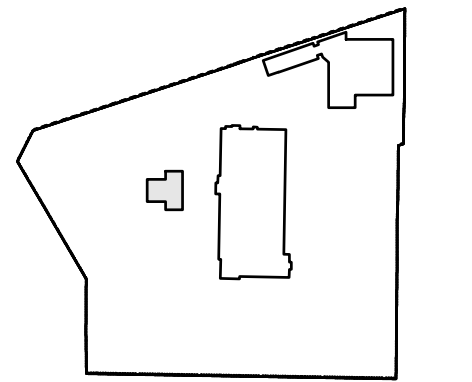


File: X:\Projects\2020\20-101_City of Niagara Falls--Municipal Service Centre_ARC\20-101 E506 REVISED POWER & SYSTEMS - MUNICIPAL TRUCK WASH AND SMALL ENGINE BUILDING.dwg
May 06, 2021 - 08:27am Plotted by: Brennan



DRAWING NOTES:
 ① PROVIDE DEDICATED FIRE ALARM ZONE FOR EXISTING TRUCK WASH AND SMALL ENGINE BUILDING. CONNECT ZONE TO FIRE PANEL IN SERVICE CENTRE BUILDING.

GENERAL NOTES

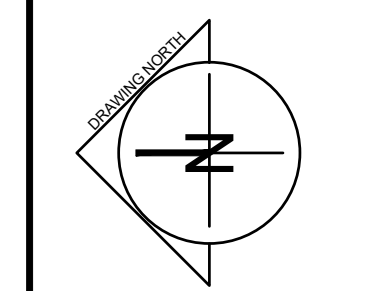


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0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS



PROJECT:
 NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

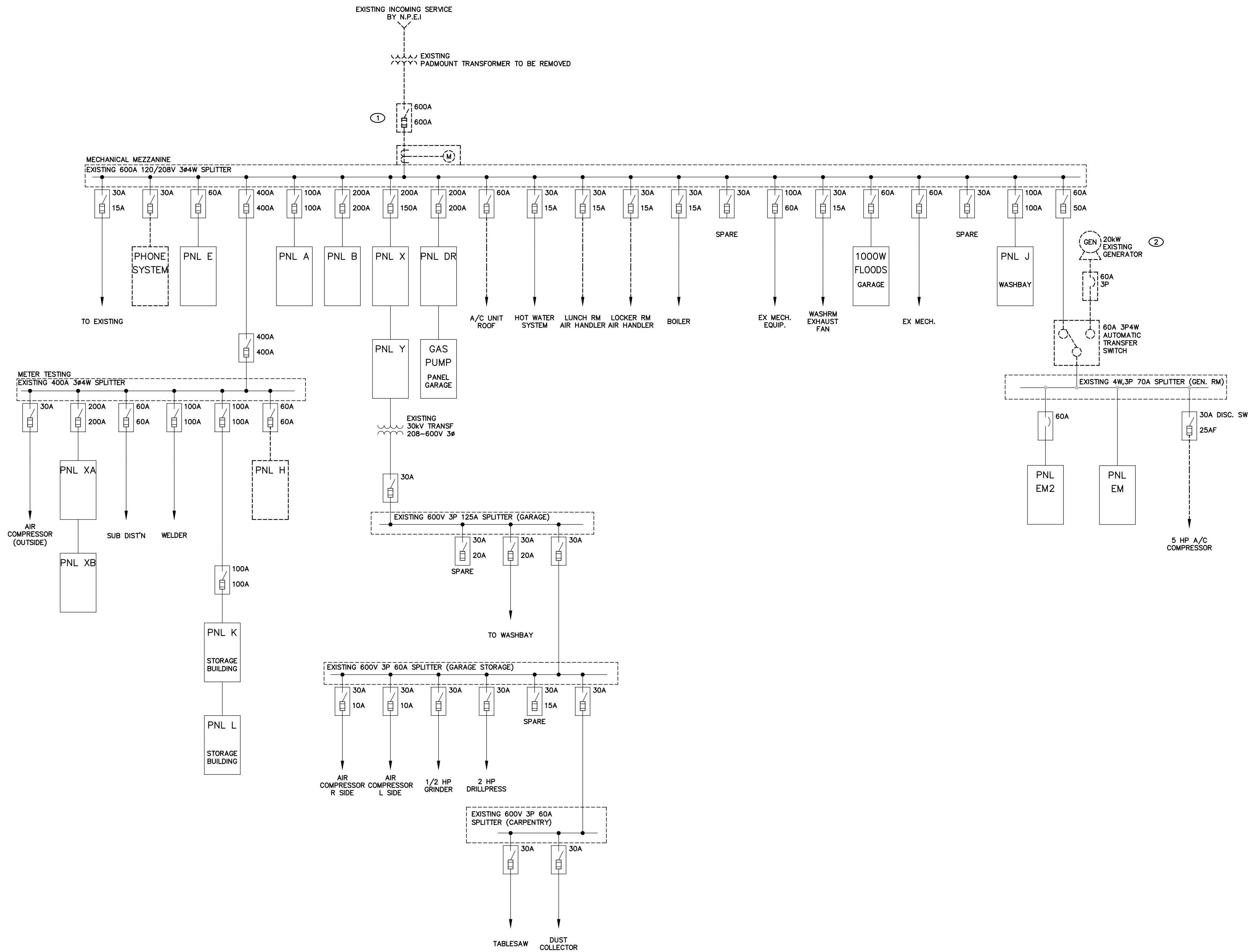
DRAWING TITLE:
 REVISED POWER & SYSTEMS MUNICIPAL TRUCK WASH AND SMALL ENGINE BUILDING

SCALE: AS NOTED
PROJECT: 20-101
DRAWING No.: E506

1 MUNICIPAL TRUCK WASH AND SMALL ENGINE BUILDING
 SCALE: 1/4"=1'-0"

15" 10" 5" 0

File: X:\Projects\2020\20-101 City of Niagara Falls-Municipal Service Centre_ARC\E\20-101 E600 DEMOLITION_SLD.dwg
May 06, 2021 - 08:27am Plotted by: Brennan



GENERAL NOTES

- ① EXISTING MAIN SERVICE ENTRANCE DISCONNECT SWITCH AND UTILITY METERING TO BE REMOVED FOR NEW ELECTRICAL SERVICE UPGRADE.
- ② EXISTING STANDBY GENERATOR AND ASSOCIATED COMPONENTS (CONTROL PANEL, BATTERIES, TRANSFER SWITCH, ETC.) TO BE REMOVED FOR GENERATOR UPGRADES.

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0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS



PROJECT:

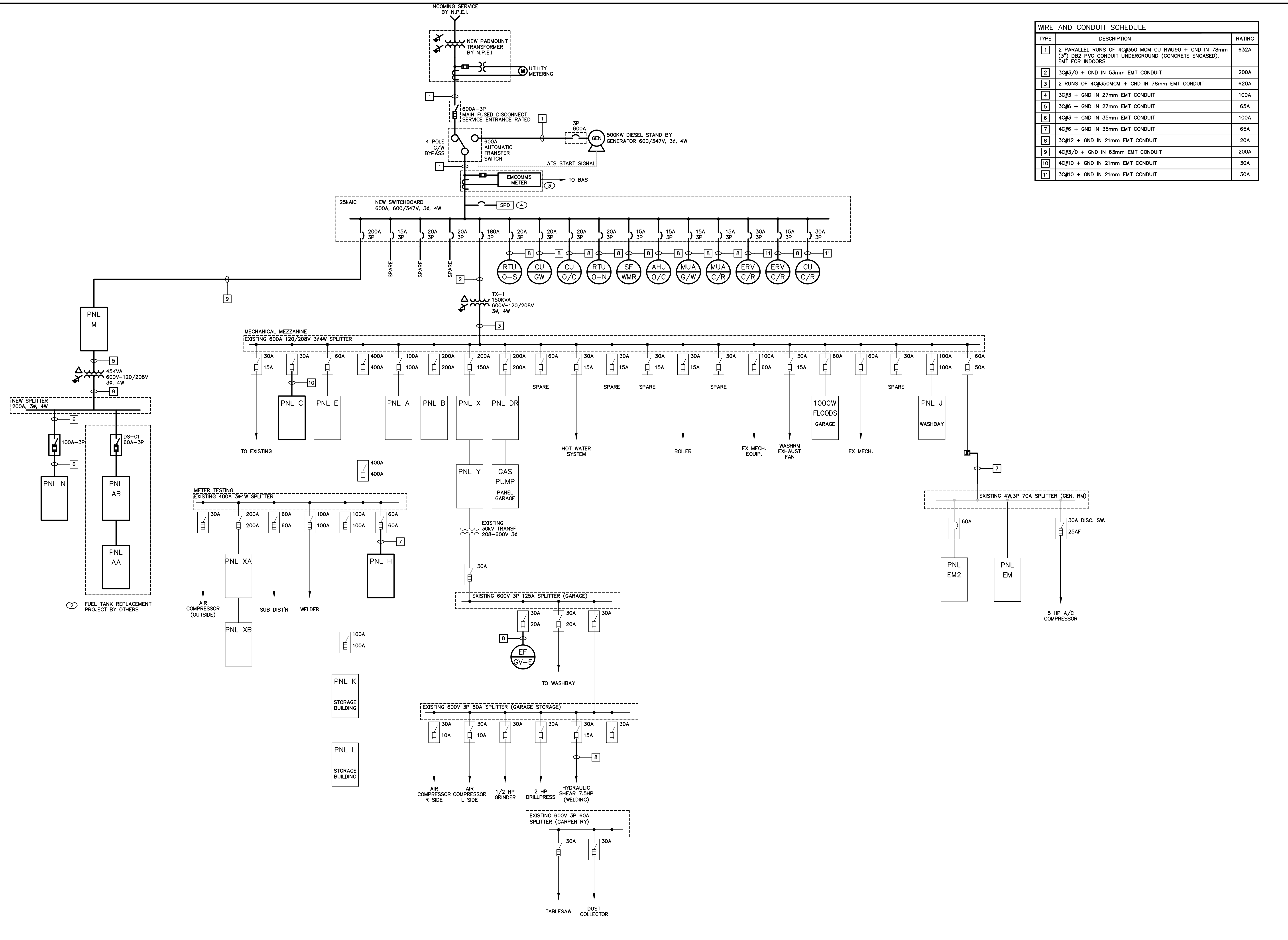
**NIAGARA FALLS
SERVICE CENTRE
IMPROVEMENTS**
3200 STANLEY AVENUE,
NIAGARA FALLS, ONTARIO

START DATE: JULY 2020	DRAWN BY: B.M.	DESIGNED BY: P.S.
--------------------------	-------------------	----------------------

DRAWING TITLE:

**DEMOLITION
SINGLE LINE DIAGRAM**

SCALE: NTS	DRAWING No.:
PROJECT: 20-101	E600



WIRE AND CONDUIT SCHEDULE		
TYPE	DESCRIPTION	RATING
1	2 PARALLEL RUNS OF 4C#350 MCM CU RWJ90 + GND IN 78mm (3") DB2 PVC CONDUIT UNDERGROUND (CONCRETE ENCASED), EMT FOR INDOORS.	632A
2	3C#3/0 + GND IN 53mm EMT CONDUIT	200A
3	2 RUNS OF 4C#350MCM + GND IN 78mm EMT CONDUIT	620A
4	3C#3 + GND IN 27mm EMT CONDUIT	100A
5	3C#6 + GND IN 27mm EMT CONDUIT	65A
6	4C#3 + GND IN 35mm EMT CONDUIT	100A
7	4C#6 + GND IN 35mm EMT CONDUIT	65A
8	3C#12 + GND IN 21mm EMT CONDUIT	20A
9	4C#3/0 + GND IN 63mm EMT CONDUIT	200A
10	4C#10 + GND IN 21mm EMT CONDUIT	30A
11	3C#10 + GND IN 21mm EMT CONDUIT	30A

GENERAL NOTES

- PROVIDE SHORT CIRCUIT AND COORDINATION STUDY FOR ENTIRE DISTRIBUTION SYSTEM COMPLETE WITH ARC FLASH HAZARD ANALYSIS AND LABELS.
- FUEL TANK PROJECT BY OTHERS (HALLEX ENGINEERING PROJECT #190812). ELECTRICAL CONTRACTOR TO PROVIDE AND CONNECT POWER WIRING TO EQUIPMENT INSTALLED BY OTHERS. OTHERS TO MOUNT PANELS AND CONNECT FIELD SIDE WIRING.
- NEW EMCOMMS ENERGY METER SUPPLIED BY MECHANICAL AND INSTALLED BY ELECTRICAL CONTRACTOR. CONNECT SUPPLIED CURRENT/VOLTAGE TRANSducers (CVT) TO NEW EMCOMMS METER AND POWER WIRING. CVT ARE TO MEASURE AND DIGITALLY COMMUNICATE POWER VALUES TO THE METER. INSTALL AS WIRING INSTRUCTIONS AS INDICATED IN INSTALLATION MANUAL.
- PROVIDE NEW INTEGRAL SURGE PROTECTIVE DEVICE, TOTAL PROTECTION SOLUTIONS# TK-ST160-3Y600 (OR APPROVED EQUAL)

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0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS

No.	DESCRIPTION	DATE	BY



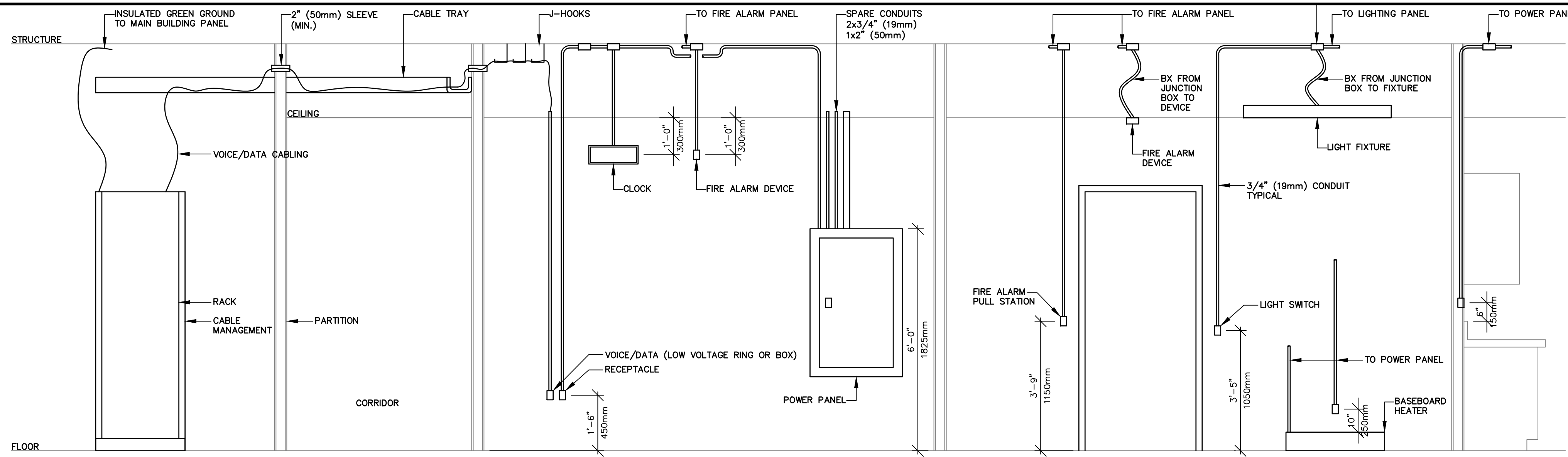
PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
 3200 STANLEY AVENUE,
 NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
 DRAWN BY: B.M.
 DESIGNED BY: P.S.

DRAWING TITLE:
NEW SINGLE LINE DIAGRAM

SCALE: NTS
 PROJECT: 20-101
 DRAWING No.: **E601**

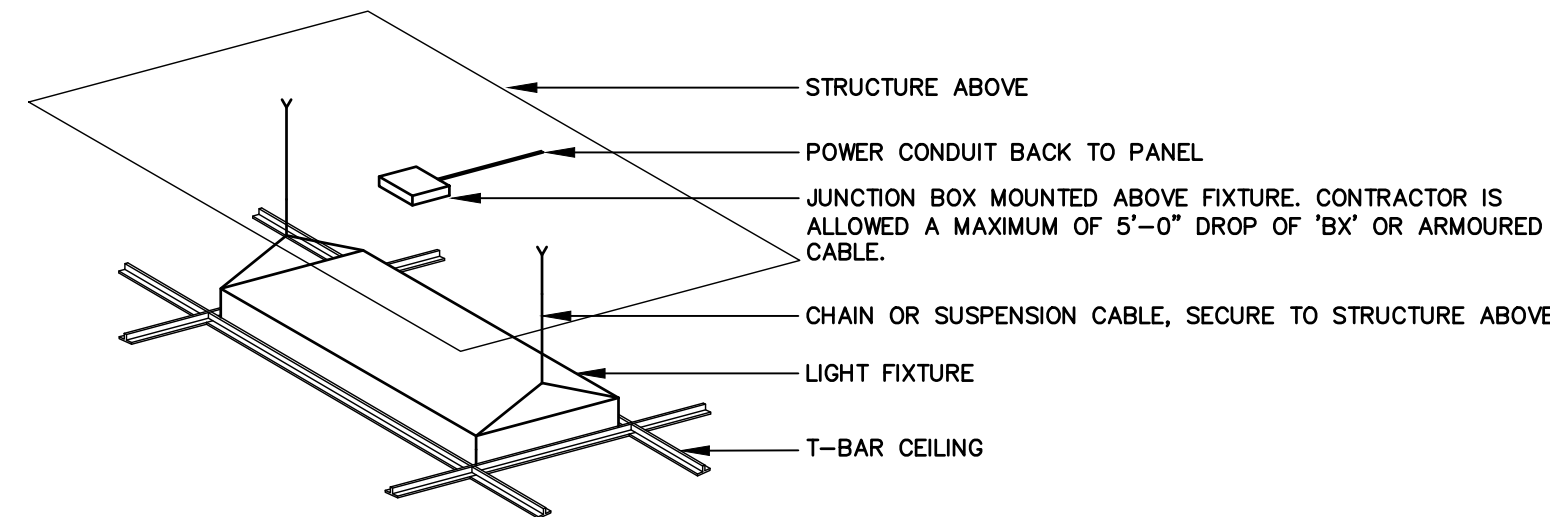
File: X:\Projects\2020\20-101 City of Niagara Falls-Municipal Service Centre_ARC\E\20-101 E601 NEW SLD.dwg
 May 06, 2021 10:08:27am Plotted by: Brennan



- DETAIL NOTES:**
- DETAIL IS APPLICABLE FOR DEVICES SHOWN ON PLANS. ALL THE DEVICES INDICATED IN THE DETAIL MAY NOT OCCUR ON THE PLANS.
 - CONDUIT SHALL BE PROVIDED IN ALL CASES UNLESS DENOTED AS BX OR AS ALLOWED IN THE SPECIFICATIONS.
 - ALL CONDUITS FOR LOW VOLTAGE CABLING AND WIRING SHALL HAVE BUSHINGS INSTALLED TO PREVENT CHAFFING OF WIRE(S).
 - ALL CONDUITS ARE TO GO DIRECTLY FROM THE OUTLET BOX UP THE WALL INTO THE CEILING SPACE. NO HORIZONTAL RUNS OF CONDUIT, OR GROUPING OF CONDUITS WITH OTHER SERVICES IN CLOSE PROXIMITY.
 - CONDUITS ARE TO HAVE PULL ROPES INSTALLED AND LEFT BEHIND TO ALLOW THE PULLING OF ADDITIONAL SERVICES IN THE FUTURE.
 - ALL BREACHES IN WALLS ARE TO BE FIRESTOPPED TO MAINTAIN THE FIRE SEPARATIONS.
 - PROVIDE SUPPORTS FOR ALL CEILING MOUNTED ELEMENTS (IE CHAIN HANGERS FOR FIXTURES ETC.) DEVICES SHALL NOT BE SUPPORTED BY A CEILING TILE.

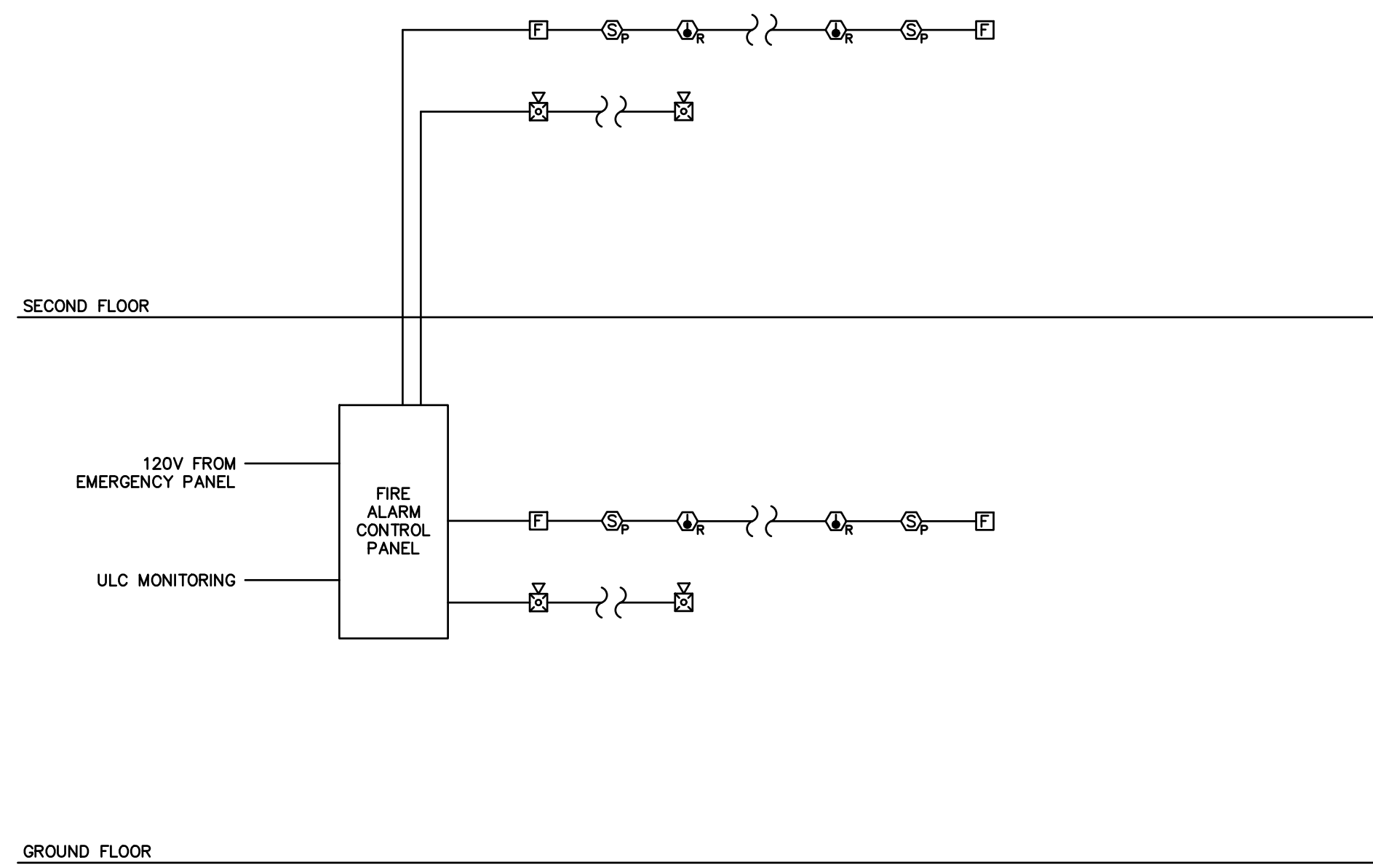
1 TYPICAL MOUNTING HEIGHTS/INSTALLATION DETAIL
E700 SCALE: NTS

ZONE	FIRE ALARM ZONES	ALARM	TROUBLE
FZ-1	GROUND FLOOR OFFICES	X	X
FZ-2	MECHANICAL MEZZANINE	X	X
FZ-3	GARAGE	X	X
FZ-4	STAIRWELL A	X	X
FZ-5	GROUND FLOOR SHOPS	X	X
FZ-6	MECHANICAL PENTHOUSE	X	X
FZ-7	STAIRWELL B	X	X
FZ-8	SECOND FLOOR OFFICES	X	X
FZ-9	TRUCK WASH/SMALL ENGINE BUILDING	X	X
FZ-10	SPARE		
SZ-1	GENERATOR RUNNING		X
SZ-2	GENERATOR TROUBLE		X

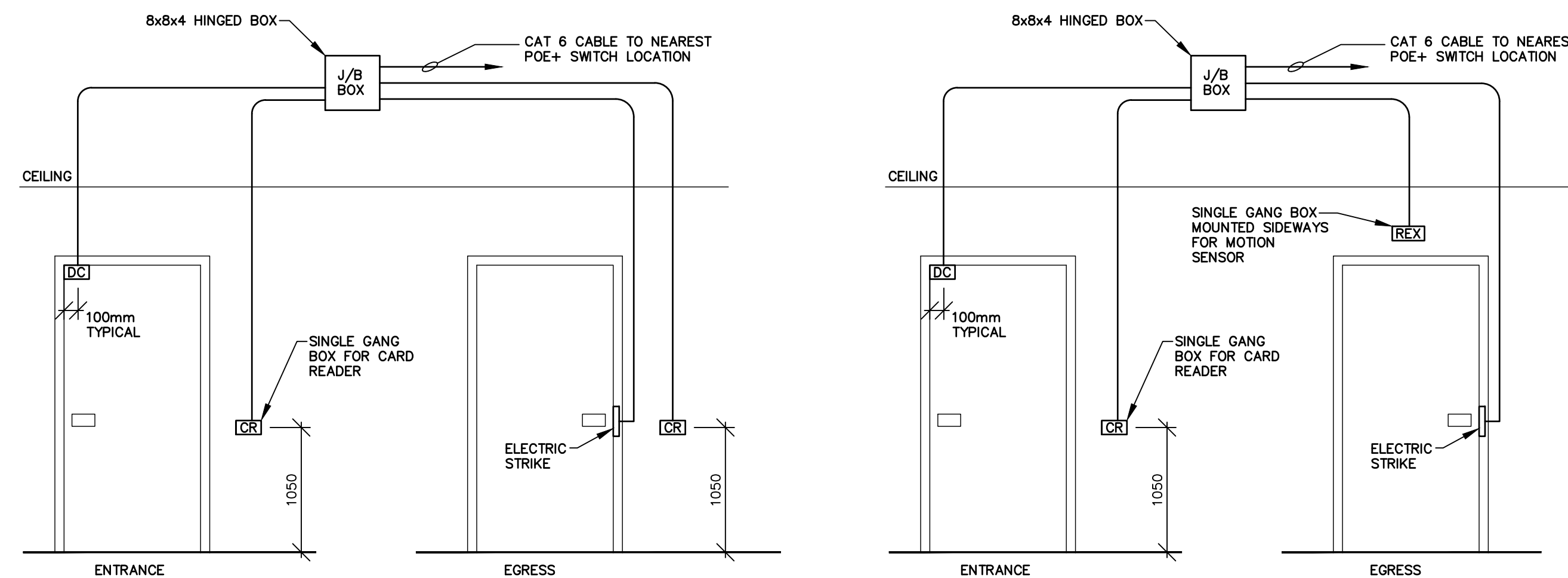


- DETAIL NOTES:**
- BX OR ARMoured CABLE IS TO BE RUN NEAT AND TIDY IN CEILING SPACE. PROVIDE CABLE TIES TO AFFIX TO SUSPENSION CHAINS. CLIP ENDS OF TIES.
 - JUNCTION BOXES ARE TO BE LOCATED CLOSE TO FIXTURES. PROVIDE P-TOUCH TYPE LABEL ON COVER PLATE WITH CIRCUIT NUMBER.

2 INSTALLATION OF RECESSED FIXTURE IN 'T' BAR CEILING
E700 SCALE: NTS



3 FIRE ALARM RISER DIAGRAM
E700 SCALE: NTS



- DETAIL NOTES:**
- THE CONTRACTOR SHALL PROVIDE ALL ROUGH-INS REQUIRED FOR THE SECURITY WORK. THE CONTRACTOR SHALL PULL ALL ASSOCIATED CABLES. TERMINATIONS WILL BE BY OTHERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK LISTED BY OTHERS. THE DOORS SHALL BE FULLY FUNCTIONING AND COMMISSIONED AS PART OF THIS CONTRACT.
 - ALL CONDUIT IS TO BE CONCEALED IN THE WALL. CONDUIT SHALL BE 1" UNLESS NOTED OTHERWISE. SURFACE RACEWAY WILL ONLY BE ALLOWED UNDER SPECIAL CIRCUMSTANCES AND MUST HAVE WRITTEN APPROVAL FROM THE OWNER AND CONSULTANT.
 - PROVIDE A 120V CIRCUIT FROM LOCAL PANEL TO POWER SECURITY DEVICES.
 - DOORS SHOWN WITH BOTH CARD READERS ON ENTRANCE AND EGRESS SIDES TO RELEASE UPON FIRE ALARM SIGNAL.
 - REFER TO CASH ALLOWANCE FOR DESIGN ELECTRONICS (ACCESS CONTROL).

4 TYPICAL SECURITY DOOR DETAIL
E700 SCALE: NTS

- DETAIL NOTES:**
- REFER TO DETAIL 4/E700 NOTES.

5 TYPICAL SECURITY DOOR DETAIL
E700 SCALE: NTS

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REVISIONS



PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

DRAWING TITLE:
ELECTRICAL DETAILS

SCALE: NTS
PROJECT: 20-101
DRAWING No.: **E700**

File: X:\Projects\2020\20-101_City of Niagara Falls--Municipal Service Centre_ARC\20-101_E800_PNL_SCHEDULES.dwg
May 06, 2021 - 08:27am Plotted by: Brennan

120/208 VOLTS			100 AMP MAIN BREAKER		
LOAD	DESCRIPTION	CCT	CCT	DESCRIPTION	LOAD
	ROOFTOP RECEPTACLE	1 20A	15A	2 CARBON FILTER UNIT CF-0/N	
	ROOFTOP RECEPTACLE	3 20A	15A	4 CARBON FILTER UNIT CF-0/S	
	GENERATOR SHORE POWER	5 20A	15A	6 EXHAUST FAN EF-CR	
	BAS PANEL	7 15A	15A	8 MOTORIZED DAMPERS	
	SPARE	9 15A	15A	10 TO EXISTING PHONE SYSTEM	
	SPARE	11 15A	15A	12 TO EXISTING PHONE SYSTEM	
	SPARE	13 15A	15A	14 TO EXISTING PHONE SYSTEM	
	SPARE	15 15A	15A	16 SPARE	
	SPARE	17 15A	15A	18 SPARE	
	-	19 15A	15A	20 SPARE	
	-	21 15A	15A	22 SPARE	
	-	23 15A	15A	24 -	

SURFACE
 FLUSH
PANEL LOCATION: EX. MECH MEZZANINE

PANEL C

600/347 VOLTS			200 AMP MAIN BREAKER		
LOAD	DESCRIPTION	CCT	CCT	DESCRIPTION	LOAD
	MAKE UP AIR MUA-G/E	1 20A	20A	2 AIR HANDLER AHU-ST	
		3 20A	20A		
		5 20A	20A		
	CONDENSING UNIT CU-ST	7 20A	20A	8 RETURN FAN RE-ST	
		9 20A	20A		
		11 20A	20A		
	CONDENSING CU-GE	13 20A	20A	14 CONDENSING UNIT CU-0/M	
		15 20A	20A		
		17 20A	20A		
	AIR HANDLER AHU-SW	19 20A	20A	20 AIR HANDLER AHU-S/C	
		21 20A	20A		
		23 20A	20A		
	SUPPLY FAN SF-SW	25 20A	20A	26 SUPPLY FAN	
		27 20A	20A		
		29 20A	20A		
	CONDENSING UNIT CU-S/W	31 15A	15A	32 CONDENSING UNIT CU-S/C	
		33 15A	15A		
	SPARE	35 15A	15A	36 SPARE	
		37 15A	15A		
		39 15A	15A	38 OUTSIDE AIR FAN EF-SMR	
		41 15A	15A		
	SPARE	43 15A	15A	44 SPARE	
		45 15A	15A		
		47 15A	15A		
	SPARE	49 20A	20A	50 SPARE	
		51 20A	20A		
		53 20A	20A		
	SPARE	55 20A	60A	56 SPLITTER TRANSFORMER	
		57 20A	60A		
		59 20A	60A		

SURFACE
 FLUSH
PANEL LOCATION: NEW MECHANICAL MEZZANINE

PANEL M

120/208 VOLTS			100 AMP MAIN BREAKER		
LOAD	DESCRIPTION	CCT	CCT	DESCRIPTION	LOAD
	LIGHTING - NEW PENTHOUSE	1 20A	20A	2 UNIT HEATER UH-ST	
	LIGHTING - STORES MEZZANINE	3 20A	20A		
	LIGHTING - STORES	5 20A	20A	6 SPUT SYSTEM OUTDOOR UNIT HP-E	
	LIGHTING - ENVIRO. MEZZANINE	7 20A	20A		
	LIGHTING - ENVIRO SHOP	9 20A	20A		
	PARTS COUNTER RECEPTACLES	11 15A	15A	12 MOTORIZED DAMPERS	
	PARTS COUNTER RECEPTACLES	13 15A	15A	14 ENVIRO SHOP FRIDGE	
	PARTS COUNTER RECEPTACLES	15 15A	15A	16 ENVIRO SHOP RECEPTACLE	
	MECH PENTHOUSE RECEPTACLES	17 15A	15A	18 ENVIRO SHOP RECEPTACLE	
	MECH ROOM RECEPTACLES	19 15A	15A	20 SPARE	
	MECH ROOM WATER HEATER	21 15A	15A	22 SPARE	
	BAS PANEL	23 15A	15A	24 SPARE	
	SPARE	25 15A	15A	26 SPARE	
	SPARE	27 15A	15A	28 SPARE	
	SPARE	29 15A	15A	30 SPARE	
	SPARE	31 15A	15A	32 SPARE	
	SPARE	33 15A	15A	34 SPARE	
	SPARE	35 15A	15A	36 SPARE	
	-	37 15A	15A	38 -	
	-	39 15A	15A	40 -	
	-	41 15A	20A	42 EMERGENCY LIGHTING	

SURFACE
 FLUSH
PANEL LOCATION: NEW MECHANICAL MEZZANINE

PANEL N

120/208 VOLTS			60 AMP MAIN BREAKER		
LOAD	DESCRIPTION	CCT	CCT	DESCRIPTION	LOAD
	HEAT RECOVERY HRV-D/M	1 20A	20A	2 EXHAUST FAN EF-0/M	
	FURNACE F-0/M	3 20A	20A	4 EXHAUST FAN FE-S/W	
	CARBON FILTER CF-0/M	5 15A	15A	6 EXHAUST FAN EF-S/W	
	CARBON FILTER CF-MR	7 20A	20A	8 EXHAUST FAN EF-S/C	
	SERVER RECEPTACLES	9 20A	20A	10 EXHAUST FAN EF-S/C	
	MECH. ROOM RECEPTACLE	11 15A	15A	12 EXHAUST FAN EF-WR	
	SPARE	13 15A	15A	14 MOTORIZED DAMPERS	
	SPARE	15 15A	15A	16 SPARE	
	SPARE	17 15A	15A	18 SPARE	
	SPARE	19 15A	15A	20 SPARE	
	SPARE	21 15A	15A	22 SPARE	
	SPARE	23 15A	15A	24 SPARE	
	-	25 15A	15A	26 -	
	-	27 15A	15A	28 -	
	-	29 15A	15A	30 -	

SURFACE
 FLUSH
PANEL LOCATION: NEW MECH ROOM

PANEL H

GENERAL NOTES

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No.	DESCRIPTION	DATE	BY
3	ISSUED FOR CONSTRUCTION	MAY 7, 2021	K.S.
2	ISSUED FOR TENDER	FEB 26, 2021	K.S.
1	RE-ISSUED FOR PERMIT	DEC 3, 2020	K.S.
0	ISSUED FOR PERMIT	NOV 6, 2020	K.S.

REVISIONS



PROJECT:
NIAGARA FALLS SERVICE CENTRE IMPROVEMENTS
3200 STANLEY AVENUE, NIAGARA FALLS, ONTARIO

START DATE: JULY 2020
DRAWN BY: B.M.
DESIGNED BY: P.S.

DRAWING TITLE:
PANEL SCHEDULES

SCALE: NTS
PROJECT: 20-101
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